

APPLIED SCIENCE - SCIENCE AND MATH (4B)

PROBLEM: How can a science experiment be both qualitative and quantitative?

PREDICTION: _____

MATERIALS: 25 ml graduated cylinders, baking soda, measuring spoons, vinegar

PROCEDURE: Follow the steps below. Record your data and then graph the results.

TRIAL 1. In one graduated cylinder put 1 ml of baking soda; slowly add 5 ml of vinegar. Students may stir the liquid gently. Record what happens (below). After it stops fizzing, add another 5 ml of vinegar. Record what happens. Continue adding 5 ml of vinegar until there is no more fizzing. How many milliliters did you use?

TRIAL 2. In one graduated cylinder, put 1 ½ ml of baking soda and repeat the experiment above. Record your data.

TRIAL 3. In one graduated cylinder, use 2 ml of baking soda and repeat the experiment above. Record your data.

DATA (State whether it fizzed or not, any odor, etc.)

	TRIAL 1	TRIAL 2	TRIAL 3

Make a bar graph of these results.

CONCLUSION:

Which portion of the experiment was qualitative? _____

Which was quantitative? _____

If you add more baking soda would you add more or less vinegar? _____