DO BUGS NEED DRUGS?

KINDERGARTEN
Overview

This lesson introduces the concept of germs, some common infections, and the importance of handwashing as a means to prevent infection and illness. The six steps of handwashing are taught first by watching the handwashing video and then by practicing handwashing with adult guidance. Pictorial flash cards are used to reinforce the steps of effective handwashing and the most important times to wash.

Lesson Outcomes

In this lesson, students will:
• Explore how germs are spread
• Identify some common illnesses caused by germs
• Identify and practice the six steps to proper handwashing
• Identify the most important times for handwashing

B.C. Curriculum Learning Outcomes

Health and Career Education:
Organizer – Healthy Living
• Students will identify practices that contribute to health, including healthy eating, regular physical activity, emotional health practices, and disease prevention practice

Science:
Organizer – Processes of Science
• Students will use the five senses to make observations
• Students will share with others information obtained by observing

Social Studies:
Organizer – Skills and Processes
• Students will participate cooperatively in groups
• Students will gather information from personal experiences, oral sources and visual representations
• Students will present information using oral or visual representations

Organizer – Governance
• Students will describe their roles and responsibilities as members of the classroom and school community
• Students will identify the purpose of classroom and school expectations
Eighty percent of common infections can be spread by the hands. Hands can pick up germs from other people or from objects that are touched by others, such as door knobs, light switches and even teachers’ desks. When the hands come in contact with the nose, mouth or eyes, germs can enter the body to cause illness. The hands are the middle-man in the chain of transfer of germs from the environment to the body. That is why handwashing is so important. Handwashing is the best way to stop the spread of infections.

Children need to learn the steps of proper handwashing because poor handwashing technique does not remove germs. The steps of handwashing are:

1. Wet your hands.
2. Apply plain soap.
3. Rub your hands together for 20 seconds or the time it takes to sing Twinkle, Twinkle. Rub all parts of your hands including palms, between your fingers, backs of hands, thumbs, wrists, fingertips and nails.
4. Rinse your hands.
5. Dry your hands with a disposable towel.
6. Use the towel to turn off the taps and let yourself out the washroom door.

_Don’t forget to leave the washroom neat and tidy._

Children also need to know the most important times to wash their hands so handwashing becomes routine. These include:

- before eating or touching food
- after using the toilet
- after playing outside
- after blowing your nose
- after touching animals or pets
- after handling any types of garbage including used tissues, bandages, food waste

In addition to handwashing, other strategies for students to practice in preventing the spread of both surface and airborne germs include:

- staying home when you are ill
- keeping hands away from face, including rubbing eyes, biting nails, picking nose
- never spitting anywhere
- coughing and sneezing into a tissue or your sleeve rather than your hand
- not sharing “licks, sips and tastes” of food with others (including water bottles)
- keeping pens, markers and other tools out of the mouth
- keeping mouth away from tap on water fountains

_Teacher Information_
What about soap and alcohol-based hand sanitizers? Use plain soap. Plain soap is just as effective as antibacterial soap in preventing illness and does not have the negative medical side effect of promoting resistance to antibiotics. Alcohol-based hand sanitizers kill germs on the hands, but do not work if the hands are greasy or dirty. Hand sanitizers are ideal if soap and water are not readily available, but since children’s hands are often soiled, handwashing is particularly important for this age group.

Handwashing with plain soap and water is a very effective way to prevent illness. When students and teachers wash their hands properly and frequently, the number of germs spread throughout the classroom can be significantly reduced.
Lesson Outline

1. Handwashing Keeps You Healthy – pages 7 - 8
2. When to Wash Your Hands – page 9
3. How to Wash Your Hands – Handwashing Video – page 10

Student Activities

1. Handpaint Mural – page 12
2. Handwashing with an Adult – page 13
3. Sequencing Practice – pages 14 - 15

Teacher Materials

1. Picture of Bugsy – page 17
2. When to Wash Your Hands – six picture cards – pages 18 - 23
3. Steps to Wash Your Hands – six picture cards – pages 24 - 29
4. “How to Wash Your Hands” – poster – page 30
5. Handwashing Video - available to download from the website
6. Handwashing Song Sheet – page 31
7. Practical Solutions to Handwashing Problems – pages 32 - 33
8. Recommended Children’s Book, Follow up and Home Connection – page 34
Lesson Outline

Kindergarten

1. Handwashing Keeps You Healthy – pages 7-8
2. When to Wash Your Hands – page 9
3. How to Wash Your Hands – Handwashing Video – page 10
Handwashing Keeps You Healthy

Explain to students that today they will be learning about germs and where germs can be found. They will also be learning about ways to stop the spread of germs and talking about other things they can do to stay healthy.

