

PHYSICAL VS. CHEMICAL PROPERTIES

Name _____

A physical property is observed with the senses and can be determined without destroying the object. For example, color, shape, mass, length, density, specific heat and odor are all examples of physical properties.

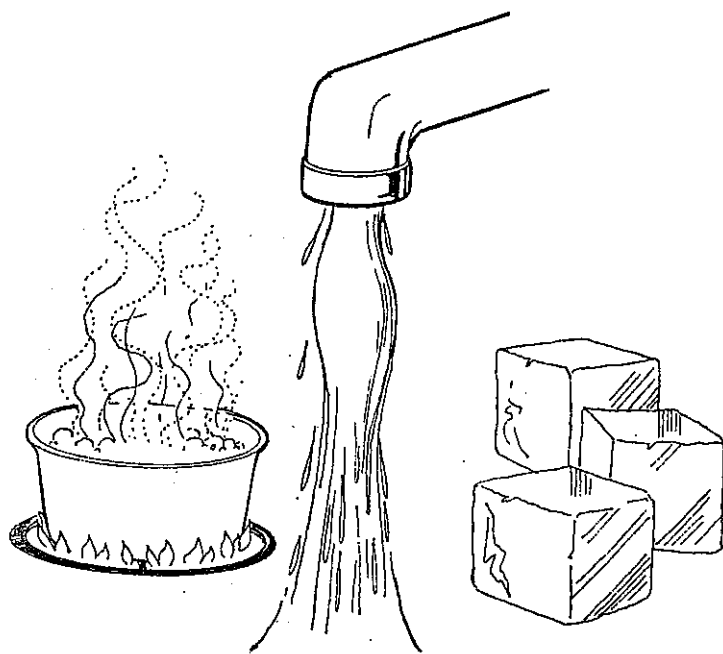
A chemical property indicates how a substance reacts with something else. When a chemical property is observed, the original substance is changed into a different substance. For example, the ability of iron to rust is a chemical property. The iron has reacted with oxygen and the original iron metal is gone. It is now iron oxide, a new substance. All chemical changes include physical changes.

Classify the following properties as either chemical or physical by putting a check in the appropriate column.

	Physical Property	Chemical Property
1. red color		
2. density		
3. flammability		
4. solubility		
5. reacts with acid to form hydrogen		
6. supports combustion		
7. bitter taste		
8. melting point		
9. reacts with water to form a gas		
10. reacts with a base to form water		
11. hardness		
12. boiling point		
13. can neutralize a base		
14. luster		
15. odor		

PHYSICAL VS. CHEMICAL CHANGE

Name _____



In a physical change, the original substance still exists, it has only changed in form. Energy changes usually do not accompany physical changes, except in phase changes and when substances dissolve.

In a chemical change, a new substance is produced. Energy changes always accompany chemical changes. Chemical changes are always accompanied by physical changes.

Classify the following as examples of a physical change, a chemical change or both kinds of change.

1. Sodium hydroxide dissolves in water.
2. Hydrochloric acid reacts with sodium hydroxide to produce a salt, water and heat.
3. A pellet of sodium is sliced in two.
4. Water is heated and changed to steam.
5. Potassium chlorate decomposes to potassium chloride and oxygen gas.
6. Iron rusts.
7. Ice melts.
8. Acid on limestone produces carbon dioxide gas.
9. Milk sours.
10. Wood rots.
