



Rock Cycle Lesson 1: “The Solve” Student Handout

I. Vocabulary Warm-up

1. Using the materials at your table, cut out your vocabulary cards along the **solid lines**. Note: Do not cut the cards at the dotted lines.

2. Fold the cards at the dotted lines.

3. Write the definition of the term on the inside of the card using the definitions below.

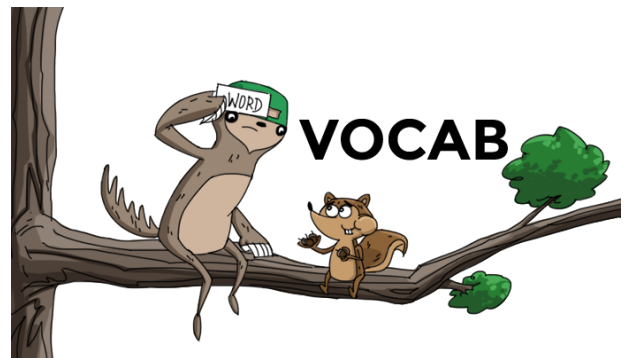
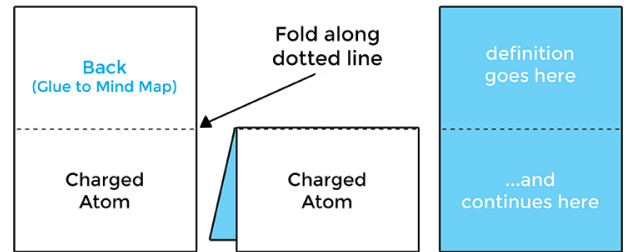
4. Use the clues from the Mind Map images, definitions, and vocabulary terms to place the cards in the correct location on the Mind Map, explaining your thinking to group members as you go.

5. When you're ready to glue or tape, raise your hand so you can check your Mind Map with your teacher.

6. Use glue or double-sided tape to connect the back of the vocabulary card to the correct place on the Mind Map.

7. Use your completed Mind Map to discuss these questions with your group:

- a. How do igneous, sedimentary and metamorphic rocks form?
- b. What happens when rain or wind continually hits against a rock over time? What is this process called?
- c. How does heat from below the Earth's crust impact rocks in the Earth's crust?

