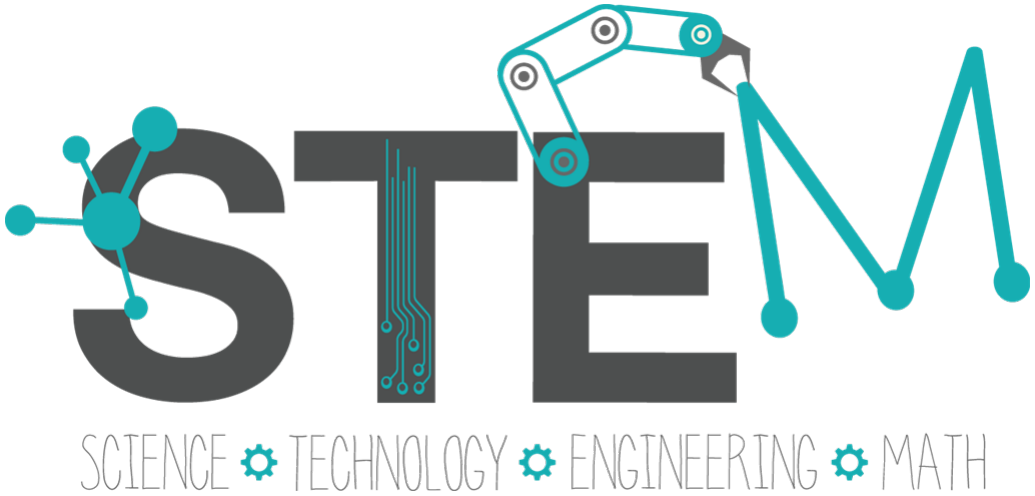
OXFORD ATLAS+

FOR AUSTRALIAN SCHOOLS

HASS | STEM | Inquiry | Coding


STEM
SCIENCE TECHNOLOGY ENGINEERING MATH

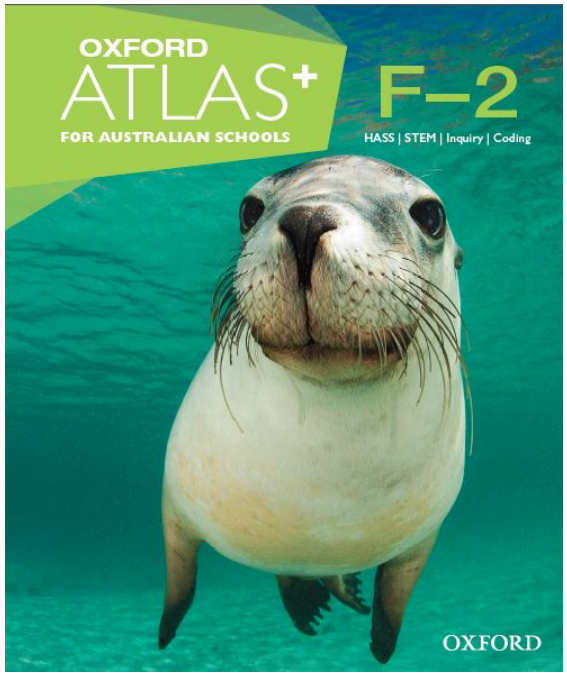
Integrated curriculum

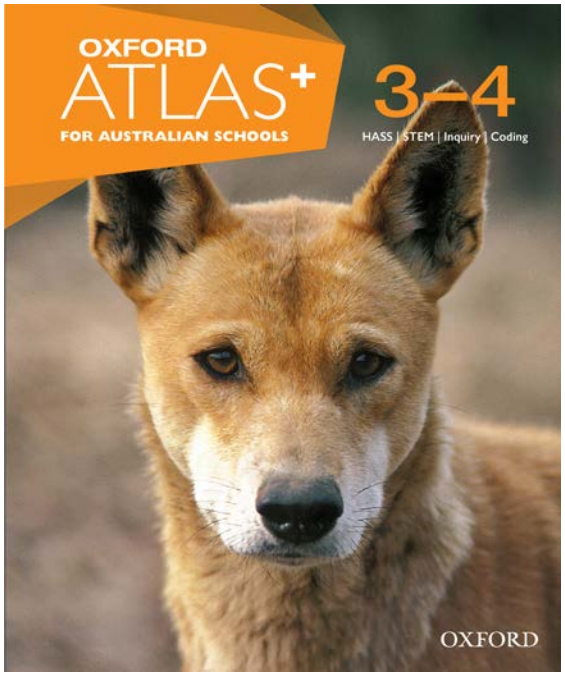
- Creating an **integrated curriculum** means that teachers are charged with having to create challenging, fun, meaningful tasks that help students connect to information. (Drake & Burns, 2004)

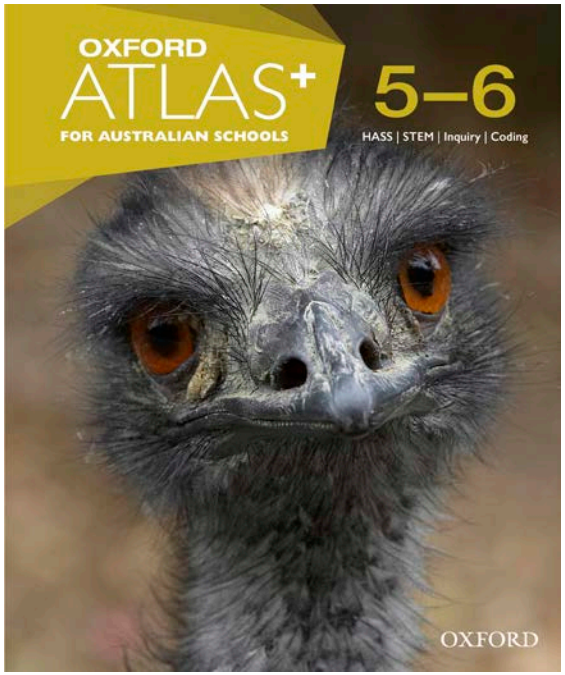
- The lack of integration of the curriculum in the primary years – particularly in the humanities and social sciences – has exacerbated the issue of **an overcrowded curriculum**. (DET, 2014)

- Technology is most effective when **integrated** with curriculum content. (Smith & Throne, 2007)

- **Differentiated teaching** and learning is enhanced when teachers innovatively use communication technologies and other teaching resources for individual or small group learning responding to individual students' learning needs. (CESE, 2016)







"Your essential resource for STEM and the Humanities"

Atlas+ for Australian Schools

Overview

Project components

F–2:

Student print

Teacher dashboard

3–4:

Student print

Student dashboard

Teacher dashboard

5–6:

Student print

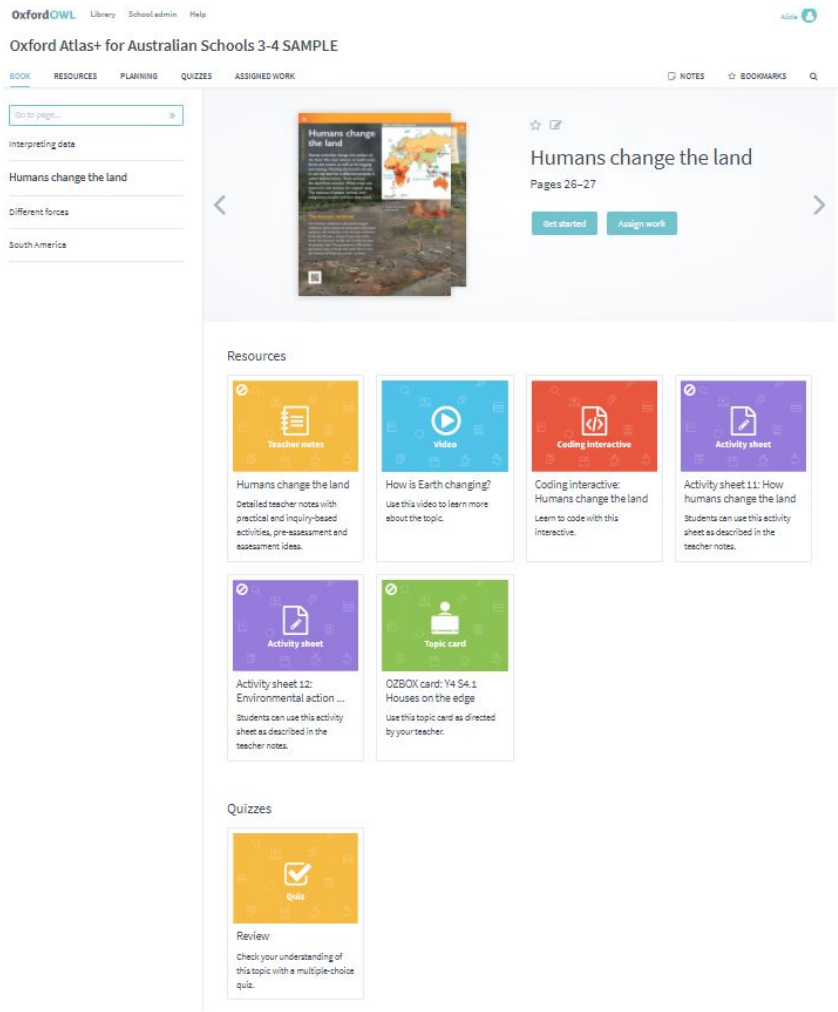
Student dashboard

Teacher dashboard

Teacher dashboard

- Professional support notes with teaching activities, ideas and experiments
- Downloadable activity sheets, graphic organisers, planning documents, etc.
- Pre-assessment and assessment activities
- All student interactives – videos, mapping skills, interactive maps, digital technologies
- Online tracking of student quiz results

