Healthy Hands

Hand Hygiene Resource Manual

Ages: 4-14

Communicable Disease Control Program
681 Commercial Street
North Bay, ON
P1B 4E7

Telephone: 705-474-1400 or 1-800-563-2808 ext: 2229
Fax: 705-474-2809
Website: www.myhealthunit.ca
PREPARED BY:

Natalie Cooper, BScN, RN
Public Health Nurse
Communicable Disease Control Program
North Bay Parry Sound District Health Unit

Sherri Gurini, RN, BScN, BBA, CIC, CCHN(C)
Public Health Nurse
Communicable Disease Control Program
North Bay Parry Sound District Health Unit

Steven Manchen, Public Health Inspector
Communicable Disease Control Program
North Bay Parry Sound District Health Unit
INTRODUCTION ........................................................................................................................................5
Ontario Curriculum and Hand-Hygiene ..................................................................................................6
Ontario Science and Technology Curriculum and Hand-Hygiene .......................................................9
THE 5 STEPS OF HEALTHY HAND WASHING: ..................................................................................10
CAN’T WASH? USE AN ALCOHOL-BASED HAND SANITIZER: .......................................................11
ASSESSMENT: HOW MUCH DO THE STUDENTS KNOW? .................................................................12
LESSON PLAN #1: WHAT ARE GERMS? ..............................................................................................13
   GERMS – Colouring Sheet .............................................................................................................14
   MICROSCOPE ................................................................................................................................15
LESSON PLAN #2: WHERE ARE THE GERMS? ......................................................................................16
   FIND THE GERMS .......................................................................................................................17
LESSON PLAN #3: SPREADING GERMS ..............................................................................................18
LESSON PLAN #4: GERMS ARE SPREAD EASILY ..............................................................................19
   HEALTHY HANDS GAME CARDS ...............................................................................................20
LESSON PLAN #5: CLEAN TAG ..............................................................................................................21
LESSON PLAN #6: CREATE YOUR OWN GERMS .................................................................................22
   MAGNIFIED BACTERIA AND WHAT THEY DO! .............................................................................23
LESSON PLAN #7: COVERING YOUR SNEEZE AND COUGH ...............................................................24
   COVERING YOUR SNEEZE AND COUGH – Face template .............................................................25
   COVERING YOUR SNEEZE AND COUGH – Hand template ............................................................26
LESSON PLAN #8: CAN YOU SING FOR 20 SECONDS? .......................................................................27
   CAN YOU SING FOR 20 SECONDS? .............................................................................................29
LESSON PLAN #9: WHEN DO I CLEAN MY HANDS? ............................................................................30
   WHEN DO I CLEAN MY HANDS? BEFORE & AFTER .....................................................................31
LESSON PLAN #10: HOW CLEAN ARE YOUR HANDS? (Glitter) .............................................................32
LESSON PLAN #11: HOW CLEAN ARE YOUR HANDS? (Glo-Germ) ....................................................34
LESSON PLAN #12: HEALTHY HANDS MURAL ...............................................................................36
   HEALTHY HANDS MURAL – Bubbles and Water Drops template ................................................37
LESSON PLAN #13: GROWING MICROORGANISMS .........................................................................38
LESSON PLAN #14: HEALTHY HANDS HEALTHY YOU ................................................................. 40
COLOUR ME (BOY) ............................................................................................................. 42
COLOUR ME (GIRL) ........................................................................................................ 43
HEALTHY HANDS MAZE ................................................................................................. 44
CONNECT THE DOTS ....................................................................................................... 45
HEALTHY HANDS TELEPHONE GAME ............................................................................ 46
HEALTHY HANDS CROSSWORD PUZZLE ........................................................................ 47
HEALTHY HANDS CROSSWORD PUZZLE (Answer Key) .................................................. 48
HEALTHY HANDS WORD SCRAMBLE PUZZLE ............................................................... 49
HEALTHY HANDS WORD SCRAMBLE (Answer Key) ...................................................... 50
HEALTHY HANDS SECRET CODE ................................................................................... 51
HEALTHY HANDS SECRET CODE (Answer Key) .............................................................. 52
HEALTHY HANDS WORD SEARCH .................................................................................. 53
HEALTHY HANDS WORD SEARCH (Answer Key) ........................................................... 54
HEALTHY HANDS STEPS OF HEALTHY HAND WASHING ........................................... 55
HEALTHY HANDS STEPS OF HEALTHY HAND WASHING (Answer Key) ..................... 56
HEALTHY HANDS FAMILY HAND WASHING SCOREBOARD (Take Home Activity) ....... 57
MATERIALS SAFETY DATA SHEET – GLO-GERM POWDER ........................................ 58
MATERIALS SAFETY DATA SHEET – ULTRAVIOLET BLACK LIGHT ............................ 60
REFERENCES .................................................................................................................... 61
INTRODUCTION
(Adapted with permission from Ottawa Public Health)

Many individuals fail to wash their hands properly, or completely neglect to wash their hands in public places (Borchgrevnik, Cha, & Kim, 2013). The World Health Organization (WHO) identified that proper hand hygiene is the most simple and effective method of preventing the transmission of infectious disease (Snow, White, and Kim, 2008; Nandrup-Bus, 2009). While this is a well known fact, "low compliance with hand-washing initiatives is still noted among health care professionals and school children alike" (Lopez-Quintero, Freeman & Neumark, 2009).

Having teachers in elementary schools incorporate a lesson on proper hand hygiene has the potential to improve absenteeism rates by ensuring that each student has the necessary knowledge and skills to prevent the spread of germs by performing proper hand hygiene. Absences related to illness are known to have a negative effect on a student’s education, and incorporating education regarding hand hygiene in the classroom has the potential to considerably decrease the rate at which students are absent due to illness (Chittleborough, Nicholson, Basker, Bell, and Campbell, 2011; Nandrup-Bus, 2011; Lau, Springer, Sohn, Mason, Gadola, Damitz, & Gupta, 2012).

