

Geology Rocks!



Overview

- Discuss the meaning of Geology
- What do Geologists do?
- Explain the types of rocks
- Bill Nye the Science Guy
- Create your own rock cycle



Geology

How would you define geology?

Think - Pair - Share



Geo = Earth

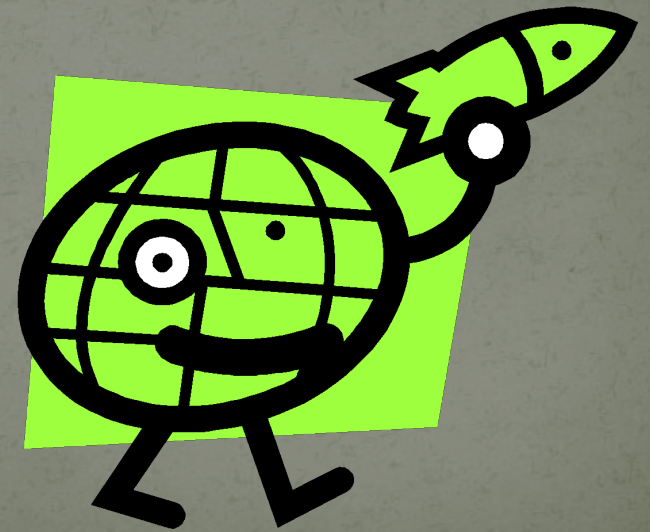
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Logia = study of/discourse



Geology = study of the earth

Earth is a complicated entity, where living organisms, oceans, atmosphere, and solid rock interact with one another.



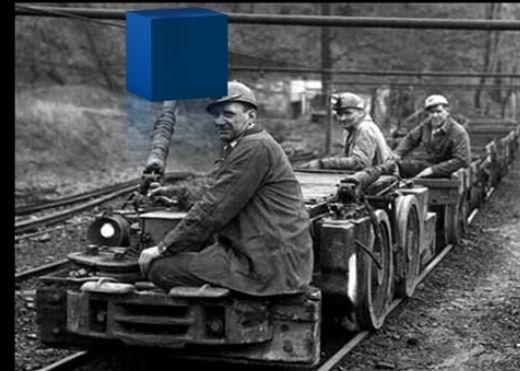
GEOLOGIST



What my friends think I do



What my mom thinks I do



What society thinks I do



What other scientists think I do



What I think I do



What I actually do

Geologist = someone who studies the Earth.

- Earthquakes
- Landslides
- Floods
- Volcanoes
- Resources
- Oil
- Natural gas
- Water
- Gold
- Metals
- Potash
- Building Structures
- Climate Change
- Hydrology
- Paleontology
- mixes all the sciences together
- focuses on processes
- change over time
- Mountain building
- Plate tectonics
- other planets
- meteorites

Things to Think About

- Did 'Saskatchewan' ever have volcanoes?
- Was 'Saskatchewan' always this flat?
- Was 'Saskatchewan' ever at the bottom of the ocean?
- Does oil actually come from dinosaurs?

Geology
Name the three types of rock.



1. Classic
2. Punk
3. Hard



Three Rock Types

"Rocks have secrets to share, if only we listened"

Igneous = fire

Rocks formed from the solidification of molten (melted) rock (magma = underneath surface or lava = above surface).



Metamorphic = change form/shape

Formed by changing one rock into a different rock because of heat and pressure.

Sedimentary = sediment

formed by cementing together broken particles.



