



Don't Pass the Germs

WATER LITERACY PRINCIPLE

Water is a Natural Resource:

- Everyone uses water.

Water Resources Exist within Social Constructs:

- My family and I use water in many ways at home, in school and at play.

HEAD START DOMAIN ELEMENTS

- Health Knowledge & Practice
- Reasoning & Problem Solving
- Symbolic Representation
- Number Relations & Operations
- Scientific Skills & Method

STANDARDS

NAEYC: 2.A.08.f,g; 2.A.10.f;
2.C.04.c,f; 2.D.03.a,b,c; 2.D.04.a,b;
2.D.06.b; 2.E.04.d,g,h; 2.G.03.a;
2.G.04.a; 2.G.06.a; 2.G.07.a;
2.H.03.a,b; 2.K.01.a

NAAEE: 4.1, 4.2, 4.4, 4.6

NGSS: N/A

COMMON CORE:

ELA: SL.K.1, SL.K.4, SL.K.6, SL.1.1,
SL.1.4, SL.2.1, SL.2.4, L.K.4

WATER WORDS

germs, healthy, magnifying (glass), microscope, sick, soap, spread, water

HIGHLIGHTS

playing with fluorescent gel or glitter, hand washing, music, snack

Summary

Children learn how germs spread through contact with people and objects by playing with a ball and pretend germs, and how healthy hygiene habits prevent the spread of germs.

Materials

- Magnifying glasses
- **Germs**—*Teacher Resource Page*
- Large ball such as a kickball or beachball
- Fluorescent gel (such as *Glo Germ™*) or glitter gel (or glitter and cooking oil)
- A UV black light if using fluorescent gel
- Music from *Water We Singing About?* or other songs
- Sink with water
- Soap to wash hands
- **How to Wash Your Hands**—*Teacher Resource Page*
- **When Should You Wash Your Hands?**—free poster download
- Snack

Suggested Resources

MUSIC

- *Water We Singing About?* by Kevin Kopp (CD and download)

STORY BOOK

- *Germs Are Not for Sharing*, by Elizabeth Verdick
- *Germs! Germs! Germs!*, by Bobbi Katz
- *A Germ's Journey*, by Thom Rooke M.D.
- *Germs Make Me Sick!*, by Melvin Berger
- *I Know How We Fight Germs*, by Kate Rowan
- *Wash'um! Handwashing As a Healthy Habit*, by Oahu Head Start Program
- *Water for YOU and ME*, by the Project WET Foundation

Teacher Facts and Information

Microorganisms are tiny, single-celled organisms found everywhere in the world—even in our bodies. There are many types of microorganisms including bacteria, fungi, viruses and parasites. Some microorganisms can be harmful to humans while others are beneficial. For example, some bacteria help our body's immune system fight illness. Microorganisms are so small they cannot be seen without a microscope.

Germs are infectious microorganisms that can make you sick. Germs, and the diseases that they cause, can be spread by direct contact and indirect contact. Direct contact transmission involves touching a person or their bodily fluids, with germs passing directly from one person to another. Indirect contact transmission refers to situations in which a person is infected through contact with a contaminated surface such as a doorknob or handrail. Some germs, including many that cause sanitation- and hygiene-related diseases, can survive on everyday objects for a long time.

We can keep our bodies healthy and free of illness-causing germs by developing healthy personal hygiene habits. Parents, teachers and the medical community stress the importance of preventive measures to avoid the spread of

germs and help our bodies stay clear of communicable diseases such as colds or influenza. These precautions include the following:

- sneezing or coughing into the upper sleeve or elbow, or into a tissue.
- washing hands frequently with soap and water, especially after going to the restroom and before eating.
- keeping hands away from eyes, nose and mouth.
- avoiding shared eating utensils, food or beverages.
- when sick, staying home from school, work and other public places where people are in close contact.
- properly cleaning surfaces and utensils that food touches.

Warm Up

- Ask children if they have ever been sick. How did they get

sick? Have them describe what it was like. Was anyone else in their family sick at the same time?