Children are taught the basic principles of hand washing very early in life; however, regular reinforcement is necessary to instill proper life-long habits. Lack of resources such as time, soap, paper towels, or running water in some locations adds to the challenges of keeping students’ hands clean. Although waterless hand sanitizers are very effective for removing germs from our hands, hand washing is still the first and most important step in this process. Healthy hand hygiene starts with children as a fundamental health practice, and like all communicable diseases, has the potential to reach all corners of the world.

*Healthy Hands: Hand Hygiene Resource Manual, Ages: 4-14 (Fall 2013)* has been developed in accordance to The Ontario Curriculum to support North Bay Parry Sound District teachers, students, and their families learn about the importance of proper hand hygiene, such as hand washing. This resource provides lesson plans, activities, and materials for teachers to use to educate students about germs, how germs are spread, and how to prevent the spread of germs through proper hand washing. The lesson plans and activities are intended to assist teachers to help incorporate healthy hand hygiene into the daily routine of every child. The ultimate goal is to educate students about proper hand hygiene in order to reduce the incidence of gastro-enteric and respiratory infections and the consequences that accompany the transmission of such communicable diseases.

North Bay Parry Sound District Health Unit is responsible to improve the health of our communities through preparation, prevention, promotion, and protection. Through this, the health unit educates and informs the public about issues related to health and well being, and empowers our citizens to hold themselves accountable for good hand hygiene practices. Parents and teachers share the task of making sure this begins with our children. Together, we can collaboratively build a safe and healthy world in which to live, starting with basic hand hygiene.
## Ontario Curriculum and Hand-Hygiene

<table>
<thead>
<tr>
<th>Specific Expectations</th>
<th>Found on Page</th>
<th>Lesson Plan Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Kindergarten</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Personal and Social Development</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 act and talk with peers and adults by expressing and accepting positive messages</td>
<td>52</td>
<td>1,2,3,4,5, 7,8,9,10, 12, 14</td>
</tr>
<tr>
<td>1.2 demonstrate the ability to take turns in activities and discussions</td>
<td>53</td>
<td>12, 14</td>
</tr>
<tr>
<td><strong>Emotional Development</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1 demonstrate self-reliance and a sense of responsibility</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td><strong>Language</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.4 follow and provide one- and two-step directions in different contexts</td>
<td>74</td>
<td></td>
</tr>
<tr>
<td>1.5 use language to talk about their thinking, to reflect, and to solve problems</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td><strong>Science and Technology</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1 identify practices that ensure their personal safety and the safety of others, and demonstrate an understanding of the importance of these practices</td>
<td>122</td>
<td></td>
</tr>
<tr>
<td><strong>Health and Physical Activity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.3 practise and discuss appropriate personal hygiene that promotes personal, family, and community health</td>
<td>132</td>
<td></td>
</tr>
<tr>
<td>2.2 demonstrate persistence while engaged in activities that require the use of both large and small muscles</td>
<td>135</td>
<td></td>
</tr>
<tr>
<td>4.1 begin to demonstrate control of small muscles in activities at a variety of learning centres and when using a variety of materials or equipment</td>
<td>138</td>
<td></td>
</tr>
<tr>
<td><strong>Grade 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Active Living</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A1.1 actively participate in a wide variety of program activities</td>
<td>74</td>
<td>1,2,3,4,5, 7,8,9,10, 12, 14</td>
</tr>
<tr>
<td>according to their capabilities, while applying behaviours that enhance their readiness and ability to take part</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A3.1 demonstrate behaviours and apply procedures that maximize their safety and that of others during physical activity</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td><strong>Healthy Living</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C3.1 demonstrate an understanding of how to stay safe and avoid injuries to themselves and others in a variety of situations, using knowledge about potential risks at home, in the community, and outdoors</td>
<td>82</td>
<td></td>
</tr>
</tbody>
</table>
## Specific Expectations

<table>
<thead>
<tr>
<th>Grade 2</th>
<th>Found on Page</th>
<th>Lesson Plan Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Active Living</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A1.1 actively participate in a wide variety of program activities, according to their capabilities, while applying behaviours that enhance their readiness and ability to take part.</td>
<td>88</td>
<td>1,2,3,4,5, 7,8,9,10, 12, 14</td>
</tr>
<tr>
<td>A3.1 demonstrate behaviours and apply procedures that maximize their safety and that of others during physical activity.</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td><strong>Healthy Living</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C1.1 demonstrate an understanding of practices that enhance personal safety in the home and outdoors.</td>
<td>94</td>
<td>1,2,3,4,5, 7,8,9,10, 12, 14</td>
</tr>
<tr>
<td>C3.2 describe methods that may be used instead of or in combination with medication to maintain good health and prevent or treat various health problems.</td>
<td>97</td>
<td></td>
</tr>
<tr>
<td><strong>Growth and Development (1998)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• describe how germs are transmitted and how this relates to personal hygiene (e.g. using tissues, washing hands before eating);</td>
<td>98</td>
<td></td>
</tr>
</tbody>
</table>

| Grade 3 | | |
|---------| | |
| **Active Living** | | |
| A1.1 actively participate in a wide variety of program activities, according to their capabilities, while applying behaviours that enhance their readiness and ability to take part. | 102 | 1,2,3,4,5, 7,8,9,10, 12, 14 |
| A3.1 demonstrate behaviours and apply procedures that maximize their safety and that of others during physical activity. | 104 | |
| **Healthy Living** | | |
| C2.2 apply their understanding of good safety practices by developing safety guidelines for a variety of places and situations outside the classroom. | 110 | |

| Grade 4 | | |
|---------| | |
| **Active Living** | | |
| A1.1 actively participate in a wide variety of program activities according to their capabilities, while applying behaviours that enhance their readiness and ability to take part. | 120 | 6, 11, 13, 14 |
| A3.1 demonstrate behaviours and apply procedures that maximize their safety and that of others during physical activity. | 122 | |
| **Healthy Living** | | |
| C2.2 apply a decision-making process to assess risks and make safe decisions in a variety of situations. | 130 | |
# Handwashing Lesson Plans

