



We hope you enjoy your **Science-In-A-Pan** Classroom STEAM Kit! Have a great time exploring Science, Technology, Engineering, Art and Math with these fun activities designed just for you.

This kit includes written instructions for the following activities included in the **Science-In-A-Pan** kit:

- Fizzy Science
- Surface Tension Exploration
- Color Bubble Creation

Visit our website www.kidsdiscoveryfactory.org/classroomkitvideos to follow along with us as we provide a step by step walk-through of the activities, or choose which activities to do when, based on your schedule.

Thank you for your continued support of Kids Discovery Factory.

Materials Included:

Pan (2 per student)
Pipette (1 per student)
Food Coloring (1 set of 4 per class)
Vinegar (1 per class)
Paper Cups (9 per student)
Baking Soda (1/2 container per student)
Plate (1 per student)
Glitter (1 set per class)
Dish soap (1 per class)
Cotton Swabs (3 per student)
Oil (2 per class)
Water (1 per class)
Fizzy Science Worksheet (1 per student)
Surface Tension Prediction Worksheet (1 per student)
Color Bubble Designer Worksheet (1 per student)
Paper Towels (2 rolls per class)
Trash Bag (2 per class)



Fizzy Science

Supplies:

Pan
Baking Soda
4 paper cups
Vinegar
Food Colors
Pipettes*
Fizzy Science Worksheet

Directions:

Pre-experiment

Pass out the Fizzy Science Worksheet to students, complete the worksheet together then pass out the materials for the first experiment.

Experiment

Pour 1/2 a (4oz) of baking soda into each tray.

Pour some vinegar into each of the 4 small cups.

Add a drop of food coloring into your cups of vinegar, stir.

Fill your pipettes with whichever colored vinegar you choose.

Use your pipette to drop vinegar into your baking soda tray. Watch the reaction.

Use the different colors to explore how colors mix as well as the chemical reaction that is taking place!

Post Experiment

*Pipettes should be saved, they will also be used again. Cups of vinegar may be disposed, and pan can be disposed.



Surface Tension Exploration

Supplies:

Pan
Plate
Glitter
1 Paper Cup
Dish soap
3 Cotton Swabs
Surface Tension Worksheet

Directions:

Pre-experiment

Pass out the materials needed to perform the activity, the worksheet will be done after the activity. Take a minute to ask students to predict what they think will happen during this activity.

Experiment

Give students each a new pan and place a small plate in the pan. Pour a small amount of water onto the plate. Sprinkle with glitter.

Give each student a small cup with dish soap, and 3 cotton swabs.

Have students dip their cotton swabs in soap and then touch it to the water, watch the glitter spread away from the soap.

Sprinkle plate with more glitter and watch the reaction over again.

Post Experiment

Use the pan to help you carry the plate with water to where it can be drained. Save the pan. The cup / cotton swabs and plate can be disposed. Pass out the Surface Tension worksheet and have students draw what they observed before and after the experiment.



Color Bubble Creator

Supplies:

Pan
Oil
4 cups
Water
Food Coloring
Pipette
Color Bubble Design Sheet

Directions:

Pre-experiment

Pass out the Color Bubble Worksheet (students will need crayons). Complete worksheet, then pass out the materials needed for the experiment.

Experiment

Each student should have a pan, place about 1/4 a cup of oil into each pan. Oil can be very thin on the bottom of the pan.

Students should be given 4 paper cups, each with a small amount of water, add food coloring.

Students will use their Pipettes to stir the food coloring into their water. Use the pipette to suck up some colored water, and drop the water into their pan of oil.

Notice what happens to the water, it is suspended as a color bubble.

Add as much color as you can!

Post Experiment

Place two paper towels into each pan to help contain the oil. Dispose of pans, cups and pipettes.