Milo & the Invisible World of Germs: Handwashing Education Kit for Preschool Children

Authors: Region of Waterloo Public Health – Health Protection and Investigation

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Description: The handwashing education kit contains suggestions for teaching infection control principles and procedures along with the use of visual aid, media presentation and a GlitterBug® Hand Show Kit.

Participants: Preschool Children up to Grade 2

Length of presentation: 30–45 minutes

Kit contents:

• GlitterBug® kit
  – Black light
  – Glitter bug® powder
  – Glitter bug® hand cream
  – Glitter bug® disclosure centre

• Lesson plan: Handwashing Presentation for Preschool Children (scripted)

• Educational DVD: “Milo & The Invisible World of Germs” (approx. 10 mins)
  1216 Flamingo Parkway, Libertyville, IL 60048
  1-800-446-3628
  www.handwashingforlife.com

• Letter to Parents/Guardians (sample template)

• Colouring activity sheets

• Why do I wash my hands? by Angela Royston

• Wash Your Hands! by Margaret McNamara
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References:

Community and Hospital Infection Control Association–Canada. (1999). *Sudsy Says Just Wash’Em*


How to Use This Resource

This resource is intended for use with preschool and kindergarten children to reinforce good hand hygiene practices. The resource structure allows you to decide how much class time to spend. A 45 minute lesson plan has been included in conjunction with activities which can be taught together or separately. You do not need to be an expert or take a lot of preparation time.

The lesson plan was tailored to fit the Ministry of Education’s Kindergarten Program, specifically Health and Physical Activity under the program section, Learning Expectation.

A “letter to parents/guardian” has been provided in this booklet. You are encouraged to photocopy and distribute it to parents to reinforce the importance of practicing good hand hygiene at home.

Lesson Plan

<table>
<thead>
<tr>
<th>Subject/Course:</th>
<th>Physical Health and Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade Level:</td>
<td>Kindergarten – Grade 2</td>
</tr>
<tr>
<td>Topic:</td>
<td>Handwashing Education</td>
</tr>
<tr>
<td>Length:</td>
<td>30–45 minutes</td>
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</tbody>
</table>

Expectation(s): 

Students will:

Demonstrate an awareness of good personal hygiene practices for themselves and others.  
(Ontario Ministry of Education, 2006, p. 54)

Practice and discuss appropriate personal hygiene habits that promotes the well-being of individual, family, and community health (e.g., cover mouth when coughing or sneezing, use a tissue, wash hands).  
(Ontario Ministry of Education, 2006)

Learning Objectives:

1. What germs are and how they contaminate our hands
2. Why it is important to wash our hands
3. Proper method for handwashing
4. When to wash our hands
Teaching/Learning Strategies

Introduction: Why are our hands important to us? (1 min)

Discuss with children and have them brainstorm the everyday activities that we carry out with our hands. Images/pictures of activities can be useful to help younger kids understand.

Potential Script:

“Hi children, today we are going to talk about handwashing. First we’ll study our hands and how our hands can become dirty, and then I will show you why it is important to wash your hands.”

“Ok, put up your hands if you’ve used your hands to do something today.”

“Great! So, what do we use our hands for? Tell me about something you did with your hands today—remember, if you want to answer you need to put your hand up!”

(Wait for kids to brainstorm)

Examples:

- To brush our teeth
- To comb our hair
- To put on our clothes
- To put on our shoes
- To eat or make food
- To shake hands with our friends/hug/tickle
- To play
- To tidy up
- To write and draw

“Good job, everyone! Thank you for your creative answers!”
Learning #1: What are germs? How do our hands become contaminated? (2–3 mins)

**Part A:** Discuss what germs are and why they are harmful to us.

**What you will need:** Poster board #1 “Germs Make us Sick”

**Potential Script:**

“Germs get onto our hands when we touch things during the day. Germs are alive and everywhere; some can make us very sick if they get into our bodies. Germs enter our bodies through our mouths, noses and eyes. We can’t see germs because they are so tiny. We need a special magnifying glass to see them called a microscope, which means they can still be on our hands even if our hands don’t look dirty.”

**Part B:** Discuss ways our hands can become contaminated with germs.

**What you will need:** Poster board #2 “Ways to Contaminate Hands”

**Potential Script:**

“Germs get onto our hands when we touch things; like our pets; touching our nose, especially when it is runny; after going to the washroom; and after playing in the sandbox.

Germs like to hide on our hands. Look at your hands; there are many lines on the palm of your hands and knuckles which are all good hiding spots for germs. Your fingernails are also a good spot for germs to hide. Sometimes you may see black lines underneath the tips of your fingernails after you have been outside playing. Those black lines are formed by the dirt and germs on things that you have touched.

We need to make sure that we remove the hidden germs by washing our hands often, especially after we’ve been playing and before we put our hand to our mouths.”
Learning #2: Why is it important to wash our hands? (11 min)

What you will need: “Milo and Invisible World of Germs” Video

Potential Script:

“We know that germs and dirt like to hide on our hands. Why is it important to wash our hands often and keep them clean?”

