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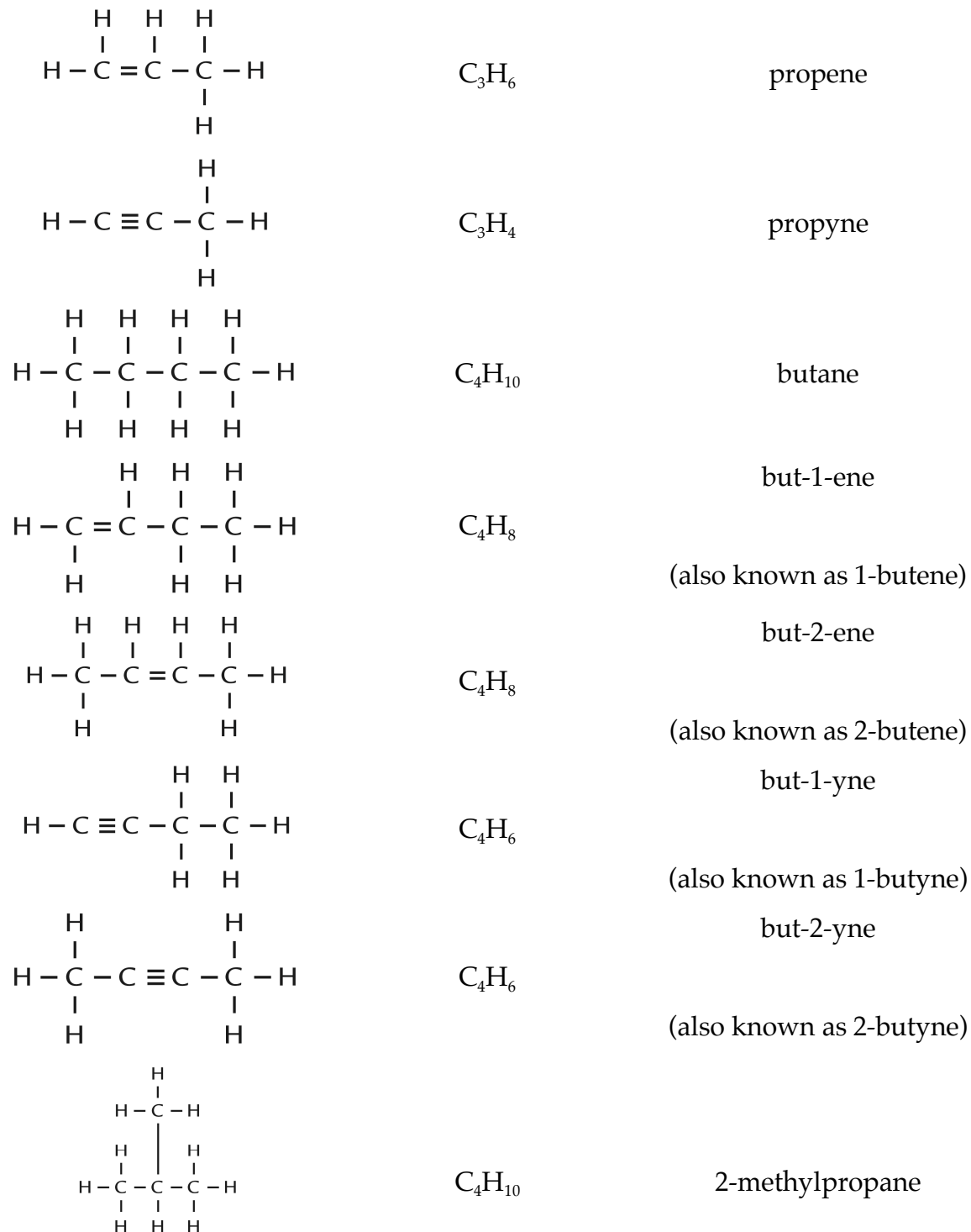
Naming Hydrocarbons

There are at least 10 million carbon-based compounds in existence, with new ones being made each year. With such a vast number of compounds it is critical that there be a consistent naming system. The International Union of Pure and Applied Chemistry (IUPAC) has the task of keeping the rules for naming compounds up-to-date. Scientists throughout the world follow these rules.

