

Name \_\_\_\_\_ Date \_\_\_\_\_

# PHYSICAL & CHEMICAL PROPERTIES

A physical property is observed with the senses (or measured) and can be determined without changing the object. For example, color, shape, and odor are all examples of physical properties because they are observed using sight, touch, and smell. Mass and length are also physical properties because they are measured using a balance and ruler.

A chemical property indicates how a substance reacts with something else. The original substance is fundamentally changed in observing a chemical property. For example, the ability of iron to rust is a chemical property because rust is a new substance not originally found on iron. The iron has reacted with oxygen, and the original iron metal is changed. It now exists as iron oxide, a different substance!

Put a check mark in the column to classify each description as either a chemical or physical property.

PROPERTY DESCRIPTION	PHYSICAL	CHEMICAL
non-metals do not conduct heat or electricity well		
methane gas is odorless until a chemical is added to it		
oxygen supports combustion		
diamonds (made from C) are very hard		
metals are lustrous (shiny)		
metals react with acid to form hydrogen gas		
acids can react with a base in neutralization		
volume of water in a water balloon is 100 mL		
water's boiling point is 100°C		
bases taste bitter		
wood is flammable		
solubility (dissolving) of food coloring in water		
metals can react with water to form a gas		
rust can form on the metal spokes of a bicycle		
the melting point of water is 0°C		
density of Al is 2.70 g/cm <sup>3</sup>		
sulfur is a yellow color		