

Name \_\_\_\_\_ Date \_\_\_\_\_ Block \_\_\_\_\_

**Excavating the Web**

Directions:

Go the Science Queen website at [www.thesciencequeen.net](http://www.thesciencequeen.net) Click on students, 7<sup>th</sup> grade, and Projects.

**1) Site #1: Rock Hounds**

Explore the Rock Creations area to complete each section.

For thousands, even millions of years, little pieces of our earth have been eroded-- broken down and worn away by \_\_\_\_\_ and \_\_\_\_\_. These little bits of our earth are washed downstream where they settle to the bottom of the \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_. Layer after layer of \_\_\_\_\_ earth is deposited on top of each. These layers are pressed down more and more through time, until the bottom layers slowly turn into \_\_\_\_\_.

Igneous rocks are called \_\_\_\_\_ rocks and are formed either underground or above ground. Underground, they are formed when the melted rock, called \_\_\_\_\_, deep within the earth becomes trapped in small pockets. As these pockets of magma cool \_\_\_\_\_ underground, the magma becomes igneous rocks. Igneous rocks are also formed when \_\_\_\_\_ erupt, causing the magma to rise above the earth's surface. When magma appears above the earth, it is called \_\_\_\_\_. Igneous rocks are formed as the lava cools above ground.

Metamorphic rocks are rocks that have " \_\_\_\_\_ " into another kind of rock. These rocks were once \_\_\_\_\_ or \_\_\_\_\_ rocks. How do sedimentary and igneous rocks change? The rocks are under tons and tons of \_\_\_\_\_, which fosters \_\_\_\_\_ build up, and this causes them to change. If you examine metamorphic rock samples closely, you'll discover how flattened some of the \_\_\_\_\_ in the rock are.

**2) Site #2 Interactives Rock Cycle**

What are the key characteristics of

- a) Igneous Rock \_\_\_\_\_
- b) Metamorphic Rock : \_\_\_\_\_
- c) Sedimentary Rock: \_\_\_\_\_
- d) Who created the rock cycle model? \_\_\_\_\_

Review the site, and then click on test your skills. Write down your score & have the teacher initial it. . Try for 100!

Score \_\_\_\_\_ Teacher's Initials \_\_\_\_\_

**3) Site #3: Rock Uses**

Match the rock with its use and write Ig for Igneous, Sed for Sedimentary & MM for Metamorphic next to the rock name

	<b>Rock</b>	<b>Rock Type</b>	<b>Use</b>
_____ 1.	Coal	_____	a. Abrasive material in hand soaps, emery boards
_____ 2.	Limestone	_____	b. Used in aggregate
_____ 3.	Shale	_____	c. Used in the construction industry
_____ 4.	Conglomerate	_____	d. It is widely used as crushed stone for concrete aggregate, road metal, railroad ballast
_____ 5.	Sandstone	_____	e. Used as building stones and other structural purposes
_____ 6.	Granite	_____	f. Same uses as sandstone
_____ 7.	Pumice	_____	g. Quarried for use as dimension stone for statuary, architectural and ornamental purposes
_____ 8.	Gabbro	_____	h. The production of lime, manufacture of paper, petrochemicals, insecticides, linoleum, fiberglass, glass, carpet backing and as the coating on many types of chewing gum
_____ 9.	Basalt	_____	i. Used in power plants to make electricity
_____ 10.	Schist	_____	j. Component of bricks and cement
_____ 11.	Gneiss	_____	k. Used principally for construction, it is easy to work, "brownstone," has been used in many eastern cities
_____ 12.	Quartzite	_____	l. Architectural construction, ornamental stone and monuments
_____ 13.	Marble	_____	m. Used as building stones

**4) Site #4 Layers of the Earth**

- a) How many kilometers deep is the Earth's Crust & Hydrosphere? \_\_\_\_\_
- b) What is the hydrosphere?  
\_\_\_\_\_
- c) What is the depth of the upper mantle? \_\_\_\_\_
- d) How do the processes in the upper mantle effect the Earth's crust?  
\_\_\_\_\_
- e) What does the transition zone do?  
\_\_\_\_\_
- f) How deep is the lower mantle?  
\_\_\_\_\_
- g) What are superplumes?  
\_\_\_\_\_
- h) What generates the Earth's magnetic field? \_\_\_\_\_
- i) What is the depth of the Inner Core? \_\_\_\_\_

**5) Site #5 Oology**

*Click on What's the Big Idea Earth & fill in the blanks.*

Here's just one way they all work together:

Intense heat flowing out of the \_\_\_\_\_ and mantle makes the \_\_\_\_\_ flow in circles. The motion of the \_\_\_\_\_ causes the \_\_\_\_\_ to move. The moving \_\_\_\_\_ create \_\_\_\_\_. The \_\_\_\_\_ release gases into the \_\_\_\_\_. The \_\_\_\_\_ acts like a giant blanket, keeping the planet warm.

*Click on Scientist at work : Jade and answer the following questions:*

- a) What type of rock do you think Jade is? \_\_\_\_\_
- b) Jade carvings have been found in Central & South America, what was the mystery surrounding the Jade?  
\_\_\_\_\_

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- c) Where are the world's largest Jade mines? \_\_\_\_\_
- d) What did the Chinese first use jade for (and it wasn't jewelry!) \_\_\_\_\_
- e) What is the Chinese word for Jade? \_\_\_\_\_

**6) Site #6 Dynamic Earth**

Click on Plates & Boundaries & then answer the following questions:

What are the two types of crust? \_\_\_\_\_

*What is a*

Convergent Boundary \_\_\_\_\_

Give an example \_\_\_\_\_

Divergent Boundary \_\_\_\_\_

Give an example \_\_\_\_\_

Transform Boundary \_\_\_\_\_

Give an example \_\_\_\_\_

*Click on Slip, Slide & Collide*

What is created at a subduction zone? \_\_\_\_\_

What is created at a collision zone? \_\_\_\_\_

Click on Test Skills

Write down your score & have the teacher initial it. . Try for 100!

Score \_\_\_\_\_ Teacher's Initials \_\_\_\_\_