A Foaming Experience

Preschool, Kindergarten | Science | 80 minutes

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Get your students excited about science! In this lesson, you will read a book to your students about performing an experiment and being a scientist. Then, your students will perform their own experiments.

Learning Objectives

Students will be able to describe and discuss their experiments and compare and contrast their activities to the activity in the book.

Materials and Preparation

- *If You Take a Mouse to School* by Laura Numeroff
- *Scientists* by Pamela Chanko and Samantha Berger
- Large clear plastic cups (1 per student)
- Small clear plastic cups (1 per student)
- Baking soda
- Small spoons (1 per student)
- Vinegar
- Different colored food coloring
- Trays (1 per student)
- Clear protective goggles (1 per student)
- Whiteboard
- Paper
- Crayons

Key Terms:

- scientist
- experiment
- prediction
Lesson

Introduction (20 minutes)

- Show your students the goggles, explaining that they protect eyes.
- Explain that a **scientist** is someone who studies something, makes guesses about it, and then does an experiment to see if her guess is correct.
- Tell your students that an **experiment** is a project where people can try something to see what happens.
- Read *If You Take a Mouse to School.*
- When you get to the page where the mouse is doing the experiment, point out the protective goggles.
- Ask the students why they think he is wearing the protective goggles. Explain that the mouse’s experiment is very messy, and he needs to protect his eyes.
- Read the book *Scientists.* Explain that there are many different kinds of scientists who study very different topics.

Explicit Instruction/Teacher Modeling (20 minutes)

- Tell the students that today, they will pretend to be a scientist and perform an experiment just like the mouse in the book.
- Hand out protective goggles for each student, and have them put them on.
- Ask your students to identify the two colors that mix together to become purple.
- Tell your students that you will try an experiment in which you mix colors in vinegar.
- Start the experiment by mixing the red and blue food coloring into some vinegar.
- Mix other colors together after asking the students for their thoughts on what colors will make green and orange.
- Hand out a tray to each student for their experiments.
- Put some of the colored vinegar in a large clear cup, and give one to each student.
- Hand out a small clear cup with baking soda in it and a spoon to each student.
- Tell the students that when they make a guess, it is called a **prediction.**
- Ask your students to make a prediction about what will happen when they put some baking soda into the colored mixtures.
Guided Practice/Interactive Modeling *(15 minutes)*

- Have the students use the spoon to sprinkle a small amount of baking soda into the purple vinegar.
- Talk about the sound, smell, color, and look of the experiment.
- Ask the students to identify similarities and differences between the mouse's experiment and their experiments.

Independent Working Time *(15 minutes)*

- Hand out paper and crayons.
- Ask the students to draw a picture of their experiments.
- Instruct your students to tell you about their pictures.
- Write key comments on their pictures.

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**Extend**

**Differentiation**

- **Enrichment**: Have your students come up with an additional experiment with the existing materials. With your permission and guidance, instruct them to carry out the experiment.
- **Support**: Direct your students to come up with ideas of what scientists might study. Have them identify scientists in real life.

**Related Books and/or Media**
Review

Assessment *(5 minutes)*

- Observe the students as they perform their experiments and as they draw their pictures.
- When they tell you about their pictures, make sure they use key words.

Review and Closing *(5 minutes)*

- Ask the students to come up with other experiments.
- Based on their suggestions, come up with an idea that you can try on another day and become scientists again!