



Mineral Mania

Name(s) _____

Visit the Earth Science section of the Kid Zone at The Science Spot (<http://sciencespot.net/>) to find the answers to these questions!
(Rocks + Minerals)

Site: Mineral Uses (Click on this link)

1. 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

2. Match each resource to its best use(s).

- | | |
|-----------------|---|
| _____ Aluminum | A. Used to make "copper" pennies, brass, and nails |
| _____ Antimony | B. Used to make fertilizer, paper, film, matches, tires, and drugs |
| _____ Beryllium | C. Used to make phosphate fertilizer and is found in soft drinks |
| _____ Coal | D. Most abundant element used to make containers and deodorants |
| _____ Copper | E. Found in metal alloys for air crafts as well as emeralds |
| _____ Flint | F. Used to produce 56% of electricity in the US |
| _____ Fluorite | G. Used to make electrical wires, brass, bronze, coins, plumbing, and jewelry |
| _____ Galena | H. Used to make arrowheads, spear points, and knives; may be used to start a fire |
| _____ Gold | I. Primary source of lead, used to make batteries, fishing weights, and the lead shields to protect us during X-rays |
| _____ Gypsum | J. Primary use is for "sheet rock" or wallboard |
| _____ Halite | K. Native element used to make medicine, glass, and fireworks |
| _____ Hematite | L. Used to make fluoride toothpaste, pottery, and hydrofluoric acid |
| _____ Limestone | M. Used in dentistry, medicine, jewelry, art, and computers; very malleable (can be made to be thinner than human hair) |
| _____ Lithium | N. Primary ore of iron used to produce iron for steel for automobiles, tools, and bridges |
| _____ Mica | O. Composed of calcium carbonate and is used in the construction of homes, sidewalks, bridges, and skyscrapers |
| _____ Phosphate | P. May be ground up to add "sparkle" to paints and cosmetics |
| _____ Silica | Q. Used in the manufacture of computer chips, glass, ceramics, abrasives, and sweeteners |
| _____ Silver | R. Used as food seasoning, water softener, and de-icer |
| _____ Sulfur | S. Compounds are used in ceramics and glass; may also be used for rocket propellants, batteries, and medicine |
| _____ Zinc | T. Used in photography, chemistry, jewelry, coins, mirrors, and silverware |

Site: Fireworks

1. How many tons of fireworks are used each year?
2. What minerals are used to make the following colors or special effects?

Bright Greens -	Yellows -
Silvery White -	Orange -
Deep Reds -	Gold Sparks -
Lavender -	Bright flashes -
Blues -	Silvery-white flashes -

Site: Mineral Groups

1. What are the birthstone(s) for each month?

January: _____ or _____
February: _____ or _____
March: _____ or _____
April: _____ or _____
May: _____ or _____
June: _____ or _____ or _____
July: _____ or _____
August: _____ or _____
September: _____ or _____
October: _____ or _____
November: _____ or _____
December: _____ or _____
2. Name three minerals that "glow" under ultraviolet light. What is the glow called?
3. What is a gemstone? Can all minerals be gemstones? Explain.
4. What is a mineraloid? Give 3 examples.

Site: Volcano World → in the search bar at the top right hand corner of the site type: "Rock and Mineral Slide show," and hit Enter. Click on the 1st Search Result and select the Printer-friendly version.

Rock and Mineral Slide show:

→ These are not in order, use the "Ctrl+F" command to find specific words or phrases.

_____ is a greenish-black mineral that is found in many igneous rocks. It is found in many basic and ultra-basic igneous rocks such as _____ and _____. Augite has a hardness of 5-6.5 with a vitreous luster and a prismatic _____.

_____ is a mineral that can be split into very thin sheets. These sheets can be so thin that _____ can be layered into mica _____ high. Mica can be clear, black, green, red, yellow, and brown.

_____ is the most abundant mineral in rocks that are located at or near the earth's surface. Feldspar can have glassy white, blue, green, or red crystals. All feldspars contain _____ and _____.

_____ is a mineral that has perfect cleavage and a greasy or soapy feel. It is given the distinction of being number _____ on Mohs hardness scale

_____ and _____ are both pure carbon. The difference is the amount of _____ and _____ that has been put onto the two minerals.

_____ is the hardest natural element on Earth with a hardness of _____ which is the maximum on the Mohs hardness scale. _____ is a very soft mineral with a hardness between 1 and 2. Graphite has a black streak and was probably formed by the metamorphism of _____ or by the crystallization of _____.

_____ are dark colored, fine-grained extrusive rock. The mineral grains are so _____ that they are impossible to distinguish with the naked eye or even a magnifying glass. They are the most _____ of all the igneous rocks. Most basalts are _____ in origin and were formed by the rapid _____ and _____ of the lava flows. Some basalts are _____ having cooled inside the Earth's interior.

_____ is a very light colored, frothy volcanic rock. Pumice is formed from lava that is _____. The lava is ejected and shot through the air during an eruption. As the lava hurtles through the air it _____ and the gases escape leaving the _____. Pumice is so light that it actually _____ on water. Huge pumice blocks have been seen floating on the ocean after large eruptions. Some lava blocks are large enough to carry _____. Pumice is ground up and used today in _____ and also in _____.