## Specific Expectations

<table>
<thead>
<tr>
<th>Grade 5</th>
<th>Found on Page</th>
<th>Lesson Plan Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Active Living</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A1.1 actively participate in a wide variety of program activities according to their capabilities, while applying behaviours that enhance their readiness and ability to take part</td>
<td>136</td>
<td>6, 11, 13, 14</td>
</tr>
<tr>
<td>A3.1 demonstrate behaviours and apply procedures that maximize their safety and that of others during physical activity</td>
<td>138</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade 6</th>
<th>Found on Page</th>
<th>Lesson Plan Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Active Living</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A1.1 actively participate in a wide variety of program activities according to their capabilities, while applying behaviours that enhance their readiness and ability to take part</td>
<td>152</td>
<td>6, 11, 13, 14</td>
</tr>
<tr>
<td>A3.1 demonstrate behaviours and apply procedures that maximize their safety and that of others during physical activity</td>
<td>154</td>
<td></td>
</tr>
<tr>
<td>A3.2 describe appropriate methods for treating minor injuries that may occur while participating in physical activity</td>
<td>154</td>
<td></td>
</tr>
<tr>
<td><strong>Healthy Living</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C3.2 recognize the responsibilities and risks associated with caring for themselves and others and demonstrate an understanding of related safety practices and appropriate procedures for responding to dangerous situations</td>
<td>162</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade 7</th>
<th>Found on Page</th>
<th>Lesson Plan Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Active Living</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A1.1 actively participate in a wide variety of program activities, according to their capabilities while applying behaviours that enhance their readiness and ability to take part</td>
<td>172</td>
<td>6, 11, 13, 14</td>
</tr>
<tr>
<td>A3.1 demonstrate behaviours and apply procedures that maximize their safety and that of others during physical activity</td>
<td>174</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grade 8</th>
<th>Found on Page</th>
<th>Lesson Plan Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Active Living</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A1.1 actively participate according to their capabilities in a wide variety of program activities</td>
<td>188</td>
<td>6, 11, 13, 14</td>
</tr>
<tr>
<td>A3.1 demonstrate behaviours and apply procedures that maximize their safety and that of others during physical activity</td>
<td>191</td>
<td></td>
</tr>
<tr>
<td><strong>Healthy Living</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C1.2 identify situations that could lead to injury or death and describe behaviours that can help to reduce risk</td>
<td>197</td>
<td></td>
</tr>
</tbody>
</table>
Ontario Science and Technology Curriculum and Hand-Hygiene

<table>
<thead>
<tr>
<th>Specific Expectations</th>
<th>Found on Page</th>
<th>Lesson Plan Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grade 1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Understanding Life Systems</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 Identify personal action that they themselves can take to help maintain a healthy environment for living things, including humans <em>(practise cleanliness to reduce the spread of germs when helping in the kitchen)</em></td>
<td>45</td>
<td>1,2,3,4,5, 7,8,9,10, 12, 14</td>
</tr>
<tr>
<td><strong>Grade 5</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Understanding Life Systems</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1 assess the effects of social and environmental factors on human health, and propose ways in which individuals can reduce the harmful effects of these factors and take advantage of those that are beneficial</td>
<td>99</td>
<td>6, 11, 13, 14</td>
</tr>
<tr>
<td><strong>Grade 8</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Understanding Life Systems</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.2 assess the potential that our understanding of cells and cell processes has for both beneficial and harmful effects on human health and the environment, taking different perspectives into account</td>
<td>141</td>
<td>6, 11, 13, 14</td>
</tr>
</tbody>
</table>
THE 5 STEPS OF HEALTHY HAND WASHING:

1. Wet hands and apply soap
2. Rub hands briskly 15-20 seconds
3. Rinse well
4. Pat hands dry with paper towel
5. Turn off water with paper towel and discard

Protect Yourself
Protect Your Family
CAN’T WASH? USE AN ALCOHOL-BASED HAND SANITIZER:

- Before eating
- After coughing, sneezing, or blowing your nose
- After touching animals
- When you are sick
ASSESSMENT: HOW MUCH DO THE STUDENTS KNOW?
(Adapted with permission from Ottawa Public Health)

This can be completed by the teacher to compare the students’ knowledge before and/or after hand hygiene instruction.

Circle a number from 1 to 5 to indicate your opinion about the students’ knowledge.

In your opinion, most of the students:

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Can explain how germs are spread</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. Can state the best way to prevent germs from spreading</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. Can recall the 5 steps of healthy hand washing</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. Can simulate proper hand washing techniques</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. Can identify when to wash hands</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. Can tell the difference between the need for hand washing and for using hand sanitizer</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
LESSON PLAN #1: WHAT ARE GERMS?
(Adapted with permission from GOJO Industries, Inc., creators of PURELL Instant Hand Sanitizer,
www.education.gojo.com)

Learning Objective:
Students learn that germs are tiny living things (microorganisms) that can make us sick.