**HA! IGNEOUS ERODES
TO SEDIMENTARY!**

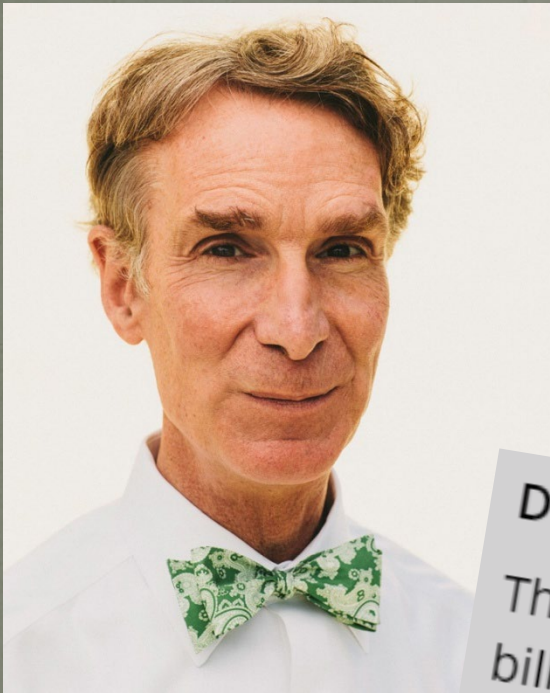
**NO NO NO. IGNEOUS
MELTS METAMORPHIC!**

**WHAT?! METAMORPHIC
ALTERS SEDIMENTARY!**



**THE UNDERSTANDABLY LESS POPULAR
GEOLOGY VERSION OF ROCK-PAPER-SCISSORS,
ROCK-ROCK-ROCK.**

Bill Nye the Science Guy Throwback



https://www.youtube.com/watch?v=BsIHV_voMk

- Bill Nye the Science Guy Rock Cycle

Did you know???

The oldest rocks in Saskatchewan are about 3.3 billion years old and are located north of Lake Athabasca.

