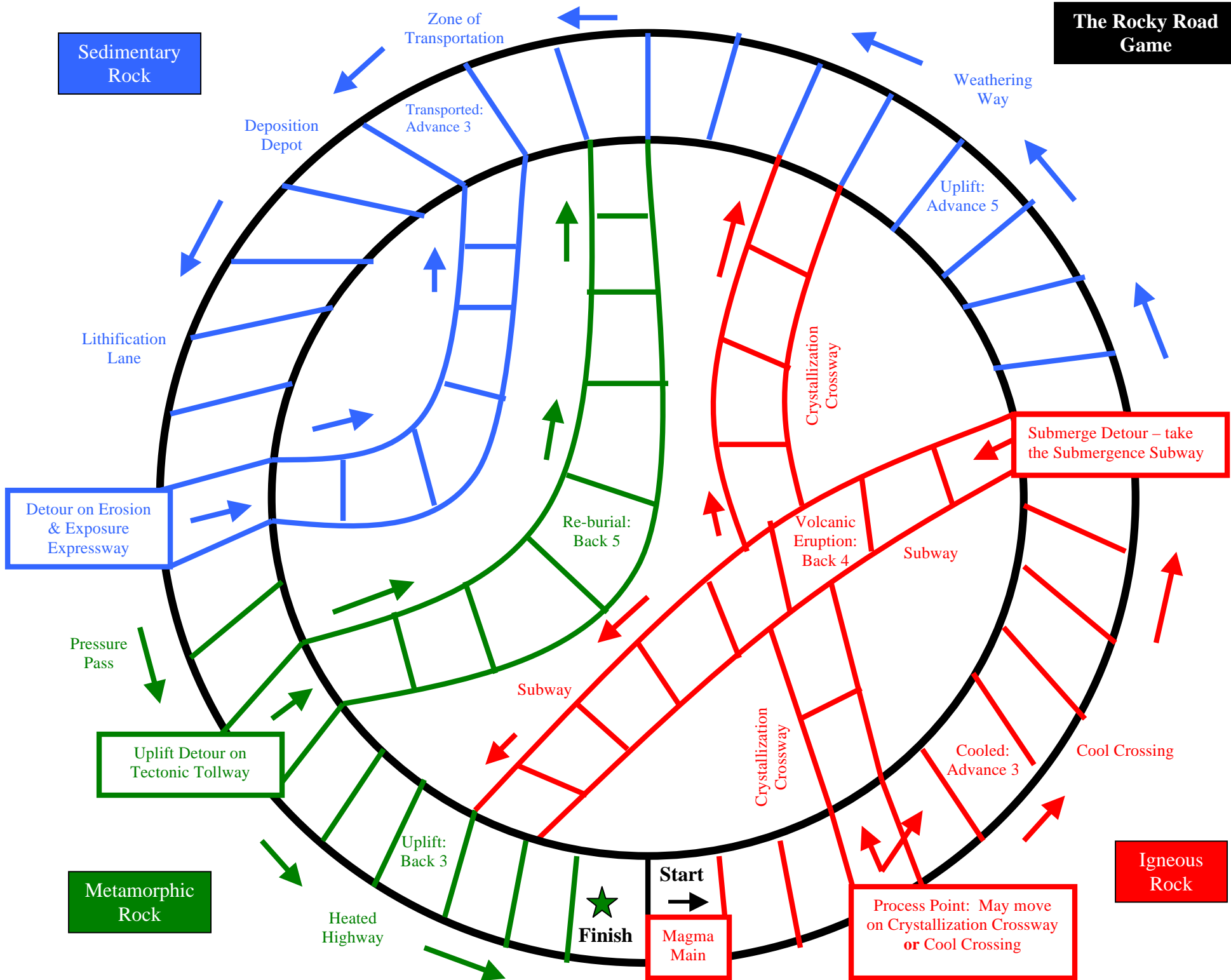


The Rocky Road Game



Rocky Road Game!



Question: What process brings rocks to the surface where they can be eroded?

Answer: Uplift

Rocky Road Game!



Question: What type of rock is produced by volcanoes?

Answer: Igneous

Rocky Road Game!



Question: What process causes the breakdown of rocks?

Answer: Weathering

Rocky Road Game!



Question: Conglomerate is a rock made of small pebbles that are cemented together. What type of rock is this?

Answer: Sedimentary

Rocky Road Game!



Question: Shale is a rock made of compacted mud. What type of rock is this?

Answer: Sedimentary

Rocky Road Game!



Question: Slate used to be shale before exposure to heat and pressure. What type of rock is this?

Answer: Metamorphic

Rocky Road Game!



Question: A fossil is found in a piece of limestone. What type of rock is limestone?

Answer: Sedimentary

Rocky Road Game!



Question: What is molten rock found underground called?

Answer: Magma

Rocky Road Game!



Question: What is molten rock found above ground called?

Answer: Lava

Rocky Road Game!



Question: Granite is a rock that cools and crystallizes from magma. What type of rock is this?

Answer: Igneous

Rocky Road Game!



Question: A rock is a solid mixture of crystals of one or more _____.

Answer: Minerals

Rocky Road Game!



Question: What type of rock is formed from magma that cools and solidifies?

Answer: Igneous

Rocky Road Game!



Question: What is the process by which one rock type changes into another rock type?

Answer: Rock Cycle

Rocky Road Game!



Question: What is the process by which water, ice, wind and gravity drop sediments in a new location?

Answer: Deposition

Rocky Road Game!



Question: What are grains or bits and pieces of rocks called?

Answer: Sediment

Rocky Road Game!



Question: Rocks are found in this earth layer.