Materials:
- Crayons
- “Germs” – Colouring Sheet
- Paper
- Picture of microscope (page 15)

Method:
1. Explain to the class that germs are tiny living things (microorganisms) that can make us sick. Explain that germs cannot be seen by using their eyes and that a microscope (like a giant magnifying glass) can be used to see germs. Explain that there are many types of germs using the “Germs” – Colouring Sheet.
2. Provide each student with a “Germs” – Colouring Sheet.
3. Have students discuss the shape of the germs.
4. Give the students a blank piece of paper to draw a germ of their own and give it a name.
5. Use classroom materials to build a model germ.
MICROSCOPE

(Adapted with permission from GOJO Industries, Inc., creators of PURELL Instant Hand Sanitizer, www.education.gojo.com)
LESSON PLAN #2: WHERE ARE THE GERMS?
(Adapted with permission from GOJO Industries, Inc., creators of PURELL Instant Hand Sanitizer, www.education.gojo.com)

Learning Objective:
Students learn some of the places germs live and will identify what products can help get rid of germs.

Materials:
- "Find the Germs" colouring sheet
- Picture of microscope (included in LESSON PLAN #1: WHAT ARE GERMS? page 15).

Method:
1. Explain to the class that germs are tiny living things (microorganisms) that can make us sick. Explain that germs cannot be seen by using their eyes and that a microscope (like a giant magnifying glass) can be used to see germs. Explain that germs can be found everywhere and can be removed from hands with proper hand washing techniques using soap and water or hand sanitizer (see page 10).
2. Provide each student with a “Find the Germs" colouring sheet.
3. Have students identify areas within the school that may contain germs.
4. Have students identify where the hand washing stations are in the school.
5. Have students identify areas within the home, shopping mall, etc., that may contain germs.
Find the germs

Name_________________________

Colour the objects where germs can live and circle the objects that can help get rid of germs.
LESSON PLAN #3: SPREADING GERMS
(Adapted with permission from Algoma Public Health)

Learning Objective:
Use apples to teach students how germs can spread from hands to food.

Materials:
- 2 apples
- Sink, soap and water

Method:
1. The teacher presents two apples on a plate, to the students.
2. The students observe the teacher washing his/her hands with soap and water.
3. The teacher holds the first apple in his/her right hand.
4. The teacher coughs, sneezes and wipes his/her nose on his/her left hand, then holds the second apple in his/her left hand.
5. Ask students which apple they prefer to eat. Ask which apple is cleaner.

Explain that the apple held in the right hand is the preferred apple because the apple held in the left hand has been contaminated. Useful or not, germs are everywhere. That is why it is important to wash our hands before handling food.
LESSON PLAN #4: GERMS ARE SPREAD EASILY
(Adapted with permission from Ottawa Public Health)

Learning Objective:
The students will recognize that germs can be spread easily and hand washing can help prevent the spread of germs.

Materials:
- Healthy Hands game cards
- Picture of microscope (included in LESSON PLAN #1: WHAT ARE GERMS? page 15).

Method:
1. Explain to the class that germs are tiny living things (microorganisms) that can make us sick. Explain that germs cannot be seen by using their eyes and that a microscope (like a giant magnifying glass) can be used to see germs. Explain that germs can be found everywhere and can be removed from hands with proper hand washing techniques using soap and water or hand sanitizer (see Page 10).
2. Photocopy the “Healthy Hands game cards” sheet. It is suggested that 3 germ cards, 2 hand washing cards and 2 hand sanitizer cards be handed out. The remaining students will receive a blank card.
3. Randomly hand one card, face down, to each student. Students are instructed to not look at their cards until directed to do so.
4. Ask students to shake hands with 2 other students in the class, and to remember the people they shook hands with.
5. Students return to their seats and turn over their cards.
6. The teacher asks the students with the germ cards to stand up and explains for this game, these are the students who may be sick.
7. The teacher then asks any student who shook hands with the students with the germs cards to stand, and explains that these people could get sick too, since they shook hands with someone who had germs.
8. One group at a time, have all the students with the hand washing cards, and then the hand sanitizer cards sit down.
9. Explain how each of these is a good way of preventing the spread of germs from one person to another. Point out the connection between good hand washing practices and the numbers of students that were not affected by the germs.
10. What about the students with blank cards? Explain that having a blank card means good hand washing practices were not used and those students might get sick.
HEALTHY HANDS GAME CARDS
(Adapted with permission from Ottawa Public Health)
LESSON PLAN #5: CLEAN TAG
(Used with permission from GOJO Industries, Inc., creators of PURELL Instant Hand Sanitizer, www.education.gojo.com)

Learning Objectives:
Students will recognize that germs can be spread easily from one to another and that the spread of germs can be reduced by proper hand washing.

Materials:
- Open area

Method:
1. Review the steps and the purpose of proper hand washing (see page 10).
2. Explain to students that they will be playing “Clean Tag”. Select four students to play special roles: two students will be disease-causing germs, a third will be hand washer (soap & water), a fourth will be hand sanitizer. Tell the remaining students to run away from the germs.
3. If one of the germs happens to tag them, they must immediately freeze and stand with their legs far enough apart to make a tunnel through which someone can crawl.
4. The hand washer and hand sanitizer are the only ones who can unfreeze (clean) the frozen (contaminated) students – by crawling through the tunnel between their legs.
5. “Cleaned” students are then free to run around again.
6. Have the students trade roles at various points during the game.
7. Have the students discuss what happened when they were tagged by the germs. What happens in real life? (They can make you sick).
8. Explain what happened when they were ‘cleaned’ by the hand washers? What would happen if there were no hand washers in the game? What would happen if there were no hand washers in real life? What would happen in the game if there were 1 germ and 4 hand washers?
9. Discuss with students what these findings mean in their personal life. How does this change their hand washing habits?
LESSON PLAN #6: CREATE YOUR OWN GERMS
(Adapted with permission from Ottawa Public Health)

Learning Objective:
Students will recognize and create different types of bacteria using modeling clay.
- Germs are microorganisms that include bacteria and viruses.
- Some examples of illnesses caused by bacteria are: strep throat, Lyme Disease, food poisoning.
- Some examples of illnesses caused by viruses are: flu, cold, chicken pox, hepatitis.
- Germs must get into your nose, mouth, eyes, cuts or scrapes to cause infection (e.g. by rubbing eyes, rubbing nose, eating, biting nails).
- Washing with soap and water removes germs from your hands.
- Cleaning your hands with hand sanitizers kills germs. However, it does not remove residue, such as food or dirt, from your hands. If your hands are visibly dirty or you may have food residue (such as peanut butter) that can cause an allergic reaction you should use soap and water to clean your hands.
- Washing your hands properly can prevent the spread of many illnesses.