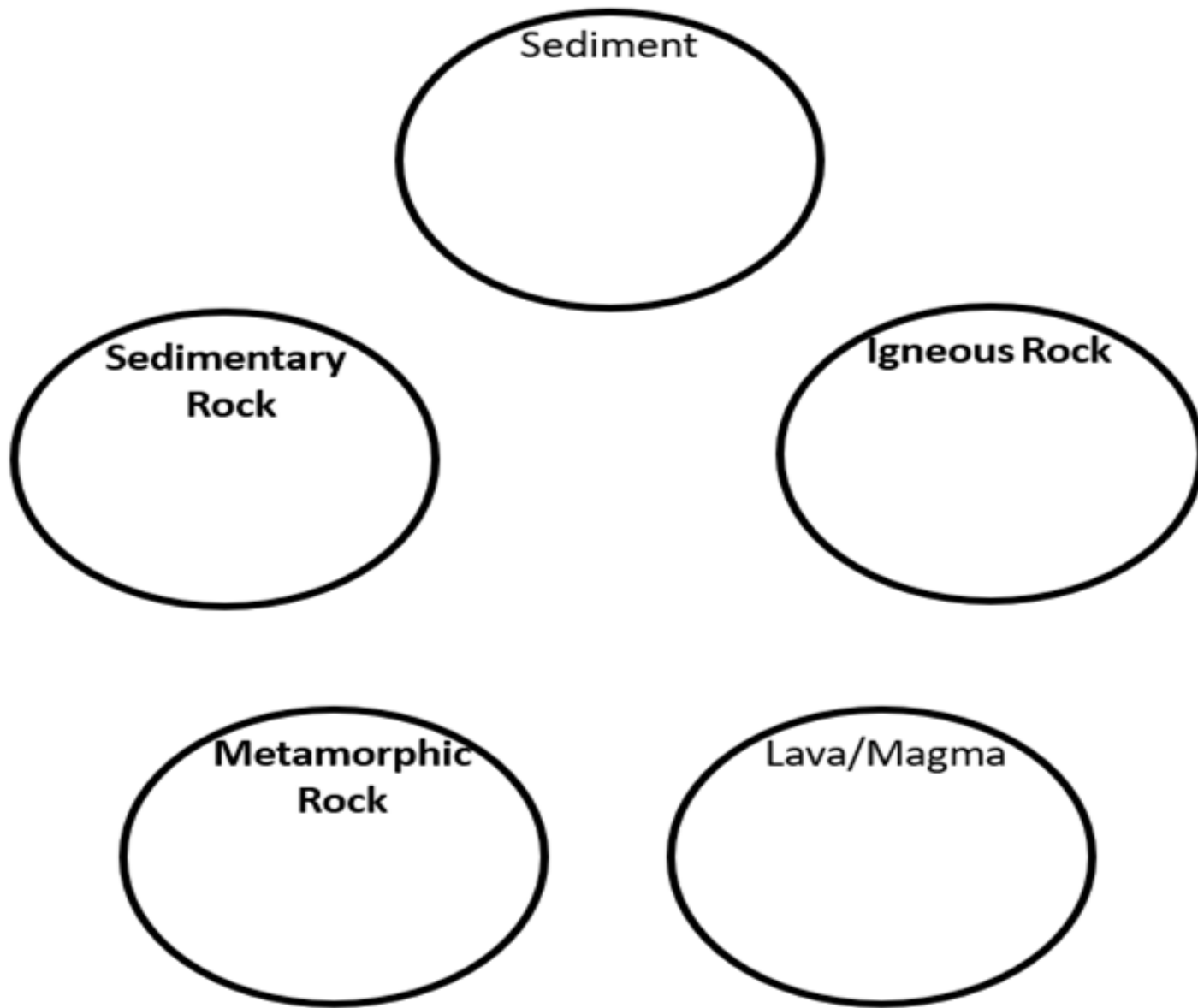
Create Your Own Rock Cycle

In your table groups create your own rock cycle.

- Write down the words sedimentary, metamorphic and igneous.
- Use arrows and words to describe how you get from one type to the other.
- Use terms such as heat, pressure, melting, compaction, solidification, cooling, breaking down, weathering, erosion, magma, sediment ...

Each group will share their rock cycle.