- Ask children if they have heard of germs. Do they know what germs are? Germs are like tiny little bugs that we can't see with just our eyes.
- Put a dot on a piece of paper with a pen or pencil. Ask children if they can see it. That dot is much bigger than a germ. Have children look at their hands and describe what they see.
- Ask them if they think there may be things on their hands they can't see. They may answer "no" or come up with some of their own answers from their imagination.
- Pass out magnifying glasses and have students look at the dot on paper, their hands, their clothes and other objects. Can they see things they couldn't with just their eyes?
- Explain that sometimes we have things on our hands and bodies that we can't see with just our eyes, like germs. But if we had a very powerful magnifying glass (more powerful than what they have) we could see them.
- Tell children that we want to wash our hands often with soap and water—especially before eating and after using the bathroom—because soap and water together remove germs that can make us sick.
- **K-2:** Show children a picture of a germ from the *Germs—Teacher Resource Page*. Explain this is what a germ



looks like under a very powerful magnifying glass called a microscope.

Activity

Pre-K

1. Place a small amount of glitter gel or fluorescent gel onto a ball. (*Note:* Fluorescent gel is best to demonstrate the idea of something that is there but they can't see, but it requires the use of a UV black light to see it.)
2. Tell students to form a circle.
3. Play a song from *Water We Singing About?* or other appropriate music and tell students to pass the ball around the circle. Tell them that when the music stops, they should stop passing the ball.
4. Stop the music after an appropriate amount of time.
5. Tell students you are going to close your eyes and count to five, and then you want to see them in another spot on the carpet (next to a new friend), while still in a circle.
6. Repeat Steps 3 and 4.
7. Ask children to look at their hands. (If you use fluorescent gel, look at their hands under a UV black light.) How many children have glitter (or fluorescence) on their hands by a show of hands? This is the number of people with pretend germs on their hands.
8. Discuss how easy it is to spread pretend germs or dirt from one person to another just by touching things like toys. Do students think they can spread things they can't see, like germs? What if the gel had

been real germs? How many people would have germs now?

9. Explain that we do not need to be afraid to touch each other or touch things. If we wash our hands often (especially after using the bathroom and before eating), we can avoid many germs.
10. Teach children the "Hand Washing Song," demonstrating the gestures outlined on the ***How to Wash Your Hands—Teacher Resource Page***.
11. Have all children wash their hands using the proper hand washing methods outlined in the ***How to Wash Your Hands—Teacher Resource Page*** while singing the Hand Washing Song.

Option: Teach children to wash their hands to another song that is easy to remember and lasts 20 seconds, such as *Happy Birthday*.

THE HAND WASHING SONG

Sing this to the tune of "Frère Jacques" ("Are You Sleeping?"). This song lasts 20 seconds, so it can be sung while washing your hands. Have children repeat each verse after you.



Lather with soap
Rub your palms together
Now the backs
Of your hands
Interlace your fingers
Cleaning in between them
Now the thumbs
Clean your nails

K-2

1. Complete Steps 1-7 of the **Pre-K** activity.
2. After Step 7, have children with pretend germs stand on one side of the room and children with no germs stand on the other side.
3. Ask children to count how many people are in each group. Compare the two numbers. Which is larger? How many students now have pretend germs?
4. Continue with Steps 8-11 from the **Pre-K** activity.

Wrap Up

- **Snack:** After washing hands, eat a snack.

- As children eat their snack, ask them what would happen to the gel if they didn't wash their hands? Could it be on their food now? (Yes!)
- Why is it important to wash our hands before eating? (To make sure we don't transfer germs to our food.)
- Download the poster *When Should You Wash Your Hands?* and discuss the important times children should wash their hands.

References

Centers for Disease Control and Prevention. "Healthy Living." Topics on how to stay healthy are discussed on this website. <http://cdc.gov/HealthyLiving> (Accessed December 21, 2016.)

Mayo Clinic. Germs: Understand and protect against bacteria, viruses and infection. MayoClinic.com. A definition and description of germs including descriptions on bacteria, viruses and fungi. <http://www.mayoclinic.org/diseases-conditions/infectious-diseases/in-depth/germs/art-20045289> (Accessed December 21, 2016.)

