



Algoma
PUBLIC HEALTH
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HANDWASHING LESSON PLAN



STOP! Wash your hands.
Get rid of germs!

GRADES 3 & 4



Title: Down with Germs

Target Group: Grades 3 & 4

Ontario Provincial Curriculum Strand: Healthy Living

Strand Component: Growth and Development

Specific Expectation: None

Time: 15 – 30 minutes

Background Information:

- [Introduction – Handwashing Teaching Toolkit](#)

Key Teaching:

- [Learning Objectives](#)
- [Activity #1](#) Pass It On
- [Activity #2](#) Creating Your Own Germs
- [Activity #3](#) Use 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



Resources:

- Posters
 - 1. [Be a Germ Stopper](#)
- DVD [“Why Don’t We Cough In Our Sleeve?”](#)
- Material Safety Data Sheet – [Glo Germ Liquid](#)
- Material Safety Data Sheet – [Ultraviolet Black Light](#)
- [Resources Available from Algoma Public Health](#)
- [Websites for Teachers](#)
- [References](#)



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. Bacteria, like people, can be either good or bad. 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 can't 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. Nearly 22 million school days are lost due to the common cold and other infectious diseases (CDC 1996). It's 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.

A study of 305 Detroit school children showed that handwashing at least four times a day reduced absenteeism by 24 – 50%.

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.



Don't 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: (Refer to [“Be a Germ Stopper”](#) poster)

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)
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 doesn't actually kill the bad germs. Instead it's the combination of soap, rubbing, rinsing, and drying that help these germs slide off hands.
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

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, as long as hands are not visibly soiled. When using gels rub hands until the gel is dry. The gel doesn't 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. Glo Germ lotion and UV light
6. Buddy Bear's Handwashing Troubles (book)



7. Just Wash-Em (7-minute video)

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 & 4 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 actually 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. (Refer to handout – "What Germs Are On Your Hands?"). 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 (Refer to ["Be a Germ Stopper"](#) poster)

1. Wet hands with warm water.
2. Use soap. It's 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.

Lathering with soap helps to lift dirt and germs off hands so they can be rinsed down the drain. However, if there is no soap, going through the action of handwashing will still help to remove some germs from your 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.

Book selection

- Those mean nasty dirty downright disgusting but invisible germs: by Judith Anne Rice – K to Grade 3
- Germs on Their Fingers: by Wendy Wakefield Ferrin – Grades 3-4
- The Germ Gang Activity Book: by Marjorie Cooke – Grade 4
- Germs Make Me Sick: by Melvin Berger – Grade 4
- Germs: by Ross Collins – Grade 4
- Wash Your Hands: by Tony Ross

Video selection

“Just Wash Em”: 7-minute video featuring “Sudsy”
(available at Algoma Public Health) - K-Grade 2

Hands Down on Germs: 8 minutes - Grades 2-4

All Hands on Deck: 10 minutes – Grades 2-4

The War on Germs: 10 minutes – Grade 4



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 different types of germs and their shapes using modeling clay to create the germs.

Materials needed

- Handout: ["Magnified Bacteria and What They Do"](#)
- 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 actually 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 different 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 GLO GERM

Description

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

Materials needed

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

Method

1. Place a small amount of 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 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 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 Glo Germ

1. Divide students into three groups. Put 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 Glo Germ light, discuss how much cleaner hands washed with soap and water become.
2. Divide students into three groups. Put 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 Glo Germ UV light. Discuss how lathering for a longer period of time will make hands cleaner.
3. Put 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 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 Glo Germ Liquid

<http://www.glogerm.com/msds-glogerm-liquid.pdf> and Materials Safety Data Sheet Ultraviolet Black Light <http://www.glogerm.com/msds-glogerm-liquid.pdf> for instructions on use.



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

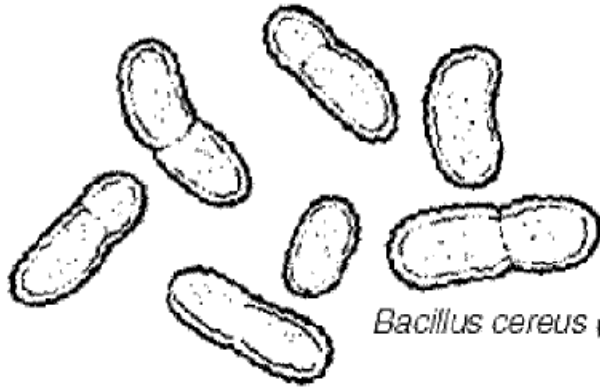
Students learn about different types of germs and their shapes.

