

Grade 6 - Science

Student Study Pack - **Answers**

Week	Topic	Lesson	Resources
Week 19	Geology 1	Rocks, Weathering & Erosion	Longman Chemistry pg 103-108
Week 20	Geology 2	The Rock Cycle	Longman Chemistry pg 108
Week 21	Geology 3	Fossils	Longman Chemistry pg 109

*if Longman Chemistry textbook is not available, use notes and booklets provided in class.

Geology - Types of Rocks

Rocks are put into groups depending on how they are formed (made).

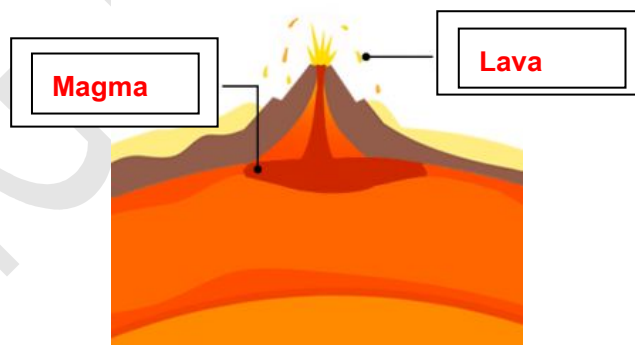
There are three main groups of rocks:

1. _____ **Igneous**
2. _____ **Sedimentary**
3. _____ **Metamorphic**

Igneous Rock

Igneous rock is formed when magma and lava cool down to a solid.

Label **magma** and **lava** in this diagram of a volcano:



Use the word bank to complete the sentences below:

magma	extrusive	crystals	quickly	larger
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There are two types of igneous rock; intrusive and extrusive. Intrusive igneous rock is formed when magma cools slowly. When a liquid cools slowly, large crystals are formed. Extrusive igneous rock is formed when lava cools quickly. When a liquid cools quickly, only very small crystals are formed.

Sedimentary Rock

Sedimentary rock is formed from broken down rock and the remains of plants, trees and dead creatures.

There are three types of weathering:

1. Physical
2. Chemical
3. Biological



☐ Use your notes and pages 103-105 in your *Longman Chemistry textbook* to define (explain) the following terms:

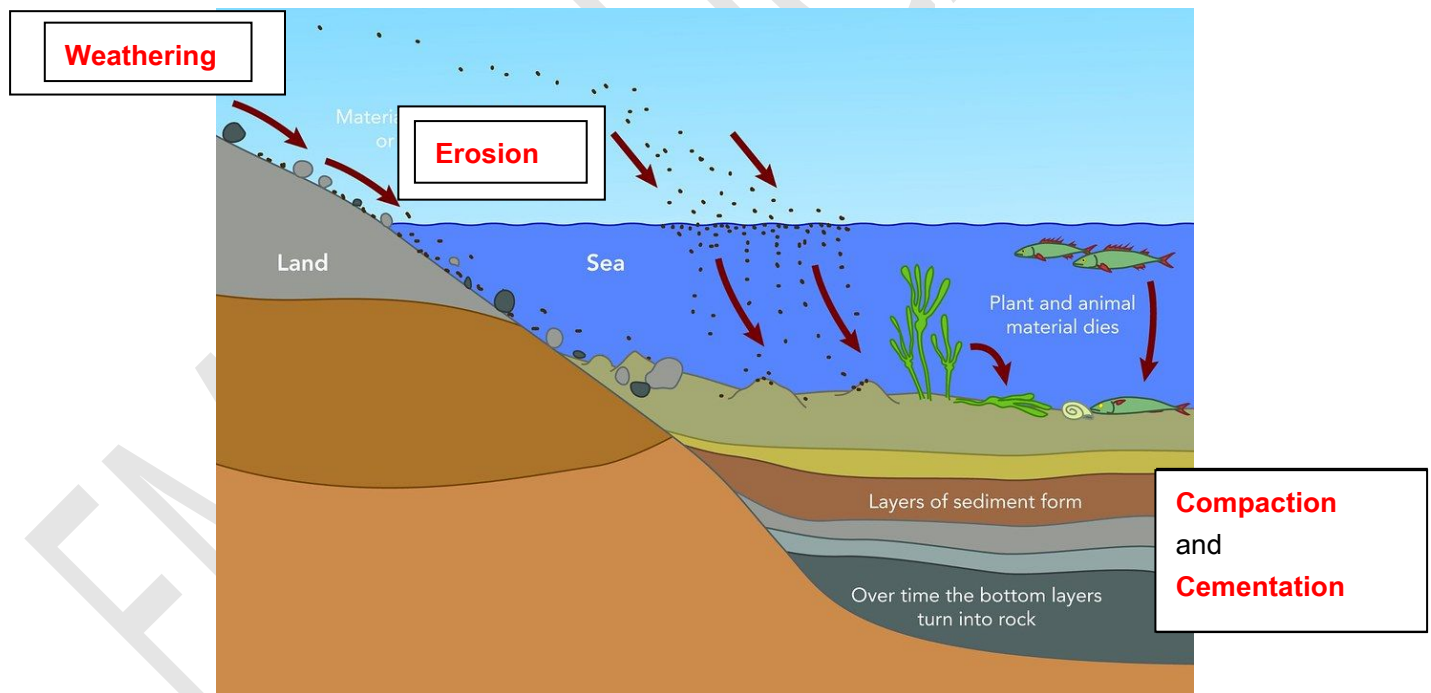
Weathering Over time, rocks break up into smaller pieces or even dissolve

