

<b>REACTION CATEGORY</b>	<b>COMPLETE COMBUSTION</b>
<b>REACTION DESCRIPTION</b>	For our purposes combustion will mean the reaction of oxygen with a compound containing carbon and hydrogen. A common synonym for combustion is burn.
<b>REACTION FORMAT</b>	$C_xH_y + O_2 \rightarrow CO_2 + H_2O$
<b>REACTION GUIDELINES</b>	<ol style="list-style-type: none"> <li>1. Identify the reaction as being a combustion reaction. (A hydrocarbon reacting with oxygen)</li> <li>2. Remember the products are always <math>CO_2</math> and <math>H_2O</math>.</li> <li>3. Compounds that contain carbon and hydrogen sometimes contain oxygen; the products are still the same-- <math>CO_2</math> and <math>H_2O</math>.</li> <li>4. Compounds that contain carbon and hydrogen sometimes contain nitrogen; in this case another product, <math>NO_2</math> is formed along with <math>CO_2</math> and <math>H_2O</math>.</li> <li>5. Compounds that contain carbon and hydrogen sometimes contain sulfur; in this case another product, <math>SO_2</math> is formed along with <math>CO_2</math> and <math>H_2O</math>.</li> </ol>
<b>REACTION GUIDELINE EXAMPLES</b>	<ol style="list-style-type: none"> <li>1. <math>CH_4 + 2O_2 \rightarrow CO_2 + 2H_2O</math></li> <li>2. <math>2H_2C_2O_4 + O_2 \rightarrow 4CO_2 + 2H_2O</math></li> <li>3. <math>C_{21}H_{24}N_2O_4 + 27O_2 \rightarrow 21CO_2 + 12H_2O + 2NO_2</math></li> </ol>

### Practice Problems

