

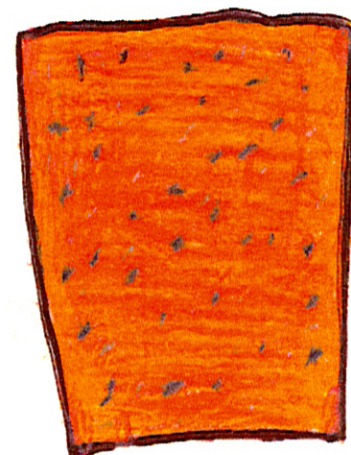
Tourmaline- Rubellite



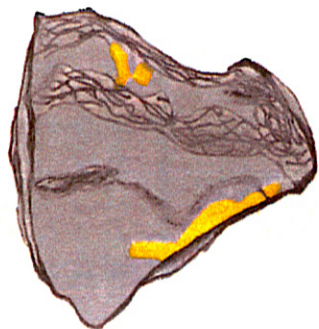
Slate



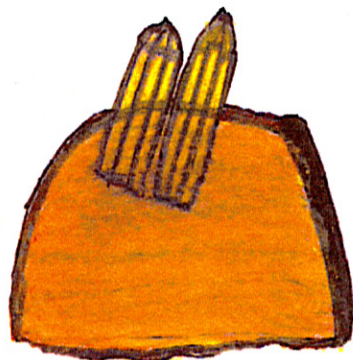
Agate



Pink Granite



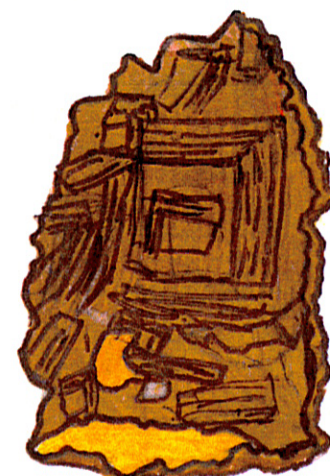
Slate



Beryl



Tourmaline



Muscovite

Igneous Rock

Partial Size- Coarse

Did you know pink granite is an igneous rock, that is formed by oxygen, iron, calcium, sodium and magnesium? It has a bumpy texture. It is shaped like a square. It has rounded edges. They are not really sharp. There are gray quartz crystals in granite. It is formed by magma and lava. It's colors are pink, red, white, brown, and a little gray. Before pink granite got it's name, it was called plutonic rock. You can find pink granite at Yosemite National Park in California. Tourmaline forms granite. Granite is used for fertilizer, tabletops, counters, floor tiles and sometimes buildings.

Mineral

Hardness 7

Did you know that agate is a kind of quartz made up of many colored bands? Most agate have rounded lumps, and can be as small as a marble and as big as football. The middle of the agate may have rock crystal. The bands' colors could be milky white, green, brown, red and black. If the bands are straight it is called onyx. The hardness is 7. The texture is waxy. It is a mineral. People like to cut them in half to see inside of them.

Metamorphic Rock

Particle Size Fine

Slate is a metamorphic rock that is formed when shale is put under pressure. Slate splits easily into many thin layers. Slate has a muddy smell when it is wet. It can be gray, green, or even purple. Its texture is fine and smooth. Slate is cut out from quarries into blocks. Organic matter such as graphite and pyrite give black slate its dark color. Its pressure and temperature is low. Slate has many uses like roofing, flooring and old fashion blackboards.

Mineral

Hardness-7-7 1/2

Tourmaline rubellite's hardness is 7-7 1/2. Tourmaline rubellite is a rectangular shape at the bottom and at the top it's a little chipped off. The color of the fabulous tourmaline rubellite is a light pink and the top and middle are a blend of a pinkish, purple color. This mineral forms in granite and pegmatites, as well as in some metamorphic rock. Tourmaline rubellite forms long crystals which have lines running along their length.

