

TEACHER BOOK



Individuals & Societies

A PRACTICAL GUIDE



Sally Hirsch
Thomas Triller



Individuals & Societies

A PRACTICAL GUIDE TEACHER BOOK

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Individuals and Societies: A Practical Guide Teacher Book

Published by International Baccalaureate Organization (UK) Ltd, Peterson House, Malthouse Avenue, Cardiff Gate, Cardiff, Wales CF23 8GL United Kingdom, represented by IB Publishing Ltd, Churchillplein 6, The Hague, 2517JW The Netherlands

Website: www.ibo.org

The International Baccalaureate Organization (known as the IB) offers four high-quality and challenging educational programmes for a worldwide community of schools, aiming to create a better, more peaceful world. This publication is one of a range of materials produced to support these programmes.

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Published 2014

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British Library Cataloguing in Publication Data

A catalogue record for this book is available from the British Library

ISBN: 978-1-906345-99-0

MYP312

Typeset by Q2A Media Services Pvt. Ltd.

Printed in India.

Acknowledgments

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Contents

How to use this book	v
1. Introduction to IB Skills	1
2. Introducing key concept 1: time, place and space	9
3. Introducing key concept 2: change	15
4. Introducing key concept 3: global interactions	26
5. Introducing key concept 4: systems	33
6. Conflict	38
Topic 1: Water demands	40
Topic 2: The Arab Spring	43
Topic 3: New Zealand Maoris	46
7. Development	50
Topic 1: Women’s rights	52
Topic 2: League of Nations	55
Topic 3: Communist China	57
8. Choice	62
Topic 1: Environmental ethics	64
Topic 2: Saving Ecuador’s rainforest	68
Topic 3: International aid	71
9. Resources	76
Topic 1: Resources and economic systems	78
Topic 2: Choices and consequences	83
Topic 3: Entrepreneurship, environment and culture	86
10. Causality	92
Topic 1: Scientific discoveries of longitude, planets, time	94
Topic 2: Geographical discoveries—the “new” world	98
Topic 3: Technological discoveries	101
11. Poverty	105
Topic 1: Defining poverty	106
Topic 2: Causes of poverty	112
Topic 3: Strategies for addressing poverty	115
12. Trade	119
Topic 1: Trade and equity	120
Topic 2: Benefits and problems of trade	123
Topic 3: Peace and trade	130

13. Power		132
	Topic 1: War on terror	133
	Topic 2: Indian caste system	137
	Topic 3: Colonialism and power in the Democratic Republic of Congo	140
14. Sustainability		145
	Topic 1: Threats to sustainability	146
	Topic 2: Debates about sustainability	151
	Topic 3: Enhancing sustainability, preserving resources	153
15. Networks		159
	Topic 1: Waste management	161
	Topic 2: Biomes	165
	Topic 3: Social Networks	168
16. Interdependence		173
	Topic 1: First World War alliances	175
	Topic 2: The media	178
	Topic 3: Climate change	181
17. Globalization		187
	Topic 1: Food security	189
	Topic 2: Infectious diseases	194
	Topic 3: Urbanization	197

How to use this book

The teacher book is designed both as a companion to the student book and to facilitate a whole school approach to individuals and societies skill development in Middle Years Programme students. As well as providing definitions and explanations for key concepts, this book includes supporting activities, task guidelines and assessment criteria that have been specified for the tasks.

The student and teacher books provide a detailed introduction to the key and related concepts in MYP individuals and societies.

The key concept chapters look at the challenges and benefits of teaching for conceptual learning and introduce individuals and societies skills. Lesson plan suggestions for teaching these concepts and skills are provided throughout each chapter. Some of these are linked to the student book and form extensions of activities located therein, others are new teaching ideas that you can use in your classes to motivate and engage students' understanding of conceptual learning and skills development.

The related concept chapters support the delivery of the related concepts in the classroom. Teacher guidance is provided to complement the activities in the student book.

Throughout the book you will find features and teaching suggestions that will help you link your teaching to the core elements of the MYP. Here are some of the features you will come across:



DIPLOMA PROGRAMME LINKS

Opportunities to link to the DP curriculum.



INTERDISCIPLINARY LINKS

These boxes provide links to other subject groups.



CHAPTER LINKS

MYP students are encouraged to use skills and knowledge from different subject areas. These boxes link to other chapters, which relate to a topic or theme.

WEB LINKS

The student and teacher books have integrated references to internet tools and sources in each chapter.

LITERARY LINKS

Recommendations for texts, films and other media are given to enhance student engagement.

TEACHING IDEA

These boxes give additional ideas to the activities in the student book.

QUICK THINK

These boxes refer to the Quick Think in the student book and give further guidance on how to use these suggestions to extend student learning or to facilitate a discussion.

TIP

Throughout the chapters you will see additional tips for teaching.

TAKE ACTION

This box relates to the student book and gives teaching-specific suggestions around encouraging students to use their study to contribute to the wider community and to make a difference in their own lives or the lives of others.



IB learner profile

The aim of all IB programmes is to develop internationally minded people who, recognizing their common humanity and shared guardianship of the planet, help to create a better and more peaceful world.

As IB learners we strive to be:

INQUIRERS

We nurture our curiosity, developing skills for inquiry and research. We know how to learn independently and with others. We learn with enthusiasm and sustain our love of learning throughout life.

KNOWLEDGEABLE

We develop and use conceptual understanding, exploring knowledge across a range of disciplines. We engage with issues and ideas that have local and global significance.

THINKERS

We use critical and creative thinking skills to analyse and take responsible action on complex problems. We exercise initiative in making reasoned, ethical decisions.

COMMUNICATORS

We express ourselves confidently and creatively in more than one language and in many ways. We collaborate effectively, listening carefully to the perspectives of other individuals and groups.

PRINCIPLED

We act with integrity and honesty, with a strong sense of fairness and justice, and with respect for the dignity and rights of people everywhere. We take responsibility for our actions and their consequences.

OPEN-MINDED

We critically appreciate our own cultures and personal histories, as well as the values and traditions of others. We seek and evaluate a range of points of view, and we are willing to grow from the experience.

CARING

We show empathy, compassion and respect. We have a commitment to service, and we act to make a positive difference in the lives of others and in the world around us.

RISK-TAKERS

We approach uncertainty with forethought and determination; we work independently and cooperatively to explore new ideas and innovative strategies. We are resourceful and resilient in the face of challenges and change.

BALANCED

We understand the importance of balancing different aspects of our lives—intellectual, physical, and emotional—to achieve well-being for ourselves and others. We recognize our interdependence with other people and with the world in which we live.

REFLECTIVE

We thoughtfully consider the world and our own ideas and experience. We work to understand our strengths and weaknesses in order to support our learning and personal development.

The IB learner profile represents 10 attributes valued by IB World Schools. We believe these attributes, and others like them, can help individuals and groups become responsible members of local, national and global communities.

Introduction to IB Skills

Welcome to IB Skills, a new series of resources for the IB Middle Years Programme students and teachers. This teacher book is intended to be used in conjunction with the student book *IB Skills: Individuals and Societies: A practical guide*. The following information is provided to help you to use both books effectively.

These books are designed to support and guide students in their journey towards becoming lifelong learners.

The main message of the *IB Skills: Individuals and Societies: A practical guide* student and teacher books is that learning effectively requires the application of concepts and skills, and that these concepts and skills can be taught and learned.

The student book guides students through all of the key and related concepts, and the teacher book provides accompanying guidance to complement the content, skills and activities.

As well as providing definitions and explanations for the key concepts, the teacher book includes supporting activities, task guidelines and assessment criteria that have been modified for the tasks. The teacher book follows the same structure as the student book. It is broken down into chapters covering key and related concepts.

Teaching the concepts

The MYP has developed a conceptual framework that includes key concepts and related concepts. Key concepts have been specifically chosen for each subject area. Each subject also has a list of suggested related concepts that teachers can use to help “unpack” the key concepts.

Both books provide a detailed introduction to the four key concepts of MYP individuals and societies:

- time, place and space
- change
- global interactions
- systems

These key concepts form the framework for all individuals and societies courses. It is essential that teachers and students spend time exploring and analysing these concepts.

Chapters 6 to 17 in the student and teacher books introduce selected related concepts within individuals and societies. Each chapter is based around a key concept and related concept, with specific topics and examples providing context for understanding.

Each chapter has a variety of topics that are explored through different disciplines within individuals and societies. These include:

- history
- geography
- economics
- sociology/anthropology.

Other topics take an integrated approach, requiring students to use skills and knowledge from several individuals and societies disciplines to enhance their understanding of the related concept.

It is possible to move between chapters in a different order than they are presented in the books, choosing the topics that are most relevant to whichever key concept you are focusing on.

Key concepts

The study of individuals and societies can be broad and far-reaching in its investigation of the world around us. The four key concepts provide a focus in this subject area.

Whether you are teaching an integrated individuals and societies course or taking a disciplinary approach, it is essential that all four key concepts are explored.

As students progress through the MYP, they will explore these concepts through increasing levels of complexity. It is up to you, the teacher, to choose relevant and suitable case studies and examples that allow students to inquire into these concepts.

Time, place and space

Time, place and space are intrinsically linked. Time is not simply the measurement of years or time periods but is a continuum of significant events of the past, present and future. Place and space are complex concepts whose definitions are fluid.

Place is socially constructed and can be explored in terms of constraints and opportunities afforded by location. Places have value and meaning defined by humans.

Space relates to why and where places and landscapes are located. The concept also includes social, economic and political processes that interact through or across space. These give rise to patterns and networks, such as migration or trade flows.

Challenges related to “place and space” can be on a local, national and global scale.

Change

This is the process of movement from one state to another. It is universal, inevitable and constant. It allows examination of the forces that shape the world: past, present and future. Students learn about the causes, processes and consequences of change: natural and artificial; intentional and unintentional; positive and negative.

Global interactions

This concept recognizes the interconnection and interdependence of the natural world and the larger human community. It focuses on the many ways that people cooperate and come into conflict—with each other and the natural world—in a global context.

Systems

Systems are sets of interacting or interdependent components that form an integrated whole. Everything in the known universe is a component of a system—generally of multiple interacting and interdependent systems. Systems provide structure and order in both natural and human-made environments. They are dynamic and complex in nature. They rely on a state of equilibrium and are very vulnerable to change.

Related concepts

Teaching the four key concepts of individuals and societies can seem a daunting prospect. Students will struggle with grasping the big ideas and placing them in a relevant context unless they are “unpacked”. One of the tools to unpacking the key concepts is the related concepts. Each discipline within individuals and societies has 12 specific related concepts that support connections between the key concept and the context; these are summarised in the following table. Related concepts are more concrete ideas that exist on a smaller scale. They form the framework for chapters 6–17 in this textbook and have been chosen from a variety of individuals and societies disciplines. Teachers are encouraged to use those that are relevant for their students while still ensuring that their curriculum is internationally minded.

WEB LINKS

For activities and additional information search for “GTIP Think Piece—Concepts in Geography” by Liz Taylor at www.geography.org.uk.

Chapter	Key concept	Related concept	Topics
6	Time, place and space	Conflict	Conflict occurs primarily when there is disagreement over resources, ideas and territory. Although the three topics in this chapter are based on different types of conflict, there are similarities that help provide an understanding of the related concept.
7	Time, place and space	Development	Development is studied through significant events in history that have ongoing repercussions today. Development of nations is influenced by the status of women and minority groups, the existence and actions of international organizations and the influence of political regimes.
8	Global interactions	Choice	Responsibility of choice connects with the IB mission statement of encouraging students to become active, compassionate and lifelong learners. Responsibility happens on different scales and is constantly changing as global interactions increase.
9	Systems	Resources	The connection between people and the use of finite resources highlights the challenges being faced by businesses and organizations. Innovative solutions and entrepreneurship can help overcome some of these challenges.
10	Change	Causality	Cause and effect help us to analyse and reflect on the impact of change. Scientific, geographical and technological discoveries have had both positive and negative impacts.
11	Time, place and space	Poverty	The often cyclical occurrence of poverty in a location challenges us to understand the underlying causes. Measuring poverty against levels of consumption can provide an unbalanced definition of poverty and therefore influence the policies designed to address poverty.
12	Global interactions	Trade	Trade holds the potential to increase prosperity but these gains can be unevenly distributed across individuals and societies. A number of different factors can disrupt the flow of trade, while other factors and conditions can encourage trade.
13	Global interactions	Power	Power in individuals and societies is connected to the perception of status and relationships. Power relationships between countries can be susceptible to exploitation but can also be used to advance development in a country.
14	Systems	Sustainability	Sustainability exists when use of resources is equivalent to the rate at which they are replaced. Sustainability is threatened by depletion, pollution and destruction and can occur on a variety of scales. Conserving resources and enhancing production efficiency can contribute to improving sustainability.

15	Systems	Networks	Networks are the complex interaction between different systems. They rely on inputs and outputs to ensure that they continue to operate. Networks of production and consumption connect people with the environment. Virtual networks are increasingly complex, connecting individuals and societies around the world.
16	Systems	Interdependence	Interdependent relationships between countries, businesses and individuals are reliant on negotiation and collaboration. An element of trust must exist between the groups to ensure that consistency of the interaction is maintained. Interdependence of all nations on the Earth's vital support system means equal responsibility shared by all countries.
17	Change	Globalization	An increasingly connected world has expanded the idea of globalization from a business perspective to an experience that affects most of us. Globalization has the potential to bring long-term benefits and solutions but requires cooperation and communication.

Table 1.1 Individuals and societies key concept summary

Learning skills

Students' methods of learning can be categorized into three different stages: inquiry, action and reflection.

Inquiry

Inquiry-based learning begins with the student's current knowledge base and experiences, then guides them on a journey to enhance their conceptual understanding of the big ideas in individuals and societies. Inquiry requires students to be actively involved in their own learning, and the MYP encourages this by providing opportunities for students to build meaning and refine understanding, principally through structured inquiry. The starting point is students' current understanding; the goal is the active construction of meaning through connections between current understanding and new concepts.

Action

An important part of conceptual learning is the development of socially responsible attitudes and thoughtful and appropriate action. Action extends a student's learning and can demonstrate a sense of responsibility. Action will look different within and between different age groups in the MYP. Students may choose to act alone or collaborate with others. They may also choose not to act. As a subject area, individuals and societies easily lends itself to promoting student action on a variety of scales.

Reflection

Inquiry learning needs to allow time and space for students to reflect on how their new knowledge and skills connect with existing knowledge and experiences. Reflection prompts synergistic thinking and encourages students to think about how understanding of concepts can be applied in different situations (transfer). Reflection is an explicit part of the objectives in all MYP subject groups, and is a key skill taught in ATL.

As an MYP teacher, teaching through inquiry, action and reflection needs to be central to your education philosophy.

Conceptual teaching and learning is:	Conceptual teaching and learning is not:
<ul style="list-style-type: none">• learning through inquiry• encouraging students to act on their knowledge• using knowledge to understand big ideas• making connections through concepts across different subjects.	<ul style="list-style-type: none">• teaching only through memorization or rote learning• getting students to the “right” answer• covering content as though working your way through a checklist• “teaching to the test”.

The characteristics of conceptual learning

Knowledge

A conceptual framework places greater emphasis on understanding and using knowledge and skills in a variety of contexts to solve problems, answer questions and create products. Without the building blocks of knowledge, students would find it difficult to understand the concepts of individuals and societies. The MYP conceptual framework encourages teachers to select knowledge and skills relevant to their students to explore the conceptual framework. Careful consideration of context will ensure that what students learn is relevant and useful for them to understand the key concepts of individuals and societies.

Global contexts

As a programme of international education, the MYP promotes globally relevant contexts in which students can practise sustained inquiry, responsible action and critical reflection in a rapidly changing world. As a teacher, you are in the best position to decide what contexts are relevant for your students. When you select a context for inquiry, you are answering the question “why is it relevant for my students to understand this concept?” The global contexts selected for this text take into account the following:

Scale—study of a concept on an individual, local or global level will vary depending on what is relevant for your students.

Relevance—the context needs to be relevant for the world your students live in.

International-mindedness—IB programmes aim to develop internationally minded students, and this is supported through using a variety of contexts to understand concepts.

A diagram showing a visual representation of the different parts of conceptual learning can be found in the student book.

Approaches to learning (ATL) skills

Approaches to learning (ATL) skills are a set of learning tools that enable students to access content, understand and synthesize information and communicate their findings. It is the responsibility of every teacher to ensure that their students have frequent opportunities to learn, practise and master the range of ATL skills as successful learners in the MYP.

The ATL skills in the MYP are a continuation of ATL skills that students have learned, practised and mastered in the Primary Years Programme (PYP). At the MYP level, new skills are learned; existing skills are developed further and applied to new situations. Skills learned, practised and mastered in the MYP form the foundation of skills needed for success in the Diploma Programme and the IB Career-related Certificate. Students in MYP years 4 and 5 will have already experienced many of the skills required of MYP students. They may be only at a novice or learner level, or they may have mastered a skill to the extent that they can teach it to other students. In any classroom, teachers will have students with differing skill levels. It is important to utilize effective differentiation strategies to ensure that each student is adequately challenged.

Each chapter in this book emphasizes different ATL skills that will enable your students to practise, develop and master a comprehensive range of these skills by the end of their MYP course.

A detailed breakdown of the different types of ATL skills can be found in Chapter 1 of the student book. Skills for IB Skills: individuals and societies have been selected from the list of MYP ATL skills available in *From principles into practice* (MYP 2014).

Objectives

In this course, both skills and objectives are closely related to the assessment criteria. There are four assessment criteria and each one is designed to measure student skills in a different area of individuals and societies as follows:

Criterion A	Knowing and understanding	Maximum 8
Criterion B	Investigating	Maximum 8
Criterion C	Communicating	Maximum 8
Criterion D	Thinking critically	Maximum 8

The objectives of any MYP subject state the specific targets that are set for learning in the subject. They define what students will be able to accomplish as a result of studying the subject.



In order to meet these objectives, students will engage in a variety of activities, continually refining their skills. These skills are very much interactive and interrelated, though in some instances teachers may wish to deal with them as discrete skills.

Summary

This teacher book has been conceived to provide specific guidance to accompany the topics covered in the student book, offering notes to help teachers that complement every student activity. This is only a starting point of course and the teacher book authors have made efforts to suggest alternative activities and teaching approaches where they might add value to the learning.

Individuals and societies courses will look different in every MYP classroom, but the *IB Skills: Individuals and Societies: A practical guide* books should become invaluable resources for both students and teachers alike.

Introducing key concept 1: time, place and space

Activity	ATL skills	Description
Activity 1 Space and interaction	✓ Self-management Consider ethical, cultural and environmental implications.	 Investigate and explain the influence of different spaces on the way we communicate.
Activity 2 The significance of time and place	✓ Thinking Consider ideas from multiple perspectives.	 Hypothesize the effects of time and place on creating historical significance.

Introducing time, place and space

Connecting time, place and space is an integral part of studying any individuals and societies topic. By understanding when and where an event occurred, students are able to hypothesize why it occurred, as well as make predictions on future events. This key concept is useful for helping to provide a context or grounding for particular events, phenomena and developments. Through the teaching of different topics, students will begin to develop an internal reference or framework that they can use to establish relationships between events and locations.

Why are time, place and space important?

The history of life on Earth is made up of innumerable events and developments, some more significant than others. The connections and interactions between individuals and societies, and societies and environments, form the basis of our knowledge about how the world works. Through the key concept of time, place and space, students will be challenged to inquire into how these ideas interact. Understanding the interaction will support them in being able to investigate issues such as why there are differences in levels of development, why conflict is more common than peace in a certain area, or how poverty persists despite continued efforts to eradicate it.

Time

For students to explore the concept of time, it is important that they develop a mental framework to reference when learning about events,

QUICK THINK

The quick think activity in the student book gets students to reflect on an event in their life that has significance and meaning. It could be a memorable holiday they went on, a difficulty that they overcame or a personal achievement. An alternative option is to choose three or four significant events that your students will remember—for example, a presidential election, the marriage of a celebrity, a major school event—and ask them to consider why these events occurred based on the interaction between time, place and space.

TIP

Encourage students to use varied vocabulary, even when having an informal discussion. You could provide them with vocabulary prompts such as key words and phrases posted in the classroom.

both historical and present day. This framework of significant eras will be influenced by the context of your students and school. However, it is important that they have opportunities to develop an understanding of the concept of time, as well as being able to communicate different scale representations of time.

Figure 2.2 in the student book provides an example of the scale of human experience on Earth in relation to the planet’s formation. Use this image as a starting point for the lesson plan below.

Time	Stage	Procedure	Resources
20 min.	Investigating	<p>Read out the lyrics for the song <i>Lucidity</i> by Kinobe or display them in the classroom.</p> <p>Ask students to spend a few minutes thinking about or discussing the idea of perspective in connection with the lyrics.</p> <p>Individually, ask students to write down what they consider to be the 10 most important events that have impacted the world in the last 100 years.</p> <p>In groups of two or three, ask students to share the events that they chose. Ask the groups to discuss, using the following prompts:</p> <ul style="list-style-type: none"> Why did they choose those dates? Can they see influences on their choices related to where they were living at the time? After discussing with classmates, do the students want to make changes to their list? <p>The groups should then write one paragraph that explains their collective understanding of the connection between perspective and time.</p>	Song lyrics
		<p>WEB LINKS Search online for the lyrics from “Lucidity” by Kinobe.</p>	
40 min.	Brainstorming	<p>Ask students to look at Figure 2.2 and Figure 2.3 in the student book.</p> <p>Ask them to explain to another student how they think the two figures connect.</p> <p>Explain to the students that scale can show events in time in relation to each other, but it can also be used to show the importance of events. The two figures are different visual representations of scales that students will be using as inspiration for the next step.</p> <p>In pairs, students will use their lists from this lesson’s investigating stage. They can choose to combine lists or to collaborate and create a new list of 10 ideas.</p> <p>Each pair will need to create a visual representation that accurately shows the scale of events over a time period. They also need to create a scale that shows a ranking of events in order of importance.</p>	Student book
		<p>WEB LINKS This is a challenging task but students can get some ideas from data visualization websites such as visual.ly.</p>	

20 min.	Hypothesizing	<p>After reflecting on the pace of change in the past, ask students to make predictions for the next 100 years.</p> <p>Ask students to generate in pairs a list of 10 global events that will happen over the course of the next century. Prompt students to think about areas of science, technology, politics, conflict, peace, development and the environment.</p> <p>Ask each pair to specify in which year they think the event will occur.</p>	
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Space

As a concept, “space” is quite abstract for students to grasp. When teaching about space, it is helpful to raise the students’ awareness of how they already use the word in everyday language.

LITERARY LINKS

Kate Atkinson’s novel *Life after Life* follows the lives of an English family from childhood to old age. However, each chapter involves a “reset” of the character’s life, exploring the alternate possibilities that exist with a slight alteration in the timing and location of events, and the reactions of the characters to these events.

TEACHING IDEA 1

Ask students to look at the quotations about space in Figure 2.4 in the student book. Discuss where they may have used or heard these sorts of phrases. What is the context? What is meant by the word “space” in the different quotes?



Activity 1 Space and interaction

This activity encourages students to reflect on their existing knowledge of the concept of space. By using familiar examples of spaces, students will think about the influence of space on language and behaviour.

Time	Stage	Procedure	Resources
20 min.	Introducing	<p>Ask the students to read Activity 1 in the student book. In pairs, they should create a short conversation for each of the scenarios posed. They can write a script or perform a short skit that shows the interaction.</p> <p>Next, discuss as a class the two questions posed at the bottom of the activity:</p> <ul style="list-style-type: none"> ■ How does space impact language? ■ How does space affect the people working or spending time there? 	Student book

40 min.

Investigating

TIP

Students should look at a wide variety of advertisements, considering aspects such as price, location, size of house, number and type of rooms. These answers could focus on the spaces within a home or on the location of more expensive real estate. Challenge students to consider both aspects when answering these questions.

TIP

You may need to give examples of virtual spaces, such as chat rooms, online collaborative documents, Second Life, online games and the “twitter-sphere”.

Real versus virtual space

The aim of this exercise is to see if there are similarities between how people create real spaces and virtual spaces. Students can work individually or in pairs, depending on the resources available and class size.

Step 1

Ask students to research the different real-estate advertisements that are available for housing in the local area. Provide students with the following prompts:

- How are spaces described?
- Based on their research, what seem to be the most important spaces?
- Why do they think these spaces are important?

Step 2

Ask the students to brainstorm in small groups ideas around virtual space. The following question prompts will help them:

- Where does virtual space exist?
- What are the different uses of virtual space?
- Why do people use virtual spaces and not actual space?

In pairs, instruct students to collaborate to create a Venn diagram comparing their research and discussions from steps 1 and 2 of this exercise.

Share the diagrams in a whole-class collaboration, then ask each student to complete a MUSE for the activity:

M = Something “**Meaningful**” they learned from the activity

U = Something that furthered their “**Understanding**” of place

S = Something they found “**Surprising**”

E = Something they found “**Engaging**” or interesting.

Local newspaper or real-estate advertising; internet

LITERARY LINKS

You may wish to explore further the concepts of time and space in connection with destiny through a film study of *Stranger than Fiction*. Harold Crick, the main character, leads a life controlled through routines until a startling event interrupts his connection with time and space. The film study can be interdisciplinary, exploring aspects such as the creative process (language and literature) and the use of colour and image in set design (design and arts).

Place

The concept of place implies a personal connection with a particular location. A space is something that can be changeable, used by different people for different reasons. A place holds much more emotional connection and therefore topics connected to place will tend to generate discussion and debate. The topics of peace and conflict provide a context for understanding the concept of place: who owns a place; emotional and historical connection to a location; the influence of a place on culture and identity.

INTERDISCIPLINARY LINKS

Language and Literature

The concept of “place” can be explored further through interdisciplinary connections with language and literature. The writings of authors such as Henry David Thoreau and Virginia Woolf incorporate the idea of personal connection to a specific location.



Activity 2 The significance of time and place

The lesson plan below serves as a starting point for students to explore this emotional connection with a place.

Time	Stage	Procedure	Resources
15 min.	Reflecting	<p>Refer students to the image of the house on page 13 of the student book, and the text about the film <i>The Wizard of Oz</i>.</p> <p>Ask them to respond in small groups to Dorothy’s statement: “There’s no place like home.” Is there really no place like home? Why would Dorothy make this statement?</p> <p>As a class, share responses from the small-group discussions.</p>	Student book; the story of <i>The Wizard of Oz</i>
		<p>TIP</p> <p>You may wish to give some context for the image in relation to the film that it comes from. Your students can do a web search for “<i>The Wizard of Oz</i>”, or you could tell them the story.</p>	
20 min.	Thinking	<p>Refer students to the image in Activity 2. The picture is of an ordinary kitchen in a house from the ancient town of Pompeii. It is not known who lived in this house or whether they were important, but this place now has historical significance.</p> <p>Ask students to discuss the image in groups of 3 or 4, and respond to the questions posed in the activity instructions.</p>	Student book
40–60 min.	Creating	<p>The following exercise provides an opportunity to explore interdisciplinary links with design. Students can collaborate at the start of the process but then should create their future home individually.</p> <p>Explain to students that they have been given the opportunity to design their own place. It could be just one room or a whole house.</p> <p>The students’ design must meet the specifications of a place that represents their personal interests. Their personality will influence shape, colour, size, functionality and materials.</p> <p>At the end of the design process, students need to be able to explain why this is “their” place.</p>	
		<p>TIP</p> <p>This activity can be expanded depending on time and resources available. Students may like to challenge themselves by designing a whole house. Other students may prefer to focus on just one or two rooms.</p>	

WEB LINKS

Plato's cave provides a useful discussion prompt for considering what is real or unreal, what defines the place and space we occupy, and how our thinking may be limited or influenced by location. Go to www.youtube.com and search for "The Cave: An Adaptation of Plato's Allegory in Clay".

Summary

The combination of time, place and space helps us to understand and explain events and phenomena in our world. This complex interaction influences where and how we live, the evolution of ideas and changes in environment. It bestows significance on specific historical events and environmental locations. Students' understanding of time, place and space will support them in being able to act on their knowledge in an ethical and responsible way.

References

Atkinson, K. 2013. *Life After Life*. London, UK. Doubleday.

Introducing key concept 2: change

Activity	ATL skills	Description
Activity 1 Change in individuals and societies	✓ Thinking Brainstorm to generate ideas.	• Think of examples of things changing from one state to another.
Activity 2 What is human nature?	✓ Thinking Use MindMap® to generate ideas and questions.	• Students use MindMap® to clarify and reflect on their view of human nature and the implications of this view for how we should live and relate to each other.
Activity 3 Structured thinking	✓ Self-management Use appropriate strategies for organizing complex information.	• Students use a change analysis table to organize their thinking about the causes, processes and consequences involved in a given historical change.
Activity 4 Setting limits	✓ Thinking Gather and organize relevant information to formulate an argument.	• Suggest appropriate limits for an inquiry into a given change in terms of time, place, space, and specificity.

Introducing change

Students' inquiries into change involve asking why things change or stay the same, how they change or stay the same and which things change or stay the same. The chapter on change in the student book seeks to introduce students to tools and skills that will help them structure and carry out their inquiries. The teacher book adds to these tools and strategies, as well as to opportunities to practise them.

While the change chapters in the student and teacher book relate to the key concept of time, place and space, it is worth noting that the connection between change and time is especially close and that any inquiry into change will also involve an inquiry into time. This is because we use time to assess the pace of change (for example, whether a change is evolutionary or revolutionary) while using change to mark the passage of time (for example, seasons of the year, developmental stages of life, movement of hands on a clock).

Change involves moving from one state to another

Change involves the process of movement from one state to another. As this is a broad statement, the student book provides examples focusing on how countries, economies and societies can all change their state.

INTERDISCIPLINARY LINKS

Arts

The arts can be a fruitful subject area for students to see how the concept of change has value for other disciplines. You can capitalize on many students' interest in music by asking them to consider how musicians use change—of key, rhythm, volume, tempo, instrumentation—to create effects in their songs. The student book discusses how change applies to the other subject areas in the MYP as well.



Activity 1 Change in individuals and societies

The activity in the student book asks students to add examples of their own to the suggestions listed. You may want to structure this further by asking students to do this for each of the disciplines within individuals and societies—especially if you teach an integrated course.

The basic question would be: What are some examples of how (psychology, economics, geography, history, philosophy) can investigate “the process of movement from one state to another”?

You want students to identify what exactly is changing (for example, individuals in psychology, markets in economics, governing arrangements in political science) and the various states they can change from and to (for example, mental health to mental illness, growth to recession, democracy to autocracy). Some examples from individuals and societies disciplines are given below:

Discipline	Objects of study, and how they can change
Psychology	Individuals, including their thoughts, emotions, behaviours and levels of mental health or sickness.
Economics	<p>Economies (national, regional, global), including:</p> <ul style="list-style-type: none"> overall economic activity, levels of development, aggregate demand and supply, unemployment, price levels, levels of inequality, government policies (on taxes, spending, money supply and regulations), exchange rates, levels of trade. <p>Markets, including:</p> <ul style="list-style-type: none"> supply and demand, price, other determinants of supply and demand such as tastes, prices of related goods, population, income, natural events, government policies (taxes, subsidies, price controls). market types (perfect competition, oligopoly, monopoly). <p>Firms, including:</p> <ul style="list-style-type: none"> changes in costs, revenues and profits.
Geography	<ul style="list-style-type: none"> Populations, including fertility levels, life expectancy, demographics. Levels of development and inequity. Levels of environmental quality and sustainability. Patterns of resource consumption.
History	Societies and individuals from the past and their political, economic, social and cultural conditions over time.
Philosophy	The truth about human nature, freedom, aesthetics, ethics (the truth itself may not change but our ideas about it do).

TIP

You may want to raise the possibility that some things in existence never change at all (for example, God in monotheistic religions; in philosophy the idea of a deeper, unchanging world that is more real than that which we perceive, as in Parmenides’ thought or Plato’s theory of forms).

Change is universal, inevitable and constant

In the student book this phrase is interpreted to mean that, while some things seem to change more frequently and faster than others eventually, even the most slowly evolving things change (the shape and location of continents, for instance).

This statement highlights the important relationship between change and continuity, especially in the study of history. The following teaching idea can help students investigate this relationship more deeply.

TEACHING IDEA 1

When it comes to inquiring into change, it can be helpful to set a baseline to clarify the starting point for the inquiry. If we are investigating a set of changes, we want to be able to answer the question “changing from what?” The example that follows sets a baseline for inquiry into 20th century world history using the categories of history.

Students can set such baselines themselves; you will just need to clarify for them the following:

- **What is the time at which the baseline is being set?** (Early 20th century in the example below.)
- **What is the place for which the baseline is being set?** (Globally in the example below, distinguishing between major world regions.)
- **What historical conditions are the focus of the baseline?** (Political, economic, social and cultural in the example below.)

While the following example establishes the broadest possible scope for setting a historical baseline, the answers to the questions above allow you to adjust the activity in terms of time, geographical scope and specificity. One variation would be to keep the scope geographically broad, asking students to set the baseline for the entire world and its major regions, but narrow the focus in terms of the categories of history, asking students to set a baseline just for political conditions. Alternatively, you could keep the scope broad in terms of historical conditions, asking students to set a baseline for all four major categories of history, while narrowing the scope geographically, asking them to focus on just one region or even one country.

Baseline: The world in the early 20th century				
Region	Politics	Economics	Social Issues	Culture
North America	Strong military power. Established nation-states. Democratic.	Fully industrialized. Relatively high levels of development.	Equality (more so than Europe) but still much segregation and inequality between races. Rise of large working class (proletariat).	Enlightenment—values of freedom, equality, popular sovereignty. Nationalism.
Latin America	Established nation-states but some instability (military control in some countries). In some cases, heavy influence from US.	Debt issues. Heavy immigration (eg, from Asia). Somewhat less industrialized than Europe, North America. Lower levels of development than North America, Europe.	Increasing equality, but still a strong, mostly European-descended elite.	Enlightenment—values of freedom, equality, popular sovereignty—played less of a role than in Europe, North America, but still somewhat important, had less impact on actual political/social systems.

Africa	Almost all countries under European control (imperialism, colonialism). European-imposed borders and the nation-state model.	Some development, but limited. Very limited industrialization, most countries still agricultural.	In most countries European elites ruled over African masses.	Some assimilation with European culture, religion. Traditional culture and religion prevalent, especially in rural areas.
Southwest Asia	Almost all countries under European control (imperialism, colonialism), although in some cases more indirect than in Africa. Some attempts to adopt European political systems (eg, nation-state, parliamentary governance).	More development than Africa, but still limited. Limited industrialization, large agricultural sectors.	Strong elites in place, very slow movement, if any, toward equality.	Some assimilation with European culture, but not in terms of religion (Islam remained strong).
Europe	Imperialist (controlled much of Asia and Africa). Strong military power. Established nation-states.	Many countries fully industrialized. Relatively high levels of development.	More equality (less power for monarchies/ aristocracies). Large working class (proletariat).	Enlightenment—values of freedom, equality, popular sovereignty. Nationalism.
Asia	Almost all countries under European control (imperialism, colonialism), although in some cases more indirect than in Africa. Japan: a modern nation-state, with imperialist foreign policy. Some limited attempts in countries other than Japan to adopt European political systems.	Limited industrialization (except in Japan, where it was advanced), some attempts to move from agricultural to industrial economies but very limited.	Still quite traditional, with elites (European or native) ruling, not much equality.	Some assimilation with European culture, but some resistance to this through attempts to maintain traditional cultures.



Activity 2 What is human nature?

The student book includes a discussion of human nature and the extent to which it changes and evolves or has permanent characteristics that all humans share. This is a central issue for all individuals and societies disciplines but also fairly challenging for students when they first encounter it. You may therefore want to support students in their reflections before they begin Activity 2 by discussing some specific views of human nature and some of the implications of these:

- **Classical conservatism** (Thomas Hobbes): Fundamental to human nature is a fear of death. An implication of this is that we need a strong government to protect us from killing each other.
- **Classical liberalism** (John Locke): Fundamental to human nature is fear of death, but also the ability to reason. Some implications of this are that we should be free to use our reason, express the conclusions we arrive at through its use and live according to those conclusions.
- **Romanticism** (Jean-Jacques Rousseau): Fundamental to human nature is the enjoyment of being alive. An implication of this is that we need to build a society that allows us to be as alive as possible, i.e., to develop our capacities to their fullest extent and to achieve self-actualization.
- **Existentialism** (Friedrich Nietzsche): Fundamental to human nature is existing, but there is not a common experience that we share. An implication of this is that we need to create the meaning of our existence. Most of us are incapable of this, so we follow the few who are (for example, prophets).
- **Religious view**: Fundamental to human nature is being made in the image of God. An implication of this is that our main goal in life is to re-establish the unity with God that we have lost.

After the discussion, ask students to consider what view of human nature underlies the religious and/or cultural traditions that they have inherited from their families and communities.

The MindMap® guidance in the student book supports students with a specific ATL skill while also providing them with a strategy for thinking about the issue of human nature. Note that the student book includes links to a website for making digital MindMaps® and an article about how to use them effectively.

We go back and back, ever farther, hunting the self as it retreats into the forest, just a step ahead of us.

Allan Bloom, The Closing of the American Mind.

The causes, processes and consequences of change



Activity 3 Structured thinking

By years 4 and 5 of the MYP, students need to develop the ability to work with change in a way that goes beyond simple cause and effect. The reality is that, in most cases of change, especially those involving complex human systems, multiple causes set in motion processes that have multiple consequences. Those consequences can later become causes themselves, starting new processes all over again. The student book gives students two tools, the change analysis table and flowcharting, for addressing the complexity of change. Activity 3 encourages them to practise using these tools.

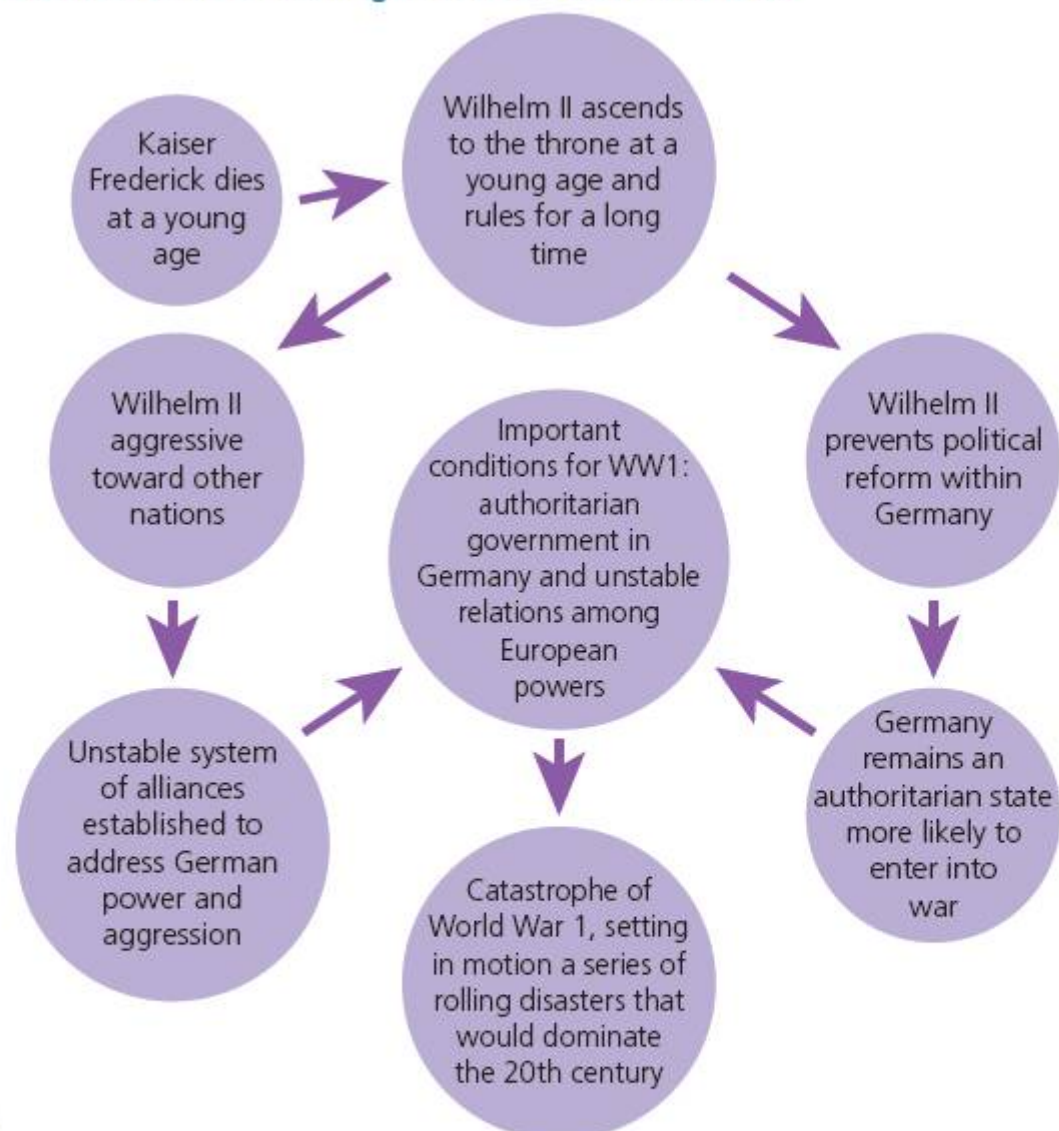
Students need to see that explanations of historical causation, even when they are found in textbooks or expounded by a teacher, are interpretations of historical evidence subject to questioning and revision based on new evidence or new understandings of existing evidence.

The change analysis table and flowcharting presented in Activity 3 support students in beginning to participate in the interpretive work of historians. One way to help them understand the provisional nature of historical explanations is to present multiple explanations for the same event. Below is an alternative explanation of the causes and processes that led to the First World War, placed into the table and flowchart format found in the student book. You could introduce this to students as an alternative to the explanation represented in their book. It is based on a review of the book *Our Fritz* by Frank Lorenz Müller. The review, by Martin Rubin, can be found under the title *The Other Kaiser* at wsj.com.

Alternative change analysis table—the outbreak of the First World War

Cause	Process	Consequence
<ul style="list-style-type: none"> ■ Wilhelm II's father Frederic dies at a relatively young age ■ Wilhelm II becomes Kaiser in 1888 ■ Wilhelm II is aggressive on the geopolitical stage (where his father would perhaps not have been) ■ Wilhelm II does not allow political reform in Germany, maintaining an authoritarian political system (where his father would perhaps have allowed more democracy) ■ Wilhelm II's aggression and unfriendliness toward Russia, France and Great Britain helped to unite those countries and put Germany in an insecure position where it was more likely to pre-emptively attack in the case of an impending conflict (where his father may have been friendlier to these countries). 	<p>The rise to power of Wilhelm II in 1888, after the untimely death of his father, brought to the German throne a ruler whose approach to other countries, as well as his stance regarding political reform in his own country, helped create the conditions that made a major European conflict more likely.</p> <p>His aggressive approach to relations with other countries helped give rise to an unstable system of alliances among European countries while his maintenance of authoritarian rule at home made it easier for him to take Germany to war when the time came.</p>	<p>Catastrophe of the First World War, setting in motion a series of rolling disasters that would dominate the 20th century.</p>

Alternative flow chart showing the causes of the First World War



TIP

For each arrow in a flowchart showing causes, processes and consequences, students should be able to insert terms such as “contributed to”, “led to”, “caused” or “influenced”.

Another way to help students understand the disputable nature of historical interpretation is to split them into groups and have them complete the change analysis table and flowchart using different secondary sources, which provide different interpretations regarding the causation of the same event.

Investigating the causes and processes that lead to certain consequences will often raise the issue for students of how far back in history they should go in seeking causes. In the case of the First World War, for example, the role of the system of alliances among European states in contributing to the outbreak of the war raises the question of how the large, unified nation-states involved in those alliances came to exist in the first place. Should the rise of the modern nation-state, the origins of which stretch back to at least the 17th century, also be included in a discussion of the causation of the First World War? In secondary works of history students will find the limits of inquiries into causation set by the author. In order to conduct their own inquiries into historical change, however, they will need to be able to make their own judgments about the appropriate limits of those inquiries. Activity 4 in the student book helps them understand the need to set limits on historical inquiries and to begin developing the capacity to do so, not only in terms of time (how far back to go) but also in terms of place, space and specificity.

WEB LINKS

As students work with the provisional nature of historical explanations, it is important that they do not draw the conclusion that all explanations are therefore equally legitimate. You may therefore want to present them with some basic criteria for judging the explanations put forward by a given author or source. Go to www.lib.lsu.edu and search “evaluation of information sources” for brief and clear guidance on how students can evaluate secondary sources and the interpretations they contain.



Activity 4 Setting limits

Another conceptual understanding that is fundamental to working with change is that any change involves a countless set of relationships among causes, processes and consequences, so we must limit our inquiry into a given change in terms of time, place, space and specificity. This is a challenging but important understanding for students to be able to apply when they are inquiring into change. Activity 4 provides students with practice in applying this conceptual understanding.

Both activities 3 and 4 demonstrate an important educational truth. In IB programmes we want students to engage in meaningful inquiry, take principled action and reflect critically in ways that lead to deep understanding. This can only happen if students possess a significant amount of content knowledge.

The example in the student book for Activity 4 illustrates the importance of background knowledge as a basis for higher-order thinking. The ability to set appropriate limits for a historical inquiry is essential to engaging in the kind of work that real historians do. However, the skill of setting such limits can only be practised by someone with extensive background knowledge of the history relevant to the inquiry.

In the case of the holocaust example from the student book, this background knowledge would ideally include the emergence of Christianity from Judaism, various Christian interpretations of the relationship between the two religions, the 2,000-year history of actual relations between Christians and Jews in the predominantly Christian civilization of Europe and the rise of modern race theories in the 19th century. Needless to say, it would be difficult for students to gain this kind of background knowledge while also trying to engage in the task of setting limits for an inquiry. You will therefore likely find that students will only be successful with this task if their inquiry involves an area of history with which they are already well acquainted.

To paraphrase cognitive psychologist Daniel Willingham, “you can teach students maxims about how they ought to” set appropriate limits for their inquiries, “but without background knowledge and practice, they probably will not be able to implement the advice they memorize.” The best way, therefore, to ensure that students can engage in meaningful and authentic inquiry, is to systematically help them build content knowledge throughout the course of their schooling so that they can draw on this knowledge as they undertake specific inquiries.

WEB LINKS

Search online for an article entitled “There are no Shortcuts: Mending the Rift between Content Knowledge and Deeper Learning” by Robert Pondiscio for a more in-depth treatment of the importance of background knowledge to developing 21st century skills.

The different types of change

The student book asserts that the causes of change can be natural and artificial, intentional and unintentional, and positive and negative.

Natural and artificial change

The Teaching Idea below looks in detail at natural and artificial causes of change.

TEACHING IDEA 2

To look at natural and artificial causes of change in more depth, give students a copy of the essay "Geography Strikes Back", by Robert D. Kaplan (this can be found through a web search). Kaplan argues in this piece that many of the major issues we face in today's world have causes rooted in geography. In other words, they have natural rather than artificial, or human-made, causes. Have students address the following questions as they study the essay. The table below provides both an example of how students might organize their responses to the questions, as well as possible responses they might actually give.

Step 1

Read the essay closely. Identify:

- the various regions on which Kaplan focuses
- the problems each region faces
- how natural causes rooted in geography affect those problems
- how human actions affect those problems.

Step 2

Kaplan's thesis is that natural causes explain many of the world's problems. In a few cases (for instance in his discussions of Syria and China) he explains how humans are currently trying to address those problems or how they might address them in the future. For each set of problems Kaplan identifies, suggest ways that human action might address them.

Step 3

Kaplan concludes: "In this very brief survey of the world as seen from the standpoint of geography, I don't wish to be misunderstood: Geography is common sense, but it is not fate. Individual choice operates within a certain geographical and historical context, which affects decisions but leaves many possibilities open." Discuss the relative balance between natural factors and human actions when it comes to creating and solving the problems Kaplan presents.