Introduce Bugsy

**Materials:** Picture of Bugsy

Introduce Bugsy to the class and explain that Bugsy is here to help them learn about handwashing. Bugsy will have important messages as we go along. As you can see, handwashing is really important for Bugsy because he has lots of hands! How many hands does Bugsy have?

**Note:** Graphic can be downloaded in print or overhead format or viewed on line from a projector or SMART board.

? **Do you know what germs are? Can you see them?**

Sum up: Germs are tiny living things that can make you sick. Germs are so small that they can’t be seen, except under a microscope. (Illustrate by pinching your thumb and forefinger together.)

? **How do you think germs are spread?**

Sum up: Coughing and sneezing are two examples, but the most common way that germs are spread is by the hands.

? **What do you think happens if you touch a doorknob that has germs on it?**

Sum up: The germs come off on your hands.

? **Then what happens if I shake your hand?**

Sum up: You will get germs too.

? **Can you name some infections/diseases that are caused by germs?**

Sum up: Colds, influenza (flu), sore throats, ear infections, “stomach flu”, and pneumonia are some of the illnesses that are caused by germs. Germs can also infect cuts and sores.
Who has had any of these illnesses? How did you feel?

Sum up: Infections make you feel miserable. Sometimes you have a runny nose, cough, fever or headache. Sometimes you throw up or feel tired or achy. Cuts or sores can become red, painful and drain pus which may be signs of an infection.

What are some of the things you can do to stay healthy?

Prompt with the following:
• Brushing your teeth gets rid of germs that can cause cavities.
• Eating healthy foods keeps your body strong to fight off illness.
• Daily activity keeps your body fit and prevents illness.
• Washing your hands removes germs on your hands that can make you sick or that you can spread to someone else.
• Staying away from others when they are sick or when you are sick.

BUGSY SAYS HANDWASHING KEEPS YOU HEALTHY!
Materials: When to Wash Hands picture cards.

Cards can be laminated if desired. Alternatively, images can be downloaded as overheads or viewed on-line from a projector or SMART board.

Explain that handwashing washes away germs from the hands. Lead the students in a discussion of when they think it is important to wash their hands.

Ask students to think of times when they might have germs on their hands that could get into their body to make them sick. Show flash cards to students and encourage them to come up with additional answers. Flash cards show the most important times to wash your hands:

<table>
<thead>
<tr>
<th>Before eating or touching food</th>
<th>After blowing your nose</th>
</tr>
</thead>
<tbody>
<tr>
<td>After using the toilet</td>
<td>After touching animals/pets</td>
</tr>
<tr>
<td>After playing outside</td>
<td>After handling garbage</td>
</tr>
</tbody>
</table>

Explain that it is important to wash your hands before eating or preparing food because this is a time when germs from their hands could get on the food that goes into their mouth. Hands should also be washed after any activities when germs can get on your hands such as after using the toilet, after playing outside, after blowing your nose, after touching animals or pets and after handling garbage.

Common sources of germs:
- Playground equipment including those in shopping malls and stores
- Shopping carts in grocery stores, malls
- Pool floors, shared sports equipment (bowling balls, hockey sticks, gym equipment)
- Restaurant tables, chairs, furniture
- Handrails in schools and all public places
- Computer keyboards
- Classroom equipment, toys, tables
- Water fountains
- Used tissues, “spit” from anyone’s mouth

Handwashing keeps you healthy. Handwashing gets rid of germs that can make you sick or that you might spread to other people.

BUGSY SAYS REMEMBER WHEN TO WASH YOUR HANDS!
Materials: Handwashing Video – available to download from the website
Steps of Handwashing picture cards
Handwashing Poster with 6 steps to handwashing

Inform students that they are now going to see a handwashing video showing the proper way to wash their hands. Tell them that you are going to ask questions about what they saw, so it’s important to watch carefully.

After playing the video once, ask students if they can remember the steps of handwashing. They are:

1. Wet your hands.
2. Apply plain soap.
3. Rub your hands together.
4. Rinse your hands.
5. Dry your hands with a paper towel.
6. Use the towel to turn off the tap and let yourself out the door.

_Last, don’t forget to leave the washroom/sink area neat and tidy!_

To review, imitate the six handwashing steps from the video and ask the students to join in.

Show the Steps of Handwashing flash cards. Ask students to help you put them in the right order. Post the flash cards in the classroom.