Mineral

Hardness 2 1/2-4

The Mineral Muscovite is clear or transparent. It could also be called Brown Mica. Mica that is light-colored and makes rock like phyllite and schist shine. Muscovite is named after people in Moscow, the capital of Russia. Russians used to use it for making rubber, wallpaper, and paint.

Muscovite breaks very easily or cleaves to little or big sheets. Some are clear, brown, white, or gray.

It is very likely found in metamorphic rocks such as granites, slate, phyllite, or schist. It is one of the most common minerals.

Mineral

Hardness 7-7 1/2

The tourmaline mineral has parallel lines running through the crystal. The crystal is green. The mineral does not have sharp edges. It has little dark spots of brown. The tourmaline mineral can be different colors like black, blue, pink and green.

Green-colored Tourmaline comes in a wide range of different shades, so, at first sight, many green tourmalines may look very similar to other gems. Green tourmaline is found in Brazil, the United States, Tanzania, Mozambique, and Namibia. This mineral has a weird looking shape; it has a lot of curves in it.

Mineral

Hardness 7-8

Beryl is made out of the elements of silicon, oxygen, aluminum, and beryllium. It usually has crystals in it. Beryl is also transparent. Beryl has the color of light yellow. Beryl can also be the colors of white, green, pink, red, and blue. There are different names for different colors of beryl. Heliodor, emerald, and aquamarine are kinds of beryl. A yellow type beryl is called heliodor, and a pink type is called morganite. The colors of beryl are all cut into gemstones. The crystals of beryl are hexagonal. Beryl is found in igneous rock. Beautiful pieces of beryl are used in jewelry.

Metamorphic Rock

Grain Size- Fine

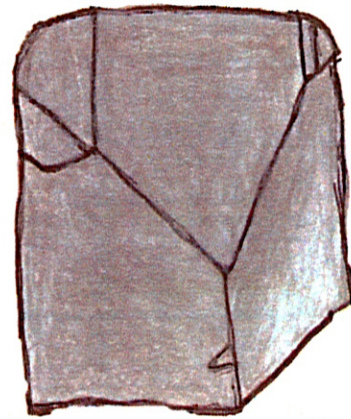
Slate is made of sediments such as shale, mudstone, quartz, chlorite, mica, and feldspar. Slate forms underground under low pressure and low temperature. The mica particles are unable to be seen by any human eye. Like most other slates you can describe slate by its magnificent, slate-like cleavage which forms by very small minerals pressured together. Slate is so delicate that it easily breaks into thin pieces. Slate's texture is grainy or smooth. Some roofs are made of slate. One other rock like slate is phyllite.