Mayo Clinic. "Healthy Lifestyle." This website discusses medical topics on how to stay healthy. <http://www.mayoclinic.org/healthy-lifestyle> (Accessed December 21, 2016.)

Mount Sinai Hospital Department of Microbiology. "FAQ: Methods of Disease Transmission." Department of Microbiology. Answers to frequently asked questions about disease transmission including descriptions of different types of transmission.

<https://eportal.mountsinai.ca/Microbiology//faq/transmission.shtml>. (Accessed December 21, 2016.)

World Bank. "Handwashing Facilities in Schools." This website

discusses the importance of hand washing for students. <http://water.worldbank.org/shw-resource-guide/promotion/school-sanitation-and-hygiene> (Accessed December 21, 2016.)



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Above: A child's hands are covered with pretend glitter "germs." Below: Children look at pretend "germs" only visible under a UV light.

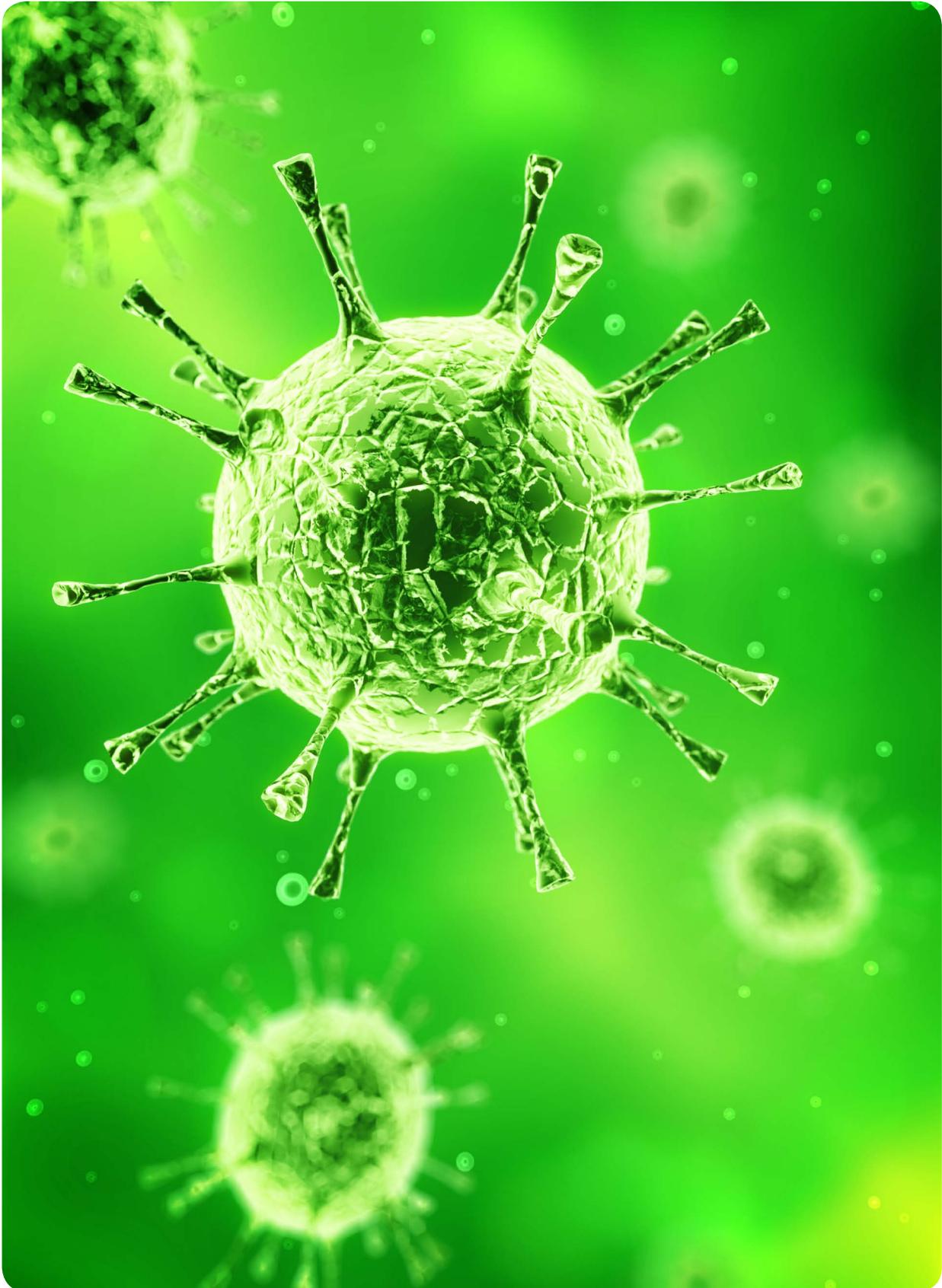
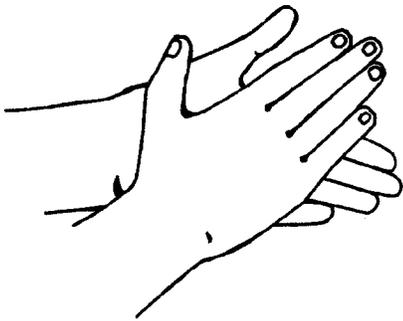


