

Student Sheet Name _____ Period ____

Title: S'mores Lab

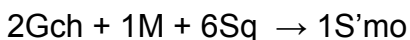
Introduction: It is obvious to the most casual observer, that the making of the epicurean delight known as the s'more is not child's play. In fact, it is a study of quantitative relationships involving stoichiometry and should only be undertaken by persons with sufficient training, such as high school chemistry students.

Pre-lab Questions:

1. What are the main parts of a written chemical equation?
2. What does the term limiting reagent mean?
3. How is theoretical different from actual yield?
4. How do you think they are both helpful in working with chemical reactions?
5. What is percent yield? (include the equation)

Advanced Lab Procedures:

1. The balanced equation for the reaction we are about to study is:



When: Gch = Graham Cracker Half
 M = Marshmallow
 Sq = Squares of Chocolate
 S'mo = S'more

2. Using your balanced equation, combine your reactants to get the desired product and then ENJOY!

Data: (draw or describe the reactants and products)

Analysis:

1. Given 18 squares of Chocolate, how many S'mores can you make if the other ingredients are in excess?
2. If you wished to make 3.5 S'mores, how many Graham Cracker Halves would be needed?
3. Given 7 Graham cracker halves, 2 marshmallows and 20 squares of chocolate:
 - (a) What is the limiting ingredient?
 - (b) What is the theoretical yield of S'mores?
4. While doing the experiment described in question 3 above some sugar-starved low life steals some of your ingredients and you are only able to make 2 S'mores. What is your percent yield?