(Wait for kids to brainstorm)

Examples:

• We can pass germs easily to each other if we don’t wash our hands.
• We can get sick if we don’t wash our hands.
• Our hands will look or feel dirty if we don’t wash them.

“And now, we will watch a video about a boy named Milo who found a pair of magical glasses that allowed him to see the germs on his hands.” (Play video).

Potential Activity:

• Glitterbug® hand show demonstration (prepare for an additional 10–15 minutes)—on page 11.
Learning #3: How do we thoroughly wash our hands? (2 – 3 min)

What you will need: A 15 second handwashing song, (e.g. sing Happy Birthday two times or the alphabet)

Potential Script:

“First we’ll roll up our sleeves and pretend to turn on the hot and cold water tap so that we get warm water coming out. Then, we’ll wet our hands from our wrist to our fingertips with warm water.”

“Now, let’s put some soap on our hands.”

“Ok, it’s time to sing our handwashing song (Optional: sing a 15 second song e.g. the alphabet or Happy Birthday twice). Remember, we should scrub our hands—palm-to-palm, scrub in between and around our fingers, and scrub the back of our hand.”

“Now, let’s pretend to rinse our hands under the warm water, from our wrist to our fingertips. Make sure we rinse off all of the soap so the germs can get washed away.”

“Remember, the germs that we have just washed away are now in the sink. We need to make sure we don’t play in the sink while we wash our hands or after our hands are washed; otherwise, those germs can get onto our hands again.”

“Take our invisible paper towel and pat our hands dry. We can use this paper towel to turn off the water and now we are done!”

Repeat once more and this time have them sing their handwashing song. Explain that their hands should be scrubbed for the duration of the song (lather and make bubbles for at least 15 seconds).

Potential activity:

- Water Demonstration (Prepare for an additional 10–15 min)—on page 12.
Learning #4: When do we need to wash our hands? (2 min)

Briefly reinforce the importance of handwashing several times throughout the day. Discuss when to wash hands. (Allow the children to brainstorm).

What you will need: Poster board #3 “Safe Things to do after handwashing”

Potential Script:

“Now we have learned how germs get onto our hands and that we need to wash hands thoroughly and often. Can you tell me when we should wash our hands?”

“For example, should we wash our hands before we eat and drink?”

“Can you think of anything else?”

Examples:

- Before we put things in our mouth
- Before we touch our face
- After we play
- After we go to the washroom
- After we sneeze or cough
- After we touch our pet(s) or other animals
- After touching things from a sick person
- After touching anything that might be really germy/dirty

“These are all very good answers. It is very important to wash your hands many times during the day especially before or after doing the things that we have just talked about.”

Conclusion:

“Thank you for being good listeners and volunteers. I hope this lesson has helped you understand why we need to wash our hands. The most important thing to remember for today is to always practise good handwashing!”
Assessment/Evaluation

Based on the application, how will I know students have learned what I intended? An evaluation component is embedded in the lesson plan and in all of the activities so the instructor may assess the students’ progress during the lesson. If you choose to assess/evaluate students during the above activities here is a sample assessment/evaluation tool.

Classroom Handwashing Chart

For the remainder of the week, teachers have the opportunity to build on the information and principles taught in the lesson above. A chart has been provided on page 13, that teachers can photocopy for each student in the classroom. Each time a student washes his or her hands a checkmark/sticker can be rewarded for their efforts. This activity will demonstrate to students the importance of washing their hands frequently to help prevent illness. Teachers can choose to use this activity for assessment if desired.
Handwashing Educational Session

Dear Parent/Guardian:

Your child recently participated in an educational session on handwashing. During the session, the children learned that germs can make them sick and that germs can be on the objects that they touch every day. Your child also learned the specific handwashing steps to thoroughly clean their hands of dirt. Please continue to reinforce good handwashing practices with your child.

Hands are the most common way of transmitting many infectious diseases, especially among school-aged children. Handwashing is the most effective method of preventing the spread of certain infectious diseases. Research has shown that a simple and easy-to-follow handwash education program can result in better handwashing practices amongst children.

For more information, please call Region of Waterloo Public Health, Health Protection and Investigation weekdays at 519-575-4400 ext. 5147 between 8:30 a.m. – 4:30 p.m.
Activity A: GlitterBug® (10–15 mins)

Goal: Students learn the importance of handwashing and demonstrate how germs can pass from one person to another and the importance of handwashing.