TIP

Consider using the Socratic seminar format as a basis for student discussion of question 3. See chapter 14 of the teacher and student books for more information on using such a format in the classroom.

Natural causes of change		
Place (region)	How natural causes affect the region's problems	How artificial (human-initiated) causes do, or might, affect the region's problems
Central and Southeastern Europe	Carpathian Mountains separate Central Europe from the Balkans, leading to different patterns of development in the two areas.	Modern communication and transportation technologies allow for exchange of ideas, processes and products, possibly causing levels of development to converge.
East and South Asia	Himalayas separate India and China, leading to the development of two different civilizations.	Modern communication and transportation technologies allow for exchange of ideas, processes and products, causing cultures and societies to become more similar.

<p>Southeast Asia</p>	<p>The South China Sea serves as “the Pacific antechamber to the Indian Ocean,” making it a crucial connecting point for oil moving from Southwest Asia to the huge populations of East Asia. It is also thought to contain oil and gas which could be exploited to provide further energy to these populations. The countries bordering it therefore strive to ensure they have access to its resources and shipping lanes.</p>	<p>China, Vietnam and the Philippines could work together to develop agreements for the use of the South China Sea and its resources.</p>
<p>Eastern Europe</p>	<p>The country of Russia lies on a “vast, continental space that is unprotected by mountains and rivers”, leading to a sense of “deep geographical insecurity” for Russians and attempts to overcome this insecurity by establishing imperial buffer zones in Eastern Europe.</p>	<p>Russia and its neighbours to the west could work together to create conditions [such as high levels of cultural and commercial exchange] that would build trust and understanding and lessen concerns about security.</p>
<p>South-central Asia</p>	<p>Afghanistan and Pakistan have no natural border and therefore “comprise the same Indo-Islamic world,” making it difficult for them to function well as two separate states.</p>	<p>The two states could work together to establish control over their respective territories and to limit unwanted interference by each other’s citizens.</p>
<p>Southeastern Europe</p>	<p>Greece lies at the intersection of the Mediterranean and Balkan worlds, leading to a history of domination by outside groups such as the Romans, Byzantines and Ottoman Turks, and the resulting development of counterproductive political and economic practices in response to external control.</p>	<p>Greece could work to build its political and economic strength in order to overcome the disadvantages of its location and avoid the pattern of outside rule repeating itself in the future.</p>
<p>East Asia</p>	<p>The Han Chinese find themselves surrounded by minority populations [Tibetans, Uighur Turks, Mongolians] occupying high plateaus possessing “much of China’s fresh water, hydrocarbons and other natural resources”, leading to a sense of insecurity among China’s leaders and concerns about the country’s longer-term unity.</p>	<p>Chinese leaders currently seek to maintain strong central control over these minority areas, populate them with Han Chinese, stimulate their economies and provide limited amounts of autonomy.</p> <p>The Han Chinese could work together with these minorities to create conditions [such as high levels of cultural and commercial exchange] that would build trust and understanding and lessen concerns about security and disunity.</p>

Southwest Asia

Syria's ethno-religious groups are divided geographically, increasing the chances of fragmentation. On the other hand, Syria occupies a territory with "deep roots in specific agricultural terrains that hark back millennia", meaning that its borders are not wholly artificial and opening the possibility that it could become a stable, unified country.

Syria's leaders attempted to use pan-Arabism and rejection of Israel as ideas which could unify its people. In the future Syrians could work together to create conditions (such as high levels of cultural and commercial exchange) that would build trust and understanding and allow the country to take advantage of its favourable location on the Mediterranean.

Intentional and unintentional change

The discussion of intentional and unintentional change offers an opportunity to link to the key concept of systems. Unintentional changes frequently result from the complexity of systems and the fact that multiple systems often interact, making them even more unpredictable. Social science has even developed a "law" of unintended consequences to reflect the fact that our actions, especially when they target complex systems, always have unanticipated consequences.

You may also want to introduce the idea here that a consideration of unintended consequences should be an important part of the inquiry cycle. Students should be trying to predict unintended consequences as they develop understanding and plan for action. After taking action, and in preparation for possible further action, they should reflect upon any unintended consequences that arose from their actions and, if the consequences were negative, consider how to adjust their plans to avoid them.

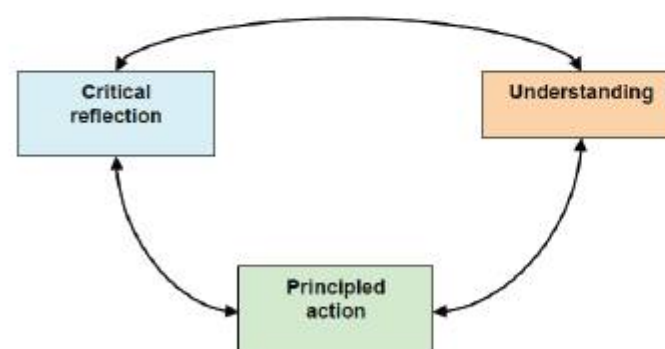
WEB LINKS

For an in-depth discussion of unintended consequences, go to www.econlib.org and search for the "unintended consequences" encyclopedia entry. The article "Slavery, Snakes, and Switching: The Role of Incentives in Creating Unintended Consequences" at the same site also provides an in-depth discussion of this phenomenon and gives many examples. For a specific example of unintended consequences in the area of US campaign finance law, see the article "Unintended consequences 1, good intentions 0".

What unintended consequences resulted from the action? Were they positive or negative? If they were negative, how can they be avoided in future actions? If positive, how can they be accentuated in future actions?

Based on your understanding of the context surrounding your actions (the individuals, groups, systems involved), consider what unintended consequences might emerge from the action.

Figure 3.1 Unintended consequences in the inquiry cycle



Positive and negative change

Judging whether a given change is positive or negative offers students the opportunity to practise synthesizing “information to make valid, well-supported arguments,” the second strand of criterion D. It can also be the source of interesting class discussion, including in more formal formats like the Socratic seminar mentioned earlier in this chapter.

WEB LINKS

Go to <http://serc.carleton.edu> and search “cosmic calendar” for a lesson that helps students understand the history of the universe by compressing it into one year. You can also do a general web search of “cosmic calendar” to find a ready-made version.

“Welcome to the Anthropocene” on www.youtube.com focuses on the idea that the extent of human impact on the Earth has caused us to enter a new geological epoch. If we have indeed entered a new epoch, what has been the pace of that change?

Summary

The student book allows students to explore the concept of change, and especially the aspects of change which interest practitioners of individuals and societies disciplines. It also gives them a number of strategies and tools that they can use as they work with the concept of change in the individuals and societies course. The teacher book expands on this, adding some strategies for working with change and ideas for further exploration of the concept.

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Willingham, D.T. “Critical Thinking: Why Is It So Hard to Teach?” *American Educator* 31, no. 2 (Summer 2007).

TIP

You may want to raise “pace” as an element of change, which is not discussed elsewhere in the student book. When we distinguish, for instance, between evolution and revolution, we are focusing on the pace of change. We also use the concept of geological time when investigating changes that happen so slowly that they are imperceptible across a human lifetime or even many generations (for example, the evolution of species, the shifting of continents).

Introducing key concept 3: global interactions

Activity	ATL skills	Description
Activity 1 Interactions on different scales	✓ Thinking Consider ideas from multiple perspectives.	• Explore and compare the development and impact of different global interactions.
Activity 2 The “rules” of trade	✓ Social Make fair and equitable decisions.	• Investigate and analyse equality in trade agreements.
Activity 3 Research into trade groups	✓ Thinking Formulate factual, topical, conceptual and debatable questions.	• Compare interactions between different countries to form trade alliances.

Introducing global interactions

The key concept of global interactions directly connects with intercultural awareness, one of the fundamental concepts of the MYP. The MYP model also stresses the development of international-mindedness as one of the primary aims for learning. Global interactions explores the increasingly connected world that our students live in, and will be working in. As a concept, it covers ideas such as the global connections in trade, movement of populations, migration of animals and the management and stewardship of global resources.

Why global interactions are important

Understanding global interactions is integral to individuals and societies. In order for the students to be able to decipher and explain the world around them, they need to recognize and analyse the relationships that exist between people and environments all over the world. These relationships have several variables that are explored through the related concepts of interdependence, complexity, cooperation and conflict. For students to be able to analyse these variables, the terms need to be clearly explained in contexts that are relevant to their lives.

TEACHING IDEA 1

The following questions/activities can provide starting points for discussions of the related concepts:

Interdependence

- Is there a person in your life who you rely on and who relies on you?
- How did this relationship form?

Complexity

- In mathematics, what differences are there between simple and complex problems?
- How can you make a problem more simple? Or more complex?

Cooperation

Choose a team sport that you know well. Describe different aspects of cooperation between the different team members.

Conflict

What different sorts of conflicts can occur between countries? Scan a local newspaper or news website and identify the varying types of conflicts.

Interdependence

Investigating interdependency in relationships provides many areas for students to practise their skills of evaluation, making judgments and supporting their opinions with detailed examples. The concept of interdependence implies that the people or groups involved in the relationship rely on each other to achieve specific objectives. However, students should evaluate the terms of the relationship and consider aspects such as economic power, political history and environmental responsibility. While a relationship might be interdependent, the exchange may have very different impacts on the people or groups involved in the relationship. For example, celebrities rely on media outlets to provide them with exposure and publicize their films, music or art. The media relies on celebrities to provide them with news items that sell magazines, or attract more visitors to websites. But when the media publicizes something that a celebrity wishes to keep private, the relationship has changed. The media, as a collective group of photographers and journalists, can often wield much more power than an individual celebrity and their publicist. This related concept is explored more in Chapter 16 on interdependence.

Global interactions recognizes the interconnection and interdependence of the natural world and the larger human community.

(MYP 2014: 17)

TEACHING IDEA 2

Step 1: Ask students to take a look at Figure 4.1 in the student book.

Step 2: Instruct students to work in pairs to list the basic needs of a person living in their country. Then ask them to list all the “wants” that a person has. Remind them that these are things beyond basic needs. Both of these lists are subjective. Students shouldn’t feel that there is a certain number of items that have to be included.

Step 3: Ask the students to form groups of four and share their lists.

Step 4: Back in pairs, ask the students to collaborate and write a short paragraph that explains what they feel must happen in a country for it to be able to provide basic needs and wants for its population. You might like to prompt the students’ thinking with reminders about the possible influence of economy, politics, environment and education.

Step 5: Instruct students to share their paragraphs in groups of four. Ask the groups to synthesize their thinking and create a headline that states the connection between interdependence and development. Limit the headline to 10 words to challenge the students to think succinctly and practise summarizing their ideas.

The topics connected to global interactions and interdependence also include a focus on the interactions that people have with the environment. The sustainability of these interactions depends on the responsibility of the users. Are they able to utilize a natural resource in a way that ensures long-term use? The more we learn about the way the environment works, the more we can understand of the impact of human actions.

An additional challenge for this topic is that many environmental resources are owned by no one yet needed by everyone—consider the atmosphere, the polar ice caps and much of the oceans. Students investigating this idea will also need to consider how cultures can conflict over the perception of sustainable land use.

The example of Ecuador’s rainforest in Chapter 8 on choice demonstrates the difference in approach to conservation depending on location and culture. Students will also explore this topic in Chapter 16 on interdependence.

Complexity

Global interactions are becoming increasingly complex and multifaceted. Students should also consider the key concept of systems when analysing the strands of connection between individuals, communities, governments and environments.



Activity 1 Interactions on different scales

The related concepts of networks and power are also important in understanding the complexity of interactions. This activity encourages students to consider a key concept from multiple perspectives. The task in the student book can be carried out individually, or in groups, as suggested below.

Time	Stage	Procedure	Resources
15 min.	Reflecting	Ask students to read Activity 1 in the student book. Organize students into pairs to complete Step 1.	Student book
10 min.	Hypothesizing	Organize the pairs of students into groups of four. Ask them to share responses to Step 1 in the activity before moving on to Step 2.	Student book
5 min.	Brainstorming	Introduce the concept of six degrees of separation through small group discussions. Ask: <ul style="list-style-type: none"> ■ Have students heard of the concept? ■ Can they think of any surprising connections they have made with people? 	<div style="border: 1px solid #0070C0; padding: 5px; background-color: #0070C0; color: white;"> WEB LINKS You can learn more about this idea by doing a quick internet search for “six degrees of separation”. </div>

<p>30 min.</p> <p>WEB LINKS Go to www.theguardian.com and search under the technology tab for "Six degrees of separation".</p>	<p>Expanding</p>	<p>Provide copies of the newspaper article "Proof! Just six degrees of separation between us" by David Smith, 2 August 2008.</p> <p>In groups of two or three, ask students to select three to five quotes from the article that highlight the concepts of "global interaction" and "interdependence".</p> <p>Use the quotes as inspiration to create a diagram that illustrates the main ideas of the article.</p>	<p>Newspaper article</p>
<p>30 min.</p> <p>WEB LINKS Go to youtube.com and search for "Kevin Bacon TEDxMidwest".</p>	<p>Investigating and reflecting</p>	<p>Watch as a class the TED talk by Kevin Bacon. "Six degrees of Kevin Bacon" was invented as a game to show the connectedness between celebrities, but it has now become much more than just a game. Despite an increasingly complex world of 7 billion people, we are all connected in some way.</p> <p>Ask the students to note down examples of "interaction" and "interdependence".</p> <p>After viewing, have students share their examples and discuss the possible impacts of interdependence and interactions.</p>	<p>Internet</p>

Conflict and cooperation

Within every interaction, there are elements of cooperation and conflict. Remind students that conflict does not necessarily always refer to war or physical violence. Conflict in an interaction can mean a difference in opinion or understanding. Conflict and cooperation can certainly exist in the same interaction. Give the example to the students that they may be assigned another student to collaborate with on a project. They may have different ideas and opinions (possible conflict) but they have to cooperate in order to complete the assigned task. In some instances, conflict provides a necessary catalyst for sharing and improving ideas. It is not something to avoid but it is important that students learn how to understand and manage conflict.

LITERARY LINKS

The concept of "six degrees of separation" was originally written about in a short story by Hungarian writer Frigyes Karinthy. The idea has also inspired a play, *Six Degrees*, and a film, *Six Degrees of Separation*.



Activity 2 The “rules” of trade

Complex interactions such as trade agreements will require students to view an interaction from different perspectives as well as through a historical context to analyse the presence of conflict and cooperation. The task in the student book can be carried out individually, or in groups as suggested below.

Time	Stage	Procedure	Resources
10 min.	Introducing	Have students read the Activity 2 instructions in the student book. As a class, share and discuss some of the knowledge that students have about trade.	Student book
30 min.	Investigating	In groups of 2 or 3, ask students to share ideas about possible trade guidelines or rules that they think should be included in their manifesto.	
20 min.	Sharing	Each group should have a one-minute speech or a manifesto that they can share with the class. Once all groups have made their presentation, the class can discuss any points of interest, and similarities or differences between the lists.	Student trade guidelines
40–60 min.	Investigating	Assign pairs of students to research trade agreements between different countries. They should ask questions such as: <ul style="list-style-type: none"> ■ What is the history of the relationship between these countries? ■ How are negotiations taking place? ■ What resources or services are being exchanged? ■ Are there ethical concerns with the process of exchange? ■ Are there winners and losers as a result? 	Library; internet
20 min.	Reflecting	Once students have researched some different trade agreements, ask them to apply the guidelines that they developed as part of Activity 2. Would their guidelines solve some of the issues that may exist in a trade agreement?	Student trade guidelines

Power, trade and responsibility

Power

The connection between global interactions and power will challenge students to consider big ideas such as fairness and ethics.

The scale and type of power wielded in an interaction are connected to the people and groups involved as well as to the goods or services being exchanged. A good example of this is triangular trade routes. Refer students to Figure 4.2 in the student book in order to complete the activity in Teaching Idea 2.

TEACHING IDEA 3

Step 1: Organize students into groups of three.

Step 2: Ask them to spend five minutes looking at Figure 4.2. In their groups, they should discuss what they observe on the map and share what additional background knowledge they might have.

Step 3: Encourage each student to go through the following steps as they think about power in connection with trade:

- “I am thinking about... from the perspective of...”.
- “I think... [give ideas about how power and trade interact, based on the map].”
- “From the perspective of... I wonder...?”

Examples of possible answers include:

- “I am thinking about trade and power from the perspective of a slave trader in West Africa.”
- “I think slave traders used their power without consideration of human rights. People who were traded as slaves had no power at all because they didn’t have anything other than their own labour as a commodity to trade with.”
- “From the perspective of slave traders, I wonder whether they ever thought about what they were doing and whether it was right or wrong?”

WEB LINKS

This teaching idea is based on the Visible Thinking routine called “Circle of Viewpoints”. You can learn more about Visible Thinking routines at www.visiblethinkingpz.org.

Trade

Encourage students to read the Quick Think box in the student book about exchanging or trading ideas, then explore the term “mutual benefit” in a class discussion. Ask students to think about a time when they have taken part in a trade or exchange. Do they feel that every exchange happens fairly? Are the parties involved with the trade always satisfied with the results?



Activity 3 Research into trade groups

Time	Stage	Procedure	Resources
10 min.	Introducing	Instruct students to read through Activity 3 in the student book, which can be carried out individually, or in groups as suggested below. Discuss what students already know about these organizations, clarifying details when necessary.	Student book
30–45 min.	Planning and investigating	Organize students into groups of 2 or 3. Each group needs to choose a trade group to research. There are three organisations suggested in the student book but you may wish to also include others. Each group should plan out responsibilities for researching information. Groups should review the activity guidelines for the information that they have to find. Students may wish to use a graphic organizer to record their notes into categories such as: natural resources, GDP, location and population.	Student book

20 min.	Analysing	<p>Once groups have collected information about the member countries of their trade organization, they need to consider the concepts of fairness and equity in the relationship.</p> <p>In each group, discuss:</p> <ul style="list-style-type: none"> ■ How does a country's location, population and resources affect its power in a trade organization? ■ Is it possible for all countries in a trade agreement to be treated equally? ■ How do the students know that trade is carried out fairly among member countries? 	<p>WEB LINKS Create a classroom simulation of the successes and difficulties of trade. This teaching activity is available as a PDF from www.worldvision.org. Search online for "Trading Game World Vision".</p>
20 min.	Sharing	<p>As a class, discuss the analyses from each of the groups. What further questions do students have about trade and global interactions?</p>	

DIPLOMA PROGRAMME LINK

Aims 4 and 5 of the theory of knowledge course directly connect to the key concept of global interactions and the related concept of choice:

- critically reflect on their own beliefs and assumptions, leading to more thoughtful, responsible and purposeful lives
- understand that knowledge brings responsibility, which leads to commitment and action.

Responsibility

Understanding global interactions is more than just analysing the costs and benefits of exchanges. Students need the opportunity to develop their understanding of choice and responsibility—at a personal, local and global level. The previous activity of creating trading guidelines serves as a useful jumping-off point for discussions on how responsibility is part of global interactions.

When exploring this concept, encourage students to think about boundaries of responsibility. For example, what is their personal level of responsibility? What responsibilities does a government have? How do these ideas of responsibility influence the choices that are made?

Summary

Global interactions are increasing in their scale, complexity and variety. Every individual is a part of these complex threads of global interactions. The many ways that people come into conflict and cooperate with each other and the environments they live in are all part of the study of individuals and societies. Understanding the reasons why an interaction exists helps us to understand the needs and wants of individuals.

Students need opportunities to analyse the benefits and drawbacks of an increasingly connected and interdependent world. Being able to analyse complexity and the balance of power in global interactions can help them to make choices about how they can live as responsible, globally minded citizens.

Introducing key concept 4: systems

Activity	ATL skills	Description
Activity 1 Documenting a system	✓ Thinking Analyse complex concepts and projects into their constituent parts and synthesize them to create new understanding.	 Create a representation of a system.
Activity 2 From Earth to eye	✓ Research Present information in a variety of formats and platforms.	 Research and document the steps in a system for creating an electronic product.

Introducing systems

Our world would not exist without systems. On a large scale, they provide essential services for life. On a smaller scale, systems do everything from sorting our emails to recycling our rubbish and timetabling the school day. The topics connected to this key concept encourage students to understand more about human systems, environmental systems and the interaction that occurs between these two groups.

Why systems are important

Systems are all around us, a part of us and connected with everything that we do.

People use, create, change and destroy systems everywhere, every day. By becoming actively aware of systems, your students are more likely to reflect on their use and impact in their lives. Their heightened sense of how they function can help them understand both the simple and complex relationships in the world around them.

Systems exist because there is a need for one component to rely on another. If a system is labelled as “poor” or “negative” it is worthwhile remembering that even negative systems exist in the first place because there has been a demand.

TEACHING IDEA 1

In small groups, ask students to think of a system that they would classify as “working” and a system that they would classify as “not working” or “frustrating”.

Ask them to list the characteristics of each system and hypothesize why one works and the other doesn't.



DIPLOMA PROGRAMME LINK

The concept of systems has continued application in the Diploma Programme. Students will need to develop understanding of a wide variety of systems when studying subjects in the individuals and societies group: political systems, economic systems, social systems, etc. In particular, Aim 8 of environmental systems and societies is “appreciate that human society is both directly and indirectly linked to the environment at a number of levels and at a variety of scales”. Understanding systems in the MYP directly supports the ability to analyse the system interactions between people and the environment.

Within your class, you will most likely have a wide range of students with different educational needs. It is important to differentiate class material to ensure that all students are able to demonstrate an understanding of the concept of systems. What can support you greatly in providing differentiation is the choice of case studies and examples of different systems. When assessing case studies and examples for use in the classroom, consider their scale and complexity.

Scale

While it is virtually impossible to study one system in complete isolation from another, it is possible to carefully select the scale of the system to study. Consideration of scale is necessary in order to select a system that is relevant for the students and possible for them to understand. Studying financial systems on a global scale (for example, the operation of a stock exchange) may be inappropriate for your students or for their learning contexts. It is still possible for students to understand the same concepts of financial systems by studying the operations of a small business, which may be more relevant and age appropriate for your students.

Complexity

The complexity of a system should also influence your choice of whether it is an appropriate case study or example. It may be effective to study a system first at a more general level, then at a more complex level once students have a basic understanding.

Things that make a system complex are:

- the number of components
- the amount of inputs and outputs
- vulnerability.

Systems also become more complex when we start to analyse how they interconnect to form networks.



Activity 1 Documenting a system

This activity helps students incorporate systems terminology into their active vocabulary while reflecting on their knowledge of systems that they use regularly. It can be carried out individually, or in groups as suggested below.

Time	Stage	Procedure	Resources
10 min.	Comparing	In groups of 2 or 3, ask students to compare and contrast the two food chains in Figure 5.2 in the student book. They should create a Venn diagram that compares and contrasts simple and complex systems.	Student book
15 min.	Brainstorming	As a class, discuss possible systems that deliver essential services to students. When sharing ideas, discuss the different scales and complexities of each system.	Student book

30 min.	Creating	<p>Read through the instructions for Activity 1 in the student book.</p> <p>Some suggestions for systems are listed but students could choose to document any system as long as it is essential to them.</p> <p>It is important to allow students to brainstorm some ideas for representing their chosen system. Encourage them to collaborate in small groups to gain input and seek feedback on their ideas.</p>	Student book
20 min.	Sharing	<p>Hold an exhibition of the different representations of systems that your students created.</p> <p>After students have viewed and shared their work, ask them to reflect on the following:</p> <ul style="list-style-type: none"> How do the different systems vary in scale and complexity? Identify and explain how systems from three different students can interact. Why are these systems classified as “essential”? 	Student system representations

Inputs and outputs

Developing an understanding of inputs and outputs, which are a part of every system, will help students to consolidate their knowledge of this key concept.

Inputs refer to processes, or raw materials, that are essential to maintaining the system, while outputs are things that are produced or consumed by the system.

WEB LINKS

As a quick example of how systems can be a closed loop, go to www.youtube.com and search for “the plant: my beer feeds your fish”.



Activity 2 From Earth to eye

Once students have developed skills of documenting systems, they can then think more critically about the ethical implications of a system. This activity encourages them to reflect on the impacts of a system that create a product that they use regularly.

Time	Stage	Procedure	Resources
10 min.	Introducing	Ask students to quickly list all the different electronic products that they use. Do the students know where these products are made? Or what materials they are made from?	
10 min.	Planning	Go over the steps for Activity 2 in the student book and clarify the instructions.	Student book
60–90 min.	Researching and creating	Students will complete the steps for the activity individually but they may wish to collaborate with peers to check understanding, share ideas or seek feedback.	Student book; library/internet

30 min.	Investigating	<p>Watch <i>The Story of Electronics</i>, a film that is available on www.storyofstuff.org, asking students to listen out for key words and phrases. If possible, note these down as the film is playing or ask the students to collaborate with note-taking using an online tool such as TitanPad. Give students time to research additional information available on the website.</p>	Internet
<p>TIP</p> <p>Download a transcript of the film from the website and provide it for students who are English language learners. They will find it very helpful to read the transcript at least a day before you watch the film.</p>			
30 min.	Synthesizing	<p>In small groups, have students review their posters and the information from <i>The Story of Electronics</i>. What recommendations would they make to designers for waste reduction when they are creating the electronic product that the student has researched?</p>	Student posters

LITERARY LINKS

You can learn more by reading Annie Leonard's book of the same name, *The Story of Stuff*. *High Tech Trash: Digital Devices, Hidden Toxics, and Human Health* by Elizabeth Grossman also documents the issue of systemic dumping of electronics.

Vulnerability

A sustainable system is one that is in equilibrium. However, the dynamic and complex nature of systems makes them vulnerable to change. When studying vulnerability in systems, it is important for students to be aware that sometimes vulnerabilities may be exploited for a positive effect. Just because a system operates, this does not necessarily mean that it “works” or that it is the most efficient system for that process.

A good example of a vulnerability in a system being exploited is the “opt in, opt out” function on forms. Dan Ariely, a behavioural economist, explores this idea in his TED talk, which students are directed to in the Web Links box in the student book.

Creating, assessing and maintaining a system

One way of promoting inquiry-based learning in the study of systems is to provide your students with the opportunity to create, assess and maintain a system.

Remind them that throughout this process, they will need to have an understanding of the inputs that are available and know what the desired outputs are. Their system will most likely interact with other systems, so they also need an understanding of what this interaction will look like, and they need to consider scale too.

The topics in chapters 9, 14, 15 and 16 feature a variety of systems in different contexts to allow students to develop an understanding of this key concept.

Summary








In order for students to understand and articulate the different parts and processes of a system, they need to read, view and create systems on different scales and of different complexities. By initially looking at more simple systems, students will be able to build their knowledge and understanding of the key vocabulary related to systems. Analysis of the interaction between people and the environment will support students' understanding of human impacts and influence in systems.

References

Grossmann, E. 2006. *High Tech Trash: Digital Devices, Hidden Toxics, and Human Health*. Washington, DC, USA. Island Press.

Leonard, A. 2010. *The Story of Stuff*. London, UK. Constable & Robinson.

Conflict

	ATL skills	Task summary
TOPIC 1 Water demands		
Activity 1 Water conflict and cooperation	✓ Communication Read critically and for comprehension.	 Research and compare characteristics of different river systems from around the world.
Activity 2 Annotated physical model of the Three Gorges Dam	✓ Social Manage and resolve conflict, and work collaboratively in teams.	 Design and construct an annotated model of China's Three Gorges Dam, documenting different types of conflict that relate to water use.
Activity 3 Short presentation	✓ Thinking Create novel solutions to authentic problems.	 A two-minute presentation that encourages action for change in resource management.
TOPIC 2 The Arab Spring		
Activity 4 Summary chart of types of government	✓ Communication Use and interpret a range of discipline-specific terms and symbols.	 A formative assessment for student knowledge of political systems.
Activity 5 Fishbone graphic organizer	✓ Self-management Use appropriate strategies for organizing complex information.	 Development of different note-taking strategies to prepare for an informative speech.
Activity 6 Recipe for change	✓ Thinking Apply existing knowledge to generate new ideas, products or processes.	 Reflection on conceptual understandings and planning for change.
TOPIC 3 New Zealand Maoris		
Activity 7 Create a collage or soundscape	✓ Thinking Apply skills and knowledge in unfamiliar situations.	 Creation of artwork based on historical events.

Activity 8 Speech on defining land ownership	✓ Research Access information to be informed and inform others.	👤 Give an informational speech on the different interpretations of land ownership.
Activity 9 Analytical essay	✓ Thinking Draw reasonable conclusions and generalizations.	👤 A comparison and analysis of different experiences of populations that have been invaded.

Introducing conflict

Conflict is a concept that will be very familiar to individuals and societies teachers. In preparing to teach about conflict, there are several steps to consider.

How will you define “conflict” with your students? Creating a class definition of conflict will support the identification of conflicts on different scales and with different levels of severity. Often, students equate conflict with physicality—the clash of armies or two people fighting with weapons. Defining conflict as a disagreement allows students to understand how conflicts can be played out without the interaction of physical force. It is also an interesting discussion point: are non-physical conflicts more or less serious than those that involve violence? Are there situations where conflict is positive?

TEACHING IDEA 1

1. Hand out the lyrics to Edwin Starr’s song *War*.
2. Play the song to students so they can hear the lyrics being sung.
3. Pose the question to your students “Was Edwin Starr right? Is war good for absolutely nothing?”

How can you quickly engage students in the related concept? Debating what the consequences of conflict are as a class will generate a variety of opinions and examples and give you some indication of what conflicts are important or relevant to students. Consider whether students’ initial responses are mostly positive or negative when listing the consequences of conflict. If they give a negative response, challenge them to list a positive consequence, and vice versa. Often, students will associate the word “consequence” to mean negative results.

Developing an understanding of resolution of conflicts should lead to discussions about the role of peace and how this term can be defined. Resolving conflict will require students to learn about negotiation, goal setting and compromise. Ending conflict will generate discussions about the existence of peace in a region or nation. Students may associate peace as a positive state that should be the goal of all nations, but they should also reflect on the possibility that “peace” may exist as an armed peace.

DIPLOMA PROGRAMME LINK

An aim of the Group 3 subjects in the Diploma Programme is to “enable the student to recognize that the content and methodologies of the subjects in Group 3 are contestable and that their study requires the toleration of uncertainty”. This serves as a reminder of the importance of remaining as neutral as possible when teaching conflicts that have contestable origins and impacts.

WEB LINKS

Two excellent starting points for resources are www.waterfootprint.org and www.thewaterfamily.co.uk.

Teaching conflict requires the ability to remain neutral when introducing controversial issues. As a teacher, impartiality is important to generate healthy independent discussion and thinking among students. Within your class, you may have students who have preconceived ideas about who is to blame in a conflict, which may differ from others. Acknowledging this is important, but it is also essential to emphasize that students should assess information in order to make up their own minds.

You should also think carefully about selection of resources. Choosing a broad range of resources will allow you to teach skills such as source analysis, the concepts of validity and reliability, and the role of perspective. It will also encourage the students to make up their own minds after evaluating all the information that is available to them. Encouraging students to make a decision and explain their reasoning behind it provides excellent opportunities for developing the ATL skill of metacognition.

TOPIC 1 **Water demands**

By using the topic of water, students have an opportunity to examine how conflict can emerge over a resource that everyone needs, every day. No matter what the climate is, water use and management can be contentious issues. With changing patterns of rainfall and water distribution, increased demand and greater risk of pollution, understanding how water resources can be managed is an important part of global awareness.



Activity 1 **Water conflict and cooperation**

Time	Stage	Procedure	Resources
15 min.	What do we use water for?	In groups of 2/3 students, brainstorm all the ways they use water. Next, ask each group to rank their list of uses from “most water” to “least water”. They could classify their uses into groups such as cooking, cleaning, etc. Then, ask them to rank the list in order from most important to least important for use of water.	Paper
15 min.	Where does our water come from?	Direct students to research in pairs the water supply for their local community. Challenge students to also research water supplies for local agriculture and industry, as well as domestic use. Students can create a flowchart, diagram or cartoon to explain the local water supply.	Internet

15 min.	What conflicts could arise from shared water resources.	Ask students to look at the map of the Limpopo River in the student book. Discuss as a class some of the possible causes for conflict related to shared water resources. Check students' knowledge of key terms such as hydroelectric dams, water diversion, flood mitigation, drought, pollution, irrigation and international cooperation.	Student book
30 min.	How do river systems operate in different parts of the world?	Direct students to Activity 1 in the student book. They will now expand their research of water supply systems to different river systems around the world. Encourage students to form groups and then create the shared list of research questions for steps 1, 2 and 3.	Student book

LITERARY LINKS

There are several films which document the struggle over finite resources. *Blood Diamond* (2006, dir Edward Zwick) provides an insight into the struggles of a poor country that has a valuable resource wanted by rich countries.



Activity 2

Annotated physical model of the Three Gorges Dam

Supporting model making

This activity requires students to create an annotated model demonstrating the effects of the Three Gorges Dam. An assessment rubric has been provided that uses criteria A, B and C to assess student learning.

Students will need support in planning and creating a three-dimensional model if they have not had previous experience with this type of task.

Providing an example is one of the ways that you can guide students through the process—it could be one that you have made or photos of a model.

Alternatives

If you are unable to have an assessment that is based on the creation of a physical model, there are other ways that students can demonstrate their knowledge and understanding using visual communication. Students could complete this assignment by creating a detailed annotated diagram or use a 3D modelling program on a computer to show the conflicts around building the Three Gorges Dam.

Planning

In the early stages of this project, it's important for students to clearly plan their time in terms of research and construction. By assessing this task using criterion B, you will be placing additional emphasis on the importance of a detailed research plan. It is also a chance for you to monitor students' processes and ensure that they are not getting carried away with the model design before completing solid research.

TIP

Careful consideration of the student groups can help the success of this assessment. Where possible, ensure that each group has at least one student who has strengths in fine art or design.

Materials

When it comes to constructing the model, some groups may have difficulty with ideas around sourcing materials. Having a 15-minute brainstorming session as a class can help groups share and receive ideas of how to build the model. One resource that you can provide is the base that the model can be built on. This should be something firm and rigid, able to support various constructions from papier-mâché to plaster. Providing all groups with the same base will also give the students an indication of the final size of the model that they are expected to make.

Annotations

The annotations on the model are where students need to show their knowledge of the impact of the Three Gorges Dam. If they do not include detailed and accurate annotations, they will not be able to achieve the higher levels of criterion A. Annotations can be printed out and attached to the model or the model can have a number code that corresponds with a separate written explanation of the conflicts.

Assessment

The annotated model is a summative assessment task that focuses on criteria A, B and C. The rubric below shows the task specific clarifications for level 7–8 in each of these criteria.

Level	A Knowing and understanding	B Investigating	C Communicating
7–8	<p>The group:</p> <ol style="list-style-type: none">I. consistently uses a wide range of terminology effectivelyII. demonstrates detailed knowledge and understanding of the three different types of conflicts through thorough, accurate descriptions, explanations and examples.	<p>The group:</p> <ol style="list-style-type: none">I. formulates a clear and focused research question surrounding conflict in the Three Gorges Dam and justifies its relevanceII. formulates and effectively follows a comprehensive action plan to investigate a research questionIII. uses research methods to collect and record appropriate, varied and relevant information	<p>The group:</p> <ol style="list-style-type: none">I. communicates information and ideas effectively and accurately by using a style that is completely appropriate to the audience and purposeII. structures the annotated labels in a way that is completely appropriate to the relevant parts of the model

Activity 3 Short presentation

This activity encourages students to take action based on their knowledge and understanding of human needs and water resources. The task in the student book directs students to adopt a specific role for a presentation and provides them with a target audience.

Time	Stage	Procedure	Resources
15 min.	What are the requirements of the task?	Ask students to read the instructions for Activity 3 in the student book. With their seat partner, ask each other questions about the activity to check understanding.	Student book
15 min.	What are the needs and requirements for presenter and audience members?	Divide the class, allocating one half the role of presenter and the other half the role of audience For each half of the class, ask them to brainstorm ideas related to the following questions:	

		<p>Presenter:</p> <ul style="list-style-type: none"> ■ What does my audience need to know? ■ What does my audience want to hear? ■ What sort of language should I use to communicate? ■ How can I best use multimedia in my presentation? <p>Audience:</p> <ul style="list-style-type: none"> ■ What do I need to know about this innovation? ■ What questions will I ask the presenter? ■ How do I want them to speak to me? ■ What will interest me in this sort of presentation? 	
15 min.	Do students have an understanding of the role of audience and presenter?	<p>Partner students so that each pair has one student who was from the “presenter” half of the class and one student who was from the “audience” half of the class. Ask each pair to compare the responses to the brainstorming questions.</p> <ul style="list-style-type: none"> ■ Did “presenters” guess what audiences wanted to hear? ■ Did “audiences” guess what presenters were going to say? 	
10 min.	How can this activity guide student presentations?	<p>As a class, summarize some of the key points of being a presenter and preparing for the specified audience. Encourage students to keep these points in mind as they prepare for Activity 3 in the student book.</p>	Student book

TOPIC 2 The Arab Spring

The events of the Arab Spring highlight the changes in how conflict is initiated, communicated and resolved around the world. The use of social media to coordinate protests and demonstrations connects with technology that many students interact with daily. The conflicts of the Arab Spring are just one example of conflicts over ideas. Through the different activities, you can encourage your students to apply their conceptual understanding to analyse conflicts that may be occurring in your local region or that have built on the events of the Arab Spring.



Activity 4 Summary chart of types of government

Many conflicts over ideas are about the way that people are governed, whether it's on a local community level or an international level. The first activity for this topic can be used as a formative assessment to check student knowledge of political systems.

Time	Stage	Procedure	Resources
10 min.	Introduction	Ask students to read the introduction to Topic 2 and Activity 4 in the student book. Instruct students to create a version of the table in Activity 4, either in their notebooks or as a word processing document. Explain to them that this is a formative assessment—a chance for you to find out what they currently know about a topic—in order to help you plan follow up skills and activities.	Student book
15 min.	Getting started	Without the use of research materials, ask students to complete as much of the table as they can. Encourage them to use different colours or codes. For example, use one colour for information they are sure about and another colour for information they are not sure about. After 15 minutes, stop the students and ask them to write 1–2 sentences reflecting on what they currently know about different political systems.	Notebooks/ computers
20 min.	Moving on	Allow the students to use the library or internet to complete their table.	Library/ internet
10 min.	Summarizing	Ask students to submit their tables to you and have them complete another brief reflection by writing three questions that they would like to explore during this topic.	



Activity 5 Fishbone graphic organizer

This activity provides an introduction to a more significant summative assessment task. The ATL skills needed to create and complete a graphic organizer will support students as they create an informative speech.

Time	Stage	Procedure	Resources
10 min.	What are some different ways of taking notes	Ask students to share in pairs their ideas for effective note taking strategies.	

20 min.	How can a fishbone organizer help students create notes?	Direct students to read the “Fishbone graphic organizer” activity in the student book. Ask students to work individually to select four countries involved in the Arab Spring that they will use for their graphic organizer. Students can use the organizer to note down information they already know or to write down questions that will guide their research to learn more about their selected countries.	Student book
15 min.	How can the graphic organizer help with speech preparation?	To promote a deeper understanding of the countries involved in the Arab Spring, have students select one country to use as a basis for an informative talk on “why this country became involved in the Arab Spring”. Give supporting examples in relation to time, place and space. This speech can form a summative assessment using criteria A and C.	Student book; graphic organizer

Assessment

The following task specific rubric can be used to assess student learning through an informative speech about the Arab Spring.

Level	A Knowing and understanding	C Communicating
7–8	<p>I have:</p> <ol style="list-style-type: none"> I. consistently used a wide range of terminology related to conflict over ideologies effectively II. demonstrated detailed knowledge and understanding of my chosen country’s role in the Arab Spring through thorough, accurate descriptions, explanations and examples of why conflict occurred at that time and place. 	<p>I have:</p> <ol style="list-style-type: none"> I. communicated my information and ideas effectively and accurately by using a style that is completely appropriate including formal language, clear voice, consistent eye contact and appropriate use of notes II. structured my information and ideas in a way that is completely appropriate, including a suitable introduction and conclusion to my speech

TIP

You may wish to provide your students with a word bank of relevant terminology that they should use when completing this task. It promotes vocabulary development and provides clarity for students on the language they need to use to reach the high levels of achievement.



Activity 6 Recipe for change

This activity encourages students to understand the steps needed to bring about change. Students can use the topic of conflict over ideas as a starting point but they could also look at conflict of resources or land.

Time	Stage	Procedure	Resources
15 min.	Forming	Group the students into threes. Students might like to group according to their interest in a global issue. Have each group read the activity instructions in the student book. Within the groups, students discuss what they think is required for the activity and any initial idea they may have.	Student book
10 min.	Brainstorming Part 1	As a class, discuss the outline of the activity and brainstorm ideas related to Step 2 of the activity.	Student book
15 min.	Brainstorming Part 2	In groups, check that everyone agrees which global issue/conflict will be addressed. Then, share ideas related to Steps 3 and 4 of the activity. Step 4 of the activity asks students to consider how much of each "ingredient" they might need for their solution. You can explain this to the students as a sort of ranking system. For example, a solution for accessing safe water might require many more community health workers than government leaders.	Student book; paper
20 min.	Documenting and sharing	Provide time for groups to create their "recipes" in Step 5 of the activity. The groups could write their recipe or create it as a visual representation. Encourage the groups to share and analyse the different solutions. Ask them to note if there were similarities in the techniques used for solutions to global issues.	Student book; paper

TOPIC 3

New Zealand Maoris

Through the case study of New Zealand Maoris, students are introduced to the concept of conflict over land. This type of conflict has been repeated many times throughout history and continues to be one of the most significant causes of conflict today. Through the activities, encourage students to analyse the connections between belief systems, land and cultural differences in relation to the key concept of time, place and space.



Activity 7

Create a collage or soundscape

This activity will allow students to practice skill transfer, using existing skills and knowledge and applying them in unfamiliar situations.

Time	Stage	Procedure	Resources
15 min.	Setting the scene	Ask students to read the introduction to Topic 3 in the student book. Encourage students to list key words or draw images that come to mind when thinking about first encounters or new experiences. Have students collaborate in pairs or threes to share what they wrote or drew.	Student book
15 min.	Understanding the activity	As a class, read through the steps for Activity 7. Have a discussion with students to share ideas about skills they may have learned in other classes that will help them with this activity.	Student book
15 min.	Listening in	Your students may be familiar with creating collages but may need some examples of what soundscapes can sound like. Go to www.last.fm and search for “soundscape”. In the “tag” results, you can hear a selection of soundscapes. Choose several to play to the class. As students listen ask them to reflect on: <ul style="list-style-type: none"> emotions they feel as they listen the mood of the music use of different instruments and sounds. 	Internet; speakers
Varies	Creating	Students should review the activity steps before creating their collage or soundscape.	Student book



Activity 8

Speech on defining land ownership

Conflict over land ownership is often connected with the definition of owning land. This activity aims to broaden understanding of what ownership can look like depending on culture and location. Different interpretations of ownership are not necessarily “wrong” but the resulting conflict over land ownership can have negative consequences.

Guiding students through speech preparation

Opening lines

The first line of a speech is known as the “grabber” as it is meant to grab the audience’s attention. Unprepared students will typically start “Hi, my name is ... and today I’m going to talk about ...”. To avoid this sort of start, give specific guidance to your students on what a good grabber can be:

- A rhetorical question: “Have you ever wondered ... ?”
- A startling fact: “Queen Elizabeth II, head of state of the United Kingdom and of 31 other states and territories, is the legal owner of about 6,600 million acres of land, one sixth of the earth’s non ocean surface” (Kevin Cahill, *Who Owns the World*).
- A short anecdote or story: make it personal by including names and places. “On Tuesday morning, Amir woke up, walked outside and saw a desolate scene laid out before him.”

Using notes during a speech

Provide specific instructions on whether students should use notes to support them during the speech. If students choose to use cards, paper or work from a tablet, they should remember to do the following:

- Write bullet points of information
- If using paper or cards, use one side only
- A large font makes notes easy to read, as does double spacing information
- Clearly separated paragraphs provide a good visual aid for separate sections of the speech.

Voice and body language

Provide opportunities for students to practice their speech in class. Allow them to work with friends or small groups to give peer feedback. Encourage them to be aware of the speed and volume they talk. Provide stopwatches for them to time each other giving their speech.

Eye contact is an essential part of communicating during a speech. Remind students to practice looking at the whole class and not just focus on the person who may be assessing them. Feedback can also be given on how a student stands or moves while giving a speech.



Activity 9 Analytical essay

To plan and research for this analytical essay, students will need to be methodical in “decoding” the essay question and preparing a format for taking notes. You can remind them of the two different note-taking formats used in this chapter: the comparative table for political systems and the fishbone graphic organizer. Ask students to reflect on which format they feel comfortable using and that they think is suitable for this task.

Guidance for writing inquiry questions

Here is Step 2 from the student book:

STEP 2

Write research questions to structure your inquiry. When comparing the negotiations of the two groups consider the **impact of land, ownership and citizenship**. You might also want to consider the **effects of the negotiations** over an extended period of time. Remember, **short-term** success in negotiation does not always mean a **long-term** gain.

- Encourage students to focus on the highlighted areas of the instructions in Step 2 (see above). These indicate recommended areas for research and are a good starting point for students who need additional guidance
- The terms “land” and “ownership” prompt questions relating to how land ownership is decided:
 - Who can own land?
 - How is land ownership declared?
 - Is money or trading of goods involved in land ownership?
 - Is there a connection between land and status?
- The term “citizenship” should prompt students to consider the relationship between the indigenous population and the invading population:
 - How were the indigenous populations viewed by the invading populations?
 - What status did each group give the other?
 - How did this relationship change when negotiations began over land?
 - Who were the key people involved?

- “Short term” and “long term” indicates that students need to address different time periods in their investigations:
 - How did the relationship between the two groups change over 10 years, 50 years or 100 years?
 - Are there still impacts today of the conflict between these two groups?
 - Who had the most success in the negotiations for land ownership and why do you think this?

Guidance for developing a graphic organizer for notes

The words that are highlighted in the essay question provide guidance for students on a way of structuring their notes that will support the writing of their essay. Because students are comparing two groups involved in a conflict, they are recommended to create a table like the one below so that information can be collated side by side.

Research area Write notes in bullet points	Group 1 – Maoris in New Zealand	Group 2 – Second selected tribe
Land		
Ownership		
Citizenship		
Short-term gains		
Long-term gains		
Five-sentence summary		
Conclusion – Which group had great success? Bullet point your three strongest reasons.		

Summary







In teaching about conflict, one of the biggest challenges you may face is remaining neutral when adjudicating class discussions or presenting information. In order to facilitate independent critical thinking among your students, they need to feel that they can express their opinions with supporting evidence and examples and not be concerned about being “right” or “wrong”. It will be difficult to find a conflict that does not elicit a wide variety of opinions among your students. Encouraging students to listen to each other and support their own opinions with evidence is an essential part of the inquiry process.

Teaching the related concept of conflict must include reference to the process of resolution and peace. Incorporating a study of conflict resolution provides opportunities to link with other programmes that focus on student social and emotional development.

References

Cahill, Kevin. 2006. *Who Owns the World*. Access at: <http://www.whoownstheworld.com>

Development

	ATL Skills	Task Summary
TOPIC 1 Women's rights		
Activity 1 Fact finding on women's suffrage	✓ Self-management Use appropriate strategies for organizing complex information.	 Research to understand differences in time and place and the impact on rights of women.
Activity 2 Elevator pitch	✓ Thinking Draw reasonable conclusions and generalizations.	 Form and share an opinion on the use of quotas for equal representation.
Activity 3 Are all rights the same?	✓ Communication Collaborate with peers and experts using a variety of digital environments and media.	 Create a multimedia presentation to answer the question "Do we still need feminists?"
TOPIC 2 League of Nations		
Activity 4 Old negotiations meet new technology – Treaty of Versailles Twitter feed	✓ Communication Use appropriate forms of writing for different purposes and audiences.	 Use the concept of Twitter to document the negotiations of the Treaty of Versailles.
Activity 5 Making decisions about development	✓ Self-management Consider ethical, cultural and environmental implications.	 Write a position paper to explain the reasons for allocating funding for development.
Activity 6 "The Development Race" magazine article	✓ Research Formulate factual, topical, conceptual and debatable questions.	 Compare development rates between two countries in an article for a magazine.

