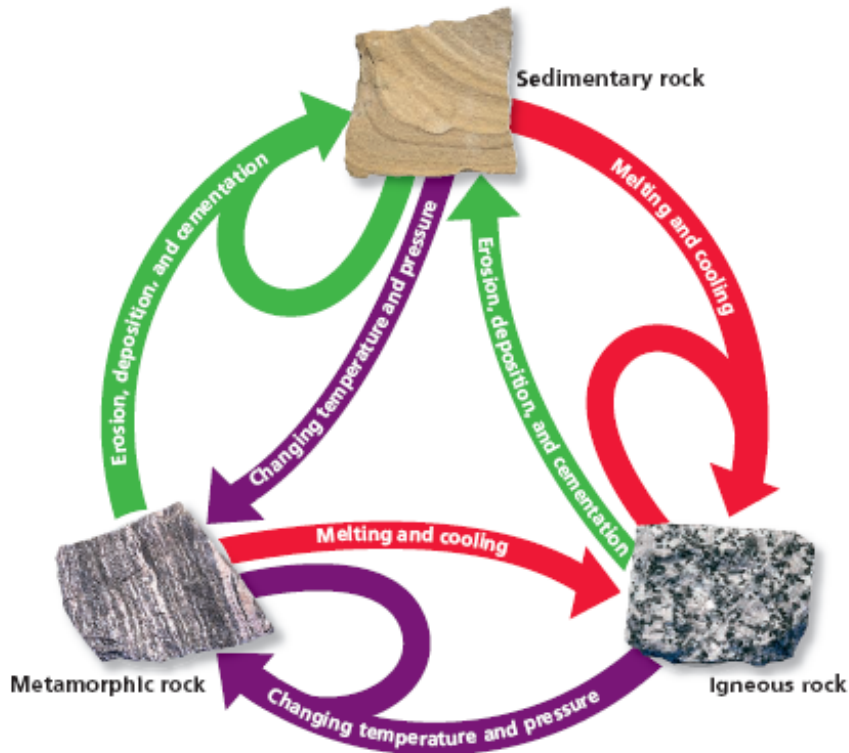


Rocks and Minerals Quick Reference

I. Rocks

- a. Rocks are made of minerals. ex.) Granite : Feldspar and Mica
- b. There are three classifications of rock:
Igneous, Sedimentary, and Metamorphic
- c. Igneous rocks form when hot molten rock cools and hardens.
- d. Igneous rocks can form from both magma and lava.
- e. Sedimentary rocks form when sediment or particles are pressed together.
- f. There are three categories of Sedimentary rock:
Clastic, Chemical and Organic.
- g. Clastic is formed when wind, ice, or water carry pieces of rock, organic material and minerals. These sediments are pressed together and cemented when water dries up and minerals begin growing; locking all the sediments together.
- h. Metamorphic means to change form; these category of rock form when heat and/or pressure change the composition of the rock.
- i. There are two forms of Metamorphic rock: Regional and Contact.
- j. Contact metamorphism occurs when rock makes contact with lava.
- k. Regional metamorphism occurs when rock is buried and changed by heat and pressure.
- l. Metamorphic rocks are also categorized by texture:
banded and non-banded.



Inquiry

How does erosion contribute to the rock cycle ?

Inquiry

What is the difference between intrusive and extrusive igneous rocks?

Minerals

Inquiry: Can minerals cause wars?

II. Minerals

A. Mineral : a solid element or compound from the Earth's crust that has a definite shape (crystal) and chemical composition.

Examples:

Gypsum : Drywall
Talc Baby Powder
Copper: Wires
Bauxite: Aluminum Foil

Testing a Mineral:

B. Luster: the way in which light reflects from the surface of a mineral.

Metallic Luster: shines like polished metal.

Non-Metallic Luster: dull, pearly or vitreous.

C. Hardness: the measure of how easily a mineral can be scratched.

Examples:

Talc is the softest mineral.

Diamond is the hardest mineral.

D. Scientists use the Moh's Scale to estimate mineral hardness.

E. Color : never a reliable test for minerals.

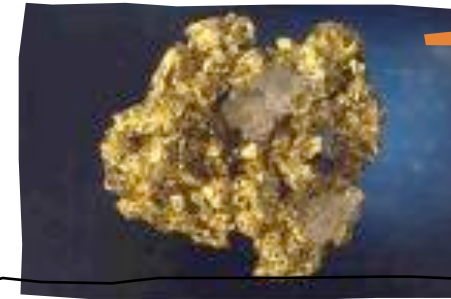
F. Streak: when you scratch a mineral against a streak plate or ceramic tile. The color of the powder, or streak, left behind will help you determine the type of mineral you are testing.

G. Cleavage: when a mineral splits easily along a flat surface or plane.

H. Why Testing Minerals are important:

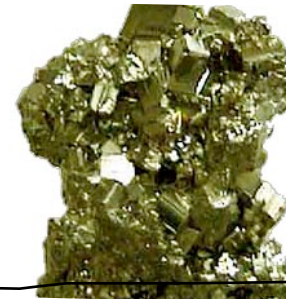
Gold and Pyrite have the same color, luster, and no cleavage.

However, their hardness and streak are different.



Gold

- Hardness 3
- Streak golden/yellow



Fool's Gold or Pyrite

- Hardness 6
- Streak green/gold

Hardness	Mineral
10	Diamond
9	Corundum
8	Topaz
7	Quartz
6	Feldspar
5	Apatite
4	Fluorite
3	Calcite
2	Gypsum
1	Talc

Mohs Hardness Scale