

## 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. **1<sup>st</sup> 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. **2<sup>nd</sup> experiment:**

a. What is the condition of the experimental variable?

b. Measurements and calculations:

**6. 3<sup>rd</sup> experiment:**

- a. What is the condition of the experimental variable?
  
- b. Measurements and calculations:

**7. 4<sup>th</sup> 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.