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# The Rock Cycle

## Background

Combinations of gravity, erosion, heat, pressure, plate motion, and mountain-building are constantly at work changing, breaking apart, moving, and recombining earth materials. The rock cycle is a process that involves a sequence of interrelated and ongoing geologic processes that have shaped, and continue to shape, the Earths' surface. The steps of the rock cycle tend to be slow, long-term processes that result in significant changes only after long periods of time. Certain rock types, related resources, and natural hazards are likely to be found associated with areas where a particular step of the rock cycle is dominant. In this activity, you will be representing a portion of "earth material" that may include: rock, molten rock (magma), sediments, materials dissolved in a solution, or materials produced by organisms.

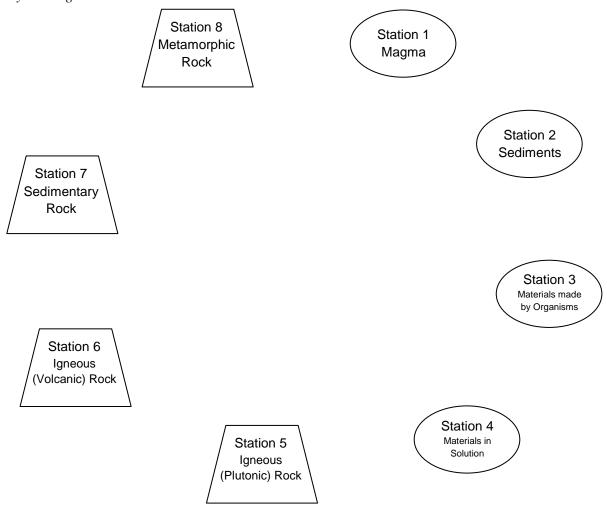
Materials: n/a

### Procedure:

- 1. Begin your rock cycle exploration by writing your station number in the appropriate box in the top row of the *Data Table* below.
- 2. Read the information on the spinner that belongs with this portion of the rock cycle. Write the station name, any notes about the station, and place a tick mark (/) in the appropriate box in the top row of your data table. This mark (/) represents ~500,000 years.
- 3. Spin the spinner and see where the arrow points.
- 4. Repeat steps 2 and 3 until you are directed to stop.
- 5. Calculate the geologic time you spent at each station and enter your results in the final box for each station.
- 6. Complete the *Rock Cycle Diagram* by drawing arrows connecting the stations in the order recorded on your data table. If you stayed at a station twice (or more) in a row, make a small loop on the diagram to show that you began and ended at that station.
- 7. Answer the questions in the *Results & Analysis* section.

### Data Table

Station		Notes	Tick Marks	Geologic Time
#	Name	notes	Marks	Geologic Tille



#### Results & Analysis

On a separate sheet of paper, answer the following questions thoroughly using complete sentences. You may complete your work on the computer. Staple your work to the back of this packet.

- 1. How much time did you spend as:
  - a. sedimentary rock?
  - b. metamorphic rock?
  - c. igneous rock?
- 2. How is igneous rock formed? How does igneous rock become sedimentary rock?
- 3. How can sedimentary rock become igneous rock?
- 4. Where are the following rocks commonly found:
  - a. sedimentary rock?
  - b. metamorphic rock?
  - c. igneous rock?
- 5. What are the defining features of:
  - a. a divergent plate boundary?
  - b. a convergent plate boundary?
  - c. a transform plate boundary?
- 6. What geologic processes and features are typical near:
  - a. divergent plate boundaries?
  - b. convergent plate boundaries?
  - c. transform plate boundaries?
- 7. What type of boundary is found in the Puget Sound area and what geologic processes and features are found there?