Materials:
- “Magnified Bacteria and What They Do!” chart
- 2 cups of flour (500 ml) - 1 cup of hot water (250 ml)
- 1 cup of salt (250 ml) - Food colouring or paint
- 1 tablespoon of oil (15 ml)

Method:
1. Teacher shows the students the chart “Magnified Bacteria and What They Do!” and discusses learning objectives.
2. Students will mix modeling clay from the ingredients listed above and create their own bacteria shapes based on those from the chart.
3. Teacher will point out that bacteria and viruses are so small they cannot be seen, and can be all over hands and under fingernails just like the clay.
4. Discuss proper steps to hand washing (see page 10).
5. Have students demonstrate proper hand washing technique when washing off the clay.
6. Describe the level of difficulty of removing the clay from wrists, hands, fingers, and nails.
7. Have students name their bacteria and write a story from the point of view of the bacteria, including efforts to stay on hands during hand washing.
MAGNIFIED BACTERIA AND WHAT THEY DO!
(Adapted with permission from Ottawa Public Health)

<table>
<thead>
<tr>
<th>Name of Bacteria</th>
<th>What it Looks Like</th>
<th>Where it is Found</th>
<th>What it Does!</th>
</tr>
</thead>
<tbody>
<tr>
<td>Escherichia coli</td>
<td><img src="image" alt="Escherichia coli" /></td>
<td>In the stomachs of animals, especially cattle, and humans.</td>
<td>Commonly causes diarrhea, vomiting and stomach cramps. Can have serious complications.</td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td><img src="image" alt="Staphylococcus aureus" /></td>
<td>On human skin, in nose and throat.</td>
<td>Commonly causes skin and wound infections. Also causes pimples.</td>
</tr>
<tr>
<td>Salmonella enteritidis</td>
<td><img src="image" alt="Salmonella enteritidis" /></td>
<td>In the stomachs of animals, especially chickens and humans.</td>
<td>Causes diarrhea and vomiting. One of the most common causes of food poisoning.</td>
</tr>
<tr>
<td>Streptococcus pyogenes</td>
<td><img src="image" alt="Streptococcus pyogenes" /></td>
<td>In the throats and nose of humans.</td>
<td>Very common cause of sore throats. Can also cause skin infections.</td>
</tr>
</tbody>
</table>
LESSON PLAN #7: COVERING YOUR SNEEZE AND COUGH
(Adapted with permission from Algoma Public Health)

Learning Objective:
Students learn that covering a sneeze or cough with a tissue helps keep germs from getting on hands and prevents the spread of germs.

Materials:
- Construction paper
- Scissors
- Glue
- Facial Tissues


Method:
1. Explain to the class that they will be creating a portrait of themselves covering a sneeze or cough.
2. Have students cut an oval from a sheet of construction paper the size of a face and glue it onto another blank sheet of construction paper.
3. Tell students to draw their face on the oval.
4. Have students trace one of their hands on a sheet of paper and glue the bottom of the hand onto the chin of the drawn face. Make sure the fingers of the hand still lift up.
5. Have students slide a piece of tissue between the face and the unglued part of the hand, covering the face and mouth.
6. Discuss with students why it is important to cover a sneeze or cough and that even when a tissue is used, they should wash their hands after sneezing.
COVERING YOUR SNEEZE AND COUGH – Face template
COVERING YOUR SNEEZE AND COUGH – Hand template
LESSON PLAN #8: CAN YOU SING FOR 20 SECONDS?
(Adapted with permission from Ottawa Public Health)

Learning Objective:
Students will demonstrate the steps of proper hand washing for a minimum of 20 seconds.

Materials:
- One of the songs or chants included on the next page

Method:
1. Review the steps of proper hand washing (with soap and water or by sanitizing hands) (see pages 10-11).
2. Teach the songs or chants listed below.
3. While students are simulating hand washing techniques, everyone sings or chants the same tune, for approximately 20 seconds.

Songs:
**If You’re Healthy and You Know It**
If you’re healthy and you know it wash your hands
If you’re healthy and you know it wash your hands
If you’re healthy and you know and you really want to show it
If you’re healthy and you know it wash your hands.
   If you’re healthy and you know it scrub your nails...
   wash your fingers...
   rinse your hands...
   dry your hands...

**Wash Your Hands (tune: Row, Row, Row, Your Boat)**
Wash, wash, wash, your hands
Many times a day
Scrub and rub and rinse and dry
Germs will go away
Scrub-A-Dub (tune: Farmer in the Dell)
Turn the faucet on; make sure the water’s warm
Put the soap right on your hands, and make a soapy storm.
Scrub-a-dub each hand, each finger, thumb, and wrist.
Scrub-a-dub all over them, so not a spot is missed.

Soap and Water (tune: Twinkle, Twinkle)
Soap and water, that’s the way,
You can wash the germs away.
Keep on washing—when you do,
You’ll get rid of germs, it’s true.
Now your hands are clean, here’s why:
Germs are down the drain. Goodbye!
CAN YOU SING FOR 20 SECONDS?

