

# Energy and Chemical Reactions

Name \_\_\_\_\_

## Part 1: The Chemical Reaction of Ethanol

The overall reaction formula of combustion of ethanol is:  $\text{C}_2\text{H}_5\text{OH} + 3\text{O}_2 \rightarrow 2\text{CO}_2 + 3\text{H}_2\text{O}$

1. Build **one molecule of ethanol** and **3 molecules of oxygen**.
2. PUT ALL OTHER PIECES BACK IN THE BIN.
3. Twist the pipe cleaners around the high energy bonds.
4. Fill in the reactants side of the data table.
5. Get checked off by Mrs. Moberly.
6. USING ONLY THE REACTANTS, build the products of ethanol combustion. DO NOT PUT ANY OF THE MATERIALS AWAY.
7. Fill in the products side of the data table.
8. Get checked off by Mrs. Moberly.
9. Complete the analysis questions.

**CHALLENGE: IF YOU HAVE TIME SET UP THE REACTION FOR PHOTOSYNTHESIS (on the back of the lab data sheet). Make sure you get checked off by Mrs. Moberly.**