

Rock Cycle

Welcome to the Rock!



THINKPAIRSHARE

- ❖ What is a rock?
- ❖ Take a minute and write down what you think the definition of a “rock” is.
- ❖ Once you have done so, discuss your answers with the person beside you. Compare your answers and discuss your thought process.
- ❖ Once you have completed this, as a class we will discuss your thoughts.



Rock

A rock is...



- ❖ Made of a blend of minerals
- ❖ Are built from materials from inside the Earth and recycled into new materials
- ❖ Can be classified into three different categories



Rocks...Minerals..what is the difference?

A rock is...

- ❖ Made of a blend of minerals

A mineral is...

- ❖ Solid, crystalline substance that is the same chemically throughout

Example: diamond is a mineral form of the chemical element carbon



Rocks...Minerals..what is the difference?

A rock is...



Granite

A mineral is.



Iron ore



Rough diamond



Graphite



Jadeite=jade



Salt

Minerals of Canada / Minéraux du Canada



ACKNOWLEDGMENTS

The *Minerals of Canada* is a dedicated reference of minerals & metals in the country. It is a collaborative effort of the Mineralogical Association of Canada (MAC) and the Geological Survey of Canada (GSC). The project was funded by the Government of Canada through the Natural Sciences and Engineering Research Council of Canada (NSERC) and the Geological Survey of Canada (GSC). The project was a joint effort of the Mineralogical Association of Canada (MAC) and the Geological Survey of Canada (GSC). The project was a joint effort of the Mineralogical Association of Canada (MAC) and the Geological Survey of Canada (GSC).

MAC MEMBERS

The Mineralogical Association of Canada (MAC) is a non-profit organization dedicated to the promotion and advancement of mineralogy in Canada. It was founded in 1952 and has since grown to become the largest mineralogical association in the country. The association's primary objective is to advance the science of mineralogy through research, education, and public outreach. It achieves this through a variety of activities, including the publication of the *Canadian Mineralogist*, the organization of national and international conferences, and the provision of resources and support to its members.