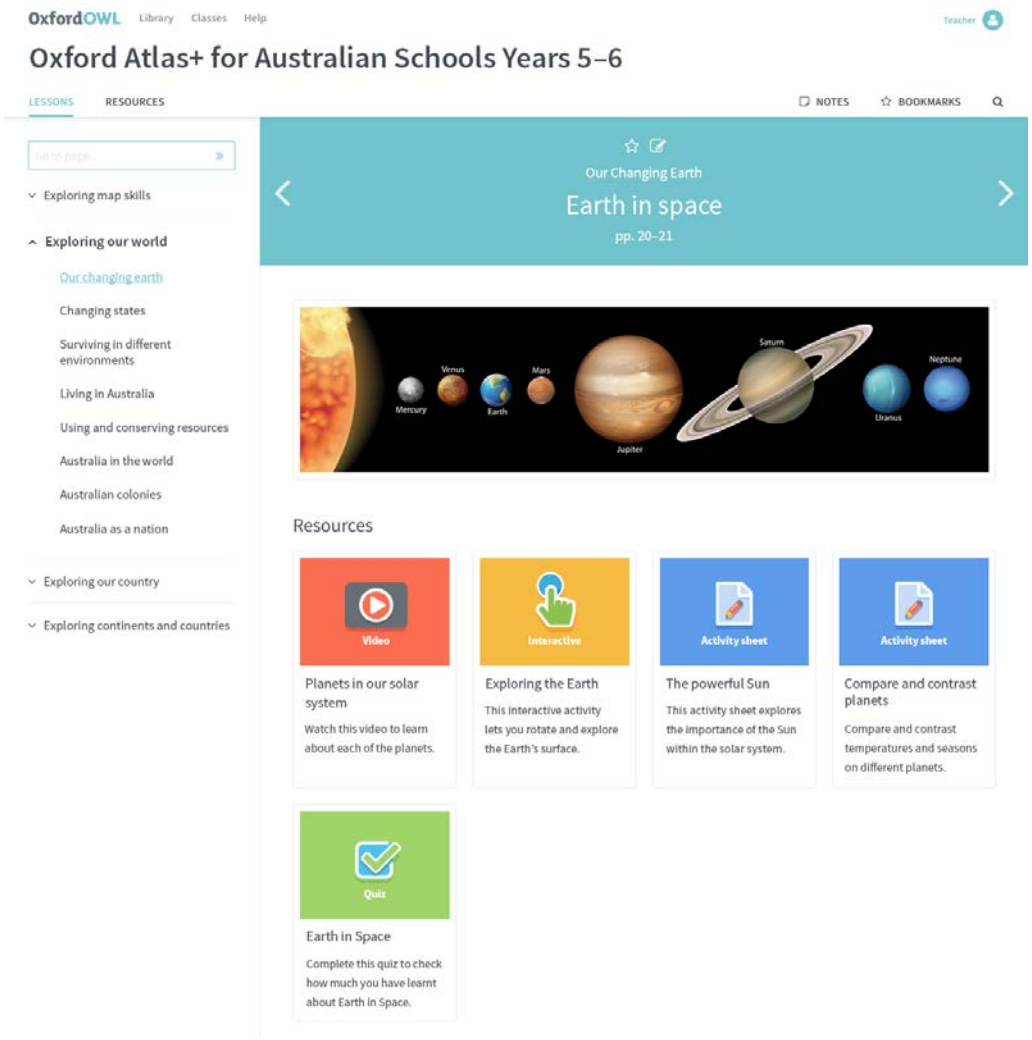
Teacher dashboard view



Student dashboard

- Videos
- Mapping skills interactives
- Interactive maps
- Topic interactives
- Coding and technologies interactives
- OZBOX cards (assigned by teacher)
- Quizzes

Student dashboard view

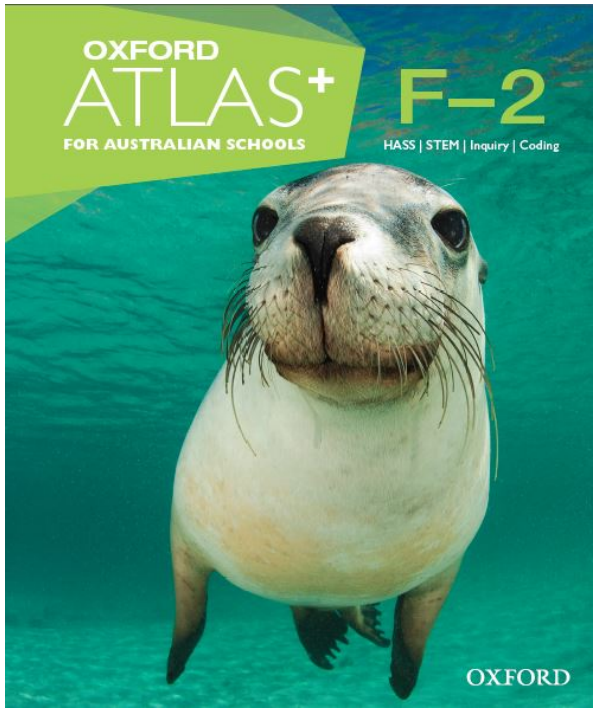


Please note this image is for illustrative purposes only. The final published product may differ.

Student Print atlases

Structure:

- Mapping skills
- Topic spreads
- World maps and case studies



Do students still need atlas skills?

- Digital technology is everywhere!
- But, students still need to be taught to interpret what they are seeing, to critically evaluate digital information in order to make the most of the tools available to them
- There is strong evidence that students' apparent ease with technology is only surface-deep

Atlas+ for Australian Schools

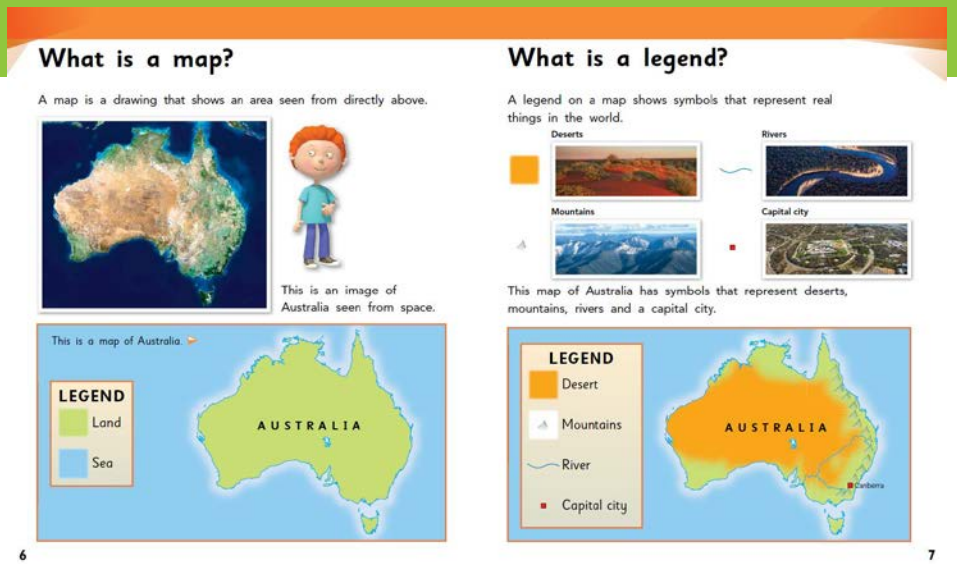
Mapping skills

Teaching notes

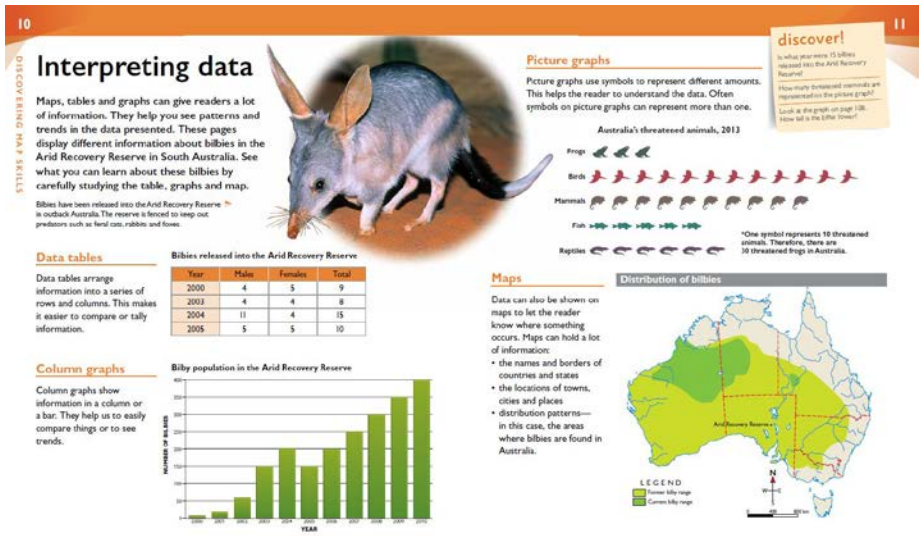
- Explicit links to both the content and the skills areas of the Humanities curriculum
- Build progressively from easier activities to more complex ones
- Feature a pre- and post-assessment activity
- Incorporate a range of learning methodologies, including collaborative group work, independent research, guided inquiry and thinking skills and tools
- Identify the key activities necessary for students to complete if time is an issue
- Include activities with a technology element

- Map conventions
- Develop spatial reasoning and higher-order thinking
- A crucial form of visual and mathematical literacy: 'reading' images, interpreting and evaluating data, using technology
- Progression from F–6

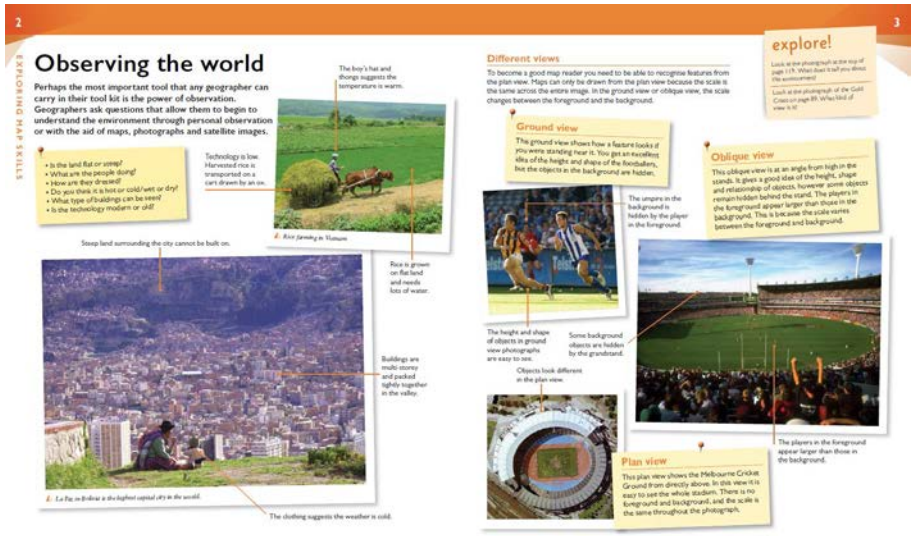
F–2:



3–4:



5–6:



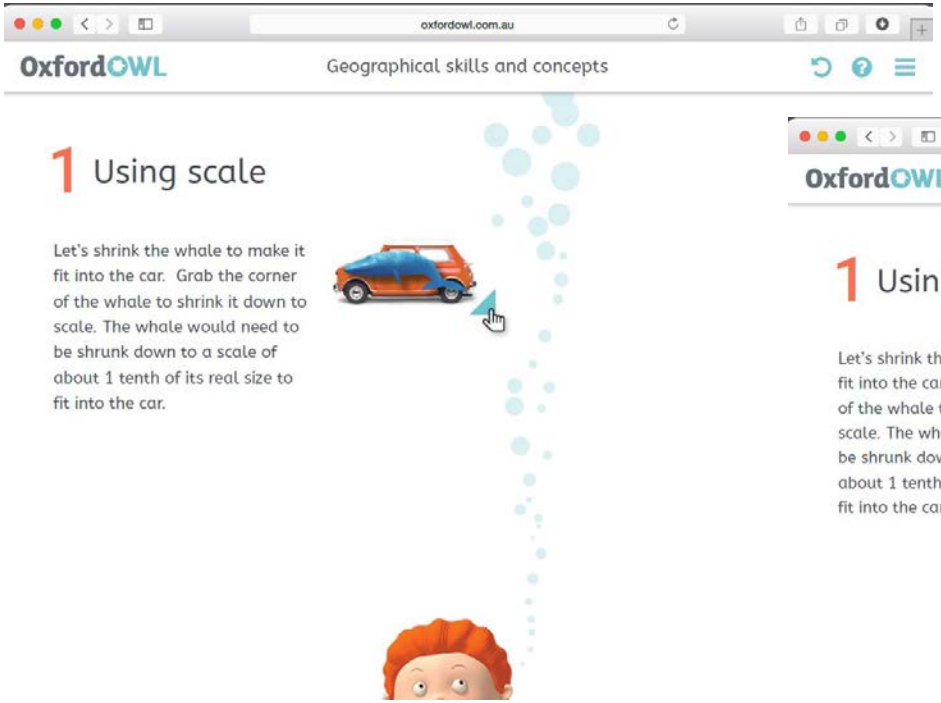
Mapping skills teaching notes

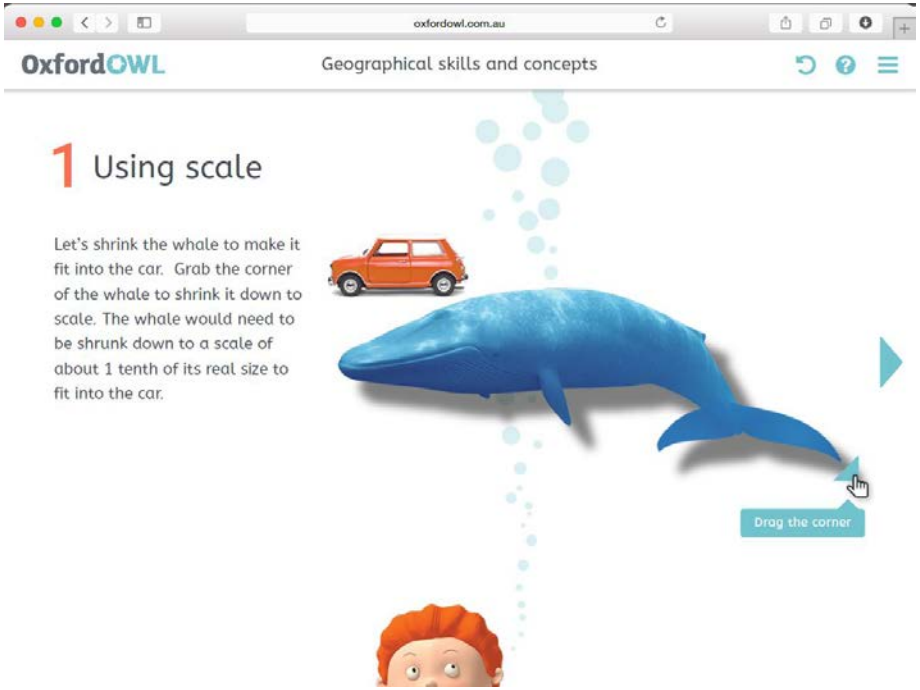
The mapping skills component features:

- Engagement with both digital and non-digital representations and methodologies relating to the concepts for students
- Pages in the print atlas focused on specific skills and concepts
- Mapping skills interactives that give students the opportunity to experience the content in a different way
- Comprehensive teaching notes incorporating curriculum links and a range of student activities
- Interactive maps
- Quizzes to check student understanding (Years 3 – 6)

Mapping skills interactives

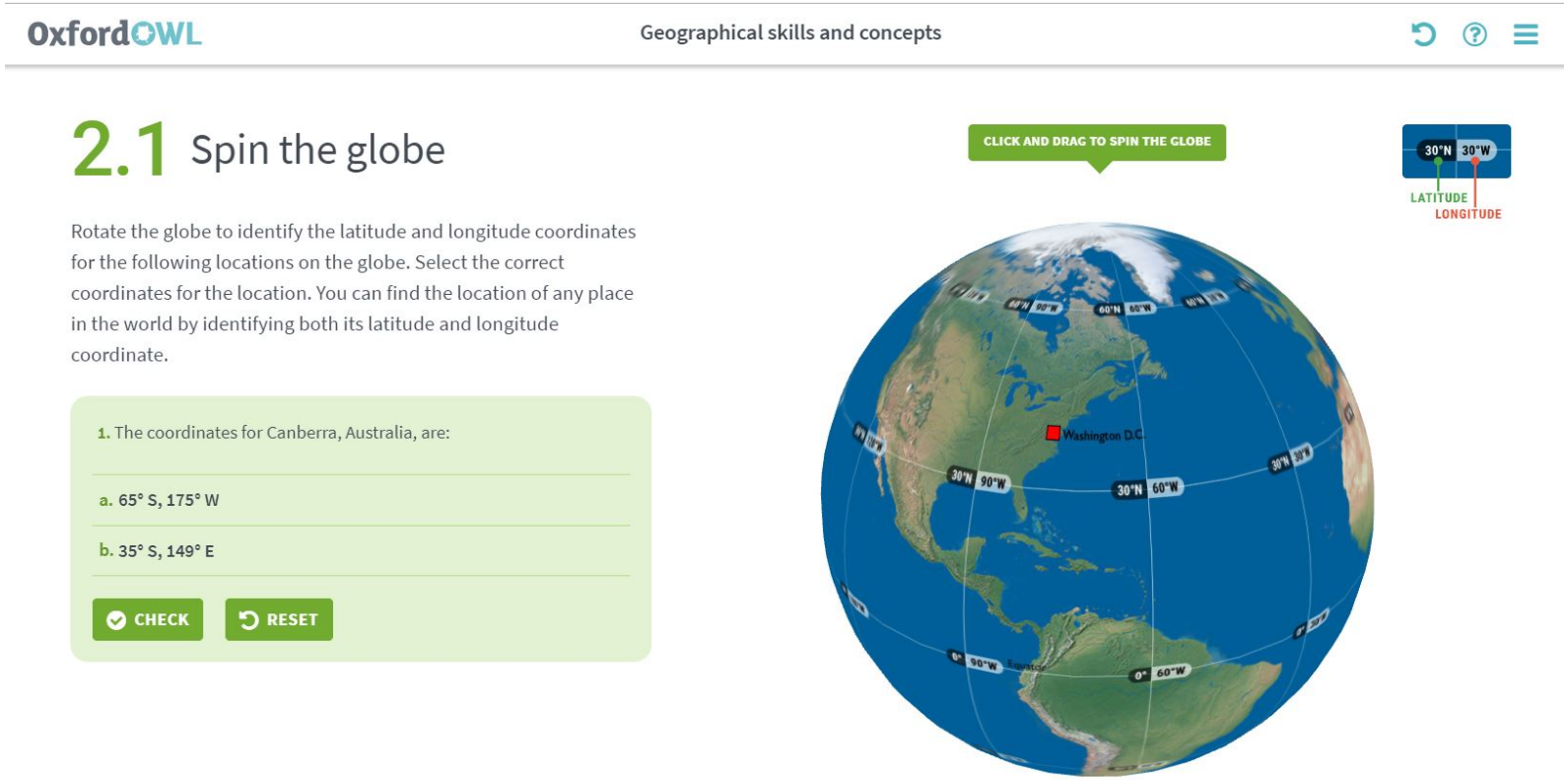
- Enhance mapping skills section in print atlases
- Students experience both digital and non-digital representations and methodologies relating to the concepts





