

# A "ROCK"ing WebQuest

Rocks WebQuest Directions: Answer the following questions on a separate sheet of paper. You should use the websites provided for each question (the underlined titles are hotlinks).

<https://www.learner.org/series/interactive-rock-cycle/>

A. Introduction: What do you think is the purpose of this activity?

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\*Click on "Begin with Types of Rocks"

B. Types of Rocks: Fill in the charts according to the information found on this page.

Types of Rocks	Summarize How It Is Formed	Two Example Names

\*Click on "Next: Start Your Rock Collection"

C. Start Your Rock Collection: Click begin and fill in the information below.

Basalt	Limestone	Marble
This rock has _____ and they form when _____ from a volcano contains gases that escapes from the rock as the lava cools. It is usually _____ in color and is the most common rock type in Earth's crust and makes up most of the _____. It is an _____ rock.	Most of the time, you can see _____ in this rock. Most of these formed when _____ and the skeletons of _____ were pushed into the sea floor along with other sediment. It is often found near _____ and _____. It is a _____ rock.	This rock has _____ and is formed when _____ is changed because of intense _____ and _____ for a long period of time. It is found in _____ and quarries (_____ dug into the Earth). It is used in _____ and _____. It is a _____ rock.

Conglomerate	Obsidian	Gneiss
It is made of _____, _____, and smaller particles pressed together by the action of waves or water. Finding this rock means that a _____ or _____ once existed in that location. It is a _____ rock.	It has a _____ surface, which is created from _____ that cools so _____ that no crystals could have time to form. It can be found near _____ and was often used to make _____ for weapons. It is an _____ rock.	It has _____ layers. It is formed when granite is squeezed and heated for a long period of time within Earth's _____. It is a _____ rock.

\*Click on "Identify Rock Types"

D. Identify Rock Types: Your Score = \_\_\_\_\_

E. How Rocks Change:

1. Before the melting point is reached, what type of rock forms when extreme heat and pressure is added? \_\_\_\_\_
2. Another name for change is \_\_\_\_\_.  
-Play the animation.

\*Click on "Next"

3. Where is it hot enough for rocks to melt? \_\_\_\_\_
4. When temperatures reach between \_\_\_\_\_ and \_\_\_\_\_ degrees Celsius, rocks melt into \_\_\_\_\_.
5. Magma is known as \_\_\_\_\_.
6. A rock that cools from magma is called a(n) \_\_\_\_\_ rock.
7. What is an extrusive igneous rock? \_\_\_\_\_  
\_\_\_\_\_
8. What is an intrusive igneous rock? \_\_\_\_\_  
\_\_\_\_\_

-Play the animation.

\*Click on "Next"

9. Compacting means \_\_\_\_\_.
10. \_\_\_\_\_ means hardening.
11. Compaction and cementation leads to the formation of \_\_\_\_\_ rock.

-Play the animation.

\*Click on "Transform the Rock"

F. Transform the Rock: Your Score = \_\_\_\_\_

G. The Rock Cycle Diagram:

1. Forces inside the Earth bring them closer to the surface (where they are weathered, eroded, and compacted) and forces on the earth sink them back down (where they are heated, pressed, and melted).
2. Elements that make up rocks are never \_\_\_\_\_ or \_\_\_\_\_, but they are constantly being \_\_\_\_\_.  
-Explore the diagram. Fill in the processes on your diagram.

Type of Rock	Three Examples of Rocks
Igneous	
Sedimentary	
Metamorphic	

\*Click on "**Complete the Cycle**" and see if you can name the different parts of the rock cycle.

3. Your Score = \_\_\_\_\_/10

WebQuest Round 2: Click on the hyperlinks in blue to access the needed websites.

Rock Cycle <http://www.cotf.edu/ete/modules/mse/earthsysflr/rock.html>

1. What are the three main types of rocks?
2. How does a sedimentary rock turn into a metamorphic rock? Hint: Follow the arrows
3. How does an igneous rock turn into a metamorphic rock? Hint: Follow the arrows
4. How do metamorphic rocks change into sedimentary rocks? Hint: Follow the arrows
5. How do igneous rocks change into sedimentary rocks? Hint: Follow the arrows
6. Why is water the beginning of the rock cycle?

View this Rock Cycle animation <http://www.youtube.com/watch?v=U7YQ5vwaL98>

7. Write a description of what you see.
8. What is causing the magma to rise?
9. What is causing weathering and erosion of rock?
10. What begins to form as sediment is deposited in the ocean?

Igneous Rocks [http://www.minsocam.org/msa/collectors\\_corner/id/rock\\_key.htm#Igneous](http://www.minsocam.org/msa/collectors_corner/id/rock_key.htm#Igneous) You will need to search **two types of igneous rocks**

11. There are two types of igneous rocks. Which type is formed underground, by magma?
12. How is Granite formed?
13. How is Basalt formed?

Rock pictures: <https://geology.com/rocks/igneous-rocks.shtml>

14. Look at the picture of Basalt. Why is it fine grained?
15. Look at the picture of granite. Why is it coarse grained?

Sedimentary Rocks [https://www.rocksandminerals4u.com/sedimentary\\_rocks.html](https://www.rocksandminerals4u.com/sedimentary_rocks.html)

- Watch this video and fill in the chart below:

Type of Sedimentary Rock	How it forms	Unique Features
Detrital/Clastic Sedimentary Rocks		
Chemical Sedimentary Rocks		

[Metamorphic Rocks](http://www.rocksandminerals4u.com/metamorphic_rock.html) - [http://www.rocksandminerals4u.com/metamorphic\\_rock.html](http://www.rocksandminerals4u.com/metamorphic_rock.html)

Fill in the chart

Type of Metamorphic Rock	How it forms	Examples
Nonfoliated Metamorphic Rocks		
Foliated Metamorphic Rocks		