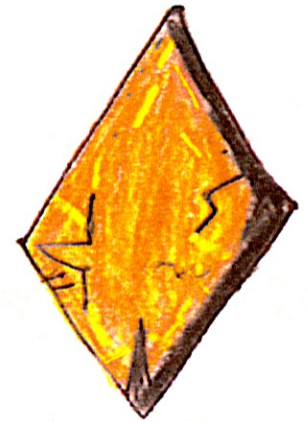
Blue Marble



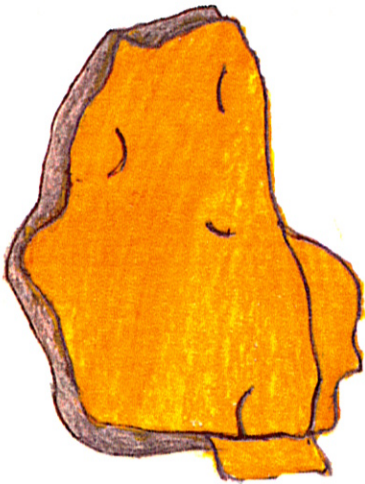
Silver



Topaz



**Gypsum
Selenite**



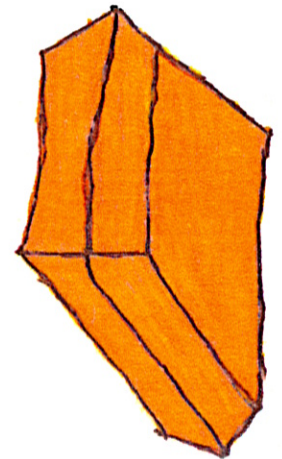
Sulfur



Obsidian



Silver



GYPSUM

Mineral

Hardness 2

The colors of Gypsum are: clear, white, gray, yellow, red, or brown with white streaks. Halite and Borax Gypsum are rocks that form when water evaporates and leaves dissolve in it. Gypsum is often found in between other kinds of rocks. Sometimes gypsum makes a crystal called selenite. I drew a diamond-shaped crystal of selenite on the other side of this card. Gypsum can be used to carve things like bowls and other objects. It is used in sheet rock. Gypsum breaks in one way perfectly. Then it breaks into curved shapes. Gypsum sometimes form in clay beds. Sometimes gypsum feels like silk and its very fibrous. Gypsum can be shaped like a flower.

Mineral

Hardness 8

Topaz feels like a smooth or a polished rock. Topaz is a mineral. Topaz can come in many colors, like light yellow, red, green, or blue. Sometimes topaz can even be colorless. Topaz can be formed with rectangular sides or round sides. Did you know that topaz can be found in granite? I didn't! Topaz measures a number eight on the hardness scale. When topaz is formed into a gemstone it can be very valuable or stylish.

Mineral

Hardness 2 1/2-3

The cool mineral called silver is sometimes found in small pieces and weird shapes. People usually find it in igneous rocks. You can sometimes find silver in quartz veins in volcanic rocks. It is colored silver and white, but gets dark, dull, and discolored very quickly when not protected from air. Silver can be hammered into very skinny sheets and will not break, and it carries electricity well. You can use silver as awards, prizes, or jewelry.

Metamorphic Rock Grain Size Coarse Fine

Marble is made mainly of the mineral calcite. Blue Marble is mostly white, gray, black, pink, blue, and often streaked. Marble is made mainly of the mineral calcite. Blue Marble is a kind of marble; it is the same except it is colored blue. Blue Marble forms when limestone is metamorphosed, usually when mountains are being formed. Blue Marble is a metamorphic rock formed by heat or pressure on limestone. The texture is fine-to-coarse-grain. Blue Marble is a metamorphic rock formed by heat or pressure on limestone. It is used for making trophies or statues.

Mineral

Hardness 2

Many forms of gypsum are silky. The bigger the gypsum the duller it is. Gypsum is made in very hot places. Some of the crystals are weird tubular shaped. Can you believe gypsum has the hardness of 2? Any kind of mineral will scratch gypsum except talc. Selenite is a kind of gypsum that is clear, sparkly and glossy.

Mineral

Hardness 2 1/2 - 3

Silver can be small specks or wiry shapes. It can be found in igneous rocks. When it is exposed to air it tarnishes and then turns dull and black. Silver is one of the few metals that is found unmixed with other elements. The crystals are usually 8 or 12 sided figures and sometimes are shaped like cubes. Silver is the best conductor for electricity and heat. Silver can be shaped by hammering into very thin sheets without breaking. Volcanic rock with quartz veins inside have silver with copper or lead. Silvers color is called silver because it is silver.

Igneous Rock

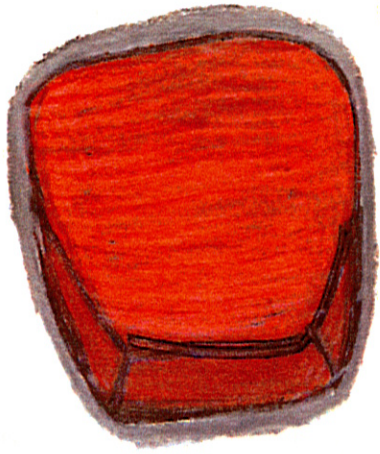
Grain size Very Fine

Obsidian is an igneous rock. It is natural glass, that is made when magma from a volcano cools fast. It cools so fast that crystals don't form. This is a volcanic rock. Obsidian rocks are mostly formed by lava and by these rocks: rhyolite, tuff, and pumice. The blended colors are orange and yellow. The main colors are brown, black, or pink. The texture of it is smooth. Some types of obsidian rock, such as snow flake obsidian, have small crystals that are called feldspar. Obsidian rocks break very easily into pieces that have sharp edges and smooth round surfaces.

