

What Are Minerals?

Name: _____

Date: _____

Minerals

- A _____ is a solid, inorganic, natural material with a certain structure and composition.
- Minerals are the _____ throughout their composition.

Mineral Characteristics

- Minerals are _____.
- Minerals are _____. This means that they were never alive or part of anything that was alive.
 - Graphite is made of carbon but was _____ alive.
- Minerals form in _____.
- Minerals have a specific _____ make-up, or composition.
 - For example, the formula for halite (table salt) is _____. So, one molecule of halite is always made of one atom of sodium (Na) and one atom of chlorine (Cl).
- Minerals have a definite _____. A mineral's structure depends on the atoms that make up the mineral and how the atoms combine.
 - Diamond and graphite are both made only of carbon (C). However, the carbon atoms in diamond are arranged in a different _____ than the carbon atoms in graphite.

Properties of Minerals

- Each type of mineral has certain characteristics or _____.
- Different properties are the result of the _____ compositions and physical structure of each mineral.
- _____ is likely the first property that you might observe.
- Some minerals are always the same color, such as _____.
- _____ is a property that describes the way a mineral reflects light.
- A mineral with metallic luster is _____, like a polished metal.
 - _____ and pyrite have metallic luster.
- _____ minerals do not have a shiny luster.
- The surface of talc resembles the surface of a pearl, so talc's luster is described as _____.
- Quartz has a _____ luster.

- Because one form of the mineral hematite looks like an earthen clay pot, its luster is described as _____.
- _____ is the color of a mineral in its powdered form.
- A streak test is done by dragging a mineral across an unglazed, porcelain tile called a _____.
- This causes the part of the mineral being dragged to break down into a _____.
- Minerals with _____ luster produce dark-colored streaks.
- Minerals with _____ luster are usually produce either colorless or very light streaks.
- Minerals that are harder than the streak plate show _____ streak at all.

Properties of Minerals: Hardness

- Another mineral property is _____.
- Hardness is the _____ of a mineral to being scratched.
- A mineralogist named Friedrich Mohs developed a _____ that ranks the hardness of certain minerals.
- Minerals and objects with higher numbers on the scale will scratch minerals and objects with _____ numbers on the scale.

Properties of Minerals: Cleavage & Fracture

- _____ are arranged differently in different minerals.
- These arrangements cause minerals to break in _____ ways.
- Minerals that break along smooth planes have _____.
- _____ is a mineral that has cleavage in only one direction.
- This causes it to cleave, or break, into _____ sheets.
- Minerals that break along rough, uneven surfaces have _____.
- _____ is one mineral that fractures.

Properties of Minerals: Other Properties

- In addition to color, luster, streak, hardness, and cleavage or fracture, many minerals have _____ properties.
- The mineral magnetite, for example, is _____.
- Halite tastes _____.
- Gold does not _____.
- The mineral calcite has _____ unique properties.
- It _____ when it contacts an acid.
- It also has a property called _____, which causes light shining through it to split into two rays.