Explain that along with the proper steps of handwashing the length of time spent rubbing their hands with soap is also important. It takes 20 seconds of rubbing the hands together with soap to get rid of germs.

Ask students what they remember from the video about how to rub their hands together. What parts of the hands need to be scrubbed? Show the video again if it helps. Prompt the students to name:

- Palms
- Between the fingers
- Backs of hands
- Thumbs
- Wrists
- Fingertips and nails

Using the Twinkle, Twinkle song as a 20 second timer, ask students to imitate rubbing their hands together with soap while singing the song. Encourage students to rub their palms, between the fingers, backs of hands, thumbs, wrists, and fingertips and nails. Post the Handwashing Poster

BUGSY SAYS REMEMBER ALL THE STEPS OF HANDWASHING.
Student Activities

Kindergarten

1. Handprint Mural – page 12
2. Handwashing With An Adult – page 13
3. Sequencing Practice – pages 14 - 15
The handprint mural is a classroom reminder about the importance of handwashing. After making a handprint on the mural, students will wash the paint off their hands using good handwashing technique with guidance from an adult. The paint serves as a visual indication of whether all parts of the hands have been washed.

Materials
- Yellow, red, blue finger paint
- Mixing trays
- Stubby paintbrushes
- Large sheet of firm paper
- Spoons

Optimal Group Size
- 2 or 3 children at a time

Directions
- Securely tape the paper to a tabletop.
- Have children mix colors to achieve a “murky” dirt color. Help children “paint” their hands.
- Children will then make a handprint on the paper.
- Ask children to rub their hands together so that the paint is on all parts of their hands.
- Direct children to the washroom/sink area for handwashing practice. Children should wash their hands well before going on to other activities.
- **Note:** You might need paper towels and a wastebasket nearby for easy access.
- Hang the mural in the classroom as a handwashing reminder

Discussion Points
- *What will you remember when you see the mural of all your handprints?*
- *Do you think you can get all the paint off when you go to the washroom?*
- *What parts of your hands will you need to wash?*

Key Message
**Remember to wash all parts of your hands when they are dirty.**
Handwashing with an adult

Students will practice handwashing with guidance from an adult.

Materials

- Hang the How to Wash Your Hands poster and the Twinkle, Twinkle song poster in the washroom/sink area ahead of time

Optimal Group Size

- One child at each sink
- **Note:** Enlist a teacher’s aide, parent volunteer or possibly an older student(s) to help with the handwashing practice
- Send small groups of children to the washroom/sink area with an adult to supervise.

Directions

- Adult mentors should be familiar with the six steps of handwashing and the Twinkle, Twinkle song.
- Guide children through the handwashing process. Ask them to sing the Twinkle, Twinkle song as they are rubbing their hands with soap, to make sure they are washing for 20 seconds.
- Resist the temptation to turn the taps on/off or get paper towels for the children.
- Discuss the following steps of handwashing as you are guiding the students through the procedure. Encourage them to follow the visual aids (posters).
  1. Wet hands with warm running water
  2. Apply plain soap
  3. Rub hands together for 20 seconds to the song: Twinkle, Twinkle
     Wash all hand surfaces including:
     - Palms
     - Between fingers
     - Backs of hands
     - Thumbs
     - Wrists
     - Fingertips and nails
  4. Rinse your hands to get the germs off (about 10 seconds)
  5. Dry your hands with a paper towel
  6. Use the paper towel to turn off the tap and open the washroom door

**Leave the washroom/sink area neat and tidy**

**Key Message**

**HANDWASHING IS THE BEST WAY TO STOP THE SPREAD OF INFECTIONS.**
Color and cut out the six steps of handwashing.
HANDWASHING SEQUENCE PRACTICE

Place the six steps of handwashing in the correct order
Teacher Materials

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When to Wash
When to Wash
When to Wash
When to Wash
When to Wash
Steps to Wash 3
HOW TO WASH YOUR HANDS

1. WET YOUR HANDS
2. APPLY PLAIN SOAP
3. RUB HANDS TOGETHER
4. RINSE YOUR HANDS
5. DRY YOUR HANDS
6. TURN OFF TAP WITH PAPER TOWEL

LEAVE THE WASHROOM NEAT AND TIDY

Poster
Handwashing Song

Twinkle, twinkle little star,
Look how clean my two hands are,
Soap and water, wash and scrub
Get those germs off rub-a-dub,
Twinkle, twinkle little star,
Look how clean my two hands are.
## Practical Solutions to Handwashing Problems