Mineral

Hardness 1 1/2-2 1/2

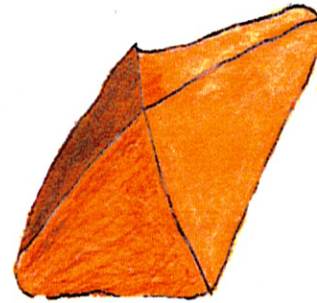
Sulfur is an unmixed element, found in rocks near volcanoes and around hot springs. It usually makes a powdery crust on rocks, but can also form large crystals. The crystal forms a mineral called tabular, bipyramidal. It burns easily, giving off sulfur dioxide making a strong, unpleasant smell. It is usually bright yellow, but can be brownish. Sulfur is transparent to translucent in color. Sulfur can be put into medicine to help people.



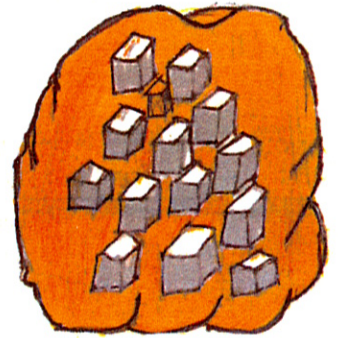
Ruby



Amber



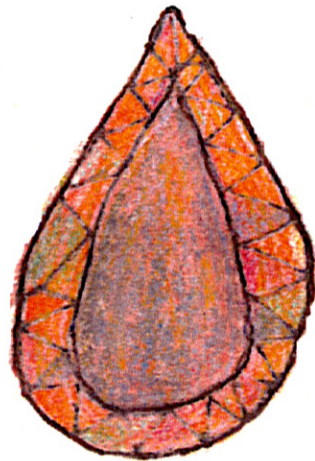
Corundum



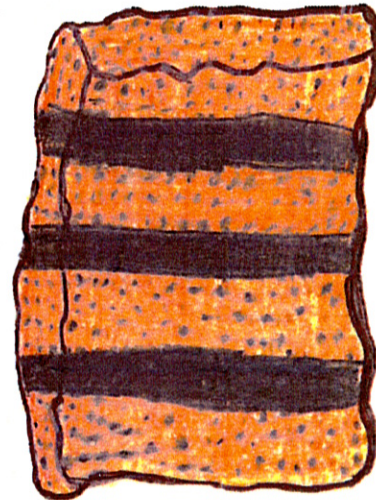
Graphite



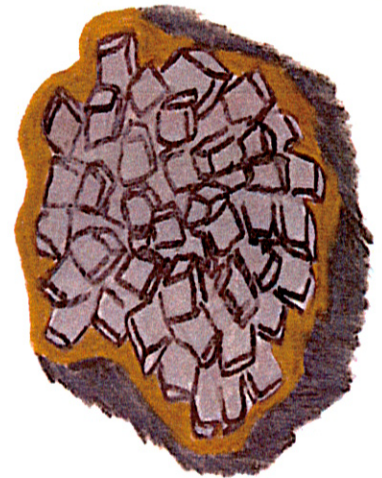
Star Sapphire



Opal



Pink Granite



GALENA

Mineral

Hardness 1-2

Graphite is made out of the element carbon. This rock is often found in schist, a kind of Metamorphic rock, and Limestone, which is a Sedimentary rock. The name comes from the Greek word *graphos*, which means "to write." The "lead" in pencils is not really lead at all. It is a mixture of clay and graphite. Graphite is very soft, has a metallic luster, a greasy feeling and cleaves break into flat pieces. On the hardness scale, graphite is the softest with 1-2. The colors of graphite are dark gray to black.