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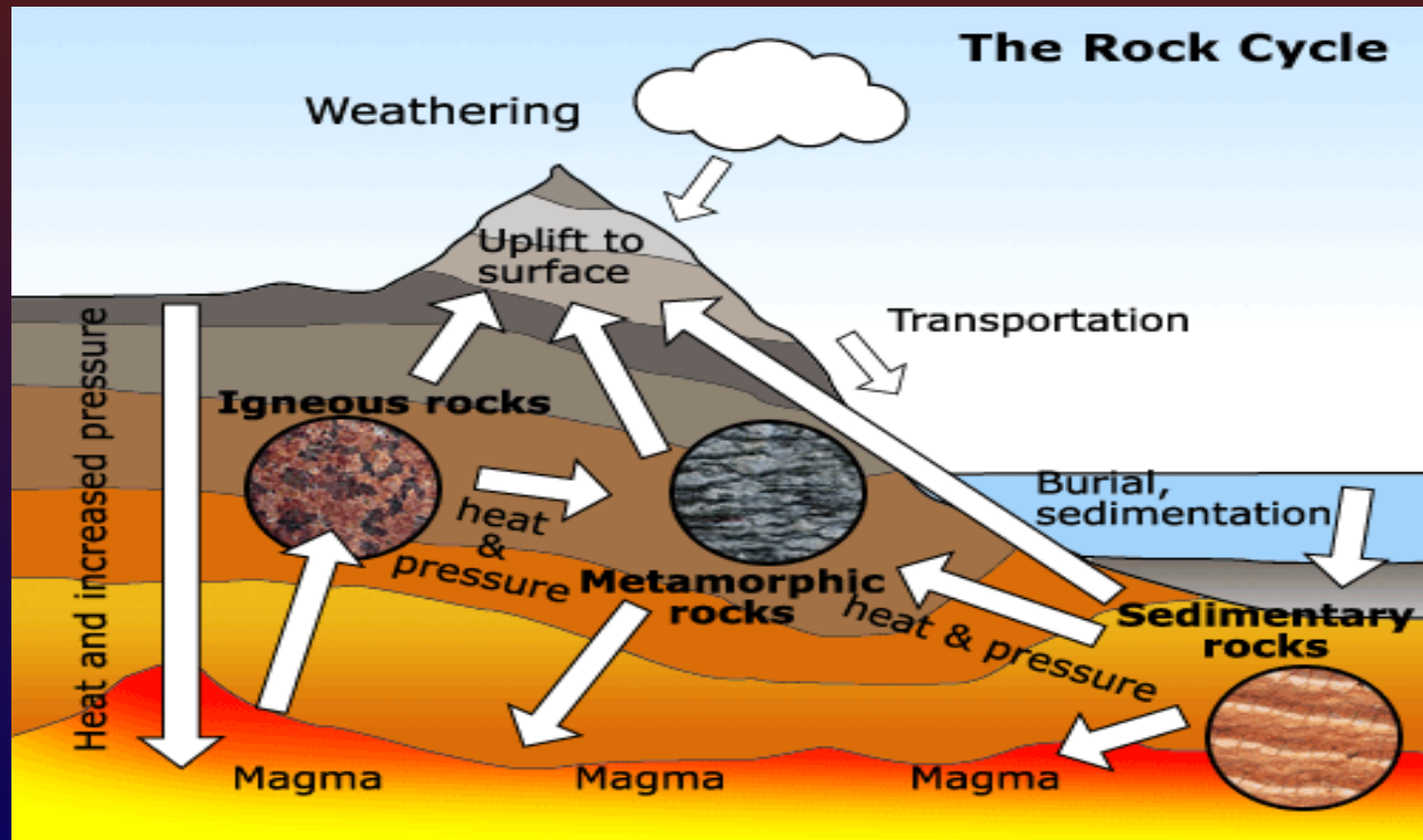
NOTES

This document is available in both English and French. The French version is available on the website of the Mineralogical Association of Canada. The document is a collaborative effort of the Mineralogical Association of Canada (MAC) and the Geological Survey of Canada (GSC). The project was funded by the Government of Canada through the Natural Sciences and Engineering Research Council of Canada (NSERC) and the Geological Survey of Canada (GSC).