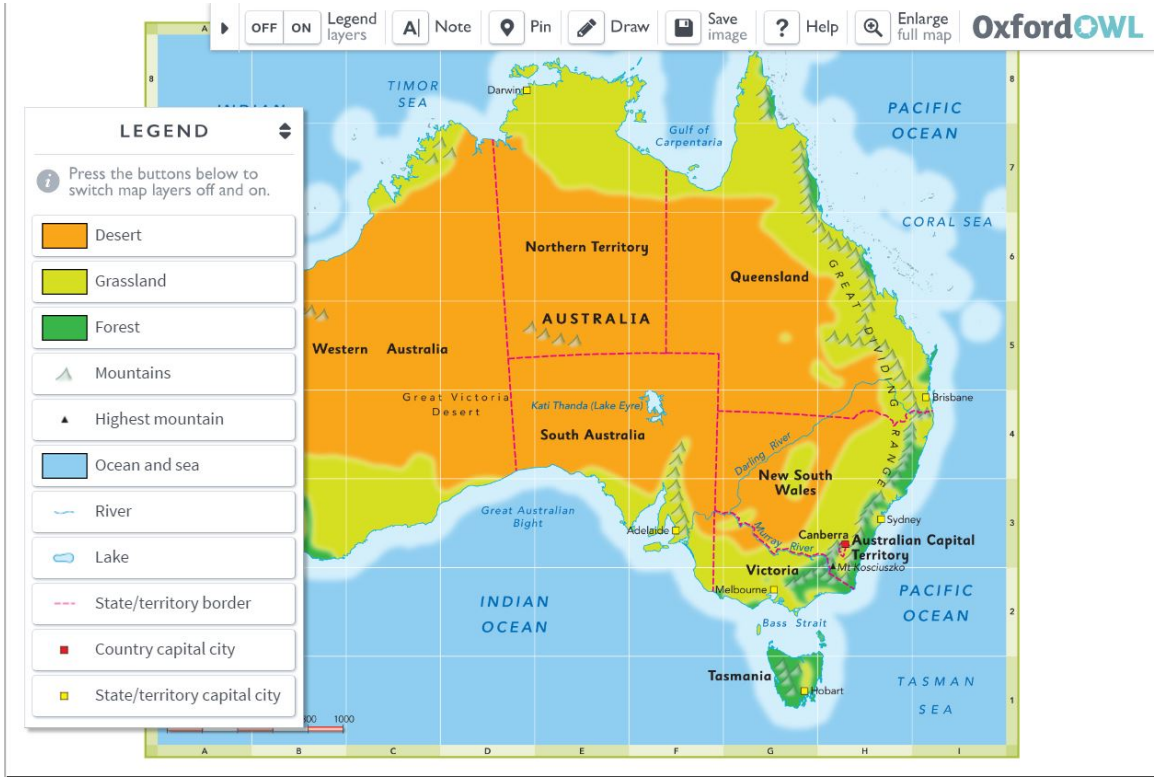
Mapping skills interactives

- What is scale?(Years F–2)
- Interpreting data (Years 3–4)
- Latitude and longitude(Years 5–6)



Interactive maps

- Deeper exploration of geographical regions



Maps and case studies

- Order of maps: Australia →Australian states → World → Continents → Regions

- Completely updated world facts and statistics, cross-checked against reputable sources (e.g. CIA World Factbook, United Nations, Australian Government websites)

- Updated case studies (e.g. Syrian war instead of Iraq war, Hurricane Sandy)that link to real-world contexts

Years F–2

Case studies linked to real-world contexts

Northern Territory

The Northern Territory runs from the centre of Australia to the north coast of Australia. Its capital city is Darwin.

Many people in the Northern Territory work in the mining and tourism industries.

Kakadu National Park is popular with tourists. It is in the north of the territory. Many tourists also visit Uluru, in the south of the territory. Both Kakadu and Uluru are very special to Aboriginal people.

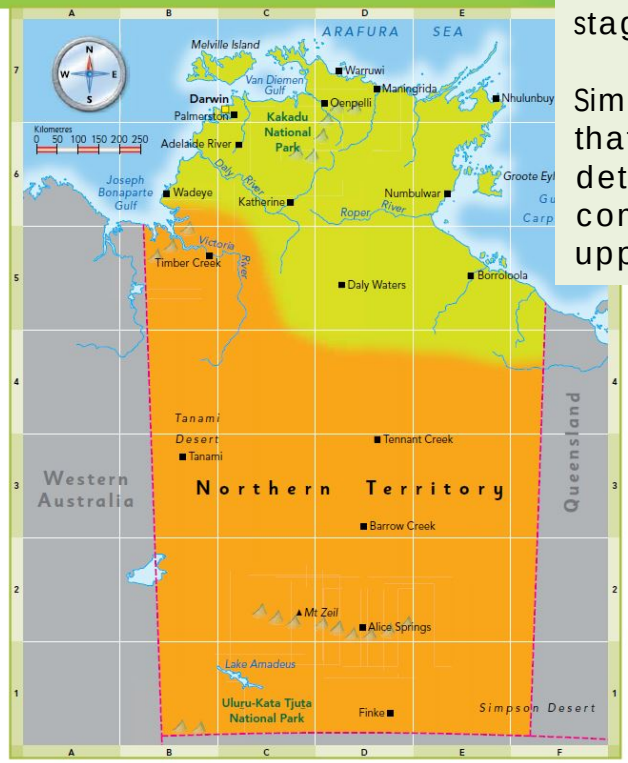
Uluru, in Uluru-Kata Tjuta National Park (C1), is a World Heritage Site.

- Which major town is found in D2?
- Which grid square is Darwin found in?
- What state is east of the Northern Territory?

LEGEND

Desert	River
Grassland	Lake
Mountains	State/territory border
Highest mountain	Territory capital city
Ocean and sea	Major town

66



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Level of map detail linked to developmental stage

Simpler maps at F–2 that become more detailed and complex in the upper years

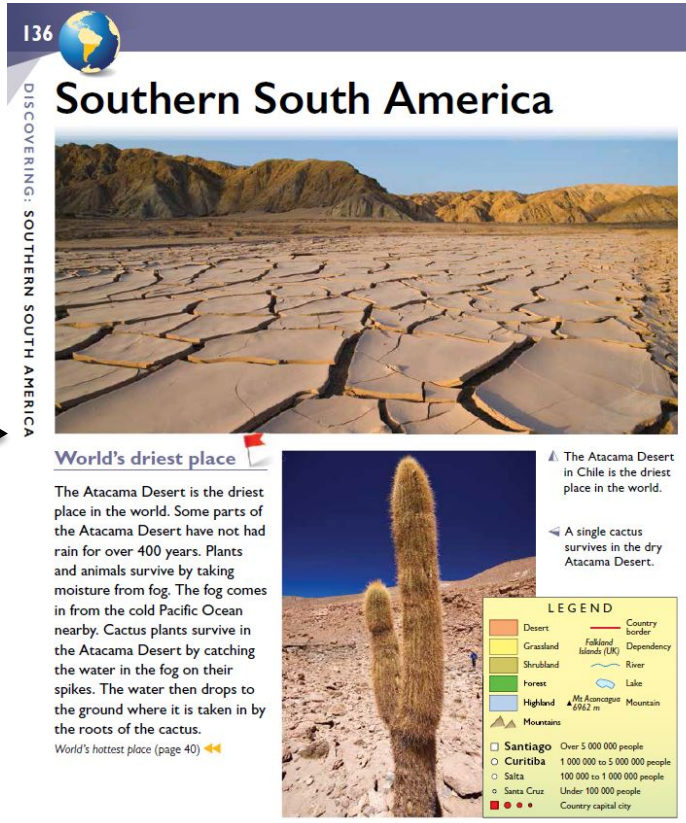
Questions for practising map skills and for further inquiry (F–2 only)

Years 3–4

Case studies linked to real-world contexts

Level of map detail linked to developmental stage

Simpler maps at F–2 that become more detailed and complex in the upper years



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DISCOVERING: SOUTHERN SOUTH AMERICA

Southern South America

World's driest place

The Atacama Desert is the driest place in the world. Some parts of the Atacama Desert have not had rain for over 400 years. Plants and animals survive by taking moisture from fog. The fog comes in from the cold Pacific Ocean nearby. Cactus plants survive in the Atacama Desert by catching the water in the fog on their spikes. The water then drops to the roots of the cactus.

World's hottest place (page 40)

The Atacama Desert in Chile is the driest place in the world.

A single cactus survives in the dry Atacama Desert.

