

1. A **physical property** is observed with the senses and can be determined without destroying the object. Examples of physical properties include mass, shape, color, odor, length. In a **physical change**, the original substance still exists. It has only changed form.
2. A **chemical property** indicates how a substance reacts with something else. In a **chemical change**, a new substance is produced. Energy changes always accompany chemical changes. Chemical changes are always accompanied by physical changes.
3. Which of the following processes are physical changes? Which are chemical changes?

a. combustion	e. evaporation	i. boiling
b. melting	f. filtration	j. electrolysis
c. dissolving	g. fermentation	k. decomposition
d. metabolism	h. distillation	
4. Identify the following properties as physical or chemical.

	Physical	Chemical
Blue color		
Density		
Flammability		
Solubility		
Supports combustion		
Sour taste		
Melting point		

	Physical	Chemical
Odor		
Luster		
Neutralize an acid		
Boiling point		
Hardness		
Reacts with acid to form H ₂		
Reacts with water to form a gas		

5. Classify the following examples as physical or chemical changes.

a. Sodium chloride dissolves in water	_____
b. Hydrochloric acid reacts with sodium hydroxide to produce a salt, water, and heat.	_____
c. A pellet of sodium is sliced in two pieces.	_____
d. Water is heated and changed to steam.	_____
e. Potassium chlorate decomposes to potassium chloride and oxygen gas.	_____
f. Iron rusts.	_____
g. Ice melts.	_____
h. Acid on limestone produces carbon dioxide gas.	_____
i. Wood rots.	_____
j. cracking an egg	_____
k. bake a cake	_____