

# Wash Those Hands!

*How are bacteria shared, and can washing my hands help protect me from getting sick?*



## Abstract

*This lesson teaches that washing our hands helps to protect us from getting and sharing bacterial infections. The activity models how one can become infected with bacteria and how infections can be shared. We begin with the abstract concept of germs and how one sick person can share his or her illness and make others sick.*

## Grade

Level 3-5

## Subject Area

Health, Biology

## Time

45 minutes

## Setting

Classroom

## Skills

Recognize patterns of infection, letter recognition, analyze problems in an activity; identify cause and effect in unhealthy situations.

## Standards Addressed

### New York State Health Education Standards

- **ORH.E.7** – Specific health practices such as proper hand washing can prevent and control the spread of germs and disease.
- **CM.E.1** – Uses qualities of active listening, following directions, and responding to others in health enhancing ways.
- **CM.E.2** – Identifies and applies effective verbal (assertiveness) and non-verbal communication skills to enhance health.
- **CM.E.3** – Demonstrates healthy ways to express needs, wants and feelings.
- **CM.E.4** – Describes characteristics of a responsible family member and friend.
- **CM.E.5** – Identifies barriers that interfere with effective healthy communication.
- **CM.E.6** – Demonstrates ways to communicate care, consideration, and respect of self and others.
- **DM.E.1** – Identifies personal health decisions and influences.
- **DM.E.2** – Recognizes personal capabilities and limitations as they relate to possible healthy solutions.
- **DM.E.3** – Locates and uses information sources to enhance health.
- **DM.E.5** – Applies a decision making model to real-life health-related situations.
- **DM.E.6** – Questions perceptions of normative health-related behavior.

### National Health Education Standards

- **1.5.1** – Describe the relationship between healthy behaviors and personal health.
- **1.5.3** – Describe ways in which safe and healthy school and community environments can promote personal health
- **1.5.4** – Describe ways to prevent common childhood injuries and health problems.
- **1.5.5** – Describe when it is important to seek health care.

**Materials** Flour, paper plates, markers, spray bottle(s) with water, moist towelettes, printed versions of “A Cold Day with Eduardo.”

*Note: \*Please check for student allergies to gluten, wheat or any alternative substance used\* Tapioca flour can be used if there are parental concerns about wheat allergies, although the flour will not be ingested. Powder can work also, but flour is preferable because of its gritty texture.*



A Union of Professionals

THE ROZY STAUNTON FOUNDATION

## Making Connections

Students will compare and contrast hygienic and unhygienic practices to help identify their own unhealthy behaviors and begin replacing them with new healthy practices. Students will realize hand-washing is important to stop the spread of germs that make us sick. This activity will help students understand the abstract concept of germs and bacteria, which they cannot see.

## Directions

1. Read aloud "A Cold Day with Eduardo," then guide students to identify unhealthy behaviors that can spread germs.
2. Facilitate the "Nitty Gritty" activity with flour to help students visualize the ease with which surface germs can be shared.
3. Close with a review of strategies for healthier behaviors.

## A Cold Day with Eduardo

One very cold winter day, my friends and I huddled very close together on the bus for warmth. When we finally got to school and started class, Eduardo was sneezing and coughing. Eduardo never covers his nose and mouth when he sneezes.

My teacher told us that when we don't have a tissue, we should cover our nose and mouth by sneezing and coughing into our elbow, but it looks so silly! We all still use our hands to cover our mouth and nose. Except Eduardo. He comes to school sick and never covers his nose and mouth—with his hand or anything else. I guess it's OK with me because he is my friend and always lets me borrow a pencil when I need one.

Today, we had a pizza party in school. My nana always makes me wash my hands before we eat, but I didn't today because I wanted to be first in line for pizza. I love hot pizza! I also love sparkling water, and I shared my cup with two friends, Mariana and Dierdre. Mariana likes sparkling water, but it was Dierdre's first time trying it. She enjoyed the sparkling water and said it is like soda but healthier!

1. Read the passage above aloud to students.
2. After each paragraph, encourage the class to identify things that sound unhealthy and contribute to the spread of germs. The list should include the following behaviors:
  - a. Sneezing into other people's space (without covering your mouth and nose).
  - b. Sneezing into your hands, instead of a tissue or sleeve.
  - c. Sharing materials, such as a pencil, when you're sick, without first washing your hands (or the item).
  - d. Skipping a chance to thoroughly wash your hands.

## Nitty Gritty

1. Write each unhealthy behavior identified from the story on the rim of a paper plate in marker.
2. Place each plate around the room to create "stations." Cover the plates with flour.
3. Divide students equally into lines at each station.
4. When the teacher says "Achoo!," the first student in each line (closest to the plate) should use the spray bottle to squirt one hand once and place that hand flat into the flour, covering the palm and fingers and allowing the flour to stick.
5. The first student should shake hands with the next student in line. Then the second student should shake hands with the next person in line, "passing it along" with handshakes until the final student in each line has participated.
6. At the conclusion of the lines, students should return to their seats but not clean their hands (yet). (The gritty sensation of flour and water may help them understand and answer the discussion questions.)

## Discussion questions

- Do you see any flour on your hands? Even if you can't see the flour, can you *feel* the flour on your hands? Do you have a sense of a gritty texture?
- Raise your hand if you touched the plate. (Count the students out loud.) Raise your hand if your hand feels gritty but you didn't touch the plate. (Count the students out loud.) How did most people get or "catch" the flour on their hands? Was it by shaking hands or by touching the plate?
- Think back to the story with Eduardo. What parts of this activity represented a sneeze?  
A: Starting the activity with the word "Achoo!," the squirt of water from the spray bottle, and the first person's hand in the plate of flour.
- Which part of this activity represents germs?  
A: The flour.  
Explain: Even though we cannot see germs, they move quickly and easily when we touch things and through the air when we cough and sneeze. Some types of germs, including some types of bacteria, can make us sneeze and cough and get us sick through infection.
- Which part of this activity represented a bacterial infection?  
A: The sensation of gritty hands.

[Students should now clean the flour from their hands using warm water and soap, moist towelettes or other means.]

- What are some ways you can be exposed to harmful bacteria?  
A: Sick people send germs through the air after sneezing and coughing without covering their nose and mouth, and can leave behind bacteria when touching surfaces.
- What are some ways you can prevent bacteria from spreading?  
A: Frequent hand-washing with warm water and soap; covering your mouth and nose with a sleeve or tissue when coughing and sneezing; and cleaning surfaces in common spaces when someone is sick, such as door handles and classroom desks.
- What are some ways you can protect yourself after exposure to harmful bacteria?  
A: Thoroughly cleaning your hands; thoroughly cleaning and bandaging cuts, scrapes and bug bites to prevent bacteria from entering the opening in the skin; getting enough rest; and talking to trusted adults about how you feel when you're sick.

### **Closing: Rewrite the story!**

1. Provide each student a printed version of "A Cold Day with Eduardo" with spaces after each sentence or paragraph.
2. Encourage students to edit and adapt the story to reflect healthier strategies on the school bus, at school and during meals.

### **Bibliography**

Centers for Disease Control and Prevention, "Stopping the Spread of Germs at Home, Work & School," page last updated on Aug. 19, 2015, <https://www.cdc.gov/flu/protect/stopgerms.htm>.