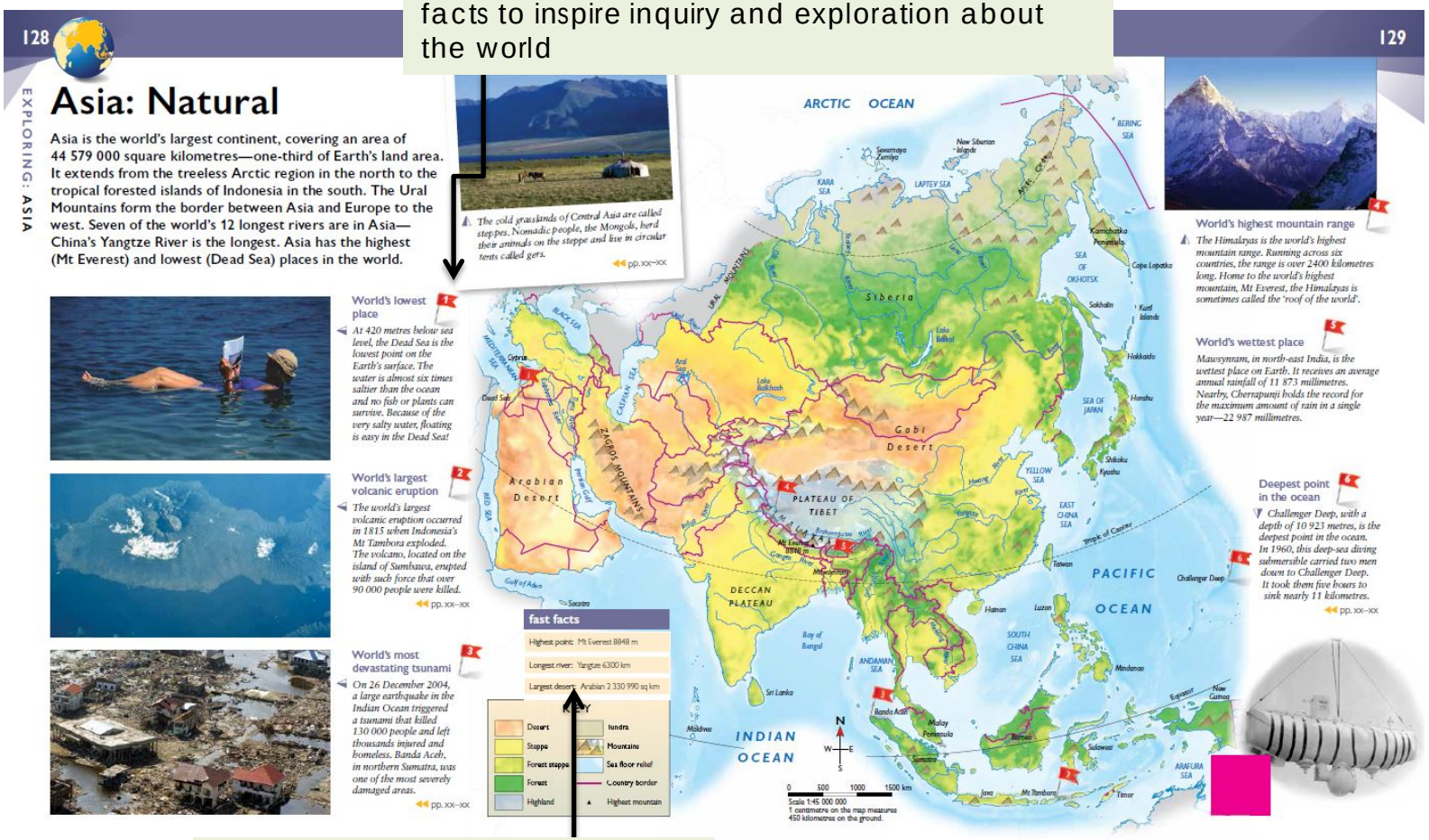
LEGEND

Desert, Grassland, Shrubland, Forest, Highland, Mountains, Country border, Falkland Islands (UK) Dependency, River, Lake, Mt Aconcagua 6962 m Mountain

Santiago Over 5 000 000 people
Curitiba 1 000 000 to 5 000 000 people
Salta 100 000 to 1 000 000 people
Santa Cruz Under 100 000 people
Country capital city

Years 5–6

Case studies with world's most/tallest/highest/largest/smallest... etc.' facts to inspire inquiry and exploration about the world



Fast facts (completely updated)

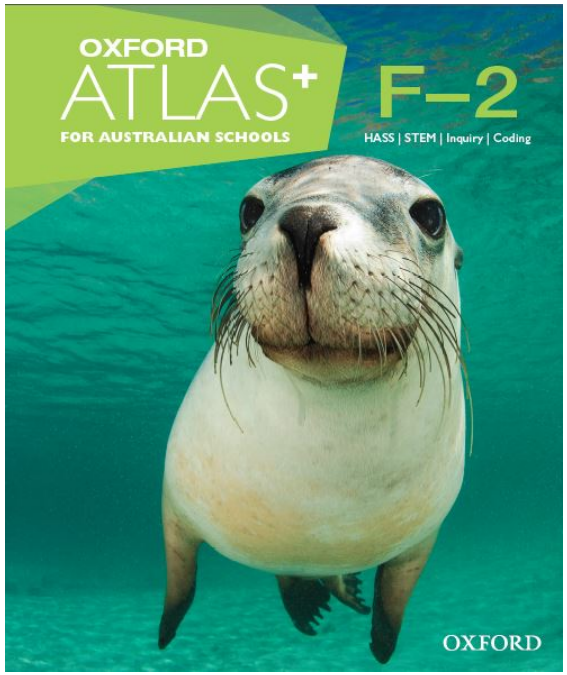
Typical learning sequence

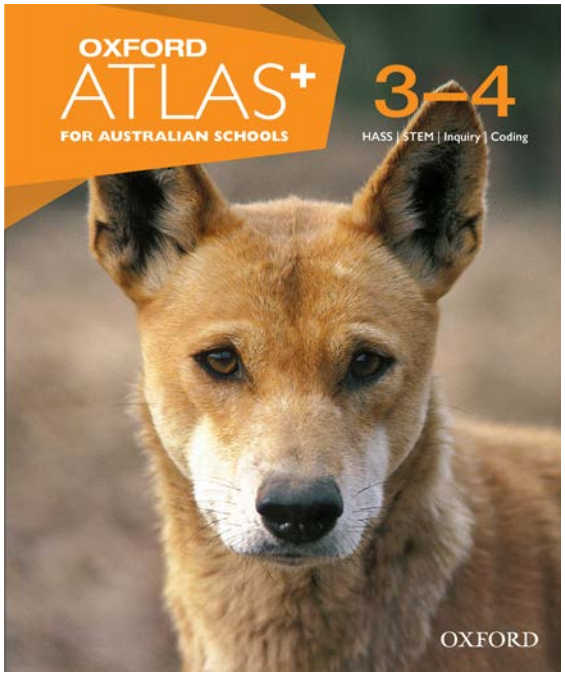
The different components of the mapping skills section are designed to be used flexibly. Here is an example of what a learning sequence might look like:

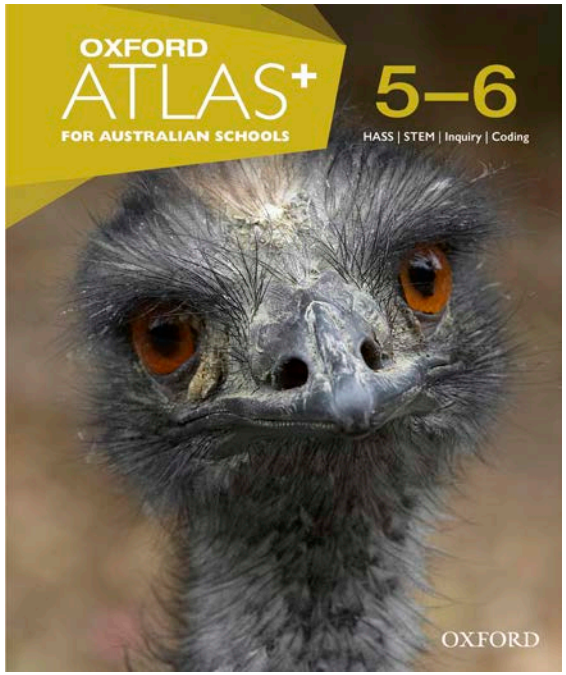
- Look at mapping skills pages in the atlas together
- Explore the matching interactive as a class or in small groups
- Conduct pre-assessment activity
- Choose activities to suit the learning pathways appropriate for your class
- Students complete the post-assessment activity
- Years 3 – 6 complete quiz to check understanding. Teachers can access student results.

Atlas+ for Australian Schools

Topic spreads







Now let's run through how Oxford Atlas+ topic spreads could be used in the classroom.

Topic spreads

The topic spreads incorporate a range of learning opportunities and resources to enhance student knowledge and skills, including:

- All the features of the Mapping Skills teaching notes, including curriculum links, extensive activity ideas and digital technologies
- Video links
- Learning interactives: specific technology interactives linked with the topic as well as general topic interactives
- OZBOX cards where appropriate
- Quizzes to check student understanding (Years 3 – 6)

Topic spreads

- Topic spreads cover Science, the Humanities, Civics and Citizenship (Years 3–6)and Business and Economics (Years 5–6)

- QR codes linking to licensed ABC/BBC videos or useful web links in every atlas

- Humans change the land video

New topic spreads

F –2	3–4	5–6
• Our amazing senses • Families • Remembering the past • Celebrations around Australia	• Indigenous sustainability practices • Living cultures • Democracy	• Democracy and the law • Australian citizenship • Global citizenship • Being a consumer • Providing goods and services

Years F–2:


Our amazing senses
We use our five senses of smell, taste, touch, sight and hearing to explore the world around us.
Our eyes help us to see shapes, colours, movement and light. The greatest source of light on Earth is the Sun. Light bulbs and lamps, candles, fire and the stars also give us light.
The skin on our body allows us to touch and feel the things around us. These pebbles feel smooth.
The taste buds on our tongue help us to taste foods. Foods can taste sweet, sour, bitter or salty. Watermelon tastes sweet.
We use our noses to smell. Some things smell good and others smell bad. I love the smell of lemons.
Our ears help us to hear sounds. Sounds are made when an object vibrates. When my dog barks, the air around my dog vibrates, too. The moving air will then cause my eardrum to vibrate and I can hear the sound.
I love playing music. I can make sounds on these instruments by doing different things. If I strum this guitar it will make lovely sounds.
I can shake these maracas to make music.
40
41

Years 3–4

Living cultures

In Australia, we embrace our cultural diversity and unique history. The indigenous cultures of Australia are the oldest living cultures in the world. They go back at least 50,000 years. Learning about these diverse cultures helps us to better understand our history as Australians.

Aboriginal and Torres Strait Islander flags

The Aboriginal flag was designed by Aboriginal elder Harold Thomas in 1971. The black represents the Aboriginal people, the red represents the earth, and the yellow represents the Sun.

The Torres Strait Islander flag was designed by Bernard Namok in 1992. The green represents the land, the black represents the people, the blue represents the sea, and the white represents peace.

NAIDOC Week

NAIDOC Week is held in July and celebrates Aboriginal and Torres Strait Islander history and culture. It is a time to recognise the contributions that Indigenous Australians make to Australian society. There are many NAIDOC week celebrations around Australia including dancing, visual arts events, community programs and awards.

People participate in a NAIDOC week march.

discover!

Why is NAIDOC Week important?

How did the Maori people react when the first white explorer reached New Zealand? (page 98 ▶▶)

Why is it important to show respect for the traditional owners of the land?

Anniversary of the National Apology

On the 13th February, 2008, the Prime Minister, Kevin Rudd delivered his apology speech to the Stolen Generations. This speech acknowledged the experiences of Aboriginal and Torres Strait Islander children who were removed from their families.

Welcome to Country

At many official events and ceremonies, a 'Welcome to Country' is performed. This is a ceremony conducted by local Indigenous Elders to welcome visitors and to show respect to current and former custodians of the land. The ceremony can be a speech, song, dance or smoking ceremony. Only Elders who represent the Traditional Owners of the land can perform a Welcome to Country.

An Indigenous Elder performs a smoking ceremony at the opening of a new school campus.

Years 5–6

Being a consumer

Being a consumer

A consumer is someone who buys goods or services. When we buy goods or services, we have to consider many factors, such as how much the good or service costs, how it compares to other products, its availability and our budget.

