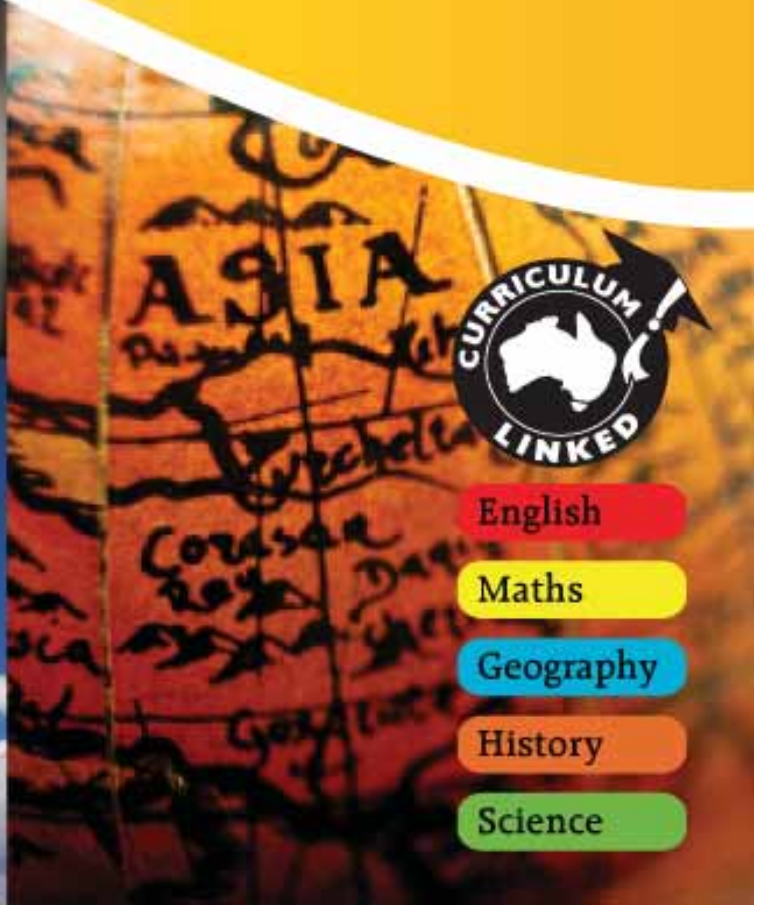
Ready-Ed Publications

PHOTOCOPY MASTERS

Cross-Curriculum: Years 5-6

Integrating priorities across learning areas as specified by the Australian National Curriculum.

By Fiona Back



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Teachers' Notes

The Australian Curriculum has been written to equip young people with the skills, knowledge and understanding that will enable them to engage effectively with, and prosper in, a globalised world. In this book students will gain the skills and knowledge to make sense of the world in which they live and make an important contribution to society in the future.

This book examines contemporary issues which are relevant to the lives of our students today. These issues have been chosen as focus areas for all students living and studying in schools in Australia. The three focus areas are known as priorities. They are:

- Aboriginal and Torres Strait Islander histories and cultures
- Asia and Australia's engagement with Asia
- Sustainability

This book examines these priorities across five core learning areas: English, Mathematics, Science, History and Geography.

Cross-Curriculum: Years 5-6 is one book in a series of three written to help teachers address the Australian Curriculum's cross-curriculum requirements. The time-consuming process of crossing the three specified priorities with core learning areas has been done for you. The answers to all of the activities can be found at the back of the book.

*Organising ideas: OI.1, OI.5, OI.6
*Content descriptors: ACELA1501 (Yr 5), ACELT1608 (Yr 5), ACELY1714 (Yr 6)

❑ Telling stories is a strong tradition of Australia's two Indigenous groups: Aboriginal Peoples and Torres Strait Islander Peoples. Some stories were told through pictures engraved on rock faces or cave walls. These pictures would include objects that they used in their daily lives and animals that they saw and hunted. Look at the symbols below used to tell stories by the Australian Indigenous community, then complete the task.

