

HANDWASHING TOOLKIT

GRADES 3 to 6

Algoma Public Health
School Health Program

Target Group: Grades 3 to 6

Ontario Provincial Curriculum Strand: Healthy Living

Strand Component: Growth and Development

Background Information:

- Introduction – Handwashing Teaching Toolkit

Key Teaching:

- Learning Objectives
- Activity #1 Pass It On
- Activity #2 Creating Your Own Germs
- Activity #3 Use Glitterbug Glo Germ
- Activity #4 Wash Your Hands
- Activity #5 Colouring Sheet
- Activity #6 Handwashing Word Search
- Activity #7 Handwashing Word Scramble
- Activity #8 Coughing and Sneezing in Your Sleeve

Handwashing Teaching Toolkit

Objective:

To teach elementary school youth the importance of handwashing, including how and when to wash their hands.

Background information:

Bacteria are everywhere. There are more bacteria on one's body than there are people in Canada. There are bacteria that live on the skin and are usually not harmful. But hands can gather all kinds of bacteria with each job they do. We cannot see individual bacteria without using a microscope.

Why teach handwashing?

Prevention is the best intervention. Addressing the spread of germs in schools is essential to the health of our youth, our schools, and our community. Proper handwashing is inexpensive and the most effective way to prevent the spread of germs. It is important for students of all ages to know when and how to properly wash their hands. While commitment to handwashing means commitment of time and supplies, the cost of NOT washing our hands is far greater than the cost of washing our hands. Despite its' simplicity, handwashing is no laughing matter. According to the CDC, handwashing education has reduced absenteeism due to gastrointestinal illness in schoolchildren by 29-57% (CDC, 2023). It is not surprising when you think about it, because school is all about sharing: desks, books, pens, food, bathrooms, door handles, water fountains, computer mice, and keyboards. Touching them results in germs. When looking into the cause of illness in young children around the world, the CDC has found that "handwashing with soap could protect 1 out of every 3 young children who get sick with diarrhea and almost 1 out of 5 young children with respiratory infections like pneumonia" (CDC, 2023). Clean hands are all about good health for students, volunteers, teachers, administrators, and the entire school community.

What are some ways to teach children good handwashing technique?

You cannot avoid collecting germs, but you can reduce the chance of infecting others by knowing when hands should be washed. It is important to encourage and help children to wash their hands before eating, after playing outdoors or playing with pets, after using the washroom, after coughing or sneezing, after blowing their noses and whenever their hands look, feel, or smell unclean. Even though hands may appear to be clean, they may carry germs capable of causing disease.

Do not assume children know how to wash their hands properly. Supervision, especially at home and in school settings, is an essential element in forming good handwashing habits in children. Children learn by example. Let them learn good handwashing technique from observing you.

How to wash hands:

1. Wet hands with warm water
2. Use liquid soap
3. Lather for at least 20 seconds
4. Rub palms together, scrub the back of hands, wrists, and thumbs, and between the fingers and under the fingernails (keep fingernails short)
5. Rinse well with water to remove all lather
6. Dry hands well using a paper towel
7. Turn off tap with paper towel, not with your clean hands

The mechanical action of handwashing – rubbing your hands together with soap and water – breaks down the tiny bits of grease, fat, and dirt on your hands that bad germs cling to. Soap does not kill the bad germs. Instead, it is the combination of soap, rubbing, rinsing, and drying that help these germs slide off hands.

Other ways to get hands clean:

When handwashing facilities and equipment are not available, alcohol-based hand rinses, gel sanitizer, or alcohol hand wipes containing at least 60% alcohol can be used as an alternative if hands are not visibly soiled. When using gels rub hands until the gel is dry. The gel does not need water to work: the alcohol in it kills the germs on your hands. Young children should be supervised when using alcohol-based products.

Things to avoid:

1. Avoid using single wash cloths and towels to wash a group of peoples' hands
2. Avoid using a standing basin of water to rinse hands

Cuts and dryness

Observe hands for cuts and signs of dryness. Cuts should be covered, and hand lotion should be used to prevent dryness. Germs enter the body through cuts and dry skin.

Contents of handwashing toolkit:

1. Lesson plan
2. Activity sheets
3. Posters
4. Book and website resource list for teachers
5. Glitterbug Glo Germ lotion and UV light

This toolkit has been adapted from the “Down with Germs – Wash Germs Down the Drain” educational kit developed by Wellington-Dufferin-Guelph Public Health Unit.