What you will need:
- GlitterBug® powder
- Plastic Toy
- Black light
- A place for children to wash their hands equipped with liquid soap and paper towel

What to do: For small group size (max. 15 children):

1. Apply GlitterBug® Potion to the surface of a water-resistant toy.
2. Have the children pass the toy around (you may pretend to have accidentally sneezed/coughed on your hand before passing out the toy) so that they each get a chance to come in contact with the GlitterBug® Potion.
3. Appoint 1–2 children as your detectives and give them the UV light to go around and find the trail of germs on the other and children and equipment (you may also apply GlitterBug® Potion on other equipment in the room in advance).
4. Turn off the lights. Explain to the children that the glow on their hands represents the germs from the toy they have touched (you may remind them that you had previously sneezed on your hands and touched the toy without washing your hands). Explain that germs can spread from contaminated objects to their hands and from their hands to other people and objects. By preventing the spread of germs we stop ourselves and others from getting sick.
5. Pick 3–4 children out of the group to wash their hands. Allow the children to wash their hands the way they normally would. After they have dried their hands, put their hands under the UV light to determine how much GlitterBug® Potion was removed. Explain that if they don’t wash their hands thoroughly, germs can’t be washed away completely and there will be a chance for people to get sick. Explain that handwashing must be done thoroughly and frequently, to prevent getting sick and passing germ onto those around us.

What to do: For large group sizes (15+ children)

Select 2–3 children to handle the contaminated toy. You may appoint 1–2 children as your detectives or you can use the UV light to find the trail of germs. Then ask the selected children to wash their hands the way they normally would and determine how much GlitterBug® Potion was removed.
Activity B: Water demonstration

Goal: To demonstrate how hands become contaminated and how we can pass those germs onto other people.

What you will need:
- Spray bottle filled with clean water
- Children’s plastic toy

What to do:

1. Use a spray bottle filled with clean water and spray the water onto children’s hands. Explain that the water on their hands represents germs that come out of their mouths when they cough and sneeze.
2. Have the children touch the plastic toy.
3. Ask them what happened to the toy they have just touched (it became damp). Explain that sneezing into our hands allows germs onto our hands and everything we touch.
4. Discuss what might happen if one of their friends touches the toy while it is still wet (their friend now has those germs on their hands and could get sick or pass them onto another friend). Explain that if you wash your hands after sneezing or coughing, most of the germs will be washed away. Washing your hands often prevents us from getting sick.
5. Explain that when we sneeze, germs are also sneezed into the air and land on nearby objects. To stop germs from spreading we should sneeze and cough into our sleeve, and always wash our hands afterwards.

Community and Hospital Infection Control Association – Canada (CHICA)
### Handwashing Sticker/Stamp Chart

How often do you wash your hands? Each time you wash your hands, mark it on the chart below. When you have all the boxes marked—

**CONGRATULATIONS, You are a germ warrior!**

<table>
<thead>
<tr>
<th>MONDAY</th>
<th>TUESDAY</th>
<th>WEDNESDAY</th>
<th>THURSDAY</th>
<th>FRIDAY</th>
<th>SATURDAY</th>
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**Remember when to wash your hands:**

- Wash when your hands look or feel dirty
- Wash after using the washroom
- Wash before eating or touching food
- Wash after coughing, sneezing, or blowing your nose
- Wash after you play
- Wash after touching animals
How to... Wash your hands

1. Wet hands
2. Use enough liquid soap to cover all areas of your hands
3. Lather and scrub hands for at least 15 seconds (rub finger tips, between fingers, back of hands, base of thumbs and wrists)
4. Rinse under warm, running water
5. Dry with paper towel
6. Turn off water with paper towel

Help protect yourself and others in only 15 seconds

For information contact:
Health Protection and Investigation
519-575-4400 (TTY 519-575-4608) • www.regionofwaterloo.ca/ph
Available in accessible formats upon request
Clean your hands!

Your hands can pass on harmful germs.
We carry many different germs on our hands everyday. These germs can make us sick (e.g. cold, flu, diarrhea). When done right, cleaning your hands often is one of the best ways to help stop the spread of germs.

Clean your hands before & after:
- Preparing and serving food
- Eating
- Putting on or taking off disposable gloves
- Treating a cut or wound
- Caring for someone that is sick

Clean your hands after:
- Handling raw meat
- Coughing, sneezing or blowing your nose
- Using the washroom
- Changing a diaper
- Handling animals or their waste

How to use alcohol-based hand rub

Note: If your hands look dirty, it is best to use soap and water.

1. Use enough alcohol-based hand rub to cover all areas of your hands
2. Rub hands for at least 15 seconds or until product is dry (rub finger tips, between fingers, back of hands, base of thumbs and wrists)

62% alcohol
Recommended for the general public

70% alcohol
Recommended for health care settings

Gel vs. Foam: Use enough hand rub to allow for a 15 second rub. Foam can dry out quicker; more foam may be needed.

Help protect yourself and others in only 15 seconds

Other ways to prevent the spread of germs:
- Cover your cough or sneeze
- Stay home when you are sick, return to work only when you feel better
- Clean and disinfect to remove dirt and germs from surfaces
- Prevent food-borne illness by handling food safely
Stop the spread of germs!

Wash your hands

1. Wet
2. Soap
3. Wash (lather for at least 15 seconds)
4. Rinse
5. Dry
6. Turn off water

Wash your hands and stop the spread of germs!
Wash your hands with soap and warm water.
I promise to wash my hands.