

Monday

- Read "Minerals" passage on pg. 2-4
- Answer questions 1-6 on pg. 5

Tuesday

- Read "Resources" passage on pg. 6-7
- Answer questions 1-6 on pg. 8

Wednesday

- IXL Identify and sort solids, liquids, and gases

Thursday

- IXL Heating, cooling, and changes of state

**NO HOMEWORK !!
ENJOY YOUR WEEKEND :)**

Reminders

- Finish any missing IXLs
- PPT link pasted for review
- End of Year Science Assessment 5/14/25
- 5th Grade Science Review PPT

5th Grade Science Review PPT

SC.4.E.6.2 Minerals

SC.4.E.6.2 Identify the physical properties of common earth-forming minerals, including hardness, color, luster, cleavage, and streak color, and recognize the role of minerals in the formation of rocks.

Minerals are solids materials that are formed in the crust of the Earth. Minerals make up all rocks. Some rocks are made of one kind of mineral, and some rocks are made of many minerals.

Minerals make up many materials on Earth. Salt is a mineral, and so is gold. Some minerals like salt have a crystal structure that is easy to observe. All minerals have a **crystalline** structure, but in metals that structure is too small to be seen. When you look at gold, you wouldn't think of it as having a crystalline structure. **Quartz, feldspar, mica, calcite, talc, pyrite**, and graphite are all very common minerals. In fact, you are probably using graphite right now: the "lead" in your pencil isn't lead at all. It is a mineral, crushed from rocks, called graphite. Graphite has many uses. It is often used to make tools like fishing poles and baseball bats.

Quartz, feldspar, and calcite are three of the most common minerals on Earth. They are found in many rocks on Earth's surface. Quartz and calcite are very common in Florida. The white sands of Florida are formed from broken pieces of quartz. Calcite is a mineral that is dissolved in ocean water (like salt). Animals like coral, shrimp, clams, and oysters use the calcite dissolved in water to make their shells. When the shells of the organisms fall to the bottom of the ocean, they are deposited with other sediments and form sedimentary rock. This is easy to observe when you pick up a rock anywhere in Florida and can see bits of clam shells in them.

Feldspar is a word that means “field rock.” This mineral is so common in some parts of the world that it just means “rock.” Mica is a very interesting looking mineral. It is shiny and silvery but flakes apart into thin sheets very easily. Pyrite is commonly called fool’s gold, because of its golden metallic appearance. Talc was once used as baby powder. It is one of the softest minerals on Earth.

Quartz and calcite are very similar in appearance. To tell them apart, you would have to compare them using the five basic mineral tests. These tests are **hardness**, **color**, **luster**, **cleavage**, and **streak color**.

Hardness is a comparison between two or more minerals. To compare the hardness of two minerals, one mineral is used to try to scratch the other. The mineral that is found to scratch the other mineral is the harder of the two. This **scratch test** can be used to place minerals in order of hardness. For example, talc is a soft mineral. It can be scratched with a fingernail. Quartz is a hard mineral. Quartz will scratch talc. Diamond is the hardest mineral. Diamond will scratch all other minerals, but no other mineral will scratch diamond. Only diamond will scratch another diamond.

Color is used to describe minerals. Some minerals, such as talc and graphite, only have one color. Talc is white and graphite is grey. Quartz can be found with many different colors. Most quartz is white, but it can also be found in other colors.

Luster describes whether a mineral is shiny or dull. Luster can also describe whether the mineral is transparent, translucent, or opaque. A mineral that is transparent will allow all light to pass through. You should

be able to see clearly through a transparent mineral. Quartz is often transparent. Translucent minerals pass some light through, but not clearly. Calcite and salt are two minerals that are translucent. Light passes through, but the mineral is not clear: it is cloudy. Opaque minerals do not allow light to pass through. You will not be able to see through opaque minerals at all. Feldspar, talc, graphite, and pyrite are all opaque.

Cleavage describes the way a mineral breaks apart along a face. Some minerals including salt, quartz, and calcite break apart cleanly along one or more faces of the mineral. Salt will break apart into cube-shaped crystal due to its cleavage. Quartz and calcite break apart into crystals with several flat faces. Quartz and calcite are often what you think of when you think of crystals. Mica has a unique cleavage: mica breaks apart into thin sheets along one face of the mineral. Think of a stack of papers: mica will break into thin sheets just like a stack of paper separating.