TOPIC 3 Communist China

Activity 7 Produce a political poster	✓ Communication Use a variety of media to communicate with a range of audiences.	 Create a propaganda poster connected to agricultural and land reform.
Activity 8 Play about commune life	✓ Social Manage and resolve conflict, and work collaboratively in teams.	 Write and perform a play that shows the experiences of life in Maoist China.
Activity 9 Surveying what the people think	✓ Thinking Apply skills and knowledge in unfamiliar situations.	 Create a survey and analyse results to understand different perspectives on development.

Introducing development

Development is a term that students will probably be quite familiar with. They may understand it in relation to their own personal development, or they may be more familiar with the concept in connection to a country's development.

It is important to discuss with your students what they mean by describing a country's level of development, and how they are doing this based on their own perspectives of what is "good" development. Countries are often classified by their level of economic development. The terms of "high", "middle" and "low" income countries use economic data such as gross national income (GNI) or gross domestic product (GDP) to classify countries into these categories. However, there can be a tendency to assume that being more economically developed means that there are no issues of poverty, access to education, corruption or violation of human rights. Another measure of a country's development is the Human Development Index (HDI), which uses measurements of living standards, education and health to rank countries.

You can help students to become more aware of how they perceive development by completing a values continuum exercise such as the one in the Teaching Idea below.

TEACHING IDEA 1

Draw or describe a line on the floor of the classroom—this is your values continuum. One end of the line is "strongly agree", the other end is "strongly disagree".

Pose statements relating to development and ask students to line up on the continuum in the position that relates to their opinion. Here are some possible statements:

- Being more economically developed is better for everyone in the country.
- Development means positive change.

- “High”, “middle” and “low” income countries are fair ways of classifying countries.
- The terms “development” and “civilization” mean the same thing.

Ask students to share the reasons why they chose their position on the line. Select a variety of students to share their thoughts and ideas. Allow students to move on the line if their opinion changes based on what they are hearing from their classmates.

Remember that this activity is for you to learn more about what perceptions your students have about development. There are no right or wrong answers.

TIP

Look at www.grossnationalhappiness.com with your students, and ask them to consider how our perspectives on countries would change if development was measured by Bhutan’s standards of Gross National Happiness.

The key concept of time, place and space drives the activities in this chapter, so there needs to be a focus on the circumstances in time and place that have led to development, whether they are economic, social, political or environmental. This understanding can help students identify where and when these circumstances could happen again, or how to bring about these conditions.

Circumstances surrounding development can be likened to a “perfect storm”, which meteorologists describe as the confluence of different weather systems resulting in a rare and dramatic event. What connections between time, place and space result in dramatic changes to a country’s level of development?

While working through the chapter, challenge students to consider if there is an end point to development. Is there a finite goal that all countries are striving for when they can say that they are “developed”? The concept of development can also be dissected in terms of how it is measured. Besides economic measures, countries could use measurements such as literacy rates, access to healthcare or life expectancy when assessing development.

This chapter is a study of the interaction between the development of individuals and the development of the societies that they are a part of. The topics covered represent events that have had a long-lasting impact on national and international history. They also challenge students to think about related concepts such as cooperation, conflict and governance in order to develop a comprehensive understanding of development. The topics enable students to explore the debatable question of whether development always brings about positive change. The benefits of development in a society may not be experienced by all individuals in that society, so it is important that students have the opportunity to move from common perceptions about development to a more in-depth understanding of why and how it occurs, as well as the short- and long-term effects.

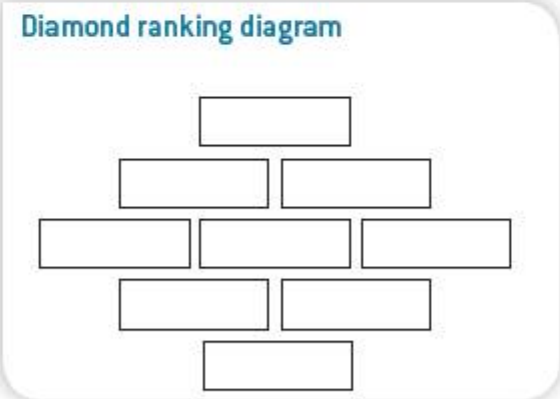
TOPIC 1 Women’s rights

The topic of women’s rights is a springboard for students to explore the global context of fairness and development. The topic raises student awareness that gender inequality still exists in the world despite the existence of organizations and legislation to support equal rights.



Activity 1 Fact finding on women's suffrage

This activity initially focuses on the broader topic of human rights, then moves to look at women's suffrage—the right to vote. Check that your students understand the definition of suffrage in relation to rights.

Time	Stage	Procedure	Resources
20 min.	Discovering and classifying	<p>Step 1: Organize the students into groups of three or four and give each group a copy of the UN Convention on the Rights of the Child.</p> <p>Step 2: Ask each group to choose nine articles from the 54 that make up the Convention, and diamond rank them in terms of importance. This will challenge the students to think about how rights are connected with each other.</p>	UN Convention on the Rights of the Child; paper
		<p>TIP</p> <p>This may also be an opportunity to discuss why some people feel different rights are more important than others.</p>	
		<p>Diamond ranking diagram</p> 	<p>WEB LINKS</p> <p>You can find a version of this convention in student-friendly language by going to www.unicef.org/rightsite and looking for resources under the “for youth” section.</p>
		<p>Step 3: Ask the groups to share the ranking and explain three factors that influenced their choice.</p>	
15 min.	Discussing	Discuss as a class how rights could be influenced by culture or location. You might like to note down some conceptual or debatable questions that emerge from the discussion.	
10 min.	Reviewing	Ask students to read the Topic 1 introduction and Activity 1 in the student book.	Student book
20 min.	Researching	Reorganize the students into groups of three to complete Activity 1.	Student book; internet/library
10 min.	Reflecting	Instruct students to review the articles that they selected from the UN Convention of the Rights of the Child. How might time and place have affected the need for these articles to be formally written down?	



Activity 2 Elevator pitch

This activity encourages students to develop the challenging skill of speaking clearly and with conviction in a short amount of time. Having a sound knowledge and logical arguments is an important base for being able to speak confidently.

Selecting information

Students only have a limited time to speak so it's important that the information they use is suitably persuasive. Once they have researched the topic of quotas for women in management, ask them to sit with another student in a “critical friends” conference. The purpose of this is for the critical friend to challenge the reasoning behind why an argument is included in the elevator pitch. It's important to remind students that they are challenging their friend in order to help them select the most relevant arguments. Ask one student in each pair to adopt the role of critical friend for five minutes. Students then swap roles to allow both to experience being a critical friend and receive feedback on their choice of argument.

Structuring the speech

Two minutes is a limited time to try to persuade someone to believe your point of view. This means that the most persuasive argument needs to come first. This argument should be one that resonates with the CEO of the company. Discuss with the class what a CEO does in a company and what they would be looking to improve or enhance.

Rehearsing the speech

Encourage students to practise giving a speech publicly in front of their peers. This is another opportunity for students to take on the role of critical friends. It's important to think carefully about group sizes here—some students may be happy to work in a large group, while others may be more comfortable practising just with one other student.

Speaking with passion


Emphasize that this is an opportunity for students to offer their own opinion. Nothing is more convincing than someone who speaks with passion about a topic. Encourage students to consider how their voice, body language, eye contact and choice of words can influence a persuasive speech.



Activity 3

Are all rights the same?

This activity requires students to draw on the knowledge that they have developed throughout the topic, including human rights, the rights of the child and the different experiences of women's rights around the world. The task challenges the students to answer a debatable question, but they may conclude by having further questions about the topic.

Time	Stage	Procedure	Resources
20 min.	Comparing	Organise students into pairs and ask them to complete steps 1 and 2 of Activity 3 in the student book.	Student book
30 min.	Researching	Step 3 of the activity in the student book asks students to compare two view points on feminism. After students have read and analysed the articles, draw the class into a discussion on the style of writing. You can prompt discussion through questions such as: <ul style="list-style-type: none">■ How did you know the point of view expressed by the writer?■ What information in the articles did you find most convincing?■ What information in the articles did not impact your thinking about this issue?■ What persuasive words or images have an impact on you when you are reading an article or watching TV?	Student book; internet
30 min.	Planning	After the discussion and completion of Step 4 in Activity 3, students will begin planning their multimedia presentation. Remind them that they need to express their opinion, supported by facts, and should try to make use of the effective styles of persuasive writing and images that they identified in the discussion.	 WEB LINKS There are several online storyboard programs that students could use for planning their presentation. A good place to start is storyboardthat.com .

TOPIC 2

League of Nations

The League of Nations became the first international effort to track statistics that are now commonly used as markers of a country's level of development. Established as part of the peace treaty in 1919, the role of the League of Nations grew to support literacy, medical advancements and protection of human rights. The activities in this topic will encourage students to reflect on their conceptual knowledge of conflicts and the effects that these can have on development.

LITERARY LINKS

For background reading and an insight into the work of the League of Nations, you might like to read Frank Moorhouse's *Grand Days*.

DIPLOMA PROGRAMME LINK

This topic prepares students for the courses of history and global politics in the Diploma Programme, in particular an analysis of costs and the benefits of cooperation.



Activity 4

Old negotiations meet new technology—Treaty of Versailles Twitter feed

Although Twitter is a new technology, it mimics the succinctness of telegraph communications, which were used during the time of the Treaty of Versailles.

Time	Stage	Procedure	Resources
15 min.	Reflecting	<p>As a class, view and discuss the Twitter feeds recommended in Step 1 of Activity 4. Ask the students:</p> <ul style="list-style-type: none"> How do the limitations of Twitter (140 characters per tweet) influence the use of language? What events are deemed important enough to tweet about? How can different interpretations of language affect the impact of a tweet? <p>You may wish to also discuss the use of hashtags and the concept of events “trending” on Twitter.</p>	Internet; student book
10 min.	Organizing	<p>Organize the class into groups so that each has a representative from “the Big Four” in Step 2 of Activity 4. If necessary, you could also have students represent journalists reporting on the Treaty of Versailles.</p> <p>Ask each group to read and review the instructions for steps 2 and 3 of the activity.</p>	Student book
30 min.	Creating	<p>Each group should draft their tweets and responses, making sure that they are historically accurate.</p> <p>Encourage students to use creativity within the role of their historical figure. As well as tweeting about the events, they can include hashtags, emoticons and personal reactions of their historical figure.</p> <p>Once each group is happy with their tweets, encourage them to create a larger version showing the timeline of tweets from the Treaty of Versailles.</p>	<p>TIP</p> <p>Do you have a class with a creative sense of humour? Ask them what a selfie that was taken at the Treaty of Versailles might look like.</p>



Activity 5 Making decisions about development

This position paper requires students to think about the factors that influence a country's development. In Topic 1, students explored the influence of women's rights on development; for this activity they need to consider the impact of literacy and health on development.

Time	Stage	Procedure	Resources
15 min.	Reflecting	In pairs or groups of three, ask students to do some initial investigation into the work of aid organizations. Ask them to find out: <ul style="list-style-type: none"> ■ examples of programmes that are supported ■ reasons for the existence of these programmes ■ facts and figures that show the impact. As a class, share and reflect on the information that each group found.	Internet/library
20 min.	Researching	Ask students to read Activity 5 in the student book. Students should use the information from their initial research to complete the table in Step 1.	Student book
60 min.	Justifying	Once students have completed the table, check for understanding of the task instructions in Step 2. Encourage students to use a graphic organizer to plan their writing. They could use a framework such as the fishbone graphic organizer in chapter 6, or they could develop their own. Remind them that they will be sharing their writing with other students and that they should allow time for revising and editing.	Student book
30 min.	Suggesting	Organize an exchange of papers so that each student now has a copy of another student's paper. Explain that this task is to challenge students to see issues from the opposing point of view. Each student will write a paragraph response to the paper that they now have. Students can start off by choosing one point from the paper that they wish to argue the opposing view. They can begin with "On the other hand ...".	Student papers



Activity 6 "The Development Race" magazine article

In order to prepare for this activity, students need an understanding of how to manipulate statistics using gapminder.org.

Time	Stage	Procedure	Resources
30 min.	Exploring	Instruct students to read the section on "Tracking development around the world" and the Activity 6 instructions in the student book to gain an understanding of the task requirements.	Student book; internet

		<p>Ask them to watch Hans Rosling's TED talk "Let my dataset change your mindset" (a link is included in Activity 6).</p> <p>As students are watching, ask them to consider these three questions:</p> <ul style="list-style-type: none"> ■ How is data collected? ■ How are decisions made based on data? ■ What information did students find surprising while watching the talk? <p>Discuss students' responses to these questions.</p>	<p>WEB LINKS</p> <p>Before using this activity in the classroom with your students, you may want to gain a more comprehensive understanding of the work of Hans Rosling through his film <i>The Joy of Stats</i> at www.gapminder.org.</p>
15 min.	Demonstrating	<p>Review the specified role, audience, format and topic for the magazine article that students have to write.</p> <p>With the class, construct a framework that can help support them with their writing. You could develop a graphic organizer for the magazine article or brainstorm some ideas about the order of information.</p>	<p>Student book</p> <p>TIP</p> <p>The Gapminder software can be downloaded onto computers so it can be used without needing a constant internet connection.</p>
30 min.	Exploring	<p>For Step 2 of Activity 6, students should be given time to familiarize themselves with how Gapminder works.</p> <p>Once students have had the opportunity to manipulate the statistics, regroup the whole class to review Step 3 of the activity.</p>	
60 min.	Creating	<p>Remind students that as they gather data, they need to include visuals to support their writing.</p>	<p>Student book; internet</p>

TOPIC 3 Communist China

This topic has significant potential for interdisciplinary links. The activities in the student book provide opportunities for students to transfer skills from different subject areas to help them complete the tasks. How you structure the links will depend on your familiarity with the other disciplines, flexibility with timetabling and possibilities for support from other teachers in different subject areas. It is possible to mentor the students in the use of interdisciplinary skills without having a detailed knowledge of the subject.

Alternatives to China


China is part of what is known as BRICS, the group of emerging powerful economies that also comprise Brazil, Russia, India and South Africa. These countries are all facing similar challenges of development: a changing paradigm in the global economy; new expectations of environmental responsibility; and an increasingly technologically developed world. Choosing one of the other BRICS countries to compare with the challenges being faced in China will encourage students to

make connections across geographical boundaries. It is also possible to compare the challenges that BRICS countries are facing now with those experienced by countries such as Britain, France and Germany at the start of the 20th century.



Activity 7 Produce a political poster

This activity will require students to use skills that have been developed in design and arts. Students may wish to follow the process of the design cycle in creating their propaganda poster.

Time	Stage	Procedure	Resources
20 min.	Reflection	<p>Ask students to read through the instructions for Activity 7 in the student book.</p> <p>Choose a selection of 5–10 propaganda posters display them around the classroom.</p> <p>On Post-it notes, ask students to complete three sentences with the following prompts:</p> <p style="text-align: center;">“I see ...” “I think ...” “I wonder ...”</p> <p>Encourage them to analyse the posters for their use of images, colours, shapes and text.</p> <p>They should complete “I see, I think, I wonder” for each image, then attach the Post-it note next to the relevant image.</p> <p>Once students have completed their sentences, divide them into groups and assign one image to each group.</p> <p>Ask each group to read the Post-it notes next to the image and summarize what people saw, thought and wondered.</p>	<p>Student book</p> <div style="border: 1px solid #0070C0; padding: 5px; margin-top: 10px;"> <p>WEB LINKS</p> <p>You can find samples of propaganda posters at www.chineseposters.net. You could also include some Western styles of posters by searching for propaganda posters at www.archives.gov.</p> </div> 
20 min.	Researching	Allow time for students to carry out further research on Mao's land reforms to get more ideas for their posters.	Library/internet
15 min.	Evaluating	Organize students into pairs to complete Step 3 of Activity 7.	Student book
30 min.	Creating	<p>Instruct students to create the final version of their poster then display these in the classroom.</p> <p>Ask students to view the posters individually before facilitating a class discussion about them.</p>	Posters



Activity 8 Play about commune life

Students can use the experiences of writing a play to combine empathy, creativity and historical knowledge. It is important that all students in a group are involved in this activity, but they don't all have to be actors—some can focus on researching historical sources or writing the script instead.

Time	Stage	Procedure	Resources
15 min.	Predicting	Organize the students into groups for creating and performing a play. There should be no more than five students in each group. Before beginning research, instruct each group to brainstorm what they already know about life in Maoist China. They could use a MindMap® to do this. Where students identify gaps in their knowledge, they should formulate inquiry questions to help guide further research.	Paper
30–60 min.	Researching	Based on their MindMap® and inquiry questions, students should then carry out additional research to help build the factual knowledge needed for the play. Direct students to the web link in the student book (www.historylearningsite.co.uk) as a starting point for their research.	Internet/library; student book
15 min.	Clarifying	Step 3 of Activity 8 suggests that the student group consider whether their play should show Maoist China from one specific perspective. Remind groups that they need to decide the message of their play before writing the script in detail.	Student book
60–90 min.	Creating	Depending on your group and class dynamics, you may wish to provide structured time for them to write and rehearse. Some suggestions for structure include: <ul style="list-style-type: none"> ■ setting time periods of 20 minutes for each task ■ creating checklists for groups to help them organize the different items they have to complete ■ creating specific roles for each group member ■ allocating rehearsal time and space for each group ■ limiting the length of the play ■ limiting the number of props each group can use. 	Student book; possible access to Arts department props and materials


TIP

At this stage, it may be useful for student groups to clarify roles and responsibilities of group members. Some groups may need more guidance than others.



Activity 9 Surveying what the people think

Developing and administering a survey is a complex skill. This activity leads students through the process, as well as providing structure for analysing the data. Additionally, the activity asks students to reflect on how they administered the survey. This type of reflection is important as many students will use survey tools as part of the research phases for their personal project or extended essay.

Time	Stage	Steps	Resources
10 min.	Introducing	<p>As a whole class, discuss some experiences and ideas related to surveys. Ask students:</p> <ul style="list-style-type: none"> ■ Have they ever completed a survey? ■ What are some different types of survey questions? ■ Do they have positive or negative experiences related to completing a survey? ■ What are surveys used for? 	
10 min.	Planning	<p>Ask students to read through the instructions for Activity 9.</p> <p>Have students spend some time reviewing the different survey tools before deciding on which one they would like to use. Students may also wish to create a survey administered by paper or interview.</p>	<p>Student book</p> <div style="border: 1px solid #0070c0; padding: 5px; background-color: #e1f5fe;"> <p> WEB LINKS Google Forms is useful for designing and administering surveys (www.google.com).</p> </div>
30 min.	Designing	<p>When students reach the point of designing questions for their survey, they need to consider the format of survey responses as part of Step 3 for Activity 9.</p> <p>Ask students to consider the differences in survey answers that are text and answers that are based on numbers or yes/no responses. Discuss how these different types of answers might be analysed.</p> <p>It is also important for students to think about the audience for their survey. Are they going to survey other students, adults or both?</p>	Student book
30 min.	Reflecting	<p>After students have completed steps 4 and 5, ask them to reflect on the quality and format of the survey tool. Some reflection questions might include:</p> <ul style="list-style-type: none"> ■ Were you happy with the survey design? Why? ■ Did the survey take the estimated amount of time to administer? ■ Were you easily able to collate the data from survey responses? ■ What would you do differently or keep the same next time you had to design and administer a survey? 	Student book

Summary








Teaching development will require you to guide students in defining the term based on their perceptions and prior knowledge. It is important to establish this at the start of the topic to gauge where further teaching or scaffolding for the different activities may be required. Each of the activities has an opportunity for students to reflect on their affective skills, as well as the impact that new knowledge has had on their conceptual understanding. The different technological tools used throughout the activities will support student skill development in areas such as data manipulation, creativity, visual organization and editing.

The inquiry questions challenge students to reflect on their values when considering the costs and benefits of development. If development is to be measured, how are the standards established that quantify whether a country is developed or not?

References

Moorhouse, F. 1993. *Grand Days* (The Edith Trilogy). Chippendale, NSW, Australia. Pan Macmillan.

Choice

	ATL skills	Task summary
TOPIC 1 Environmental ethics		
Activity 1 Interview transcript	✓ Research Locate, organize, analyse, evaluate, synthesize and ethically use information from a variety of sources and media.	 Create an interview transcript based on the biography of an environmental ethicist.
Activity 2 Speak out, stand up	✓ Communication Use appropriate forms of writing for different purposes and audiences.	 Write a press release to share an opinion on an environmental issue.
Activity 3 Becoming an advocate	✓ Thinking Create novel solutions to authentic problems.	 Develop an advocacy plan to bring about change.
TOPIC 2 Saving Ecuador's rainforests		
Activity 4 Ecuador fact sheet	✓ Communication Read critically and for comprehension.	 Research and create a fact sheet on Ecuador.
Activity 5 Newspaper podcast	✓ Communication Collaborate with peers and experts using a variety of digital environments and media.	 Write and record a podcast that provides information about Ecuador's conservation initiative.
Activity 6 Persuasive response essay	✓ Thinking Draw reasonable conclusions and generalizations.	 Write a persuasive essay that explains the reasons for or consequences of Ecuador's position.
TOPIC 3 International aid		
Activity 7 Mapping activity tracking international aid	✓ Self-management Demonstrate persistence and perseverance.	 Create an annotated map that shows donors and recipients of aid.

Activity 8 Effective donation programmes	✓ Social Make fair and equitable decisions.	 Research an aid programme that students consider worthy of additional donor support.
Activity 9 What should the future look like and what are you responsible for?	✓ Research Create references and citations, use footnotes or endnotes and construct a bibliography according to recognized conventions.	 Develop and create a commercial based on choice and responsibility.

Introducing choice

The related concept of choice highlights the importance in individuals and societies of requiring that students reflect, and possibly act, on the knowledge that they have gained. It also demands that students consider what their own personal morals are in relation to those of the societies that they live in. Choice tends to imply action, but it is important that students are not forced to take action. As a teacher, you have the opportunity to provide guidance, support and resources to enable students to become aware of their responsibilities and the choices they make, both in the classroom and outside school.

Students should grasp from the activities how they are already making choices in their lives and consider other areas where they could contribute. As with teaching the related concept of conflict, it is important to act as a facilitator for discussion rather than impose a set of guidelines or rules that tell students what choices they should make. Choice is closely connected with responsibility and culture. In classrooms that are ethnically diverse, there may be greater opportunity to share and discuss different expectations of responsibility and choice that are linked to particular cultures.

Teaching about the concept of choice will encourage students to develop self-awareness of their role in their communities. It should foster an understanding of the changing expectations of students as they move through secondary school towards adulthood.

Begin by raising the students' awareness of how they define and apply the concept of choice to their lives. It may be a starting point for discussions on the different expectations that communities have of young people.

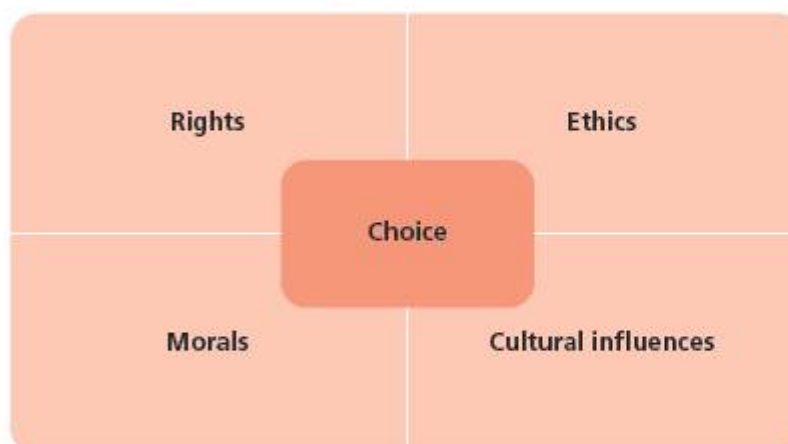
It may be helpful for students to think about the “sphere of responsibility” as being like jumping into a pool. As they jump in, they will create ripples that are strongest near their body and weakest further away. Responsibility is often felt most strongly nearest to us. It is usually quite difficult to feel responsible for an effect created by our choices that is distant in both space and time. The topics in the student book encourage students to evaluate what defines a boundary of choice.

TEACHING IDEA 1

Use the chart below to prompt students to think about how responsible choice is connected to ethics, morals, rights and cultural influences.

Throughout the unit, provide regular prompts for students to update and review their thinking.

Figure 8.1 Choice diagram showing connections



DIPLOMA PROGRAMME LINKS

Studying the concept of choice provides opportunities for students to engage in knowledge and skills that prepare them for achieving the aims in several subjects in the Diploma Programme.

Philosophy: examine critically their own experience and their ideological and cultural perspectives.

Social and cultural anthropology: explore principles of social and cultural life and characteristics of societies and cultures.

Environmental systems: appreciate that human society is both directly and indirectly linked to the environment at a number of levels and at a variety of scales.

History: encourage an understanding of the present through critical reflection upon the past.

Geography: develop a concern for human welfare and the quality of the environment, and an understanding of the need for planning and sustainable management.

Economics: develop an awareness of development issues facing nations as they undergo the process of change.

WEB LINKS

A useful resource for background information and current research is enviroethics.org.

TOPIC 1

Environmental ethics

Environmental ethics is a relatively new branch of ethics prompted by the recognition of pressures on the environment as a result of rising populations. This topic provides a starting point for the role of ethics. The Diploma Programme's theory of knowledge (TOK) course defines one of the areas of knowledge as ethics. Several of the inquiry questions from the TOK guide could be used as discussion questions with your students:

- Does the rightness or wrongness of an action depend on the situation?
- Are all moral opinions equally valid?

In the study of environmental ethics, students need to consider:

- how they currently make use of the environment around them
- what they consider to be most important.



Activity 1 Interview transcript

Activity 1 encourages students to step into the shoes of an environmental ethicist. What inspired this historical figure to choose to become an activist to protect and celebrate the unique environments around them? Students will need to use their skills of empathy and creativity in generating the transcript. Remind them that factual accuracy is essential, but by combining facts and other sources students can also tap into the inspiration that prompted the passion for the environment from their chosen person.

Introducing the activity

Begin by discussing the purposes of an interview. Responses may include “a job interview” or “interview with someone famous”. Ask them to reflect on the aim of these interviews— ie, to learn more about the person.

Choose several interviews, either audio or audio-visual, that hold relevance for your students. These could be interviews with actors, sports stars, politicians or local celebrities. As students watch or listen to the interview, ask them to identify why that person is being interviewed.

Choosing a purpose

The task instructions state that the reason the person is being interviewed is that they are a key figure in the field of environmental ethics. Check student understanding of what this term means.

Interview questions and responses

Students’ inquiry questions that guide their research should be the questions used in the interview transcript. They need to have a mixture of open and closed questions.

Closed questions tend to generate single-word responses but are helpful in getting basic facts. For example:

- Where did you study environmental science?

Open questions will help the students to provide more detailed answers:

- How did the Sierra Nevada Club inspire you to campaign for its protection?

Questions that invite the interviewee to tell a story usually elicit a more extended response:

- Can you tell me about a time when you were criticized for your campaign?

Provide an authentic audience

Specify that students choose an audience for their interview transcript. This provides a sense of authenticity for the activity as well as encouraging students to focus their language on communication for a particular audience.

A little bit of artistic licence

In the course of research, students may come across interesting or humorous facts and anecdotes that they can include in their interview. As long as it stays authentic, students should be encouraged to step into the shoes of their interviewee to try to see the world from their perspective.


Sharing the results

Student transcripts can be shared with the class by reading them aloud. Alternatively, students can turn their transcripts into podcasts or radio interviews to incorporate technology skills into this activity.



Activity 2 Speak out, stand up

Writing a press release involves using a specific style of language, similar to in the elevator pitch task in Chapter 7. For some students, it may be difficult to know which issues to speak out about. Encourage them to spend some time viewing the different political protests via the Huffington Post web link on p.76 of the student book and to discuss their ideas with other students.

Time	Stage	Procedure	Resources
10 min.	Introducing	Instruct students to read “The choice for activism” section on pages 76–77 of the student book. If possible, students should view the images located in the web link to the Huffington Post in the student book. Discuss with the class some of the issues people are speaking up about.	Student book; internet
20 min.	Exploring	Try the following “chalktalk” activity. Divide students into groups of 3 or 4. Give each group a large piece of paper with this question written in the middle of it: How has social media changed the way we learn and participate in environmental activism? Ask students to discuss the question—but the discussion must take place in silence, with students writing their thoughts and responses on the piece of paper. After 10 minutes, allow students to speak. In their groups, discuss what was written and come up with three key statements or questions that they want to share with the rest of the class.	 WEB LINKS This activity is adapted from Visible Thinking strategies available at www.visiblethinkingpz.org .
10 min.	Checking	Re-read the instructions for Activity 2 in the student book. Explain that students will now have the opportunity to write a press release which is used by the media to generate news stories. Check that students understand their role, audience, format and topic for this activity.	Student book
30–60 min.	Creating	Students write their press releases individually. You may wish to direct them to the web link in the student book for samples of media releases.	



Activity 3 Becoming an advocate

Developing a plan for student advocacy requires students to think creatively about solutions to issues. Encourage them to look at the local community when developing their plan.

Time	Stage	Procedure	Resources
10 min.	Brainstorming Part 1	Have a class discussion about the definition of “advocate”, and share some examples of advocates. You might like to refer to people who work in legal aid, activities for animal rights or members of organizations such as Greenpeace.	
20 min.	Evaluating	Ask students to form pairs and direct them to Figure 8.2 in the student book. For each step, have students create a red light, orange light and green light, and consider the following questions: <ul style="list-style-type: none"> ■ Red light—what do you think you will find challenging about this step? ■ Orange (yellow) light—what questions or concerns do you have about this step? ■ Green light—what are you confident in doing in relation to this step? 	Student book; paper
15 min.	Brainstorming Part 2	Direct students to read through Activity 3 in the student book. Allow them time to discuss the details and brainstorm initial ideas. Students may wish to collaborate with a partner or in small groups. Monitor for students who are having difficulty getting started and help them with some ideas.	Student book
30–60 min.	Setting goals	For steps 2 to 5 of the activity, students may find it helpful to set SMART goals in order to track their objectives: <ul style="list-style-type: none"> S—setting a specific goal M—having a measurement strategy for the goal. Step 5 in the student book gives some examples A—making sure the goal is attainable R—setting a realistic goal T—providing time parameters for achieving and measuring the goal. 	

TOPIC 2

Saving Ecuador's rainforest

In 2010, Ecuador's president Rafael Correa startled the world by revealing that his country's Yasuni National Park would be protected from oil exploration if the government received donations of \$3.6 billion over 13 years. It was estimated that this is about half of what it would receive if it allowed oil exploration to take place.

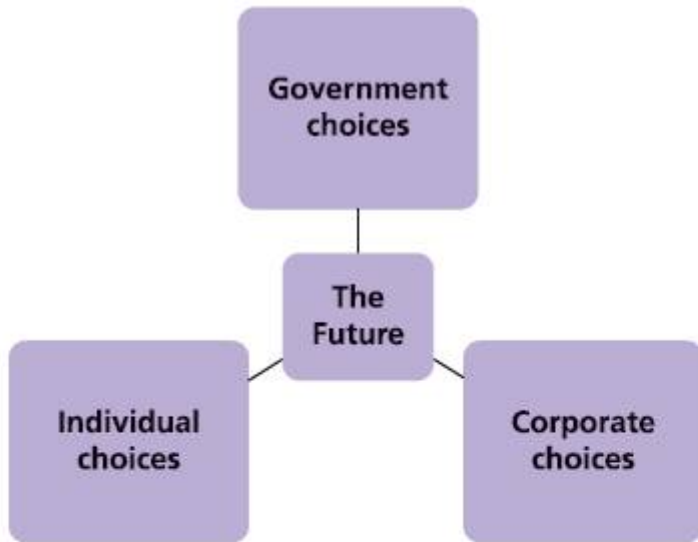
Some argued that it was an audacious and innovative way to protect a country's natural resources. For others, the context surrounding the announcement caused an uncomfortable reflection on the factors that had led to such a pristine environment being threatened. Richer countries that had built their infrastructure and economic stability on the back of exploiting finite materials could be viewed as hypocritical by condemning a plan to drill for oil in Ecuador's rainforests.

Poorer countries face condemnation for exploiting finite resources in the interests of economic growth, but they often have fewer alternatives to generate capital to invest in health, education or social services.



Activity 4 Ecuador fact sheet

This activity involves students making a fact sheet on Ecuador.

Time	Stage	Procedure	Resources
15 min.	Thinking	<p>Share the following diagram with students.</p>  <pre> graph TD A[Government choices] --- B[The Future] C[Individual choices] --- B D[Corporate choices] --- B </pre> <p>Encourage them to collaborate with a partner or small group to annotate this diagram, showing their initial thoughts, ideas and questions about choices in connection with the future of a country.</p>	Diagram paper
15 min.	Reflecting	<p>Ask the groups to share some of their ideas from their diagrams. Did any group discuss choices related to the environment?</p> <p>In the same groups as before, repeat the diagram annotation activity but this time, ask them to consider how the future of the environment is influence by different choices from local, regional and global factors.</p>	Diagram paper



30–60 min.	Researching	<p>As a class, review the instructions for activity 4 in the student book.</p> <p>The format in the student book currently requires each group to find similar information. There are several alternatives to structuring this activity.</p> <p>Divide students into expert and mixed groups. For the first part of the activity, students work in expert groups. For example:</p> <ul style="list-style-type: none"> ■ politics—government structure ■ environment—geography and natural resources ■ society—literacy, education, population structure ■ economy—imports, exports, GDP. <p>For the second part of the activity, students collaborate in mixed groups, combining their knowledge from the four research areas to create a detailed fact sheet on Ecuador.</p> <p>Another alternative is for student groups to each create a different product for the fact sheet. Students can research individually and then work with others on a product of their choosing. This could include a Prezi, short documentary, pamphlet, poster, brochure, flipbook, magazine article or report.</p>	Student book; internet/library
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Activity 5 Newspaper podcast

Creating a podcast will require students to utilize their technology skills. This is a good opportunity for some students to take on a leadership role and share some of their technical know-how with others who may need additional help.

Time	Stage	Procedure	Resources
10 min.	Reviewing	<p>Ask students in pairs to share the tables that they completed in the “Paying for protection” section of the student book.</p> <p>If necessary, clarify or add questions to the third column of the table</p>	Student book

15 min.	Planning	Staying in pairs, instruct students to read through the Activity 5 instructions in the student book. Discuss podcasts with the class. Have any of the students listened to podcasts? What about news podcasts? What are the characteristics or features of a news podcast?	Student book; internet
15 min.	Exploring	Direct the students to the podcasts in the web links box in Activity 5 and allow time for them to listen and note down information about the structure of these podcasts. As a class, share feedback from listening to the podcasts and create a graphic organizer that students could use to help them construct their own podcast.	Internet
60–120 min.	Researching and developing	Provide suitable time for students to research and develop their podcasts to complete steps 4 and 5 of Activity 5.	



Activity 6 Persuasive response essay

The essay requires students to reflect on discussion around the theory of knowledge questions included at the start of this chapter:

- Does the rightness or wrongness of an action depend on the situation?
- Are all moral opinions equally valid?

Students will need to have the opportunity to reflect on their own beliefs about domains of responsibility, and what has influenced those beliefs. Students with a low degree of self-awareness will need additional support in Step 2 of Activity 6. The following prompts can help students with this initial stage of recalling factual information and brainstorming for the essay.

Remembering

- What was the choice made by Ecuador's president with regard to the Yasuni National Park?
- What were some of the reactions by Ecuadorians? People from other countries? Oil companies?

Understanding

- What was the point of asking for money in return for protecting Yasuni National Park?

Applying

- Can you think of another situation (actual or hypothetical) where someone wanted an amount of money in order not to do something?
- Are there other environmental situations where money or trade deals have been involved?

Analysing

- Have there been other situations like Yasuni National Park where environments have been successfully protected?
- What methods were successful in this situation?

Evaluating

- What do you think of Ecuador's decision to ask other individuals, groups and governments to protect their national park?
- Is there an alternative solution you can think of?

Creating

- What are the three main reasons for your opinion in connection to the essay question?

These prompts take students through the process of recalling information, using factual knowledge and evaluating ideas to support an opinion in response to the essay question. They could be used during a one-to-one talk with a student, or they could be used in discussion or as writing prompts with small groups.

TOPIC 3 International aid

When introducing international aid, it will be necessary to ensure that students understand that aid comes in different forms, from different sources and is used in different ways. Students will need to be specific when completing the activities in the student book to identify which type of aid they are referring to.

Another area of caution is to ensure that generalizations are avoided when discussing aid donors and recipients. Students should look at their own country as well as countries around the world to be aware that giving and receiving in the form of aid happens on different scales as well as in different formats. Stereotypical comments such as “the starving people in Africa” need to be addressed so that students become knowledgeable and accurate communicators on this issue.

LITERARY LINKS

As a class, read Dame Claire Bertschinger’s autobiography *Moving Mountains*. Dame Bertschinger was working as a nurse for the ICRC in the refugee camp in Ethiopia that was featured in a BBC news report in 1984, and which inspired the organisation of Live Aid.



Activity 7 Mapping activity tracking international aid

Time	Stage	Procedure	Resources
10 min.	Reviewing	As a class, review the steps for Activity 7 in the student book. Address any concerns that students might have. This activity could be completed on paper or students may wish to use online mapping tools such as Google Maps.	Student book
30 min.	Taking action	Students complete Activity 7. While this could be carried out as an individual activity, students may wish to collaborate to share ideas on how to best use online mapping tools.	Student book; internet/library
20 min.	Reflecting	Using the maps that the students have created, pose the question: “Where do our stereotypes relating to aid come from?” Ask the students if they have heard of Bob Geldof, Live Aid or Band Aid. Use their knowledge and provide additional information to give some background to Band Aid and Live Aid. You could also include visuals such as the logo for the concerts or the catchphrase “The day the music changed the world”. View the film clip on YouTube titled “BBC News 10/23/1984 Michael Buerk”. Note that this clip does contain some strong images, so students may need to be warned before watching.	Student annotated maps; internet

		<p>Afterwards, form groups of 3 or 4 students and ask them to share their reactions to the clip.</p> <p>Check the students' understanding. Ask:</p> <ul style="list-style-type: none"> ■ Where was the news clip filmed? ■ What caused this famine? ■ What sort of aid is required in this situation? ■ Who should provide this sort of aid? 	
15 min.	Consolidating	<p>Ask students in groups to reflect on the maps that they have created and the images that they saw in the YouTube clip. Are these the sources for stereotypes about aid? Why are these images so powerful?</p>	Student annotated maps



Activity 8

Effective donation programmes

This activity will require students to make decisions based not only on data but also on what they believe is ethically responsible. Like most of the activities, it is important for students to know that there is not a "right" answer that you are looking for.

Time	Stage	Procedure	Resources
20 min.	Understanding and discussing	<p>Ask students to spend 10 minutes writing a response connecting the events they saw from the news clip in 1984 (see Activity 7) with what they believe are the reasons why countries require emergency aid.</p> <p>Discuss as a class some of the reasons why countries may need bilateral or multilateral aid. Record a list of reasons on a class chart, whiteboard or overhead projector.</p> <p>Introduce the author Dambisa Moyo.</p> <p>View the YouTube clip titled "Dambisa Moyo discusses Dead Aid with an MP" from Norway's Grosvold show.</p> <p>All together, discuss the following questions:</p> <ul style="list-style-type: none"> ■ What stereotypes is Moyo trying to eradicate? ■ What specific facts did you find memorable or surprising? ■ What sort of aid is she specifically referring to? <p>Individually, ask students to complete a second written response using the following prompt: "What are your conclusions when comparing what happened in 1984 with what Dambisa Moyo is suggesting? What further questions do you have?"</p>	Internet

WEB LINKS

Dambisa Moyo's website containing biographical information, videos and articles is at www.dambisamoyo.com.

15 min.	Thinking	<p>In groups, create a MindMap® that shows the discussion and thinking behind the following questions. Where possible, include specific details such as countries, events and types of aid.</p> <ul style="list-style-type: none"> ■ What are the intentions of countries that provide aid? ■ How can perspectives differ about the benefits of aid? ■ What makes groups perceive an outcome as “bad”? ■ When do good intentions result in bad outcomes? <p>Once groups have completed their MindMaps®, ask them to write a summary paragraph at the bottom of the map.</p> <p>Allow groups to mingle, sharing their thinking and responding to the comments and questions that the groups have posed.</p>	Paper
60–120 min.	Taking action	<p>Ask students to read the instructions for Activity 8 in the student book.</p> <p>Using their responses from the previous activities of this topic, students should feel ready to choose an aid programme that has long-term success. The previous activities will have helped students develop some clarity as to what they consider success, which aid programmes should be supported and the possible focus of these aid programmes.</p>	Student book
60 min.	Presenting	<p>As groups present, remind the student audience members to adopt the role of donor, and that they will be voting on the most compelling proposal at the end of the presentations.</p>	

Activity 9 What should the future look like and what are you responsible for?

An integral part of the MYP is taking action based on new knowledge. This activity encourages students to take action based on their responsibility towards the future.

Time	Stage	Procedure	Resources
20 min.	Investigating	As a class, watch Dambisa Moyo's TED talk titled "How the West was lost" at tedxtalks.ted.com . After watching, discuss some of the choices that she offers for countries to take responsibility. Do you agree or disagree with her proposals?	Internet
10 min.	Reviewing	In pairs, direct students to read and check their understanding of the steps for Activity 9.	Student book
15 min.	Brainstorming	In pairs, instruct students to complete Step 1, sharing ideas with each other.	Student book
20 min.	Planning	As a whole class, or working in small groups, model the planning process that is required for tackling this activity. To support students in choosing actions for responsibility, encourage them to reflect on what is possible with their own resources. Scale Consider actions within local neighbourhoods and communities. A good catchphrase to remember is "Think global, act local". Influence So often, peer pressure is used with negative connotations, but here is an opportunity for students to use their influence with peers. Through a blog, discussion or sharing of photos and videos, students can show others what changes they can bring about. Time Encourage students to choose actions that they can continue over an extended period of time. Commitment to being an advocate for change requires passion—more than just the effort of doing something on one occasion for the sake of a school assignment.	

WEB LINKS

Public service announcements are a good instance of artists, musicians and actors contributing their time and talents towards promoting important issues. Here are some examples:

Sean Penn's work with the World Food Programme—go to www.youtube.com and search for "Sean Penn Human Rescue Plan".

Public service announcements for voting in the USA—go to www.youtube.com and search for "Rock the vote" (published 18 September, 2012).

Summary

Teaching the related concept of choice will complement developing students' understanding of their responsibilities and rights, the concept of citizenship and the interplay between individual, corporate and government contributions to ensuring a sustainable future. Students need to be given opportunities to develop their understanding of personal values and how these affect the choices that they make, both now and in the future.

The effects of actions are felt at different levels, depending on space and time—a sphere of influence. Students have to decide what they take responsibility for, based on their sense of self and the role they have as a citizen in a community and in the world.

References

- Bertschinger, C. 2005. *Moving Mountains*. London, UK. Doubleday.
- Diploma Programme. *Theory of Knowledge guide*. May 2013.

Resources

	ATL skills	Task summary
TOPIC 1 Resources and economic systems		
Activity 1 Identify the question	✓ Thinking Apply skills and knowledge in unfamiliar situations.	• Explain how one or more of the three basic questions about resources applies to a news article on economics.
Activity 2 Analysing economic systems	✓ Research Locate, organize, analyse, evaluate, synthesize and ethically use information from a variety of sources and media (including digital social media and online networks).	• Analyse economic systems, explain how their parts relate to each other and interpret information about them to determine how they answer the three questions of resource allocation.
TOPIC 2 Choices and consequences		
Activity 3 Resource choices and unintended consequences	✓ Research Demonstrate awareness of media interpretations of events and ideas.	• Read an article closely to identify the unintended consequences of resource allocation choices.
Activity 4 Resource use and values	✓ Thinking Consider ethical, cultural and environmental implications.	• Reflect on the relationship between personal values, choices and resource use.
TOPIC 3 Entrepreneurship, environment and culture		
Activity 5 Entrepreneurship in action	✓ Thinking Analyse complex concepts and projects into their constituent parts and synthesize them to create new understanding.	• Analyse how the entrepreneurs behind an innovation used resources in new and improved ways.

Activity 6 Entrepreneurship, agriculture and land use	✓ Communication Read critically and for comprehension.	● Read an article on agricultural sustainability and entrepreneurship closely and analyse it using a Visible Thinking Strategy.
Activity 7 What do you know?	✓ Thinking Change the context of an inquiry to gain different perspectives.	● Consider how people in different positions, and with different knowledge, beliefs and values, view the same resource.
Activity 8 Cultures and resources	✓ Thinking Create original works and ideas; use existing works and ideas in new ways.	● Draw connections between the knowledge and values of a culture and the way the people living in that culture interact with resources.

Introducing resources

The student book starts this chapter by making the point that resources allow us to obtain the things we need and want. The idea is to help students to see how fundamental resources are to our lives, how their availability affects what is possible for us in life, and how the choices we make about them will have major impacts on us. In addition, our resource choices will be impacted by our values, or what we believe to be important in life.

While the student book brings up the relationship between the related concepts of resources and values later in the chapter, you may want to introduce it at this early stage. The student book uses the example shown in Figure 9.1 (in the student book) to introduce the four basic categories of resources—land, labour, capital and entrepreneurship. The example is based on the assumption that students value education, and shows how each category of resource can help them pursue this value (in this case, through higher education). Again, you may want to be more explicit about values as you discuss this example with students.

Focusing on the relationship between resources and values can also help students to recognize that, while resources are important to basic survival, they are also necessary to leading a good and fulfilling life, however that is defined. Our values determine how we envision the good life, while resources are necessary for making it a reality. Of course, availability of resources does not guarantee that we can live according to what we value. Good decisions about how to use those resources will also be required, as well as good fortune.

The introduction to the concept of resources ends by presenting the dilemma that arises: our wants are unlimited but our resources are limited. This is, in fact, one of the fundamental dilemmas with which individuals and societies, and especially the discipline of economics, is concerned. This is a prelude to Topic 1 on resources and economic

systems, which represent different approaches societies use to try to address the tension between unlimited wants and limited resources via a framework in which people make choices about which wants to prioritize. If you teach an economics course or unit, this is also a time when you can introduce the concepts of choice and opportunity cost.

Topic 2 of this chapter allows students to inquire into the consequences of our choices, which result, at least in part, from the complexity of the human and natural systems in which we operate. It also explores how complex and conflicting value systems play a role in our choices about resource use. Topic 3 singles out entrepreneurship as a special resource that allows us to use all other resources more efficiently and sustainably, and then looks at how environment and culture impact our interactions with resources.

DIPLOMA PROGRAMME LINKS

The dilemma of limited resources and unlimited wants, and the choices this forces on us, is a fundamental aspect of the DP economics course.

INTERDISCIPLINARY LINKS

Language and Literature

Help students to find examples of how the arts treat the theme of “thwarted desire”, exploring how desires are frustrated in the first place and how we respond to such disappointments. There are many books and films in which characters are forced to make difficult choices between two things they intensely desire.

TEACHING IDEA 1

Ask students to think about how being “rich” differentiates people who do not have access to such economic resources.

Do people who are so rich that they can buy much more than they could ever consume have to make choices in the same way that other people do? Can't they just buy everything they want and therefore avoid making choices?