Erosion Broken pieces of rock moved by wind, water, ice, or gravity

Compaction Sediments pushing down and squeezing out water

Cementation Minerals in the water cement (stick) the sediment together

Put the above four terms into the correct boxes in the diagram below:



Search this video on YouTube to help you understand how sedimentary rock is formed.

Forming Sedimentary Rocks

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

Metamorphic Rock

Metamorphic rock is formed when igneous rock or sedimentary rock is exposed to high temperatures or pressures.

Igneous Rock
Sedimentary Rock

High temperatures or
pressures.

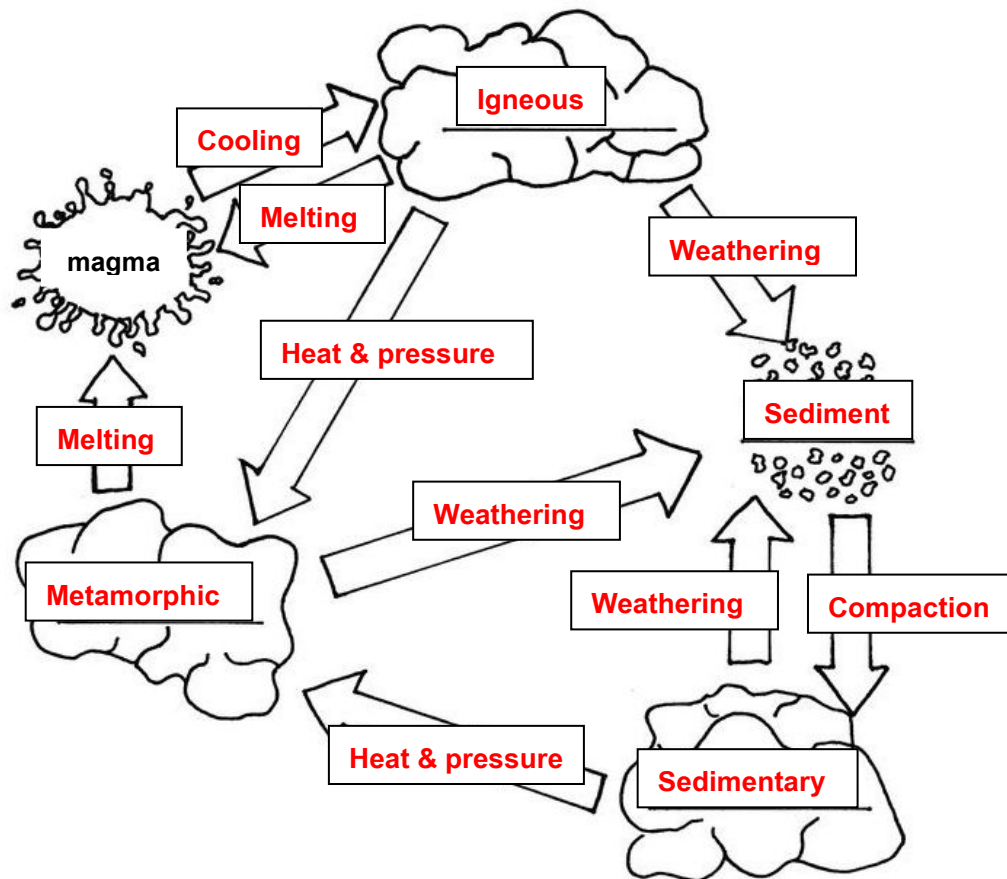
Metamorphic Rock

Search this video on YouTube to help you understand how metamorphic rock is formed.

BBC Bitesize KS3 Chemistry How is metamorphic rock formed

<https://www.youtube.com/watch?v=YLo4zr42fXM>

The Rock Cycle



Use the word bank to complete the above diagram:

weathering	sedimentary	sediment	<i>magma</i>	melting
heat & pressure	metamorphic	melting	igneous	weathering
cooling	heat & pressure	compaction	weathering	

Use your *Longman Chemistry textbook* or notes to find out which rock type each example is:

Name of Rock	Rock Type (<i>igneous, sedimentary or metamorphic</i>)
Granite	Igneous
Marble	Metamorphic
Basalt	Igneous
Sandstone	Sedimentary
Slate	Metamorphic

Fossils

Fossils are the preserved remains or traces of organisms that lived long ago.
Preserved = kept in original or similar state for a long time.