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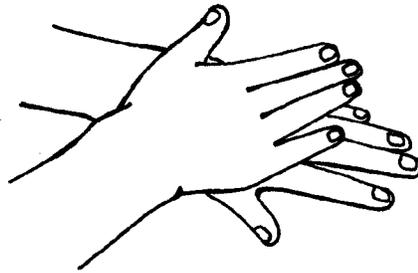
Photo of a virus under a powerful microscope.

Getting Little Feet Wet

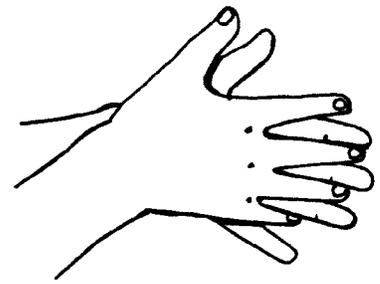
HOW TO WASH YOUR HANDS—TEACHER RESOURCE PAGE



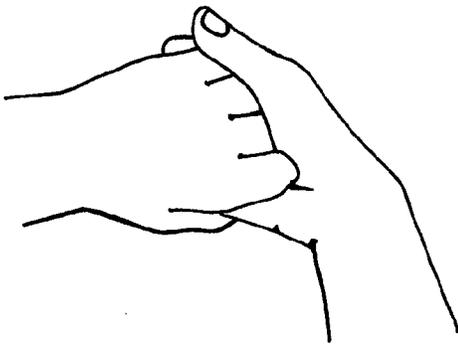
1. Apply soap to wet hands and wrists.



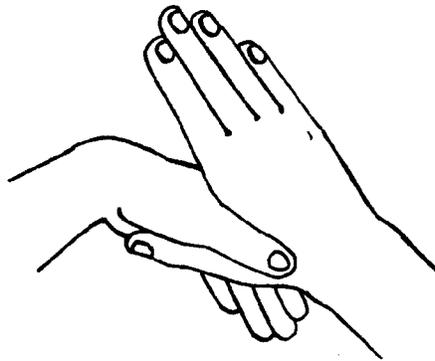
2. Vigorously scrub the backs of both hands.



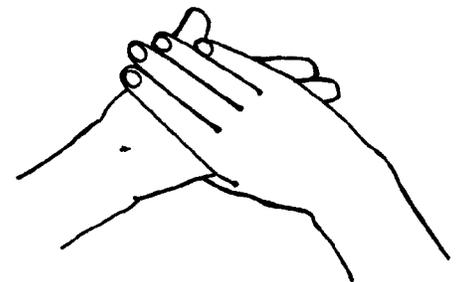
3. Vigorously rub hands together, palms together and fingers interlaced.



4. Interlock fingers and scrub the backs of fingers on both hands.



5. Vigorously scrub each thumb with opposite hand.



6. Rub the tips of thumb and fingers against the palm of opposite hand and vice versa.

Repeat all steps in the process until hands are clean and for a minimum of 20 seconds. Rinse hands with clean water and wave hands until dry or use a clean paper towel.