Encourage students to consider that even billionaires have constraints on their time and may want intangible things that money can't buy. They therefore have to make trade-offs (for example, the trade-off between spending time with loved ones and working towards professional success).

TOPIC 1

Resources and economic systems

The section on economic systems in the student book focuses on how societies use these systems to make choices about resource use. The choice of economic system is fundamentally a choice about how all other choices regarding allocation of resources will be made in a society. The systems lie on a continuum, with those at one end leaving choice to individuals and those at the other end centralizing choice as much as possible in the hands of a few. The student book presents a basic model of this continuum (Figure 9.2).

Nature gives us a finite quantity of resources to begin with, creating the need to make difficult decisions about which of our wants to pursue and which to forego. As the student book discusses later in the chapter, entrepreneurship is a special kind of resource that can increase the abundance and productivity of the other three resources. However, even the human ingenuity that makes entrepreneurship possible has limits. At the very least, it needs to work within the constraints of the laws of nature.

You may want to help students understand the choices we have to make in the light of infinite wants and finite resources by first helping them to relate such choices to their own lives, before you explore choices on a societal level. This can also serve as a formative task to help you assess the extent to which students understand the four types of resources, as well as the relationship between unlimited wants, limited resources and choice.

TEACHING IDEA 2

Ask students to think of a choice they have made in their lives. They should think about this choice in two key ways:

- What resources did they need to execute the choice?
- Once they had used the resources in making that choice, what other choices or possibilities were no longer available to them? What did they forego in following through on the choice they made?

The second point brings in the concept of opportunity cost, which you may want to be explicit about. Even if you don't, it is important for students to see that choice involves giving something up to get something else.

Ask students to use a table like the one below to organize their answers:

The choice you made	Resources needed to act on the choice	What you were not able to do because you acted on your first choice
To do homework last night.	<ul style="list-style-type: none"> ■ Labour—my own, plus the labour of teachers or others that went into setting the work. ■ Land—coal (or natural gas, water, uranium, etc) to run the power plant that provided electricity to run my lights and computer; wood and metals that provided raw materials for the basic tools I used (paper, writing utensils, computer). ■ Capital—pens and pencils, computer, desk. ■ Entrepreneurship—my own ATL skills, which help me use strategies. 	Spend time communicating with friends on social media.



Activity 1 Identify the question

The student book presents the three basic economic questions that underpin economic systems. These questions are at the conceptual level and students therefore need practice in applying them to real-life situations. This activity gives them an opportunity to do so. It also allows them to practise a crucial ATL skill—to apply abstract conceptual or theoretical understandings to various contexts.

Ask students to read the instructions for Activity 1 in the student book. Most news articles that relate to economic decisions will allow for some application of the three basic economic questions. Encourage students to search for articles related to issues that interest them, and suggest possible sources.

A good example that you can go through with the class is to examine an article entitled “Novartis: India rejects patent plea for cancer drug Glivec” on www.bbc.co.uk. The table below contains the relevant information that can be extracted from the article. Students could record the findings of their article research in a similar format.

Basic economic question	How it relates to actions or developments in the article
What products should we make and how much of each product should we produce?	India’s Supreme Court has decided that a drug called Glivec should continue to be produced in generic form. Given that more firms will therefore be able to produce the drug, this reflects a decision to produce more, rather than less, of this particular product. However, this could lead to fewer new drugs being introduced in the future. This would presumably not be an intended outcome of the current decision.
How should we make our products (ie, how should we combine our resources to produce goods)?	The decision is to have this drug made by many generic drug companies rather than solely by the drug company that invented it. The drug that the generic companies will make is apparently slightly different from the one made by Novartis, the company that invented the original drug. Patents are usually used to encourage entrepreneurship. Again, the criticism of the decision arises out of concerns that it will discourage use of the resource of entrepreneurship—representing a choice to use less entrepreneurship in India’s mix of resources. But in the short term, the decision represents a choice to use more of the other three types of resources—land, labour and capital—to produce this particular drug.
Who should get the products we make (ie, based on what criteria, such as wealth or fairness, should products be distributed)?	The decision should increase the number of people who are able to get this product and prioritizes fairness and need as criteria for access to the product rather than wealth. A critic of the decision may say that in the future there will be fewer new products (in this case, drugs) about which to answer this question.

Assessment

Criterion A: Knowing and understanding

If you choose to assess this task, you can use criterion A. The task-specific descriptor for the top band (7–8) should read that the student:

- Demonstrates excellent knowledge and understanding of the three basic economic questions through thorough, accurate explanations of how they apply to a specific situation involving economic decisions.

TIP

Try to help students to see that applying abstract knowledge (such as the three basic economic questions) to concrete situations is an important skill to develop. The best way to achieve deep understanding of the three basic economic questions, which are at an abstract, conceptual level, is to apply them to many real-life economic decisions.

Abstraction is the goal of schooling. The teacher wants students to be able to apply classroom learning in new contexts, including those outside of school... The surest way to help students understand an abstraction is to expose them to many different versions of the abstraction.

Daniel T Willingham, *Why Don't Students Like School: A Cognitive Scientist Answers*.



Activity 2 Analysing economic systems

The main task in Activity 2 allows students to explore the continuum of economic systems more deeply by analysing three different economic positions. It also gives students a chance to expand their understanding of the key concept of systems. Students should recognize some of the interacting components of economic systems, such as firms, households, governments and resources. They should also be able to identify how economic systems interact with other kinds of systems, such as political, social and natural ones.

If you choose to assess this task, you can use criterion D (see Assessment criteria at the end of this activity).

To extend the activity beyond the steps in the student book, students could research and explore “mixed economic systems”. Highlight to students that all economic systems in the real world are mixed in some way. Applying the three basic economic questions to mixed systems is more complex, so students will need support with this.

Economic systems and societal outcomes

The following extension task allows students to consider one of the more interesting economic questions of our time: “Where should societies be on the continuum of economic systems in order to get the best outcomes in a variety of areas, including economic growth, human development, and environmental preservation?”

Students can explore this question by choosing two countries that are as similar as possible in all ways except for their positions on the continuum of economic systems.

They should collect information and data about their chosen countries, analyse what they find, and present their answer to the key question.

STEP 1

Ask students to find (or supply the class with) texts expressing two opposing viewpoints regarding where societies should place themselves on the continuum of economic systems:

- **Viewpoint 1:** Societies should support significant government intervention.
- **Viewpoint 2:** Societies should support limited government intervention.

STEP 2

Students will need to investigate a number of websites to help them come to some conclusions about which viewpoint they find more persuasive. They should use the arguments in the texts, as well as data and information they find, to formulate their own argument answering the key question. The sources detailed below are particularly useful to this task, and enable students to cross-reference a country's position on the continuum of economic systems with development outcomes:

- **Index of Economic Freedom:** For the current position of countries on the continuum of economic systems and information about their economic performance, go to www.heritage.org/index. This is a good starting place for research as the index ranks most of the countries in the world according to the level of government intervention they have in their economies. This provides students with a baseline for comparing countries when looking at the other websites—for example, if they know that Peru has more economic freedom than Ecuador, they can compare them on other indexes to see which country is faring better in terms of economic growth, development and environmental outcomes.
- **World Bank's Doing Business Index:** For more information on countries' positions on the continuum of economic systems, especially in terms of how much they allow individuals and businesses to answer the three basic economic questions, students can look at this index, which ranks countries based on how easy it is to set up and run a business within their borders. Access it at www.doingbusiness.org.
- **Environmental Performance Index:** Visit www.epi.yale.edu to view Yale University's environmental performance index. It ranks countries in terms of their impact on the environment.
- **UN Human Development Index:** The concept of development tries to go beyond more basic economic indicators as a measurement for the relative success of societies. When the UN looks at development, it considers not only economic indicators but also access to education, healthcare and to an array of choices about how to live one's life. hdr.undp.org.

WEB LINKS

If you have access to Cengage's Opposing Viewpoints database (www.gale.cengage.com), you can point students in the direction of "Capitalism Causes Poverty" (1999 and 2010) as a source for viewpoint 1.

TIP

Students should try to compare countries that are in the same regions and have some of the same conditions, such as population size and make-up, cultural background, etc. It is probably more instructive to compare Peru and Ecuador, for example, than to compare Hong Kong and Zimbabwe.

STEP 3

Allow students to choose the final format of their project. It can be a written essay, an in-class presentation, a recorded multimedia presentation, a brochure, poster or any other format that allows them to address the question and satisfy the criteria for the task. Whichever format they choose, provide students with the following advice:

- Generate appropriate graphs and/or tables of collected data. Students may also want to include maps or diagrams to support their arguments, but they must include graphs and/or tables.
- If they choose the essay format, they should write between 750 and 1,500 words. If students opt for any other format, they should try to communicate roughly the same amount of analysis and evaluation as they would in the essay. As they progress, they should constantly check their own work against the task-specific clarification to make sure that they are satisfying all of the requirements.
- Students should consider the values and possible limitations of their sources, as well as the entire approach they took to trying to answer this research question. Are there other data or information sources they would like to have? Are there other ways to address this question that they believe would strengthen their conclusions? This is part of criteria B and D on the task-specific clarification.

TIP

Instead of giving students a choice of format, you may want to specify that the format be a written report but give them a choice of roles (for example, journalist for a general-interest magazine such as *Time*, *The Economist*, *The Atlantic*, researcher for the World Bank, IMF or UNDP, scholar at a think tank).

Assessment

If you chose to assess to assess this extension task, you can use criteria B, C and D.

Level 7–8 **B** Investigating

I have:

- I. used research methods to collect and record appropriate, varied and relevant information consistent with the question: "Where should societies be on the continuum of economic systems in order to get the best outcomes in terms of economic growth, human development and environmental preservation?"
- II. thoroughly evaluated the investigation process and results.

C Communicating

I have:

- I. communicated information and ideas effectively and accurately by using a style that is completely appropriate to the audience and purpose of answering the research question in an interesting and engaging way
- II. structured information and ideas in a way that is completely appropriate to the chosen format
- III. consistently documented sources of information using a recognized convention.

D Thinking critically

I have:

- I. completed a detailed discussion of the positions of two countries on the continuum of economic systems, as well as their economic, environmental and human development outcomes
- II. synthesized information to make valid, well-supported arguments responding to the question: "Where should societies be on the continuum of economic systems in order to get the best outcomes in terms of economic growth, human development and environmental preservation?"
- III. effectively analysed and evaluated a range of the sources used for the project in terms of origin and purpose, consistently recognizing values and limitations.

TIP

The SEER (Source Educational Evaluation Rubric) at turnitin.com provides criteria for evaluating sources, which students might find helpful:

1. Be sure that you support all of your assertions. If you find yourself saying something but not supporting it with data from the indexes, either find a way to support it or consider whether you need to revise your argument.
2. Show that you have dug deep into the indexes by analysing what they have to say about the main question and then making evaluations based on that analysis.

TOPIC 2

Choices and consequences

This topic ties together the related concepts of choice, causality and resources and the key concept of systems. You may also want to refer to the discussion of intentional and unintentional change covered in chapter 3. It is important for students to understand how the complexity of systems makes the outcomes of our decisions difficult to predict, and that this should lead to a certain level of humility when approaching such decisions.

In the topic introduction, Adam Smith's *The Invisible Hand* is cited as an example which illustrates that, sometimes, unintentional outcomes can be positive. It promotes the idea of the market as an instance of positive unintended consequences that occur when individuals pursue personal gain within a free market but end up benefiting society as a whole. Their pursuit of higher profits leads them to use resources more efficiently and in new ways that other people value.



Activity 3

Resource choices and unintended consequences

Activity 3 gives you an opportunity to assess students' understanding of the statements of inquiry for this topic. Note that the questions in Step 2 of the activity can be used with any scenario in which resource allocation choices have been made and unintended consequences have resulted.

Possible responses to the questions in the student book might be similar to those listed below:

Q1: What choices about resource allocation were made in the situation described? (Think of this in terms of the three economic questions.)

A1: What products should we make? *More energy-efficient washing machines. This led to more front-loading and fewer top-loading washers being produced, as top-loading machines use more water and are thus less energy efficient.*

How should we make them? *The actual production process is not addressed in the article.*

Who should get them? *Given that front-loading washers are more expensive, the move toward front-loading washers could mean that fewer people on lower incomes will be able to purchase washing machines.*

Q2: Who made these choices?

A2: *According to the article, the changes in what products to make and possible changes in who would get those products were the result of decisions made by the US federal government through its energy standards.*

Q3: What goals did those who changed the resource allocations hope to achieve?

A3: *They hoped to save energy by making appliances more efficient.*

Q4 and Q5: What unintended consequences resulted from the changes in resource allocation? Why did these consequences occur?

A4 and A5: *The article claims that the quality of washing machines has fallen and their prices have risen. Front-loading machines don't immerse the clothes fully and therefore use less water, making them more efficient. Because they therefore more easily meet government efficiency standards, they now dominate the market. However, they do not wash clothes as well, are more expensive and are more prone to mould than the top-loading machines that were produced before the efficiency standards were implemented.*

Assessment

Criterion A: Knowing and understanding

The task-specific descriptor for the top band (7–8) should read that the student:

- demonstrates excellent knowledge and understanding of the statement of inquiry: "We make choices about resource allocation with certain objectives in mind but the complexity and interconnectedness of the human and natural systems in which resource use occurs often lead to consequences we did not intend" through accurate descriptions, explanations and examples.

Survey study

Step 3 in Activity 3 suggests that students examine the issue more closely by reading about the survey, which the author criticizes in the last paragraph, from the point of view of the organization that conducted it.

Students should recognize that the author's critique of the survey focuses on the fact that it did not make clear to respondents that increased efficiency could compromise performance. It does appear from the press release that respondents were indeed not made aware that higher efficiency standards could affect the performance of appliances.

You can extend this activity by asking students to evaluate the two sources (the article and the press release, which is referred to in the Web Links box in Step 1 of the activity) and discuss which they find more persuasive. Consider having them use the SEER (Source Educational Evaluation Rubric) at turnitin.com (referred to earlier in this chapter) as a tool for evaluating the sources. Remind students that in drawing on the second source, they are practising the ATL skill of changing the context of an inquiry to gain different perspectives.

WEB LINKS

At www.consumerfed.org, go to "Newsroom/Press releases/2011/Americans want Appliances Standards to Drive Down the Cost of Home Energy, 03/08/11."

This is a press release about the survey by the organization that conducted it (Consumer Federation of America).



Activity 4 Resource use and values

This activity is designed to help students understand that the choices we make about resource use are driven, at least in part, by our values and that this raises two key issues.

As students carry out the steps in Activity 4, explain to the class that:

- Our value systems, like other systems, are complex and changing. This means that the priorities that arise from our values may conflict. For example, we might value travel but we also value sustainable resource use.
- Individuals and groups have different value systems. This means that our values will sometimes conflict with those of others. For example, environmentalists in developed countries may value cutting fossil fuel use globally while people in developing countries may want to increase fossil fuel use to escape poverty.

Different perspective

Using the article by Bjorn Lomborg in the Web Links box, ask students to look again at the questions in Activity 4, and this time answer them as if they were one of the “desperately poor” people Lomborg writes about.

Make students aware that, in carrying out this exercise, they are practising the ATL skill of changing the context of an inquiry to gain different perspectives.

Possible responses in this context might be:

Q1: What resources do you need in order to obtain the things that are important to you?

A1: Lomborg suggests that the poor want to escape poverty and need energy based on fossil fuels in order to do this. Fossil fuels fall under the category of land. They would also need capital, in the form of power plants and electric grids to use the fuels.

Q2: Do you see any conflicts between your priorities? How would you resolve these conflicts?

A2: A conflict exists between the priorities of clean air and addressing global warming, and helping people escape poverty. It is likely that people living in poverty want to avoid pollution and global warming, but not at the expense of remaining in poverty (Lomborg suggests this with his example of China). In the short term, those living in poverty would like to resolve the conflict between increased prosperity and increased pollution in favour of increased prosperity. Lomborg suggests that in the longer term, as clean-energy technology improves, this conflict of priorities may no longer be an issue. Students may also note that indoor air pollution should decrease as access to fossil-fuel energy increases, as people will no longer need to rely on dirty fuels to cook and heat their homes. This makes the pollution versus prosperity trade-off more complex than it first appears.

Q3: Do you see any conflicts between your priorities and those of other people?

A3: Lomborg subtly suggests that wealthier people prioritize the environment more than economic development when he notes that “as China becomes wealthier, it will most likely begin to cut its air pollution problem through regulation, just as the rich world did in the 20th century,” as well as when he discusses the US government’s refusal to subsidize coal-fired power plants. Students would have to read closely and use the ATL skill of making inferences to pick up on this point.

The further questions in the student book, about possible ways to resolve issues of conflicting priorities, would make a good basis for a discussion or debate.

WEB LINKS

Go to www.nytimes.com and search for “The poor need cheap fossil fuels” by Bjorn Lomborg for an exploration of the clash of values between environmentalists in developed countries and people in developing countries.

WEB LINKS

For a reply to Lomborg’s article go to www.theguardian.com and search “Is Bjorn Lomborg right to say fossil fuels are what poor countries need?”

TOPIC 3

Entrepreneurship, environment and culture

Entrepreneurship is singled out as a special type of resource because it represents the application of human ingenuity to improve how we use all other resources.

Students can see the global impact of entrepreneurship in the industrial revolution, which significantly raised living standards globally after they were relatively flat for much of human history. The huge population growth that has occurred as a result raises the concepts of sustainability and values, given that our values play a role in how we address the tension between rising standards of living and sustainability. Students should have some familiarity with this issue after addressing it in Activity 4 in Topic 2. In addition there are some useful web links in topics 2 and 3 in the student book to help you explore this issue further.



Activity 5 Entrepreneurship in action

Students can use this activity to show understanding of the statement of inquiry by applying it to a specific instance of entrepreneurship.

The possible examples students can use in this task are almost endless. Any case in which a newer product displaced an older one will work. Note that, in some cases, the older product may still be in use (for example, television displaced radio but radio has continued to be popular), while in other cases the older product has disappeared almost completely (automobiles replaced horse-drawn vehicles, which are now extremely rare in most parts of the world).

Another issue that may arise is that some new products don't really seem to replace anything. They represent something new in kind rather than in degree (what did fire or anaesthesia replace?). In other cases, a long string of products seem to succeed each other (for example hand-delivered messages, telegraph, telephone, then the internet).

Some possible innovations for students to explore in this activity are:

Older product	Newer product
???	Wheel
Hand-copied books	Printed books
???	Electricity
Hand-delivered communications	Telegraph
Telegraph	Telephone
Stone, brick, wood etc.	Cement
???	Antibiotics
Animal-powered land transport	Trains
Trains	Airplanes
Iron	Steel
???	Personal computer

Level A Knowing and understanding

7–8 I have:

- I. demonstrated excellent knowledge and understanding of the statement of inquiry: “Entrepreneurship is a resource that can help us use other resources more efficiently and sustainably, while still allowing us to improve our standards of living” through thorough, accurate explanations of how it applies to a specific example of entrepreneurship.

D Thinking critically

I have:

- I. completed a detailed discussion of the innovation in terms of how entrepreneurs used the other three resources of land, capital and labour to improve efficiency, sustainability and standard of living.

 **WEB LINKS**

Go to www.theatlantic.com and search “The 50 Greatest Breakthroughs Since the Wheel” for a longer list of innovations and an interesting discussion of innovation (ie. entrepreneurship) in general.

**Activity 6 Entrepreneurship, agriculture and land use**

This activity can also be used to assess student understanding of the statement of inquiry: “Entrepreneurship is a resource that can help us use other resources more efficiently and sustainably, while still allowing us to improve our standards of living.”

The following questions and possible responses can be used to support students in doing a close reading of the article “Our fading footprint for farming food” by Matt Ridley, which is referred to in Step 1 of the activity. Ask students to consider the following points:

Q1: In the developments the article describes, how did entrepreneurship contribute to greater efficiency, sustainability, and higher standards of living?

- A1:**
- **Greater efficiency:** Entrepreneurs developed fertilizers, machinery like tractors, pesticides and better varieties of plants which allow for the production of a given quantity of crop using less land.
 - **Sustainability:** A major issue with agricultural sustainability is availability of land. Because of the innovations listed above, land devoted to agricultural is now falling at 2% per year, even with growing populations, making it more likely that agriculture will be sustainable over the longer term.
 - **Higher standards of living:** The ability to produce more food with fewer resources means more people will have better diets. It also means that people who would have been farmers in the past can be freed up to do other work making products that raise living standards in other ways.

Q2: To what extent does the tension between a rising standard of living and sustainable use of resources play a role in the developments the article describes?

- A2:** There has been tension in the past between sustainable use of resources and rising living standards as population and affluence both increased at relatively high rates. This population growth was driven in part by the rising living standards represented by access to more and better food. This meant that rising living standards and sustainable use of resources appeared to be at odds. However, the article argues that the tension is now easing for two reasons. One, population growth is slowing and two, once standards of living/affluence reach a certain level, increases in food intake begin to slow down as well. Combined with the increased efficiency of land use in agriculture due to entrepreneurship, the tension between rising standards of living and sustainable use of resources may be easing, at least in agriculture.

Assessment**Criterion A: Knowing and understanding**

The task-specific descriptor for the top band (7–8) should read that the student:

- demonstrates excellent knowledge and understanding of the statement of inquiry: “Entrepreneurship is a resource that can help us use other resources more efficiently and sustainably, while still allowing us to improve our standards of living” through thorough, accurate explanations of how it applies to a specific example of global agriculture.

The final section of this chapter explores the relationship between culture and resources—how culture, and especially the knowledge and values embedded in it, impacts humans’ perceptions and actions towards resources, and how resources impact the development of human culture in turn.

You may want to point out to students that there are multiple types of knowledge and that the different types can have different impacts on how we interact with resources. The discussion of knowledge in the student book touches on three main types of knowledge but does not use the technical terms:

- **acquaintanceship knowledge** (knowing that the resource exists)
- **declarative knowledge** (knowing that the resource has certain uses)
- **procedural knowledge** (knowing how to make use of the resource). (Colman 2012)



Activity 7 What do you know?

A suggested example for this study of knowledge—comparing a hunter-gatherer, a tribe member and an engineer—is provided in the student book. Have students use this example on their first attempt at completing the table in Activity 7; possible responses are given below. You can also encourage students to look ahead at the diagram in Activity 8, which should enhance their understanding of the relationship between culture and resources.

Resource: oil

Person	Knowledge: What does the person know about the resource?	Beliefs and values: What does the person believe about the resource? How might their judgments about what is important in life affect their views of the resource?	Confirmation bias: How might the person’s current knowledge, values and beliefs distort their view of the resource?	Interaction: How might the person’s knowledge, beliefs and values impact their interaction with the resource in question (eg, oil/coral reef).
Hunter-gatherer living 15,000 years ago	Limited knowledge of the resource.	The hunter-gatherer would tend to view resources in light of their ability to support hunting and gathering of food and would likely see no use for it.	Oil has turned out to be one of the most important in human history, but the hunter-gatherer’s current knowledge, values and beliefs don’t allow them to anticipate its importance.	The hunter-gatherer will avoid the resource as a nuisance.

Member of a tribe that uses canoes	Some knowledge of the resource.	The tribe views canoes as very important to their livelihood. Oil is therefore seen as a somewhat important resource which can help canoes to function better.	The tribal member would view oil as a resource with limited uses. Like the hunter-gatherer, they are not able to anticipate its many uses.	The tribal member will make limited use of the resource.
20 th century engineer	Extensive knowledge of the resource.	The engineer places high value on the resource, seeing it as a basis for modern life and its high standards of living, as well as a source of commercial success for them and their company.	Given their personal and professional investment in the resource, it is possible that they are less able or willing to see the potential downsides of oil extraction and use (ie, negative environmental effects).	The engineer and their company will make extensive use of the resource, extracting as much of it as possible for sale to other companies and individuals in the global economy who have many uses for it.

After students have completed the first exercise, try modifying the activity using the example of Ecuador's Yasuni National Park as the context (see Topic 2, chapter 8). It works very well in terms of the value of resources, cultural values and opportunity costs, and provides an excellent link to the related concept of responsible choice.

Assessment

Criterion A: Knowing and understanding

This task can be used to assess student understanding of the statement of inquiry: "Human culture, especially in the areas of science, technology and values, affects how we interact with resources." The top band (7–8) of the descriptor should read that the student:

- demonstrates excellent knowledge and understanding of the statement of inquiry "Human culture, especially in the areas of science, technology and values, affects how we interact with resources" through thorough, accurate examples of how two people with different knowledge and values might view the same resource.



Activity 8 Cultures and resources

This activity asks students to make connections between the knowledge and values of a culture and the ways in which that culture interacted, or interacts, with resources.

You may want to simplify the activity for students by asking them to focus on how a given culture interacted with one resource or set of resources (as in the example in this activity).

Another approach is to have students compare how different cultures interacted with natural resources in general (ie, all resources that fall under the category of land). The table from Activity 7 can be adapted for this task by replacing the person in column one with an entire culture. Again, you may want to encourage students to use the diagram in Activity 8 as a template for creating their own visual of their chosen culture's relationship with resources.

Finally, it may be especially interesting to have students work individually or in small groups to investigate how different cultures interacted with the same resource.

Example: Neolithic agriculturalists and the resource of plants and animals

Culture	Knowledge: What does the culture know about the resource?	Beliefs and values: What does the culture believe about the resource? How might its judgments about what is important in life affect its views of the resource?	Confirmation bias: How might the culture's current knowledge, values and beliefs distort its view of the resource?	Interaction: How might the culture's knowledge, beliefs and values impact its interaction with the resource in question?
<p>Early Neolithic agriculturalists living in Southwest Asia (8000–3500 BC)</p>	<p>The people in this culture know that some plants (eg, wheat, barley, beans) could be cultivated and some animals (goat, sheep, pig, cattle) domesticated. As the period went on, their knowledge of how to cultivate plants and use domesticated animals increased.</p>	<p>The people in this culture probably believed that domesticated plants and animals were fundamental to their way of life. Based on evidence from later Neolithic civilizations in Mesopotamia and Egypt, the centrality of agriculture likely affected their overall cultural and religious views. This might be expressed in concerns with flooding, attempts to predict seasons, or the belief that divine forces could be found in natural objects such as rivers and the need to please these divinities through sacrifice and worship.</p>	<p>In the early Neolithic they would have likely interacted with hunter-gatherers and been able to make comparisons between their way of life and that of the hunter-gatherers. They might have believed their way of life was superior because it gave them a more predictable diet, allowing them to settle in one place and to support larger populations. They may have downplayed, ignored, or not been aware of the disadvantages involved in their dependence on domesticated plants and animals, such as a more labour-intensive lifestyle and their close interaction with animals increasing the incidence of disease.</p>	<p>With increasing knowledge of the natural environment, these people were able to exercise more control over it. They cleared land for intensive agriculture, built irrigation systems and established larger and more permanent settlements. They controlled domesticated animals for their entire life cycles, living in close proximity to them.</p>

Examples of other cultures and resources for students to investigate

Culture	Resources
Paleolithic hunter-gatherers	Stone, wild plants and animals
Early civilizations (Mesopotamia, Egypt, Kush/Axum, Indus Valley, Shang/Zhou China)	Stone, rivers, metals (copper, tin) used to make bronze, domesticated plants and animals, wild plants and animals
Classical civilizations (Han China, Greece/Rome, Mauryas/Gupta Empire, Maya, Ghana)	Stone, clay, salt, rivers, seas and oceans, iron, domesticated plants and animals, wild plants and animals
Modern industrial civilization	Stone, clay, salt, rivers, seas and oceans, iron, domesticated plants and animals, wild plants and animals, coal, oil, wind, sunlight, air

Assessment

Students who can do this task well would be demonstrating a sophisticated understanding of the statement of inquiry: “Human culture, especially in the areas of science, technology and values, affects how we interact with resources.” If you choose to assess the task, you can use criteria B and D.

Level **B** Investigating

7–8

I have:

used research methods to collect and record appropriate, varied and relevant information consistent with the research question: “How did aspects of a culture, especially in the areas of science, technology and values, affect the way the people living within the culture interacted with resources?”

Level **D** Thinking critically

I have:

thoroughly interpreted a range of different perspectives of the culture, especially in terms of knowledge and values, and the implications of these for how the culture interacted/interacts with resources.

Summary

This chapter explored the concept of resources, looking at how we make decisions about how to use them and the intended and unintended consequences of those decisions, including environmental impacts. Students considered how the resource of entrepreneurship relates in a special way to the other three. Finally, they inquired into the relationship between culture and resources, considering how culture affects resource use and how resource availability affects culture.








The tasks in the student book gave students the opportunity to practise a variety of ATL skills, from applying conceptual understanding to concrete examples, to locating, analysing and organizing information, to reading challenging texts critically. The teacher book provides a number of extension tasks that can be used in a unit related to the concept of resources, and also shows how many of the tasks in the student book can be assessed using the individuals and societies criteria.

References

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Causality

	ATL skills	Task summary
TOPIC 1 Scientific discoveries of longitude, planets, time		
Activity 1 Who was Copernicus?	✓ Communication Read critically and for comprehension.	 Create a profile for Nicolaus Copernicus that describes his work.
Activity 2 Newsflash— “The Sun is the centre of the universe!”	✓ Communication Use a variety of media to communicate with a range of audiences.	 Write a newsflash that communicates a significant scientific discovery.
Activity 3 Pamphlet on a scientific discovery	✓ Thinking Analyse complex concepts and projects into their constituent parts and synthesize them to create a new understanding.	 Create a pamphlet for other students that informs them of a discovery related to science between the 15 th and 18 th centuries.
TOPIC 2 Geographical discoveries—the “new” world		
Activity 4 Prezi—“The world as we know it”	✓ Research Understand and implement intellectual property rights.	 Use presentation software to analyse differences in maps depending on time and culture.
Activity 5 Flow chart of exploration	✓ Self-management Use appropriate strategies for organizing complex information.	 Document a series of causes and effects of change connected to exploration.
Activity 6 Summarize and predict—then, now and next	✓ Thinking Apply skills and knowledge in unfamiliar situations.	 Make predictions about future explorations and their possible causes and impacts.
TOPIC 3 Technological discoveries		
Activity 7 Back to the future	✓ Research Present information in a variety of formats and platforms.	 Create a timeline documenting the changing technology of mobile telephones.

<p>Activity 8 The internet— cause and consequence</p>	<p>✓ Research Locate, organize, analyse, evaluate, synthesize and ethically use information from a variety of sources and media (including digital social media and online networks).</p>	<p>👤 Research and develop a presentation documenting causes and consequences of the internet.</p>
<p>Activity 9 The impact of the internet</p>	<p>✓ Thinking Draw reasonable conclusions and generalizations.</p>	<p>👥 Design a survey that tracks the impact of using the internet.</p>

Introducing causality

Students probably associate causality with the study of cause and effect. As a related concept, causality can be explored through a myriad of different topics and disciplines.

- **History:** The study of cause and effect can be applied to events throughout historical time periods. Causality can also be examined when comparing types of events, such as revolutions, innovation and exploration, to analyse whether there are similarities in causes and effects.
- **Geography:** Causality can be viewed in the context of change in landscapes or resource extraction. Geographers can also use the concept of causality to examine the connection between people and the environments they use.
- **Economics:** Using the key concepts of change and systems, economists can study causality in connection with trade, stock exchanges and markets. Events such as the global financial crisis provide significant opportunities to analyse the influences of change on financial systems and the repercussions that are experienced locally and globally.
- **Political science/civics/government:** Causality provides a useful tool for students to focus on why different types of government develop and the impact that each type has on individuals and societies under that government. It is possible to combine the related concept of causality with leadership and analyse the reasons why leaders rise to prominence and the impact that they have.

The student book introduces the idea of a catalyst—an agent, event or individual that can be identified as the main cause of change. After students have completed the “If..., then...” Quick Think activity in the student book, follow up with the more detailed analysis outlined in Teaching Idea 1.

TEACHING IDEA 1

In groups of three or four students, create a flow chart of the decision-making process in the student council. If there is no student council in your school, use the process to show how new laws are enacted from the local or national government.

Highlight the key people or groups that can recommend or approve change.

Ask students to analyse the efficiency of the decision-making process based on length of time and stages of approvals. How easy is it to bring about change in the school or local community?

Ask the students to hypothesize what situations could override this decision-making process. What sorts of catalysts are extraordinary enough to require special action?

The topics in this chapter focus on significant discoveries in the fields of science, geography and technology. While the discoveries by themselves provide rich opportunities to study human ingenuity, it is important for students to be able to examine the situations that prompted these discoveries. Although change is the key concept for this chapter, students should also consider the key concept of time, place and space. Often, the catalyst for an event can be attributed to the circumstances created by a particular time and place.

The related concept of causality requires students to develop and master the skills involved in hypothesizing, logical reasoning and evaluation. As with many topics in individuals and societies, there is not necessarily a “right” answer to a research question. Nevertheless, students can propose explanations and judgements using detailed, factual knowledge of the people and events involved.

TOPIC 1

Scientific discoveries of longitude, planets, time

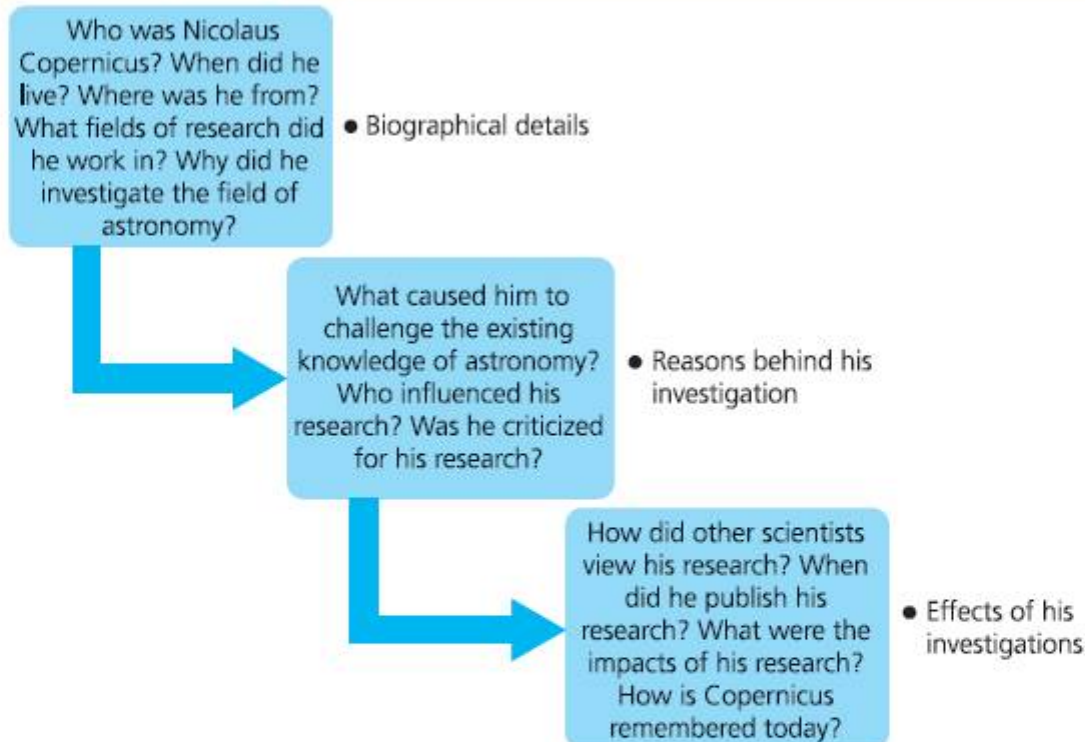
This topic naturally lends itself to collaboration with sciences and the possibility of developing an interdisciplinary unit based on scientific discoveries and their impact. Students can reflect on the experiments they have conducted or learned about and how this has impacted development in chemistry, physics and biology. It is also possible to approach this topic from the perspective of ethical scientific experimentation. For example, is the method of experimentation justifiable because of the potential effect of a new medication?



Activity 1 Who was Copernicus?

This activity requires students to learn more about Copernicus, including biographical information as well understanding more about the impact of his research. The activity can be done individually or in groups; you may wish to provide differentiation for your students using the activity structure below.

Time	Stage	Procedure	Resources								
10 min.	Introducing	As a class, read the introduction to Topic 1 and Activity 1 in the student book.	Student book								
15 min.	Planning	<p>Organize the class into groups of three. Each group will create three profiles of Copernicus but for different publications and audiences.</p> <p>Step 3 in Activity 1 suggests three different possibilities for publication: a webpage, a poster and a newspaper article. Groups can use these suggestions or choose their own.</p> <p>Each group should create a “RAFT” table to show the different audiences and formats. The topic of Copernicus will remain the same but each format may focus on a different aspect of his life.</p> <table border="1"> <thead> <tr> <th>Role</th> <th>Audience</th> <th>Format</th> <th>Topic</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Role	Audience	Format	Topic					Paper; student book
Role	Audience	Format	Topic								
60 min.	Investigating	Each group should develop inquiry questions before beginning their research. These could be created in a diagram to help students structure the order of inquiry (see figure below for an example).									



20 min.	Evaluating	Once each group has created the three different profiles, have them share with the other students in the class. Lead a discussion, reflecting on the challenges of creating different products for different audiences.	Completed profiles
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Activity 2 Newsflash – “The Sun is the centre of the universe!”

Today, scientific discoveries are published in peer-reviewed journals as well as popular media. The information used in these different types of publications is styled for particular audiences. For this activity, students will be communicating scientific information for the general public using a news format. This activity builds on the skills from Activity 1 and encourages students to think carefully about the message they are communicating and who they are communicating it to.

Time	Stage	Procedure	Resources
15 min.	Introducing	Lead a class discussion on the characteristics of a newsflash. If possible, show some clips of newsflashes from YouTube. Check that students have shared the following characteristics of what a newsflash should be: <ul style="list-style-type: none"> ■ Factual ■ 2–3 minutes long ■ Based on important news that affects many people. 	Internet
30 min.	Researching	Ask students to read the instructions for Activity 2 in the student book. Check that each pair of students has developed inquiry questions before they begin researching.	Student book
20 min.	Organizing	When students have collected the information they need, have them organize each piece of factual information on a separate card or piece of paper. Direct them to review Step 3 of Activity 2. How will they organize the information for their newsflash? Ask each pair to test out different orders of facts to see what is most effective.	Student book
20 min.	Predicting	As a summarizing activity after students have shared their newsflashes, lead a discussion on the impact that this discovery might have had on the general public. What sort of future scientific discoveries could have a similar impact?	<p>TIP</p> <p>This activity could be differentiated by having students research other scientific discoveries of the time and create newsflashes for these discoveries.</p>



Activity 3 Pamphlet on a scientific discovery

This task gives students an opportunity to combine historical research skills in the context of learning more about science. By giving them a specific audience for their pamphlet, they are challenged to translate information to be relevant and accessible for a genuine audience. This directly connects with the ATL skill of breaking down large concepts into component parts.

The student book provides three options for topics, giving students a choice but still providing some guidance.

Time	Stage	Procedure	Resources
15 min.	Introducing	<p>Direct students to read Activity 3 in the student book. Spend 10 minutes brainstorming initial ideas for the pamphlet. Remind students to check the role, audience, format and topic.</p> <p>To help students choose the topic for the pamphlet, encourage them to reflect on the following questions:</p> <ul style="list-style-type: none"> ■ Which topic interests you the most? ■ Have there been any topics during the unit where you have wanted to discover more? ■ Is there a connection between this class and your science class that you want to learn more about? 	Student book
30 min.	Evaluating	<p>This activity can be used as a summative assessment task, and so will require task specific assessment criteria. Students can be guided through the process of creating this criteria so that it is customized for their pamphlet, based on the topic that they selected.</p> <p>Share with the students the pre-selected strands of criteria A, B and C.</p> <p>A: Knowledge and understanding</p> <ol style="list-style-type: none"> i. Use a wide range of terminology in context. ii. Demonstrate knowledge and understanding of subject-specific content and concepts through developed descriptions, explanations and examples. <p>B: Investigating</p> <ol style="list-style-type: none"> i. Formulate a clear and focused research question and justify its relevance ii. Formulate and follow an action plan to investigate a research question. iii. Use research methods accurately to collect and record appropriate, varied and relevant information <p>C: Communicating</p> <ol style="list-style-type: none"> i. communicate information and ideas effectively using an appropriate style for the audience and purpose ii. Structure information and ideas in a way that is appropriate to the specified format. <p>Explain that these descriptors need to be made specific to their pamphlet and give them an example: Criterion A. (ii) – Demonstrate knowledge and understanding of Copernicus and his scientific discoveries through developed descriptions, explanations and examples.</p> <p>Once students have created their own assessment criteria, they can begin to research for their pamphlet.</p>	

TOPIC 2

Geographical discoveries—the “new” world

With this topic, it is tempting to fall into the European-centric view of exploration, claiming that countries are only “discovered” when European explorers have visited them. Encourage your students to consider why this point of view exists and use it to open dialogue on the question of different types of land ownership and belonging. It is important to choose exploration topics that are interesting and relevant to your students. While the student book focuses on exploration through sea voyages, it is also possible to include exploration of wilderness regions, the Arctic and Antarctic, deep-sea exploration or space exploration.

This topic has clear links with Chapter 6, which focuses on peace and conflict in New Zealand. Use this first teaching idea to introduce the topic.

INTERDISCIPLINARY LINKS

Design

Connect with design classes to create an interdisciplinary investigation into the machines and support systems that have enabled humans to explore environments that have previously been inaccessible.

TEACHING IDEA 2

1. Ask students to spend several minutes discussing what they recall about the topic of New Zealand from Chapter 6 on conflict (see Topic 3).
2. In pairs, ask students to create two newspaper headlines, one from the perspective of European explorers and the other from the perspective of Maoris. What would these headlines look like if they were about the initial meeting between Europeans and Maoris?
3. Ask each pair to share their headlines, explaining the reasoning behind their choice of words.



Activity 4 Prezi—“The world as we know it”

This activity requires students to use online presentation software. There are many software programs that allow students to collaborate and work online, and suggestions are given in the student book. When students are required to use technology to investigate, analyse and communicate, teachers often question how much of the class time should be dedicated to teaching a particular program or skill.

The vast amount of resources available through videos on YouTube, product-generated tutorials and examples means you do not have to commit significant amounts of class time to teaching technology skills. You also do not need to be an expert in creating Prezis, using Glogster or editing video content. Your class of students will no doubt contain experts in using technology and so your role is to facilitate their ability to teach and guide other students. You can do this in several ways:

- When students are working in groups, ensure that at least one student per group is able to proficiently use the technology.
- Allow class time for students to experiment, make errors, question and collaborate using new technology.
- Assist students in creating their own tutorials that can be shared to teach other students.

WEB LINKS

Free software such as Jing allows students to create screencasts that can demonstrate new technology with a narration of the processes. For more information about Jing, visit www.techsmith.com/jing.

Time	Stage	Procedure	Resources
20 min.	Exploring	Ask each student to take a pencil and blank piece of paper then move to a place on the edge of the classroom. Have the students create a rough sketch of the floor plan of the classroom from the perspective of where they are standing. Once students have finished ask them to share their plans, noticing that they are all different yet all represent the same location. Discuss the influence of perspective when creating maps.	Paper, pencils
10 min.	Checking	Read through Activity 4 in the student book. Clarify the differences between the two possible objectives for the activity. Ask students what might influence their choice of objective.	Student book
20 min.	Evaluating	As part of Step 1 in the activity, instruct students to work in pairs to research different types of software they could use for the task. As they evaluate the software, have them create a list of pros and cons that they can share with the class.	Student book



Activity 5 Flow chart of exploration

This flowchart can document a linear progression of events, but students can also be encouraged to expand their research to include the important events around the new invention, the interaction with culture and the long-term effects of the voyage. The activity helps students deepen their conceptual understanding of change as they analyse the causes and consequences of change in connection with exploration.

Time	Stage	Procedure	Resources
10 min.	Introducing	Ask students to read Activity 5 in the student book. Discuss which skills and knowledge that they have developed throughout the unit could help them complete this task.	Student book
30 min.	Exploring	Organize the students into partners. 1. Provide each pair with a portrait of an explorer and a short biography. Alternatively, display one portrait and biography that the whole class will use. 2. Each pair has to create an “interview” for the portrait. Encourage the students to examine the portrait closely and view it in connection with the biography, considering: <ul style="list-style-type: none"> What expressions can be seen on the explorer’s face? What hardships or challenges has the explorer had to deal with? 	Pictures of explorers and accompanying biographies

WEB LINKS

You can find a resource bank of explorers at www.biography.com. Search for “explorers”.


		<ul style="list-style-type: none"> How do you think they coped with adventure, risk and disappointment? How do you think they responded to fame and accolades they received for their explorations? What possible emotional or physical hardship could they have experienced? <p>Ask each pair to share the interview with another group.</p>	
15 min.	Deciding	<p>Explain that students need to choose an explorer from the time period between the 15th and 18th century.</p> <p>If students are not sure, have them spend 20–30 minutes researching possibilities before making a decision.</p>	Student book
30 min.	Analysing	<p>Once students have completed their research and created their flowcharts, provide 30 minutes for them to share or display them for other students to see. As they view the collection, ask students what they noticed that surprised them about the different explorers. Was there something that all of the explorers had in common?</p>	Student flowcharts



Activity 6

Summarize and predict—then, now and next

As students move through the steps in this activity, they are encouraged to reflect on causality in the past and how this might occur in future discoveries and explorations.

Time	Stage	Procedure	Resources
10 min.	Preparing	<p>Have students read Activity 6 in the student book. Clarify any questions they might have about the task before organizing them into groups of 2 or 3.</p>	Student book
40 min.	Synthesizing	<p>For steps 2 to 6 of the activity, students will be collaborating independently. Depending on your class, you may wish to provide recommendations for how to divide the time to keep groups on track.</p> <p>Remind students that they need to refer back to the student book and their notes from topics 1 and 2 of chapter 10.</p>	Student book; student notes
20 min.	Discussing	<p>Step 7 of Activity 6 requires each group to share their ideas with each other. You could structure this by asking certain groups to collaborate, or allow students to move freely about, sharing their discussions.</p>	<p> WEB LINKS</p> <p>There are examples of other modern day explorations on www.nationalgeographic.com. Search for “the new age of exploration”.</p>

20 min.

Thinking

As a culminating activity, instruct students to take part in a “tug of war” exercise.
Pose the question: “Should governments invest money in space exploration?”
Place students in groups of 5 or 6, and ask them to think of reasons for both sides of the argument—these are the “tugs” on the rope. After hearing the different tugs, ask them to consider which side they feel more aligned with, and to justify their responses.

WEB LINKS

This activity is based on the Visible Thinking routines you can find at www.visiblethinkingpz.org.

LITERARY LINKS

Students may be interested to read about a modern-day explorer, Jessica Watson, who sailed solo, non-stop and unassisted around the world at the age of 16. Her book documenting this journey is called *True Spirit*.

TOPIC 3

Technological discoveries

The topic of technology and causality allows students to explore the resources that many of them use on a regular basis. If the premise applies that technological inventions happen for a reason, pose questions to the students that encourage them to reflect on the reasons why different technologies were created (such as smartphones, social media networks, apps, aircraft and cars that run on biofuels). These questions also require students to analyse the effects of technological change, both positive and negative, short and long term. As some technologies are still relatively new, it also provides the opportunity for students to practise their prediction skills, considering how technology has influenced individuals and societies in the past and then seeing if these effects could apply to current technologies.



Activity 7 Back to the future

This activity requires students to create a multimedia timeline documenting the changing “face” of mobile telephones. Students will be able to incorporate sources from images, text and video to create a compelling timeline, telling the story of the mobile phone. Students must include information on the history, social impact and alternative uses of mobile phones.

It is important to provide guidance about how students should manage their time on this task. They should spend approximately 50% of their time on research and 50% on creating, revising and editing the timeline.