Use your notes and page 109 in your *Longman Chemistry textbook* to fill in the blanks below about the two types of fossils.

1. Body **Fossil** : These fossils are made of a **plant** or **animal** body.
2. **Trace** fossil: These fossils can record the **behavior** and **movements** of animals.

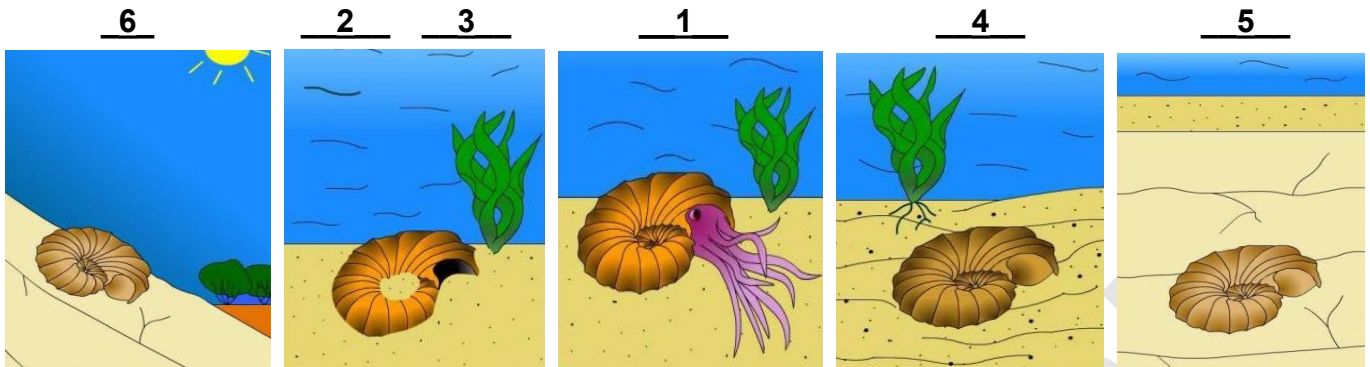
There are six steps in the formation of fossils.

Put these six steps in the correct order from 1(first) to 6(last).

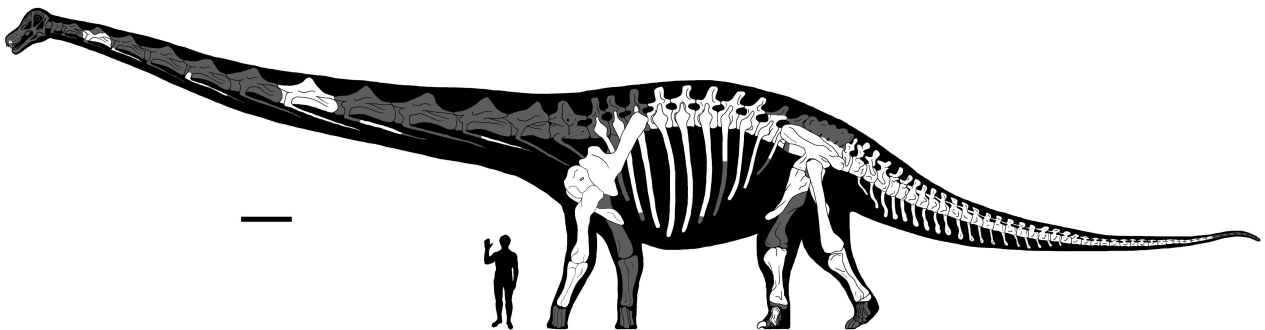
- The animal dies and falls to the bottom of the ocean.
- This builds up layer after layer of sediment; burying the remains.
- The marine rocks become exposed on the Earth's surface.
- These sediments will compact and cement over time to form sedimentary rock.
- The soft parts decay; leaving the hard shell only.
- Over time sediment settles to the bottom of the ocean.

1. (First) The animal dies and falls to the bottom of the ocean.
2. **The soft parts decay; leaving the hard shell only.**
3. **Over time, sediment settles to the bottom of the ocean.**
4. **This builds up layer after layer of sediment; burying the remains.**
5. **These sediments will compact and cement over time to form sedimentary rock.**
6. (Last) **The marine rocks become exposed of the Earth's surface.**

Next, match each step from above with its picture.



Watch a video on YouTube about the Dreadnoughtus, probably, the largest terrestrial (land) creature to have ever walked the Earth, and how fossils are an important source of information about them.



Scientists discover 65-Ton Dinosaur 'Dreadnoughtus'
<https://www.youtube.com/watch?v=MNe4g3TZQ8U>