Mineral

Hardness 9

Corundum is a mineral made of aluminum and oxygen. Corundum is found mainly in metamorphic rocks. Corundum can be brown, yellow, or green, but the best known kinds are red and blue. Corundum also forms in igneous rocks called pegmatites. It forms crystals of different shapes. The red and blue kinds are best known as the gems ruby and sapphire. Corundum is very hard and is used to make the rough surface on sandpaper and emery boards. Corundum has a hardness of 9.

Igneous Rock

Grain Size Fine

Amber is the resin fossil of extinct coniferous trees. That means the resin has become a mineral. It varies from transparent to translucent. Insects were sometimes trapped in the sticky resin of amber and fossilized. Amber is used to make jewelry. Amber is called the Jurassic gem. The name Amber comes from the Arabic Ambar. The most valuable colors of amber are reds, blues, and greens. Amber is found along the southeastern shores of the Baltic sea. Amber is spread around the Baltic's shores.

Mineral

Hardness 9

Ruby is the rarest and most valuable mineral. You can see other materials in the crystals, these is called inclusions. Rubies are formed in both igneous and metamorphic rocks. Rubies are pink to blood-red and are transparent. Ruby has a hardness of 9 and is used for jewelry. Some think you can predict the future by looking into a ruby.

Mineral

Hardness 2 1/2

Galena is a very important lead mineral that was used to make weapons, ceramics, glassware, and different kinds of metals. Because lead is highly toxic, it's more recent uses in gasoline and paints have been reduced. Galena forms cube shapes or eight sided crystals. Its color is gray metallic. Galena forms from hot water from the earth's interior. Galena can irritate the skin when touched. When Galena is heated with hydrochloric acid it smells like rotten eggs.

Igneous Rock

Grain Size Coarse

Pink Granite is a common but important igneous rock that has many uses. Many rocks are granite. If we could mix up all the rocks in the Earth's crust, melt them, and then solidify them, we would get granite. The colors inside granite are white, gray pink and red. The main minerals in pink granite are feldspar, quartz, and mica. Granite is often polished, then used as a decorative building stone. The dark minerals give granite a speckled appearance.

Mineral

Hardness 5 1/2-6 1/2

Opals are made of silicon, oxygen, and water. Opals can transform into quartz when its water molecules are moved. They can be clear, translucent, milky white, gray, blue, green, red, brown, or black. Some opals are many different colors at once. Opals have been mined for centuries in Czechoslovakia which is in Europe. A black precious opal has the highest value. Unpolished opals look beautiful but feel rough while polished opals feel as smooth as silk. It's localities are worldwide but particularly in Australia. It is usually used for jewelry.

Mineral

Hardness 9

Did you know sapphire and rubies are a variety of corundum? Sapphires can be many colors like green, pink, purple, gray, yellow and colorless. It is only colorless if it is a pure mineral. On a scale from 1 to 10 it has a hardness of 9. Sometimes the crystal has different materials that is called an inclusion. Sometimes tube-like inclusions make a six-rayed star known as an asterism. Sapphires with a asterism is called a star sapphire. Sapphires forms in certain igneous and metamorphic rocks. Sometimes you can find it in sedimentary rocks. If corundum is not red it is a sapphire. It is clear with a vitreous or adamantine luster.