The ATL skill focus for the activity is to represent information in multimodal forms. However, students should also use the ATL skill of locating, organizing, analysing, evaluating and synthesizing information from a variety of sources. This skill focus reminds students that they have to be judicious in selecting relevant information and not simply focus on the presentation.

This activity can be used as a summative assessment task, focusing on the ATL skills that students have been developing through the unit.

Assessment

Criterion C: Communicating

- i. Communicate information and ideas effectively using an appropriate style for the audience and purpose.
- ii. Structure information and ideas in a way that is appropriate to the specific format.
- iii. Document sources of information using a recognized convention.

Criterion D: Thinking critically

- i. Discuss concepts, issues, models, visual representation and theories
- ii. Synthesize information to make valid, well-supported arguments.

To create task-specific criteria for this assessment, the following clarifications can be made for the descriptors:

Level	C Communicating Audience—student peers Purpose—analysis of social impact of mobile phones	D Thinking critically
7–8	<p>I have:</p> <ol style="list-style-type: none"> I. communicated information and ideas effectively and accurately by using a style that is completely appropriate for my student peers to understand the social impact of mobile phones II. structured information and ideas in a way that is completely appropriate for a multimedia presentation III. consistently documented sources of information using the specified format. 	<p>I have:</p> <ol style="list-style-type: none"> I. completed a detailed discussion of the concept of causality in connection with the invention of the mobile phone II. synthesized information to make valid, well-supported arguments about the social impact of mobile phones.

Activity 8 The internet—cause and consequence

This activity challenges students to communicate their findings on the internet using the specific format of PechaKucha. This is a presentation format originally designed by Astrid Klein and Mark Dytham of Klein Dytham architecture. The premise is to present a topic using 20 slides, each being shown for 20 seconds. Slides advance automatically, encouraging a dynamic but concise presentation that lasts about six minutes.

Time	Stage	Procedure	Resources
20 min.	Brainstorming	<p>Organize students into groups of three or four. Alternatively, if you have a small class, you could complete this brainstorm as a class discussion.</p> <p>Step 1: Generate For 5–10 minutes, have students generate a list of all the possible aspects of the internet, including causes and consequences. They could do this on separate pieces of paper or have one idea per notecard.</p> <p>Step 2: Sort Sort the ideas from Step 1 according to different categories. Students might like to organize information by time period, impact or scale. It is important that the categories emerge from the ideas of the students.</p>	Paper

		<p>Step 3: Connect Once the categories have been sorted, challenge students to explain how the different categories are connected. Is there a hierarchy to the categories? Do the ideas of one category impact another?</p> <p>Step 4: Elaborate After completing the brainstorm, students now have the opportunity to add more detail or to pose questions. During this step different groups can share what they have created.</p>	
15 min.	Synthesizing	If you have completed the previous stage in groups, bring the class together to synthesize the different ideas. The ideas that students have generated will form a starting point for Activity 8 in the student book.	Student book
10 min.	Checking	Have students read through Activity 8 and check for understanding of the task instructions.	Student book
20 min.	Analysing	<p>The format for PechaKucha is quite different to that of most presentations.</p> <p>Instruct students to collaborate in small groups, with each group watching a different example of a PechaKucha presentation. After they have watched, ask each group to summarize some of the positive and negative aspects of the presentation. What will they try to incorporate into their own presentation? What will they try to avoid?</p>	Internet; AV equipment

TIP

It can be daunting to do a PechaKucha presentation in front of audience. You might like to give students the option to use slide show recording options in programs such as PowerPoint or Keynote.



Activity 9 The impact of the internet

This activity challenges students to make predictions about the changing use of technology. By designing a survey, students need to reflect on the sorts of questions that will result in information about use of technology. Note that students will not be carrying out the research, just planning for it.

Time	Stage	Procedure	Resources
10 min.	Reviewing	<p>Ask students to read the Objective B descriptors from the individuals and societies guide.</p> <p>Discuss the differences between four strands of investigating.</p>	Individuals and societies subject guide
15 min.	Explaining	<p>Divide the class into four groups. Allocate each group one of the strands and ask them to give some examples of student learning that could be used to assess the strand. For example, the group looking at strand iii could list different methods of collecting and recording information.</p>	Individuals and societies subject guide

15 min.	Discussing	Provide time for each group to share their examples, clarifying or offering alternative responses where necessary.	
15 min.	Clarifying	Review the instructions for Activity 9 in the student book. Ask students to identify the connection between the different steps of the activity and the related strands of Objective B. Explain that students won't actually be carrying out the survey (as this would take 8 years!) but they are developing the planning for the survey.	Student book
60–90 min.	Thinking	As students move through the steps in Activity 9, encourage them to collaborate with their peers to seek feedback on the survey design and questions.	Student Book

Summary

The related concept of causality encourages students to act like investigators, exploring events and issues to identify the catalyst for change and evaluate its impacts. Students need to be given the opportunity to propose theories, supported by evidence, on the cause and effects of significant historical events, geographical processes, social phenomena and economic change.






Throughout this chapter, students have been challenged to present in a variety of formats, using different technologies. As a teacher, it is important to balance class time to allow students enough time to familiarize themselves with new formats. It is not necessary for you to be proficient in all the technologies used—there are many ways that students can access online tutorials, collaborate with peers or use other teachers as resources to learn these skills.

The topics also provide opportunities for developing interdisciplinary units with science and design. Collaborating with teachers in these subject areas can give a different perspective to these topics and allow students different ways of demonstrating their understanding and skills.

References

Watson, J. 2010. *True Spirit*. Sydney, NSW, Australia. Hachette Australia.

Poverty

	ATL skills	Task summary
TOPIC 1 Defining poverty		
Activity 1 Setting the poverty line	✓ Thinking Change the context of an inquiry to gain different perspectives.	 Discuss where the poverty line should be set and some of the key questions raised by this issue.
Activity 2 Real-life poverty measurements	✓ Research Collect and analyse data to identify solutions and make informed decisions.	 Investigate how countries define and measure poverty and construct a fact sheet to communicate this information.
TOPIC 2 Causes of poverty		
Activity 3 Real-life causes of poverty	✓ Self-management Use appropriate strategies for organizing complex information.	 Explore the causes of poverty in a given place and time and present your findings.
Activity 4 Applying the poverty cycle	✓ Research Analyse complex concepts and projects into their constituent parts and synthesize them to create new understanding.	 Synthesize the poverty cycle with the explanation of the causes of poverty from Activity 3.
TOPIC 3 Strategies for addressing poverty		
Activity 5 Ending poverty	✓ Thinking Create novel solutions to authentic problems.	 Design a solution to the poverty situation investigated in activities 3 and 4.

Introducing poverty

The poverty chapter begins by giving students the opportunity to inquire into issues related to defining poverty. The book states that “poverty exists when people are unable to consume at an adequate level”, but prompts students to question what exactly constitutes an adequate level of consumption.

The crucial distinction between relative and absolute poverty is then defined, especially in terms of how these two ways of measuring poverty interact with the key concept of time, place and space:

- **Absolute poverty**, in terms of the basic necessities needed by all people everywhere and at all times, provides us with a definition that transcends time, place and space.
- **Relative poverty** allows us to develop measures of poverty more specific to a given time and location.

Topics 2 and 3 of this chapter focus on causes of poverty and strategies for addressing, providing an opportunity for students to carry out their own research into the origins of poverty, undertake some fieldwork, and propose possible solutions.

WEB LINKS

Lesson plans for addressing poverty in the MYP classroom can be found in the global lessons section at globalengage.ibo.org.

TOPIC 1 Defining poverty

A primary purpose of this topic is for students to explore the concepts of relative and absolute poverty in more detail, and allow them to further understand these two approaches to defining and measuring poverty. Underlying the distinction between them is the fact that levels of poverty change across time and are different across place and space. The idea of relative poverty exists partly to take into account these changes and differences. The idea of absolute poverty exists partly to allow us to compare levels of poverty across time, place and space.

It can be challenging for students to contextualize an issue such as poverty. How does the poverty we see in the world today compare with poverty throughout history? How does the poverty in a student’s community compare with poverty in other places? A key point for students to grasp is that poverty is not new. The vast majority of people have always struggled to stay above conditions of absolute poverty. We have however made significant gains over the past few hundred years towards lifting humankind out of the near universal poverty that was its fate for most of human history. Recent news is also quite positive. The UN Millennium Goal of halving world poverty between 1990 and 2015 was achieved five years early.

At the same time, over a billion people worldwide still live in absolute poverty, and it seems reasonable that we should be able to do even more to overcome poverty given the wealth, and inequalities of wealth, that exist today.

WEB LINKS

“First World Problems Anthem” on www.youtube.com is an engaging way to help students think about the relativity of poverty.

TEACHING IDEA 1

The essay “The Mountain Man and the Surgeon: Reflections on Relative Poverty in North America and Africa”, published in *The Economist* in 2005 and available to read online, is a reflection on the relative poverty between countries—in this case between the USA and the Democratic Republic of Congo.

Students could read the essay in order to grasp the key points the author makes, the questions he raises and the conclusions he draws about this issue.

Comprehending texts written for a general, adult readership is a challenge for most students in years 4 and 5 of the MYP, and it is also a crucial skill to develop in order to ensure college and career readiness. One way to help students is to give them a set of questions that they can apply to all non-fiction texts they read. Encourage them in the good practice of applying the basic “W questions” to articles as they read. Questions to consider include:

- **Who wrote the text?** What qualifications does the author have to make him/her reliable? Are there any possible sources of bias that may affect what the author says, and which you should be aware of?
- **What is the main idea of the text (thesis or theme)?** You should be able to state this in one or two sentences. In a textbook, do this for each section.
- **What important conclusions or what important points does the text make?** Often, but not always, you may find these as the topic sentences of paragraphs. You may note these by highlighting important sections in the text and making brief explanatory notes in the margins. If you are reading a textbook, where nearly every paragraph contains an important conclusion or point, it may help to ask yourself: “What is this paragraph about?” and make a brief note to answer that question.
- **How does the author arrive at the conclusions you found?** What evidence does he or she use to support the conclusions? Sometimes an author will not use evidence and instead rely on his or her expertise to support what he or she says (this is often, but not always, the case with textbooks). If this is the case, write it down. If it is the case for the entire text, you do not have to repeat it for each important conclusion/point.
- **What questions do you have after reading the text?** This can be the most interesting part, especially as a basis for discussion.

Assessment

Criterion A: Knowing and understanding

If you choose to assess students on their responses to W-questions for non-fiction texts, you can use criterion A. The task-specific descriptor for the top band (7–8) should read that the student:

- Demonstrates excellent knowledge and understanding of the content and concepts of a non-fiction text through thorough, accurate responses to W-questions.

One of the key issues explored in the chapter is the question: “Where is the poverty line?”. If you choose to make this the focus of a unit, or part of a unit, your statement of inquiry could be something like: “The level of consumption below which poverty occurs is a question for debate. It involves value judgments and may be answered differently depending on time and place.”

Topic 1 discusses absolute and relative poverty, and the implications of using either one to define poverty, in greater depth. It then looks at some of the arguments for setting the relative poverty line higher or lower before asking students to reflect on, and possibly discuss, their views on the issue.

One way to help students grasp the effect of time and place on experiences with and understandings of poverty is to have them imagine themselves living in different times and places and considering how this would affect their relationship with poverty (see Quick Think box in the student book). This can help them to not only achieve a better understanding of poverty but also to cultivate the ATL skill of changing the context of an inquiry (in this case, the time and place) to gain different perspectives. Teaching Idea 2, below, expands upon this theme.

WEB LINKS

For some of the recent positive news about advancements in reducing poverty go to www.economist.com and search for the article “A fall to cheer”.

WEB LINKS

You may want to explore with students understandings of poverty that go beyond income or consumption measures into other dimensions. See www.ophi.org.uk (and search for “poster on multidimensional poverty”) and www.prosperity.com for examples of broad-based approaches to measuring poverty/prosperity. One issue to explore is the relationship of these other factors to income/consumption poverty. Do they cause it? Are they consequences of it? If so, how strong are these relationships?

TEACHING IDEA 2

Ask students to imagine the following scenarios:

- You live in the same location as now, but a number of years earlier (the number of years will be dependent on how long the community has existed, or you may want to choose a time for which you have good information on social history, since students will imagine themselves as an “average” person in terms of statistics such as GDP per capita).
- You live in the present day, but in a different location (again, this may be dependent on student interest, or available information regarding everyday life).

Students should investigate each scenario and complete the following table. Students will need information on what life is or was like in the time and place on which they are focusing.

Scenario	As an “average” teenager, what is your level of prosperity or poverty (standard of living, quality of life)?	What is the outlook for you as you get older in terms of prosperity/poverty (standard of living, quality of life)? What are your chances of improving your levels of prosperity or of seeing them fall?	If someone asked you, how would you define poverty?	How does this scenario differ from your current life in terms of standard of living, future outlook, and your views on how poverty should be defined?
Living where I do now, but ____ years earlier				
Living in the present day, but in ____				

Assessment

Criterion D: Thinking critically

If you choose to assess students on this task, you can use criterion D. The task-specific descriptor in the top band (7–8) should read that the student:

- thoroughly interprets a range of different perspectives on poverty held by an average person in another time and place and the implications of these perspectives.

LITERARY LINKS

The idea of changing the context of an inquiry to gain different perspectives was used by the philosopher John Rawls in his book *A Theory of Justice* (1971). Rawls wanted to consider what kind of society rational people would construct if they were truly impartial. He argued that this could be done by depriving people of any knowledge of their actual position in the society. All people would have to confront the possibility of being on the lowest rungs of the socioeconomic ladder, which would lead them to favour a society with a strong concern for the least well off, as well as a basic set of freedoms. You may want to ask students to try Rawls’ thought experiment for themselves.



Activity 1 Setting the poverty line

Students will need support thinking through the open-ended questions presented in this task. Below are some possible, but by no means exhaustive, responses to the questions posed in the student book:

What is the relationship between poverty and equity? Is it important to keep these two concepts separate, or are they inseparably linked? Is it possible to successfully address poverty while still having large inequities in society? Is it possible to successfully address inequity, while still having widespread poverty?

- The idea of absolute poverty keeps poverty and equity separate, while the idea of relative poverty links them. A person lives in absolute poverty if they can't meet basic needs, regardless of the equity question of whether those around them are in the same position or not. During a time of famine, for instance, an entire society could be living in absolute poverty by not being able to meet its needs for food. The fact that high levels of equity exist has no effect on the equally high levels of absolute poverty.
- Relative poverty links equity and poverty by tying measurements of poverty to the customary standard of living in a society. If a person is far enough below that standard of living, they will be considered impoverished according to that society's standards. That same person, were they living at the same level but in a different society, or in the same society at an earlier time, might not be considered impoverished if their standard of living were closer to the norm.
- Only under an absolute approach to poverty is it possible to address poverty and still have large inequities in a society. If even the relatively poor in a society are easily able to meet their basic needs, then from the perspective of absolute poverty that society would have little or no poverty. From a relative poverty perspective, significant inequity means some people live well below the society's normal standard of living and therefore poverty exists as long as inequity exists.

Should the poverty line be set more according to an absolute measure of poverty or a relative one?

This question involves value judgments:

- Those arguing for a more absolute approach might focus on the concern that mixing the concepts of equity and poverty could cause a society to overestimate the extent of its poverty and therefore divert resources from more pressing needs. This could include diverting resources from people in the society who live in extreme poverty, and therefore badly need support, to people living in relative poverty but who have a reasonable overall standard of living in absolute terms and therefore need only limited support.
- Those who argue for viewing poverty in relative terms might stress that we should raise our expectations for standards of living in line with our capabilities for providing for people and ensure that as the average or normal standard of living rises, everyone participates in that prosperity. They might also focus on how those living well below average standards of living might be viewed negatively by those in higher socioeconomic positions and whether they could be full members of society if others see them as abnormal.

Should societies focus more on equity of opportunity or equity of outcomes?

People on both sides of this question tend to invoke fairness to support their positions:

- Those who support equity of opportunity often argue that this approach is fairer as it allows people to benefit from hard work and talent. It may also make a society more prosperous overall by encouraging people to work hard and use their talents fully, knowing they will be rewarded for doing so. This leveraging of effort and ability benefits the society as a whole and answers to the human desire for freedom and fulfillment. The flip side of this is that enforcing equity of outcome saps people of their motivation to excel and encourages them to become dependent and unaccountable.
- Those who support equity of outcome often argue that the distribution of talent is out of people's control and it is therefore unfair to distribute rewards based on this. They might also stress that those who reap the most rewards often keep far more than they need and that therefore society must redistribute wealth to avoid morally problematic levels of inequity. They might raise the spectre of a poverty trap (see Topic 2) which people cannot escape from without first receiving the resources to do so.

WEB LINKS

Search for "high global poverty line" and "two goals for fighting poverty" at www.developmentprogress.org for two very relevant blog posts on this issue.

To what extent might your socioeconomic position in a society influence your position on this issue?

This question gets at the issue of perspective and the extent to which we can be objective about dilemmas that affect us directly. Whatever position students take on this, it provides a good opportunity to remind them of, and have them reflect on, the ATL thinking skills of:

- recognizing unstated assumptions and bias (can they do this when it comes to their own thinking about poverty?)
- changing the context of an inquiry to gain different perspectives (can they put themselves in the place of those living in different socioeconomic circumstances in order to gain different perspectives on poverty?)

In *A Theory of Justice* (see Literary Links box above), John Rawl's notion of the "veil of ignorance" is a good example of how to approach this issue.

What questions or further information would help you develop your position on the issue?

This will depend on individual students and provides an opportunity to practise their ATL reflection skills. To this end, you might want to reframe the question as follows to help students think more deeply:

- What have I learned about poverty so far?
- What about poverty do I not yet understand?
- What questions do I have now about poverty and especially about the issue of setting the poverty line?

Assessment

Criterion D: Thinking critically

If you choose to assess students on this task, you can do so using criterion D. The task-specific descriptor in the top band (7–8) should read that the student:

- synthesizes information to make valid, well-supported arguments about where to set the poverty line.

Poverty and values

A person's views on an issue like poverty derive, at least in part, from their deeper values and worldview. You may want to explore this conceptual understanding with your students using the following activity.

WEB LINKS

For an in-depth discussion of how different methods of measuring poverty can lead to different outcomes and point towards different solutions, go to www.nytimes.com and search "Who is poor?" by Thomas B Edsall. The post also includes a graph showing different outcomes from two different methods of measuring poverty.

STEP 1

Provide students with two sources that take relatively conflicting positions on the issue of poverty. In the Web Links box are two possible sources for this task, which discuss poverty mostly in the context of the USA. Students will be able to find quite a bit of information about the values and missions of these two well-established research organizations, which is ideal for this task.

WEB LINKS

Search www.epi.org for an article entitled "US poverty rates higher, safety net weaker than in peer countries". Read the article "Air conditioning, cable TV, and an Xbox: What is poverty in the United States today?" at www.heritage.org.

STEP 2

Have students study each source and place the arguments they find about poverty (eg, how to define it, what causes it, possible solutions) into a t-chart graphic organizer.

As much as possible, they should try to use the t-chart to match opposing arguments (although it will not always be the case that an argument made by one source will be directly opposed by an argument made by the other).

TIP

A t-chart is a type of graphic organizer in which a student can list and compare certain information about a topic, such as the advantages and disadvantages associated with it.

STEP 3

Once the class is clear as to the arguments each source is making about poverty, ask them to probe more deeply into the values held by the authors of each source by addressing the following questions:

- What is the author's (or authors') purpose in creating the source?
- What general view of the world do you think the authors of your sources hold (ie, what are their deeper values and beliefs)? Are they animated by a specific religious or philosophical outlook?
- How does their general worldview affect their position on poverty?
- What aspects of the time and place in which the author lives or lived might influence his or her values and beliefs and, by extension, their position in this value conflict?
- What are the values and limitations of each source (ie, how well does each source do in fulfilling its purpose)?
- Students may have to take some educated guesses and do some further research on the authors to help address these questions because the answers to them may not be made explicit in the sources.

Assessment

Criterion D: Thinking critically

If you choose to assess students on this task, you can use criterion D. The task-specific descriptor in the top band (7–8) should read that the student:

- completes a detailed discussion of the issue of poverty and the values held by those taking different positions on the issue
- effectively analyses and evaluates two sources taking opposing positions on the issue of poverty in terms of origin and purpose, consistently recognizing values and limitations of the sources
- thoroughly interprets the range of different possible values held by the authors of each source and the implications of these values on the authors' views of poverty.



Activity 2 Real-life poverty measurements

For this activity, you may want to steer students toward the poverty scorecard method for measuring poverty in the countries they choose. Be aware that this method is not available for all countries; the site in the Web Links box indicates the countries for which scorecards have been developed.

The poverty scorecard method was designed as an efficient way to measure the chances that people are living in poverty, while taking into account differences between countries. It was designed for non-governmental organizations with limited resources and could therefore be used fairly easily by students doing fieldwork, if you believe that this can be done in an appropriate and safe way in your area. Students could do fieldwork on measuring poverty as a separate activity or they could integrate it into their work in Activity 3 on the causes of poverty.

The following information is an example of content that might be included in a fact sheet based on the poverty scorecard method in Tanzania (using data from the microfinance.com site):

- The poverty scorecard approach to measuring poverty for Tanzania generates data which can measure poverty against four established benchmarks for poverty measurement. These benchmarks are:
 - Tanzania's national poverty line (492 Tanzanian shillings per day)
 - USAID "extreme" line (median per capita expenditure of all people living below the national poverty line)
 - \$1.25 per day
 - \$2.50 per day
- The scorecard for surveying families fits on one page and is based on the Household Budget Survey (HBS) conducted by Tanzania's National Bureau of Statistics in 2007. The scorecard simplifies the HBS approach, which required a questionnaire of 20 pages and multiple visits to each household to gather data. The scorecard can be completed in one short visit to a household.

WEB LINKS

Go to www.microfinance.com and click on any of the countries listed for reports on how poverty scorecards were developed and used for that country, versions of the actual scorecards themselves, and spreadsheets which can be downloaded and used to complete surveys. The reports contain some technical discussion which students will not understand but also fairly clear explanations of how the scorecards can be used.

- The ease of the scorecard means it can be used by non-governmental organizations that need to determine poverty levels in a given community they want to serve but who lack the resources to conduct intensive surveys.

The scorecard allows the person using it to record data based around multiple indicators. These are:

- members of the household under 18
 - whether children aged 6 to 17 attend school
 - whether the lead female in the house can read or write
 - the material from which the household's main building is constructed
 - the number of vehicles (motorized and non-motorized) the household owns
 - whether the household owns a radio or radios
 - whether the household owns lanterns
 - whether the household owns irons
 - the number of tables the household owns.
- Interviewers complete the scorecard for a household and derive a score based on the household's responses. They then use a conversion table to determine the likelihood that the household is below the poverty line according to the four measures listed above.
 - The scorecard is designed to be used throughout mainland Tanzania, including in both rural and urban areas.

Assessment

Level	B Investigating	C Communicating
7–8	I have: used research methods to collect and record appropriate, varied and relevant information consistent with the research question: "How is poverty measured in country X?"	I have: communicated information and ideas about how poverty is measured in a given country effectively and accurately by using a style that is completely appropriate to the audience and purpose.

TOPIC 2

Causes of poverty

This section in the student book explores some general approaches to explaining poverty. A statement of inquiry for this topic could be that "the causes of poverty are multiple, contestable and complex, given the interconnectedness of the systems, communities and processes that can play a role in this causation."

The overview of possible causes of poverty given is by no means exhaustive. The main point is to prepare students to undertake an authentic investigation of the causes of poverty in a specific community. They should be in a better position to do this after being introduced to some basic theoretical frameworks for understanding poverty.

There are a few points in the overview where you may want to encourage students' inquiry.

One issue you could raise regarding the causes of poverty is what questions we should be asking as we inquire into them. Given that poverty had been the norm throughout human history, perhaps it makes more sense to inquire into the causes of wealth, as the exceptional condition, rather than poverty.

You may also want to further explore the balance between the outcomes that individuals and communities experience being determined by larger forces outside their control and those same individuals and

communities having some ability to determine their own outcomes. You can help students to better understand this tension by asking them to consider it in their own school setting. How much control do they as individuals and as a student body have over their school experience, and to what extent is that experience controlled by others, such as teachers, administrators, parents, school boards, ministries of education, or the IB? You can also tie this to the section on individual and cultural characteristics. Will communities that perceive themselves to be disempowered by outside forces create a self-fulfilling prophecy by acquiescing too easily to them?

Finally, in the section on time, place and space factors, you may want to bring up the idea of the resource curse, or paradox of plenty, to explain the Singapore-Democratic Republic of Congo comparison. A 1997 paper by Jeffrey Sachs and Andrew M. Warner entitled *Natural Resource Abundance and Economic Growth* explores this issue and can easily be found online.

WEB LINKS

For more on the resource curse, go to www.economist.com and search for “The curse of oil: the paradox of plenty”.



Activity 3 Real-life causes of poverty

The student book refers to Hernando de Soto's *The Other Path* as containing an authentic example of the kind of work students are asked to do in this activity.

De Soto and his colleagues at the Institute for Liberty and Democracy (ILD) conducted research and fieldwork among the poor of Lima, Peru to better understand their economic struggles. He also helped the Peruvian government develop mechanisms for listening more carefully, and responding more effectively, to the poor and their needs. De Soto's (pp. xxii–xxiii) own words capture the larger purpose of trying to understand the causes of poverty; it is a precondition for providing solutions that actually work:

ILD research had already demonstrated that due to bad law, the poor were facing huge entry and operational costs and were missing some of the crucial institutions needed to create prosperity... The question was, how does one find out which laws are bad and don't work and which have to be modified...? The only people who could provide us with such criteria for reform were the excluded themselves. We were like the dentist who cannot begin without asking the patient which tooth hurts. The poor not only knew where the problems were, but also knew what institutions and services were missing.

Chapter five of *The Other Path* describes the fieldwork carried out by the ILD, interprets what the results of this fieldwork say about the causes of poverty in Peru, and shows how an understanding of poverty's causes leads to a particular set of solutions. You may want to consider studying this chapter with your students, or at least presenting its basic findings, as an authentic example of the kind of work they are being asked to do in this activity and as a way of helping them plan their own attempts to explain the causes of poverty in their chosen situation. The chapter explains the causes of poverty in Peru as follows:

- The main complaint of those living in or near poverty was that they were excluded from the legal system.
- This led the ILD to look more closely at the legal system, how it affected people's economic decisions and how it created inefficiencies which contributed to poverty.
- One specific piece of fieldwork the ILD undertook was to simulate an individual setting up a small, one-person garment business in compliance with all legal procedures. They found it took 289 days and cost \$1,231 (32 times the monthly minimum wage). This showed that it was nearly impossible for a person with low income to legally establish a business, even a small one.
- The ILD closely investigated the procedures for a group of low-income families to legally acquire urban land on which to build housing. They found that the procedure would take 83 months and would cost each member of the group their entire income for four years and eight months.

- Other findings from the ILD's fieldwork at the time the research took place in Lima:
 - it took 43 days and 15 times the monthly minimum wage to open a small store legally.
 - it took 14 ½ years for a group of vendors to legally establish a market where they could operate.
 - it took 27 months to legally obtain permission to operate a minibus route for public transport.
 - the cost to a small business of remaining legal was 347.7% of its after-tax profits.
- To avoid the costs of operating legally, many business operated outside the legal system (informally). This, however, created other costs such as:
 - the need to limit the size of a business to avoid detection
 - lack of access to credit, or very high interest rates for such access
 - operating under the constant risk of being penalized
 - the inability to advertise for fear of being detected
 - the need to bribe officials to avoid penalties
 - unwillingness to invest in land, housing or equipment for fear of having them confiscated
 - inability to sell assets without legal ownership
 - inability to enter into contracts.
- The costs of access to a workable legal system were born not only by those living around the poverty line but by the country as a whole, making it difficult to produce the kind of economic growth which could alleviate poverty. These costs to the nation included “declining productivity, reduced investments, an inefficient tax system, increased utility rates, limited technological progress” and difficulties for the government in collecting macroeconomic data and formulating reasonable policies based on that data (De Soto, p.173).

As students develop their action plans for investigating the causes of poverty in a given community, you might want to help them understand the steps taken by the ILD:

- 1: They asked those struggling with poverty what they themselves felt to be standing between them and greater prosperity.
- 2: When the ILD determined that the main complaint was with the law, they conducted a number of field studies to “identify and quantify” how the law made it difficult for people to prosper (De Soto, p.132).
- 3: Once they understood the ways in which the law was an impediment to alleviating poverty, they were able to suggest solutions which would address the problems created by bad law. (This step applies to Activity 5.)

If it is safe and appropriate for students to conduct fieldwork in local communities where people are living around the poverty line, encourage them to look closely at the approach the ILD took as outlined in *The Other Path* and to consider how they can work such an approach into their own fieldwork. Be aware that it may only be possible for them to take the first step above, as the second step might require very extensive fieldwork. The third step can be addressed in Topic 3 of this chapter, which involves strategies for addressing poverty.

Assessment

If you choose to assess students on this task, you can do so using criteria B and D. For criterion B the task specific descriptors in the top band (7–8) should read that the student:

- formulates and effectively follows a comprehensive action plan to investigate the research question: “What are the causes of poverty in community X?”
- uses research methods to collect and record appropriate, varied and relevant information consistent with the research question: “What are the causes of poverty in X?”

WEB LINKS

Students can go to the World Bank's www.doingbusiness.org to get data on the business environment in most countries in the world, as well as the questionnaires used to obtain the data. Students might use these questionnaires as models for their fieldwork investigating the causes of poverty.



Activity 4 Applying the poverty cycle

Introducing the poverty cycle after students have completed Activity 3 allows students the opportunity to integrate new understanding into previous work they have done. This allows them to practise a number of ATL thinking skills, such as:

- revising understanding based on new information and evidence (the poverty trap)
- analysing complex concepts (in this case poverty and causation) into their constituent parts and synthesizing them to create new understanding
- using models (the model of the poverty trap) and simulations to explore complex systems and issues (the causes of poverty)
- considering multiple alternatives (their previous explanation to the causes of poverty was one alternative, integrating the poverty cycle into that explanation would possibly give them a second alternative).

Assessment

Criterion D: Thinking critically

If you choose to assess students on this task, you can do so using criterion D. The task specific descriptor in the top band (7–8) should read that the student:

- synthesizes their previous explanation of the causes of poverty in a given community with their understanding of the poverty cycle to make valid, well-supported arguments.

TOPIC 3

Strategies for addressing poverty

This topic in the student book is ideal for embedding meaningful action into a unit. Students can use what they have learned through their research into the causes of and solutions to poverty to take action in a way that helps to combat it.

TEACHING IDEA 3

The Web Links box in the Topic 3 introduction in the student book refers to a blog entry which provides an example of two people agreeing on the causes of poverty but disagreeing as to the solutions.

The post provides students the opportunity to do close reading of a challenging text. Have students read the post and identify words or phrases with which they are not familiar. They will likely come up with the following:

- WSJ/NYT—*The Wall Street Journal* and the *New York Times*, two major newspapers.
- *Coming Apart*—a recent book by Charles Murray exploring the growing class divide in the US.
- Welfare state—the combination of all the different programmes provided by the government to alleviate poverty.
- The sexual revolution—a movement toward less restrictive sexual norms that began in the 1960s.
- Tight job market—an economic situation in which unemployment is low and jobs are easy to find.
- Fecklessness—the unwillingness or inability to take initiative and responsibility.
- Stigma—disapproval with a person or group for being in a certain situation or acting in a certain way that usually distinguishes them from the rest of society.
- Dysfunctional—describes a situation in which normal social relations have broken down.

Once students are able to understand the passage, see if they can go a step further and identify the cause of poverty that the author and Charles Murray agree on (they agree that a major source of poverty is the unwillingness of men to work) and the different solutions they propose to address this particular cause. (The author says that the welfare state should be dismantled so that men have to work; Charles Murray, according to the author, wants society to place a stigma on men who do not show a willingness to try to work.)

Specialists estimate that a person must understand 90% of what they read in order to be able to use context to decipher the meaning of the 10% they do not.

E.D. Hirsch



Activity 5 Ending poverty

For this activity you can again use the authentic example found in *The Other Path* as a model for students to follow in their own work.

As noted in the guidance for Activity 3, once the Institute for Liberty and Democracy (ILD) understood the causes of poverty in Peru, they were able to craft solutions that worked because the solutions directly addressed those causes. This is a key conceptual understanding for Topic 3 in the student book. A person's view of the causes of poverty will shape the solutions they propose.

By helping students to understand the solutions De Soto proposes, and how those solutions tie to his analysis of the causes, students can see an actual example of this relationship. This should increase the likelihood that their own solutions to poverty connect meaningfully to the causes they identified. De Soto's (pp.247–255) proposed solutions to poverty in Peru were as follows:

WEB LINKS

The website www.one.org is a good resource for ideas on action students can take to fight poverty.

ILD's proposed solution to poverty	How it addresses the causes of poverty, as identified by the ILD
<ul style="list-style-type: none"> ■ Simplification—Reduce the costs of engaging in legal productive activity (eg, starting a business or building a house) by limiting the requirements to be fulfilled before beginning such activity. This will encourage more people to operate within the legal system. 	<ul style="list-style-type: none"> ■ Those with limited means are currently forced to operate outside the legal system because of the huge cost of legalizing businesses and housing. But operating informally brings costs of its own and limits the ability of informals to prosper. Simplifying the requirements for engaging in legal economic activity will encourage more people to do so and allow them to be much more productive and prosperous.
<ul style="list-style-type: none"> ■ Decentralization—Transfer the power to make and administer laws to local and regional governments. 	<ul style="list-style-type: none"> ■ This allows localities to compete at creating the best legal environments for fostering prosperity and makes it more likely that all people, including those living around the poverty line, will be able to communicate more effectively with government and ensure that its actions address their needs.
<ul style="list-style-type: none"> ■ Deregulation—Remove the state as much as possible from administering resources and engaging in production. Instead it should focus on ensuring that all people have equal access to engage in production and that they do so according to the [simplified] laws. This would especially include ensuring that property rights, contracts and other laws (such as laws to protect the environment or maintain public order and safety) are enforced by an impartial judiciary. 	<ul style="list-style-type: none"> ■ Like simplification, deregulation makes it easier for people to engage in productive activities and create prosperity for themselves and others. The state can focus its limited resources on ensuring the fairness of these activities and that all people can enter into them regardless of socioeconomic background.
<ul style="list-style-type: none"> ■ Ensure future laws are effective—The government should publicize drafts of laws before they are enacted and gather feedback from the public on these drafts. All draft laws should also be subject to cost-benefit analysis to ensure that the negative effects do not outweigh the good they are meant to do. 	<ul style="list-style-type: none"> ■ Ensure that the laws that are passed serve the interests of all people, including those living around the poverty line.

If you do use the ILD's work as an authentic example, consider having students evaluate the group's solutions using the SMART criteria provided in the student book. Possible responses would be as follows:

S—Be **specific** about what you want your solution to achieve.

Because the ILD identified the causes of poverty, it was able to offer specific solutions to address those causes. The ILD concluded that the main cause of poverty in Peru was that the state's laws and procedures were excluding the majority of people from being able to engage in formal economic activity. It therefore focused its solutions on reforming the state so that it would encourage, rather than discourage, involvement in the formal economy.

M—How will you **measure** the impact of your solution?

The ILD's solutions could be measured by tracking, over time, the number of people who move from the informal sector to the formal sector. The number of people who are able to move out of poverty as a result must also be tracked. If the ILD's solutions generate significant movement from the informal to formal economy, but with little impact on poverty levels, then they cannot be said to have succeeded.

A—How do you know if your solution is **achievable**?

The ILD's solutions to poverty involve broad and deep changes that need to occur through the political process. This makes it likely that, while they are ultimately achievable, the progress toward achieving them will be uneven and subject to reversals.

R—Explain how your solution is **realistic**.

Developed countries tend to have at least some of the ILD solutions in place and, possibly as a result, they have lower levels of poverty than developing countries. The fact that these solutions have been implemented in some places indicates that they are realistic.

T—Outline the **timeline** for developing, implementing and measuring your solution.

To a large extent, ILD has already developed solutions to poverty. Given the ambitiousness of these solutions, and the need to put them in place through the political process, it might be difficult to predict the amount of time it would take to implement them. Measurement, however, can start to take place any time that any of the solutions are implemented and would involve, as noted above, tracking levels of poverty. (Some of ILD's solutions were in fact put in place in Peru beginning in the mid-1980s, and with some success. For instance, poverty has fallen 28% in the country since 2002 alone.)

WEB LINKS

Students can visit the website of the ILD at www.ild.org.pe to find out about the organization's work in countries around the world. The site includes a general action plan for addressing poverty on the "our work" page.

Summary

In this chapter students had the opportunity to explore the concept of poverty, focusing on the issues of how to define it, what causes it, and how to end it. The student book provides a number of tasks that allow students to develop ATL skills that apply throughout the individuals and societies subject area and beyond.

The teacher book extends these skills, especially in the areas of close reading of challenging texts and changing the context of an inquiry to gain different perspectives. It also suggests ways the tasks in the student book can be assessed using the individuals and societies criteria, as well as how they can be deepened and extended. For activities 2–5, the teacher book provides authentic examples which students can use as models for their own inquiries.

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Trade

	ATL skills	Task summary
TOPIC 1 Trade and equity		
Activity 1 Where would we be without _____?	✓ Thinking Apply existing knowledge to generate new ideas, products or processes.	 Investigate the consequences of being cut off from trade.
Activity 2 A real-life laboratory experiment	✓ Communication Read critically and for comprehension.	 Make a comparison between countries with different approaches to trade.
TOPIC 2 Benefits and problems of trade		
Activity 3 Shrinking the world	✓ Research Access information to be informed and inform others.	 Explore what life would be like if food could only be locally sourced.
Activity 4 Trade—the good news	✓ Research Identify primary and secondary sources.	 Explain how increased trade created certain benefits.
Activity 5 Trade—the bad news	✓ Research Access information to be informed and inform others.	 Investigate the negative consequences of trade.
Activity 6 Setting the boundaries	✓ Thinking Analyse complex concepts and projects into their constituent parts and synthesize them to create new understanding.	 Suggest appropriate boundaries for an inquiry into trade in terms of time, place, space and specificity.
TOPIC 3 Peace and trade		
Activity 7 All you need is trade	✓ Communication Paraphrase accurately and concisely.	 Analyse arguments in favour of the idea that trade, peace and democracy are mutually reinforcing.

Introducing trade

In MYP individuals and societies, trade is understood to encompass all exchanges of resources, goods, and services at all levels, from the individual to the local to the global.

This can include exchanges of ideas, practices and beliefs, although chapter 12 in the student book focuses on economic trade. The chapter is designed to help students see the important role that trade plays in their lives and the lives of all people, and how limited our options would be if we were not able to trade for much of what we need and want.

A fundamental point here is that trade, and the closely related concept of specialization, free us up to spend time on the things that we value. Whatever students are interested in—from sports to the arts to religion to video games—they would have little time for it were it not for trade. Thus trade has significantly increased our quality of life.

However, students also need to be aware that, despite its clear benefits, the idea of expanding trade is not without controversy. The prosperity that is generated from increases in trade is not always distributed equally, and some people may even be harmed by it, at least in the short term. There is also concern about the impact that expanding economic activity and trade has on the environment. You may want to tie this issue together with the related concepts of resources and sustainability. Expansion of trading activities requires increased use of resources. This brings the gains from trade, in the form of increased prosperity, into potential conflict with the goal of sustainability. This conflict is sometimes framed as a trade-off between economic growth and environmental protection.

TOPIC 1 Trade and equity

This section gives students the opportunity to inquire into the relationship between two related concepts: trade and equity. While trade generally increases levels of prosperity and improves standards of living, these gains may not be distributed equally. The statement of inquiry here could be: “Trade holds the potential to increase prosperity, but these gains may not be evenly distributed to all individuals and communities, raising questions of equity.”

Note that, in order to help students explore the relationship between trade and equity, this section focuses more narrowly on international trade. Part of the goal is to help students puzzle out why trade is so often controversial, despite its benefits.



Activity 1 Where would we be without _____?

This activity can be an engaging way for students to understand the effects of trade on their lives. It is also a good way to inquire into the global context of the world as a connected whole, and explore the key concept of global interactions. The task should help them to grasp the interconnectedness of human-made systems (global trade networks) and communities, and the effect of global trade on their own individual experiences. Students should recognize how dependent they are on global trade by imagining an entire continent or country missing from the global trading system. The activity also broadens the understanding of trade to include ideas, beliefs and knowledge, as well as resources, goods and services.

In Step 1, North Korea provides a case study in the consequences of lack of trade, both within the country, where trading activities are controlled by the government, and between the country and the rest of the world, where the government severely limits exchange. Robert Worden's book *North Korea: A Country Study* (pp.95–100) describes access to goods and services for average North Koreans:

- If they have access to televisions, refrigerators or sewing machines, they would share these in communal rooms with many other people. An average family can never hope to buy a black-and-white television or refrigerator for themselves.
- A few people have bicycles or wristwatches that they have won in competitions at their place of work.
- Food is limited to basic rations of rice, corn and sugar. Fruit can be consumed in season. Meat comes in the form of chicken a few times per month and red meat up to six times per year.
- Most families live in houses with one bedroom, a kitchen, and shared bathroom facilities. The size of the family does not affect the size of the housing they receive.
- They have no access to automobiles or vacation facilities.
- They receive free education and medical care but the quality of these is low.
- The average monthly salary can buy “a nylon sweater and two pairs of nylon stockings.” The average daily wage could buy one of the following:
 - a metre of cotton cloth
 - a toothbrush and toothpaste
 - a private bath and cake of soap
 - a haircut and styling
 - a set of table tennis paddles and balls.
- Overall, “27% of the population lives at or below the absolute poverty level” (see chapter 11, Poverty, for more information on the absolute poverty level).
- George Will noted in a 2004 column that “in 2001 Americans spent \$25 billion—more than North Korea's GDP—on recreational watercraft.”

For steps 3 and 4, you may want to suggest to students that they take an inventory of the products they use and determine where they come from.

For more complex products, such as electronics, students may find that many countries and even continents play a role in their production.

You could make students aware of the basic economic fact that even if some of the products they consume could be made in other places, they would likely be more expensive if some countries that currently produce them did not contribute to global supply. For instance, many textiles are made in Asia. If trade with Asia were no longer possible, textiles would still be produced, but their prices would be higher. Most people would therefore be able to afford fewer textile products, be forced to buy lower quality textile products, or, in order to consume textiles at the level they currently do, would have to cut back on consumption of other products, or on how much they were able to save.

Assessment

If you chose to assess this task, you can use criteria B and D.

Level	B Investigating	D Thinking critically
7–8	<p>I have:</p> <ol style="list-style-type: none"> i. used research methods to collect and record appropriate, varied and relevant information about resources, products, ideas and knowledge that originated from my continent/country of choice. 	<p>I have:</p> <ol style="list-style-type: none"> i. synthesized information about resources, products, ideas and knowledge that originated from my continent/country of choice, with information about my own life, to make valid, well-supported arguments about how my life would be different without the continent/country of choice.



Activity 2 A real-life laboratory experiment

This activity offers the opportunity to explore variables with students and, in doing so, to compare social science disciplines, which are part of the individuals and societies subject area, with the physical sciences.

Help students to understand that, given the complexity of societies, it can be difficult to pinpoint the causes of something like increased prosperity.

For example, if a nation opened itself up to freer trade and found that, 10 years later, its economy had grown 40%, this would not automatically prove that free trade had been the main cause of strong economic performance. This is because many other developments would have occurred during that time which could possibly have contributed to the strong economic performance as well, such as the government cutting taxes or paring back regulations.

A challenge in individuals and societies disciplines is that, because we are studying humans and their societies, we cannot usually undertake laboratory experiments. Rather, we need to conduct our investigations in the real world. But in the real world, unlike in the laboratory, it is difficult to isolate and manipulate variables to see what kind of causal effect they have. We cannot ask a country to free up its trade with other nations and make no other policy changes for 10 years, in order to isolate the variable of freer trade.

Social science practitioners do have methods for trying to isolate variables in their investigations but these are not as precise as the methods that can be used in laboratory situations. This is a major reason why some of the individuals and societies disciplines, although they are referred to as social sciences, are considered not as rigorously scientific as the physical sciences, where laboratory experiments are often possible.

For this activity, the independent variable for the Korean and German “experiment” would be economic freedom (ie, the extent to which governments allow private property and people to trade freely with each other). The dependent variable would be economic growth as measured by changes in GDP.

The reason the two Koreas and the two Germanys provide a laboratory-like experiment is that they are similar in important ways—climate, culture, resources—but have (in the case of the Koreas) or had (in the case of the Germanys) different levels of economic freedom. This allows us to isolate the variable of economic freedom in a way that is usually not possible.

Students should come up with the following results for their table. They will need to find information for the first four rows in other sources, while the last question can be answered from the article:

	North Korea	South Korea	East Germany	West Germany
Population	24 million	49 million	16 million at time of reunification in 1990	63 million at time of reunification in 1990
Land size	120,538 sq km	99,720 sq km	108,333 sq km	248,577 sq km
Type of government	Communist dictatorship	Republic	Communist	Republic

TIP

In the physical sciences, variables are physical characteristics which are manipulated (independent variables) and observed (dependent variables). For instance, a scientist might heat a substance to observe what happens to its volume. Heat would be the independent variable and volume the dependent variable in the experiment. In the social sciences, variables are attributes belonging to individuals or groups. For instance, an economist might observe how lower tariffs on imported goods (independent variable) affects gross domestic product (dependent variable).

Economics is history trying to be physics.

—Anonymous

Main economic system	Command economy	Mixed economy	Command economy	Mixed economy
Brief description of culture	Traditionally Buddhist/Confucianist	Traditionally Buddhist/Confucianist, now a sizable Christian minority	Traditionally Christian, European Enlightenment	Traditionally Christian, European Enlightenment
Who had the stronger economy and why?	Very weak economy with slow growth; GDP \$40 billion in 2004 with 2.6 % average annual growth 1953–2004.	Strong economy with fast growth; GDP \$925 billion in 2004 with 8.6% average annual growth (three times the North Korean official growth rate) 1953–2004.	Weak economy with slow growth; GDP \$86 billion in 1991 with 1.3% average annual growth 1950–1991.	Strong economy with relatively fast growth; GDP \$1.24 trillion in 1991 with 4.4% average annual growth (three times the East German official growth rate) 1950–1991.

WEB LINKS

See the article “Economics does not lie” by Guy Sorman at www.city-journal.org for an argument that at least one of the individuals and societies disciplines—economics— does meet fairly high scientific standards.

Read “Overcoming ‘Physics Envy’” at www.nytimes.com for an argument that the social sciences should not concern themselves with imitating the physical sciences.

Economics and finance might be science, if it weren't for people.

—Alex J. Pollock

TOPIC 2

Benefits and problems of trade

This section of the student book allows students to inquire deeply into the advantages and disadvantages of trade, going beyond the issue of equity into many other effects that trade may have.

The statement of inquiry for the section could be: “The consequences of increased trade can create winners and losers.”

There are a number of tasks in the student and teacher book that can be used in this section, and which allow students to inquire more deeply into trade and to begin to draw some conclusions for themselves. Given that the discussion of the benefits and problems related to trade is at quite a high conceptual level, the student book provides examples, especially for the more challenging ideas. You may want to add to these examples in order to help students consolidate their understanding of the various effects of trade.



Activity 3 Shrinking the world

This activity gives students the opportunity to engage in fieldwork.

You can have them develop a list of foods and drinks that they regularly consume and then conduct research to determine the origins of each item. For some items, this will only require reading package labels but for others, especially non-processed foods like fruits, vegetables, meat and fish, it may require further investigation, such as asking at the stores where the items originated from.

Students should be aware that, even for packaged items, an address on the package is likely to be the nearest address of the firm which produced the food, rather than the actual source of the food items in the package.

