



Year 7



Term 2: Week 1

Welcome to your week 1, science work package.

For Term 2, we will be moving onto the topic of **Earth and Space sciences**. Starting with Chapter 3: Earth Resources.

We will also be catching up on the human endeavor and inquiry skills from previous topics.

Below are your weekly lessons and steps to complete each task. Make sure you follow each step and read each focus information to help you complete these lessons. Each day has a science as a **human endeavour** or **science inquiry** skill focus and an **Earth and Space sciences** activity. There is an extension activity each day for those who wish to further extend or research the topic.

Pearson science textbook login: pearsonplaces.com.au

username: firstname.lastname@student.education.wa.edu.au

password: bdhs2020

If you do not have access to the internet or an appropriate electronic device, there will be no expectations on completing those digital tasks written below. If you do have access, there are some great videos and websites to digitally/visually support your learning.

Good luck and if you have any questions, please email me on

Melissa.Gwatkin@education.wa.edu.au.

-Mrs Gwatkin

Lesson 1 - Tuesday

Scientific word of the day

Variables: Factors that influence an experiment.

Science as a Human Endeavour

Pearson Science Book 7: Scientists in Antarctica – Page 9

Focus: Scientists work in Antarctica.

“Antarctica is one of the most remote and untouched places on Earth. No humans live in Antarctica permanently, but 1000 scientists live there in winter and 4000 live in summer.”

Lesson Overview

1. Read through this page to learn about the research scientists are doing on the continent of Antarctica.
2. Review Questions: Answer questions 1-4 in your workbook. The sentences have been structured below for you to be able to answer in FULL sentences.

Question 1: I believe collaboration is important in science because_____

Question 2: Antarctica is an important place for scientific investigation because_____

Question 3: The branches of science being used in Antarctica are_____

Question 4: I think it is important for scientists to work with different branches because_____

Extension: research deeper into Antarctica’s contribution to science.

Website to look at: <https://discoveringantarctica.org.uk/how-is-antarctica-governed/geopolitics/science-of-antarctica/>

Science Understanding: Earth and Space Sciences

Pearson Science Book 7: 3.1 Renewable and Non-renewable Resources– Page 86-87

Focus: What is the difference between natural and human-made resources?

Natural resources: A natural resource is something found within our natural environment that people use to meet their needs.

Human-made resources: A man-made resource is something that starts as natural but is altered by humans to meet their needs.

Lesson Overview

1. Read through page 86 and the beginning of page 87 about Natural and Man-made resources.
2. Using your workbook, divide your page into two and write down the definitions of natural and human-made resources. It must include what it is used for in your home. An example of how to set up is below.
3. Provide 5 examples of each used within your home/family or community.
For example; water is a natural resource we use to shower/keep clean and a kettle is a man-made resource we use to make hot drinks like coffee, tea, milo etc.

Natural Resources	Human-made Resources
Definition	Definition
Examples	Examples

Below image sourced from google images



Extension: Rubber is an important resource that we use for many different purposes and products. Tyres are particular an important product that is used to help cars, trucks or other vehicles transport between places.

Research how the natural research of rubber turns into a tyre. Write a step-by-step process that it takes from rubber becoming a tire we use on vehicles for everyday driving.

1951 – Making Tires

<https://www.youtube.com/watch?v=xN4Df41PPpc>

How a tire is made

<https://www.continental-tires.com/car/tire-knowledge/tire-basics/tire-production>

Lesson 2 - Wednesday

Scientific word of the day

Dependent variable: The variable that will change naturally as you change the variables. It is what we measure.

Science as a Human Endeavour

Pearson Science Book 7: Science and the Law – Page 18

Focus: The laws and regulations created due to science.

“Scientists pay attention to the world around them and they make observations about them. These observations are the reasons for many of the laws and regulations that we all must follow every day.”

Lesson Overview

1. Read through this page to learn about how scientific evidence has been used to help form laws and regulations.
2. Review Questions: Answer questions 1-4 using your workbook. The sentences have been structured below for you to be able to answer in FULL sentences.

Question 1: The chemicals that were banned across the world due to them destroying the ozone layer are...

Question 2 a): The evidence that led to this law is...

b): I think _____ evidence is what led to all states adopting the law of seatbelts.

