

# Germs

## Learner Objectives:

---

The 4-H member will:

- Know what germs are.
- Be able to list at least 2 different kinds of germs.
- Understand how germs are spread.

## Educational Lesson:

---

### What are Germs?

Germs are tiny microorganisms; they are so tiny that the human eye can't see them. Germs are everywhere; they are on our skin, in dirt, in water, on plants, and on animals. Germs are even in the air. Some germs are not harmful, but some of them can cause infectious diseases like a cold or the flu.

### Different Types of Germs

There are 4 different types of germs: Bacteria, Viruses, Fungi, and Protozoa.

Bacteria are one-celled organisms, that are only seen through a microscope. Some bacteria cause diseases like strep throat, tuberculosis, and urinary tract infection. Most bacterial diseases can be cured with antibiotics.

Viruses are capsules that contain genetic material. Viruses reproduce by invading healthy cells in your body and hijacking them and changing how the cells work. Viruses are responsible for causing many diseases such as: AIDS, common cold, the Flu, and chicken pox.

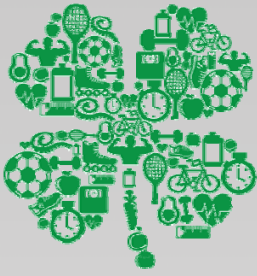
Fungi comes in all shapes and sizes. Candida is an infection that can be given to people and it is caused by yeast which is a type of fungi, this is usually called a yeast infection. Other examples of fungi infections are athlete's foot and ringworm, these will be covered in the hygiene lesson plan.

Protozoa is harmful and can cause diseases such as giardia, malaria, and toxoplasmosis. This single-celled organism invades the human body by multiplying easily which is why they have a great advantage against humans. Protozoa is contagious and can be transmitted through sharing food, or even touching the person that has it. Some of these diseases are very common (malaria & toxoplasmosis) and other are rare (giardia).

### Healthy Habits that Prevent the Spread of Germs

There are many ways to protect yourself from germs such as:

1. Washing Hands Often
2. Coughing & Sneezing into your elbow
3. Don't Share Personal Items (EX. Toothbrush, towels, or razors)
4. Get Vaccinated
5. Stay at Home When Sick



### MATERIALS NEEDED

- 1 Beach ball
- Glo-Germ kit
- Hand washing soap
- Sink

### TIME NEEDED FOR LESSON

About 25-30 minutes.



## Activity: Popcorn Beach ball

---

In this activity, the instructor will toss a beach ball around the classroom. Whoever catches the beach ball must give one fact they learned from this lesson. If the fact the student stated was wrong, be sure to correct them. Once the student is done stating the fact they can throw it to whomever they would like. Once the children are done stating facts, apply the Glo-Germ cream on the beach ball to show the kids how fast germs spread.

After this activity, properly show the children how to wash their hands:

- **Wet** your hands with clean, running water (hot or cold), turn off the tap and apply soap.
- **Lather** your hands by rubbing them together with the soap. Be sure to lather your whole hand and don't miss any spots.
- **Scrub** your hands for at least 20 seconds. Sing the happy birthday song from beginning to end twice.
- **Rinse** your hands well under clean, running water.
- **Dry** your hands with a clean towel or air dry them.

## Reflection:

---

- Where are germs located? Are all germs harmful?
- Name at least two types of germs.
- What are 3 ways to prevent the spread of germs?

## References:

---

- Mayo Clinic (2014). *Germs: Understand and Protect Against Bacteria, Viruses, and Infection*. Retrieved on February 2, 2015, from <http://www.mayoclinic.org/diseases-conditions/infectious-diseases/in-depth/germs/ART-20045289>.
- Communicable Disease Control and Prevention: San Francisco Department of Public Health (n.d.). *Protect Yourself With Healthy Habits*. Retrieved on February 2, 2015, from <http://www.sfc-dcp.org/healthyhabits.html>.
- Communicable Disease Control and Prevention: San Francisco Department of Public Health (n.d.). *Germs*. Retrieved on February 2, 2015, from <http://www.sfc-dcp.org/germs.html>.
- Med-Health (2015). *Protozoan Diseases*. Retrieved on April 6, 2015, from <http://www.med-health.net/Protozoan-Diseases.html>.
- Centers for Disease Control and Prevention (2014). *When & How to Wash Your Hands*. Retrieved on April 14, 2015, from <http://www.cdc.gov/handwashing/when-how-handwashing.html>.