In addition, processed foods often have multiple ingredients sourced from multiple locations, which are combined to make the final product in another location still. You may want to advise students that in such cases they should eliminate the product from their list of locally sourced food as the likelihood of all ingredients coming from nearby will be low.

In some countries apps and websites have become available which allow consumers to trace foods to their source (see Web Links box). You may also find entities in your community, such as farmers' markets or food hubs, which specialize in locally sourced food and which students can therefore use as resources.

Given the investigative challenges that this task presents, consider having students work in groups, or even having the whole class work together, to construct a list of food and drink that can be sourced from within the 100 km radius.

WEB LINKS

- www.eatwellguide.org provides a searchable database of businesses which specialize in sustainable food.
- www.harvestmark.com has an app for tracing food to its source.
- Go to www.foodtank.com and search "23 mobile apps changing the food system" for more apps that can help students with this task, including a number that can help them with the "Take Action" suggestion of creating their own garden.
- www.foodmiles.com has a tool for calculating how far food has travelled, if you know its source.
- If you have the time and want to further explore food sourcing and systems with students, www.discoverfoodsys.cornell.edu provides an entire experiential learning programme on the topic, including possibilities for students to apply their learning in community action. Section 1, lesson 3, "think globally, eat locally" is especially relevant to Activity 3.



Activity 4 Trade—the good news

Activities 4 and 5 ask students to find and explain examples of different benefits and problems that trade brings. It may help to introduce students to some examples of policies that are often used by governments to encourage higher levels of trade and commerce, either within or between countries. In other words, where these policies are put into place, overall economic activity should increase, allowing us to observe the benefits and drawbacks of increased trade and commerce. Once students have a basic understanding of these policies, they can look for real-life examples of them to complete the task.

WEB LINKS

Students can visit www.numbeo.com to access a tool that allows users to compare the cost of living between different countries and cities around the world, and provides price lists of common goods. Students could use this to gather evidence about the extent to which trade lowers prices.

Policy	How it can be enacted	How it increases trade and commerce
Removing international trade barriers	<p>Many kinds of international trade barriers are in place which can be removed:</p> <ul style="list-style-type: none"> ■ Tariffs—taxes charged on goods as they are imported into a country. ■ Subsidies—money paid to domestic producers so that they can compete more effectively with imported products. ■ Quotas—limits on the amount of certain products that can be imported into a country. ■ Administrative barriers—excessive regulations on goods that are being imported. 	When any one of the four types of trade barriers is removed or lowered, trade between countries will increase as goods flow more freely across borders.
Lowering taxes	Most governments have a variety of taxes in place at any given time. In most countries, individuals and businesses pay taxes on their income. Many national, regional and local governments also collect taxes on goods and services (sales or value added taxes) and on property. Any of these can be lowered or removed.	Depending on the types of taxes that are lowered, consumers may have more money to spend on goods and services and businesses may have more money to invest in producing goods and services. In either case, more goods and services will exchange hands, increasing levels of trade and commerce.
Easing regulations	At any given time, governments have many regulations in place guiding the production and sale of goods and services. These may include laws regarding employment (ie, the conditions under which firms are able to hire, retain and dismiss employees), the environment and health and safety.	Businesses have to expend money, time and their employees' efforts in adhering to regulations. If the relative burden of regulations is decreased, either by lowering their quantity or their severity, then businesses will have more resources to devote to producing goods and services and they will be able to sell them for lower prices. This will increase the overall level of economic activity.

In order to identify countries with relatively low trade barriers and taxes and a limited regulatory regime, students can go to the Index of Economic Freedom at www.heritage.org. Countries with high rankings on the index will have policies in place, such as those listed above, which encourage both domestic and international trade.

Once they have identified a country or countries with relatively high levels of trade, students can investigate them further for the extent to which they exhibit the benefits of trade. To provide context, students can examine a country's performance over a period of time in terms of the benefits of trade.

Alternatively, they can use the index to compare countries that currently have policies which encourage trade and commerce, with countries that have policies which discourage it. They could use a table like the one on the next page, which is based on information found in the Index of Economic Freedom and the CIA Factbook (at www.cia.gov), to organize their findings:

Benefit of trade	Country with policies that encourage trade and commerce: Singapore	Country with policies that discourage trade and commerce: Cuba
Lower prices	<p>Inflation = 5.2%.</p> <p>Prices appear fairly high in Singapore but incomes are also high, meaning that the average person can purchase many goods. Prices are therefore low in relative terms.</p> <p>Despite higher nominal prices in Singapore, numbeo.com calculates local purchasing power in Singapore as being 4,000% higher than in Cuba.</p>	<p>Inflation = 4.7%.</p> <p>Prices appear very low in Cuba but incomes are also very low, meaning that the average person can purchase few goods. Prices are therefore high in relative terms.</p>
More efficient allocation of resources	<p>Despite having few natural resources, Singapore is an extremely prosperous nation, with globally competitive manufacturing and service industries. Its workers earn high wages, suggesting their productivity is high as a result of efficient use of resources.</p>	<p>Average salary in Cuba is \$25 per month. This is an indication of a very inefficient economy. If workers earn low average wages, it often means that they have low productivity stemming from inefficient use of resources. Key industries such as agriculture and mining perform poorly, suggesting inefficiency in their production methods.</p>
Increase access to resources	<p>With few natural resources, Singapore has to import many of the inputs for its manufactured goods, which it is able to do with its relatively open approach to international trade.</p>	<p>The government controls most of the resources in the country. Individuals who want to obtain resources to engage in productive activities have a difficult time doing so.</p>
Increase access to finished products	<p>Singapore's GDP per capita is one of the highest in the world. This is a sign that its people have access to goods and services comparable with the most developed countries.</p>	<p>Cuba has relatively low GDP per capita, suggesting that most of its citizens have limited access to good and services. Products that are taken for granted in developed countries, such as electrical appliances and automobiles, are unobtainable for many Cubans.</p>
Increase efficiency through increased competition	<p>Much of Singapore's efficient use of resources is likely due to its relatively open and free-market economy, which allows considerable scope for entrepreneurs to operate businesses and compete with each other in doing so.</p>	<p>Cuba organizes its economy along communist lines, meaning that the government controls most economic activity and allows little competition. This explains at least some of Cuba's inefficient use of resources. 80% of its workers are employed by the government.</p>

LITERARY LINKS

The *Commanding Heights* DVD series (available at www.pbs.org) contains a number of examples of the effects of increased trade and commerce. See especially:

Episode 1: Chapter 3 on Lenin's new economic policy and Chapter 9 on German price controls.

Episode 2: Chapters 12 and 13 on Poland opening up its economy after the collapse of the Soviet Union.

Episode 3: Much of the episode, which focuses on increased international trade in the past generation, as well as policies within countries, like China, that sought to increase domestic commerce and trade.



Activity 5 Trade—the bad news

The student book suggests a number of cases which students can investigate to learn more about the possible negative effects of trade. The case of Chevron in Ecuador is a highly interesting one to explore given the starkly competing claims of each side. The case illustrates the challenges we face in evaluating trade, because of the complexity of today's economies, combined with the range of possible costs and benefits attached to any given trade arrangement.

In terms of the problems trade can cause, the Chevron case illustrates:

- over-reliance on primary commodities by developing countries
- negative impacts from multinational corporations.

The extension task that follows focuses on the Chevron in Ecuador case and allows students to:

- design research questions and action plans for inquiries
- analyse and evaluate sources in terms of origin and purpose, recognizing values and limitations.

STEP 1

Provide students with the following summary of the case:

- The oil company Chevron was sued in Ecuador for the failure of Texaco, which was bought by Chevron in 2001, to clean up drilling sites in the Amazon rainforest.
- An Ecuadorian court handed down judgment in February 2011, ordering that Chevron pay \$18.2 billion in damages and penalties.
- Texaco had spent \$40 million to clean up the sites before it left Ecuador in the 1990s and had been released from further liability by the Ecuadorian government and the Ecuadorian state oil company, PetroEcuador, in 1998. Chevron asked an international arbitration tribunal in The Hague to find that the Ecuadorian government was therefore responsible for any environmental damage (this case was still pending as of 2014).
- Since Chevron had no assets in Ecuador, plaintiffs and their legal representatives sued Chevron in different countries, such as Brazil and Canada, in order to try to secure payment of the damages that the Ecuadorian court had awarded them.
- Chevron claimed that the case against it was marked by fraud and that it was denied a fair hearing in the Ecuadorian court. The company went to court in the US in an attempt to prove fraud. A US judge ruled for Chevron in 2014, but the plaintiffs appealed. The appeal was pending as of 2014.
- Chevron also raised questions about who would receive the award, arguing that the court had not named any of the people living near the sites as recipients. Instead, 10% was to go to the Amazon Defence Coalition (ADC), a non-governmental organization that advocated on behalf of the lawsuit, and at least \$5.7 billion to interests outside the affected communities, such as US law firm Patton Boggs, and other financial interests inside Ecuador. A sum of \$8.7 billion was to be administered by ADC for the environmental clean up and health and community projects. The award was subsequently lowered from \$18.2 to \$9 billion.

STEP 2

Ask students to imagine themselves in the role of investigative journalists. They should consider how they would try to discover the truth about a complex case, such as that of Chevron in Ecuador, which involves:

- multiple countries
- thousands of individuals
- various organizations
- huge amounts of information, much of it generated by interested parties with distinct perspectives on the situation.

TIP

Students can use a template for their action plan like the one found in Activity 3, chapter 11 of the student book.

In their role as investigative journalists, students should do the following:

- Formulate a research question they could use to guide an inquiry into the case. They should make sure their research question is relevant and manageable, and guides them toward finding the truth of the case, but is realistic in terms of how much of the truth they can reasonably expect to uncover.
- Formulate a detailed action plan that would allow them to investigate their research question. Since they are journalists, they can assume that the media organization for which they work will support their research with some resources, such as travel to relevant locations for interviews and first-hand observations. However, their employer will want them to be efficient with those resources, so they should try to limit their travel and time on the case to the minimum they think they will need to determine the truth.

STEP 3

Explain to students that journalists and others have, in fact, attempted to determine the truth in the Chevron in Ecuador case. Ask students to analyse and evaluate the sources listed in the adjacent Web Links box in terms of their origin and purpose, as well as values and limitations for helping them to answer the research question they developed in Step 2. They can use the SEER (Source Educational Evaluation Rubric) at turnitin.com to help them assess the sources.

WEB LINKS

- theamazonpost.com: Chevron's views and opinions about the case. Includes links to news articles.
- www.cbsnews.com: Search "Amazon crude" for a 60 Minutes segment on the case (can be read or watched).
- www.washingtontimes.com: Search "Banana Republic v. Chevron" for an editorial on the case.
- chevrontoxico.com: Website sponsored by the Amazon Defence Coalition and Amazon Watch. Includes links to news articles.

Assessment

If you want to assess students' work on Steps 2 and 3, you can do so using criteria B and D.

Level **B** Investigating

7–8 I have:

- I. formulated a clear and focused research question to guide an inquiry into the case of Chevron in Ecuador and justified its relevance.
- II. formulated and effectively followed a comprehensive action plan to investigate the research question I have developed.

Level **D** Thinking critically

I have:

- I. effectively analysed and evaluated a range of sources and data related to the case of Chevron in Ecuador in terms of origin and purpose, consistently recognizing values and limitations.

Because students develop the action plan as part of a role-playing exercise, and do not actually carry it out, you should assess the plan formatively. Alternatively, you can have them develop the action plan in their actual role as students.

TIP

You could extend the case study further and ask students to complete their own research on the case, including drawing some conclusions about the merits of each side's arguments.



Activity 6 Setting the boundaries

This task allows students to apply what they learned in chapter 3 about setting boundaries on inquiries into change in terms of time, place, space and specificity.

One way for students to set boundaries for an inquiry into changes related to trade would be to focus on a particular country which implemented policies that opened it up to trade and did so over a relatively defined period of time. Poland provides an excellent example for this task, as it enacted significant pro-trade and free-market policies soon after freeing itself from Soviet influence in 1989. Students could set boundaries for an inquiry into the effects of increased trade on Poland as follows:

Time—1989 to present

Place and space—Poland

Specificity—Look at the overall effects of increased trade and commerce for Poland, including:

- effects on economic growth
- distribution of economic gains
- any groups which were harmed by increased trade and commerce
- any significant social or cultural impacts
- any other benefits or problems related to increased trade and commerce.

Once students set the boundaries for an inquiry into the effects of trade, they can also carry it out. Below is an example of key points which students might discuss for an inquiry into the effects of increased trade and commerce in Poland, based on the boundaries suggested above:

- Poland implemented sweeping free-market reforms in the early 1990s. These included removing price controls and trade restrictions, limiting public sector wages and allowing the currency to be exchanged for other currencies.
- **Effects on economic growth:** Poland's economy grew 177% from 1991 to 2007 and continues to be one of the fastest growing economies in Europe.
- **Distribution of economic gains:** Poland has a relatively low poverty rate (10%) and its levels of economic inequality (as measured by the Gini Index) are only a bit higher than the European Union as a whole.
- **Any groups which were harmed by increased trade and commerce:** Many people initially lost jobs when the economic reforms were first put into place in the early 1990s.
- **Any significant social or cultural impacts:** Overall Poland is more open to the outside world, with increased economic, social and cultural exchange over the past 20 years. Poles travel much more widely and frequently and many more tourists visit Poland. Poland's membership of the European Union also allows its people to migrate to other countries for work and for citizens of other European countries to come to Poland for work and study. As consumers have become wealthier, they have become more concerned with the quality of the products they buy rather than just the price.

Sources: "20 Years after Communism's Collapse, Poland's Economy Is Thriving" by Rafal Kiepuszewsk (*Deutsche Welle*, 15 Oct. 2009); "How Poland Became Europe's Most Dynamic Economy" by Stephan Faris (*Bloomberg Businessweek*, 27 Nov 2013).

Sources and the specificity of an inquiry

One of the key issues when it comes to specificity is that of sources. Students need to be aware of the need to reach a balance in their sources between those that give a general, big-picture view of a situation and those that focus more narrowly on specific aspects of it.

When it comes to the effects of trade, for instance, a more general source may give us economic and human development data showing that, overall, a country that had increased its levels of trade and commerce was experiencing better outcomes. On the other hand, another source may focus on a specific industry or community that had been harmed by the new policies designed to increase trade and commerce. Students need to see that both types of sources have limitations and value and that therefore multiple sources, which strike a balance when it comes to specificity, are needed in order to support strong conclusions.



Activity 7 All you need is trade

This final activity of this chapter gives students the opportunity to inquire into the relationship between trade and peace. The idea that increased trade links can foster peace along with prosperity is an attractive one. Students will read the text of a speech entitled “Trade, Democracy and Peace: The Virtuous Cycle” (see the link in the student book), which makes this argument, and use the suggested “W-questions” for non-fiction texts to develop a thorough understanding of it.

Possible responses to W-questions for the text are as follows:

Q1: Who wrote the text? What qualifications does the author have to make him or her reliable? Are there any possible sources of bias you should be aware of that may affect what the author says?

A1: This is a speech by Daniel Griswold, who served as a director of trade policy studies at the Cato Institute. He has a degree in journalism and economics, and a Master’s in “the politics of the world economy”. He has authored a book about globalization as well as studies on globalization, trade and immigration. The Cato Institute is “dedicated to the principles of individual liberty, limited government, free markets and peace”.

Q2: What is the main idea of the text (thesis or theme)?

A2: Trade not only promotes prosperity, it also promotes democratic governance within, and peace among, countries that trade freely.

Q3: What important conclusions does the text draw and what important points does it make?

- A3:**
- During the Cold War, trade was widely recognized as a key to spreading human rights and democracy, and securing peace.
 - Anti-trade policies of the 1930s helped foster the conditions that made the Second World War possible.
 - Trade promotes political freedom by:
 - opening societies to new technologies and ideas
 - allowing people to travel and experience freedoms in other countries
 - creating sources of wealth and power that can counterbalance the government as the sole source of power in a society
 - creating wealth that allows for the rise of a civically minded middle class.
 - Since the early 1970s, trade and political freedom have expanded in tandem around the world.
 - Countries that are open to trade are much more likely to extend political freedoms to their people.
 - Tracking individual countries over time shows that as they expand freedom to trade, their levels of political freedom grow as well.
 - The best way for democratic countries to encourage political and civil freedom in autocratic countries is to trade with them.
 - China, with its billion people, is reaching a stage of economic development and trade freedom at which increasing political freedom might be expected.
 - As global trade has increased the world has become more peaceful, according to a number of measures. There are a several reasons for this:
 - Trade promotes democracy and democracies rarely go to war with each other.
 - Trade leads to economic integration, making the economic cost of wars between countries that trade with each other much greater.
 - Trade allows countries to generate wealth through production and exchange rather than through conquering territories.
 - A virtuous cycle of democracy, peace and trade exists in parts of the world today. Trade encourages democracy, democracy creates conditions of stability that are hospitable to trade, the two together encourage peace, and peace fosters more trade and political stability.
 - Because of the benefits of trade, countries should seek to encourage trade through the World Trade Organization and through unilaterally opening their borders.

Q4: For each of the conclusions, write down how the author arrives at them. What evidence does he use to support the conclusions?

- A4:**
- The actions of Western nations during the Cold War show they valued trade and realized the damaging effects of anti-trade policies in the 1930s.
 - The simultaneous growth of trade and political freedom since the 1970s can be observed in Freedom House's data showing an increase in countries rated "free" and decrease in countries rated "not free" during that time.
 - Combining political freedom ratings (from Freedom House) with economic freedom ratings (from the Economic Freedom of the World Report) shows the relationship between increasing trade and increasing political freedom for individual countries.
 - The possibility of increasing political freedom in China is shown in the data which suggests that countries at its levels of trade and per capita income often liberalize politically.
 - The evidence for increased world peace includes findings that:
 - the number of armed conflicts globally has been declining over the past 50 years
 - the death toll from war has been falling and recently reached its lowest point since the Second World War.
 - Parts of the world with relatively more trade, such as Europe, East Asia, Latin American and North America, tend to be more democratic and peaceful, whereas regions with countries less open to trade, such as the Middle East and Sub-Saharan Africa, tend to be less democratic and peaceful.

TIP

Educational research increasingly supports the idea that students learn best when they are exposed to challenging texts and receive adequate support from teachers in accessing them. For a good summary of this research go to www.shanahanonliteracy.com and search for "rejecting instructional level theory".

The Socratic seminar format (see chapter 14 in the student and teacher books) was developed in part to provide students a way to help each other understand challenging texts. You may therefore want to follow up this task with such a discussion.

Summary









This chapter explores the concept of trade, inquiring into its relationship to equity and its positive and negative effects, including the possibility that it can foster peace and democracy. Through this inquiry, students have the opportunity to:

- inquire into the global context of the world as a connected whole
- explore the key concept of global interactions
- formulate research questions, action plans and conduct research
- synthesize information to make their own arguments
- analyse and evaluate sources.

References

Worden, Robert L., ed. *North Korea: A Country Study*. Washington, DC: U.S. Government Printing Office, 2008.

Power

	ATL skills	Task summary
TOPIC 1 War on terror		
Activity 1 Six acts of terrorism from six different countries	✓ Research Present information in a variety of formats and platforms.	 Construct an annotated timeline that documents acts of terrorism.
Activity 2 A documentary of the impacts of a terrorist attack	✓ Social Manage and resolve conflict, and work collaboratively in teams.	 Write and create a mini-documentary based on the experiences of one person during a terrorist attack.
Activity 3 Provocative inquiry into power and religious beliefs	✓ Thinking Formulate factual, topical, conceptual and debatable questions.	 Investigate and analyse the different oaths of office that are used by political leaders around the world.
TOPIC 2 Indian caste system		
Activity 4 “Snakes and Ladders”	✓ Communication Use and interpret a range of discipline-specific terms and symbols.	 Create a board game that helps players learn more about the Indian caste system.
Activity 5 Village festival	✓ Social Build consensus.	 Take part in a role play activity following the process of group decision-making.
Activity 6 The integration of minority groups	✓ Thinking Identify obstacles and challenges.	 Develop an action plan that supports the integration of a minority group in the local or national government.
TOPIC 3 Colonialism and power in the Democratic Republic of Congo		
Activity 7 The impact of rubber in the DRC	✓ Self-management Consider ethical, cultural and environmental implications.	 Create a diagram that shows causes and impacts of resource control in the Democratic Republic of Congo.
Activity 8 Document the transition of power in the DRC	✓ Self-management Demonstrate persistence and perseverance.	 Construct a graphic organizer that documents the struggle for power in the Democratic Republic of Congo.

Activity 9
Persuasive
essay

✓ **Communication**
Read critically and
for comprehension.

👤 Research and write a persuasive essay on
the role of external powers on a country's
government.

Introducing power

Focusing on power as a related concept provides many opportunities for students to learn, practise and master skills in order to identify and understand perspectives, develop contrary arguments, adopt flexible and metaphorical thinking, and share and negotiate ideas with peers and teachers.

The student book introduces the idea of power as the influence that one person has on another. This influence can be generated through differences in wealth, family, education, job or ideas. The idea of power connected with threats or force also needs to be understood. Why do people, organizations or countries need to use force to show power? What does this lead to? Is using or wielding power good or bad?

TEACHING IDEA 1

1. As a class, brainstorm and record examples of where and when students have witnessed power being used.
2. In pairs, ask the students to sort their responses into different scales: individual, group, national and international. If possible, they can add more examples. Remind the groups that they can include both positive and negative examples of power.
3. Ask each pair to join another so that students are working in groups of four.
4. Each group should create criteria that explain the different levels and types of power at each scale.
5. Share and discuss the criteria as a class.
6. Check the definitions and examples of power in the student book. Do students agree with the definitions? Is there anything else that they can add?

WEB LINKS

Additional guidance on teaching controversial issues can be found at www.oxfam.org.uk/education/teacher-support/tools-and-guides.

TOPIC 1

War on terror

The attacks of 11 September 2001 raised the global consciousness of just how precarious and dangerous power can be, even in the country that could be considered the most powerful in the world. Studying the role of terrorism requires an exploration of how fear can be associated with and manipulated by those in positions of power.

Placing terrorism in the context of human history will help students to realize that it is not a new phenomenon, but the power and publicity surrounding terrorism has risen dramatically in human consciousness.

LITERARY LINKS

The films *The Hurt Locker* and *Zero Dark Thirty* both tackle the complicated issues of power wielded by terrorist groups, military organizations and countries. They provide interesting background information to the approach taken towards terror by different governments around the world.



Activity 1 Six acts of terrorism from six different countries

By researching events of terrorism, students are connecting the related concepts of power and conflict. The timeline format supports development of the skills of graphing and working to scale.

Time	Stage	Procedure	Resources
15 min.	Reflecting	<p>Ask students to spend 10 to 15 minutes reflecting on when they first became aware of the concept of terrorism. Ask them to think about events that may have made an impression on them.</p> <ul style="list-style-type: none"> What emotions do they associate with terrorism? Do they think they could ever feel empathy towards a cause supported by a terrorist group? How have they defined terrorism? 	
<p>TIP</p> <p>This question is not asking if they could feel empathy towards a terrorist group. It requires students to reflect on whether they could support a cause that may have a small group trying to support the same cause through violent means.</p>			
15 min.	Reviewing	<p>Instruct students to read Activity 1 in the student book. Check their understanding of the format for the timeline. Students may wish to construct their timeline using graphing or flowchart software. Encourage them to share their ideas with the class, checking on the strengths and limitations of creating a timeline this way.</p>	Student book
60–90 min.	Researching and creating	<p>As students research and construct their timelines, ask them to reflect on the type and location of the terrorist acts they have chosen for their timeline. For example, do their chosen countries share similar political, social or economic characteristics? Do the acts of terrorism have similar outcomes?</p>	Library/ internet; student book
20 min.	Reflecting	<p>After students have constructed their timelines, lead a discussion on the connection between these acts of terrorism and the related concept of power. Collaborating in pairs, ask students to create 10 statements related to power. They should write five examples (“Power is...”) and five non-examples (“Power is not...”) and consider a variety of scales (individual, group, national). Ask each pair to choose their strongest example and non-example to share with the class. Collate these on the board.</p>	Student timelines



Activity 2

A documentary of the impacts of a terrorist attack

Creating a mini-documentary requires student groups to be organized and able to collaborate effectively to meet a challenging goal. By focusing on the experiences of one person during a dramatic event, students will develop their skills of perspective and empathy.

Time	Stage	Procedure	Resources
10 min.	Reviewing and connecting	Instruct students to review the timelines they created in Activity 1. Can they use the events to explain the concepts of causality, conflict and power?	Student timelines
20 min.	Exploring	<p>TIP</p> <p>Paddy Ashdown speaks quite quickly, presenting new ideas rapidly in the 18-minute talk. To support English language learners, provide students with the transcript of the talk or ask them to watch it at home before watching it again in class.</p> <p>Explain that students will be watching a TED talk by Paddy Ashdown entitled “The Global Power Shift”, available on www.ted.com.</p> <p>Before they watch the video, ask students to reflect on the title of the talk. The word “shift” implies that power is moving. Ask them to predict where power has been held in the world and where Paddy Ashdown may argue that power has shifted to. Remind students that they should also justify their predictions with relevant, specific examples. Then ask students to share some of their responses.</p> <p>Watch the talk as a class, asking students to listen out for the related concepts of interdependence, networks and values.</p> <p>After watching, allow 10 to 15 minutes of students’ questions and discussions.</p>	Internet
20 min.	Analysing	<p>Paddy Ashdown argues that the world goes through phases, roughly every century, of turbulence and peace. Challenge the students to present two cases, one arguing that we are in the turbulent phase of this cycle, and the other arguing that we are in the peaceful phase.</p> <p>Explain to the students that they have to prepare one-minute speeches for two perspectives on what kind of world we are living in today:</p> <ol style="list-style-type: none"> 1. We are living in more turbulent times because ... 2. We are living in more peaceful times because ... <p>Give students 15 minutes to collaborate with a partner and create a speech for each side of the argument.</p>	
15 min.	Connecting	<p>Explain that the opinions shared by Paddy Ashdown are based on his analysis of events. When students are creating their mini-documentary, they will be focusing on one perspective of a person involved in that event. This means that their documentary may show bias or just one perspective on the events.</p> <p>Have students read Activity 2 in the student book, and address any questions that they may have.</p>	Student book



Activity 3

Provocative inquiry into power and religious beliefs

This activity asks students to analyse the different oaths of office sworn by political leaders around the world. These oaths provide a useful discussion point for what it means to be in a position of power—the expectations, the resources and the sphere of influence a leader has. Much of the controversy surrounding events such as the US occupation of Iraq relate to differences in the definitions of terms such as “use of force” and “terrorist attack”. This lesson helps students explore the challenges of defining actions in a way that is acceptable to all countries, and can serve as a culminating lesson to Topic 1.

Time	Stage	Procedure	Resources
15 min.	Introducing	Hold a class discussion on the meaning of the term “oaths of office”. Ask students to share examples that they might have heard.	
15 min.	Brainstorming	Instruct students to read Step 1 of Activity 3 in the student book, either individually or with a partner, then create a MindMap® of the different connections in Step 1 (governments, religion, power, beliefs). Remind them that they can include questions for further inquiry on their MindMap®.	Student book
60–90 min.	Researching	Students may have a clear idea of which countries they would like to research. However, they may find that there is not a great deal of information available or the country choice is not appropriate for the assignment. Encourage structure when researching to help students use their time wisely, as follows: 1. Initial investigation: 15–20 min Use this time to check that the choice of countries is suitable or to decide which countries to research. After 20 minutes, suggest that students can meet with you for extra guidance if they haven’t been able to select countries. 2. Gather data: 30–40 min Encourage students to use the table from the student book to record information. Remind them to record sources. 3. Checking: 15 min Have students check the purpose of Activity 3 and make sure that they are able to develop a thesis statement based on the results of their research. If students need to collect more information, remind them to write inquiry questions or brainstorm search terms before returning to research.	Library/ internet; student book
20 min.	Reflecting	After students have completed their essays, you may wish to have a reflective activity to conclude this topic. You can do this through a class discussion connected to Paddy Ashdown’s concepts of turbulent and peaceful times. Reflection prompt: Is this a time of turbulence or peace? What about in 50 years’ time?	

TOPIC 2

Indian caste system

When investigating power, it is important to explore how power and status are linked. This topic focuses on power within social structures. In any society, identity, status and power are intrinsically connected. This connection may be based on an individual's wealth, their family or the job that they do. Throughout this topic, students should reflect on how power operates in societies that they have lived in or been a part of.



Activity 4 "Snakes and Ladders"

This activity challenges students to manipulate their subject knowledge and apply it in a new context. The board game doesn't have to be specifically Snakes and Ladders; there may be a different game that is more popular and relevant for your students. The idea is for them to practise asking and answering different levels of questions for different audiences.

Time	Stage	Procedure	Resources
10 min.	Introducing	Have students read Topic 2 and Activity 4 in the student book.	Student book
15 min.	Reflecting	Allow students to collaborate with each other and complete a "KWH" chart for the topic, with the following headers: Topic: Indian caste system K—What do I know about this topic? W—What do I want to learn about this topic? H—How do I find out more?	Paper
30 min.	Planning	Organize the students into groups of 3 or 4 and ask them to review the steps for Activity 4. If a group is not familiar with the concept of Snakes and Ladders, share some examples with them. Encourage groups to plan out the responsibilities for each member. Remind them that even though group members may have different responsibilities, it's important for them to communicate with each other.	Student book
60–90 min.	Investigating	As students carry out the process of research, they will be developing different inquiry questions. Share the table below with students to help them with their planning, research and evaluating.	

Table: Hierarchy of questions

Skill	Example of question
Remembering	What happened...? Where...? When did...? Who are...?

Understanding	Can you explain how...? What does this term mean in relation to...? Why do you think that...?
Applying	Is there a different way to...? How could this work with...? Could you say that this is also an example of...?
Analysing	How does this work? How can these be organized? What happens when...?
Evaluating	What is the best? Which do you prefer? Why should we...?
Creating	How could we...? What would happen if...? Would this work if...?



Activity 5 Village festival

Collaborative decision-making can be a challenging process. This activity assigns students a character in a role play to support the development of ATL skills such as building consensus, making choices and understanding the ideas of fairness and development.

Time	Stage	Procedure	Resources
15 min.	Reflecting	Ask students to look at the KWH chart that they created in the previous activity. Ask them to add a column to the right of the chart labelled “L—What I have learned.” Have students complete this column. Topic: Indian caste system K —What do I know about this topic? W —What do I want to learn about this topic? H —How do I find out more? L —What I have learned?	Student KWHL chart
20 min.	Preparing Part 1	Read through the scenario and steps for Activity 5 in the student book. Depending on your class size, you could organize several “villages” of six students per village. Alternatively, you could have one village with several students playing each role. You could also develop additional roles that the student might suggest.	Student book

15 min.	Preparing Part 2	Once the roles have been assigned, allow students some time to prepare their thoughts. Students may wish to do additional research or meet with other students playing the same role to discuss their ideas.	Student book
30–40 min.	Discussing	Once students are ready, organize them into their villages and allow the meetings to begin. As a teacher, it is important to be an observer of this process but allow students to lead the discussions according to their roles.	
20 min.	Reflecting	Once the village meetings are complete, ask students to step out of their roles and reflect on the process. In their village groups, have them read through and respond to the reflection questions in Step 4 of Activity 5.	



Activity 6 The integration of minority groups

Taking action is an important part of the learning process in the MYP. Through the following activities, students will experience one form of action as well as develop a plan for action related to a minority group located in their community.

Time	Stage	Procedure	Resources
15 min.	Reflecting	<p>Ask students to review their KWHL charts and add two additional columns:</p> <p>Topic: Indian caste system</p> <p>K—What do I know about this topic?</p> <p>W—What do I want to learn about this topic?</p> <p>H—How do I find out more?</p> <p>L—What I have learned?</p> <p>A—What action will I take?</p> <p>Q—What additional questions do I have?</p> <p>After they have completed the A and Q columns, ask students to share some of their responses with the class. What actions are easy to carry out? What actions are more challenging?</p>	Student KWHL charts
15 min.	Exploring	<p>Explain that students will go through the process of taking action on an issue by making postcards. Students will be creating postcards to distribute across India informing citizens of their rights in terms of overcoming caste discrimination.</p>	Library/ internet; art supplies

		<p>Task requirements:</p> <ul style="list-style-type: none"> ● Make four postcards in total—each aimed at a specific audience (for example, people who suffer from caste discrimination, government officials, those who consider it acceptable to discriminate, children, women, men, young people, people who are illiterate, etc). ● Each card should have a powerful visual image on one side and brief, relevant information on the other. ● Cards can be no bigger than A5 size (postcard size). ● Cards can be black and white or colour. ● Images must be original (drawn by the student) or photos that they have taken. 	
60–90 min.	Designing	As students research and develop their postcards, ask them to include a brief commentary that explains their choice of information and images for each card.	
20 min.	Sharing	<p>Display the completed postcards and allow students to discuss, analyse and give feedback on them in an informal discussion.</p> <p>Ask the students if they think that postcards could be effective as a way of taking action?</p>	Student postcards
15 min.	Integrating	<p>Ask students to read through Activity 6 in the student book. Clarify any questions that they might have before beginning the activity.</p> <p>If necessary, lead a brainstorming session on some of the possible groups in the local community that students could take action for.</p>	Student book

TOPIC 3

Colonialism and power in the Democratic Republic of Congo

Making the link between power and responsibility requires an investigation into people and organizations that use power as a means to create social, financial and political equity. It provides opportunities for students to think about the positive effects of power, but to understand that different people might have an alternative viewpoint.

With the inquiry focus on the Democratic Republic of Congo, students may be quickly willing to offer their opinion on the drawbacks of colonialism. However, it is important to remind them that they have the benefit of historical hindsight. At the time, many European governments believed that they were “civilizing” the people of the Congo and, in return, they could use the country to provide much-desired resources such as rubber and gold.



Activity 7 The impact of rubber in the DRC

Students will analyse the causes and consequences of colonialism by looking at one particular resource from multiple perspectives—social, political, economic and environmental perspectives as well as different countries.

Time	Stage	Procedure	Resources
15 min.	Introducing	<p>Have students read Activity 7 and “A new nation is born” in the student book.</p> <p>Check their understanding with some quick questions:</p> <ul style="list-style-type: none">■ Which country colonized the Democratic Republic of Congo?■ What were some of the resources that the Belgian government wanted control of?■ What challenges do you think the Belgian government faced when colonizing the DRC?■ What challenges did the Congolese face when Belgium invaded?	Student book
30 min.	Researching	<p>Guide students through the process of completing the diagram in Activity 7. Alternatively, they could complete this exercise in pairs, dividing the research up by causes and impacts. The activity can also be expanded to cover different resources that were in demand at the time, such as diamonds, gold or ivory.</p>	Student book; library/internet
15 min.	Reflecting	<p>After students have completed their diagrams, ask them to reflect independently on some of the different interplays of power that occur in a country that is part of a colony. They can complete a “3, 2, 1” of the reflection:</p> <ul style="list-style-type: none">■ 3—Three statements about the topic. These can be facts about the DRC or statements about the related concept of power.■ 2—Two conceptual understandings that they have about the related concept of the chapter (power, beliefs, justice, ideologies, relationships, conflict, perspective).■ 1—One question that they would like to explore further throughout the study of this topic.	Student diagrams; paper



Activity 8

Document the transition of power in the DRC

Activity 8 in the student book asks students to construct a graphic organizer documenting the transition in power in the Democratic Republic of Congo in 1960. The second part of the task asks students to write two or three paragraphs that explain how other countries or organizations viewed this transition.

INTERDISCIPLINARY LINKS

To support student skills in identifying perspectives, use activities such as role plays. Role plays provide an opportunity for students to utilize skills learned in language and literature, arts and physical health and education classes to step into the character of a historical figure.

Time	Stage	Procedure	Resources
10 min.	Listing	Throughout this chapter, students have used several different methods to visually organize information [timelines, flowcharts, MindMaps®, diagrams]. Instruct students to spend 5–10 minutes listing the different techniques they have used, including brief explanations of how they used them.	Student notes
10 min.	Planning	Ask students to pair up and read through Activity 8 in the student book. As they read, have them highlight, circle or list the different parts of the task. Students should list: <ul style="list-style-type: none"> ■ Chart ■ DRC and Belgium ■ Power struggles between the different political groups ■ How these changes were viewed by other countries or organizations Discuss with the class what other countries or organizations might students choose? Suggestions could include other countries that have colonies in Africa, countries surrounding the DRC, or international organizations such as the UN or IFRC (International Federation of Red Cross and Red Crescent Societies).	Student book
60–90 min.	Researching	Direct students back to the KWH hierarchy of questions that they used for the Snakes and Ladders game in Topic 2. Students can use this table as a basis for generating inquiry questions before they begin their research.	Table from Activity 4

30 min.

Peer reviewing

When students take part in a peer review process, it is important to provide some framework or guidelines to focus the discussions:

- Allow students to choose who they want to collaborate with—it could be a partner or in a small group.
- Remind students that they should check for the required elements of the activity (DRC and Belgium, power struggles, perspective from another country or organization).
- Activity 8 in the student book suggests three questions that should be asked during a peer review. Encourage students to use these questions as a starting point.
- Students should also be assured that you are involved in the peer review process. Monitor the discussions, and offer advice or clarification where necessary. If a student isn't comfortable having their draft peer reviewed, they should feel able to meet with you.



Activity 9 Persuasive essay

A persuasive essay encourages students to write with clarity and conviction. This essay topic will allow students to demonstrate their understanding of the related concept of power. Students should be encouraged to use examples of current events to justify their arguments.

Time	Stage	Procedure	Resources
15 min.	Reflecting	<p>Ask students to read in pairs the essay topic for Activity 9 in the student book.</p> <p>With their partner, they should conduct a one-minute discussion sharing their initial thoughts and ideas on the topic. Each person should speak to their partner for one minute without interruption. After both students have spoken, they should then question or clarify what has been said.</p>	Student book
20 min.	Planning	<p>Read the activity instructions as a class and clarify any questions students might have.</p> <p>Students should be guided to create a research plan and write inquiry questions before beginning their research.</p> <p>You may wish to have students research independently and then write the essay as an in-class summative assessment.</p>	Student book

20 min.	Reflecting Part 1	After students have completed their essays, lead a discussion where they can share their ideas on power and government.	
20 min.	Reflecting Part 2	<p>As a culminating activity, organize students into groups of 4 or 5 for a “Write Around”.</p> <p>Step 1: Each person has a piece of paper and a pencil. They are given one minute to write a statement about power showing their conceptual understanding.</p> <p>Step 2: After one minute, students pass their paper to the person sitting next to them in their group. They then read and respond or add to the statement on that paper.</p> <p>Step 3: Repeat this until every person in the group has written on every person’s piece of paper. The paper should now be with the original writer.</p> <p>Step 4: Each person then reads what is on the paper and creates one final summarizing statement: “The bottom line is...”.</p> <p>Once students have completed this, ask the different groups to share their “bottom lines”.</p>	Paper and pencil

Summary

Understanding how power can be gained, used, abused or lost is essential for comprehending relationships between people, organizations and countries. Power comes in many forms, such as financial power, social status and political influence. Throughout history, countries have used their power for personal gain as well as for supporting others. However, perspectives shift over time, and in retrospect the justification of power at a particular time can seem unreasonable.

On an individual level, students need to become aware of what power they can wield or yield, how they gain power, and how power shifts over time. They need to consider whether it is simply a law of nature for people and countries to have different amounts of power or whether it is something that they can influence themselves.

Sustainability

	ATL skills	Task summary
TOPIC 1 Threats to sustainability		
Activity 1 The consequences of pollution	✓ Thinking Identify obstacles and challenges.	• Explore the implications of an environment becoming polluted in terms of the Sustainability Compass.
Activity 2 Doomed societies	✓ Thinking Analyse complex concepts and projects into their constituent parts and synthesize them to create new understanding.	• Investigate a past society that collapsed due to a lack of sustainability and analyse the collapse in terms of the three basic threats to sustainability.
TOPIC 2 Debates about sustainability		
Activity 3 Innovators for the future	✓ Thinking Create novel solutions to authentic problems.	• Analyse a recent innovation discussed in an article and a local threat to sustainability. Suggest a solution to that threat.
Activity 4 Socratic seminar: How bad is it?	✓ Thinking Consider ideas from multiple perspectives.	• Discuss the extent to which the sustainability of global civilization is threatened.
TOPIC 3 Enhancing sustainability, preserving resources		
Activity 5 Which approach?	✓ Research Access information to be informed and inform others.	• Investigate a policy, programme, organization or development that was intended to, or actually did, enhance sustainability.
Activity 6 Save the society	✓ Thinking Create novel solutions to authentic problems.	• Use the three approaches to sustainability to suggest ways that a society which collapsed in the past could have sustained itself.
Activity 7 International cooperation and common-access resources	✓ Thinking Draw reasonable conclusions and generalizations.	• Research an example of an international attempt to protect a common-access resource.

Introducing sustainability

Sustainability is an extremely rich and relevant concept, providing many links to other key and related concepts across MYP individuals and societies disciplines and beyond. The conceptual exploration of sustainability in the student book includes the ideas that threats to sustainability come in three key forms—depletion, pollution and destruction—and that sustainability can be enhanced through three basic strategies: conserving, increasing efficiency and discovering.

The student book supports students in inquiring into the threats to sustainability and strategies for pursuing it, while helping them to develop a range of ATL skills. The teacher book gives ideas for how to expand on some of the student tasks, including how to use them to achieve and assess individuals and societies objectives. It also provides extensions to the activities contained in the student book to further explore the concept of sustainability, develop ATL skills and meet objectives.

The student book defines sustainability as the condition of meeting our current needs and wants without undermining the ability of people in the future (including our future selves) to meet theirs. To the extent that we achieve it, we help to ensure a future that is at least as good as, and possibly even better than, the present.

TOPIC 1 Threats to sustainability

In this topic students are introduced to the Sustainability Compass—a tool that can help students reflect on the impact of threats to sustainability, as well as possible solutions to those threats, including action they may decide to take. The “directions” of the compass are as follows.

- **North** = Nature (the natural systems on which all life depends).
- **East** = Economy (the economic systems that provide humanity with goods, services and meaningful work).
- **South** = Society (the social and cultural systems that provide cohesion, identity, security and freedom).
- **West** = Who decides (the political systems that provide direction and make decisions).

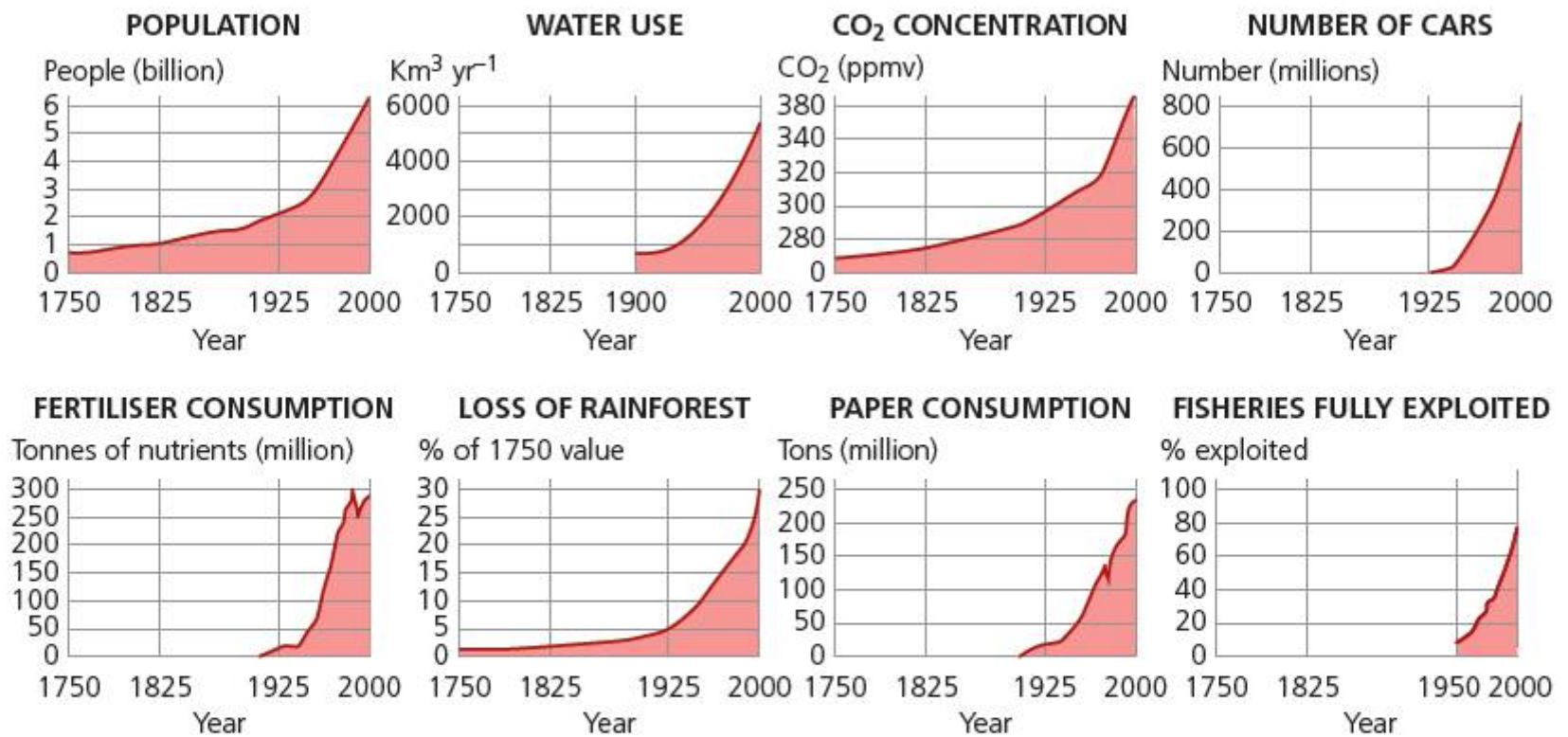
TEACHING IDEA 1

1. Introduce the graphs in Figure 14.1, which illustrate the following eight different indicators of ecological footprints on Earth:

- | | |
|----------------------------------|---------------------------|
| a) Increases in human population | e) Fertilizer consumption |
| b) Water use | f) The loss of rainforest |
| c) CO ² concentration | g) Paper consumption |
| d) The number of cars | h) The use of fisheries. |

2. Divide the class into eight groups, each one focusing on one of the indicators. Provide each group with marker pens and a large piece of paper with concentric circles.

Figure 14.1 Ecological footprints



SOURCE: International Geosphere – Biosphere Programme (Steffen et al 2004)

- Each group should write their chosen indicator in the centre circle. The group should ask themselves: "What are the immediate consequences of this trend?" and write their ideas in the surrounding circle. For example, if the trend was "higher ownership of microwave ovens", the immediate consequences could be: no need for a conventional oven, less heat in the kitchen, more radiation in the environment, a need for different pots and pans.
- Next, the groups need to think what consequences may follow on from the first ones. Students should write these "second order" consequences in the next circle.
- Succeeding third and fourth order consequences can be added to the corresponding circles, although it is not really necessary to track every consequence as far as it goes.

WEB LINKS

See the Earth Day resources at globalengage.ibo.org for the entire lesson of which this activity is a part.

LITERARY LINKS

The Consequence Wheel is adapted from David Hicks: *Citizenship for the Future: A Practical Classroom Guide*, which is a highly recommended resource for teachers.



Activity 1 The consequences of pollution

Below is an example of the task set in Activity 1 in the student book, taken from an actual case of pollution, the "dead zone" in the Gulf of Mexico. You could adjust the task to have students look at actual cases of environments becoming polluted. Although this may make it more difficult to investigate local environments, for which data may be limited, students may be able to get more information on a real case of pollution than a hypothetical one.

Pollution example: The "dead zone" in the Gulf of Mexico

A "dead zone", roughly between 7,000 and 20,000 square kilometres in size, appears in the Gulf of Mexico each summer as the result of run-off from nitrogen fertilizer used on fields in the Mississippi River Basin. The dead zone is almost entirely void of aquatic life.

