

## Grade 3 Lesson Plan 2

### Program outcomes

- Students identify different disease transmission routes including the spread of bacteria, viruses, and parasites. (5.3)

### Objectives:

- Students define the terms bacteria, virus, and parasite
- Students identify the similarities and differences between a bacteria, virus, and parasite
- Students determine locations of germs including on surfaces, in the air, and in our bodies
- Students learn where germs can enter the human body including body openings as well as cuts or scrapes
- Students identify strategies to protect themselves from diseases including hand-washing and covering their mouth when they sneeze/cough

### Standards addressed:

*ISBE Health Standards:* 22.A.1a, 22.A.1b, 22.C.2, 23.b.2,

*National Sexuality Education Standards:* SH.5.CC.1

Time: 45-50 minutes

### Materials needed

- PowerPoint presentation
- Bag of marbles for introductory activity
- Three posters...one of a bacteria, one of a virus, and one of a parasite
- Medicine bottles with Velcro, shampoos and creams with Velcro

### Setup:

Make sure classroom has space for three posters to be displayed and seen by all. As students enter room, choose two or three and give them each a handful of marbles for introductory activity. Instruct them to give a marble to anyone who high-fives them if they would like (however, they don't have to give one if they don't want to). They may also high-five anyone they would like using the same rules as above regarding marble distribution. Prior to attention-getter, administer ARS pretest.

### Attention-getter

Several students are given marbles. Students then have one minute to circulate the room and greet each other by giving a high-five. Students with at least one marble can give it to the other after the high-five, though they do not have to if they don't want to. After one minute, all students sit down. This activity will help students understand how germs can spread. (5 minutes)

### Activity outline

1. Student discussion based on the following questions: (7-10 minutes)
  - a. Please describe the activity we just completed.
  - b. You gave each other high-fives during this activity. How else might you come in contact with another person during the day? (handshake, hug, kiss)

- c. Some people got marbles during this activity while others did not. What might the marbles represent? (Possible answers: the marbles show something spreading when people touch each other...maybe sickness or something else...at this point, it is ok to explain to them that the marbles represent germs. Explain that there are different kinds of germs that can make us sick. Some are viruses, some are bacteria, some are parasites)
  - d. Can we see these germs that can make us sick? (not usually, though some parasites can be seen...lice, for instance)
  - e. Why did some people high-five and not get a marble? (This represents the fact that our bodies are designed to keep germs out...skin, tears, nose hairs, stomach acid acts like a fortress...sometimes germs don't get in and we don't get sick, even if we're exposed to germs!)
  - f. If diseases can be spread by touching something or someone, how else can they be spread? (also through the air, and can enter any body opening or cut/scrape, food that is not prepared properly, untreated water)
  - g. If diseases can be spread by touching something, or through the air, what are some ways we can keep ourselves healthy so we don't get sick? (washing hands, eating healthy so our bodies are strong, cleaning cuts and wounds, staying home if we know we are sick)
2. Teacher shows students three different organisms that can make someone sick (bacteria, viruses, and parasites.) Teacher explains basic information about these including the size of each with the use of computer website (<http://learn.genetics.utah.edu/content/begin/cells/scale/>) and that some help us while others can make us sick (give examples of each...intestinal bacteria to digest food versus flu virus). (5 minutes)
  3. Teacher asks students what a person can do if they get sick. (rest, chicken soup, get medicine from the doctor). (3-5 minutes)
  4. Teacher asks for several volunteers. Some get medicine bottles with Velcro attached to them. Others get tubes of cream or bottles of shampoo with Velcro attached to them. Teacher instructs the students that there are different ways to get rid of different types of diseases. Students have the option of sticking their props to a large labeled poster with a bacteria, a virus, or a parasite. Teacher instructs students to put their props on whichever germ they think their prop will help get rid of. Of the three, the virus poster has no Velcro to attach the props. When finished, teacher asks students to sit down and begins debriefing. (5-7 minutes)
  5. Teacher asks students the following questions: (5-7 minutes)
    - a. For those who participated: Why did you choose the way you did?
    - b. For all students: Did anyone notice what happened when they tried to stick their medicine on the virus? Why do you think they couldn't put their medicine there? (Viruses are not responsive to penicillin or other medicines the way bacteria or parasites are. The human body is designed to fight off viruses, but it takes time. For instance, the flu is a virus. If you get the flu, you have to wait for your body to fight it off. Medicines might help the symptoms like stopping a cough, but your body fights off the flu virus. Teacher makes sure to point out clearly that medicine can't kill viruses like it can with bacteria, it can only help make the person feel a little better.)
    - c. Why did some of the students have creams or shampoo? (Some parasites are inside our body and we need medicine. Others live on the outside of our body and we can get rid of them with cream and shampoo.)

- d. Can anyone think of a parasite that kids your age sometimes get in your hair? (Lice)  
How do you get rid of lice? (Special medicated shampoo)
6. Teacher wraps up lesson reminding students of the three primary types of germs, how they get into our bodies, and how we treat them if we get sick. (3 minutes)

### Assessment questions

#### Pretest/post-test

1. Which of the following germs cannot be cured by medicine?
  - a. Bacteria
  - b. Virus**
  - c. Parasite
2. Which of these is a parasite?
  - a. Flu
  - b. Lice**
  - c. Strep throat
3. Germs can enter our body through our mouths.
  - a. True**
  - b. False

DRAFT