Needs and wants

We all have needs and wants! Needs are things that we must have in order to live, such as food, water and shelter. Wants are things that we would like to have but are not necessary for our survival, such as toys, cars and mobile phones. Some things can be categorised as both needs and wants. For example, you need clothes to survive, but they may not be the expensive brands you would like.

Making choices

Why do we need to make choices as consumers? Each of us has finite time and resources. This is known as the principle of scarcity. Making one choice means giving up another.

For example, imagine you have only $25 to spend on an item. You could buy a $15 T-shirt or a $25 pair of shoes. You cannot buy both with your $25. There is an opportunity cost when you choose one item over another, defined as the value of giving up the next best option.

If you pick the shoes, the opportunity cost is $10, meaning you have $10 less to spend than you would if you bought the T-shirt. But if you already have lots of T-shirts and only one worn pair of shoes, a new pair of shoes will benefit you more than a new T-shirt. So the opportunity cost of choosing the T-shirt could be more than the $10 you would save. To make the best choices, we need to weigh up what each item costs and what benefits it will bring.

Advertising for consumers

Advertising is all around us and can influence the types of things we buy. Companies advertise on television, radio, in magazines, newspapers, on billboards and the internet, and through social media. Advertisers get to know what, how and where their consumers like to buy goods and services and create advertising to attract them.

Anytime, anywhere shopping

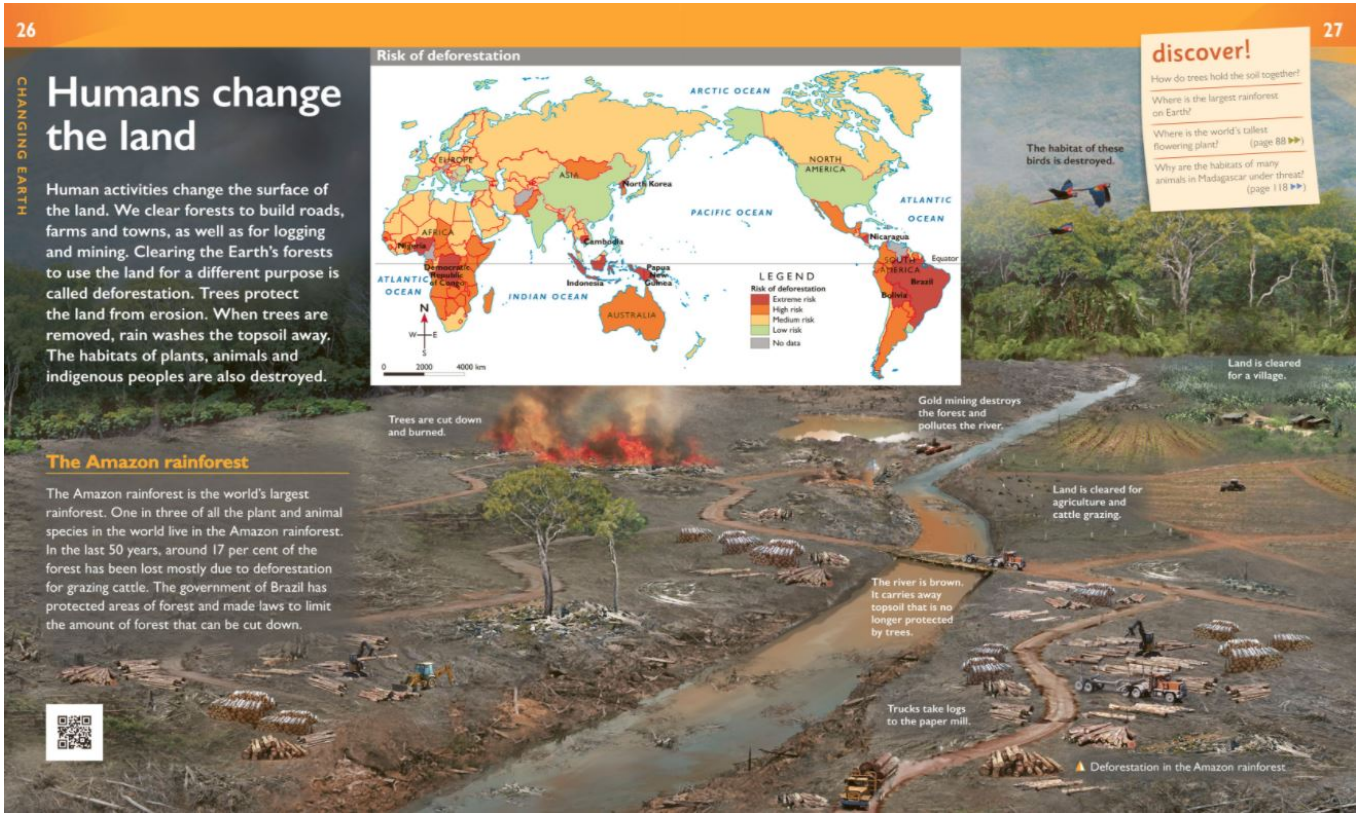
Now more than ever, we can buy goods and services anywhere and anytime. Before the internet, most consumers could only buy goods and services available within their community. With the internet, shopping markets have opened up around the world. An item can be purchased online at any time and shipped from another country to your home.

Paying for goods and services

There are also lots of ways to pay for goods and services. Consumers can pay using notes and coins, credit and debit cards and online payment systems. Bartering is a system where goods and services are exchanged without money. For example, a café owner could offer coffee or a meal in exchange for home-grown produce from his customers. Bartering was more common in the past but some small businesses still use it today. In some communities, barter systems are set up for families to exchange toys, clothes and household objects with other families.

Read the atlas spread

- As a class or in groups
- May want to include a think-pair-share type activity to promote discussion



Select your activities

- Review the information you gained from the pre-assessment activity
- Choose the activities you'll use based on this information and the time and resources that you have
- Choose from the other resources provided, such as the interactives
- Review the post-assessment activity

1

CHANGING EARTH

Humans change the land

Oxford Atlas+ for Australian Schools 3–4, pages 26–27

Inquiry question

How does the environment support the lives of people and other living things?

Background information

Our environment provides for many of our basic needs, but we also have a responsibility to care for the land to ensure that the Earth is sustainable for generations to come. Each action in changing the land, such as deforestation or mining, has consequences. Some of these are positive, such as providing areas for people to live, but there are often negative impacts, such as loss of animal habitat. Remedial actions, such as reforestation, are sometimes required to minimise the negative effects of human actions on the land.

Watch the video to learn more about how humans change the land.
Use the *OZBOX* card S4.1 to learn more about erosion.

Key terms

activities, clear, deforestation, erosion, government, habitat, human, Indigenous, logging, mining, protect, surface, topsoil

What do we need to know?

- G • The importance of environments, including natural vegetation, to animals and people (Year 4: ACHASSK088)
- G • The use and management of natural resources and waste, and the different views on how to do this sustainably (Year 4: ACHASSK090)
- S • Living things depend on each other and the environment to survive (Year 4: ACSSU073)
- S • Earth's surface changes over time as a result of natural processes and human activity (Year 4: ACSSU075)

What do we need to learn?

- G • Exploring how vegetation has an important role in sustaining the environment by producing oxygen, protecting food-producing land from erosion, retaining rainfall, providing habitat for animals, sheltering crops and livestock, providing shade for people, cooling urban places, producing medicines, wood and fibre, and making places appear more attractive (Year 4: ACHASSK088)
- G • Identifying some of the resources produced by the environment and where they come from (for example, water, food and raw materials such as fibres, timber and metals that make the things they use) (Year 4: ACHASSK090)
- S • Considering how different human activities cause erosion of the Earth's surface (Year 4: ACSSU075)

What inquiry skills do we need?

- HASS • Pose questions to investigate people, events, places and issues (Year 3: ACHASSI052)
- HASS • Locate and collect information and data from different sources, including observations (Year 3: ACHASSI053, Year 4: ACHASSI074)
- HASS • Examine information to identify different points of view and distinguish facts from opinions (Year 3: ACHASSI056, Year 4: ACHASSI056)

Start with pre-assessment activity

Humans change the land

Allow pairs of students to choose a populated area on Google Maps. Ask students to use Activity Sheet 11 to draw what the area might have looked like before humans lived there and to list all the human changes they can see. You may want to revisit this activity later to see if students' understanding of the concepts has grown.

Activities

TF **1.** Allow pairs of students to choose a populated area on Google Maps. Ask students to use Activity Sheet 11 to draw what the area might have looked like before humans lived there and to list all the human changes they can see. You may want to revisit this activity later to see if students' understanding of the concepts has grown. PA

KA **2.** Source some early photos of the area that your school is in and, as a class, compare these with the area today. Ask: 'What has changed? What is the same? How has the shape of the land influenced land use?'

3. Invite a representative from your local Landcare group to talk to the class about caring for the land. This can be done in person or as a web conference. Ask each student to think of a question for the speaker.

4. As a class, research a region where deforestation has had a major impact on the environment, such as Borneo, where orang utan and elephant habitats have been destroyed, or Madagascar, where erosion is a major problem. Discuss what might happen if these issues are not addressed.