The text below examines the details in relation to the Sustainability Compass:

North = Nature: How are natural systems involved in the pollution?

- The large amount of nitrogen that runs off cornfields stimulates algae and phytoplankton growth. When these organisms die, their decay creates carbon dioxide, leaving the water too short on oxygen to support life. Corn responds especially well to nitrogen fertilizer, leading to its heavy use for corn growing.
- Soil erosion in the Mississippi Basin has also contributed to the increasing amounts of nitrogen ending up in the Gulf of Mexico, as has the loss of wetlands and forests which serve as sinks to absorb nitrogen.
- To a lesser extent, municipal and industrial wastewater treatment plants have also contributed to the dead zone.
- Overall, the amount of nitrogen involved in creating the dead zone is estimated to have tripled since 1970.

East = Economy: How are economic systems involved in the pollution?

- Corn is in high demand and this has driven up its price, causing more farmers to grow corn and to use nitrogen fertilizer. The market for corn has been affected by the government's decision to require that ethanol, a biofuel made from corn, be mixed with gasoline in order to limit greenhouse emissions. Corn is also in demand as an important part of many people's diets. People eat corn and its products (such as corn oil and corn syrup) directly, and corn is also used to feed animals that provide meat for human consumption.
- The dead zone may negatively affect the fishing industry along the Gulf Coast as fish and shellfish die or swim further out where they are more difficult to catch. This is one of the most productive fishing areas in the US.

South = Society: How are social and cultural systems involved in the pollution?

- If a higher cultural value can be placed on environmental preservation, it might lead to preventative measures, such as more careful use of fertilizer and restoration of forests and wetlands, that could mitigate the problem.
- Scientific knowledge could help address the problem by clarifying whether the ethanol targets, which are meant to address climate change, are worth keeping in place given the collateral damage to other aspects of the environment (some studies have suggested that, even when it comes to climate change, increased use of ethanol may do more harm than good).

West = Who decides: How are political systems involved in the pollution?

- The government in the US has increased demand for corn by establishing targets for the amount of ethanol, a biofuel that is mixed with gasoline to decrease the greenhouse emissions from vehicles.
- Federal state and local governments could implement policies to help address the problem, such as regulations for fertilizer use, restoration of wetlands, and changes in ethanol targets.

TIP

See the categories of history table in Chapter 3 of the teacher book for guidelines on what students should look for when they are addressing the economic, cultural, social and political aspects of environmental issues.



Activity 2 Doomed societies

The task in Activity 2 should help students gain a better understanding of the urgency of preserving sustainability by giving them the opportunity to inquire into past societies that collapsed due to sustainability issues.

The exercise can be expanded by asking students to apply what they learn about past societies and their sustainability issues to contemporary global civilization and the sustainability issues it faces.

Easter Island is a particularly good case study for this chapter as it provides the clearest analogy to the current challenges faced by contemporary global civilization. As Jared Diamond writes in his book *Collapse*, this example “proves to be the closest approximation that we have to an ecological disaster unfolding in complete isolation . . . The parallels between Easter Island and the whole modern world are chillingly obvious.”

Example: Easter Island's collapse and the threats to sustainability (based on chapter 2 of *Collapse*)

Depletion factors that led to Easter Island's collapse	Destruction factors that led to Easter Island's collapse	Other factors that led to Easter Island's collapse
<ul style="list-style-type: none"> ■ Islanders spent enormous effort carving and transporting large stone statues (moai) and building platforms (ahu) upon which to place the statues. Archeologists have estimated that the intense physical labour required for these projects added “25% to the food requirements of Easter’s population over the 300 peak years of construction” (p.102). This, and general overexploitation, depleted food resources. ■ Easter was home to at least six species of land birds when humans arrived. All of these were wiped out by humans and the rats they brought with them; there were at least 25 species of seabirds, with all but one being eliminated from the island; shellfish also became extremely depleted. ■ Erecting the statues also depleted the island’s trees as large amounts of rope and timber were required to move and raise them. Easter has almost no trees left today but was covered by forest when humans first arrived. Large amounts of timber were also used for cremation and for firewood in general. In addition, trees were felled to make room for growing crops. Diamond calls what happened on Easter “the most extreme example of forest destruction in the Pacific, and among the most extreme in the world: the whole forest gone, and all of its tree species extinct” (p.107). Once the trees were gone, islanders were no longer able to build large canoes and therefore had little access to large fish as a food source. They also lacked fuel to keep warm during winter. Their cultural practices of cremation and of erecting moai also had to stop. ■ Islanders lost access to, or completely depleted, most wild food sources, including porpoises and tuna (without wood to build canoes to reach them), nearly all land and seabirds (depleted by hunting), and wild plant foods such as palm nuts and wild fruits. 	<ul style="list-style-type: none"> ■ Traditional elites, the chiefs and priests, were overthrown by military leaders when they could no longer deliver prosperity. The island descended into warfare. This included rival clans destroying each other’s moai and ahu, which past generations had spent so many resources to erect. ■ Population was further reduced as a result of European incursions, which brought diseases that killed many islanders and involved islanders being kidnapped as slaves. By 1872 only 111 islanders were left from a population that had at one time been approximately 15,000. 	<ul style="list-style-type: none"> ■ Easter Island has a uniquely fragile environment which caused certain actions by islanders that many other societies have engaged in as well, such as overhunting and overharvesting, to have particularly severe effects for the sustainability of society there.

 LITERARY LINKS

You can find an authentic example of applying lessons from past societies that faced sustainability issues to contemporary global civilization in “Part four: Practical lessons” of Jared Diamond’s *Collapse*.

- Quality soil was depleted through erosion caused by deforestation and a lack of compost caused by the disappearance of wild plants. This led to fewer food crops being harvested.
- Food supply appears to have eventually collapsed, leading to starvation, a steep fall in population (around 70%) and widespread cannibalism.
- Later, Europeans introduced sheep, goats and horses, whose grazing led to further erosion of soil.

The student book suggests that students can also use the Sustainability Compass to analyse the society's collapse. If you have students do this, consider providing them with the following table headers as a guide:

Society that collapsed	North = Nature: How did the natural systems on which the society depended contribute to its collapse?	East = Economy: The economic systems that provided the society with goods, services, and meaningful work. What were these and how did they contribute to the society's collapse?	South = Society: The social and cultural systems that provided the society with cohesion, identity, security and freedom. What were these and how did they contribute to the society's collapse?	West = Who decides: The political systems that provided the society with structures and processes for allocating power and making decisions. What were these and how did they contribute to the society's collapse?

Collaborate

Consider synthesizing students' work on the different societies by having them combine their individual tables into one class-wide table for threats to sustainability (based on the model in the student book) and one class-wide table for the Sustainability Compass points (based on the model above). In this way students will be able to quickly see similarities and differences between the societies in terms of the processes that led to their collapse.

Assessment

Criterion D: Thinking critically

If you choose to assess this task, you can do so using criterion D. The task-specific descriptor for the top band (7–8) should read that the student:

- completes a detailed discussion of how depletion, pollution and destruction factors contributed to a society's collapse.

TEACHING IDEA 2

Ask students to produce a piece of creative writing (for example, a short story) around a scenario in which one or more "threats" actually leads to an unsustainable future. The piece could describe the events that immediately cause a societal collapse or be set in the time after a collapse has occurred. In any case, it should involve a realistic description of what exactly led to the unsustainable future upon which it is based. Students should conduct research into the threats to sustainability that play a role in their stories, to ensure the accuracy of their descriptions.

As a "behind the scenes" supplement to their story, students should explain how they used knowledge and understanding of specific threats to sustainability to inform the piece.

Points to consider:

- This does not have to be a creative writing task. It could also be written as a piece of history by a historian living in the distant future or just as a straight prediction. The point is to take advantage of students' fascination with such scenarios to deepen their understanding of threats to sustainability. The Wikipedia page on apocalyptic and post-apocalyptic fiction has a long list of literary works that treat these themes.
- There are many examples of apocalyptic (dealing with the destruction of civilization) and post-apocalyptic (dealing with the aftermath of such destruction) works in literature, film and TV. Any media products that portray the threats to sustainability students are working with could be used as exemplars for students' own work, especially if they go into some detail regarding how civilization collapsed. The assignment could also be adjusted so that, instead of producing their own creative work, students respond to one of these works, evaluating the extent to which it depicts a realistic end to sustainability.

Assessment

If you choose to assess this task, you can do so using criteria A, B and C.

Level	A Knowing and understanding	B Investigating	C Communicating
7–8	<p>I have:</p> <ol style="list-style-type: none">I. demonstrated excellent knowledge and understanding of the threats to sustainability depicted in the piece through thorough, accurate descriptions, explanations and examples.	<p>I have:</p> <ol style="list-style-type: none">I. used research methods to collect and record appropriate, varied and relevant information about the threats to sustainability that play a role in the piece.	<p>I have:</p> <ol style="list-style-type: none">I. communicated information and ideas effectively and accurately by using a style that is completely appropriate to the audience and purpose of a creative writing piece depicting an unsustainable future.II. structured information and ideas in a way that is completely appropriate to the specified format of the a creative writing piece.III. consistently documented sources of information using a recognized convention.

TOPIC 2

Debates about sustainability



Activity 3 Innovators for the future

Possible responses for steps 3 and 4 of Activity 3 in the student book are as follows:

STEP 3

Who was the inventor of the giant basket?

Designer Arturo Vittori

How did the inventor identify a need?

"768 million people don't have access to safe water, and every day 1,400 children under the age of five die from water-based diseases." Vittori visited northeastern Ethiopia and observed first-hand the problems faced by the villagers there, especially when it came to water. Women and children had to walk for miles to collect contaminated water, which took hours out of the day and often made the children sick. This kept the children from attending school, contributing to a cycle of poverty.

How was the design inspired?

"By the Warka tree, a giant, gravity-defying domed tree native to Ethiopia that sprouts figs and is used as a community gathering space." Vittori wanted the tower to be in harmony with the landscape and to be built in a way that accorded with local craft techniques.

What do you think prompted the development of this innovation? How do you think the inventor imagined Ethiopia's future without it?

Vittori seems to have been motivated by a combination of statistics (about the lack of access to clean water and the effects of this) and his own personal experience visiting villages in Ethiopia. Given the role that lack of access to clean water plays in the poverty cycle, Vittori likely saw Ethiopian villagers as struggling to escape from the poverty cycle without this invention.

STEP 4

Using the Sustainability Compass, identify one positive impact for each of the four compass points.

North – Nature:

- The design of the tower preserves the natural beauty of the area.
- The device has minimal environmental impact.

East – Economy:

- Children can be freed up to attend school, with positive effects for development.
- Women can be freed up to do other tasks because they spend less time obtaining water. This increases their productivity and improves the local economy.
- All members of the community will have less disease, allowing them to be more economically productive.

South – Society:

- People will be freed up to spend more time on economically productive activities as well as on social and cultural activities.

West – Who decides:

- This design places control in the hands of the villagers themselves, as it can be produced inexpensively and using familiar techniques. Once villagers learn to construct the towers, they do not have to wait for outside help to address the problem of clean water.

TIP

See Chapter 11 for more on the poverty cycle. If students already understand the poverty cycle, ask them to construct a poverty cycle model that reflects the situation of these villagers.



Activity 4 Socratic seminar: How bad is it?

Activity 4 in the student book is structured as a Socratic seminar-type discussion. The goal of such a discussion format is to collaborate to find out the truth about an issue, through building understanding of the issue and of challenging texts related to it. In this sense it differs from a debate, as the goal is not to defend a previously held position at all costs, but to seek consensus through discussion.

Assessing such a seminar may appear challenging, given that many students are involved at once. It is possible, however, to assess students' collaborative, communicative and critical-thinking skills by following these guidelines:

1. All students should come to the seminar with a written response to the question or questions the seminar is addressing. This will serve as evidence for assessment, along with student participation in the seminar itself.
2. During the discussion the teacher can observe the frequency and level of sophistication of a student's contributions by taking notes. If you find it difficult to keep up with note taking, consider recording the discussion to assess later. You can also have students take turns observing and have observers take notes on the contribution of one or two participants.
3. The evidence of student performance is the combination of each student's written response and their participation in the seminar, as evidenced by notes taken during the discussion or by a recording of the discussion.

Assessment

Use criteria C and D to assess student performance.

Level **C** Communicating

7–8 I have:

- I. communicated information and ideas effectively and accurately by using a style that is completely appropriate to the audience and purpose of a Socratic seminar (seek consensus on difficult questions). This includes allowing others to finish before speaking, maintaining an appropriate balance between listening and speaking, referring to the sources which serve as the basis for the discussion and/or to what other participants have said.

Level **D** Thinking critically

I have:

- I. completed a detailed discussion of the extent to which the sustainability of global civilization is threatened.
- II. synthesized information to make valid, well-supported arguments about the extent to which the sustainability of global civilization is threatened.
- III. thoroughly interpreted a range of different perspectives on the extent to which the sustainability of global civilization is threatened and their implications.

TOPIC 3

Enhancing sustainability, preserving resources



Activity 5 Which approach?

This activity in the student book gives students the opportunity to apply what they have learned about strategies to enhance sustainability. It will work with any specific policy, programme, organization or development which was intended to, or actually did, enhance sustainability. Some examples follow:

Policy, programme, organization or development that was intended to, or actually did, enhance Sustainability	How it illustrates conservation	How it illustrates efficiency	How it illustrates discovery
<p>Fracking—Hydraulic fracturing, or fracking, is a method for using gas and oil wells more efficiently, while also tapping gas and oil resources that were previously inaccessible. It has made natural gas cheaper and more accessible. Natural gas releases fewer greenhouse gasses than coal.</p>	<p>To the extent that it limits the release of greenhouse gases and therefore slows the pace of global warming, it can preserve resources that might otherwise be lost to global warming, through rising sea levels, desertification etc. This allows humans to meet their energy needs over the near term while preserving the environment, giving us time to develop even more sustainable energy sources.</p>	<p>Since natural gas releases fewer greenhouse gasses than coal, fracking has contributed to cuts in greenhouse gas emissions in some countries, such as the US. The same amount of energy can be produced for a relatively lower environmental impact. Fracking can also increase the efficiency of existing gas and oil wells.</p>	<p>Fracking has made it possible to extract gas and oil from formations where this was previously not possible. In this sense it represents a discovery of new oil and gas reserves.</p>

<p>Forest Stewardship Council (FSC)—An organization made up of environmental NGOs, businesses and social organizations which sets standards for environmentally appropriate, socially beneficial and economically viable forest management. Based on these standards it awards certification to forest owners, as well as those who process and trade forest products, or use them for manufacturing.</p>	<p>FSC standards ensure that harvesting of forest products happens in a way that “maintains the forest’s biodiversity, productivity and ecological processes.” The forest is left basically intact and conserved for future generations.</p>	<p>FSC standards are developed to ensure that businesses which use forest products can be profitable. This includes “efforts to market the full range of forest products and services for their best value”. The resources of the forest are used as efficiently as possible while maintaining the forest’s viability. With these changes, a given amount of forest yields relatively more products than before.</p>	<p>The FSC provides expertise and guidance to those who own forests and those who use their products on how to harvest a full range of forest products without upsetting the balance by focusing too much on one type of product (eg, a certain type of tree). This helps those who use forests to discover resources within the forests, of which they were previously unaware.</p>
<p>Circular economy—A circular economy functions in a way that any biological materials produced can re-enter the biosphere safely, rather than as toxic waste, and technical materials are of high quality so that they continuously circulate through the economy rather than being disposed of.</p>	<p>By producing high quality, highly durable technical materials, the circular economy slows the rate at which new resources need to be used, thus preserving them for future generations.</p> <p>By limiting toxic waste that is released into the biosphere, the circular economy protects resources from becoming unusable for future generations.</p> <p>A major component of the circular economy is renewable energy, and moving away from non-renewable sources of energy which cannot be easily conserved.</p>	<p>By producing high quality, durable technical products, the circular economy ensures that the resources that go into any product can be consumed by many users and over a long period of time.</p> <p>The circular economy seeks to extract all possible value from biological products. Even upon release back into the biosphere they still have uses, for instance as fertilizer, since they are non-toxic.</p>	<p>An imperative of the circular economy is to try to discover all possible uses for biological materials. For instance, coffee production generates large amounts of waste products which can be used as a medium for growing high-value tropical mushrooms, then used as livestock feed, and finally returned to the soil as fertilizer.</p>

Assessment

Criterion A: Knowing and understanding

If you choose to assess students on this task, you can do so using criterion A. The task-specific descriptor for the top band (7–8) should read that the student:

- demonstrates excellent knowledge and understanding of the concepts of conservation, efficiency and discovery through thorough, accurate examples.



Activity 6 Save the society

For this activity you can ask students to use their analyses of doomed societies from Activity 2. They should consider strategies based on the three approaches for ensuring sustainability discussed in Topic 3 (conservation, efficiency and discovery), which address the threats to sustainability they explored in Activity 2.

See the example below for Easter Island, based on information from Chapter 2 of *Collapse* by Jared Diamond.

How conservation might have saved the society on Easter Island	How increased efficiency might have saved the society on Easter Island	How discovery might have saved the society on Easter Island	How other actions might have saved the society on Easter Island
<p>Easter Islanders could have done a number of things to conserve their resources, although some would have required significant religious and cultural changes:</p> <ul style="list-style-type: none"> ■ They could have limited the building of moai and ahu. This would have allowed them to conserve up to 25% of their food resources. ■ They could have conserved trees by using timber more carefully. ■ They could have mummified or buried bodies instead of cremating them (they did start doing this eventually). ■ They could have attempted to build and use fewer canoes (which required very large trees). <p>Erecting fewer moai would also have preserved trees that were used to build equipment for transporting the statues.</p>	<p>Easter Islanders did use some strategies to increase efficiency, especially when it came to farming:</p> <ul style="list-style-type: none"> ■ They used irrigation, and strategic placements of rocks to protect crops, enrich soil, and moderate soil temperatures and moisture. They also built large chicken houses. ■ It appears that the society on Easter Island at first relied heavily on wild food sources and only began to depend more on domesticated food sources after wild food sources became depleted. By this time, the absence of wild plants and trees created the conditions for extreme soil erosion and loss of soil quality. This left islanders with relatively unproductive soil. Had they balanced wild food sources with farming from the beginning, they may have been able to preserve the quality and productivity of the soil, allowing them to 	<p>The islanders appear to have used this approach.</p> <ul style="list-style-type: none"> ■ As some resources ran out or became inaccessible, they switched to new resources that they had previously not used. They massively expanded their use of chickens, rats and crops such as “sweet potatoes, yams, taro, bananas and sugarcane” when they ran out of wild food sources. ■ When wood became depleted, they used “herbs, grasses, and sugarcane scraps and other crop wastes for fuel.” They also used sugarcane juice to compensate for limited supplies of fresh water. ■ The island was eventually discovered by European explorers. Initially this devastated the indigenous society even more 	<ul style="list-style-type: none"> ■ Politically, the island was divided into a number of different territories which appeared to have competed with each other, including in building more and larger ahu and moia. Had the island been more unified and the society more oriented toward cooperation than competition, islanders may have been able to work together more effectively to increase their chances of sustaining their society. ■ Culturally, the society could have changed its practices of erecting many large statues and cremating bodies, as these both significantly drained resources. This could have been challenging, however, if people believed deeply in these traditions.

- They could have conserved their wild food sources by maintaining a more balanced mix of wild and domestic food sources such as chickens and cultivated plants. This may have given the wild plant and animal populations a chance to maintain themselves.
- They could have preserved the soil by keeping more trees and wild plants around to prevent erosion and provide compost.

get more crops from a relatively smaller amount of land.

- In addition, wild plants and trees could have protected their crops from extremes of sun, wind, rain and evaporation, also raising the productivity of the land.
- They could have used the resource of labour more efficiently by diverting large numbers of people from working on building ahu and erecting moai to working on tasks more immediately connected to the society's survival. It is likely that many of the society's most talented and creative people, representing the resource of entrepreneurship, worked on overcoming the considerable challenges involved in building ahu and carving, transporting and erecting moai. Islanders could have used the resource of entrepreneurship more efficiently by allowing creative, ambitious people to focus on solving sustainability-related challenges instead.

through disease and enslavement. Today, however, the society has stabilized somewhat.

- Cultural awareness and pride are reemerging and islanders are experiencing some economic growth through tourism, as well as access to resources, and the products made from these resources, not previously available on the island.

Only the trauma of environmental and societal collapse appears to have ended these practices. Unfortunately, the islanders initially responded to this collapse by spending scarce resources on fighting and on destroying the very ahu and moai that previous generations had spent so many resources to build.

Assessment

Criterion D: Thinking critically

If you choose to assess this task, you can use criterion D. The descriptor for the top band (7–8) should read that the student:

- synthesizes information to make valid, well-supported arguments about how various approaches to ensuring sustainability could have helped to save a past society which collapsed due to sustainability issues.



Activity 7

International cooperation and common-access resources

Activity 7 in the student book lists some examples of international attempts to protect common-access resources. Some other cases include:

- Convention on Long-Range Transboundary Air Pollution
- Convention on the Conservation of Migratory Species of Wild Animals
- Convention on Wetlands of International Importance
- Many fisheries treaties among multiple countries (eg, Asia-Pacific Fishery Commission, International Commission for the Conservation of Atlantic Tunas, International Council for the Exploration of the Sea)
- Many treaties on waste (eg, Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter)
- Many treaties on water (International Commission for the Protection of the Danube River, Great Lakes Water Quality Agreement, The Convention on the Law of Non-Navigational Uses of International Watercourses).

Common-access resources

Before asking students to complete the activity task, you may want to explore the idea of common-access resources more deeply with them. The following points can guide you in this exploration:

- Some of our resources, such as the Earth's atmosphere, oceans and freshwater supplies, are polluted through actions by individuals and firms. This can occur in a wide variety of ways and during the processes of producing and consuming goods:
 - On the production side, factories may release harmful substances into the air or water, or mining activities may damage surrounding land and water.
 - On the consumption side, the use of automobiles dirties the air, while huge amounts of refuse from consumption activities end up in garbage dumps or waterways.
- A key problem is that no one owns resources such as the atmosphere, the oceans or, in many cases, freshwater reservoirs. This makes it difficult to motivate people to take care of them. It is not just that they do not care. It is also that, if others are still degrading these resources while an individual or firm makes the effort to preserve them, that person or firm's efforts may not make any difference. Thus, they have made a sacrifice but have nothing to show for it.
- This lack of an incentive to protect common resources can also play a role in certain cases of depletion. For instance, a fisherman could decide that the waters in which he worked were being overfished and so opt to catch fewer fish per day. This would involve a sacrifice on his part because his revenues would fall as he sold fewer fish. At the same time, if other boats kept trying to catch as many fish as possible, it is likely that they would catch the fish that he had passed up. This means that the fisherman would have hurt his business in exchange for no improvement to the overfishing problem. It is likely that he would not stick to his plan for long.
- When it comes to protecting common-access resources, government policies may sometimes be needed because, as we have seen, market forces may not provide enough incentive to people to protect them. This is why governments sometimes step in with policies, such as taxes, regulations or investment in research and development, to help ensure sustainability of common-access resources. But when governments do determine that they need to intervene, they still face difficult questions:
 - They need to decide which policies will be most effective in enhancing sustainability of the resource in question.
 - They need to consider the exact composition of these policies. For instance, if a government decides to tax fuel as a way of limiting its use and protecting the atmosphere from harmful emissions, it needs to determine the right amount of tax that will deliver the maximum benefit to the environment while causing a minimum of harm to the economy. Given the complexity of both environmental and economic systems, this represents a very difficult calculation indeed.
- Another determination governments need to make when setting policies around sustainability is whether they need to work with other governments in doing so. This may especially be the case with common-access resources such as the atmosphere, the oceans, and freshwater supplies, given that these are not contained neatly within national borders. Therefore the policies of one country can affect other countries as well, for better or worse.
- This can lead to the same problem between countries as we saw with firms and individuals. If one country makes significant sacrifices, say, in order to decrease its levels of carbon emissions, while other countries do nothing or even increase their emissions, then that country may end up sacrificing without seeing any effect on global carbon emissions.

Assessment

If you choose to assess this task, you can do so using criteria A and D.

Level **A** Knowing and understanding

7–8 I have:

- I. demonstrated excellent knowledge and understanding of a case of international cooperation to protect a common-access resource through thorough, accurate explanations of the cooperation.

Level **D** Thinking critically

I have:

- I. completed a detailed discussion of the cooperation in terms of its effectiveness in preserving the common-access resource (or, if the cooperation has been implemented recently, its likely effectiveness in the future).

Summary

This chapter has brought into focus the concept of sustainability, the threats to it, and potential ways in which some of those threats can be addressed. Students have also explored how the complexity of human and natural systems makes the task of tackling threats to sustainability a particularly challenging one.

As students have inquired into sustainability, they have developed a variety of skills, from creating solutions to authentic problems, to managing complex tasks, to collaborating with others to build consensus and increase understanding of complex issues. The chapter also allows students to address a number of the MYP individuals and societies objectives, from demonstrating knowledge and understanding, to conducting research, to analysing events and ideas, to communicating in written and spoken form.

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Networks

	ATL skills	Task summary
TOPIC 1 Waste management		
Activity 1 World waste	✓ Research Locate, organize, analyse, evaluate, synthesize and ethically use information from a variety of sources and media.	 Research and analyse waste statistics in different countries.
Activity 2 What's happening in my neighbourhood?	✓ Research Locate, organize, analyse, evaluate, synthesize and ethically use information from a variety of sources and media.	 Create an informational product for your neighbourhood.
Activity 3 What can we do about it? Assessing and changing a network	✓ Thinking Analyse complex concepts and projects into their constituent parts and synthesize them to create new understanding.	 Research and analyse views on e-waste to create a documentary.
TOPIC 2 Biomes		
Activity 4 Create a poster about biomes	✓ Communication Collaborate with peers and experts using a variety of digital environments and media.	 Create a poster that compares the networks of four different biomes.
Activity 5 Information pamphlet on mangroves	✓ Communication Use appropriate forms of writing for different purposes and audiences.	 Create an informative pamphlet for a specific audience and purpose.
Activity 6 Magazine article	✓ Self-management Plan short- and long-term assignments; meet deadlines.	 Write a magazine article that investigates the effectiveness of conservation efforts.

TOPIC 3 Social networks

Activity 7 Generate, sort, connect, elaborate	✓ Thinking Organize and depict information logically.	 Map and reflect on the connections of social and family networks.
Activity 8 Public versus private information	✓ Communication Use intercultural understanding to interpret communication.	 Explain and give examples of differences between public and private information domains.
Activity 9 Persuasive speech—"The future of social networks"	✓ Self-management Consider ethical, cultural and environmental implications.	 Prepare and give a persuasive speech on the future of social networks.

Introducing networks

Learning about networks means delving into the complexity of the many systems that are part of our world. In most cases in this subject area, the related concept provides a more simple idea to act as a lens through which to examine the more abstract key concept. For this chapter it is perhaps the opposite. The key concept of systems helps us to recognize the operation of interacting parts to form a whole. We can then use the related concept of networks to learn about how their complexity provides us with essential resources.

The networks you choose to study with your students will vary in complexity. Less complex networks tend to have fewer systems interacting and so may provide a more accessible point of entry for your students.

Highly complex networks can exist on different scales—for example, the human body is a highly complex network of systems involving nutrient distribution, circulation of blood and the nervous system, but it operates on quite a small scale when compared with, for example, the network of public transport in a country. The challenge of teaching complex networks will be to provide specific, concrete examples that encourage students' conceptual understanding. Making a suitable selection of examples allows you to provide clarity for your students.

Teaching this topic will require you to provide guidance for students on how to draw boundaries around the systems or networks that they are studying. This gives you an opportunity to differentiate the learning that takes place.

TEACHING IDEA 1

Use this activity to help students visualize terms such as “inputs”, “outputs”, “flow” and “organization”.

1. Form groups of three or four students.
2. Each group needs a large sheet of paper or the use of a whiteboard.
3. As a class brainstorm some of the keywords connected to the related concept of networks. Define these, if necessary, and record them so that students can refer to them during the activity
4. In groups, students create a map that shows the school as a network of interrelated systems. They should include systems such as the academic system, any extra-curricular activities systems and the communication system. The groups should also label what they consider to be the inputs and outputs of the network and use arrows to illustrate flow within each system.
5. When the groups have finished, ask them to share their map with the other students and explain some of the reasons behind their decisions for the map.

Students will need to be able to hypothesize what the effects will be when a change is made in a system. This will require them to make predictions and then justify these with supporting evidence.

Predicting the effects of change will also require students to consider the short- and long-term implications. As with many issues in individuals and societies, short-term benefits do not always equate to long-term gains.

TOPIC 1 Waste management

The investigation of networks of resource use is much bigger than simply studying the process of recycling. This topic can be expanded to include an investigation of resource flows, waste disposal and the newer concept of upcycling. It can also tie in with economics (why we attribute different values to different products) and with sociology (the connection between possessions and status).

The three activities for this topic in the student book require students to use data collection and analysis, which students will need specific guidance on. The information below can be taught before the activities, as a way of preparing the students, or can be used during the activities to guide them through the different stages.

DIPLOMA PROGRAMME LINK

The Group 4 subject of design technology has a specific core topic focusing on the principles of green design. Investigations into sustainable production and consumption connect directly with the objectives of green design.

WEB LINKS

To introduce the idea of product generation and lifetime, you can show the TED talk titled “How I built a toaster – from scratch” by Thomas Thwaites, by searching on www.ted.com.



Activity 1 World waste

As an initial investigation into the topic of waste management, students will compare waste production and processing in different countries around the world.


Time	Stage	Procedure	Resources
15 min.	Introducing	Instruct students to read the introduction to Topic 1 and Activity 1 in the student book. Individually or in pairs, ask students to estimate the amount and type of waste they produce every day. They should consider: <ul style="list-style-type: none"> ■ Is water used during showers or baths “waste” water? ■ When materials are recycled, should they still be classified as waste material? ■ How is waste connected with consumption? 	Student book
15 min.	Comparing	Encourage students to collaborate and discuss their estimates. What surprised them about the information? What further questions do they have?	
15 min.	Planning	Activity 1 in the student book asks students to research and compare waste production in five different countries. You may wish to plan or allocate countries to ensure that there is an even distribution from different continents. This activity could be completed individually or students can collaborate in groups of five, researching one country per student. If students are collaborating in groups, they will need to agree on a similar data collection format to ensure that they are able to compare the statistics from different countries. An example is shown below in figure 15.1.	Student book
<div style="background-color: #0070C0; color: white; padding: 5px;">  WEB LINKS There are many online programs that can help students create infographics. You can see some excellent examples at www.informationisbeautiful.net, or alternatively a web search for “infographic” will give you some other sources. </div>			
30–40 min.	Collaborating	Once students have completed their research and analysis in groups, share the information as a class. Students can collaborate in groups or as a class to create an infographic of their research.	Internet

Figure 15.1 Example of data collection table

Country	Population	Geographic size	Waste generated per person annually	GDP of country	Main sources of industry



Activity 2

What's happening in my neighbourhood?

Taking action in the MYP starts with the students' local community. This activity challenges students to create a resource for use by their local council or government.

Time	Stage	Procedure	Resources
20 min.	Planning	<p>Read through Activity 2 in the student book. Ask students to share in small groups what they know about their local council or government. Ask:</p> <ul style="list-style-type: none">■ What is the local government responsible for?■ How do they operate?■ How does the local government communicate with residents? <p>Discuss as a class Step 2 of the activity. You may wish to bring in samples of communications from the local government to help students think about the product they will create.</p> <p>If possible, arrange a field trip to the local government offices or town square. Have students look for evidence of ways that local governments create and support networks in the community.</p>	Student book; samples of communication materials from local government
30 min.	Reflecting and Investigating	<p>As students begin their investigation, remind them of the role of inquiry questions in guiding research. Encourage them to reflect on the format in which they like to view information and consider if this is suitable for the activity.</p>	Student book; library; internet
40 min.	Sharing and taking action	<p>When students have completed their products, provide an opportunity to share them with their classmates.</p> <p>After students have viewed the different products, organize them into groups of 3 or 4. In each group, collaborate to make each student product suitable for a different group in the community. For example:</p> <ul style="list-style-type: none">■ Translate the product to be used by a minority language group.■ Adjust the format so that it can be distributed in a different way.■ Alter the level of language so the product can be understood by a different audience.	Student products



Activity 3

What can we do about it? Assessing and changing a network

In order to create a documentary about electronic waste production and management, students will need to carry out research related to their peer group. Further guidance on different types of data collection will help them plan their research and analysis.

Surveys

Surveys are useful when you want to direct your analysis to a specific group of people (for example, a class of students). They can be used to elicit open responses about a particular issue or to get a quick opinion. Here are some important considerations:

- Always provide a very brief introduction that gives the purpose of the survey.
- The entire survey should be concise, with unambiguous questions.
- If given verbally or in written format, there should be an indication of how much time the survey will take for participants to complete.
- Shorter surveys will generally get more responses.
- Questions can have answers that are yes/no or ranked on a scale.
- Consider using an online format such as Survey Monkey or Google Forms.
- Think about how you collate your responses. If participants have to write a paragraph, you will have to read and summarize it, which is a time-consuming task.
- For data to be considered valid, the results should come from at least 30 surveys—although this may not be possible, depending on the class/school size.

Observations

Observation methods can be used to record data on human or animal behaviour. For example, how many times someone turns left when entering a shop compared with turning right, or how many times birds drink out of a red water bowl compared with a blue water bowl. Points to remember include:

- If multiple people are recording observations, students should ensure that everyone in the group understands the specifications of the behaviour they are recording. For example, if they are recording litter disposal, are they simply observing whether people use a litter bin or whether they use the correct litter bin depending on what they are throwing out?
- Ensure that the number of people are observed as well as the number of behaviour traits observed (for example, 20 people were observed, 13 threw rubbish away).
- Consider setting time limits for the observation.
- Be aware of the time of day impacting people's or animals' behaviour.

Measurements

This method should be used when collecting data that can be quantified against a scale such as weight, number, temperature, length, etc. Points to remember:

- Consistent measurements should be used throughout the data collection period (for example, use kilograms if collecting data on weights).
- Allow the same amount of time between measurements to ensure accuracy. For example, if students are recording how much water is lost through a dripping tap, they could record measurements in millilitres every 30 minutes.
- Consider using a program such as Microsoft Excel to collate the data. This will help with analysis of the information recorded.

Analysing data

It is important that students are given opportunities to learn and practise describing the results as well as analysing what they mean.

Describing data is the process of telling what the observations show—extremes of responses, unusual patterns of behaviour or most frequently-observed responses. Analysing data will require the students to use critical-thinking skills in considering why the data responses exist and the implications that follow.

Encourage students to use analytical phrases such as:

- The number of responses indicates that...
- This information contradicts the hypothesis that...
- The data in column A is an anomaly because...

Be careful that students don't assume that there is a causal relationship between two observations. For example, just because someone throws food waste in a litter bin doesn't mean that they know nothing about recycling. It may be that there is no other way of disposing of the waste. Correlation does not always mean causation.

TIP

There is a well-known example used in statistics classes that explains the difference between correlation and causation. Search online for "ice cream sales and crime rates".

TOPIC 2**Biomes**

Learning about biomes provides rich and varied opportunities to understand complex networks and systems. The student book provides an overview of some of the common elements of biomes but you may wish to focus on biomes relevant to your location. Additionally, the focus for biomes can be on the relationship between people and the environment to understand how interactions between networks can cause disruption of systems that have been in place for long periods of time.

**Activity 4 Create a poster about biomes**

Time	Stage	Procedure	Resources
10 min.	Brainstorming	As a class, brainstorm the different landscapes and environments that exist and the systems within them. Encourage students to recall knowledge from science that may be relevant, such as food webs, trophic levels, nutrient flows, and the water cycle.	
20 min.	Investigating	Encourage students to take a closer look at the environment in which they are located. If possible, walk around the school grounds or local neighbourhood looking closely at what is growing and living there. When students return to class, ask them to create a quick sketch of what they saw. Under the sketch, instruct them to list some examples of plants they saw growing or animals that live in the surrounding environment. Direct students to the Web Links box in Activity 4 in the student book. Ask them to investigate what biome the school is located in.	Paper; internet; student book
10 min.	Planning	Organize students in groups of four and read through the instructions for Activity 4 in the student book. Check that each group has a research plan before investigating their biomes.	Student book
20 min.	Analysing	After each group has created their poster, including a list of similarities between biomes, display the posters around the classroom. As students view the posters, ask them to identify some essential networks or parts of networks that are present in all of the biomes.	Student posters



Activity 5

Information pamphlet on mangroves

While the student book specifies mangroves as the topic for this activity, it is possible to choose another biome to focus on. You may also allow students to choose their own. However, they need to pick a biome location where there has been significant interaction between people and the environment, as well as different perspectives on how the biome should be managed.

Time	Stage	Procedure	Resources								
20 min.	Investigating	<p>Bring in a selection of pamphlets for students to view. Have students view at least five different pamphlets, completing a comparative analysis using a table like the one below:</p> <table border="1"> <thead> <tr> <th>Pamphlet topic</th> <th>Possible Audience</th> <th>Things I like about the pamphlet</th> <th>Things I don't like about the pamphlet</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	Pamphlet topic	Possible Audience	Things I like about the pamphlet	Things I don't like about the pamphlet					Examples of pamphlets
Pamphlet topic	Possible Audience	Things I like about the pamphlet	Things I don't like about the pamphlet								
15 min.	Summarizing	<p>After students have viewed the different examples, discuss their findings. Ask:</p> <ul style="list-style-type: none"> ■ Was it difficult to guess the audience for the pamphlets? ■ How does the format influence the way information is written? ■ What did they notice about the use of images or graphics? 	Student analysis tables								
10 min.	Planning	Read Activity 5 in the student book. Check that students understand the specific role and audience for the pamphlet.	Student book								
60–90 min.	Creating	<p>After students have carried out their research, they need to plan the order of information on their pamphlet to communicate it effectively.</p> <p>Ask them to look again at the samples of pamphlets to see how information is organized and formatted.</p> <p>Students may wish to use publishing software to create their pamphlet. There are many online tutorials available so you shouldn't feel the need to be an expert to be able to guide students through the process. If some students have created pamphlets before using this software, allow them time to share their experiences with other students as a way of peer coaching and support.</p>	Examples of pamphlets								



Activity 6 Magazine article

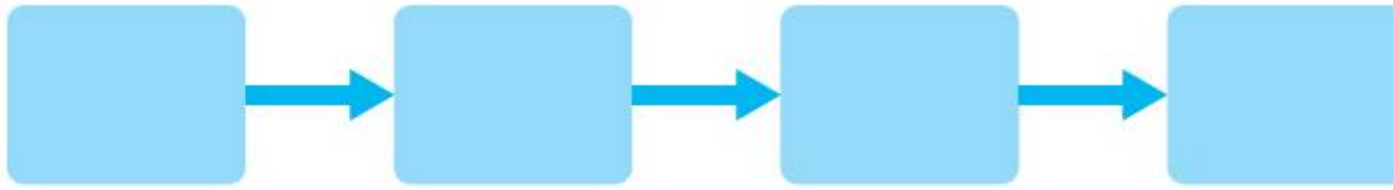
This activity in the student book asks students to write an opinion piece for a magazine. Because the specification is for a magazine, it will be a longer article than an editorial and require more research. Deconstructing magazine articles can be an effective method for students to understand how to structure their own article. The flow chart in Figure 15.2 can be used to either set a framework for the investigation or to create a framework for writing the article.

Time	Stage	Procedure	Resources
20 min.	Deconstructing	<p>Students may wish to work independently or in small groups to complete this activity.</p> <p>Step 1: Each student or group should choose a magazine article that they want to read.</p> <p>Step 2: Have students skim through the article first, deciding what type of article it is (informative, persuasive etc).</p> <p>Step 3: Ask them to read the article again in more detail, noting the different topics of each paragraph.</p> <p>Step 4: Instruct students to create a simple diagram that shows the different “chunks” of information in the article. You might like to show students the blank flow-chart diagram (Figure 15.2) to help them get started. Each blue box in the diagram should represent a particular part of the article. They are not representative of paragraphs or topics, but rather the different ideas that might be included, for example:</p> <ul style="list-style-type: none"> ■ an anecdote ■ historical background ■ perspective from a particular organization or person ■ reference to research ■ focus on an alternative solution ■ the student’s opinion ■ predictions for the future ■ comparison to a similar case study ■ comparison to an alternative method. 	A selection of magazine articles
15 min.	Planning Part 1	Read the instructions for Activity 6 in the student book. Answer any questions students may have about the task.	Student book
20 min.	Planning Part 2	<p>After students have completed steps 1–3, encourage them to use the box diagram to plan out their writing. For students to decide the order of their boxes, they will need to reflect on the best way to communicate their ideas for the specific audience.</p> <p>It can be helpful for students to read an opinion piece in a magazine and try to “chunk” the ideas in it as an example. Ask the students why they think the writer made that decision. Generate a dialogue among the students about what makes them continue to read an article past the first sentence. Perhaps they find the presentation of facts compelling, or maybe it begins with an anecdote that draws the reader into the article.</p>	Student book; magazine articles

LITERARY LINKS

To gain an understanding of how storytelling is used in scientific reporting, watch National Geographic’s *Strange Days on Planet Earth: Predators*. Ask the students to reflect on how information is presented in terms of interviews and narration, as well as the way that time is used to create interest.

Figure 15.2 Mapping the ideas of your research and writing



TOPIC 3

Social Networks

Teaching and learning about social networks will generate discussions around a whole variety of individuals and societies subject areas. Students interested in social and cultural anthropology will want to understand more about how social networks are integrated with existing methods of communication. Through the lens of sociology, social networks can be studied within the broader context of human communication, investigating why societies use certain methods of communication, the interaction between message and media, and the influence that social networks have had as different cultures interact and intermingle.

INTERDISCIPLINARY LINKS

Language and literature

How have social networks influenced the way that people communicate with each other? Apart from the creation of social network language, networks like Facebook and Twitter have influenced the way that people share knowledge. The audience for communications on social networking sites may be very varied. How does this influence what people share and the way they write it?

Many businesses now feel that it is vital to have a social media presence. Consider the difference in communicating a message about a business through a newspaper advertisement or through a Facebook posting. Ask students to compare word choice and tone of language used in business advertisements and promotions in different media.

Design and Arts

Students can explore the concept of networks through art and design by imagining how they would create a sculpture or visual image of their social network. When designing the sculpture or visual image, students have to consider how they would show ideas such as influence, friendship and different strengths of connections.

Mathematics

In the next activity, students are required to collect and analyse data in relation to the use of social networks. Connection to mathematics skills will allow students to chart regression lines based on data trends and predict the use of social media for students in the upcoming classes.

LITERARY LINKS

For background reading on the power of social networks, try *Connected* by Nicholas A Christakis and James H Fowler. It is an excellent teacher resource for explaining the connection between networks and influence.



Activity 7 Generate, sort, connect, elaborate

This activity requires students to reflect deeply about the connections they have with people around them. Students may wish to keep their MindMaps® private and this should be respected. Collaboration for this activity only involves the categories that students have selected for their MindMap®.

Time	Stage	Procedure	Resources
10 min.	Discovering	Ask students to read the introduction to Topic 3. Ask students to look at figure 15.2 in the student book. Can they explain what defines the boundaries shown on the circle?	Student book
30 min.	Investigating	After reading through Activity 7, clarify any questions students may have. Students may wish to use notecards or small slips of paper during the “generate” and “sort” steps. For the “connect” step, these smaller pieces of paper can then be attached to a larger sheet as students explain the connections between the different groups.	Notecards; paper; student book
20 min.	Sharing	Ask students to share the different categories that they created. Were there similarities among the class? Did some people have challenges deciding on categories? How has social media influenced the categories that people chose?	
20 min.	Reflecting	After reviewing their MindMaps®, ask students to complete an individual reflection thinking about their network and what they know of network characteristics. They can respond to one of the following prompts: <ul style="list-style-type: none"> What are the similarities between my social network and networks in biomes? How do changes in network affect the connections I have with people? How do inputs and outputs work in my social network? 	Paper



Activity 8 Public versus private information

Throughout this topic, it is important to encourage discussion and reflection among students on how they use social networks to communicate. The practice of self-documentation of life events is an increasingly common phenomenon but how much should students share? What are some possible long-term effects?

LITERARY LINKS

The film *The Social Network* charts the motivation of Mark Zuckerberg in founding Facebook. While watching the film, students could analyse the impact of sharing information face-to-face compared with sharing information with an online community.

Time	Stage	Procedure	Resources
30 min.	Investigating	<p>Begin by investigating the existing use of social networks in the class. Using the data collection skills learned in the first topic, help students design a method of collecting data related to the use of social networks.</p> <p>As a class:</p> <ul style="list-style-type: none"> ■ define which social networks are being referred to ■ decide which data collection method will be used ■ if necessary, write survey questions or create an online survey ■ ensure that responses remain anonymous ■ collect and record data ■ analyse data. 	Student book
15 min.	Reflecting	<p>Ask students to reflect individually on the results. Questions may include the following:</p> <ul style="list-style-type: none"> ■ What surprised you about the results? ■ Which result was similar to what you predicted? ■ Are there any questions you think should have been included in the survey? <p>Ask students to consider how their class compares with other classes in the school, in the country, and in the world. Students should give reasons for their answers.</p>	
30 min.	Analysing	<p>Ask students to read the instructions for Activity 7 in the student book.</p> <p>After they have completed the table, organize them in to groups of three or four to answer the questions in the second part of the activity.</p>	Student book



Activity 9

Persuasive speech—“The future of social networks”

As a summative assessment task, students will draw upon their planning and organization skills to prepare and deliver a persuasive speech.

Time	Stage	Procedure	Resources
10 min.	Introducing	<p>Have students read the Activity 9 guidelines in the student book. Provide students with additional instructions specifying a role and audience for the speech, using the “RAFT” format demonstrated here:</p> <ul style="list-style-type: none"> ■ Role Sociologist ■ Audience Parents ■ Format Persuasive speech ■ Topic What is the future of social networks? Have they got positive uses for young people? Will they affect the way young people communicate as adults? 	Student book
15 min.	Evaluating	Before students begin the research and analysis process, have a class discussion on the use of assessment criteria for this task. Recommended assessment criteria for this task are B: investigating and D: thinking critically.	

TIP

A detailed and effective action plan includes time allocation, proposed resources and opportunities for practising the speech and peer review.

Assessment

Criterion B: Investigating

(note that strand i is not assessed in this task)

- ii. Formulate and follow an action plan to investigate a research question.
- iii. Use research methods to collect and record appropriate, varied and relevant information.
- iv. Evaluate the process and results of the investigation.

Criterion D: Thinking critically

(note that strands i and iii are not assessed in this task)

- ii. Synthesize information to make valid, well-supported arguments.
- iv. Interpret different perspectives and their implications.

Level B Investigating

- 7–8 I have:
- II. formulated and followed a detailed action plan to investigate the future of social networks
 - III. used methods such as surveys, interviews and research to collect and record appropriate and varied information.
 - IV. thoroughly reflected on and evaluated the investigation process and results.

Level D Thinking critically

- I have:
- II. synthesized information to make valid, well-supported arguments about the future of social networks
 - IV. thoroughly interpreted a range of different perspectives about the future of social networks, and their implications.

TEACHING IDEA 2

1. Form groups of two or three students. Students will need their class notes and resources for all the topics in this chapter.
2. Have each group create a summary table of the essential elements of networks, like the one below. The table should include blank rows at the bottom for additional categories students may want to put in.

	Resource networks	Natural networks	Social networks
Inputs			
Outputs			
Organization			
Scale			
Patterns			

3. Each group should write a definition of networks that describes the different types of networks and why they exist.
4. As a whole class, compare the definitions written by each group. Have a discussion around statements that are debatable or open to interpretation. Pose the following questions:
 - Can the definitions be interpreted differently depending on cultural or historical perspectives?
 - Will these definitions continue to be valid in the future?