Rhodochrosite



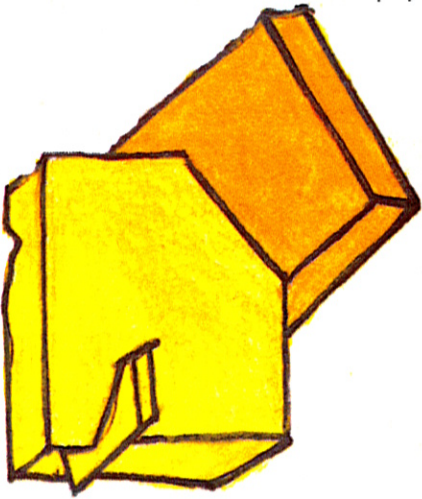
RUBY



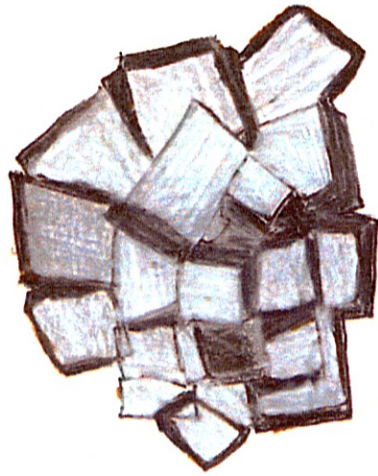
Diamond



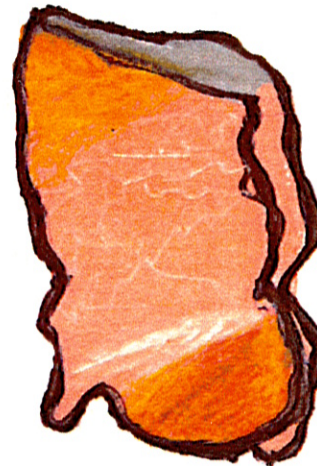
Pink Granite



Fluorite



Galena



Rose Quartz



Topaz

Igneous Rock

Partial Size-Coarse

Did you know pink granite is an igneous rock, that is formed by oxygen, iron, calcium, sodium and magnesium? It has a bumpy texture. It is shaped like a square. It has rounded edges. They are not really sharp. There are gray quartz crystals in granite. It is formed by magma and lava. It's colors are pink, red, white, brown, and a little gray. Before pink granite got it's name, it was called plutonic rock. You can find pink granite at Yosemite National Park in California. Tourmaline forms granite. Granite is used for fertilizer, tabletops, counters, floor tiles and sometimes buildings.

Mineral

Hardness 10

The diamond is the hardest known mineral. It can only be scratched by another diamond. It forms into perfect eight-sided forms. A diamond has many different colors: clear, yellow, red, blue, white, pink, green or black. Diamonds are very much like Graphite, they are made from the chemical carbon.

Diamonds are found in volcanic rocks that are called kimberlites. Diamonds need a lot of pressure to form. They form more than 75 feet into the earth's mantle! Did you know that Diamonds found near craters where meteorites hit are very tiny and they can only be seen with microscopes?

Mineral

Hardness 9

Ruby is the same thing as sapphire but in a red color. It is a variety of corundum. It has a hardness of nine. Rubies can be pink or red. Rubies can be found in Thailand and central Africa. If you were born in July ruby would be your birthstone. This precious stone can be used to make beautiful jewelry. It forms in igneous and metamorphic rocks. Because of it's hardness and density, the ruby also occurs in river gravel because moving water can break up rocks with hard rubies inside them.

Mineral

Hardness 3 1/2-4

The name Rhodochrosite comes from the Greek name RHODON for "rose" and CHROS for color. Rhodochrosite sometimes comes in other colors instead of red. It comes in pink, brown, or brownish- yellow with a white streak.

Rhodochrosite breaks in three directions and forms a six-sided crystal prism which look like a rhombus .

Rhodochrosite is an important manganese ore that purifies water and iron. It also makes steel more resistant .

Mineral

Hardness 8

Did you know topaz is November's birthstone? It comes in all types of colors, like gray, pink, purple or brown. From a scale of 1 to 10, topaz has a hardness of 8. Topaz is a mineral. Topaz is transparent and that means you can see through it. Topaz forms as prismatic crystals, this means that they are already formed. Topaz crystals can weigh over 220 pounds. Topaz is a light yellow variety of quartz. The structure of Topaz is controlled by a chainlike structure of connected irregular octahedrons. In early history topaz was recommended to cure madness. Today it is used mostly for jewelry.