Indigenous Symbols


tracks


kangaroo


emu


honey ant


grub


possum


club


digging stick


human


spears


nest


well or waterhole


man


rain


star


quandong


bush plum

bowl


rain/flowers/
ants/eggs/fruit


rainbow/cloud/
sand dune/cliff

❑ Use the above symbols to create your own simple story about living in the Australian bush. Write your story in the space provided using the symbols to replace the words. Include at least 10 symbols in your story. If you run out of room, continue your story on the back of this sheet.

For example: **The ∪ (man) sat by the**  **(grub).**

_____

_____

_____

_____

_____

_____

Interesting fact: Engraved symbols on rock faces or on the walls of caves done by Indigenous Australians to tell their stories is known as rock art. Today original rock art can be found all over Australia. Historians have dated some rock art as far back as 50,000 years ago. Historians have also used this rock art to decipher the types of animals which existed at this time and how Indigenous Australians lived.

History 4 Activity

*Organising ideas: OI.1, OI.2, OI.3, OI.6
*Content descriptors: ACHHK096 (Yr 5), ACHHS121 (Yr 6)

The information on the previous two pages together with your own knowledge will help you to complete the tasks below.

❑ Read the clues to help you to record the answer on each card.

Who Are We?

Clue 1: We were the first to live in Australia.

Clue 2: We speak over 500 languages.

Clue 3: Our land was taken from us.

_____

What Am I?

Clue 1: I teach how the world was created.

Clue 2: I am told through stories.

Clue 3: I am what is believed in.

_____

Who Am I?

Clue 1: I didn't understand the Indigenous way of life in Australia.

Clue 2: I came by ship.

Clue 3: I claimed Australia as my own.

_____

Who Am I?

Clue 1: I come from a group of islands to the north of Australia.

Clue 2: My traditional culture is linked to the sea.

Clue 3: I live in harmony with the land.

_____

❑ Explain what the poem means in your own words.

`We don't own the land, the land owns us.'

`The land is my mother, my mother is the land.'

`Land is the starting point to where it all began. It is like picking up a piece of dirt and saying this is where I started and this is where I will go.'

`The land is our food, our culture, our spirit and identity.'

`We don't have boundaries like fences, as farmers do.

We have spiritual connections.'

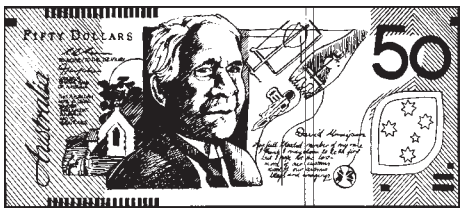
Science Activity

*Organising idea: OI.9
*Content descriptors: ACSHE082 (Yr 5), ACSHE099 (Yr 6)

❑ Read the information, then complete the questions which follow.

Science And Inventions

David Unaipon is a famous Indigenous Australian who invented a machine for shearing sheep based on the scientific principles of converting curvilineal motion into straight line movement. This principle is behind the design of modern mechanical shears still used widely today throughout Australia. David Unaipon is honoured for this invention on the Australian $50 note.

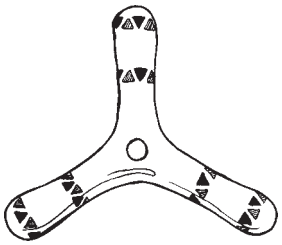


In the process of inventing the mechanical shears, Unaipon used the scientific principles of observation, use of his senses, prediction and hypothesis. He also used the process of trial and error to test his mechanical shears.

1. Draw lines to match the words with their meanings.

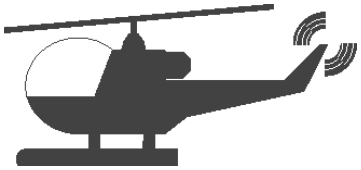
Observation	to think about a future result
Prediction	how the body receives and feels information
Senses	to find the best way to achieve a certain result
Hypothesis	'what if...' an idea or explanation which is tested
Trial and error	the ability to notice significant details

2. David Unaipon also invented a design for a helicopter based on the principle of the boomerang. Use the image of the boomerang-inspired propeller below to create your own sketch of a helicopter based on the rotating boomerang.



3. As a class discuss the scientific principles used in the design of a helicopter.

David Unaipon was not the only person to contribute to the design of the helicopter and its rotating blades. Scientific knowledge and developments are usually due to the contribution of many people.



