

GPS:

**S6E5. Students will investigate the scientific view of how the earth's surface is formed.**

b. Investigate the contribution of minerals to rock composition.

c. Classify rocks by their process of formation.

d. Describe processes that change rocks and the surface of the earth.

e. Recognize that lithospheric plates constantly move and cause major geological events on the earth's surface.

f. Explain the effects of physical processes (plate tectonics, erosion, deposition, volcanic eruption, gravity) on geological features including oceans (composition, currents, and tides).

g. Describe how fossils show evidence of the changing surface and climate of the Earth.

1. A mineral is a naturally occurring, inorganic solid that has a crystal structure and a definite chemical composition.
2. A mineral is inorganic, which means that it cannot contain materials that were once part of living things.
3. The repeating pattern of a mineral's particles forms a solid called a crystal.
4. Element such as copper, silver, and gold are examples of minerals that occur in nature in a pure form.
5. The streak of a mineral is the color of its powder which provides a clue to a mineral's true identity.
6. Shiny materials, such as galena, are said to have a metallic luster which describes how light is reflected from the mineral's surface.
7. Talc is the softest known mineral on the Mohs Hardness Scale that flakes when scratched by a fingernail.
8. The hardest known mineral on the Mohs Hardness Scale is a diamond which can scratch all other substances.
9. A mineral that splits easily along flat surfaces has the property called cleavage.
10. Most minerals do not split apart evenly, but instead break apart in an irregular way and is referred to as fracture.
11. To describe a rock's texture, geologists use terms based on the size, shape, and pattern of the grains.
12. Rock that forms from the cooling of magma below the surface or lava at the surface is called igneous rock.
13. Most sedimentary rock forms when particles of other rocks or the remains of plants and animals are pressed and cemented together.
14. Metamorphic rock forms when an existing rock is changed by heat, pressure, or chemical reactions.
15. Extrusive rock is igneous rock formed from lava that erupted onto Earth's surface.
16. Basalt is the most common extrusive rock on Earth and is found mostly on the ocean floor.
17. Igneous rock that formed when magma hardened beneath Earth's surface is called intrusive rock.
18. The most abundant intrusive rock on Earth's continents is granite.
19. Sediment is small, solid pieces of material that come from rocks or living things.
20. The sedimentary rock called limestone is used in making cement.
21. Forces inside Earth can push the rock down toward the heat of the mantle producing metamorphic rock.
22. Metamorphic rocks such as slate, schist, and gneiss that have their grains arranged in parallel layers or bands are said to be foliated.
23. Metamorphic rocks such as marble and quartzite are said to be nonfoliated because their mineral grains are arranged randomly.
24. Marble and slate are two of the most useful metamorphic rock.
25. The rock cycle is a series of processes on Earth's surface and in the crust and mantle that slowly change rocks from one kind to another.
26. Most sedimentary rocks are formed through a series of processes:

Erosion - running water, wind or ice loosen and carry away fragments of rock.

Deposition - is the process by which sediment settles out of the water or wind carrying it.

Compaction - is the process that presses sediments together.

Cementation is the process in which dissolved minerals crystallize and glue particles of sediment together.