Mineral

Hardness 7

There are many different kinds of quartz. Rose quartz, for example, is pink like a rose. Quartz can come in many colors like clear, white, blue, or yellow. It is used for cell phones, radios, and watches. Quartz is used in buildings and for many things like curbstones and headstones in cemeteries. Quartz is also used for gemstones and to make glass. Quartz is found in igneous, sedimentary, and metamorphic rocks.

Mineral

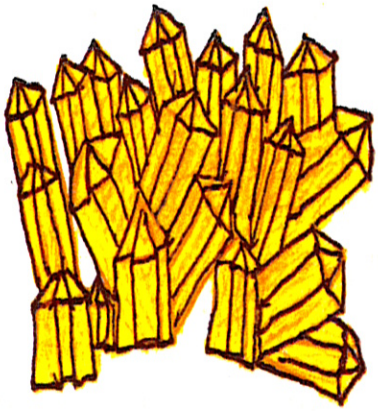
Hardness 2 1/2

This mineral forms cubes. Galena is a shining silver-gray, but it tarnishes to dull gray with time. The mineral Galena has 2 uses. One is it's the primary ore of lead and is used worldwide. Second use is Galena is an ore of silver. This rock's hardness is 2- 1/2. This rock is sometimes found in sedimentary rocks . Galena's group is sulfides. Galena forms when hot fluids find their way to higher levels in the earth crust.

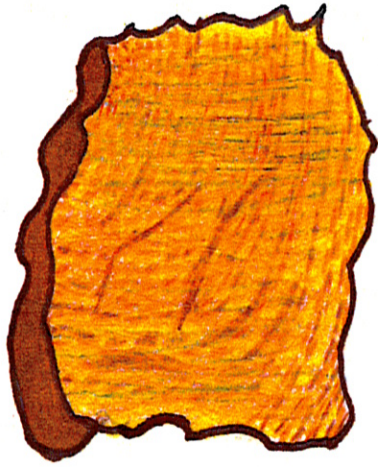
Mineral

Hardness 4

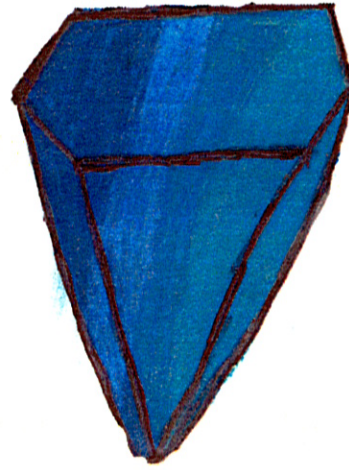
Fluorite looks like a diamond, but is a lot weaker, it has the hardness of 4 on the scale from 1-10. Fluorite is smooth like a diamond and has pretty sharp edges. Fluorite comes in many different colors like blue, violet, purple, green, yellow, white and pink. There's another color called ultraviolet and it sometimes glows with an effect called fluorescence. Fluorite is found in Southern Illinois. It helps make steel, pottery, plastic and a hard coating for cook wear. Fluorite is also used for emery wheels, electric welders, and toothpaste.



Calcite



Sandstone



DIAMOND



Stalactite



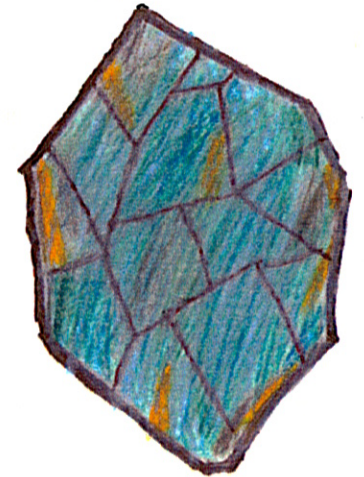
Hematite



RUBY



Limestone



Beryl- Aquamarine

Sedimentary Rock Particle Size -Crystalline

Stalactites are a sedimentary rock and grow from the roofs of caves in a long thin shape. Sometimes stalactites and stalagmites join together to form calcite. Stalactites are also formed by groundwater that holds lime. It leaves a thin amount of lime as it is evaporating. They increase by an inch each year and after many years they can be in yards. They can grow rings as wide as a tree trunk.