If You’re Healthy and You Know It

If you’re healthy and you know it wash your hands!
If you’re healthy and you know it wash your hands!
If you’re healthy and you know and you really want to show it
If you’re healthy and you know it wash your hands!
LESSON PLAN #9: WHEN DO I CLEAN MY HANDS?
(Adapted with permission from Ottawa Public Health)

Learning Objective:
The students will identify when to clean their hands.
- Before and after eating and touching food
- After using the washroom
- After sneezing, coughing or blowing your nose
- After touching animals
- After getting your hands dirty

Materials:
- When Do I Clean My Hands? Before & After worksheet
- Scissors
- Glue

Method:
1. Explain the importance of getting rid of germs.
2. Begin an open discussion of places where germs might hide. Reflect on all the different places germs may hide in the school. Ask students to think, “When would I come in contact with these germs?” (After getting hands dirty, after using the toilet, before handling food, after playing with animals, after coughing, sneezing or blowing your nose).
3. Brainstorm with the students a list of the important times to clean hands. Post a list of when to clean hands in a visible location in the room.
4. Have the students cut out the hand-washing pictures at the bottom of the worksheet and glue in the appropriate before and after boxes.
**WHEN DO I CLEAN MY HANDS? BEFORE & AFTER**
Cut out the hand washing pictures at the bottom of the worksheet and glue in the appropriate before and after boxes.

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>![before picture]</td>
<td>![after picture]</td>
<td></td>
</tr>
<tr>
<td>![before picture]</td>
<td>![after picture]</td>
<td></td>
</tr>
<tr>
<td>![before picture]</td>
<td>![after picture]</td>
<td></td>
</tr>
</tbody>
</table>

**Name** ________________________________
LESSON PLAN #10: HOW CLEAN ARE YOUR HANDS? (Glitter)
(Adapted with permission from Ottawa Public Health)

**Learning Objective:**
Students will recall that germs can be on their hands although they cannot be seen. Students will recognize that proper hand washing can remove germs from hands.

**Materials:**
- Hand lotion
- Glitter
- Hand washing facilities
- Liquid soap
- Paper towels

**Method:**
1. Place a small amount of hand lotion into each student’s hand. A small amount should be enough for small hands. Have students rub the lotion all over their hands. Next, have students open their hands so that a small amount of glitter can be applied as well. Have students rub the glitter all over their hands.
2. Explain that, like the glitter, germs are on their hands. But, unlike the glitter, they cannot see germs.
3. Have students wash their hands using the proper technique (see page 10) and then look at their hands again. There should be a significant reduction in the amount of glitter on their hands.
4. Have students discuss areas on their hands that are sometimes missed during hand washing (i.e. where the glitter was left on their hands after hand washing).
5. Encourage students to pay extra attention to these areas whenever hand washing.
6. Explain that, like the glitter, germs can be washed off through proper hand washing.
Variations:

- Divide the students into two groups. Have one group wash with water only, and the second group wash with soap and water. After examining their hands, discuss the results.

- Put lotion and glitter 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. Discuss how the glitter has been transferred from the hands of the original student to the hands of others. This is a representation of how germs can be transmitted from one person to another through direct contact.

- Divide students into groups and use different colours of glitter for each group. Ask the students to shake hands or high five one another. Examine the student's hands. Discuss how the glitter has been transferred from the hands of the original student to the hands of others. This is a representation of how germs can be transmitted from one person to another through direct contact.
LESSON PLAN #11: HOW CLEAN ARE YOUR HANDS? (Glo-Germ)
(Adapted with permission from Ottawa Public Health)

Learning Objective:
The students will recognize that germs can be on their hands even though they cannot
be seen and that hand washing can remove germs from hands.

Materials:
- Glo-Germ Powder
- UV Flashlight
- Hand washing facilities
- Soap
- Paper towel
- Picture of microscope (included in LESSON PLAN #1: WHAT ARE GERMS? page 15).

NOTE: Material Safety Data Sheets for Glo-Germ Powder and UV Flashlight are included
in this resource kit (pages 58-60)

Method:
1. Explain to the class that germs are tiny living things (microorganisms) that can
make us sick. Explain that germs cannot be seen by using their eyes and that a
microscope (like a giant magnifying glass) can be used to see germs. Explain that
germs can be found everywhere and can be removed from hands with proper
hand washing techniques using soap and water or hand sanitizer (see page 10).
2. Place a small amount of Glo-Germ Powder on each student’s hand and have the
students rub the powder all over their hands. Explain that, like the powder,
germs are on their hands although they cannot see them.
3. Have students place their hands under the UV light (you may have to dim the
lights in the room). The areas where there is Glo-Germ will glow under the light.
4. Have the students wash hands using the proper technique (see page 10) and
then look at their hands under the UV light again. There should be a significant
reduction in the areas that glow.
5. Have students discuss areas on their hands that are sometimes missed during
hand washing (i.e. areas that continued to glow under the light). These are
usually the thumbs, between the fingers, and around the fingernails. Encourage
students to pay extra attention to these areas whenever hand washing. Explain
that, like germs, the powder can be washed off through proper hand washing.
Variations:

1. Divide the students into two groups. Have one group wash with water only and the second group was with soap and water. After examining their hands under the UV light, discuss the results.

2. Put Glo Germ Powder 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. Discuss how the powder has been transferred from the hands of the original student to the hands of others. This is a representative of how germs can be transmitted from one person to another through direct contact.

3. Put Glo Germ Powder on an object (e.g. piece of paper, pen, pencil, toy) without the students knowing and then pass the object around the class. Then examine the student’s hands under the UV light. This is representative of how germs can spread from an object to our hands.

4. Put Glo Germ on a surface and examine under the UV light. Explain to the students that the powder represents germs on surfaces. Have the students wipe the surface and then examine under the UV light again to see how much powder was removed. Have students discuss areas on surfaces that are sometimes missed during hand washing (i.e. areas that continued to glow under the light).
LESSON PLAN #12: HEALTHY HANDS MURAL

Learning Objective:
Students will recognize that proper hand washing can remove germs from hands.

