

Germ Gems: Bacteria Are Everywhere!

How does my skin protect me from getting sick?



Abstract

This lesson teaches us how our skin protects us from bacterial infections. A person's body can become infected from an abrasion/cut, so we must clean the cut and cover it to stay safe and avoid getting sick. We begin with the abstract concept of germs and how they might enter our bloodstream and make us sick.

Grade Level

PreK-2

Subject Area

Health; Arts & Crafts

Time

45 minutes

Setting

Classroom

Skills

Recognize patterns, letter recognition, analyze problems in a story; identify cause and effect in unhealthy situations; develop fine motor skills by creating artwork.

Standards Addressed

Common Core

- **Reading Literature.K.1** – With prompting and support, ask and answer questions about key details in a text.
- **Reading Literature.1.1** – Ask and answer questions about key details in a text.
- **Reading Literature.1.2** – Retell stories, including key details, and demonstrate understanding of their central message or lesson.
- **Reading Literature.2.1** – Ask and answer such questions as *who*, *what*, *where*, *when*, *why*, and *how* to demonstrate understanding of key details in a text.

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.



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National Health Education Standards

- **1.2.1** – Identify that healthy behaviors affect personal health.
- **1.2.5** – Describe why it is important to seek health care.

Objectives

Understand that our skin protects us from infection. When our skin opens, bacteria may enter our body and make us sick. We protect ourselves by always finding our cuts, cleaning them and covering them.

Author

Ann Smith

Vocabulary

Bacteria, bandage, germs, infection

Materials

Two bananas, two paper plates, a knife (for teacher use), three different types of uncooked pasta representing the common shapes of bacteria (rotelle or wagon wheels, ziti and spiral pasta), yarn or twine, scissors, paint and brushes.

“Germy Germs”—A Song to Sing

By Ann Smith

Sung to the tune of “This Old Man” (*class can act out each line, as suggested*)

These Germ Gems	remind me that	<i>Points to head</i>
Washing my hands	makes germs go SPLAT!	<i>Washes hands</i>
Cuts are very bad	clean them up now!	<i>Points to elbow</i>
If you cover them up	you can take a bow	<i>Take a bow</i>
These Germ Gems	remind me that	<i>Points to head</i>
Washing my hands	makes germs go SPLAT!	<i>Washes hands</i>
I cover my cuts from	germy germ attacks	<i>Points to elbow</i>
So those germy germs	won't get in the cracks!	<i>Shakes finger “No”</i>

Demonstration: How does our skin keep us healthy?

The teacher will peel one of the bananas and put it on a paper plate and put the other unpeeled banana on another plate. After a while, the peeled banana will begin to turn brown. As the banana changes are occurring, have the class discuss the changes they are observing.

Questions for discussion

1. How do you think the banana peel and your skin are similar?
2. How does the peel protect the banana?
3. How does your skin protect you?
4. What do you think your skin's main job is?
5. If you get a cut in your skin, how can that stop the skin from doing its job?
6. How does cleaning your cuts help your skin to do its job?
7. Why is it important to place a bandage on a cut?

At the end of the class, everyone should examine these bananas again for discussion.

Germ Gems: Awareness necklaces:

1. Each student gets one of each of the three different types of pasta, representing the three shapes of bacteria: cocci (round bacteria, represented by rotelle or wagon wheels), bacilli (rod-shaped bacteria, represented by ziti) and spirilla (curved or spiral-shaped bacteria, represented by corkscrew pasta).
2. Students will use paint to creatively color their pasta (allow time to dry).
3. Once dry, the students will place their pasta on a string, making a “germ gems” necklace. (For safety purposes: When cutting the strings, make sure the necklaces are long enough so they can be easily removed when students are wearing them.)
4. Tie one end of the string to the spiral pasta (since there are usually no holes), and use the other end of the yarn as the “needle” to thread the other two pasta shapes. Then tie that end to the spiral pasta to close the necklace.

Note: The necklaces will help the students raise awareness that bacteria are everywhere in our environment. They will also serve as a reminder that bacteria are present even though we can't see them, and that students must always tell a trusted adult to clean and cover their cuts to keep them safe.

Next, instructors can return to the banana experiment and discuss any new changes in the banana's color.

Questions for discussion

1. Who can name a kind of germ that can make you sick that begins with the letter "B"?
2. How can a germ get into your body?
3. What can germs do to your body?
4. Why do you think germs are bad for you?
5. What can you do to keep yourself safe from germs?
6. Name some things that you can do to protect yourself.

Final statement (see essential question)

When you cover a cut, you are closing an opening in the skin where bacteria can enter and make you sick. To stay healthy, we must always cover our cuts. Our skin protects us from getting sick!

Cool-Down Activity

Repeat the "Germy Germs" song.