

Name _____ Date _____ Period _____

Rocks and Minerals Preview

Directions: Answer the following questions using the websites provided for each question. Go to www.thesciencequeen.net click on the student resources drop down menu and then click rock & mineral preview.

Site 1: Rock Cycle

1. What are the three main types of rocks?
2. How does a sedimentary rock turn into a metamorphic rock?
3. How does an igneous rock turn into a metamorphic rock?
4. How do metamorphic rocks change into sedimentary rocks?
5. How do igneous rocks change into sedimentary rocks?
6. What is the beginning of the rock cycle? The end?

Site 2: Rock Cycle animation

7. Quick cooling forms many small what?
8. When you look at the desert monuments, what eroded away?
9. The microscopic view of sandstone contains what two components?
10. What two things are needed to turn igneous rock into metamorphic rock?

Site 3: Rocks

11. List *and* define the 6 key characteristics that can help you identify rocks within the three main classes.
 - a.
 - b.
 - c.
 - d.
 - e.
 - f.

Site 4: Mineral Uses

12. Based on current consumption, it is estimated that you - and every other person in the United States - will use more than a _____ pounds of rocks, minerals and metals during your lifetime. How many pounds of the following will you use?

_____ Lead _____ Zinc _____ Copper _____ Aluminum
 _____ Iron _____ Clays _____ Salt _____ Stone, sand, & gravel

13. Identify each resource based on the clues provided.

Name	Description
	Composed of calcium carbonate and is used in homes, sidewalks, bridges, and skyscrapers
	Compounds are used in ceramics and glass; may also be used for rocket propellants, batteries, and medicine
	Found in metal alloys for airplanes as well as in emeralds
	May be ground up to add "sparkle" to paints and cosmetics
	Most abundant element used to make containers and deodorants
	Native element used to make medicine, glass, and fireworks
	Primarily used for "sheet rock" or wallboard
	Primary ore of iron used to produce steel, automobiles, tools, & bridges
	Primary source of lead; used to make batteries, fishing weights, and lead shields used during X-rays
	Used as a food seasoning, water softener, and de-icer
	Used in dentistry, medicine, jewelry, art & computers; very malleable (can be made to be thinner than human hair)
	Used in photography, chemistry, jewelry, coins, mirrors, and silverware
	Used to make arrowheads, spear points, knives; may be used to start a fire
	Used to make computer chips, glass, ceramics, abrasives, and sweeteners
	Used to make electrical wires, brass, bronze, coins, plumbing, and jewelry
	Used to make fertilizer, paper, film, matches, tires, & medicines
	Used to make fluoride toothpaste, pottery, and hydrofluoric acid
	Used to make "copper" pennies, brass, & nails
	Used to make phosphate fertilizer and is found in soft drinks
	Used to produce the majority of electricity in the US

Mohs Scale:

- 14. What is Mohs Scale used for?
- 15. What mineral is a 10 on Mohs Scale?
- 16. Give an example of a mineral with a hardness of 7 (according to Mohs Scale). Tell me about that mineral.
- 17. If a mineral can scratch a penny, what number is it on Mohs Scale?

Mount Nyiragongo is an active volcano in central Africa. Not much is known about how long the volcano has been erupting, but since 1882, it has erupted at least 34 times (once every 4 years), including many periods where activity was continuous for years at a time, often in the form of a churning lava lake in the crater.

- 18. Watch the video. Would you get this sample? Why or why not?

Uses of Common Minerals

- 19. Which is the most abundant element in the Earth's crust?

- 20. Complete the chart by listing common uses for each mineral. You will need to use both sites.

clays	
cobalt	
copper	
halite	
mica	
Bauxite	
Calcite	
Graphite	
Quartz	
talc	