

## What Do You Think Now?

At the beginning of this activity you were asked the following questions about producing a gas to inflate a balloon.

- What information would you need to predict how much of the reactants you would need?
- How could you use that information to determine the final volume of the balloon?

How would you answer these questions now that you have completed this activity?

## Chem Essential Questions

### What does it mean?

Chemistry explains a macroscopic phenomenon (what you observe) with a description of what happens at the nanoscopic level (atoms and molecules) using symbolic structures as a way to communicate. Complete the chart below in your *Active Chemistry* log.

MACRO	NANO	SYMBOLIC
<i>In this activity, you developed a method for determining an unknown number of pennies without counting them. Explain how the mole concept is similar to buying a bag of flour without counting the particles of flour.</i>	<i>On a molecular level, describe what is happening when two substances react to form new products.</i>	<i>Describe the information provided in the symbolic notation of a chemical equation. Can you make an equivalent domino with any two units? Explain why or why not.</i>

### How do you know?

At the beginning of this activity you carried out an activity using pennies. Explain how this activity relates to stoichiometry.

### Why do you believe?

One example of stoichiometry used in the real world is in recipes. Different amounts of certain ingredients must be combined together to produce a certain amount of a food. Describe another real-life application of stoichiometry.

### Why should you care?

Some of the requirements for the *Chapter Challenge* are that the sequence of events be reliable, repeatable, and safe. Describe how stoichiometry will be important in ensuring that these three requirements are met. What might be the consequences of forming too little product? What might be the consequences of forming too much product?