

Igneous Rocks

Complete the crossword puzzle using words from the lesson.

extrusive

granite

igneous

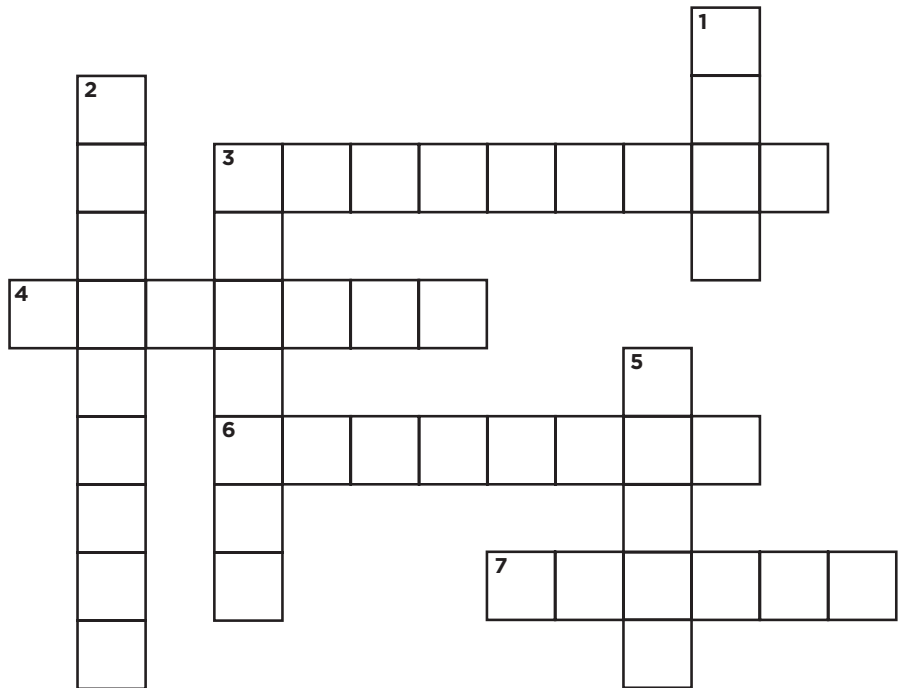
intrusive

lava

magma

obsidian

pumice



Across

3. Igneous rocks formed below Earth's surface _____
4. A hard igneous rock used in buildings _____
6. A shiny black rock _____
7. A lightweight igneous rock that is full of tiny holes _____

Down

1. Melted rock _____
2. Igneous rocks formed above Earth's surface _____
3. The rocks formed when melted rock cools and hardens. _____ rocks
5. Melted rock below Earth's surface _____

Igneous Rocks

Use your textbook to help you fill in the blanks.

A layer of melted rock lies beneath Earth's crust. When this melted rock, called _____, cools and hardens, it becomes _____ rock. Sometimes it remains _____ Earth's surface and hardens slowly over hundreds or thousands of years.

As it slowly cools, large mineral _____ form within it. The rock that results is called _____ igneous rock. An example of this kind of rock is _____, which has a coarse texture from the large crystals it contains.

When melted rock reaches Earth's surface, it is called _____. Once above the surface of Earth, it cools rapidly. Only small mineral crystals have time to form before it _____.

The rocks that form from the cooled lava are called _____ igneous rocks. One example of extrusive igneous rock is _____, which is full of tiny holes from the gas bubbles that were in the lava when it hardened. Another is _____, which has a shiny, glass-like texture.

Sedimentary Rocks

- | | | |
|------------------------|----------------------------|---------------------|
| a. conglomerate | d. limestone | g. sediments |
| b. fossils | e. sandstone | |
| c. iron oxide | f. sedimentary rock | |

Match the correct letter with the description.

1. _____ Tiny particles of rocks or minerals
2. _____ Remains of animals or plants from millions of years ago
3. _____ Rock made up of rounded pebbles, stones, or even boulders once carried by fast-flowing waters
4. _____ Bits of sand that had become cemented together
5. _____ The type of rock formed from sediments that become pressed together
6. _____ Rocks formed from the remains of once-living things on the bottom of the ocean
7. _____ Often the cementing material, stains the rock red

Sedimentary Rocks

conglomerate	iron oxide	moving water	sediment
fossils	limestone	sandstone	weight

Fill in the blanks.

Most sedimentary rocks are formed over a long period of time.

_____, or tiny particles, is pressed together in layers to form a rock. Most often, these particles are carried by _____ and dropped off in a new place. The _____ of the top layer presses out the water and air from the lower layers to form the sedimentary rock.

_____ is formed on the bottom of the ocean. Plant and animal remains, called _____, help create the layers of limestone. _____ is another type of sedimentary rock made up of bits of sand cemented together. Sometimes _____ stains the rocks red. Another type of sedimentary rock is a _____, which is formed from larger rocks lumped together.

Metamorphic Rocks

anthracite

lapis lazuli

metamorphic

rock cycle

igneous

marble

quartzite

sedimentary

Fill in the blanks with the correct vocabulary word. Then use the clues to solve the message.

1. I am a rock used in statues.
5

2. I am a rock found deep in Earth and used as fuel.

11

3. I am a type of rock that may contain fossils.

1 2

4. I am a smooth and shiny rock.
6

5. I am the process by which rocks change from one form to another.

7 8

6. I am a rock with a medium texture, and I am used in swimming pools and ceramics.
4

7. I am a rock used in jewelry.

9 10

Use the numbered letters from your vocabulary words to solve the message below.

Extreme heat and pressure can cause rocks to become

t
5 1 9 2 7 4 10 11 6 8

Metamorphic Rocks

clues	gneiss	physical
colored bands	igneous	properties
crystals	metamorphic rocks	texture

Fill in the blanks.

The extreme heat and pressure within Earth squeezes rocks together. This causes the _____ properties of rocks to change. _____ are formed deep inside Earth. Metamorphic rocks can be made from _____ , sedimentary, or other metamorphic rocks. For example, traces of the igneous rock granite can be found in the metamorphic rock _____. The physical _____ of metamorphic rocks are different. The minerals and _____ in metamorphic rocks determine their _____ and appearance. A geologist can classify a rock by looking for _____. One clue to help identify metamorphic rocks are _____. Because of their useful properties, metamorphic rocks are used to make items such as tile, jewelry, statues, and even gravel.