4. Write a paragraph explaining how scientific developments, such as the invention of the helicopter, have affected people's lives.

Maths1 Activity

*Organising idea: OI.1
*Content descriptors: ACMNA291 (Yr 5), ACMNA123 (Yr 6)

❑ Australia and countries in Asia use different currencies. Read the information, then complete the questions.

The value of a country's money changes depending on a country's economy on any given day. One day $1.00 of Australian currency might buy 100 yen, the next day it might have risen or fallen. If it has fallen, $1.00 of Australian currency may only be worth 90 yen. This means that the Australian dollar is worth less. If you are travelling to Asia, you will need to convert Australian dollars to that country's currency. For example, if you travel to Japan, you will need Japanese yen.

	Japanese Yen	Australian Dollar
Monday	100 yen	1.00 dollar
Tuesday	90 yen	1.00 dollar

❑ Calculate how much the items listed below will be in Australian dollars.
Example: A one day ticket to Tokyo Disneyland cost 6,200 yen on Monday. To convert this into Australian dollars divide 6,200 by 100 = $62.00.

1. A two day ticket to Tokyo Disneyland

costs 10,700 yen on Monday = _____ Australian dollars.

2. A train fare from Tokyo Station to Disneyland

costs 800 yen on Tuesday = _____ Australian dollars.

3. The monorail that circles Tokyo Disneyland

costs 250 yen on Tuesday = _____ Australian dollars.

4. You are taking 500 Australian dollars with you to Japan. How much will you have in yen if you exchange your money on Monday? _____

5. You are taking 500 Australian dollars with you to Japan. How much will you have in yen if you exchange your money on Tuesday? _____

Science Activity

*Organising idea: OI.2
*Content descriptors:
ACSHE083 (Yr 5), ACSSU096 (Yr 6)

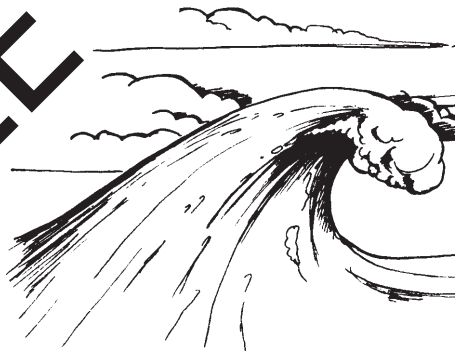
❑ Read the information, then complete the questions.

Prediction And Management Of Tsunamis Using Nano-Technology

The 2011 tsunami which hit Japan killed over fifteen thousand people. It was caused by an underwater earthquake measuring 9.0 on the Richter scale 70 kilometers off the coast of Japan. The closest land was hit by the tsunami only 26 minutes after the deep sea-quake struck. The Japanese Meteorological Agency issued a tsunami warning only three minutes after the quake struck, but just as a caution.

Nano-technology has enabled humans to monitor the earth's movements, but this is not always enough to save lives. The National Oceanic and Atmospheric (NOAA) Pacific Tsunami Warning Centre issued a warning to Japan nine minutes after the quake.

A DART (Deep-Ocean Assessment and Reporting of Tsunamis) buoy in the open ocean is a form of nano-technology which measures a dramatic change in the ocean tide gauge. A DART buoy is the first piece of technology to trigger a response from other systems. The DART gauge nearest to the Japanese earthquake was actually destroyed by the quake. This meant that a DART further away had to report the tidal change and that the people of Japan had even less time to respond to the tsunami warnings broadcast through the media and along the shoreline - particularly near Sendai where one of Japan's nuclear reactors was fully functioning and directly in the path of the tsunami.



1. Which part of the above process failed on the day of the Japanese tsunami?

_____

2. How could improving technology further help to save lives?

_____

3. Why do you think that only a `caution' was given by the Japanese Meteorological Agency immediately after the earthquake struck?

_____

4. On a separate piece of paper investigate these five rules to follow when in a tsunami.

Be tsunami aware
Learn nature's warning signs
Leave the beach and low-lying areas
Be prepared – have a plan of action
Don't go back for anything, not even pets.

