

## Experiment with Sudsy Lemon Science

Second grade students frequently study the properties of objects, as well as the many different ways that objects interact with one another, including chemical reactions, physical reactions, and magnetism. Watching these types of interactions typically generates “oohs” and “aahhs” from second graders. But there's nothing quite like performing the interaction while others observe. In many of these interactions, the science seems almost like magic.

Here's a fun scientific “interaction” that your child can perform using basic materials found in the kitchen. And, as an added bonus, performing it for your family will help to boost your child's confidence, and make your countertops shine!



### What You Need:

- Empty cup
- 1 teaspoon baking soda
- 2 teaspoons liquid dish detergent
- Measuring spoon
- Plastic spoon or straw for stirring
- Fresh lemons, sliced into quarters
- Wet and dry paper towels

### What You Do:

1. In advance, have your child prepare his cup full of special ingredients. Place the baking soda and liquid dish detergent in the empty cup and stir to mix.
2. Now it's time for the show to begin. Gather your family—the audience—in the kitchen for the show. For best results, do this performance over a counter that could use a gentle cleaning.
3. Have your child begin the show by introducing himself, telling the audience that he can create a cleaning concoction from lemons. He may wish to add a little drama to his presentation by wearing a white jacket (to resemble a lab coat) or putting on safety glasses.
4. Have him squeeze the juice of two quarters of a lemon into the cup.
5. When the lemon juice mixes with the baking soda and dish soap, it begins foaming immediately, creating a fluffy pile of lemon-scented suds!
6. Your child can actually use these suds to clean the counter. Have him simply dump the suds onto the countertop, and use a paper towel to wipe the suds across the counter. Follow up with a wet paper towel to remove any baking soda residue.

**What Happened?** The acid in the lemons interacted with the baking soda, which is a base. The interaction created carbon dioxide bubbles, which made the soap get bubbly and sudsy. Be sure to explain the "why" behind this interaction to your child prior to the show, so he can answer any questions generated by the audience!