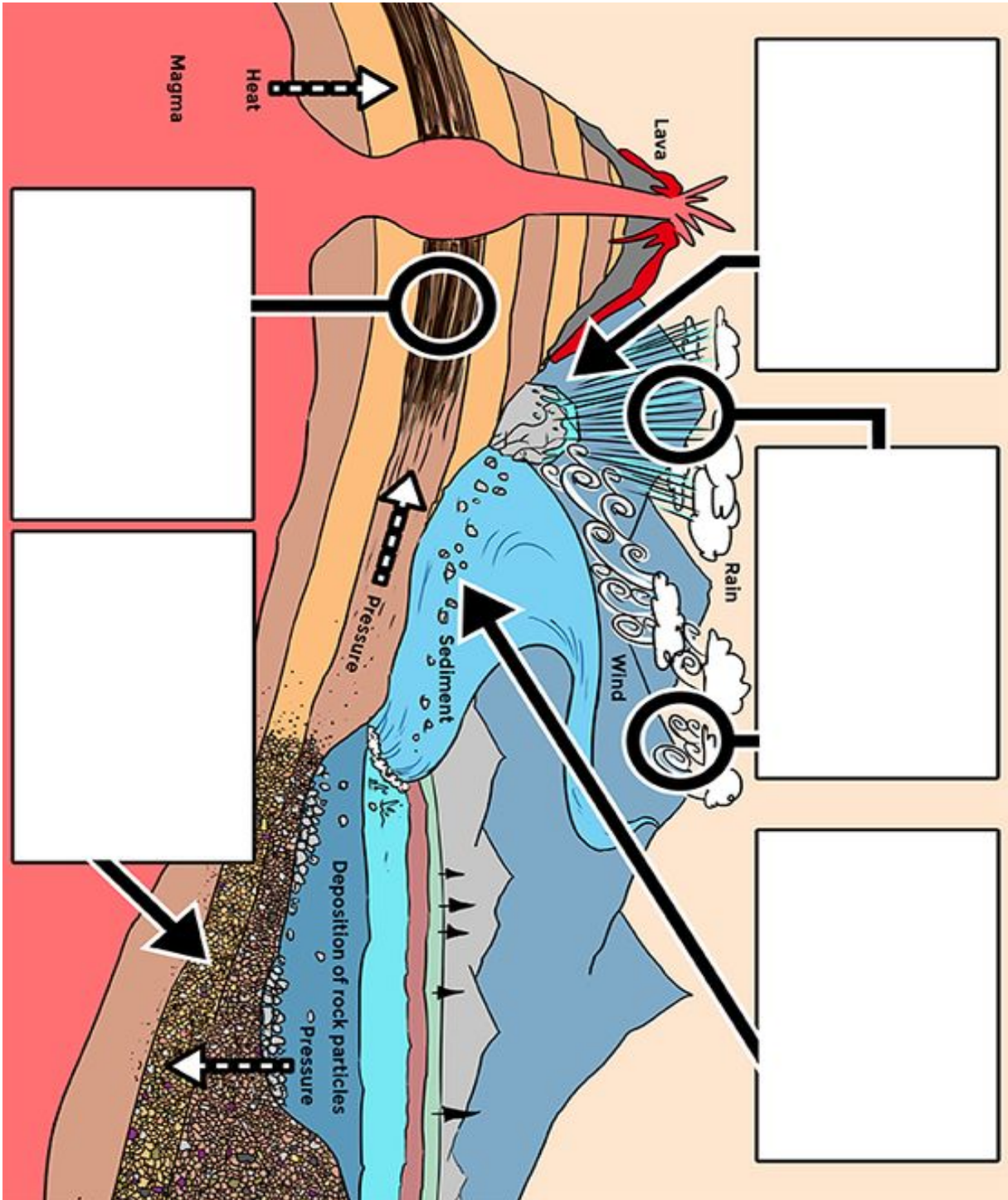




MOSA MACK SCIENCE

STUDENT GUIDE

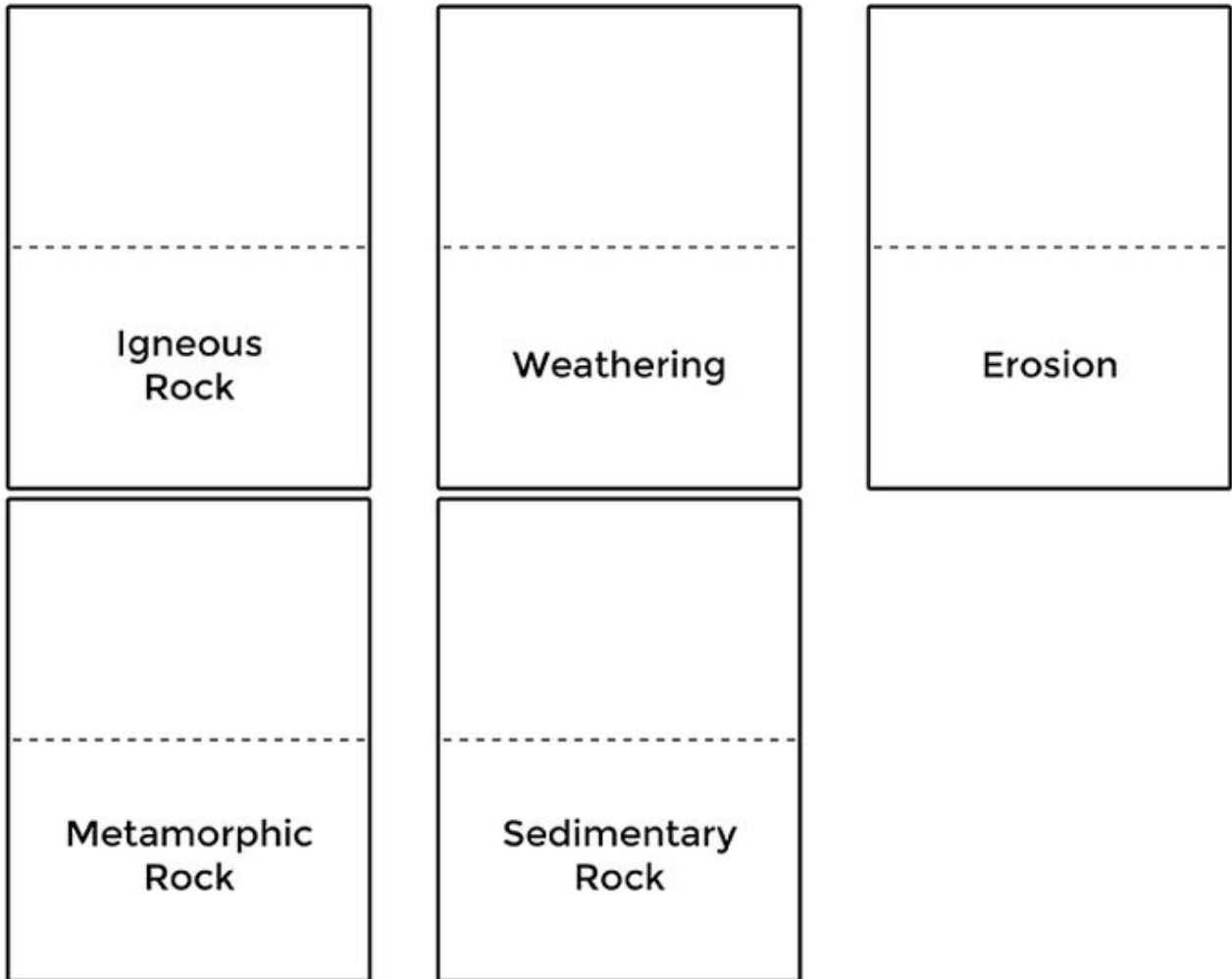
Mind Map:





MOSA MACK SCIENCE

STUDENT GUIDE



Vocabulary

- Igneous Rock - a type of rock formed from lava that has been cooled
- Sedimentary Rock - a type of rock formed from sediments that have been compacted together
- Metamorphic Rock - a type of rock formed when the texture and composition of a rock changes due to heat or pressure
- Erosion - the process of wind, water, or ice moving sediments away from a parent rock to another location
- Weathering - the process of rock breaking down over time due to exposure of natural elements such as wind, water and ice



MOSA MACK SCIENCE

STUDENT GUIDE

6. How is it possible that fish, animals that live in water, had fossils found at the bottom of the canyon?

7. Explain the process that turns sedimentary rock into metamorphic rock.

8. What did Mosa and her crew discover when they “Entered the Meltdown”?

9. Explain how volcanoes play a role in the rock cycle.

10. In which rock was the Sunset Topaz located? Which rock did Mosa hand over to Zog in order to fool him? What was her reasoning?



MOSA MACK SCIENCE

STUDENT GUIDE

III. Exit Ticket: Check for Understanding

Complete the exit ticket below or you can take the quiz online!

Name: _____

Date: _____

1. Which of the following below is NOT a type of rock?
 - a. Igneous
 - b. Sedimentary
 - c. Metamorphic
 - d. Canyon

2. The Sunset Topaz is a crystal found inside a(n): _____.
 - a. Sedimentary Rock
 - b. Igneous Rock
 - c. Metamorphic Rock
 - d. Volcano

3. Which of the following best describes how an **igneous** rock forms?
 - a. Hot lava from a volcano cools into rock.
 - b. Sedimentary rock deep in the surface is pressurized and heated.
 - c. Layers of sediment stick together due to pressure.
 - d. Remains of an animal are covered in soil and compressed over time.

4. True or False: Rain and wind can cause weathering of rock.

5. Water can move sediment from one location to another. This process is known as _____.
 - a. Sedimentary Rock
 - b. Erosion
 - c. Weathering
 - d. Crystal Formation



MOSA MACK SCIENCE

STUDENT GUIDE

6. When walking through a canyon and observing rock layers, the oldest rock would be found at the _____ of the canyon.
- Top
 - Middle
 - Bottom
 - Center
7. Which of the following below would best describe how a **metamorphic** rock forms?
- Hot lava from a volcano cools into rock.
 - Rock deep in the surface is pressurized and heated.
 - Sediments layer on top of one another and pressure causes them to stick together.
 - Remains of an animal are covered in mud and soil and are compressed over time.
8. True or False: Heat can melt rock into magma.
9. Which structure brings magma from below the Earth's crust to the Earth's surface?
- Geyser
 - Canyon
 - Glacier
 - Volcano