











# Common Compounds

- $H_2O =$  WATER - about 75% of earth is covered with this compound; the reason earth is called Blue Planet
- $CO_2 =$  CARBON DIOXIDE - animals exhale this compound; plants take this compound in through stomata and use it during photosynthesis to make sugar for themselves; this compound is called Dry Ice when frozen; it is denser than air thus sinks in air
- $CO =$  CARBON MONOXIDE - poisonous gas found in fumes; produced any time you burn fuel in cars or trucks, small engines, stoves, lanterns, grills, fireplaces, gas ranges, or furnaces; don't burn anything or run any engine inside without an air vent!
- $SO_2 =$  SULFUR DIOXIDE - pollution; compound released by factories and released during volcanic eruptions
- $C_6H_{12}O_6 =$  GLUCOSE - created when plants photosynthesize; a form of sugar plants use for energy
- $CaCO_3 =$  CALCIUM CARBONATE - chalk; limestone is made of this; coral animals make this exoskeleton
- $HCl =$  HYDROCHLORIC ACID - very strong acid found in your stomach; breaks food down into smaller molecules; helps you digest food by "dissolving" food; hazardous substance
- $NaCl =$  SODIUM CHLORIDE - table salt; used to flavor food and preserve food; your heart requires Na!
- $CH_4 =$  METHANE - natural gas; used in houses for gas burners; gas released by animals during digestion; flammable
- $NH_3 =$  AMMONIA - colorless gas with a pungent odor; used in cleaning products; hazardous
- $H_2O_2 =$  HYDROGEN PEROXIDE - colorless; can be used as a bleaching agent (in toothpaste) and as a disinfectant
- $SiO_2 =$  SILICON DIOXIDE - glass; quartz; most common ingredient found in beach sand
- $Fe_2O_3 =$  IRON OXIDE - rust; forms when oxygen and iron chemically combine; reddish orange
- $C_3H_8 =$  PROPANE - gas that is sold in tanks and used in grills for cooking

**Directions:** Use the Legos to make the compounds listed above.

➤ Use this key when making your compounds.

Color with colored pencil	Color Name	Element Name	Element Symbol
	Black	Carbon	C
	Red	Oxygen	O
	Green	Chlorine	Cl
	White	Hydrogen	H
	Yellow	Sulfur	S
	Silver Gray	Sodium	Na
	Blue	Calcium	Ca
	Orange	Iron	Fe
	Brown	Silicon	Si
	Tan	Nitrogen	N

- Each different color of Lego represents a different element
- One Lego represents one atom of a particular element
- When you snap or join the Legos together, that represents a chemical bond
- Legos that are not snapped together are free elements; they do not make a compound until they are chemically bonded or snapped together with a different element.