GRADES 3 to 6 LESSON PLAN

Learning objectives:

- Describe how germs are transmitted and how it relates to personal hygiene
- Understand that there are many types of germs (bacteria and viruses, some harmful and others not harmful).
- Identify some of the illnesses and diseases that harmful germs can cause.
- Understand that proper handwashing removes harmful germs from hands and prevents the spread of illnesses and diseases.

General information:

- Germs are so small that you cannot see them, and they can be found almost everywhere.
- There are many types of germs, including bacteria and viruses.
- Some bacteria and viruses cause illnesses and diseases. Some are naturally occurring and do not make people sick and may be beneficial to people's health. Examples of beneficial bacteria are ones used to make yoghurt and cheese. People also have beneficial bacteria in their intestines or guts that help them digest food.
- Some illnesses and diseases that are caused by bacteria and viruses can be harmful.
- Some examples of illnesses and diseases caused by bacteria and viruses are pink eye, pneumonia, food poisoning. Washing with soap and water removes germs from your hands and washes them down the drain. Handwashing reduces the number of germs on your hands.
- Washing your hands properly and often can prevent the spread of many illnesses and diseases.

How to wash your hands:

1. Wet hands with warm water.
2. Use soap. It is best to use liquid soap.
3. Lather for at least 20 seconds.
4. Scrub the back of hands, thumbs, between the fingers and under the fingernails.
5. Rinse with water to remove all lather.
6. Dry hands well using a paper towel.
7. Turn off tap with paper towel – not with your bare hands.

When to wash your hands:

- Before eating, drinking, or touching food
- After using washroom facilities
- After playing outside or with animals
- After visiting someone who is sick
- After touching money
- After handling garbage
- After coughing, sneezing, or blowing your nose
- If hands look or feel dirty

Activities:

Select one or several activities from the following pages to reinforce proper handwashing.

ACTIVITY #1: PASS IT ON**Description:**

Students learn how germs can be transmitted.

Materials needed:

- Small Playground Ball
- Vaseline
- Glitter

Method:

Pass around a ball that is coated with Vaseline and glitter. Tell your students that the gunk on the ball represents germs that they pick up when they touch things like balls or other playground equipment. Afterwards they will definitely want to wash their hands! Provide water, soap, and paper towels, and have students demonstrate proper handwashing technique when washing off the “gunk.”

ACTIVITY #2: CREATING YOUR OWN GERMS

Description:

Students learn about diverse types of germs and their shapes using modeling clay to create the germs.

Materials needed:

- Handout: “Magnified Bacteria and What They Do” (page 9)
- 2 cups flour (500 ml)
- 1 cup salt (250 ml)
- 1 tablespoon oil (15 ml)
- 1 cup hot water (250 ml)
- Food colour, powdered or liquid paint


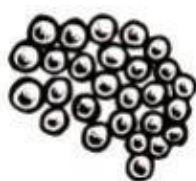

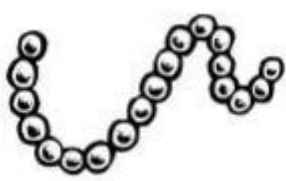
Method:

1. Show students the handout with the magnified germs and what illnesses or diseases are transmitted by each type of germ.
2. Tell students that all germs on the chart are called bacteria. Bacteria and viruses are the most common germs that cause illnesses and diseases.
3. Have students mix modeling compound from the ingredients listed above and create their own bacteria shapes based on those from the chart.
4. Discuss how bacteria, although they are so small they cannot be seen, can be all over hands and under the fingernails just like the modeling clay.
5. Have students demonstrate proper handwashing technique when washing off the modeling clay.

Variations:

Find magnified pictures of viruses on the Internet and discuss common illnesses that can be caused by viruses. Also discuss the concept of beneficial bacteria and viruses that do not make people sick, like bacteria used to make yoghurt and cheese. Have students make models of the diverse types of germs.

Magnified Bacteria and What They Do!

