

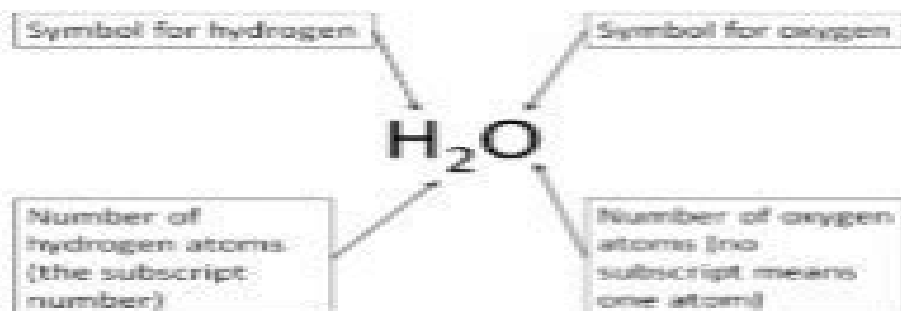
STAAR Science Tutorial 02

TEK 8.5D: Chemical Formulas

TEK 8.5D: *Recognize that chemical formulas are used to identify substances and determine the number of atoms of each element in chemical formulas containing subscripts.*

Chemical Formulas

- A **chemical formula** is a description of the number and kind of atoms found in a single molecule of a substance, using the symbol for each element and a subscript number to state the number of atoms of the element to the left of the subscript.
- Scientists use chemical formulas such as NaCl instead of common names (table salt) or chemical names (sodium chloride) because it is shorter, more accurate, and universally understood.
- Examples of chemical formulas include H_2O (water), CO_2 (carbon dioxide), $\text{HC}_2\text{H}_3\text{O}_2$ (vinegar), NaHCO_3 (baking soda), NH_3 (ammonia), and $\text{C}_6\text{H}_{12}\text{O}_6$ (glucose).



- If asked how many different elements are in a chemical formula, remember that each element symbol starts with a capital letter. But be careful to not count an element twice if repeated in the formula. In $\text{HC}_2\text{H}_3\text{O}_2$, there are only three elements, carbon, hydrogen and oxygen, even though there are four capital letters. (The H symbol is repeated twice in the formula.)

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