

The **ROCK** Cycle



8 Science

Geology Workbooklet

Let's get started...

This booklet contains the tasks and information to help you learn about the rock cycle and the three main types of rocks. A geologist is someone who studies the different substances that make up the earth – and a lot of this comes down to rocks and minerals!

Brainstorm with a partner: *What types of jobs or careers might need some understanding of geology? (other than being a geologist 😊)?*

_____	_____
_____	_____
_____	_____

The Rock Cycle is the first part of our geology unit. Here are the three key learning intentions that you will want to aim to master:

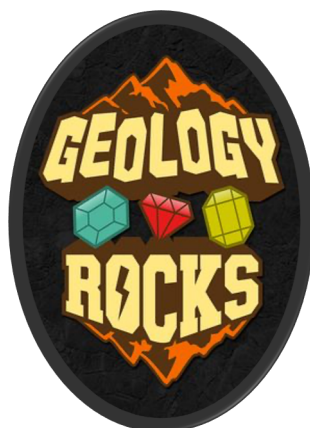
LEARNING INTENTIONS - KNOWLEDGE & SKILLS	
I can identify the different layers in the structure of the earth.	
I can evaluate the characteristics of a rock to determine which the 3 main rock types (and subgroups) it likely is.	
I can illustrate how rocks move through the rock cycle and the processes involved.	

Get ready – you are about to encounter some new and familiar geology terms! Here are some of them:

Crust
Mantle
Core
Asthenosphere

Igneous
Sedimentary
Metamorphic

Erosion
Deposition
Compaction
Crystallization



Task 1 - Intro to how rocks form and change

a) **Read** Text pages 325 – 330, and pay close attention to the pictures and diagrams!

b) **Answer** the following questions from your text, in the space below:

- Q 1, 2, 3, 6, 15 (from text p.331)

The form consists of a vertical red margin line on the left side and 30 horizontal blue lines for writing, providing a space for the student to answer the questions.

Task 2 - Create an Infographic!

Task:

Your job is to complete an A4 **infographic** on the rock cycle. Draw it on the next blank page!

What is an infographic?

An **infographic** is a collection of imagery, charts, and minimal text that gives an easy-to-understand overview of a topic. As in the example below, **infographics** use striking, engaging visuals to communicate information quickly and clearly.

Checklist of what to include:

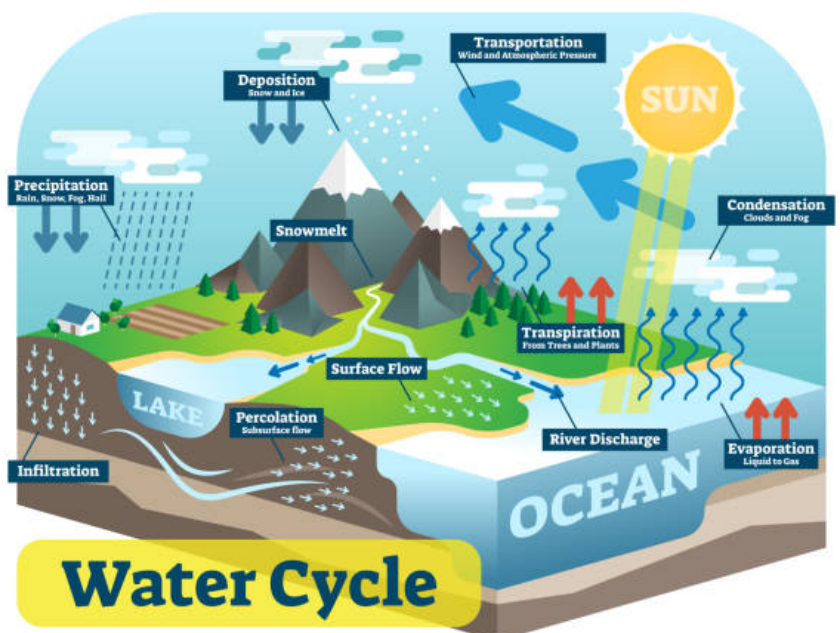
- Legible font size – from arm's length away
- **Colour – ask teacher to get colored pencils handy**
- Hand drawn images/diagrams
- Labels
- Key terms & brief definitions

Terms to include and **define (state the meaning)** clearly on the infographic

- Igneous rock
- Metamorphic rock
- Sedimentary rock

- Weathering
- deposition
- Compaction
- Heat/pressure
- Crystallization
- Erosion

Here is snazzy example of an infographic for the water cycle... →



Resources:

The following are resources to gather the information to construct your infographic. Note – do not simply use one rock cycle diagram to build your own. Refer to more than two when building your own unique infographic (that rocks!).

- Year 8 Science text – p. 326 etc
- Google search for 'rock cycle' or 'rock cycle process'

Task 3 - Watch Planet Earth - CAVES

Task:

The teacher will play Planet Earth – CAVES by BBC (about 50min). While watching this, fill in the **Compass Points** note taking guide!

Never knew that!

2 new facts you learned related to **geology**

1.

2.

Extra information needed!

2 things you want to know **more** about

1.

2.



Wow, creation is amazing!

2 things that make you wonder about God's creation.

1.

2.

Sounds familiar!

2 facts that link to something you already know.

1.

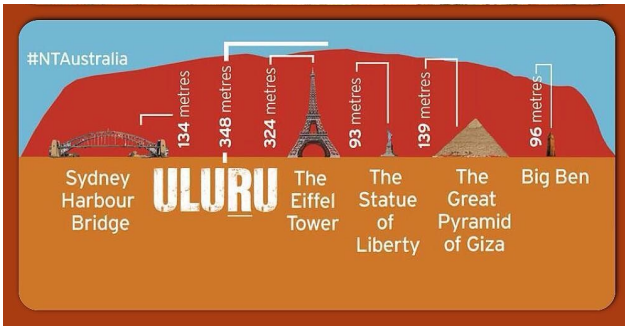
2.

Task 4 - What are the different characteristics of the 3 main rock types?

Task: Use the text pages as indicated and make dot point summaries for each box. Do this with a partner!

IGNEOUS (p. 334-337)	SEDIMENTARY (p. 341-344)	METAMORPHIC (p. 349-351)
General Qualities:	General Qualities:	General Qualities:
Types (dot point describe + examples) Intrusive • • •	Types (dot point describe + examples) Clastic • • •	Types (dot point describe + examples) Foliated • • •
Extrusive • • •	Chemical • • •	Non-foliated • • •
	Organic • • •	

Task 5 - The RED Centre! What is Uluru?



Task: Uluru (Ayers Rock) is a monstrous geological wonder! Let's find out what geologists think it is!

Use the internet to find out answers to these questions and neatly write your findings.

1. What type of rock is Uluru made from?
Be as specific as you can.

2. Give a summary of what geologists think about how on earth Uluru was formed and got to be the way it is today – a massive rock out in the middle nowhere!

3. Explain what has caused all the unique markings/stripes on Uluru – there might be several causes!

4. Have you heard of **The Devil's Marbles** (Karlukarlu)? This another unique rock formation just north of Uluru. Do your best to sketch what it looks like AND describe how geologists think it was formed! (use the blank space below)