Question 3: Different drugs are treated differently because_____.

Question 4: _____ is the reason why laws now determine the type of houses that are allowed to be built in areas at risk of cyclones or bushfires.

Extension: *Creating new law/regulation*

Create your own law or regulation (rule) that you could invent (or already have) within your home. Is there something that you have noticed in your observations that doesn't work as smoothly as it could? Is there always dirty dishes in the sink? Is your favourite shirt no longer white because it was washed with all the coloured clothes?

Science Understanding: Earth and Space Sciences

Pearson Science Book 7: 3.1 Renewable and Non-renewable Resources– Page 87

Focus: What is the difference between renewable and non-renewable resources?

Renewable resource: A resource that is always being replaced naturally.

Non-renewable resource: A source of energy that cannot be replaced after it is used.

Lesson Overview

1. Read through page 87 about Renewable and Non-renewable resources.
2. Using your workbook, write down the definitions of renewable and non-renewable resources. As well as the examples provided in the text.

Renewable Resources	Non-Renewable Resources
---------------------	-------------------------

3. Provide 5 used within It must used for in For fuels for a car and is a non-renewable resource. Water is used to drink and is a renewable resource.	Definition	Definition	examples of each your home/family. include what it is your home. example; Fossil (unleaded) are used
	Examples	Examples	

Extension: Future energy renewable resource instead of fossil fuels.

We all want to be more sustainable in our energy use so it is better for our environment and more affordable. When looking at a new future energy resource for fossil fuels, what are somethings or factors that scientists will need to think about?

Lesson 3 - Thursday

Scientific word of the day

Independent variable: The variable that you change in an experiment. This is the variable that you will test.

Science as a Human Endeavour

Pearson Science Book 7: Teamwork across different branches of science – Page 34

Focus: "Big problems require big teams with a range of skills from different branches of science."

Lesson Overview

1. Read through this page to learn about the importance of teamwork between the different branches of science.
2. Review Questions: Answer questions 1-2 in your workbook. The sentences have been structured below for you to be able to answer in FULL sentences.

Question 1: Scientists from different branches of science need to work together to save the mountain pygmy-possum because _____.

Question 2: a) _____ are examples of big problems that scientists will have to solve.

b) The branches of science that these scientists will need to specialise in are _____.

Science as a Human Endeavour

Pearson Science Book 7: Biodegradability – Page 46-47

Focus: What is the difference between biodegradable and non-biodegradable substances? What can we do to prevent pollution?

Biodegradable: Substances are classified as biodegradable if bacteria or fungi break them down.

Non-biodegradable: Substances are classified as bio-degradable if they eventually break down but often take hundreds of years to do so.

Lesson Overview

1. Read through this page to learn about the importance of teamwork between the different branches of science.
2. Review Questions: Answer questions 1-4 in your workbook. The sentences have been structured below for you to be able to answer in FULL sentences.

Question 1: Biodegradable substances: _____, _____, _____, _____.

Non-biodegradable substances: _____, _____, _____, _____.

Question 2: The evidence that shows that fruit and cardboard are biodegradable is _____.

Question 3: a) The log is _____.

b) I predict that in 10 years the log will _____.

Question 4: Faeces are _____.

(There is no extension for this lesson because you are completing 2 readings instead.)

Science Understanding: Earth and Space Sciences

Focus: The impact fossil fuels have on our environment.

Please watch 'Farming the wind video' and answer the following questions below. (6 minutes long)

<https://cdn.pearsonplaces.com.au/cdn/9808d9e5-6d2c-4a5b-88e1-3d1ebbd665e2/USMG-6-5.html?assetid=41d2393e-b633-41c1-8ac4-41d263652296&deviceid=melissa.gwatkin@education.wa.edu.au-PP2128784fc-0e10-4cd1-8c94-226bd179d2ca&appversion=melissa.gwatkin@education.wa.edu.au-PP2128784fc-0e10-4cd1-8c94-226bd179d2ca&authorization=Bearer%20ede74061-6478-49fb-aa26-99be021d2b44&userid=melissa.gwatkin@education.wa.edu.au>

1. What is the main source of non-renewable energy that the video is about?
2. What is an example of a concern for our increased use of energy?
3. What is the main greenhouse gas scientist believe is linked to climate change?
4. How is a wind farm a renewable form of energy?
5. If accessible, look at an example of an electricity bill. How can we reduce electricity use within your household and school? List 5 simple ways we could reduce our energy use and carbon footprint.