Summary








The scale and complexity of networks can make investigating them seem like a daunting process for both students and teachers. It is essential to acknowledge that all networks interact but a system can be studied in isolation to understand its components. Every network exists for a reason, which may not be immediately obvious at first glance. Even networks that may be thought of as “broken” are in place to fill certain needs.

Making changes to systems and networks requires caution. It is impossible to accurately predict all of the short- and long-term effects of change, but careful consideration of the impacts will help to mitigate negative effects.

References

Christakis, NA and Fowler, JH. 2009. *Connected: The Surprising Power of Our Social Networks and How They Shape Our Lives*. New York, NY, USA. Little, Brown and Company.

Interdependence

	ATL skills	Task summary
TOPIC 1 First World War alliances		
Activity 1 “The enemy of my enemy is my friend”	✓ Research Locate, organize, analyse, evaluate, synthesize and ethically use information from a variety of sources and media.	 Create an annotated map showing alliances in Europe in 1914.
Activity 2 Switzerland—remaining independent not interdependent	✓ Thinking Analyse complex concepts and projects into their constituent parts and synthesize them to create new understanding.	 Collaborate to create a multimedia presentation that explains the reasons for a country to remain neutral.
Activity 3 Source analysis and creation—obligation and advantage	✓ Research Demonstrate awareness of media interpretations of events and ideas.	 Analyse sources and create an artefact that demonstrates understanding of a historical event.
TOPIC 2 The media		
Activity 4 A day in the life of...	✓ Communication Read critically and for comprehension.	 Analyse news headlines on the same day in different places around the world.
Activity 5 Good press gone bad	✓ Research Present information in a variety of formats and platforms.	 Create a multimedia presentation of the changing relationship between the media and a person or an organization.
Activity 6 Round-table discussion	✓ Self-management Consider ethical, cultural and environmental implications.	 Participate in an informal discussion about the interdependent relationship between media and government organizations.
TOPIC 3 Climate change		
Activity 7 From a vending machine to the Pacific—one bottle’s journey	✓ Communication Use appropriate forms of writing for different purposes and audiences.	 Create a presentation that explains the movement of trash from land to ocean.

Activity 8 Informative speech—Tuvalu’s future	✓ Research Access information to be informed and inform others.	👤 Prepare and deliver a speech as a representative of Tuvalu’s population.
Activity 9 A workshop on interdependence and climate change	✓ Communication Collaborate with peers and experts using a variety of digital environments and media.	👥 Collaborate to prepare a workshop for young people on interdependence and climate change.

Introducing interdependence

Within interdependence, each person or group has obligations as well as expectations. Interdependent relationships experience conflict when there are different opinions about the give and take in the relationship. The topics for this related concept will challenge students to look at interdependent relationships of different scales and from a variety of perspectives.

They need to begin by distinguishing how a dependent relationship is different from one that is interdependent. By using a diagram such as the one in Figure 16.1, students can collect examples that help illustrate the difference between interdependence and dependence.

Figure 16.1a Dependent relationship

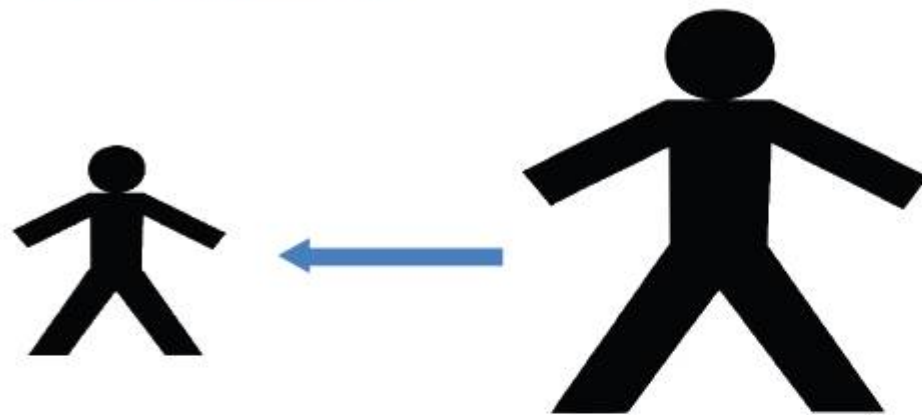
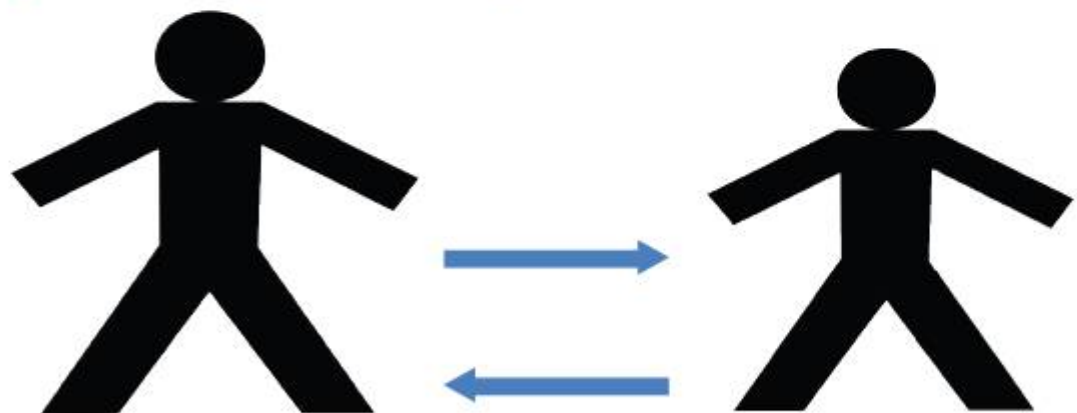


Figure 16.1b Interdependent relationship



When looking at the diagram, ask the students to consider the following:

- **Size of the figure**—this can represent the size of a country, the amount of power someone has, the age of a person or the amount of wealth in an organization.
- **Direction of arrow**—this represents the flow of resources, ideas, money, services or knowledge.
- **Width and size of arrow**—this can represent the amount of resources, ideas, money, services or knowledge that is being transferred in the relationship.
- **Number of figures**—it is possible to have many more figures and arrows in this diagram. In order to highlight the key concept of systems, this diagram represents the systems of exchange or trade between people, organizations and governments.

Around each figure, students should also note other influences on a dependent or interdependent relationship. What are the influences of culture, language, history, geography and economy?

In preparation for the IB Diploma Programme, students in the MYP need to develop flexible thinking skills, allowing them to view an issue from a variety of different perspectives. The study of interdependence supports the development of this skill and encourages activities and assessments that are creative and challenging. Several of the activities in the student book provide opportunities for a choice of product or role. Students can select a role that they are comfortable with or they can be challenged to research the issue from an alternative perspective.

TOPIC 1

First World War alliances

The topic of the First World War lends itself to an inquiry into how alliances can form and break depending on the needs and resources of a country. Primarily, interdependence is about ensuring safety and, in this case, countries formed alliances to protect themselves from invasion.

Ensure that students have a firm grasp of the different names given to the alliances throughout the first two decades of the twentieth century. Remind students to check the first Tip box in Topic 1 of the student book that clarifies the use of different terms. Being consistent in the terms that you use will help support students who are English language learners. The tasks in the student book focus on the interdependence of governments, but interdependence can be seen on a more personal scale when looking at the relationship between troops, commanders, nurses and civilians. This relationship and the experiences of war are well documented in poetry written during this period.



Activity 1

“The enemy of my enemy is my friend”

Annotating a map challenges students to show their understanding of a topic in a visual format. By learning more about the agreements between different countries, students will be able to reflect on the possibilities and drawbacks of interdependent relationships.

Time	Stage	Procedure	Resources
15 min.	Investigating TIP	<p>Organize students so that they are collaborating in pairs or groups of three.</p> <p>Have them read the introduction to Topic 1 and the details for Activity 1 in the student book.</p> <p>Using the link to businessinsider.com in the activity, instruct groups to view and analyse the sample of an annotated map.</p> <p>Form the groups into larger groups so that they can share their analysis of the annotated map.</p>	Student book; internet
40–60 min.	Creating	<p>Provide students with an outline map to complete their annotation. Alternatively, students could use mapping resources such as Google Maps to create an annotated map online.</p> <p>Students may wish to write a separate paragraph that explains what each set of alliances had in common.</p>	Internet
20 min.	Synthesizing	<p>Once students have completed their annotated map, have them write a separate paragraph that gives their opinion on the reasons for unity among the Central Powers and the Allied Powers.</p>	Student book
15 min.	Sharing	<p>After students have completed their paragraphs, ask them to share their opinions using a continuum.</p> <p>Pose the statement: “The Central Powers and the Allied Powers were only united through a common enemy.”</p> <p>Have students place themselves on a continuum to show the extent to which they agree with the statement.</p> <p>As students share the reasons for their opinions, allow them to move on the line if they want to change their stance based on the arguments of others.</p>	

Students will need to have a Google account in order to create an annotated map using Google Maps. Blank outline maps can be found online by searching for “WW1 outline map”.



Activity 2

Switzerland—remaining independent not interdependent

Understanding the difference between independence and interdependence is essential before students begin this activity. The case study of Switzerland provides the opportunity for students to delve into the reasoning a country may have to avoid alliances or agreements with its geographical neighbours.

Time	Stage	Procedure	Resources
10 min.	Brainstorming	<p>Discuss with the class what they know about Switzerland. Remind them to think about:</p> <ul style="list-style-type: none"> ■ politics ■ history ■ culture ■ location ■ population. 	
15 min.	Planning	<p>Organize the students into groups of 2 or 3. Have each group read through the instructions for Activity 2 in the student book. Clarify any questions they may have.</p> <p>The activity asks all student groups to research information about Switzerland, but it is possible to differentiate and have groups research other countries that attempted to remain neutral during the First World War.</p>	Student book
20 min.	Organizing	<p>This activity requires students to have a good understanding of their own skills and abilities. In Step 2, students are asked to assess the talents of the group. Make sure that each group takes the time to plan the research and development of their multimedia presentation based on the skills of each group member.</p>	Student book
15 min.	Reflecting	<p>After the groups have created their presentations, allow class time for them to be shared.</p> <p>Next, ask students to make a simple reflection on the concept of interdependence by completing the following sentence phrase: “I used to think... and now I think...”.</p>	

WEB LINKS

For projects that are carried out over a longer period of time, students may wish to set up a digital space for collaborating such as Trello (trello.com).

Activity 3 Source analysis and creation—obligation and advantage

This activity checks student understanding of sources in two aspects; firstly, through analysis of an existing source, and then through the creation of an artifact based on historical evidence.

Time	Stage	Procedure	Resources
20 min.	Investigating	Have students read Activity 3 in the student book. Divide the class in half to look more closely at the steps of either source analysis or source creation. Ask each half to identify three challenges for completing the activity and three skills that will be needed. Share these reflections with the class and discuss possible ways to overcome the different challenges.	Student book
30 min.	Analysing	Move through the steps for the first part of the activity involving source analysis. Students should complete answers for each step individually but they may wish to discuss their initial ideas and responses with a partner.	Student book
40–60 min.	Creating	The second stage of this activity requires students to create an artefact that could have existed as a primary source form 1915. Step 1: Ask students to visit the history.com web link in the student book to find out the essential details of the Treaty of London. Students might like to use the “five Ws and an H” format of questioning. From their notes, students will then write a summary paragraph as outlined in Step 2 in the student book. Step 2: In small groups, brainstorm the different sources that could exist in relation to this treaty. Suggestions might be telegrams, posters, postcards, drawings, cartoons or photographs. Step 3: Students work individually to create their artefact based on suggestions generated in the group discussion.	Student book; internet; library
20 min.	Reflecting	In groups of 3 or 4, have students exchange their completed artefacts. As they view different artefacts, can students guess the intended audience and the perspective for the artefact?	

WEB LINKS

If your students need additional practice analysing primary sources, you may wish to use the activities available on the US Library of Congress’s website. Go to www.loc.gov and search for “using primary resources”.

TOPIC 2 The media

Studying the relationship between the media, governments and the public provides many opportunities to explore what happens when expectations change in an interdependent relationship. Depending on your location and the needs of your students, you can choose to focus on a specific case study of a person or organization and their relationship with the media. It is also possible to broaden this topic into a study of the freedom of the press and to compare the role of the media in different countries around the world.

Another possibility is to study how the media may be manipulated or may manipulate public perception of an event, depending on the power of the media and the organizations that control it.



Activity 4 A day in the life of...

This activity requires students to analyse the news media on one particular day. They have to utilize different resources such as television, internet, newspapers and radio. They also have to incorporate news from a variety of different countries to compare how events are represented in the media.

In order to make this individual activity into a whole-class analysis, this task can be modified in the following ways:

Assign the same day for all students

By allocating the same day for all students to complete the task, there will be an interesting collection of data relating to news events being reported on a specific date.

Assign specific regions to students

Collaborate with the class to ensure that all regions of the world are covered for this task. By combining this with collection of news headlines on the same day, students will have a wide variety of sources to compare when analysing the role of the media.

Within each region, it is also possible to specify whether students should collect local, national or international news items, or a combination of these three categories.

Set up a wiki

To enable ease of collecting and to facilitate comparing the different headlines, students can be assigned their own page in a class wiki. Provide clear guidelines on the required structure of the page and allow time in class for students to familiarize themselves with how to edit a wiki page.

Analysis

Step 5 of the activity requires students to consider why differences exist between media outlets when reporting the day's news. As well as looking at the differences or similarities between the events that are reported, students can also analyse the variations of perspective and language. Challenge them to explain possible reasons for these difference or similarities.

WEB LINKS

Using a programme such as www.wikispaces.com, assign each student a page where they will display the different headlines they have collected. It is also possible to add images and links related to their collection.



Activity 5 Good press gone bad

Understanding the relationship between the media and an individual or organization requires analysis of complex sources of information. Students need to practise reading nuanced text and be able to recognize bias in reporting.

Time	Stage	Procedure	Resources
20 min.	Investigating	<p>Individually or in pairs, instruct students to browse through a selection of newspapers, news magazines and news websites. As they look, ask them to watch out for repeated featuring of a particular individual or company. This may be because the person or company is controversial or because recent events have placed them in the media spotlight.</p> <p>After 15–20 minutes, have a class discussion about which person or company they identified and what they noticed about the reporting.</p>	Variety of newspapers and news magazines; internet

10 min.	Checking	<p>Read through the activity instructions in the student book. Check if students require clarification of the instructions. As a class, read through Step 1 and share ideas of other people or companies who might be suitable. Some additional suggestions include:</p> <ul style="list-style-type: none"> ■ Tiger Woods ■ Martha Stewart ■ agricultural company Monsanto ■ Facebook. 	Student book
60–90 min.	Investigating	<p>Step 4 requires students to create a timeline documenting the changing nature of press coverage for this person or organization. In order to prepare for this, students may wish to create a research plan or note-taking strategy that is based on a timeline.</p> <p>As students are investigating, remind them that their final product is a multimedia presentation. As well as text information, students should be gathering research in the form of images, graphs, and charts to include in their presentation.</p>	Student book; library/internet
30 min.	Reflection	<p>After students have shared their presentations, ask them to reflect on the different relationships between the media and the person/organization. What is the meaning of interdependence in these examples? Do people/organizations need the media? Does the media need these people/organizations?</p>	Student presentations



Activity 6 Round-table discussion

This activity asks students to participate in a round-table discussion. It is important that students understand how a discussion is different from a debate. Students are expected to share their opinion on the issue and support their points with relevant and specific examples. There is no “winner” declared at the end of the discussion. However, by the end, participants may have reached a consensus on the two discussion questions.

Preparing students

Class discussions can be more intimidating for students than formal debates or even speeches. In this context, they have to give their own opinion as well as respond to questions and comments from other students. The informality of the discussion means that there will be a natural tendency for some students to dominate the discussion while other students will find it very challenging to participate.

Discussion warm-ups

To support skill preparation, include regular discussion sessions as a class warm-up activity. Divide the students into groups of four to six and provide them with a topic. Allow two or three minutes of silence or quiet collaboration while students think about the topic and prepare their contributions. Over time, you can increase the size of the groups so that students get used to speaking and listening in different situations.

TIP

If you feel that your students are not ready to participate in a verbal discussion, it would be possible to have this discussion in an online “silent” format using a shared document or software such as TitanPad. See titanpad.com.

Guidelines for notes

Ask the students to carefully follow the steps outlined in the student book as part of their preparation. They should have notes clearly organized and use strategies such as highlighting and underlining key phrases and points. Students could also be prepared during the discussion to write down points to which they would like to respond.

Chairing the discussion

Having a chairperson for the discussion will help provide some structure. This role could be filled by a student or a teacher. If you are planning on assessing the task, it is best for another teacher to fill the role of chairperson, leaving you free to observe student contributions.

Request that each student prepares a one-minute opening statement that explains their point of view on the topic. Each opening statement should end with one or two debatable questions related to the topic. While the opening statements are being made, other students should be noting down responses to the different opinions and questions being shared.

During the discussion, the chair should follow a protocol for calling on students to speak.

Assessing student contributions

A useful method for assessing contributions is to use a checklist. This can be something that students have access to before the discussion and use as part of their preparation. For students who are nervous about contributing, this can help by providing a very specific instruction of what sort of contributions are expected. Your list could include the following advice:

- Make a clear and detailed opening statement that includes one or two debatable questions.
- Respond in detail to a question that is asked of me.
- Question a specific detail or fact in another student's opening statement.
- Show affirmation or disagreement in relation to a comment from another student.
- Provide additional details in response to a statement from another student.
- Synthesize arguments put forward by different students.

TIP

Thinking is a very important part of the discussion process. Students must be allowed time to formulate their ideas without the pressure of having to contribute straight away. Time this so that you are not cutting it short and asking students to begin discussion after only 30 seconds.

TOPIC 3

Climate change

Climate change is an excellent example of how the concept of interdependence connects with care and stewardship of the environment. Through the chapter on networks, students will have already explored ideas connected to relationships. These ideas can be built upon as they study the related concept of interdependence and the environment.

A useful way to introduce the concept of interdependence and resources is to share the concept of the tragedy of the commons. By understanding this, students can reflect on how common resources can be shared by many in a sustainable fashion.

LITERARY LINKS

Larry Gonick and Alice Outwater have written an excellent book called *The Cartoon Guide to the Environment* that documents the history of Easter Island, another example of tragedy of the commons.

WEB LINKS

There are several short, clear videos that explain the tragedy of the commons. Go to www.youtube.com and search for "Tragedy of the commons animation".

Activity 7 From a vending machine to the Pacific—one bottle's journey

Interdependence means that our actions have an impact on the lives of others. This activity helps students understand the connection between human actions and the environment.

Time	Stage	Procedure	Resources
10 min.	Introducing	<p>Have students read the introduction to climate change and the Activity 7 instructions in the student book.</p> <p>Ask students to work with a partner and write down some initial ideas for why the concept of interdependence is a part of understanding more about the Great Pacific Garbage Patch. Some ideas might include:</p> <ul style="list-style-type: none"> ■ coordinated management of oceans ■ connecting networks of production and consumption ■ needs of consumers and the supply of raw materials. 	Student book
20 min.	Investigating	<p>Watch the introduction to the Great Pacific Garbage Patch on YouTube, which is linked from the student book.</p> <p>The video is quite short and fast-paced, so after watching it once ask students to discuss the content and facts with a partner.</p> <p>Watch the video again, this time asking students to observe the presentation techniques.</p> <p>Discuss with the class some of the different formats used in the presentation, analysing the pros and cons.</p>	Internet
20 min.	Planning	<p>Allow time for students to brainstorm with others while planning the audience and format of their product for Activity 7. Remind students of any time or resource limitations that you might have decided for this activity.</p>	Student book
15 min.	Evaluating	<p>Once students have decided on the audience and format for their product, spend time reviewing the assessment criteria for this task.</p> <p>Because the assignment allows for student choice in the product, it is important that the assessment rubric also reflects this. There is no need to write multiple rubrics; it is simply a matter of careful word choice.</p>	

Assessment

A: Knowing and understanding

- Use a wide range of terminology in context.

B: Investigating

- Formulate a clear and focused research question and justify its relevance.
- Formulate and follow an action plan to investigate a research question.
- Use research methods to collect and record appropriate, varied and relevant information.
- Evaluate the process and results of the investigation.

TIP

A research plan is what students intend to do. Be careful not to refer to a journal, which is where students document what they have done, similar to a reflection. This criterion is focusing on the students' investigative and planning ability.

C: Communicating

- i. Communicate information and ideas effectively using an appropriate style for the audience and purpose.
- ii. Structure information and ideas in a way that is appropriate to the specified format.

Specifications

Your final product must be submitted with your research plan and notes as well as drafts.

Grade	A Knowing and understanding	B Investigating	C Communicating
7–8	<p>I have:</p> <ol style="list-style-type: none"> I. used a wide range of terminology accurately and appropriately, including terms such as “recycling”, “gyre”, “current”, “decomposition”, “production”, “transportation”. 	<p>I have:</p> <ol style="list-style-type: none"> I. formulated a clear and focused research question on the Great Pacific Garbage Patch and justified its relevance II. formulated and effectively followed a comprehensive action plan that includes proposed questions, time and resources to investigate my research question III. used research methods to collect and record appropriate and relevant information consistent with my research question IV. thoroughly evaluated the research process and results. 	<p>I have:</p> <ol style="list-style-type: none"> I. communicated information and ideas effectively by using a style that is consistently appropriate to my chosen audience II. structured information and ideas in a way that is completely appropriate to my chosen format.



Activity 8

Informative speech—Tuvalu’s future

Speaking on behalf of a specific country gives students the opportunity to practise their skills of empathy and perspective. The informative speech is intended to explain the predicament that Tuvalu is experiencing but students can also use the opportunity to provide some ideas for solutions.

Time	Stage	Procedure	Resources
10 min.	Introducing	<p>Read through the information on rising sea levels and the Activity 8 guidelines in the student book.</p> <p>Explain that students will be preparing an informative speech but they will also have the opportunity to propose solutions to the problem.</p>	Student book
30 min.	Role playing	<p>As a way to practice problem solving, students will take part in an activity called Happy Fishing.</p> <p>Part 1</p> <ol style="list-style-type: none"> 1. A variety of materials are required for this activity. Each student will need: <ul style="list-style-type: none"> ■ a drinking straw ■ a napkin. <p>Each group will need:</p> <ul style="list-style-type: none"> ■ a bowl with 40 different “fish” in it. 	Drinking straws; napkins; bowls; assortment of four different types of food items (all raisin size); happy fishing instructions for students

TIP

Choose any appropriate food to represent fish. The idea is to have four different sorts of fish.

		<ol style="list-style-type: none"> 2. In each bowl, you need four different types of fish in the form of four different sorts of food (such as raisins or small items of candy). 3. Provide each group with printed instructions. 4. Explain that the fishing season only lasts for 20 seconds and that they will have five seasons to fish. 5. Reiterate the instructions, then have the students start fishing. 6. At the end of the season, each group should record what they caught. <p>You can influence the success of this activity significantly by doing a few simple things. By handing out the instruction sheets, giving the students only a short amount of time to prepare and emphasizing that the student with the most fish wins a prize, you can encourage them to “fish” furiously for the first season without thinking about the fact that some fish have to remain in the ocean. This can mean that groups immediately fish out all the fish in the ocean after the first season.</p> <p>Catching all the fish in the first season is a good simulation of what the tragedy of the commons is all about and actually provides a good example in the class. If this happens, use it as a teaching moment and ask students to review the instructions again with their group. Restock the ocean and allow the group to try again.</p> <p>Another variation is that if an individual fails to catch the required fish for the season, they can try to join another group. However, the rules of the game still apply.</p>	
20 min.	Reflecting	After taking part in the “fishing” activity, have students reflect on how they solved the problem of fishing sustainably. How could these problem solving techniques be applied to the issues that Tuvalu is experiencing?	

“Happy Fishing” instructions for students

Materials required

- 1 “fishing pole” (straw)
- 1 “ocean” with 40 “fish”
- 1 boat (napkin)
- Fish
- Each fish has a value, for example:

Fish type 1 (eg. sultana) = 3 coins	Fish type 2 (eg. Gummi) = 5 coins
Fish type 3 (eg. Malteser) = 5 coins	Fish type 4 (eg. Candy) = 10 coins

Rules

Each group will get an ocean full of 40 fish. Each group member takes a fishing pole, and the entire group will fish for five “years”.

- Each person must catch at least 10 coins’ worth of fish each year to survive.
- You cannot use your hands.
- Fish must land in the boat—any fish on the table do not count.
- The ocean cannot be moved, tilted, etc.

Reproduction

There must be at least two fish left of the same species for fish to reproduce. Each breeding couple produces two baby fish each year, which are replaced into the ocean before the next round of fishing starts.

Record the number of fish caught during each season by each individual and by the group on the tally sheet. The member of each group who earns the most money in each round receives a bonus.



Activity 9 A workshop on interdependence and climate change

Student collaboration is the key to success for this activity. If possible organize a genuine audience for the student workshop by connecting with a primary school.

Time	Stage	Procedure	Resources
15 min.	Introducing	<p>Explain to the students that the final activity for this topic will require them to coordinate their ideas, knowledge and creativity to prepare a workshop. Have them read through the activity in the student book.</p> <p>If you have organized to connect with another class for this activity, you will need to let students know particular time or activity constraints.</p>	Student book
15 min.	Brainstorming	Organize the students into groups of 3 or 4. Each group should spend 15 minutes brainstorming initial ideas. Encourage students to think about activities, workshops or lessons that they have found particularly enjoyable, or where they have learned a great deal.	Student book

40 min.	Planning	<p>Support the groups as they move through steps 2–4 of Activity 9.</p> <p>STEP 2</p> <p>Provide an example of how students might write a big idea.</p> <p>For example, students will understand that climate change is something that is currently happening.</p> <p>STEP 3</p> <p>Remind students of any time constraints you may have; 20 minutes is a suitable length of time to plan activities.</p> <p>STEP 4</p> <p>Check in with each group to make sure that individual members are contributing equally and that groups are able to collaborate effectively.</p>	Student book
40 min.	Practising	<p>Partner up different groups to help them to practise delivering their workshop. Encourage the students to provide feedback to each other. Have them check procedures for the workshop such as:</p> <ul style="list-style-type: none"> ■ which students will be leading activities ■ any resource requirements they might have ■ managing groups of students during the workshop. 	








Summary

Interdependence relies upon the understanding that there is give and take in the relationship. For an individual, group or government to become involved in an interdependent agreement, there must be benefits for all parties as well as obligations that are not too onerous. Throughout the First World War, the demands of alliances caused some countries to break agreements and others to seek the security of support in political agreements. Interdependent relationships that are not formalized, such as the ones between celebrities and the media, can easily tip from being mutually beneficially to destructive. When interdependency relies on shared use of a resource, responsible action by all parties involved is essential. In the case of sharing the Earth's resources, the impacts of acting irresponsibly can be drastic.

References

Gonick, L and Outwater, A. 1996. *The Cartoon Guide to the Environment*. New York, NY, USA. HarperCollins.

Globalization

	ATL skills	Task summary
TOPIC 1 Food security		
Activity 1 What can I eat?	✓ Research Access information to be informed and inform others.	 Investigate the origins of different foods available in the local market.
Activity 2 Research report—evaluating food insecurity	✓ Self-management Plan strategies and take action to achieve personal and academic goals.	 Collaborate to write a report on the causes and effects of food insecurity.
Activity 3 Persuasive essay	✓ Thinking Draw reasonable conclusions and generalizations.	 Write a persuasive essay that explains the connection between globalization and food security.
TOPIC 2 Infectious diseases		
Activity 4 News report	✓ Communication Use and interpret a range of discipline-specific terms and symbols.	 Prepare and present a news report on the eradication of smallpox.
Activity 5 Summary table	✓ Research Locate, organize, evaluate, synthesize and ethically use information from a variety of sources and media.	 Research and summarize information about infectious diseases and how this influences the ability for a disease to be eradicated.
Activity 6 Vodcast	✓ Thinking Create original works and ideas; use existing works and ideas in new ways.	 Develop an action plan for the eradication of an infectious disease.
TOPIC 3 Urbanization		
Activity 7 Poster: rural benefits	✓ Communication Use appropriate forms of writing for different purposes and audiences.	 Create a poster that promotes the benefits of living in a rural community.

Activity 8 A simile for the city	✓ Thinking Analyse complex concepts and projects into their constituent parts and synthesize them to create new understanding.	 Use metaphorical thinking to explain the essential functions and networks of a city.
Activity 9 Immigration debate	✓ Social Manage and resolve conflict, and work collaboratively in teams.	 Participate in a formal class debate on the integration of immigrants in a local community.

Introducing globalization

The related concept of globalization builds on the understandings developed through the study of networks. Students understand why networks exist and how they operate, and they have also had practice in predicting the effects of change within a network. In a sense, globalization is the description of the infinite number of networks that have been increasing the complexity of connections over time. Thanks to developments in communications, trade, financial and social networks, people are more connected with each other around the world than ever before.

Globalization was traditionally linked with the idea of companies beginning to operate across national borders, requiring different strategies depending on the culture and political climate. Now, it is also linked to the life experiences many people have through their jobs, travel, friendships and lifestyle.

On the face of it, an increasingly connected world that pushes geopolitical borders into the background appears advantageous. But how can individuals and organizations tap into the positive potential of globalization? Are the negative aspects of globalization increasing as we become more connected?

Introduce this topic with an exercise that directly engages the students with what they are wearing and using. Teaching Idea 1 encourages students to consider more than just whether their shirt fits; it challenges them to consider the original raw materials, means of production and transportation that go into manufacturing something that they can purchase in a shop.

TEACHING IDEA 1

This activity can be adapted to work with a display map, or students can collaborate in groups using a program such as Google Maps.

The task could also be assigned as a research project where students investigate the place of production and purchase of household items and other products they use every day.

1. Pair students and ask them to check the labels of their clothing and school supplies to find out where they are made.
2. Mark these locations on the map, indicating the type of item.
3. If possible, add to the map the location of where the item was bought and connect the place of production to the place of purchase.
4. Compile the results for the class.
5. Ask students in groups of 3 or 4 to observe the information that has been collated. What can they describe about the data? What inferences can they make about the data?
6. Ask the groups to share their thoughts with the class.

TIP

Remind students of the difference between describing what they see and then making inferences (critically analysing) the data. Prompt them by asking what they might know about the demographics of the class that connects with the data.

Increasing globalization means there is an increasing set of people that we now compare ourselves to. Where once we used to judge our status by a comparison with our nearest neighbours, globalization gives us global neighbours, each with different ideals, standards, hopes and aspirations.

Globalization has, however, also provided innumerable ways to share resources, ideas and solutions. As students explore these issues, remind them to reflect on the possibilities for globalization and their own role within it.

TOPIC 1 Food security

Students will quickly engage with the topic of food supply and demand. The student book states that about 800 million people in the world do not have enough food to eat every day. This fact provides an opportunity for you to initiate a class discussion where students consider what they eat and where it comes from. Globalization has certainly helped to provide more food, but it doesn't necessarily mean that more people are getting the food they need. Use this opening discussion and the student book to ensure that there is a clear understanding of the differences between food security and food shortages.

There are many resources that could be used to study the related concept of globalization. From a historical perspective, students could examine the spice trade and Silk Road as early examples of resources being exchanged across countries and empires. From an economic perspective, students can compare companies that have expanded to become multinationals.

TIP

For a business and management perspective on the issues, you can incorporate a study of different location-specific marketing campaigns that one company uses.



Activity 1 What can I eat?

By learning more about their local food supply, students will start to deepen their knowledge of how the concept of globalization applies to food security. As students map origins of food, they might like to consider the global “footprint” generated by different products.

WEB LINKS


A TED talk by Jamie Oliver provides relevant background information on the topic of our relationship with food. Go to www.ted.com and search for “Teach every child about food”.

Time	Stage	Procedure	Resources
15 min.	Reflection	Encourage students to reflect on what they know about the origins of some of the world’s most common food crops. Students can assess their own knowledge using the chart in Teaching Idea 2.	Copies of Teaching Idea 2 chart
15 min.	Introducing	As a class, read through Activity 1 in the student book. Clarify guidelines that students need to follow when visiting local markets or supermarkets.	Student book
60–90 min.	Investigating	Remind students to develop their inquiry questions before visiting the market. Students could complete the investigation individually or in pairs. As a class, go through a quick brainstorming activity to review the essential skills of annotating a map. Students may choose to do this online using mapping programs such as Google Maps.	Student book; blank outline maps
40 min.	Analysing	Organize students in to groups of 3 or 4 to analyse the results of their investigations. As they review the similarities and differences in their results, encourage them to develop questions for further inquiry.	Student investigation data

TEACHING IDEA 2

Worksheet: What does this plant produce?

Match each fruit, vegetable or grain with the plant that grows it.

1.		a)	
2.		b)	
3.		c)	
4.		d)	
5.		e)	
6.		f)	
7.		g)	
8.		h)	
9.		i)	
10.		j)	

Answer key

1f—plantain	2h—wheat	3a—potato	4e—corn	5c—rice
6b—cassava	7g—soy	8d—peanut	9j—quinoa	10i—sugar



Activity 2

Research report—evaluating food insecurity

Students will collaborate in the role of educational consultants for the UN World Food Programme. The report that they will create will help them develop a deeper understanding of the different causes of food insecurity and the effects that it has, both in the short term and long term.

Time	Stage	Procedure	Resources
20 min.	Reflecting	<ol style="list-style-type: none"> 1. Explain to the students that they will become coordinates on a graph related to globalization. They have to place themselves on the graph in the location that describes their current opinion on the relationship between globalization and food security. 2. Draw a quick plan on the board that helps students to understand where the virtual X and Y axes are. 3. Explain to the students that the X axis represents “increasing globalization” and the Y axis represents “increasing food security”. <div> </div> <ol style="list-style-type: none"> 4. Students then arrange themselves on the axis that best describes their current state of thinking. 5. Ask students why they have chosen particular locations. As they share their thinking, other students may be influenced and will want to move position. Ask everyone who changes position during the discussion what influenced their thinking. 6. This activity can be repeated several times during and at the end of the unit of learning. You can also use different variables or ask the students to suggest variables. 	A large space
10 min.	Preparing	<p>After students have thought about the connection between globalization and food security, read the “Impacts on food security” section and Activity 2 in the student book.</p> <p>Organize the students into groups of 2 or 3 in preparation for the activity.</p>	Student book

TIP

This teaching idea can be used whenever you are discussing issues that have two variables. It is best done in a large space. It requires more critical reflection than a simple values continuum as students have to evaluate the interaction and influence between two factors.

30 min.	Planning	Encourage the groups to spend some time using the online resources linked in Step 3 of the activity before choosing a country to focus on for their report. The groups should also discuss different responsibilities within the group for researching and recording information.	Student book; library; internet
20 min.	Synthesizing	After groups have completed their reports, share the ranked lists that they need to generate as part of Step 5. Are there similarities or differences in the lists? What do students think are the reasons for these similarities or differences?	Ranked lists for each group



Activity 3 Persuasive essay

After completing the previous activities to build their knowledge base, students can communicate their analysis and reflection on globalization and food security in the form of a persuasive essay.

Time	Stage	Procedure	Resources
15 min.	Introducing	Have students read the Activity 3 steps in the student book. Clarify any question students might have about the task.	Student book
30 min.	Practising	Explain to students that demand for reliable food sources has also led to scientific development of genetically modified crops, sometimes known as GM foods. Proponents of GM foods claim that they help increase food production and can reduce the amount of pesticides and herbicides needed. Opponents claim that GM foods can have a negative impact on other species and lead to increased allergic reactions in people. To prepare for the persuasive essay, challenge students to prepare a one-minute speech for or against the use of GM foods. 1. Give each student 20 minutes to prepare. They can research on their own, as well as discuss ideas with another student. 2. Students then have five minutes to draw an image or symbol that represents their view. 3. Allow students five minutes to practise their one-minute speeches. 4. Have students give their speech to the class.	Library/ internet

		<p>At the end of the speeches, conduct a vote. Which arguments were more persuasive—those for or against GM foods?</p> <p>Discuss what made specific arguments persuasive—was it the facts used? Or words and phrases?</p> <p>Discuss how these techniques could be used in a persuasive essay.</p>	
90–120 min.	Investigating	As students prepare to start the research for their persuasive essay, remind them to consider the related concepts mentioned in the activity instructions.	Student book

LITERARY LINKS

The student book recommends Michael Pollan's text *The Omnivore's Dilemma*. There is both an adult and a youth version of this text, allowing you to use or recommend a version that is suitable for your students.

TOPIC 2 Infectious diseases

When explorers came into contact with indigenous people, often the most severe impact was the diseases they brought with them. It rarely took anything more sophisticated than the common cold to have a dramatic impact on the mortality of indigenous people, and highly contagious diseases such as measles and smallpox were indiscriminate in who they infected.

While contagion is a negative impact of increased globalization, collaboration is a more positive effect—especially when used to generate vaccines and treatments.

For this topic, students focus on generating solutions using the powerful tool of globalization. It is important to stress that solutions require understanding and use of the interaction between social, political, economic and environmental factors across borders.

INTERDISCIPLINARY LINKS



Sciences

If possible, collaborate with biology teachers to make this topic more interdisciplinary. Students can use expert knowledge of how human diseases work to create solutions in individuals and societies.



Activity 4 News report

The eradication of smallpox is a “good” news story. It shows the successful results when collaboration, cooperation, research and planning come together to combat a global issue. By understanding more about this success, students can hypothesize how to apply these strategies to solve other global issues.

Time	Stage	Procedure	Resources
15 min.	Brainstorming	<p>Check students’ existing knowledge on infectious diseases. Encourage them to think about the role of:</p> <ul style="list-style-type: none"> ■ vaccinations ■ immunity ■ transmission ■ effects of a disease ■ impacts on communities, epidemics. 	 WEB LINKS The World Health Organization has detailed resources to support learning on this topic. Go to www.who.int and search for “infectious diseases”.
10 min.	Preparing	<p>Read through the instructions for Activity 4 in the student book.</p> <p>Organize students into pairs to research and prepare their news report. You may wish to have them view some sample news reports before beginning their research.</p>	Student book; sample television news reports
20 min.	Rehearsing	<p>Each student pair should have the opportunity to rehearse their news report, especially if they are going to be presenting in front of the class.</p> <p>If students are able to film their news reports, structure time so that they can record and edit their work.</p>	Filming and editing equipment
30 min.	Analysing and reflecting	<p>After the class has viewed the different news reports, discuss some of the strategies or events that helped the successful eradication of smallpox. Collect student ideas and then ask them to select the top five strategies.</p> <p>Organize the students into groups of 4 or 5 and share with them the Ebola article in the web link opposite.</p> <p>Ask each group to consider the strategies from the smallpox campaign and decide whether they could be successfully applied to control this disease. Do they have any other recommendations?</p>	 WEB LINKS Have students review the article titled “At Heart of Ebola Outbreak, a Village Frozen by Fear and Death” by Adam Nossiter, available on www.nytimes.com .



Activity 5 Summary table

When students are developing problem-solving tactics, they need to develop the skill of transfer, identifying solutions in one situation and seeing if they can be applied to other situations. This summary table helps them identify where there are similar causes or problems, and therefore also where there might be similar solutions.

Time	Stage	Procedure	Resources
15 min.	Introducing	Have students read through Activity 5 in the student book. As a class, complete the first column with information about small pox. Encourage students to compare responses with their peers to make sure that their table is complete.	Student book
10 min.	Thinking	As a class, discuss the diseases of malaria, HIV/AIDS and polio. Why do they think these diseases are included on the table? Should there be other diseases on here that are affecting more people?	Student book
30–60 min.	Investigating	In small groups, ask students to research and complete the table with relevant facts.	Student books; library/internet
40 min.	Reflecting	The final row of the table asks students to form a hypothesis as to why a disease hasn't been eradicated. Once students have completed the charts, instruct the groups to share and comment on the different hypotheses. As a class, select one hypothesis for each disease that students think is the most likely. Have any groups come across evidence that could support these hypotheses? Which disease should be targeted for worldwide eradication?	Completed student tables

TIP

You may wish to differentiate this task by having groups of students look at additional diseases such as tuberculosis or measles.



Activity 6 Vodcast

Time	Stage	Procedure	Resources
10 min.	Introducing	Ask students to read through Activity 6 in the student book. Clarify any instructions for students.	Student book
20 min.	Critiquing	Ask students to collaborate in pairs to review a variety of different vodcasts using the Unicef web link in the student book. As a class, share some of the main components of a vodcast and some ideas for how to create one. Discuss some different technologies that students could use, as well as methods for organizing information, video clips, voice overs, music etc.	Student book; internet

<p>15 min.</p> <p>WEB LINKS Encourage students to use a collaborative note-taking tool such as TitanPad to share information. See www.titanpad.com.</p>	<p>Organizing</p>	<p>Give the class the following guidance for tackling the activity:</p> <ol style="list-style-type: none"> 1. Organize the class into groups of 3 or 4 students. Ensure that each group has at least one student who is strong in biology. 2. Ask the groups to choose which disease they want to focus on. 3. Remind them that their solution must be possible, humane, innovative and long lasting. 4. Provide students with details of the resources they have available and how much time they have. 5. Ask the students to share with their groups their summary tables from Activity 5. For their chosen disease, students should look at the countries affected, the cost of treatment or prevention for the disease, and their hypothesis on why they think the disease still exists. 	<p>Student book</p>
<p>60–120 min.</p>	<p>Investigating</p>	<p>During the research and problem-solving process, groups will need to utilize both divergent and convergent thinking.</p> <p>When proposing a solution, group members should share ideas freely even though they may conflict with each other. This is divergent thinking, which is an important part of brainstorming ideas for a solution.</p> <p>Once students have shared ideas with the group, they will then need convergent thinking; coming together to work towards one specific goal or solution.</p>	

TOPIC 3 Urbanization

Increasing rates of urbanization are part of the changing organization of our global populations. Urban areas have facilitated an increase in globalization as they become hubs for transport, communications, industry and innovation. When people travel to a new country, the first point of contact is usually a large urban centre. Urban areas contain many examples of globalization; the existence of foreign communities in a larger city, diversity of music, restaurants and languages.

The study of urbanization is a prime opportunity for students to carry out field research. They will be able to work individually, in small groups and as a class to carry out data collection and analysis. It is important to consider the environment that you have available to you. A field investigation could begin in the suburb or town in which the school is located. It could be expanded into a residential trip, travelling to a new location. The investigation could also happen online, utilizing public records of urban statistics for a specific location.



Activity 7 Poster: rural benefits

Many of your students are probably familiar with some of the attractions of living in an urban setting. This activity challenges them to look at the attractions for living in a rural community.

Time	Stage	Procedure	Resources
10 min.	Introducing	<p>Have students read the introduction to urbanization and the details for Activity 7 in the student book.</p> <p>Instruct students to form pairs and list all the goods and services that people need which are supplied by rural communities.</p>	Student book
15 min.	Brainstorming	<p>Remind students of the fact that there is a 200 word limit. This type of poster is more like an advertisement rather than an informative, scientific poster. The information they present will need to be concise and clear.</p> <p>If possible, have students walk around the school or local community, viewing some different types of posters. Share thoughts on what makes a poster eye-catching and communicates information effectively.</p>	Student book; samples of posters
90–120 min.	Researching	<p>Before students use other resources for research, tell them to reflect on what they think may be the attractions for living and working in rural communities. They could use a graphic organizer to consolidate their ideas.</p> <p>Step 2 of Activity 7 then asks students to consider why people would leave rural communities. Again, students can use an organizer to record their ideas.</p>	Student book; paper
30 min.	Reflecting	<p>When students have completed their posters, have them display them around the classroom like a gallery. As they view the different posters, they should share opinions on how messages are communicated using text and images. Which posters have a strong impact on the students?</p>	Student posters



Activity 8 A simile for the city

Metaphorical thinking in connection with urbanization challenges students to consider how networks and services interact in an urban environment.

Time	Stage	Procedure	Resources
15 min.	Thinking	<p>Show students a selection of images from urban areas.</p> <p>Instruct students to collaborate with a partner to create a headline that shows their current thinking on urban areas. Give students an eight-word limit for their headline.</p> <p>Ask each pair to share their headline, explaining the thinking behind what they have written.</p>	<p>Internet</p> <p>TIP</p> <p>A wide variety of urban images can be found doing a quick internet search for “urbanization”.</p>
10 min.	Introducing	<p>Instruct students to read the instructions for Activity 8 in the student book.</p> <p>Check their understanding of the term “simile”.</p> <p>Explain to the students that thinking in the form of similes can help clarify their understanding of a topic or issue.</p>	Student book
15 min.	Brainstorming	<p>Organize students into groups of 4 or 5. Ask them to collaborate on Step 2 of the activity by listing all the different parts of a city. Remind students to include services, housing, transportation and recreation, as well as the related concept of globalization.</p> <p>These lists will help students when they begin to work on the activity individually in Step 3.</p>	Student book
40–60 min.	Creating	<p>Although students need to design the visual representations individually, they may wish to consult with other students, sharing ideas and asking questions. This sort of informal collaboration allows for differentiation in the classroom; some students may wish to work in a small group while others may prefer to work on their own.</p>	Paper; library/internet
20 min.	Sharing	<p>Once students have completed their visual representations, allow time for them to be displayed.</p> <p>A short reflective activity such as a journal entry encourages students to think about both the process of planning and creating in this activity, as well as their knowledge of urbanization.</p>	Student drawings



Activity 9 Immigration debate

Debating is a formalized version of persuasive speaking. Students will prepare and present arguments for or against a statement. At the end of the debate, a team is announced as winner based on their arguments and persuasive speaking.

Time	Stage	Procedure	Resources
15 min.	Introducing	<p>Have students carefully read through Activity 9 in the student book.</p> <p>Check their understanding of the differences between a debate and discussion.</p>	Student book
10 min.	Planning	<p>Organize the class into groups in preparation for the activity.</p> <p>Each debate team will need three speakers. You may wish to have student adjudicators, and teams can also have students assigned as researchers.</p> <p>Depending on the size of the class and how you would like students to participate, you could organize this in several different ways:</p> <ul style="list-style-type: none"> ■ If you have a large class, you may wish to have several debate teams, with additional statements so that there are several different debates. ■ If you have a smaller class, and some students who don't want to speak, you can have researchers to support speakers on the debate teams. ■ Adjudicators keep order during the debate and make the decision as to which team wins. You can have a group of two or three students to act as adjudicators. They need to prepare for the debate by having knowledge of both sides of the argument and designing a scoring card for the debate. 	
40–60 min.	Researching	<p>Once teams have been decided, students will need time to research and prepare their arguments.</p> <p>Have teams review the specific details of their roles in Step 3 of the activity. Encourage students to use the resources available through the web link box.</p> <p>It is important that speakers have a chance to practise stating their arguments clearly, as well as being able to think on their feet to rebut arguments from the opposing team.</p>	Student book; library/internet
30 min.	Debating	<p>Set time limits for each speaker and have a timekeeper to monitor this during the debate.</p> <p>Once the debate has concluded, have a debrief session with the whole class to reflect on the skills that they have learned and practised during this activity.</p>	

Summary

The related concept of globalization is more than just a study of global interactions in the world. By using the key concept of change, students are challenged to understand how globalization affects people and places in both positive and negative ways. Globalization can provide the enormous promise of connecting more people in the world in order to share resources and contribute to communities. However, it can also promote an increasing gap between rich and poor, a clash of values and ideologies, as well as an imbalance in access to basic resources.

The activities throughout the chapter prompt students to actively observe, engage with and analyse the world around them—both from their own point of view and that of others. Frequently refer students back to the inquiry question: “Can everyone in the world get what they want?” As a concluding activity, adapt the question to ask: “Should everyone in the world get what they want?”

References

Pollan, M. 2006. *The Omnivore's Dilemma*. New York, NY, USA. Penguin Books.