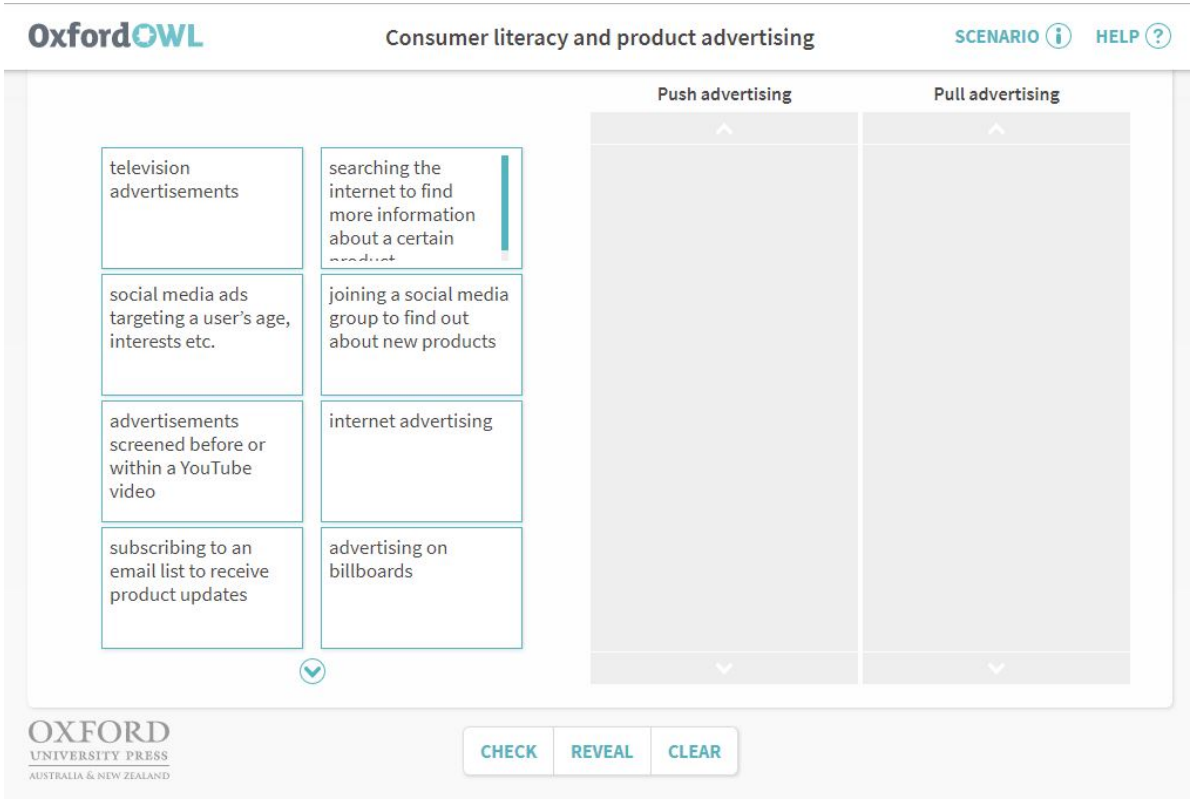
TF **5.** Ask students to create a quiz about the effects of deforestation in Borneo using the 'Changing the land' coding interactive.

KA **6.** As a class, brainstorm ideas about how to care for the land in and around your school. In small groups, have students use Activity Sheet 12 to write an action plan for one of the ideas, including how they will get the support of the school or other stakeholders and what their project will achieve.

7. Write a letter to a farmer, logging company or town planner, real or imaginary, suggesting actions that could be taken to reduce the adverse effects of deforestation on a particular area, and why this is important. A

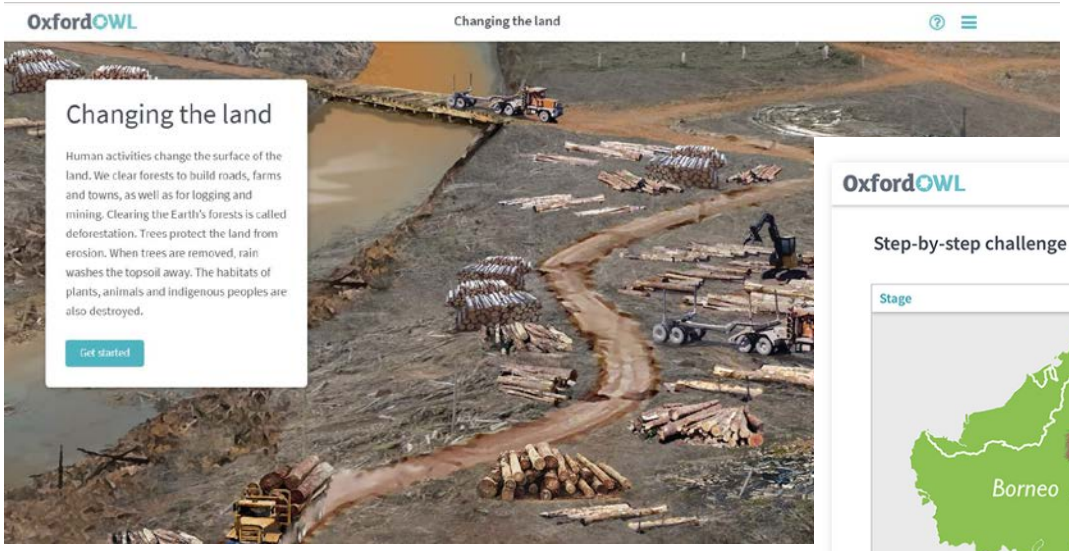
Topic interactives

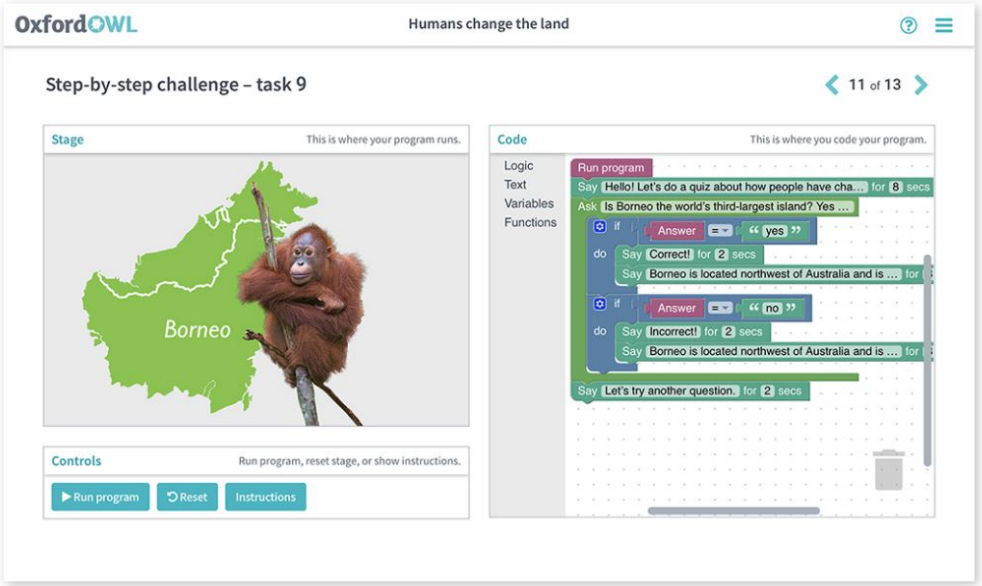
- Deeper engagement with topics
- Can be used individually via the student dashboard or as a class
- Offer a different way to access and build understanding of the concepts



Coding and technologies interactives

- Plugged and unplugged activities
- Coding activities linked to themes within atlases





Unplugged activities

OXFORD ATLAS+ FOR AUSTRALIAN SCHOOLS 3–4 OXFORD UNIVERSITY PRESS AUSTRALIA & NEW ZEALAND

UNPLUGGED ACTIVITY TEACHER NOTES

Contact and non-contact forces

Title	Contact and non-contact forces
Atlas spread	Different forces (print atlas pp. 46–47)
Activity overview	Create an infographic that introduces contact and non-contact forces by using images, symbols and graphs with minimal text to display information.
Related content description AC	Collect, access and present different types of data using simple software to create information and solve problems (ACTDIP009)
Background information	This activity can be done as an unplugged activity on paper or the infographic can be created on a computer or tablet. Students must choose their own format and layout for presenting an infographic about contact and non-contact forces. An infographic is a type of visual communication that includes graphics, data and minimal text. It conveys key messages visually, rather than through lots of text. The key aim is to display information effectively and efficiently to an audience. An internet search for 'infographics and healthy lunches' will bring up a lot of infographics examples on that topic. There are many free online infographics creators that can be used with students, including: • Easel.ly—https://www.easel.ly/ • Piktochart—https://piktochart.com/ (These may require users to create an account to join—check terms and conditions for age restrictions.) If completing this as an unplugged activity, have students draw pictures and charts or use images from magazines.
Activity time	30 minutes
Materials	• one 'Contact and non-contact forces infographic' activity sheet for each student • magazines and drawing tools for unplugged activity, or computer or tablet for plugged activity

OXFORD ATLAS+ FOR AUSTRALIAN SCHOOLS Name: Class: 3–4 OXFORD UNIVERSITY PRESS AUSTRALIA & NEW ZEALAND

UNPLUGGED ACTIVITY

Contact and non-contact forces infographic

Forces are pushes and pulls. There are contact and non-contact forces that make things speed up, slow down and change direction. You could write lots of information about this topic as text or, alternatively, represent it visually as an infographic.