Materials:
- Bubbles and Water Drops template
- Scissors
- Large piece of paper
- Paint
- Hand washing facilities
- Liquid soap
- Paper towels

Method:
1. Have the students make a healthy hands mural using their handprints and the soap bubbles and water drops.
2. Review the steps of hand washing (see page 10) and have the students wash their hands using the proper technique and then look at their hands again. There should be a significant reduction in the amount of paint on their hands.
3. Have students discuss areas on their hands that are sometimes missed during hand washing (i.e. where paint was left on their hands after hand washing).
4. Encourage students to pay extra attention to these areas whenever hand washing.
5. Explain that, like paint, germs can be washed off through proper hand washing.
6. Hang the mural in the classroom as a reminder for students to wash their hands using soap and water.
HEALTHY HANDS MURAL – Bubbles and Water Drops template
LESSON PLAN #13: GROWING MICROORGANISMS
(Adapted with permission from Ottawa Public Health)

Learning Objective:
Students will recall that microorganisms can be everywhere. Students will grow microorganisms by making cultures on agar plates. Students will recall that hand cleaning reduces the number of bacteria on hands.

Materials:
- Petri dishes, nutrient agar
- Cotton swabs
- Toothpicks
- Masking tape and scotch tape
- A marker
- Hand washing facilities with liquid soap

Method:
1. Have the students inoculate petri dishes with a different bacterial source for each plate. Suggestions are:
   - Hair – remove hair from the head of a student and place into the dish
   - Cough – hold a petri dish about 6 cm away from the mouth of a student and have him/her cough onto the plate.
   - Saliva – place a clean cotton swab into a mouth and moisten it with saliva, rub the swab over the agar
   - Nose – place a clean cotton swab into a nose and gently move it around, rub the swab over the agar.
   - Desk/Counter – have a student drag his/her fingers on a desk/counter to then trace an “S” on the agar.
   - Fingernail – scrape underneath with a toothpick and place contents onto the agar.
   - Place a washed fingertip in the agar in a petri dish.
   - Place an unwashed fingertip in the agar in a different petri dish.
2. Tape each dish closed by running scotch tape around the edge. Label each dish using masking tape and marker.
3. Place the dishes in a warm dark place for three to five days.
4. Check the dishes daily for growth; when the desired amount of bacterial growth is seen, refrigerate.
5. When bacterial growth can be seen, examine dishes and discuss how the bacteria became present.
6. Recall the different routes of transmission that occurred when inoculating the petri dishes.
7. Examine and compare all the cultures in the dishes. Explain how hand cleaning reduces the amount of bacteria on hands.
8. Have students discuss the implications of this experiment for classroom hygiene and hand hygiene and what could they do differently regarding hand hygiene at school and at home.
LESSON PLAN #14: HEALTHY HANDS HEALTHY YOU
(Adapted with permission from Ottawa Public Health)

Learning Objective:
The students will recognize how germs are spread and how it relates to personal hygiene; will recognize the difference between germs, bacteria, and viruses; identify some of the illnesses and diseases that germs can cause. The students will also recognize that proper hand cleaning removes germs from hands and prevents the spread of illnesses and diseases.

- Germs are microorganisms that include bacteria and viruses.
- Some bacteria are beneficial and can help our bodies. Some examples of helpful bacteria can be found in yogurt and cheese. We also have helpful E. coli bacteria in our intestines that help our bodies digest food.
- Some examples of illnesses caused by bacteria are: strep throat, Lyme Disease, food poisoning.
- Some examples of illnesses caused by viruses are: flu, cold, chicken pox, hepatitis.
- Germs must get into your nose, mouth, eyes, cuts or scrapes to cause infection (e.g. by rubbing eyes, rubbing nose, eating, biting nails).
- Washing with soap and water removes germs from your hands.
- Cleaning your hands with hand sanitizers kills germs. However, it does not remove residue, such as food or dirt, from your hands. If your hands are visibly dirty or you have food residue (such as peanut butter) that can cause an allergic reaction you should use soap and water to clean your hands.
- Cleaning your hands properly can prevent the spread of many illnesses.
- Some other things you can do to help prevent the spread of illnesses include:
  - Coughing/sneezing into a tissue or into your sleeve
  - Staying home when you are sick
  - Keeping your immunizations up to date

Materials:
- Crayons or pencil crayons
- “Colour Me” pages with Boy or Girl
- Healthy Hands Maze
- “Connect the Dots” activity sheet
- Healthy Hands Telephone Game
- Healthy Hands Crossword
- Healthy Hands Word Scramble Puzzle
- Healthy Hands Secret Code
- Healthy Hands Word Search
- Healthy Hands Steps of Healthy Hand Washing
- Healthy Hands Family Hand Washing Scoreboard (Take Home Activity)
Method:

1. Teacher explains the above learning objectives, followed by a question and answer format with students.
2. Have the students complete the accompanying activities.
COLOUR ME

Name ________________________________

North Bay Parry Sound District Health Unit
HEALTHY HANDS MAZE

Name ______________________________________

Help the hands find the sink so they can be washed!

North Bay Parry Sound District Health Unit
CONNECT THE DOTS

Name _________________________________

North Bay Parry Sound District Health Unit
HEALTHY HANDS TELEPHONE GAME

Read one of the phrases below to a student, and then have them whisper the phrase to the person sitting next to them, and so on.

The last student to have the phrase whispered to them will say the phrase out loud.

1. Wash your hands.

2. Soap and warm water.

3. Hand sanitizer.

4. Influenza is a virus.

5. 20 seconds is all it takes.