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The Rock Cycle

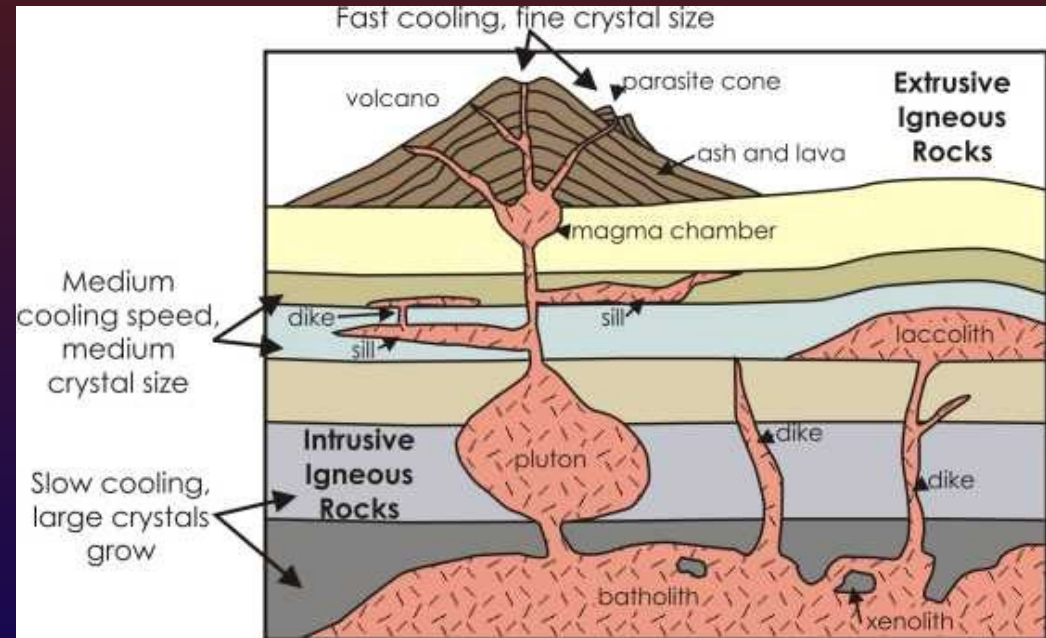




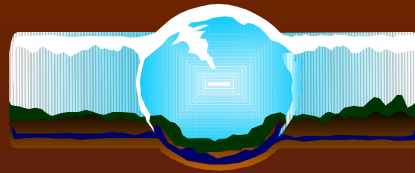
Igneous

❖ The word Igneous is Greek for “FIRE”

❖ As magma pushes towards the earth's surface, it begins to cool and turns into solid igneous rock.



❖ All igneous rocks do not cool the same way, hence the reason why they do not all look the same.



Igneous



- ❖ Intrusive igneous rocks cool slowly under the earth's surface. Granite is an example of this.

❖ Extrusive igneous rocks occur when magma erupts and the lava cools quickly and forms rocks with small crystals. Basalt is an example of this.





Images



Granite
Counter



Granite Mt.
Rushmore



Roman Theatre

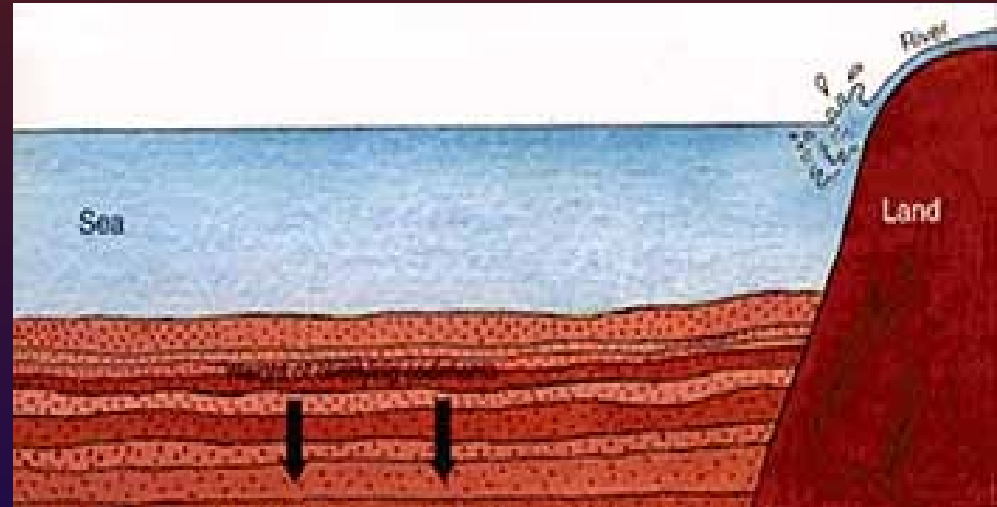


Paving
stones for a
street in Italy



Sedimentary

- ❖ Earth's surface is constantly being eroded by weathering (wind, rain, ice).
- ❖ This means that rocks are broken up into small pieces.



- ❖ These pieces, through weathering, travel and settle in new places and begin to pile up to form flat layers.



Sedimentary

- ❖ Over time, these pieces are pressed together to form solid rock called sedimentary rock.
- ❖ Examples include limestone, sandstone, and shale.