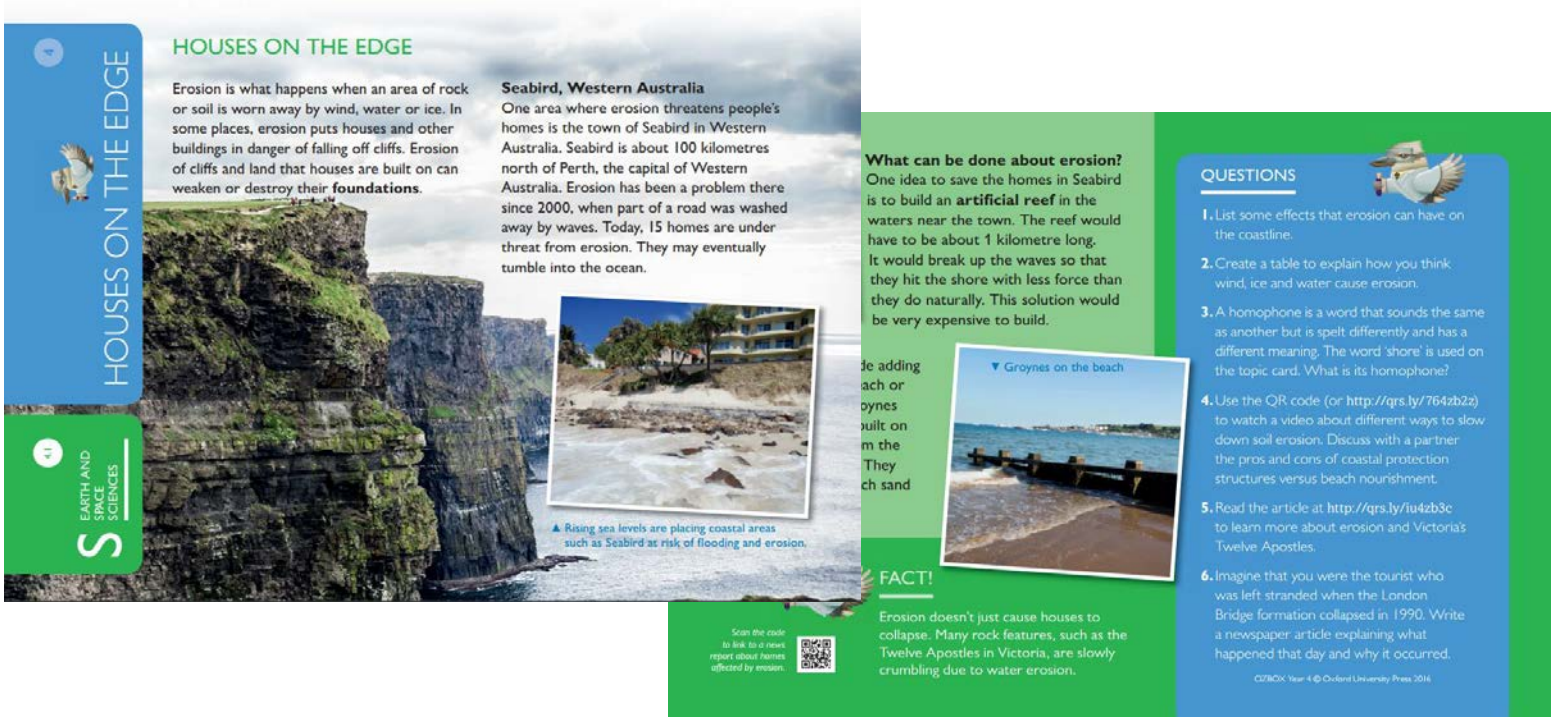
Create your own infographic about contact and non-contact forces making sure you include as many of the features below as possible. Use this example, the 'Benefits of drinking water', to give you some ideas.

Features of an infographic

- looks appealing
- creative design
- informative
- easy to understand
- minimal text
- uses images and graphs to convey data and information
- clear labelling
- uses colour effectively

OZBOX cards

- Assignable by teacher
- Not for every topic, but included where relevant
- Include the opportunity to read about the content further
- Incorporate comprehension questions as well as further activity ideas



Atlas+ for Australian Schools

Assessment

Pre- and assessment activities

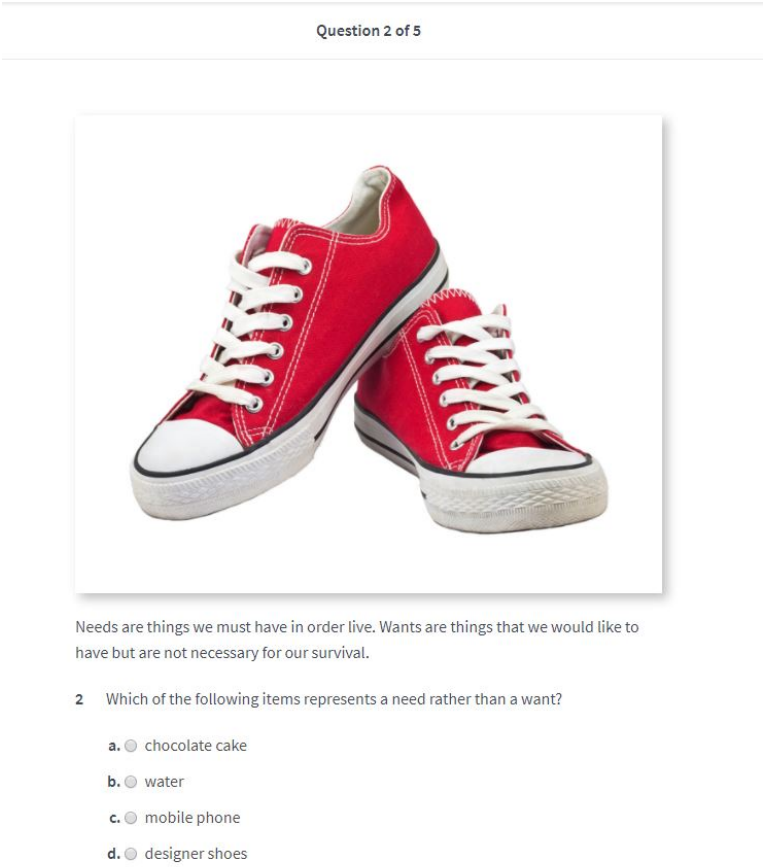
- Pre-assessment activities are quick to administer and designed to give you a snapshot of the overall skills and understanding across your class
- Assessment activities allow for the collection of rich data that includes information about students skills and knowledge directly related to the curriculum
- Both the pre- and assessment activities increase in complexity as appropriate for the students' year levels

1. As a class, brainstorm all the family words that students know. Can students describe the relationship between the different terms? PA

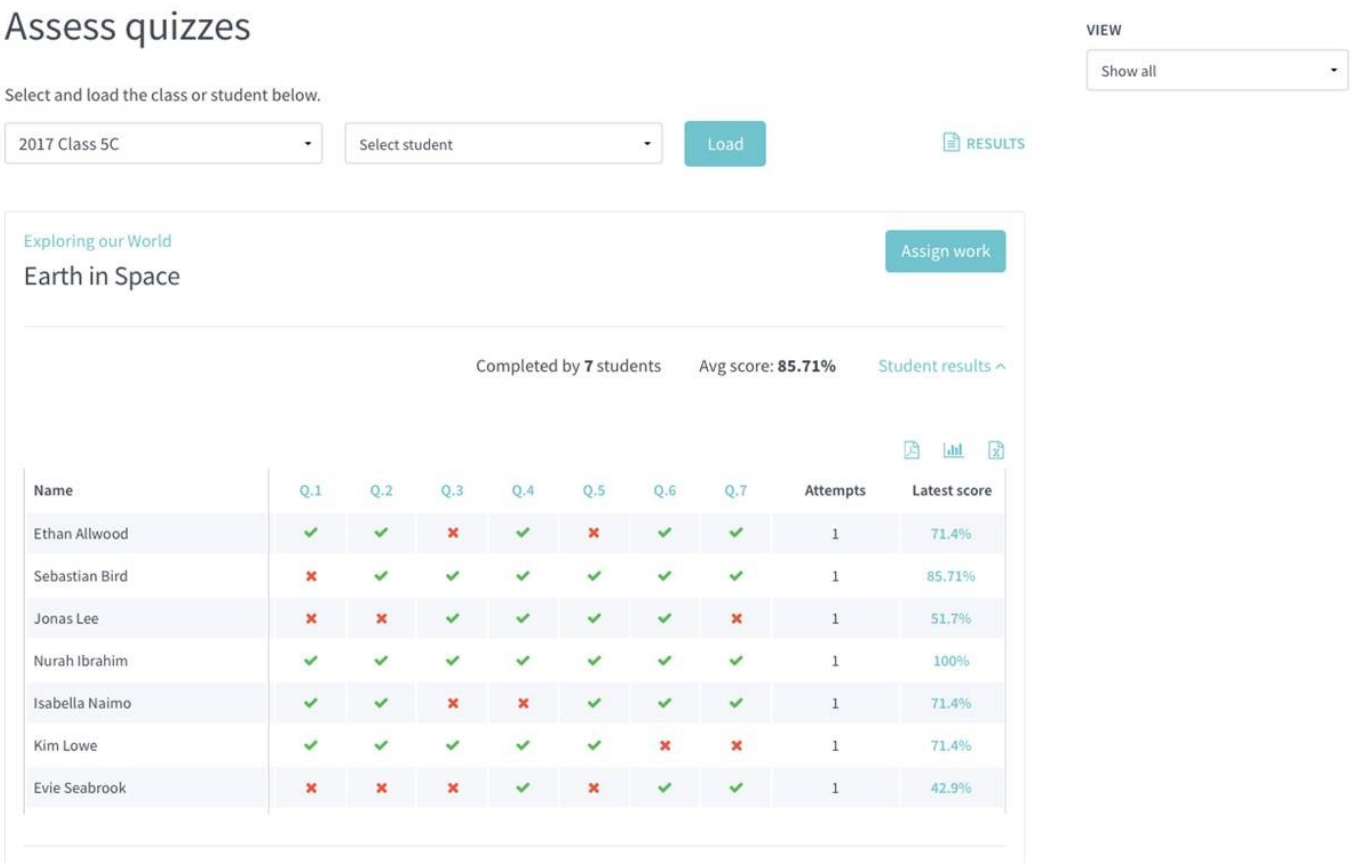
8. Ask students to create a piece of writing or art to celebrate their favourite things about their families. They should include information about different family members and their relationship to them, significant events or celebrations and any other information they would like to share. Hold a family day and invite students' families to view the finished work. A

Quizzes

- Years 3–4 and 5–6 only
- Quick check of student understanding – instant feedback and tracking available
- Multiple choice text questions



Teacher dashboard – student results screen



Educator experts

Rachel Kennedy

Rachel is an education IT consultant with over 25 years of experience in education, both as a primary classroom teacher and teacher professional learning facilitator. She has a passion for exploring mathematics, Technologies and English in the primary years and presents *Numicon* and *Oxford Literacy* professional learning workshops for schools across Australia. Rachel enjoys developing partnerships with schools and assisting them in their professional learning journeys.

Annie Facchinetti

Annie is the Professional Practice Leader, Literacy Leader and Senior Literacy Coach at Our Lady Help of Christians Primary School in Eltham, Victoria. She is also an education writer and editor, and authors student and teacher materials. She is a regular contributor to *Education Today* and the editor for the *Australian Educational Leader*. Annie has a Bachelor of Arts, a Diploma of Teaching (Primary), a Diploma of Professional Writing and Editing and is currently completing a Master of Education in Allied School Psychology. She draws heavily on her early years teaching experience to write for *Oxford Literacy, OZBOX* and *Oxford Maths*.