Name of Bacteria	What it Looks Like	Where it is Found	What it Does
Escherichia Coli		In the stomachs of animals, especially cattle, and humans.	Commonly causes diarrhea, vomiting and stomach cramps. Can have serious complications.
Staphylococcus Aureus		On human skin, in nose and throats.	Commonly causes skin and wound infections. Also causes pimples.
Salmonella Enteritidis		In the stomachs of animals, especially chickens, turtles and humans.	Causes diarrhea and vomiting. One of the most common causes of food poisoning.
Streptococcus Pyogenes		In the throats and nose of humans.	Very common cause of sore throats. Can also cause skin infections.

ACTIVITY #3: USE GLITTERBUG GLO GERM

Description:

Demonstrates to students that germs can be on their hands although they cannot be seen. The Glitterbug Glo Germ lotion is rubbed on hands and disappears as it is rubbed in. The lotion simulates germs that hide (seen under Glitterbug Glo Germ UV light) after hands are washed. This helps students to understand that handwashing can remove germs from hands.

Materials needed:

- Glitterbug Glo Germ UV Light (available from Algoma Public Health)
- Glitterbug Glo Germ lotion (available from Algoma Public Health)
- A sink with hot and cold running water
- Liquid soap
- Paper towels
- Hand sanitizer (optional)

Method:

1. Place a small amount of Glitterbug Glo Germ lotion into each student's hand. A pea-sized drop should be enough for small hands.
2. Have students rub the lotion all over their hands.
3. Explain that like the lotion, germs are on their hands although they cannot see them.
4. Have children place hands under the UV light (you may have to dim the lights in the room). The areas where there is Glitterbug Glo Germ lotion will glow orange under the light.
5. Explain to students that the orange glow reveals where germs are on their hands.
6. Have children wash hands using the proper technique and then look at their hands under the UV light again. There should be a significant reduction in the areas that glow orange.
7. Have students discuss areas that are commonly missed during handwashing, where the Glitterbug Glo Germ lotion continues to glow under the light. These are usually the thumbs, between the fingers and underneath the fingernails. Encourage students to pay extra attention to these areas when handwashing.
8. Explain that like germs, the lotion can be washed off using proper handwashing.

Variations with Glitterbug Glo Germ:

1. Divide students into three groups. Put Glitterbug Glo Germ lotion on the hands of all students. Have one group wash with water only, the second group wash with soap and water, and the third group wash with hand sanitizer. After examining their hands under the Glitterbug Glo Germ light, discuss how much cleaner hands washed with soap and water become.
2. Divide students into three groups. Put Glitterbug Glo Germ lotion onto the hands of all students. Have the first group wash hands and lather for 5 seconds. Have the second group lather for 10 seconds and the third group lather for 20 seconds. Compare the cleanliness of the hands of each group using the Glitterbug Glo Germ UV light. Discuss how lathering for a longer period will make hands cleaner.
3. Put Glitterbug Glo Germ lotion onto the hands of one student and ask that student to shake hands with five classmates. Examine the hands of the students involved in the handshakes under the UV light and discuss how the Glitterbug Glo Germ lotion has been transferred from the hands of the original student to the other hands. This is a representation of how germs can be transmitted from one person to another through direct contact.

Refer to Materials Safety Data Sheet Glitterbug Glo Germ

<https://www.glogerm.com/sds.html>

ACTIVITY #4: WASH YOUR HANDS

Description:

Educates students about how germs are spread and the importance of washing their hands to prevent illness.

Materials needed:

- Spray bottle filled with water
- Towels/napkins to dry hands

Method:

1. Fill a spray bottle with water and spray water on each student's hands.
2. Explain that the water on their hands represents germs that come out of their mouths when they cough, sneeze, or put their fingers in their mouth.
3. Have the students touch an object such as their desk, chair, etc.
4. Ask them what happened to the object when they touched it (it became damp).
5. Explain that this is what happens when we sneeze or cough into our hands and then touch an object. The germs get on the object.
6. Ask the students what might happen if one of their friends has a cold and sneezes in their hand and then touches an object such as your desk and then you immediately touch the same object while it is moist. Write students' answers on the blackboard.
7. Ask the students what would happen if that friend had washed their hand before they touched any object. Write the students answers on the board and explain the importance of washing hands several times throughout the day.

ACTIVITY #5: COLORING SHEET

Description:

Students learn about diverse types of germs and their shapes.

Materials needed:

- What are Germs? Coloring Sheet (Appendix C)
- Crayons or colored pencils

ACTIVITY #6: HANDWASHING WORD SEARCH

Description:

Students learn about words extensively used with handwashing.

