Name:	Class/Period:	Date:

Presentation

Define “conceptual model.”

Conceptual Model	

Make a diagram of the fire triangle.

Complete the table below by listing the three components of the fire triangle in the first column. Give an example of each factor in the second column.

Table 1: The Three Components of the Fire Triangle

Laboratory Procedure

Organize your team. Change jobs if you repeat the experiment. For a team of 4:

- The **Observer** should light the matches.
- The **Timer** should measure the duration of burning (in seconds).
- The **Measurer** should measure the length of flames.
- The **Recorder** should record data.

Complete the experiment by following the “Procedures.”

Procedures:

1. Be sure the “tree model” experimental setup matches the demonstration setup or the example in the image. Be sure that the tree model stand is on a metal tray.

2. Clamp a wooden match pointing **downward** in the alligator clip.
3. When the **Timer** and **Measurer** are ready, the **Observer** should use the stove lighter to ignite the downward-pointing match. Then have the **Recorder** record the group's measurements and observations in **Table 2** below.

4. Wearing gloves, remove the burnt match and place it on your group's metal tray. Clamp another downward-pointing match in the alligator clip and repeat step 4.
5. Now, with a match pointing upward, complete two more trials.
6. Complete the data table and, then, answer the questions at the bottom of the page.
7. When you have finished the activity, be sure to clean up your group's station appropriately;. e sure all matches are out before they are disposed of; there is no smoke and no heat being released. Use the metal bucket in the activity area for match disposal. If in doubt, use the station's spray bottle to wet the matches before putting them in the metal bucket.

Table 2: Flame Length and Burn Time

	Match pointing:	**Upward**	**Downward**
Flame Length (cm)	Trial 1		
	Trial 2		
	Average		
Match Burn Time (s)	Trial 1		
	Trial 2		
	Average		
Use the fire triangle to explain why the upward-pointing matches went out.			
Use the fire triangle to explain why the downward-pointing matches went out.			
Use the fire triangle to explain similarities or differences in flame length between upward- and downward-pointing matches.			
Use the fire triangle to explain similarities or differences in "burn time" between upward- and downward-pointing matches.			