

**Project FOCUS
Best Lessons
SECOND GRADE**

Title of Lesson: The Glitter Bug

Theme: Life Science

Unit Number: **Unit Title:**

Performance Standard(s) Covered (enter codes):

The Great Body Shop: Germs! They Can Make You Sick!

Enduring Standards (objectives of activity):

Habits of Mind

- Asks questions
- Uses numbers to quantify
- Works in a group
- Uses tools to measure and view
- Looks at how parts of things are needed
- Describes and compares using physical attributes
- Observes using senses
- Draws and describes observations

Content (key terms and topics covered):

Germs: Bacteria and Viruses
How Germs Spread
The Importance of Hand-Washing
Food Poisoning
Antibodies
Antibiotics
Vaccinations

Learning Activity (Description in Steps)

Abstract (limit 100 characters): This activity is meant to illustrate the concepts of germ spreading, hand-washing, and antibodies.

Details: The lesson coupled with this activity is based off of The Great Body Shop lesson, "Germs! They Can Make You Sick!." In order to introduce the lesson, start off the class with a discussion about germs and what they are. Ask them questions such as, "Can we see germs?," "Where are germs found?," and "What types of germs are there?" As the class gives feedback, be sure to explain that germs, though they are invisible to us, are everywhere and on everything, including ourselves. Define a bacteria and a virus, give example of common "bugs" such as the flu, food poisoning, and staph infections. Once the children have a grasp of what a germ actually is, introduce the germ-spreading activity by explains that the glitter will represent germs. Then choose three volunteers to come up to the front of the classroom to start the activity.

Have the three volunteers hold their hands over the large bin. Lightly spray each hand with Pam (or other cooking spray), sprinkle each hand with glitter, and ask the students to shake their other classmates' clean hands. In order to further demonstrate how germs spread from person to person, have all of the children continue to shake each others' hands while asking the question, "Do you see the germs spreading?" and "Is everyone getting the Glitter Bug?" Once everyone has glitter on their hands, invite one or two volunteers to come to the front of the classroom. With the daily objects set out in front of them, ask the volunteers to pick them up and pretend to use them (have them immitate eating, writing, etc.). After they have finished "using" the objects, show the objects to the class. These clean objects now have glitter germs on them too. Talk to the students about the importance of not sharing a fork or spoon and why it is dangerous to put objects such as pensils and barrettes in our mouths.

To demonstrate the importance of hand-washing, ask each student to take his or her paper towel and try to wipe the glitter off of his or her hands. Ask the question, "Can you get ALL the glitter germs off?" Because some glitter should still be on their hands, discuss the necessity of using both soap and water to clean one's hands. Have the class line up and take turns washing their hands thoroughly with soap.

In teaching about our bodies' defense mechanisms, fill two-thirds of the glass beaker with water. Explain that the water represents our blood and the food coloring represents germs. Place one to two drops of food coloring in the water and stir. While stirring the water, describe to the class how germs can multiple and spread when exposed to our blood and make us sick. Once the food coloring is evenly spread throughout the water, hold up the bleach and explain that the bleach represents our antibodies, our bodies' special army for fighting germs. Pour the bleach into the glass beaker, stirring the mixture as you pour. As the water turns back to clear, talk to the class how our antibodies kill the germs to protect us from getting sick or to make us well again. This is also a good time to talk about vaccinations and antibiotics given at the doctor's office. Have a discusison with the chilren about vaccines and antibiotics and how these medications are often antibodies that have been created to help the antibodies with us.

Materials Needed (Type and Quantity):

1 Large Bin

1 Bottle of Pam (or other type of cooking oil)

Glitter

Daily Used Objects: paper plates, utinsils, pensils, paper, barrettes , etc.

1 Roll of Paper Towels

1 Bottle of Hand Soap

1 Large Glass Beaker

1 Glass Stir Rod

Water

Food Coloring

Bleach

Notes and Tips (suggested changes, alternative methods, cautions):

Classroom control is essential during this activity. Be sure to explain to the class prior to the glitter activity to only shake hands and not rub glitter everywhere.

Note, cooking sprays (such as Pam) work very well not only in application to the children's hands but also in making the glitter stick to their hands.

Be sure to set up the daily objects and pass out the paper towels prior to the activities. This will save time.

Do NOT allow the students to help with the antibody activity given that bleach can be very dangerous and food coloring can stain.

Sources/References:

1) <http://www.hometrainingtools.com/germ-science-projects-for-elementary/a/1467/>

2) <http://www.proteacher.net/discussions/showthread.php?t=21563>

3) Best Lesson Plans: First Grade, Germs