Mineral Hardness - 10

Have you ever wondered how your diamond had came to be? Well a diamond starts to form in the earths mantle. On a scale from 1 to 10 a diamond is the hardest. This rock can't be scratched by any other mineral besides itself. If you thought a diamond is only clear, your wrong, a diamond can be clear, yellow, red, blue, black, brown, gray, white, orange, pink, and, green. But no matter what, when you scratch another rock the scratch is white. A diamond is made of carbon. A diamond is forced to the top by hot lava. Its found in a rock called kimberlite. A diamond is usually an eight sided figure. They are very smooth. A diamond is an igneous

Sedimentary Rock Particle size Medium

Sandstone is mostly made up of quartz and grains of sand. Sometimes, there are unusual minerals in the mixture of quartz and sand.

Sandstone is a sedimentary rock that is mostly found in places that have been sandy in the past. Sand is moved by rivers and the wind. Deposits of sand were pressed together underground to make sandstone.

The different colors of sandstone are, white, yellow, red, orange, pink, and greenish. Sandstone is a very common rock.

Mineral Hardness 3

Have you ever heard of the mineral Calcite? Calcite is made out of calcium, carbon and oxygen. When calcite is broken it forms a six sided shape. The hardness of Calcite from 1 to 10 is 3, this is a soft mineral. The colors are clear, white pink, red, green, blue and white. Calcite is used for making chalk or making marking lines on playing fields. Calcite is found in many rocks like Limestone or Travertine. Calcite is a mineral, consisting largely of calcium carbonate, and is the second most abundant mineral on Earth. Calcite has many uses that include animal feed, use in the chemical industry, dough strengthener, and decorative stones in buildings.

Mineral Hardness 7-8

Have you ever heard of the beautiful Beryl? Beryl has a hardness between 7 and 8 on the hardness scale. It can have no color or it can be white, green, yellow, pink, red, or even blue. Different types of beryl rocks are: emerald, heliodor, aquamarine, and morganite. Beryl can be a pure mineral or have bits of minerals in it. It can be rough like an emerald or smooth like aquamarine, heliodor, and morganite. Beryl has points with dull edges. Beryl is a type of mineral called silicates. The shape can be triangular and hexagonal. Beryl is used for nuclear power, x-ray tubes

Sedimentary Rock Grain Size Medium, Fine

Limestone is a fascinating rock! You can find fossils in it, from sea creatures to shells. Usually when I think of limestone I think of a gray rock, but limestone can be white, gray, black, yellowish and pink. Limestone has minerals in it called calcite, dolomite and aragonite. Limestone can be used for buildings, marble, cement, glass and chalk. Limestone is a sedimentary rock.

Mineral Hardness 9

Ruby is the same thing as sapphire but in a red color. It is a variety of corundum. It has a hardness of nine. Rubies can be pink or red. Rubies can be found in Thailand and central Africa. If you were born in July ruby would be your birthstone. This precious stone can be used to make beautiful jewelry. It forms in igneous and metamorphic rocks. Because of it's hardness and density, the ruby also occurs in river gravel because moving water can break up rocks with hard rubies inside them.

Mineral Hardness 5-6

Hematite is a very important mineral. Here are some of the color ranges: brownish, bright red, blood red, brownish red, black, steel or silver- gray. Hematite is a very common mineral that is mined as a main ore of iron. Hematite is harder then pure iron, but much more brittle. Huge deposits of hematite are found in banded iron formations. Grey Hematite is typically found on top of the ground at places where there has been standing water or mineral hot springs such as those at Yellowstone Park.