Name:

Combustion Reaction Notes

REACTION CATEGORY	COMPLETE COMBUSTION
REACTION DESCRIPTION	For our purposes combustion will mean the reaction of oxygen with a compound containing carbon and hydrogen. A common synonym for combustion is burn.
REACTION FORMAT	$C_xH_y + O_2 \rightarrow CO_2 + H_2O$
REACTION GUIDELINES	1. Indentify the reaction as being a combustion reaction. (A hydrocarbon reacting with oxygen) 2. Remember the products are always CO_2 and H_2O. 3. Compounds that contain carbon and hydrogen sometimes contain oxygen; the products are still the same-- CO_2 and H_2O. 4. Compounds that contain carbon and hydrogen sometimes contain nitrogen; in this case another product, NO_2 is formed along with CO_2 and H_2O. 5. Compounds that contain carbon and hydrogen sometimes contain sulfur; in this case another product, SO_2 is formed along with CO_2 and H_2O.
REACTION GUIDELINE EXAMPLES	1. $CH_4 + 2O_2 \rightarrow CO_2 + 2H_2O$ 2. $2H_2C_2O_4 + O_2 \rightarrow 4CO_2 + 2H_2O$ 3. $C_{21}H_{24}N_2O_4 + 27O_2 \rightarrow 21CO_2 + 12H_2O + 2NO_2$

Practice: Complete the following reactions, then balancing each reaction.

1. $C_6H_6 + O_2 \rightarrow$
2. $C_{12}H_{22}O_{11} + O_2 \rightarrow$
3. $CH_3COCH_3 + O_2 \rightarrow$
4. $C_2H_5OC_2H_5 + O_2 \rightarrow$
5. $C_4H_9OH + O_2 \rightarrow$