Answer: Crust

Rocky Road Game!



Question: True or False: Ice can weather rock.

Answer: True

Rocky Road Game!



Question: True or False: Water can transport sediment.

Answer: True

Rocky Road Game!



Question: True or False: Magma and lava are the same thing.

Answer: False

Rocky Road Game!



Question: True or False: Fossils can be found in igneous rocks.

Answer: False

Rocky Road Game!



Question: Yes or No: Can a sedimentary rock be weathered and its pieces become part of another sedimentary rock?

Answer: Yes

Rocky Road Game!



Question: When a rock is buried, it may be exposed to heat and _____.

Answer: Pressure

Rocky Road Game!



Question: Pumice is a rock with a lot of “air pockets” and no noticeable crystal structures. Did it cool from magma or lava?

Answer: Lava

Rocky Road Game!



Question: Marble used to be limestone. What type of rock is marble?

Answer: Metamorphic

Rocky Road Game!



Question: Sandstone is made of compacted and cemented sand. What type of rock would sandstone be?

Answer: Sedimentary

Rocky Road Game!



Question: The Grand Canyon has obvious strata or layers where material has been deposited. What type of rock has this characteristic?

Answer: Sedimentary

Rocky Road Game!



Question: Name a tool that a geologist would use to carefully examine the crystals of a rock

Answer: Magnifying glass (and/or microscope)

Rocky Road Game!



Question: The mass of a rock could be found with this piece of classroom lab equipment.

Answer: Triple Beam Balance

Rocky Road Game!



Question: The weight of a rock could be found with this piece of classroom lab equipment.

Answer: Spring Scale

Rocky Road Game!



Question: Sediment is held together by compaction and _____.

Answer: Cementation

Rocky Road Game!



Question: The volume of a rock can be found using a graduated cylinder and what method?

Answer: Water Displacement Method

Rocky Road Game!



Question: What is the formula for calculating the density of a rock?

Answer: $\text{Mass} \div \text{Volume}$

Rocky Road Game!



Question: Enchanted Rock is an uplifted dome of magma. What rock type would it be classified as?

Answer: Igneous

Rocky Road Game!



Question: What type of rock will form as the result of a volcanic eruption?

Answer: Igneous

Rocky Road Game!



Question: True or False: Minerals and rocks are the same thing.

Answer: False

Rocky Road Game!



Question: The chemical makeup or combination of minerals that make up a rock is called its _____.

Answer: Composition

Rocky Road Game!



Question: What do we call a book that helps us to identify the names of specimens?

Answer: Field Guide

Rocky Road Game!



Question: Is a coarse-grained rock made up of large or small crystals (or grains)?

Answer: Large

Rocky Road Game!



Question: To metamorphose means to _____.

Answer: Change

Rocky Road Game!



Question: Metamorphic rocks that have bands (or stripes) of different minerals are called _____.

Answer: Foliated

Rocky Road Game!



Question: Sediment that is removed from mountains and washed down a river or sea may eventually be deposited at the bottom of the _____.

Answer: Ocean

Rocky Road Game!



Question: Magma rises because it is less _____ than the surrounding rock.

Answer: Dense

Rocky Road Game!



Question: The volume of a rock can be found using a graduated cylinder and what method?

Answer: Water Displacement Method

Rocky Road Game!



Question: What is the formula for calculating the density of a rock?

Answer: $\text{Mass} \div \text{Volume}$

Rocky Road Game!



Question: True or False: Soil is partly made of weathered rock.

Answer: True

Rocky Road Game!



Question: The texture of _____ rocks depends on how quickly it cools.

Answer: Igneous

Rocky Road Game!



Question: Rock can be brought to the Earth's surface by uplift and by _____.

Answer: Erosion of overlying rock.

Rocky Road Game!



Question: You find a rock made of igneous, metamorphic & sedimentary rock fragments. How would you classify it?

Answer: Sedimentary (Conglomerate)

The Rocky Road Game

Materials:

- 2 - 3 players
- Rock Playing Pieces
- The Playing Board
- Question Cards
- A Die

Object of the Game: This is a race board game in which players move along the path of the rock cycle. The path for *The Rocky Road Game* is divided into 3 colors corresponding to the 3 rock categories – igneous is red, sedimentary is blue, and metamorphic is green.

The Rules:

1. Each player selects a rock as a playing piece and places their rock on “Start.”
2. Each player rolls the die & the player with the highest number goes first.
3. The questions and their answers are on the same card, so the player whose turn it is should not read their own question card. The next player on the right will be the question reader.
4. Once a question is read, the player has up to 30 seconds in which to answer.
5. If the player answers correctly before time runs out, he/she is to roll the die and advance the number of spaces indicated by the die.
6. If the player answers incorrectly, he/she is to roll the die and move backwards the number of spaces indicated by the die. No one moves backwards further than the “Start” space.
7. Next, the player to the right takes his/her turn. The question reader should also shift to the right.

Notes on the Rules:

- The object of the game is to reach “Finish” and the first player to do so wins the game. Players do NOT need to have the exact number of spaces to hit the “Finish” space.
- Each player attempts only one question per turn.
- The question reader draws cards from the top of the question pile and returns them to the bottom of the pile.
- If the player lands on a space with directions, he/she completes those directions before the next person takes his/her turn. This applies to both forward and backward movement.
- If players land on a detour space, they MUST take that path.
- At “Process Point,” players can move in either direction.
- Where “Submergence Subway” and “Crystallization Crossway” intersect, players must stay on their current path and may not cross over to another path.

Variation: To enable play by the whole class, the teacher can take the role of the question reader. Students can be divided into 2 or 3 large teams. The game board can be posted or projected on the wall.