Materials needed:

“Handwashing Word Search” work sheet (Appendix C)

ACTIVITY #7: HANDWASHING WORD SCRAMBLE**Description:**

Students learn about words extensively used with handwashing.

Materials needed:

“Handwashing Word Scramble” work sheet (Appendix C)

ACTIVITY #8: COUGHING AND SNEEZING IN YOUR SLEEVE

Description:

Millions of disease-causing germs are released into the air every time we cough or sneeze. Children have learned that coughing and sneezing into a tissue can help keep germs from getting on hands and prevents the spread of germs. Coughing and sneezing into a tissue may contaminate the hands. If this occurs, it is strongly recommended that the hands be washed immediately to prevent the spread of germs.

There is another technique in town! Did you know that the best place to sneeze and cough is into fabric, such as one's sleeve, where the germs get trapped, dry out and die? This takes practice, so practice, practice, practice!

Materials:

Video: <https://www.youtube.com/watch?v=CtnEwvUWDo0>

Method:

1. Explain to the class that they will be demonstrating the proper technique for coughing and sneezing into their sleeve (short or long)
2. Explain to the class how this technique prevents the spread of germs
3. Demonstrate the proper technique for coughing and sneezing into fabric (sleeve or shoulder)
4. Ask 4-6 students to individually demonstrate the technique of coughing into fabric, to the rest of the class then
5. Ask the class to rate the students from 1 (poor) to 3 (successful) on technique each student demonstrated

APPENDIX A: CURRICULUM EXPECTATIONS

The Ministry of Education – Ontario Physical Health and Education Curriculum Links 2019 Grades 1-8 Human Development and Sexual Health

D2.5 Demonstrate an understanding of and apply proper hygienic procedures for protecting their own health and preventing the transmission of disease to others

(e.g., washing hands with soap, using a tissue, sleeve sneezing, brushing and flossing teeth, not sharing hats or hairbrushes) page 108 (Grade 1)

Personal Safety and Injury Prevention

D1.1 Demonstrate an understanding of practices that enhance personal safety in the home

(e.g., observing precautions for answering the phone and door, establishing home fire escape strategies, respecting electrical outlet covers, following precautions for preparing and storing foods, washing hands), outdoors (e.g., using UV protection; observing safety rules when riding the bus, riding a bicycle, walking to school, approaching railway tracks and crossings; carrying medication for allergic reactions; being cautious when approaching animals), and when online (e.g., not sharing personal information, checking with an adult if information found online is true) [A1.5 Self, 1.6 Thinking] page 124 (Grade 2)

APPENDIX B: REFERENCES

Centers for Disease Control and Prevention. (2023, May 4). Show me the science – Why wash your hands? Centers for Disease Control and Prevention. <https://cdc.gov/handwashing/why-handwashing.html#s3-three>

Coughsafevideos. (2012, Mar 7). *Why Don't We Do It In Our Sleeves?* [Video].

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Glitterbug Glo Germ (N.A.). *Educational Worksheets*. Glitterbug Glo Germ. <https://www.glogerm.com/worksheets.html>

Saskatchewan Health Authority. (2020, Sep 4). *Germ Smart Kids: How-To Handwashing* [Video]. Youtube.

<https://www.youtube.com/watch?v=eNmte6Xe3R4>

The Ontario Curriculum Grades 1-8: Health and Physical Science (2019). Toronto: Ontario Ministry of Education and Training. <https://www.edu.gov.on.ca/eng/curriculum/elementary/2019-health-physical-education-grades-1to8.pdf>

