Mineral Study Guide Key

1. What are the characteristics of all minerals?
   1. Solid – definite shape and definite volume
   2. Naturally occurring – occur naturally on Earth (not man made)
   3. Inorganic – does not contain living things or the remains of living things (it is not alive, it was never alive)
   4. Fixed chemical composition – It is made from specific amounts of elements from the periodic table (the recipe for that mineral does not change)
   5. Crystal Structure – Minerals have repeating patterns of the minerals particles (how are the atoms organized within your mineral)
2. What is the difference between a mineral’s characteristics and its properties?

Mineral characteristics are used to determine if an item is a mineral or not. All minerals must have all 5 characteristics: Solid, naturally occurring, inorganic, fixed chemical composition, crystal structure. Mineral properties are used to identify what mineral you have. Mineral properties may vary: color, luster, hardness, streak, cleavage, fracture, density, special properties.

1. True or False: A mineral’s color is always the same. Explain your answer. False. Minerals of the same type may come in different colors. Ex. Quarts
2. True or False: A mineral’s chemical composition is always the same.
3. True or False: An object that comes from something that was once alive, or organic, is a mineral.
4. Yes or No: Is your desk a mineral? Why or Why not? My desk is not a mineral because it does not contain all 5 characteristics needed to be considered a mineral. One characteristic it does not have is that it is not naturally occurring.
5. True or False: Gold is a mineral because it did not come from something that was once alive, is naturally occurring and it has a definite chemical composition.
6. How do you tell the difference between cleavage and fracture?

Cleavage is when a mineral breaks along smooth flat surfaces. Fracture is when a mineral breaks in a rough jagged pattern.

1. If Mineral A can be scratched by Mineral B, then Mineral A is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ than Mineral B.
   1. Harder
   2. softer
2. \_Streak\_ is the color of a mineral’s powder.