

S'mores Activity Sheet



Objective:

Demonstrate the concept of a limiting reactant in a chemical reaction by giving teams different amounts of graham crackers, chocolate, and marshmallows, and asking them to calculate how many s'mores can be made with the materials provided.

Procedure:

1. Students will be divided into teams with a predetermined number of crackers, marshmallows, and pieces of chocolate.
2. Read the activity sheet and answer the questions as you work through the lab.
3. Using the materials given, create s'mores consisting of two crackers, a marshmallow, and a piece of chocolate, until you are no longer able to continue.
4. Discuss the results from the activity sheet.

Pre-lab Questions:

1. What do you need to make one s'more?
2. Write out a "reaction" for how to make one s'more.
3. How many marshmallows do you have?
4. How many pieces of chocolate do you have?
5. How many graham crackers do you have?

Post-lab Questions:

- 1. What is the maximum number of s'mores you can make?**
- 2. What determined the number of s'mores you could make?**
- 3. Based on your results, what is the limiting reactant in this reaction and why?**