Materials needed

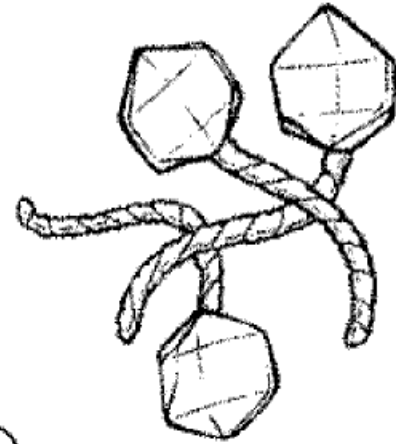
- [What are Germs? Coloring Sheet](#)
- Crayons or colored pencils



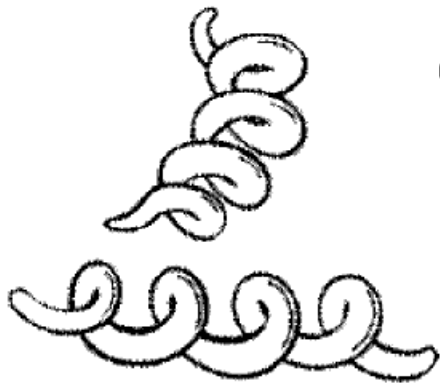
"What Are Germs?" Coloring Sheet



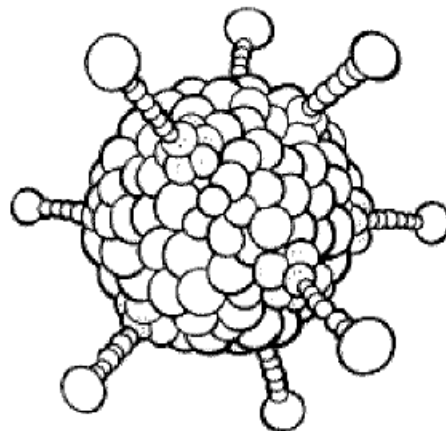
Bacillus cereus (bacteria)



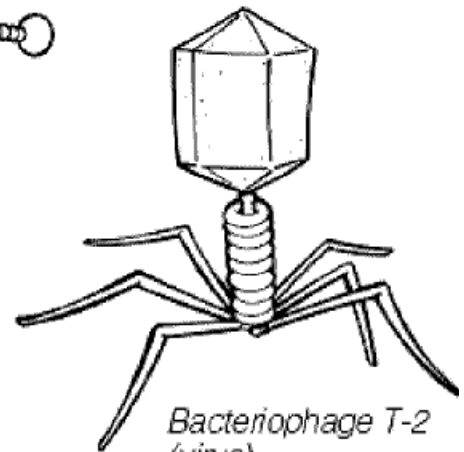
Bacteriophage lambda (virus)



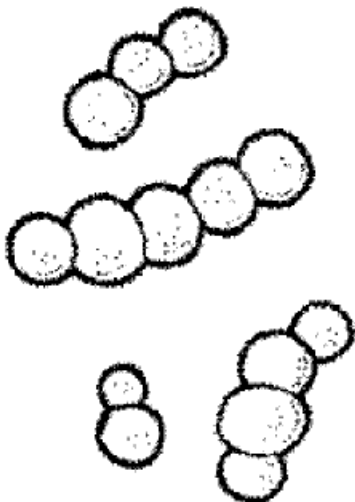
Spirillum (bacteria)