Lesson 4 - Friday

Scientific word of the day

Controlled variable: The variable that is held constant throughout an experiment. This helps keep the experiment fair and more accurate.

Science Inquiry Skills

Pearson Science Book 7: Inquiry Skills, Thinking Scientifically – Page 39

Focus: Using data (information) of an experiment to interpret what it means.

The three bears recorded the temperature of their porridge and how fast different-sized bowls cooled.

Lesson Overview

1. Read through this page to learn about the temperature change over time in each bowl. (Both the table and graph)
2. Answer questions 1-6 in your workbook as either **A, B, C OR D.**

Pearson Science Book 7: Inquiry Skills, Thinking Scientifically – Page 83

Focus: Using data (information) of an experiment to interpret what it means. Calculating the density and volume.

Density = $\frac{\text{mass}}{\text{Volume}}$ (density = mass divided by the volume) **Volume = 1mL is the same as 1cm³**

(example of how to calculate density and volume is in Pearson Science Book 7: Page 72)

Lesson Overview

1. Read through this page to learn about the effects of mixing materials and calculating the volume and density.

2. Answer questions 1-3 in your workbook as either **A, B, C OR D.**

(There is no extension for this lesson because you are completing 2 readings instead.)

Science Understanding: Earth and Space Sciences

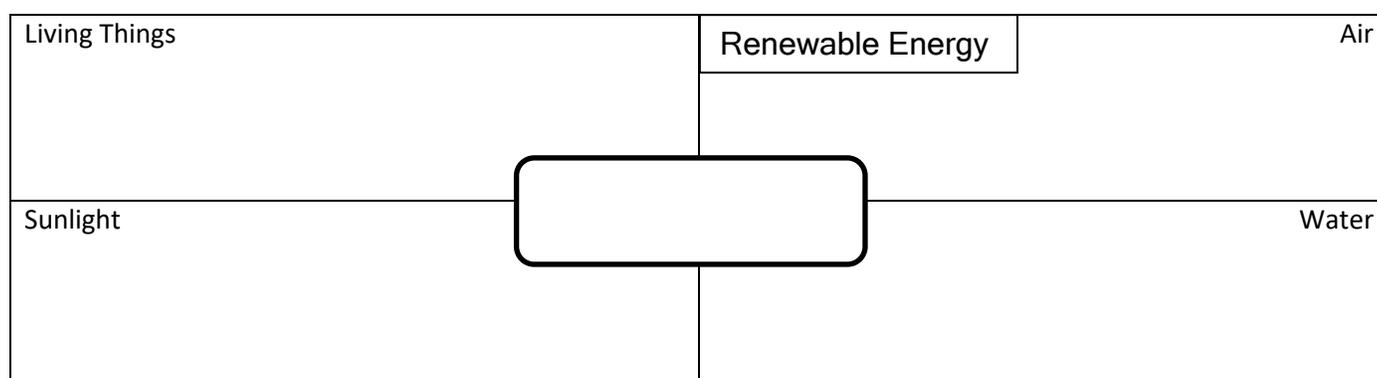
Pearson Science Book 7: 3.1 Renewable and non-renewable resources – Pages 88-90

Focus: Renewable resources examples.

Renewable resource: A resource that is always being replaced naturally.

Lesson Overview

1. Read through pages 88-90 about examples of renewable resources.
2. Using a mind map (example below), write key important notes about each type of renewable resource. (living things, air, sunlight and water)



Extension: Further research and information about renewable resources. Watch the following videos about renewable resources. Can you think of any other forms of renewable resources in our community?

Renewable Energy 101 | National Geographic
<https://www.youtube.com/watch?v=1kUE0BZtTRc>

Renewable Energy 101
<https://www.youtube.com/watch?v=T4xKThjcKaE>

Weekly Practical

No practical's will be suggested this week due to it being a new topic and catching up on 'Human Endeavour' work.
(Keep an eye on next week's lessons)