Handout M05-1: Matchstick Forest.

Name(s): ________________________

1. **Experimental question:** What is the effect of _______________________ on fire spread? This is the condition that will be changed – “varied” - from one experiment to the next, so it is called the *experimental variable*. In Experiment 1, the experimental variable was *slope*.

2. **Hypothesis:**

3. **Measurements needed:**

   Calculations needed, if any:

   How do you plan to ignite – from the top, side, or bottom row of matches?

Experiments 1-4 (below) refer to each team’s experimental trial. Answer questions for all four experiments, not just your own.

4. **1st experiment** –
   a. What is the condition of the experimental variable? That is, how many matches are being used and how are they arranged?

   b. Measurements and calculations:

5. **2nd experiment:**
   a. What is the condition of the experimental variable?

   b. Measurements and calculations:
6. **3rd experiment:**
   a. What is the condition of the experimental variable?

   b. Measurements and calculations:

7. **4th experiment:**
   a. What is the condition of the experimental variable?

   b. Measurements and calculations:

**After all experiments are done, answer the following:**

8. Review your hypothesis (Question 2 above). Based on your observations, do you think your hypothesis was correct? If not, write a better one here:

9. Write a paragraph that answers Question 1 above. Show how the results of your experiments demonstrate your answer. Use your understanding of the heat plume and the Fire Triangle to explain.