APPENDIX C: ACTIVITY PAGES

What are Germs? Colouring Page

Source: <https://www.glogerm.com/worksheets.html>

Grade 3: Handwashing Word Search

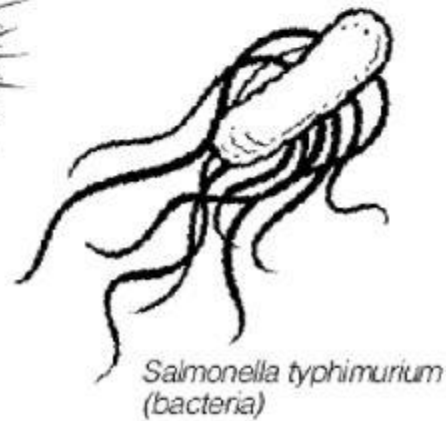
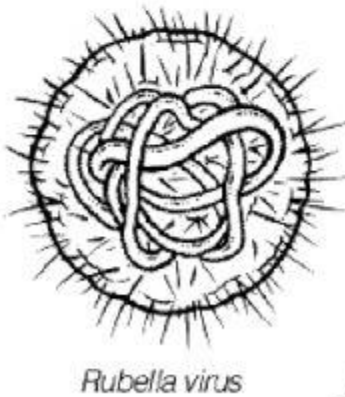
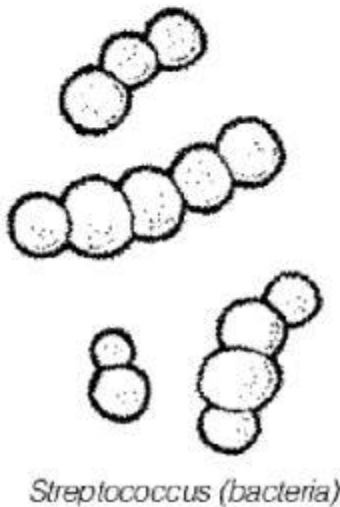
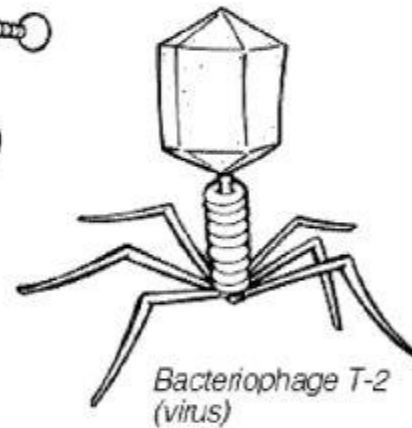
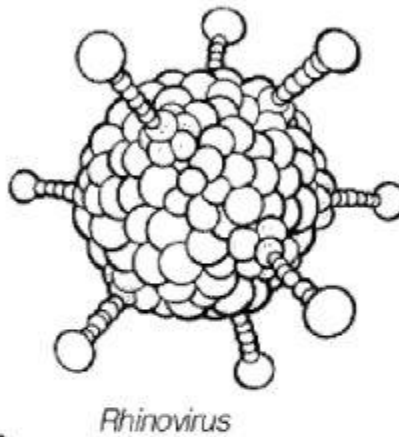
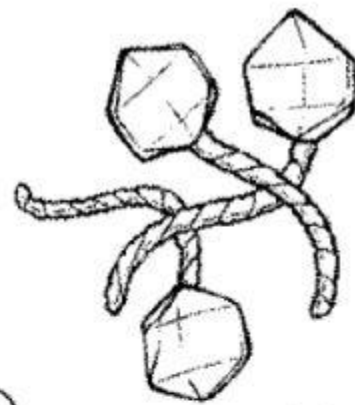
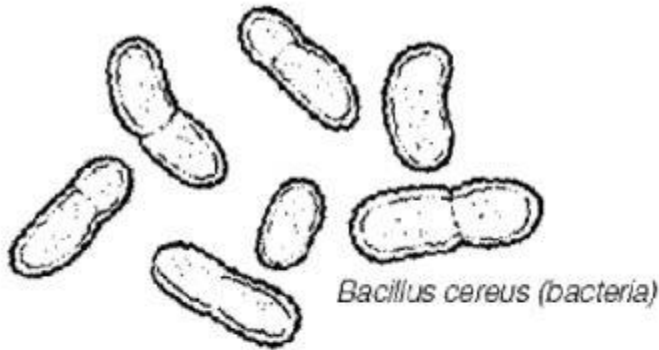
Source: <https://www.glogerm.com/worksheets.html>

Grade 4: Handwashing Word Scramble

Source: <https://www.glogerm.com/worksheets.html>



"What Are Germs?" Coloring Sheet





Hand Washing Word Search

Find and circle the eight words in the puzzle below.

