



Staying Safe During COVID-19

All About Germs Science Experiment

Objective:

In this activity, students are engaged in answering a scientific inquiry by using logic-based evidence, observation, and prediction to report formulated explanations linked to scientific knowledge.

Materials:

- Prediction worksheet (provided)
 - Plate
 - Water
 - Dish soap
 - Black pepper
 - Pencils (1 per student)
 - Food coloring/dye (optional)
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Preparation:

1. Print the prediction worksheets (1 per student).
 2. Pour water onto the plate, making sure to coat the bottom of the plate.
Optional: Add food coloring or dye to the water. This may help students see the process more clearly.
 3. Place the plate in a location visible to all students and keep the soap and black pepper nearby. If you don't have pepper available, consider using glitter.
 4. Provide each student with a prediction worksheet and pencil.
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Considerations:

- To simplify this activity, omit the prediction worksheet portion.
- To extend this activity, ask each student to write a sentence or two about their predictions. Consider using the following questions:
 - Why did they make that prediction?
 - What was the result of the experiment?
 - What did they learn?

Activity Script:

We recommend using the following verbal cues as you model each step.

1. **"Today we are doing a science experiment to learn all about germs. You will all get to make predictions about how soap reacts with germs."**

Indicate the prediction worksheets and items related to the experiment.

2. **"Germs are tiny organisms that can make us sick if they get into our bodies. Germs are so small we can't see them with our eyes! For our experiment, let's pretend these pieces of black pepper are germs, and the water in the plate is our bodies."**

Pour some black pepper onto the water on the plate and allow students to observe.

3. **"See how the germs spread all over the water? That is how quickly germs can spread on our bodies!"**

Continue to encourage students to observe and comment.

4. **"Who knows what we can use to stop germs from spreading? That's right, soap!"**

Encourage students to answer and comment. Indicate the soap.

5. **"Before we continue our experiment, let's make a prediction. If we add soap to the plate, do you think it will react with the germs? Circle your predictions now."**

Distribute the prediction worksheets and pencils to students. Assist them with their predictions as needed. Lead a brief discussion about everyone's predictions if time allows.

6. **"Now let's see how soap reacts to the germs! First, let's see what happens when we dip our fingers into the germs without soap."**

Help students take turns dipping one finger into the water-pepper mixture. Add more pepper as needed.

7. **"Without soap, the germs stick to our fingers! Now let's see what happens when we use soap."**

Apply a small amount of dish soap to each student's finger. Rub it around to cover the entire tip of the finger. Help students take turns dipping their soap-covered fingers into the water and pepper. Add more pepper as needed.

8. **"Wow, when we used soap, it reacted with the germs! As soon as the soap touched the germs, they scattered to the edge of the plate. If we use soap to clean our hands well, it helps to keep germs from spreading into our bodies and making us sick."**

Allow students to repeat the experiment and discuss the results as time allows.

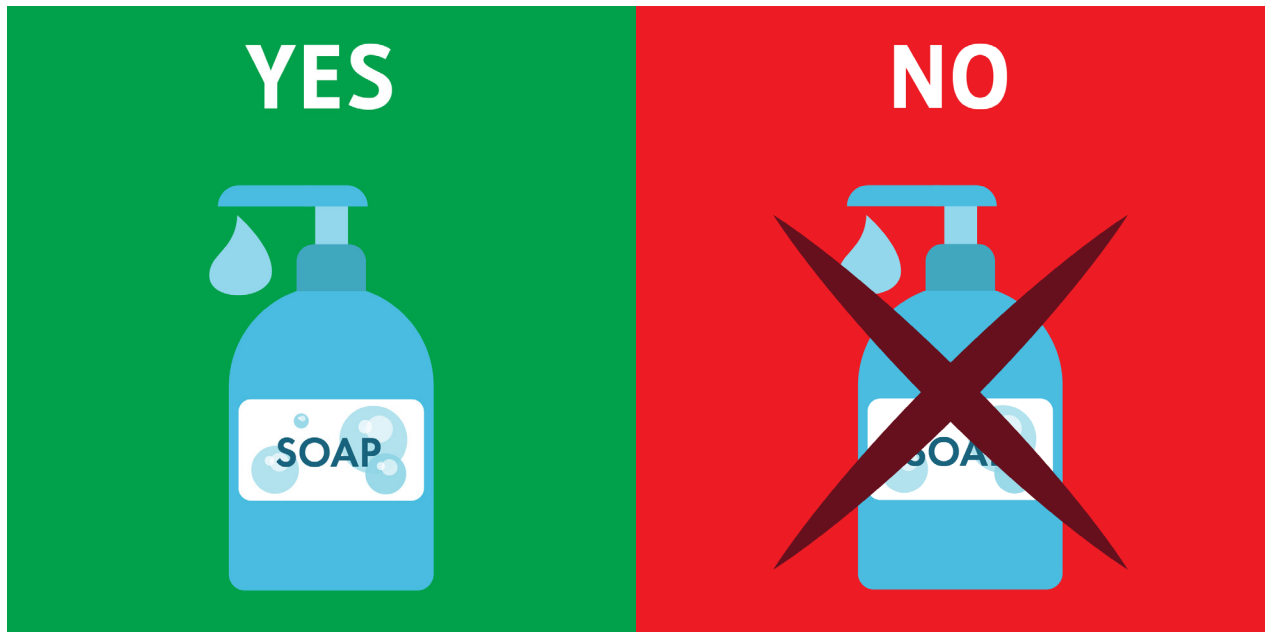
9. **"Now let's check our predictions. Were your predictions correct?"**

Help students complete their prediction worksheets and discuss as time allows.



Name: _____

Does Soap Prevent Germs? Prediction Worksheet

Will the soap cause a reaction with the germs? Circle YES or NO.



Was my prediction correct?

<p>YES</p> 	<p>NO</p> 
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