

Handout H02-2. Experiment 2. Explain why matches go out.

Name _____

Your objective is to figure out what part(s) of the Fire Triangle are removed when downward-pointing and upward-pointing matches go out. Use the support stand set up from Experiment 1.

Before beginning, read all of these directions together.

1. Decide what you will observe and how you will measure it. Develop a table for recording your data.
2. Plan your team roles. Write them down below your data table.
3. Show your data table and team roles to the teacher. When you have his/her approval, proceed:
4. Attach a downward-pointing match to one alligator clip and an upward-pointing match to the other.
5. When everyone is ready for his/her role, use a separate match to light either the downward- or upward-pointing match. Record your observations. You may burn as many matches as needed to meet your objective. **Burn one match at a time. Always use the oven mitt to remove burned matches.**
6. Observe how each match burns and goes out.
7. Discuss how the Fire Triangle might explain why the matches go out.
8. Below your data table, use complete sentences to explain why the matches went out. Use the Fire Triangle. You may have several explanations. You may have different explanations for the downward-pointing and upward-pointing matches.
9. These explanations are your **hypotheses**. Now figure out how to further test your hypotheses. Do you need to repeat the experiment, change it in some way, or record different information? Write down your next step, design a data table, and determine your team roles. Check with the teacher. Once you have his/her approval, proceed.
10. In complete sentences, write your final hypothesis for why downward-pointing matches go out and your final hypothesis for why upward-pointing matches go out. Use the Fire Triangle.
11. Use complete sentences to explain how you could use what you have learned from Experiments 1 and 2 to predict the spread of a wildland fire that starts on a hillside.