<table>
<thead>
<tr>
<th>Problem</th>
<th>Hygiene Principle</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soap or paper towels not available</td>
<td>Handwashing by students, teachers and staff is the best way to stop the spread of infections in schools.</td>
<td>Inform custodial staff and/or principal. Suggest that the school administration hold an information session for custodial staff about the importance of handwashing. Handwashing protects custodial staff too.</td>
</tr>
<tr>
<td>Taps go off automatically and water does not run long enough</td>
<td>Water needs to run long enough to rinse off soap and germs.</td>
<td>Have students wash hands with a buddy so they can assist each other with the tap. Students should use a paper towel to push in the tap if they have already washed their hands.</td>
</tr>
<tr>
<td>Warm water not available</td>
<td>Cold water is a deterrent to handwashing.</td>
<td>Discuss with school administration. If it is not possible to have warm water, use cold. Cold water is less comfortable but will work (with soap) to remove germs from the hands.</td>
</tr>
<tr>
<td>Children cannot reach the taps or sink</td>
<td>Handwashing is important for all children.</td>
<td>Provide a stool or step that does not tip.</td>
</tr>
<tr>
<td>Need to conserve water. Taps should not be left running.</td>
<td>Good handwashing technique includes using a paper towel to turn off the taps. This prevents recontamination of the hands from dirty taps.</td>
<td>Suggest that students get their paper towel before washing their hands so that it is available when they need to turn off the taps. The towel can be tucked under the arm or into a pocket until it is needed.</td>
</tr>
<tr>
<td>Paper towel dispenser is far away from the sink</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Problem</td>
<td>Hygiene Principle</td>
<td>Solution</td>
</tr>
<tr>
<td>----------------------------------------------</td>
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<td>---------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Paper towel dispenser has a lever or button</td>
<td>Hands can be recontaminated by touching the lever or button to dispense a paper towel.</td>
<td>Show students how to use an elbow or forearm to dispense the towel or suggest they get the paper towel before washing their hands.</td>
</tr>
<tr>
<td>Wastebasket is not near the door</td>
<td>Hands can be recontaminated by touching the washroom door or handle. Good handwashing technique includes using the paper towel to open the washroom door. To avoid making a mess, it’s best to have the wastebasket near the door.</td>
<td>Move the wastebasket close to the door or prop open the door. If that’s not possible, suggest that students take the towel with them and throw it away in the classroom.</td>
</tr>
<tr>
<td>Handwashing takes too much time</td>
<td>Handwashing prevents illness and reduces absenteeism. In the long run it saves time.</td>
<td>Establish routine times for students to wash their hands. Before lunch and after recess are ideal. Teach good handwashing technique and remove barriers so that students become proficient.</td>
</tr>
<tr>
<td>Custodial staff concerned about the mess in the washroom</td>
<td>Washrooms should be neat and tidy.</td>
<td>Reinforce the final message of good handwashing with the students to properly throw away their paper towel in the wastebasket.</td>
</tr>
<tr>
<td>Don’t know if antibacterial soap is in use</td>
<td>Plain soap does not promote antibiotic resistance and is equally effective in preventing the spread of germs.</td>
<td>Ask about the soap that is used in your school. Read the ingredients. If the soap contains “triclosan” it is antibacterial soap. Antibacterial soap has negative medical side effects and does not work any better than plain soap. If antibacterial soap is in use, suggest switching to plain soap. Plain soap is generally less expensive.</td>
</tr>
</tbody>
</table>
Recommended Children’s Book
Ross, T. Wash Your Hands! La Jolla: Kane/Miller, 2000.

Follow-up and Home Connection

- Revisit the Handwashing Video throughout the year to reinforce good handwashing technique.
- Be conscious of yourself as a role model. Model good hand washing technique and keep your own workspaces and personal spaces clean. Build in time throughout the day for students to clean their own space as well as shared spaces such as centers, worktables and sink areas.
- Ensure tissues are readily accessible to students and garbage containers are kept clean and tidy.
- Establish routines so that handwashing becomes a habit. Have students always wash their hands before snacks or eating, and after returning from outside or the gymnasium.
- Post signs to remind both staff and students to wash their hands.
- Expect and acknowledge good hand washing and disease prevention habits. Discuss student roles, rights and responsibilities regarding self-care and the well-being of others.
- Encourage students to pass along handwashing information to parents and siblings at home.
- Share children’s progress and success/concerns with parents.
- Refer to Practical Solutions to Handwashing Problems to facilitate good handwashing in your student washrooms and sink areas.

Acknowledgement

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The program was adapted to meet the British Columbia Education curriculum by Joanne Matheson, Educational Consultant and the Do Bugs Need Drugs? Program in British Columbia.