The Rock Cycle
Review
May 14th, 2020
7th grade EARTH SCIENCE

Lesson: May 14th, 2020

LEARNING GOAL:
I can describe the processes of the rock cycle.
1. Begin your review by taking this short quiz.

Quizziz: The Rock Cycle
1. On your paper create a model of the rock cycle (from memory).

2. Now create a model of the rock cycle after watching the film.

3. Write a short summary regarding how your model changed before and after watching the film.
Possible Answers
1. Read all 5 steps.

2. Recreate the chart below

3. In each step create a symbol that models the process. (Answers vary)

Step 1
Minerals are heated to extremely high temperatures and then cooled, forming igneous rocks. When magma cools inside the earth, it forms igneous rocks such as granite. These are called intrusive igneous rocks. And they're coarse-grained because they cool slowly. When lava cools at the earth's surface, it forms igneous rocks such as basalt—a rock with fine grains, because it cooled quickly.

Step 2
When rocks are exposed at the earth's surface, their mineral structure changes because they erode and break down into smaller grains. These grains are then transported through wind or water and deposited as sediments, such as sand and pebbles.

Step 3
Sediments are compacted and cemented over time, forming sedimentary rocks. You can usually find sedimentary rocks in and near riverbeds and streambeds. Sedimentary rocks sometimes contain fossils—traces of life—that can give scientists some information about the earth and its past.

Step 4
Igneous or sedimentary rocks that are heated or put under pressure can turn into metamorphic rocks. Some or all of the minerals in the original rocks are replaced, atom by atom, to form new minerals. Metamorphic rocks are often squished, twisted, smeared out, and folded from pressure, water, or heat.

Step 5
At higher temperatures, over time, metamorphic rocks may melt again. That changes the crystals of the rocks and creates igneous rocks. What happens then? Go back to Step 1 and repeat—forever.

Activity
HAWAIIAN HEAT! The islands of Hawaii were formed when volcanic lava cooled to form igneous rocks. Use an encyclopedia or the Internet to make a timeline of how the islands of Hawaii formed. How has Hawaii's rock composition changed? What type of rocks are found in Hawaii today? Why do you think these rocks are found there? Keeping in mind what you've learned about the rock cycle, what could possibly happen to the igneous islands of Hawaii?
VOCABULARY REFRESHER

1. ON YOUR PAPER NUMBER FROM 1-16

2. MATCH THE DEFINITION WITH THE SYMBOL

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2. Match the definition with the symbol.

1. Definition: The process by which sediment is laid down in new locations.
   Example: The river deposited tons of sediment into the estuary.

2. Definition: Process in which sediment is pressed together under their own weight.
   Example: Small pieces of sand and stone compacted together to form sedimentary rock.

3. Definition: A type of rock that forms from the cooling of molten rock at or below the surface.
   Example: Igneous rocks, which cool slowly, form intrusive rocks with large crystals.

4. Definition: A series of processes on the surface and inside earth that slowly change rock from one kind to another.
   Example: Studying the rock cycle is the best way to learn how rocks are formed.

5. Definition: Molten, or hot liquified rock, located deep below the Earth's surface.
   Example: Magma boiled and bubbled beneath the earth's surface.

6. Definition: Igneous rock layer formed when magma hardens beneath Earth's surface.
   Example: After the volcanic eruption the lava cooled to form an intrusive rock formation.

7. Definition: Heat from the center of the earth along with all of the pressure pushing down form metamorphic rock.
   Example: The combined heat and pressure within the earth are strong enough to change rock from one kind to another.

8. Definition: Volcano is a vent, or opening, in the earth's surface through which molten rock, gases, and ash erupt.
   Example: When plates collide, the energy of movement can heat the rock until it melts into magma and erupts as a volcano.

9. Definition: Lava is a liquid material that comes from rocks or the remains of organisms.
   Example: A bunch of sediment was washed into the river after the big storm.

10. Definition: When magma erupts from a volcano it turns to lava and hardens as it cools.
    Example: Lava erupted from the volcano covering the valley below.

11. Answers on next slide
Answer Key

1. Igneous Rock
2. Metamorphic Rock
3. Sedimentary Rock
4. Compaction
5. Cementation
6. Weathering
7. Erosion
8. Deposition
9. Rock Cycle
10. Extrusive Rock
11. Intrusive Rock
12. Magma
13. Lava
14. Sediment
15. Volcano
16. Heat+Pressure
1. Study the table and select the best answer

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Which type of rock is most likely to form by Process Z?
Note: Think about which type of rock is formed from weathering and erosion.

A. magmatic rock  
B. metamorphic  
C. sedimentary  
D. igneous

2. Study the table and select the best answer.

Which type of process is most likely to form by process Y?

A. magmatic rock  
B. metamorphic  
C. sedimentary  
D. igneous

3. Read the passage then study the pictures and select the two best answers.

On March 20, 1980, Mount St. Helens experienced a magnitude 4.2 earthquake; and, on March 27, steam venting started. By the end of April, the north side of the mountain had started to bulge. On May 18, a second earthquake, of magnitude 5.1, triggered a massive collapse of the north face of the mountain. The magma in St. Helens burst forth into a large-scale flow that flattened vegetation and buildings over 230 square miles around.

What geological impact did the 1980 eruption of Mt. St. Helen’s (pictured below) have on the mountain and its surrounding environment? Select all that apply.

A. Vegetation populations thrived.  
B. The summit height was reduced by over 1,000 ft.  
C. Vegetation was flattened due to debris avalanche.  
D. The eruption has no geological impacts.
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