Image

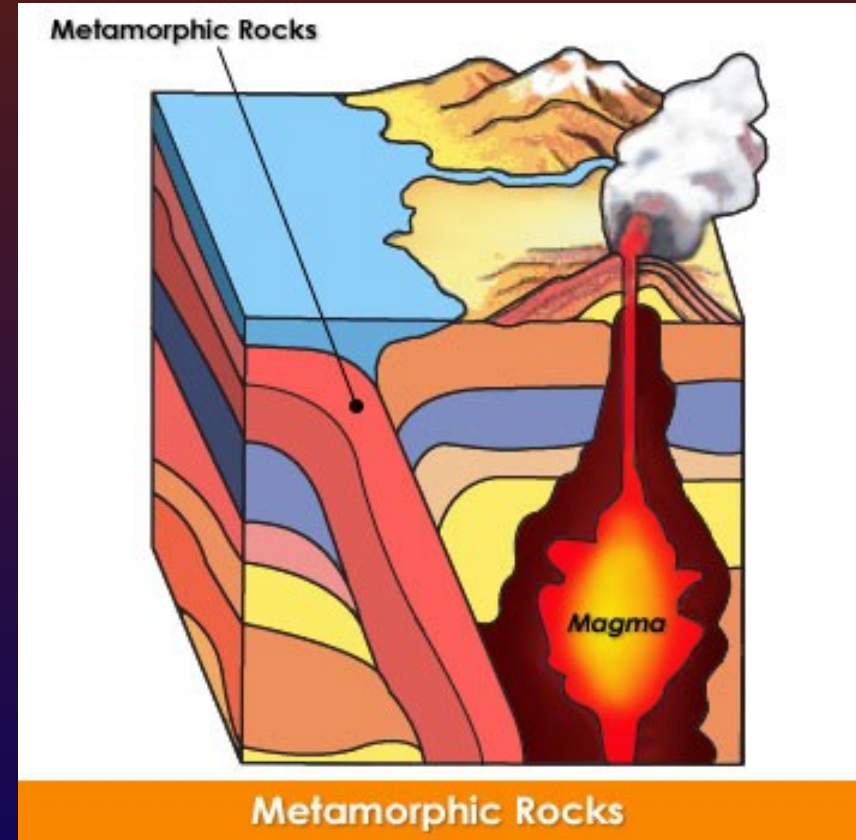
Many buildings use sedimentary because it is easy to cut.