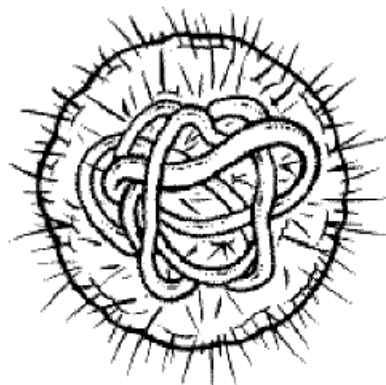
Rhinovirus



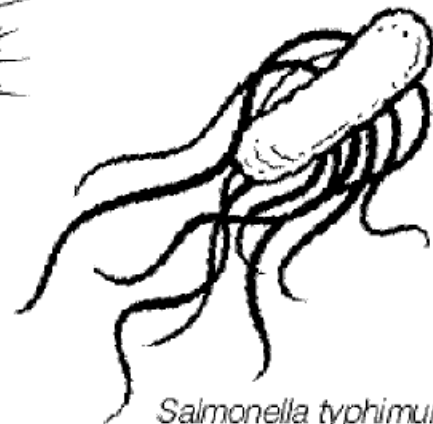
Bacteriophage T-2 (virus)



Streptococcus (bacteria)



Rubella virus



Salmonella typhimurium (bacteria)



ACTIVITY #6: HANDWASHING WORD SEARCH

Description

Students learn about words regularly used with handwashing.

Materials needed

“Handwashing Word Search” handout -

<http://www.glogerm.com/sheets/grade3.pdf>



Hand Washing Word Search

Find and circle the eight words in the puzzle below:

GERMS

DISEASE

SOAP

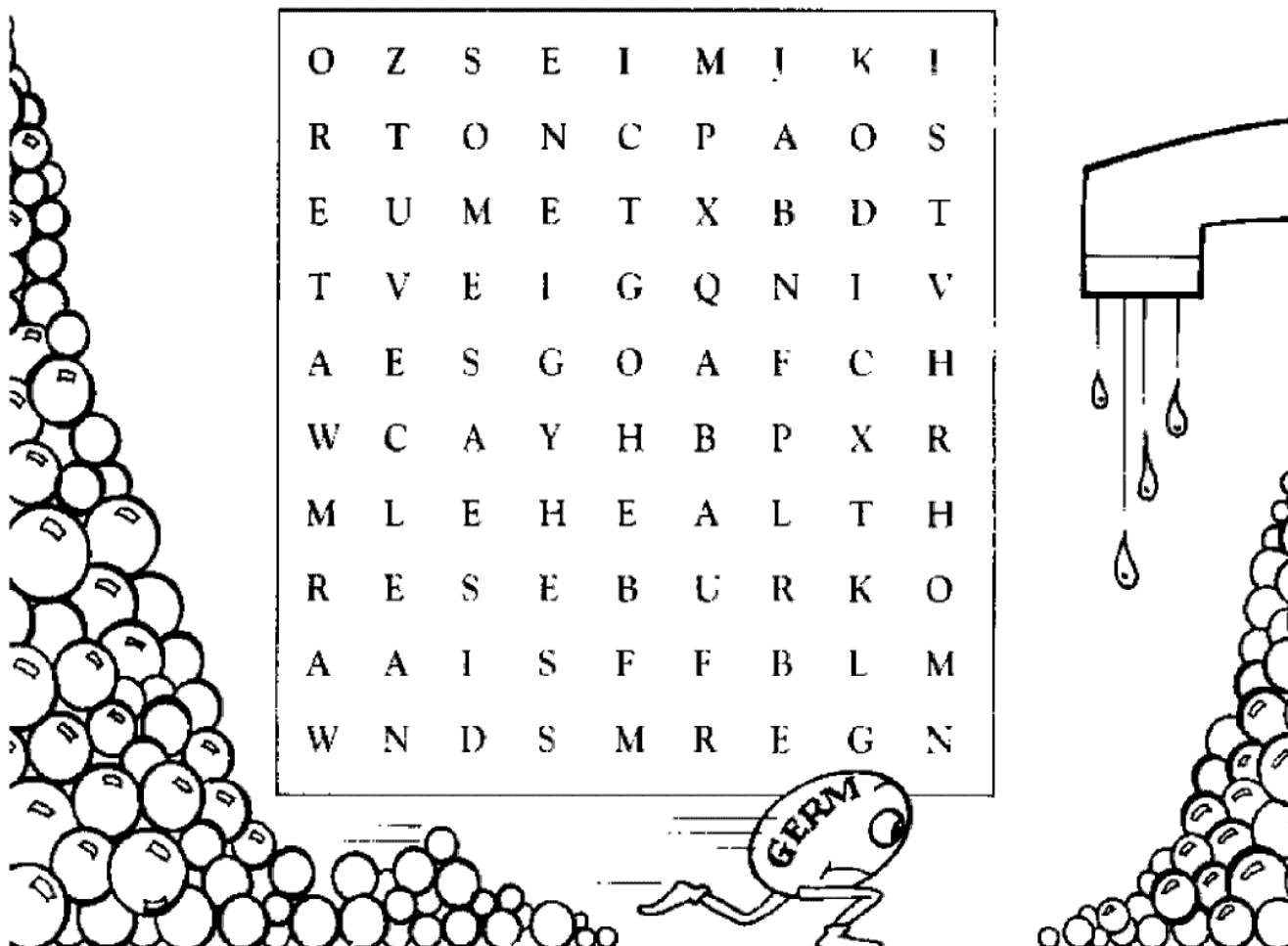
WASH HANDS

WARM WATER

HYGIENE

CLEAN

HEALTH



Name _____

I pledge to wash my hands



ACTIVITY #7: HANDWASHING WORD SCRAMBLE

Description

Students learn about words regularly used with handwashing.

Materials needed

- “Handwashing Word Scramble” handout -
<http://www.glogerm.com/sheets/grade4.pdf>



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 _____



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. In reality, 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's 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:

On-Line Video: Why Don't We Cough In Our Sleeve:

<http://www.coughsafe.com/media.html>

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



Resources Available from Algoma Public Health

| Resource | Target grade |
|--|--------------|
| Glo-germ lotion and UV light | All grades |
| BOOKS | |
| Buddy Bear's Handwashing Troubles Marjori Cooke | K-2 |
| Germs Are Not for Sharing Elizabeth Verdick | K-2 |
| Germs! Germs! Germs! Bobbi Katz | K-2 |
| Gerbusters Handwashing Activity book Marjorie Cooke | K-2 |
| Those mean nasty dirty downright disgusting but invisible germs Judith Anne Rice | K-3 |
| Wash Your Hands! Tony Ross | K-4 |
| Germs on Their Fingers Wendy Wakefield Ferrin | Grades 3-4 |
| The Germ Gang Activity Book Marjorie Cooke | Grades 4-6 |
| Germs Make Me Sick Melvin Berger | Grades 4-6 |
| Germs Ross Collins | Grades 4-6 |

DVD

| | |
|---|----------------|
| Why Don't We Cough In Our Sleeves? 5 minutes | K-Adult |
|---|----------------|

VIDEOS

| | |
|---------------------------------------|-------------------|
| Just Wash-Em: 7 minutes | K-2 |
| Hands Down on Germs: 8 minutes | Grades 2-4 |
| All Hands on Deck: 10 minutes | Grades 2-4 |
| The War on Germs: 10 minutes | Grades 4-8 |

Resources are available for a two-week loan period. To book your resource(s), contact Algoma Public Health at 759-5418



Websites for Teachers

1. www.algomapublichealth.com
2. www.itsasnap.org
3. <http://www.cdc.gov/germstopper>
4. www.glogerm.com
5. www.washup.org
6. www.henrythehand.com
7. www.scrubclub.org



REFERENCES

Cooke, Marjorie T. (1986), Germbusters, Utah: Brevis Corporation.

FDA/CFSAN Food Safety A to Z Reference Guide, September 2001:
Handwashing

Handwashing Awareness Week Classroom Kit (1995), The Canadian Paediatric Society in association with Lever 2000.

Handwashing Lesson Plans (2000), Utah Hygiene Education Coalition

The Kindergarten Curriculum (1998), Toronto: Ontario Ministry of Education and Training.

The Ontario Curriculum Grades 1-8: Science and Technology (1998), Toronto: Ontario Ministry of Education and Training.

The Ontario Curriculum Grades 1-8: Health and Physical Science (1998).
Toronto: Ontario Ministry of Education and Training.

The Lung Association, The CHN Respiratory Diseases. (2006) The Importance of Handwashing for your Health.

www.microbe.org/washup/Wash_Up.asp (1999), American Society of Microbiology.

The Ministry of Health and Long-Term Care. Handwashing:
http://www.health.gov.on.ca/english/public/program/pubhealth/handwashing/handwashing_mn.html

Minnesota Department of Health. (2005) Handwashing: Prevent Disease & Outbreak Intervention.

Safe or Sorry – Food Safety Program of the Minnesota Department of Health, Environmental Health Division, April 2001, Revised 2003.