The Rock Cycle



Sediment



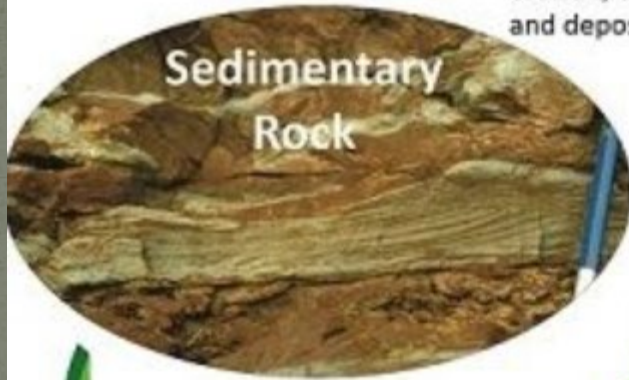
erosion, transportation and deposition



compaction and cementation



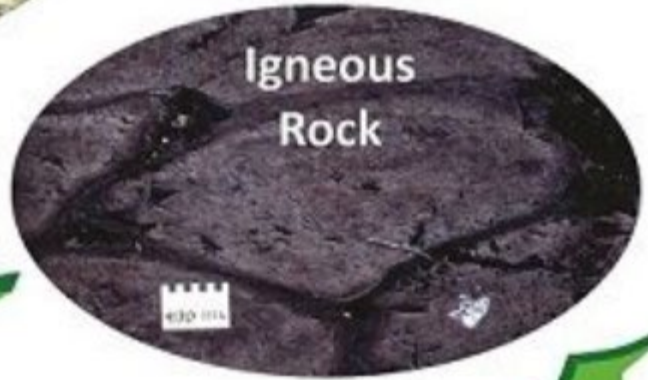
Sedimentary Rock



erosion, transportation and deposition



Igneous Rock



Cooling
At surface: volcanic
At depth: plutonic



heat and pressure



heat and pressure



Metamorphic Rock



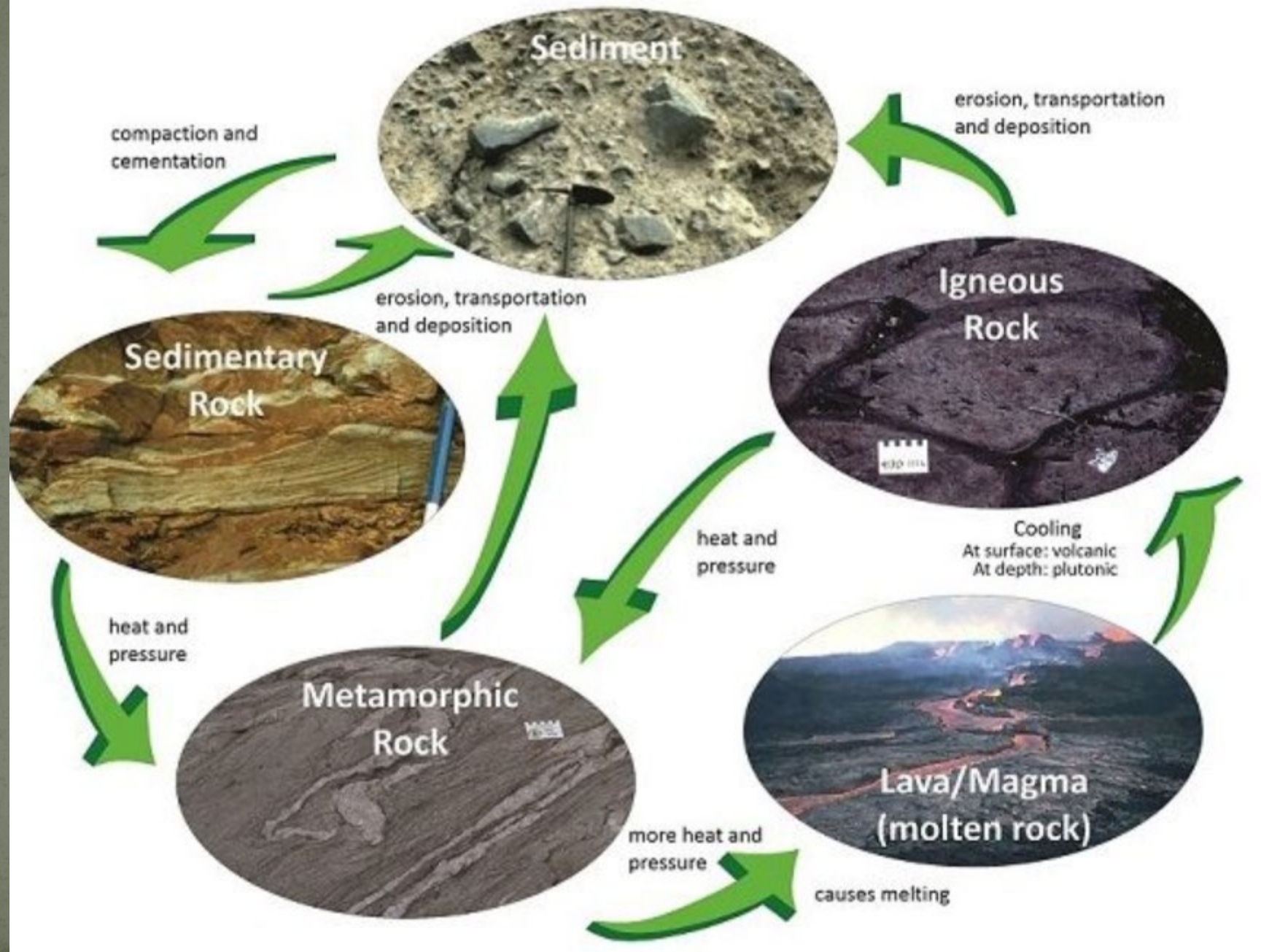
more heat and pressure



Lava/Magma
(molten rock)



causes melting



Bringing Rocks into the Classroom

- Each group will get some rocks.
- Try to place the rock on the correct rock type.
- Discuss your reasoning with your group.