* Organising ideas: OI.7, OI.8, OI.9
* Content descriptors: ACELY1704 (Yr 5), ACELY1714 (Yr 6)

❑ After reading a summary of Dr.Seuss' book entitled *The Lorax* on page 44, complete the tasks below.

❑ Write a paragraph beginning with the following sentence:

If I were The Lorax, I would help the Earth by …

❑ Finish the poem entitled *What's Inside The Treasure Chest?* Choose words about sustainability to describe what could be in the treasure chest. For example: a new seed, an endless waterfall …

What's Inside The Treasure Chest?

I dug into the sand today,

I found an enormous treasure chest.

I wonder what could be inside,

I think it could be …

A _____ _____,

A _____ _____,

A _____ _____,

A _____ _____,

Hope for the future.

* Organising ideas: OI.7, OI.8, OI.9
* Content descriptors: ACMNA291 (Yr 5), ACMNA123 (Yr 6),

Larger populations can create more pressure on the environment's natural resources, which is why we need to practise living sustainably. Sustainable living is friendly to our plants and animals.

❑ Complete the questions based on the data and the map.

Dardo	**1,245,678**
Haroon	**2,414,675**
Hobots	**4,296,456**
Longtown	**6,049, 298**

1. Which town has the largest population?

_____

2. Which town has the population nearest to 5 million people?

_____

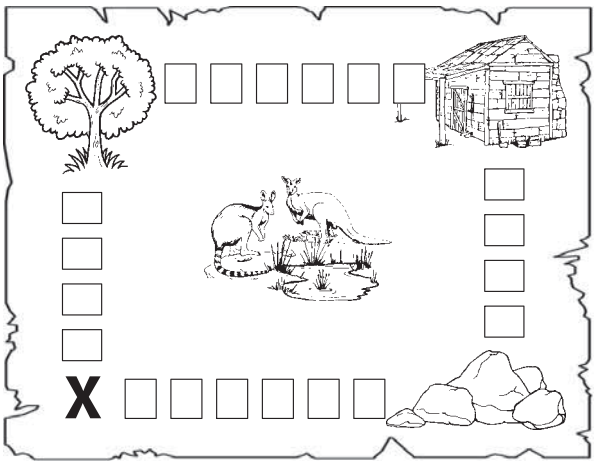
3. Which town has the smallest population?

_____

4. Which two towns have the population closest to 3 million when added together?

_____

❑ Tom decides to go for a bush walk to check how many kangaroos inhabit a certain area. Tom starts his search for kangaroos at Point X. Following the path, which direction will he need to go in to reach:



1. The big tree?

_____

2. Big tree to Walker's Hut?

_____

3. Walker's Hut to boulders?

_____

4. The boulders to Kangaroo Swamp?

_____

5. If Tom had not followed the path which direction would have got him to the Walker's Hut in the least amount of time?

_____

❑ **Challenge Task:** Create your own map of an area, together with direction questions for another person in your class to answer.

*Organising ideas: OI.1, OI.2, OI.3
*Content descriptors: ACSSU043 (Yr 5), ACSSU094 (Yr 6)

❑ Read the information, then answer the questions.

Ecosystems:

All life forms, including human life, are connected through ecosystems on which they depend for their wellbeing and survival. Ecosystems exist within the Earth's biosphere.

An **ecosystem** consists of all the things that interact in a specific area, whether they are living or non-living. Some examples of **non-living** things which support life in an ecosystem are: light, air, soil and water. Some examples of **living** things in an ecosystem are plants and animals, these are called **organisms**.

Organisms can only thrive when all of their needs are met in the ecosystem. **Temperate zones** are examples of ecosystems which never become too hot or too cold and therefore organisms thrive there.

All living organisms perform certain **life processes**. They take in **nutrients** such as: air, sunlight, water and food. They use the energy from those nutrients to grow. They **release energy** by moving; playing a vital part in the ecosystem. Organisms also release **waste products**. They react to their environment and produce offspring that are similar to themselves. A careful **balance** of all of these is what keeps humans alive.

1. List the key words from the text.

2. Use these key words to write down your understanding of an ecosystem.

_____

_____

_____

3. What are the four life processes that living organisms do?

_____

_____

4. Name four non-living things in an ecosystem.

_____

5. Name two living things in an ecosystem.

_____