

Earth's Spheres

Scientists divide Earth into four parts, or spheres. Match the name of the sphere with its description.

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|----------------------|---|
| 1. _____ Lithosphere | a. all living things |
| 2. _____ Atmosphere | b. Earth's solid rocky part |
| 3. _____ Hydrosphere | c. Earth's water |
| 4. _____ Biosphere | d. The outermost sphere, the mixture of gases surrounding Earth |

Identify each part of Earth. Write *L* in the blank if it is part of the lithosphere, *A* if it is part of the atmosphere, *H* if it is part of the hydrosphere, and *B* if it is part of the biosphere.

- | | |
|------------------|---------------------|
| 5. _____ a lake | 6. _____ a mountain |
| 7. _____ a cloud | 8. _____ the ocean |
| 9. _____ a whale | |

The table below lists elements found in the Earth's crust. Use the table to answer the following questions.

Element	Percentage
Oxygen	46.6%
Silica	27.7%
Aluminum	8.1%
Iron	5.0%
Calcium	3.6%
Sodium	2.8%
Potassium	2.6%
Magnesium	2.1%
Other	1.5%

10. Which element is present in the greatest amount? _____
11. Which two elements make up almost 75% of Earth's crust? _____
12. Silicon and oxygen are nonmetals. The rest of the elements listed are metals.
Which element is the most abundant metal? _____

Sedimentary Rocks

These are four steps in the formation of sedimentary rock. The steps of the process are listed below. Write **A** in the blank next to the step that occurs first, **B** next to the second step, and so on.

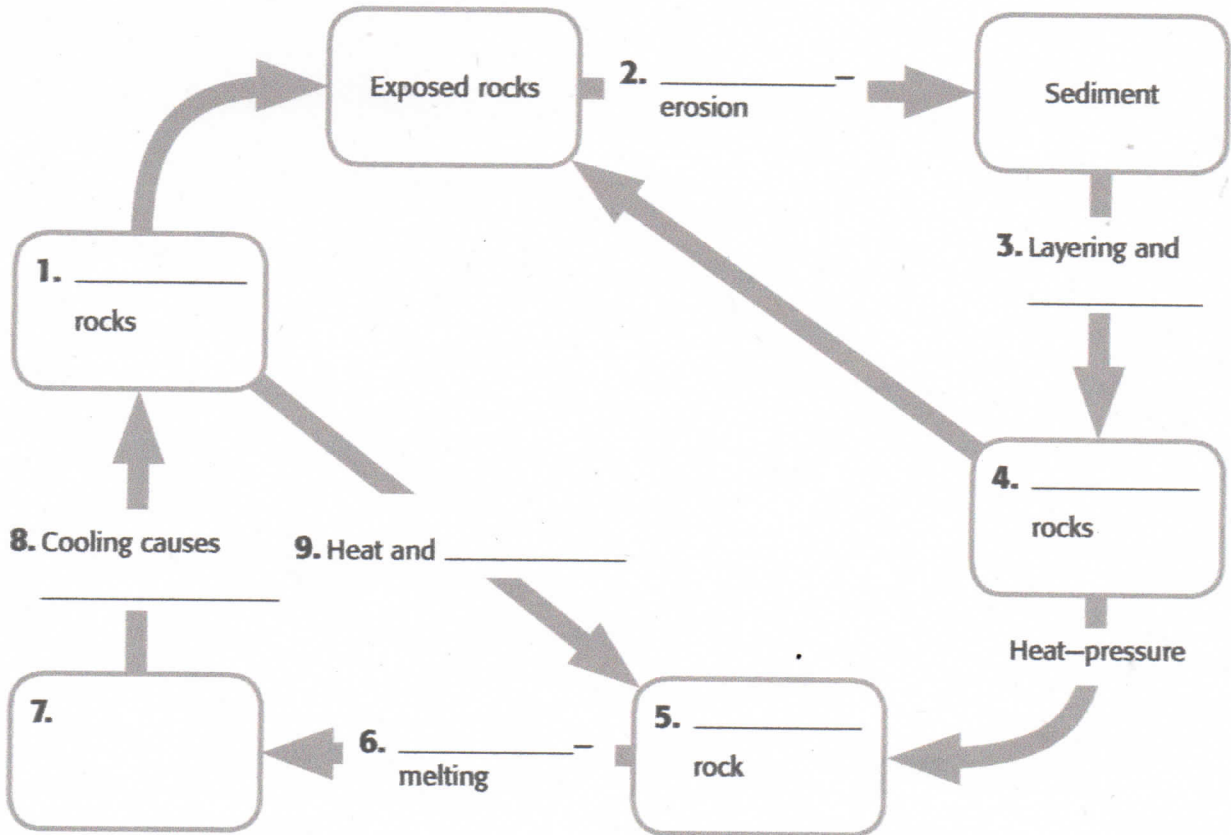
1. _____ **Compaction** Thick layer of sediments build up. These layers are heavy and press down on sediments beneath. This is the process of pressing sediments together.
2. _____ **Erosion** Faces are constantly breaking up and weary away rocks. The result is small pieces of rock carried by wind or water.
3. _____ **Cementation** Minerals dissolve in water. Dissolved minerals seep into spaces between sediment particles. The dissolved minerals crystallize and hold the sediment together.
4. _____ **Deposition** Running water or wind deposits the sediments.

Compare the different types of sedimentary rocks by completing the table.

Type	Description
CLASTIC	
Conglomerate	5. Composed of _____-sized fragments cemented together
Breccia	6. Composed of _____-sized fragments with _____ cemented together
Sandstone	7. Composed of grains of _____ cemented together
Shale	8. Composed of _____ particles cemented together
CHEMICAL	
Precipitates	9. Rocks formed from minerals that _____ out of the water
Evaporates	10. Rocks formed from minerals that are _____ when water evaporates
ORGANIC	
Organic	11. Rock formed from the _____ of living things

The Rock Cycle

Explore the rock cycle by completing the flow chart below.



Mark each statement as True or False by writing *T* if the statement is true or *F* if it is false. If the statement is false, replace the underlined term with a term that makes the statement true.

10. _____ Metamorphic rock is formed from igneous rock and sedimentary rock. _____
11. _____ You are walking near an outcropping and find a rock with light and dark bands that look like layers. You have found an igneous rock. _____
12. _____ Mount St. Helens in Washington State is an active volcano. If you were to find a rock in the area it is probably a metamorphic rock. _____
13. _____ Igneous rocks subjected to weathering result in the formation of metamorphic rock. _____
14. _____ Magma may form through the melting of igneous, sedimentary or metamorphic rock. _____