GERMS

DISEASE

SOAP

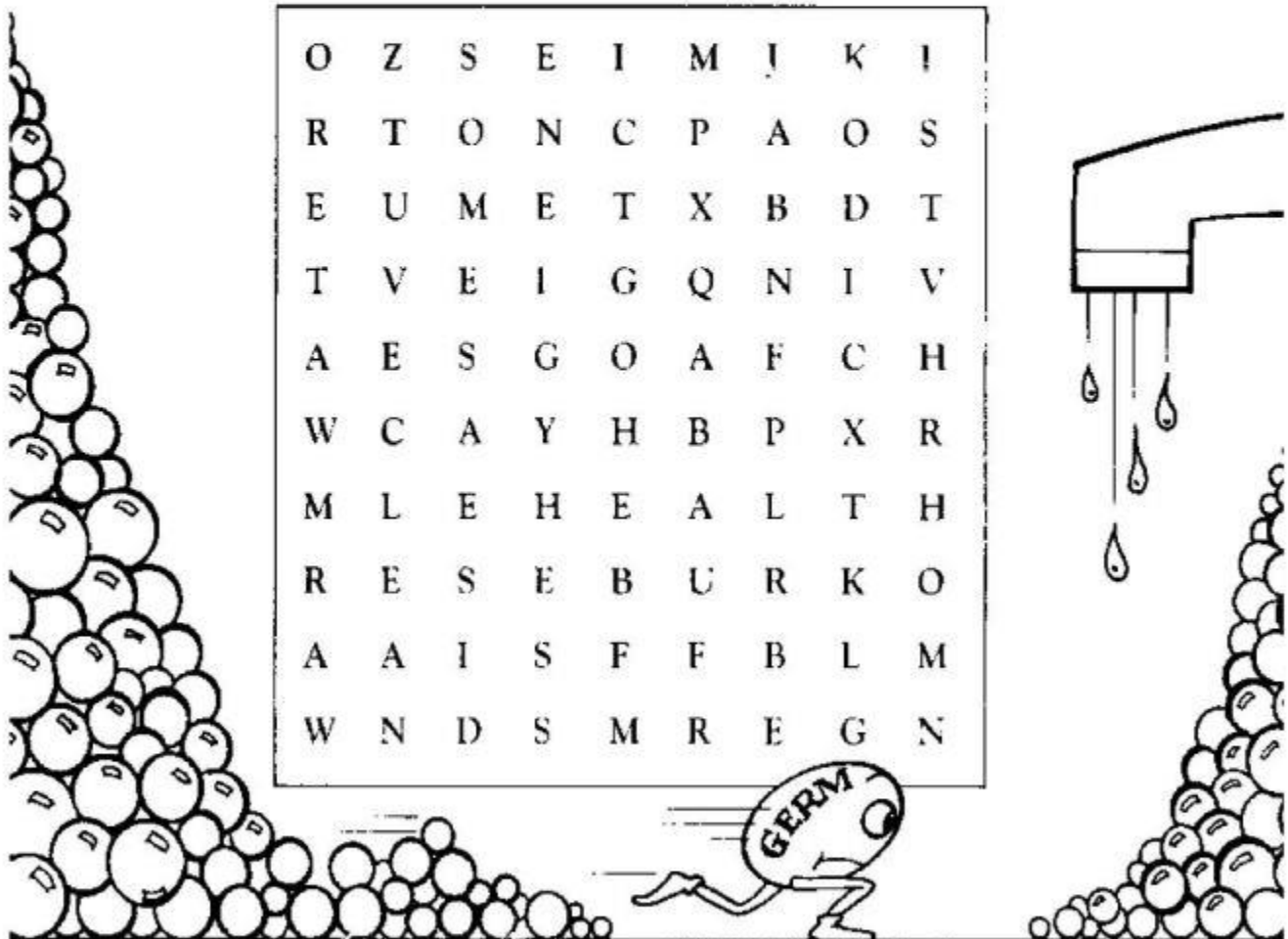
WASH HANDS

WARM WATER

HYGIENE

CLEAN

HEALTH



Name _____

I pledge to wash my hands



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HAND WASHING WORD SCRAMBLE

Unscramble the words below. Try not to use the hints.

Hint:

Answer:

M G S E R

These are what make you sick.

S V U R I

This is one type of germ.

D S N H A

What you should always wash.

T R W A E

What you wash your hands with.

S A P O

This helps to eliminate germs.

S E A I D S E

What germs can cause.

C I B A E A T R

This is another type of germ.

T L E H A H Y

Washing your hands can keep you _____!



Name _____

I pledge to wash my hands regularly



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