Ex. A Courthouse in Kansas built of Limestone, of this sandstone wall

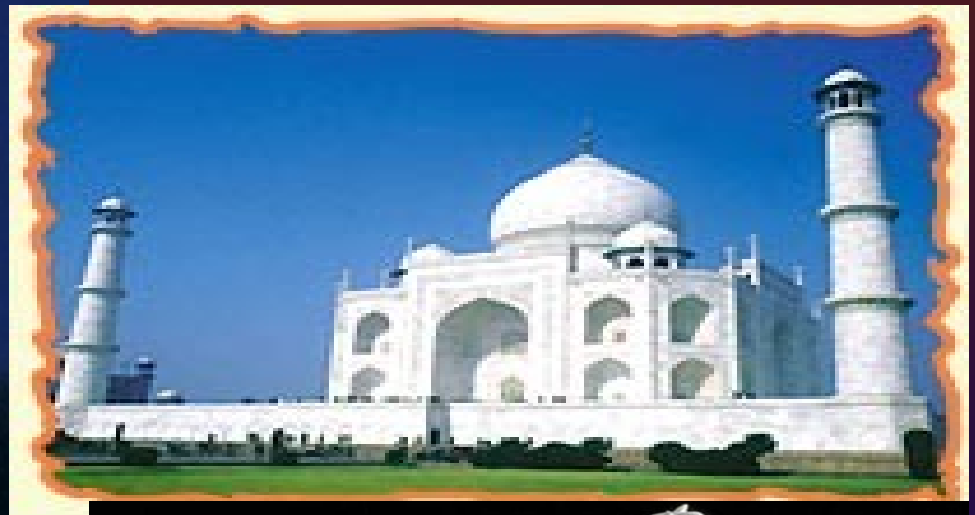


Metamorphic

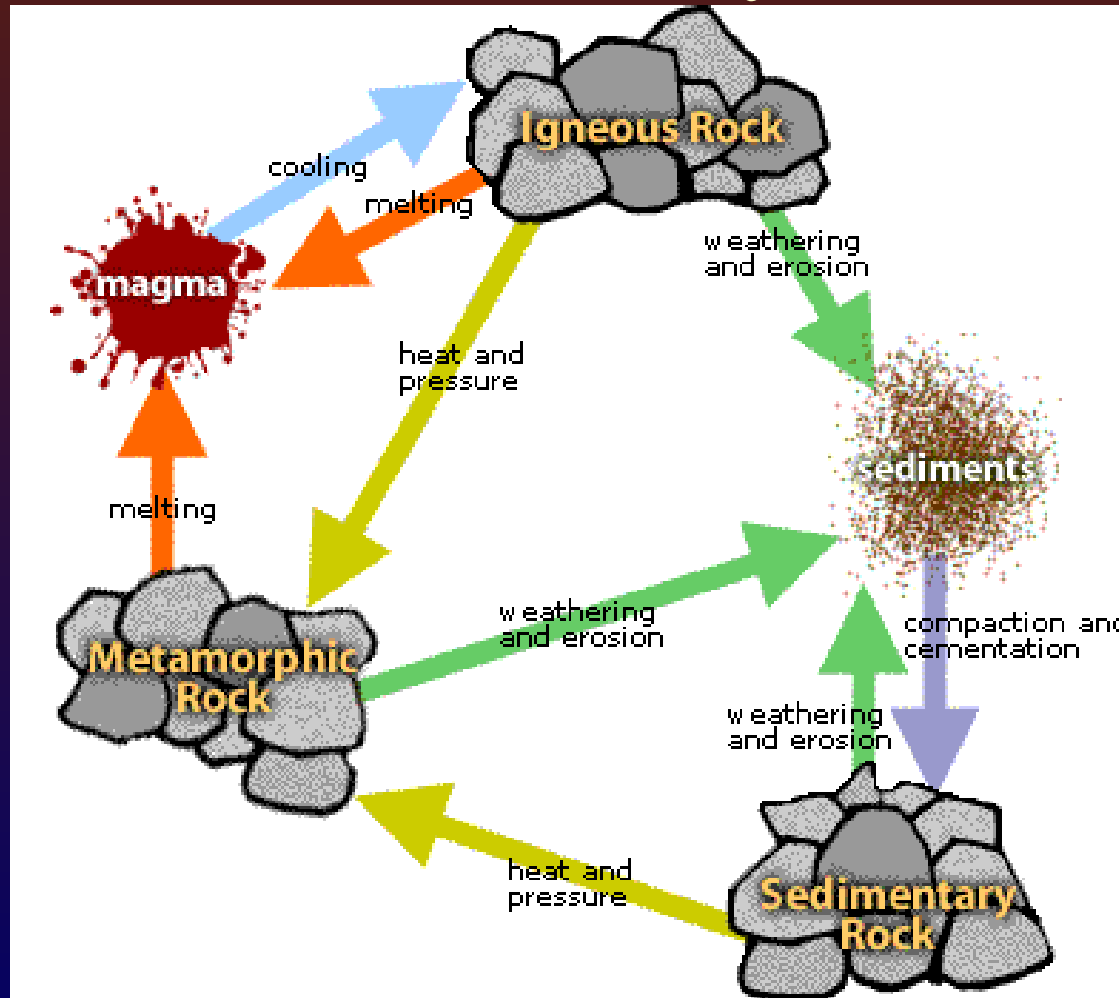
- ❖ Heat and pressure can alter many things, including rocks.
- ❖ Metamorphic rocks are formed deep in the earth where the temperature and pressure are both very high.
- ❖ Heat comes from the magma and the pressure comes from the layers of rock.



Limestone turns into Marble



The Rock Cycle



Make Your Own Rock Cycle

- ❖ Using the previous rock cycle, pencil crayons and a pencil, make your own rock cycle with captions on the side explaining what is happening.