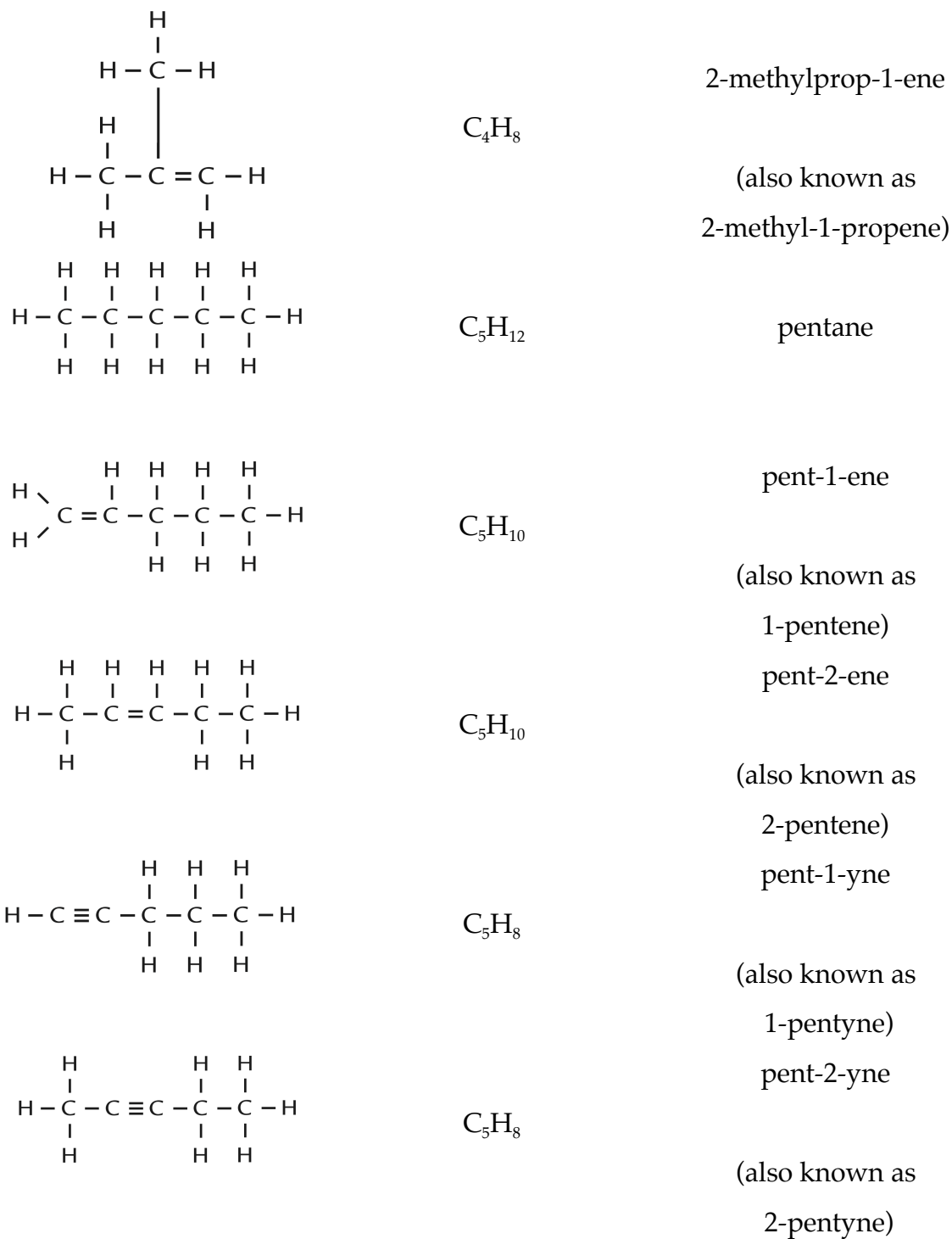
Try to derive some of the IUPAC rules for naming hydrocarbons by examining the names of some of the molecules that you made with the molecular model sets.

Structural formula	Chemical formula	Name
$\begin{array}{c} \text{H} \\ \\ \text{H} - \text{C} - \text{H} \\ \\ \text{H} \end{array}$	CH_4	methane
$\begin{array}{c} \text{H} \quad \text{H} \\ \quad \\ \text{H} - \text{C} - \text{C} - \text{H} \\ \quad \\ \text{H} \quad \text{H} \end{array}$	C_2H_6	ethane
$\begin{array}{c} \text{H} \quad \text{H} \\ \quad \\ \text{H} - \text{C} = \text{C} - \text{H} \end{array}$	C_2H_4	ethene
$\text{H} - \text{C} \equiv \text{C} - \text{H}$	C_2H_2	ethyne
$\begin{array}{c} \text{H} \quad \text{H} \quad \text{H} \\ \quad \quad \\ \text{H} - \text{C} - \text{C} - \text{C} - \text{H} \\ \quad \quad \\ \text{H} \quad \text{H} \quad \text{H} \end{array}$	C_3H_8	propane

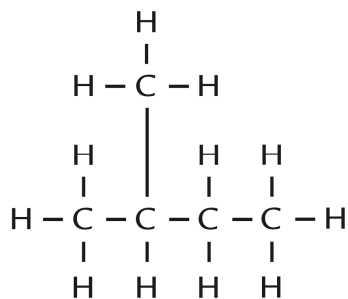
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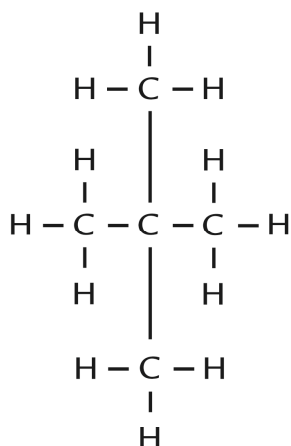
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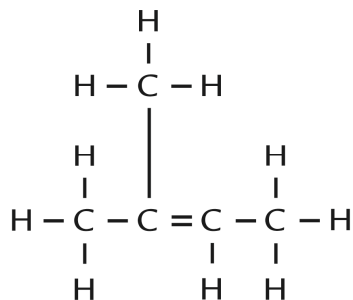
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2-methylbutane

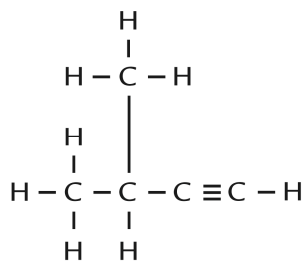


2,2-dimethylpropane



2-methylbut-2-ene

(also known as
2-methyl-2-butene)



3-methylbut-1-yne

(also known as
3-methyl-1-butyne)