_____ is an igneous rock that is composed of _____ minerals. These minerals are _____ and usually _____. Granite forms as magma cools far under the earth's surface. Because it hardens deep underground it cools very _____. This allows crystals of the four minerals to grow _____ enough to be easily seen by the _____. Look at the photo of granite above, notice the different crystals in the rock.

Granite is an excellent material for building bridges and buildings because it can withstand _____. It is also used for monuments because it weathers _____. Engravings in the granite can be read for _____, making the rock more valuable.

_____ is metamorphosed limestone or dolomite. Both limestone and dolomite have a large concentration of _____ (CaCO_3). Marble has many different _____ of crystals. Marble has many color variances due to the _____ present at formation. Some of the different colors of marble are white, red, black, mottled and banded, gray, pink, and green.

Marble is much _____ than its parent rock. This allows it to take a _____ which makes it a good material for use as a building material, making sink tops, bathtubs, and a carving stone for artists. Today, headstones are made from marble and granite because both of these rocks weather very _____ and carve well with _____. Marble is quarried in _____, _____, _____, _____, and _____.

_____ is a fine-grained metamorphic rock with perfect _____ that allows it to split into _____. Slate usually has a light to dark brown streak. Slate is produced by low grade _____, which is caused by relatively low temperatures and pressures. Slate has been used by man in a variety of ways over the years. One use for slate was in the making of _____ or grave markers.

_____ is composed of sandstone that has been metamorphosed. Quartzite is much harder than the parent rock, _____. It forms from sandstone that has come into contact with deeply _____ magmas.

_____ rocks form from the build up and decay of plant and animal material. This usually forms in _____ regions in which there is an abundant supply of growing _____ and low amounts of _____. The vegetation builds so _____ that new layers of vegetation bury the _____ material very quickly. The _____ that decay the vegetation need _____ to survive. Because these decaying layers are buried so _____ the bacteria use up what _____ there is available and _____ finish the

decomposition of the vegetation. The overlaying layers become so heavy that they squeeze out the _____ and other _____ that aid in decay. This compressed vegetation forms _____. The longer and deeper that coal is buried makes it of _____. _____ is the first stage of coal formation. _____ is the next grade of coal followed by _____ and the highest grade, _____. Anthracite is actually a _____ rock. It forms during _____ when compaction and friction are extremely high. This form of coal burns very _____ and almost _____. It is used in the production of high grade _____.

_____ is a high grade metamorphic rock. This means that gneiss has been subjected to more heat and pressure than _____. Gneiss is _____ than schist and has distinct _____. This banding has alternating _____ that are composed of different minerals. The minerals that compose gneiss are the same as _____.

_____ is a clastic sedimentary rock that forms from the _____ of rounded cobble and pebble sized rock fragments. Conglomerate is formed by _____ movement or _____ action. The cementing agents that fill the spaces to form the solid rock conglomerate are _____, _____, or _____.

_____ is a very hard sedimentary rock that is usually found in nodules in _____. Chert is light gray to dark gray in color. It probably formed from the remains of _____ or other _____ that have been _____. _____ has replaced the tissue forming the sedimentary rock. _____ is a very dark form of chert. It breaks like _____ with conchoidal fractures making it widely used by ancient people to make _____, _____, and _____.

_____ is the most abundant of the non-clastic sedimentary rocks. Limestone is produced from the mineral _____ (calcium carbonate) and sediment. The main source of limestone is the limy _____ formed in the _____. The calcium carbonate can be precipitated from _____ or it can be formed from _____ that secrete lime such as _____ and _____. Chalk is another type of limestone that is made up of very small _____. Chalk is usually white or gray in color.

Limestone can easily be _____ by acids. If you drop vinegar on limestone it will _____.

_____ is common table salt. It forms where _____ (salty) lakes or sea beds dry up. This evaporation of the water causes the salt to precipitate forming the _____. Halite frequently occurs in crystal form. It is usually colorless but can be reddish brown because of iron oxides in the water that it forms in. Halite has perfect _____ and a hardness of _____ on the Mohs hardness scale.

(Minerology Kids)

Minerals 4 kids:

Minerals in your house. What minerals are in items in your house? *(Click on House icon)*
Not all of them are present on website... that's ok.

Bedroom:

Closet _____

Golf clubs _____

Clock radio _____

Wrist watch _____

Bed _____

Mirror _____

Desk _____

Table lamp _____

Bathroom:

Make-up _____

Towels _____

Teeth/toothpaste _____

Toilet _____

Deodorant spray _____

Bath tub _____

Living room:

TV _____

Fireplace _____

Computer _____

Vacuum cleaner _____

Phone _____

Chair _____

Kitchen:

Glasses _____

Refrigerator _____

Toaster _____

Stove _____

Dishwasher _____

Salt n pepper _____

Blender _____

Matches _____

Can opener _____

