

# Rocks and Minerals Study Guide

## Enduring Understandings

- A geologist is a scientist who studies rocks and minerals.

### ALL ABOUT ROCKS:

- A rock is a non-living solid substance that is made up of two or more minerals.
- The properties of a rock are:
  - Color
  - Size
  - Shape
  - Texture
  - Luster

### ALL ABOUT MINERALS:

- A mineral is a non-living solid substance that is the same all the way through.
- The properties of a mineral are:
  - Color
  - Streak
  - Cleavage
  - Fracture
  - Luster
  - Hardness
- Streak is the color of a mineral when it is ground into a powder. A streak test is used to determine the color a mineral. A streak of a mineral may be different than the external color of a mineral.
- Cleavage is the tendency for a mineral to split easily along a flat surface.

- Fracture is the tendency for a mineral to break in an irregular pattern with rough or jagged edges.
- Luster is the way a mineral shines or reflect light.
- Hardness is a measure of how easily a mineral can be scratched. Hardness is the most accurate test in determining the identity of a mineral.
- Minerals are found in the foods we eat. Our bodies need certain minerals to stay healthy.

### **The MOHS HARDNESS SCALE:**

- The Mohs Hardness Scale was created by Friedrich Mohs in 1812 and is still in use today.
- According to the Mohs Hardness Scale, a diamond is the hardest mineral with a hardness rating of 10 while talc is the softest with a hardness rating of 1.
- Explain why Friedrich Mohs created the Mohs Hardness Scale.

*(be on the lookout for a comprehension sheet all about the Mohs Hardness Scale).*

### **WEATHERING OF ROCKS:**

- Weathering from wind, water, ice, and plants can cause a rock to break down over time. Most weathering is caused by water. Rushing water, like that of a stream or river, can cause tiny particles to break away causing the rock to change over time. When the wind blows sand and small rocks against a larger rock, tiny particles of rock can break away. When water freezes inside cracks found in rocks, over time the crack will become deeper and wider and eventually the rock will break apart into smaller pieces. Plants are another form of weathering. Seeds find their way inside a crack in a rock and take root. Over time the roots grow deep into the crack causing the crack to become deeper and wider. Over time the effect will cause the rock to split and break into smaller pieces.