Streak color is the test used to describe minerals. To test streak color, a mineral is rubbed against a tile plate. The streak of color that is left behind is recorded as streak color. Some minerals will leave behind a powder streak that is the same color as the mineral itself. If graphite, a gray mineral, is rubbed on a tile, the streak color is also grey. Pyrite, a mineral often called “fool’s gold,” leave a brownish-black streak, even though the mineral appears gold in color. This is an easy test to tell the difference between real gold and pyrite: real gold would leave a gold streak color.



Name: _____

1. Which mineral test compares two minerals to determine which mineral will scratch the other? _____

2. Which mineral test will observe if a mineral is shiny or dull, or transparent, translucent, or opaque? _____

3. Which mineral test observes the color of powder left behind when a mineral is rubbed on a tile? _____

4. Which mineral test observes the way a mineral will or will not break cleanly? _____

5. Explain the role of mineral in the formation of rock: _____

6. Two mineral samples are white in color, have flat faces, and are translucent. Which of the following test would BEST identify if both sample are the same mineral or different minerals?

- ☐ A. hardness
- ☐ B. color
- ☐ C. streak color
- ☐ D. cleavage

SC.4.E.6.3 Resources

SC.4.E.6.3 Recognize that humans need resources found on Earth and that these are either renewable or nonrenewable.

Think about the things you need every day. Food, water, and shelter are basic needs. The things that we need are called **resources**. Resources are things that we use from nature. Water, something that we need every day, comes from nature. When get a drink of water from a water fountain, the fountain is probably made of metal. Water also comes in water bottles made of plastic. Both metal and plastic come from resources that are found in the Earth's crust. Metals are mined. Rock is dug up and processed to produce metals from the minerals in the rock. Plastic is made from oil. Oil is drilled from deposits in the Earth's crust. Oil is also used to make the gasoline to fuel our cars, trucks, and buses.

Some resources, like water, wind, and sunshine, are called **renewable resources**. These are resources that are easily produced in nature. The water cycle constantly cleans and moves fresh water over the surface of the Earth. Sunshine is produced every day when the Sun is shining. Winds will blow sometimes and not others, but there are always winds somewhere on Earth. Winds can be used for something as simple as flying a kite or sailing a sailboat.

Wind, water, and sunshine can also be used to produce electricity. Water can be used to generate electricity in a dam. Wind can be used to spin the blades of a wind turbine. Sunshine is used by solar panels to produce electricity. Electricity can be produced by each of these renewable resources.

Mineral resources are not renewable. Metals, once they are mined, are not easily made again by the Earth. Oil, once it is drilled from an oil deposit, is not easily made again. Because these resources are not easily made again by nature, they are considered **nonrenewable resources**. **Oil** is found in Florida, but Florida is not a major producer of oil. One resource abundant in Florida is **phosphate**. Phosphate is a natural resource that was produced at the bottom of a shallow sea. Florida soils in the center of the state near Tampa contain high levels of phosphate. Phosphate is needed by all plants to grow, and Florida is a major supplier of the world's phosphate needs. **Limestone** is also another abundant Florida resource. Limestone is the type of rock found in Florida from the Keys to the panhandle. Limestone was used in the past to make building blocks to construct buildings throughout Florida. Today limestone is used to produce concrete. **Silica** is another very common natural resource found in Florida: sand! Silica is one of the minerals that makes up sand. Silica can be separated from sand and is used in the production of glass.



Name: _____

1.What are resources? _____

2.What makes a resource a renewable resource? _____

3.What makes a resource a nonrenewable resource? _____

4.What are examples of natural resources found in Florida? _____

5. Explain the difference(s) between renewable and nonrenewable resources: _____

6. According to the text, there are several natural resources found in Florida that can be used to produce electricity. Which of the following natural resources found in Florida would be considered a renewable source of electricity?

- ☐ A. oil
- ☐ B. phosphate
- ☐ C. sun
- ☐ D. silica