6. Bacteria and viruses are germs.

7. Germs make us sick.

8. Cover your cough.

9. Cover your sneeze.

10. Clean hands are healthy hands.
HEALTHY HANDS CROSSWORD PUZZLE

Name __________________________

Across
4. Used with water to wash hands
6. Used with soap to clean hands (2 words)
7. Always clean these to help stay healthy!
9. The spread of this can be prevented by proper hand washing.
10. You should wash your hands before and after this
11. You cannot see these but they can make you sick
12. Wash your hands _____ playing with your furry friends
15. Along with viruses, these are the most common germs that can make you sick
16. Number of seconds you should spend washing your hands

Down
1. Remember to clean under your _______; germs often hide here
2. Coughing, sneezing, and runny nose are some of the _______ of a cold (a common respiratory infection)
3. The single most important means of preventing the spread of germs (2 words)
4. Ahchoo! Cover your ______!
5. Can be used instead of soap and water to wash your hands (2 words)
8. To avoid spreading germs, stay here if you are feeling sick
13. Hand washing will help you stay ______
14. Always wash your hands after using this room

North Bay Parry Sound District Health Unit
Created with Puzzlemaker: http://www.discoveryeducation.com/free-puzzlemaker
# HEALTHY HANDS CROSSWORD PUZZLE (Answer Key)

<table>
<thead>
<tr>
<th>Across</th>
<th>Down</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. <strong>Soap</strong> Used with water to wash hands</td>
<td>1. <strong>Fingernails</strong> Remember to clean under your _______; germs often hide here</td>
</tr>
<tr>
<td>6. <strong>Warm-Water</strong> Used with soap to clean hands</td>
<td>2. <strong>Symptoms</strong> Coughing, sneezing, and runny nose are some of the _______ of a cold (a common respiratory infection)</td>
</tr>
<tr>
<td>7. <strong>Hands</strong> Always clean these to help stay healthy!</td>
<td>3. <strong>Hand-Washing</strong> The single most important means of preventing the spread of germs</td>
</tr>
<tr>
<td>9. <strong>Infection</strong> The spread of this can be prevented by proper hand washing</td>
<td>4. <strong>Sneeze</strong> Ahchoo! Cover your _______!</td>
</tr>
<tr>
<td>10. <strong>Eating</strong> You should wash your hands before and after this</td>
<td>5. <strong>Hand-Sanitizer</strong> Can be used instead of soap and water to wash your hands</td>
</tr>
<tr>
<td>11. <strong>Germs</strong> You cannot see these but they can make you sick</td>
<td>8. <strong>Home</strong> To avoid spreading germs, stay here if you are feeling sick</td>
</tr>
<tr>
<td>12. <strong>After</strong> Wash your hands _____ playing with your furry friends</td>
<td>13. <strong>Healthy</strong> Hand washing will help you stay ______</td>
</tr>
<tr>
<td>15. <strong>Bacteria</strong> Along with viruses, these are the most common germs that can make you sick</td>
<td>14. <strong>Bathroom OR Washroom</strong> Always wash your hands after using this room</td>
</tr>
<tr>
<td>16. <strong>Twenty</strong> Number of seconds you should spend washing your hands</td>
<td></td>
</tr>
</tbody>
</table>

North Bay Parry Sound District Health Unit
Created with Puzzlemaker: http://www.discoveryeducation.com/free-puzzlemaker
HEALTHY HANDS WORD SCRAMBLE PUZZLE

Name ______________________________

Unscramble each of the clue words.
Copy the letters in the numbered cells to other cells with the same number to solve the mystery message.
HEALTHY HANDS WORD SCRAMBLE (Answer Key)

INFECTION
BACTERIA
VIRUS
HAND SANITIZER
SOAP AND WATER
TRANSMISSION
ILLNESS
HEALTHY
TWENTY SECONDS
COLD OR FLU
FINGERNAILS
SNEEZE
COUGH

WASH YOUR HANDS
# HEALTHY HANDS SECRET CODE

<table>
<thead>
<tr>
<th>Code Symbol</th>
<th>Code Letter</th>
</tr>
</thead>
<tbody>
<tr>
<td>🦠</td>
<td>A</td>
</tr>
<tr>
<td>❤</td>
<td>B</td>
</tr>
<tr>
<td>🔔</td>
<td>C</td>
</tr>
<tr>
<td>🔥</td>
<td>D</td>
</tr>
<tr>
<td>📈</td>
<td>E</td>
</tr>
<tr>
<td>📻</td>
<td>F</td>
</tr>
<tr>
<td>🏛</td>
<td>G</td>
</tr>
<tr>
<td>🏞</td>
<td>H</td>
</tr>
<tr>
<td>🔧</td>
<td>I</td>
</tr>
<tr>
<td>🔬</td>
<td>J</td>
</tr>
<tr>
<td>👁</td>
<td>K</td>
</tr>
<tr>
<td>🏕</td>
<td>L</td>
</tr>
<tr>
<td>🙆</td>
<td>M</td>
</tr>
<tr>
<td>🏛</td>
<td>N</td>
</tr>
<tr>
<td>🔔</td>
<td>O</td>
</tr>
<tr>
<td>📈</td>
<td>P</td>
</tr>
<tr>
<td>🏓</td>
<td>Q</td>
</tr>
<tr>
<td>🏛</td>
<td>R</td>
</tr>
<tr>
<td>🏕</td>
<td>S</td>
</tr>
<tr>
<td>🕙</td>
<td>T</td>
</tr>
<tr>
<td>🔔</td>
<td>U</td>
</tr>
<tr>
<td>📸</td>
<td>V</td>
</tr>
<tr>
<td>🕙</td>
<td>W</td>
</tr>
<tr>
<td>🏛</td>
<td>X</td>
</tr>
<tr>
<td>🕙</td>
<td>Y</td>
</tr>
<tr>
<td>🏛</td>
<td>Z</td>
</tr>
</tbody>
</table>

You will find secret code symbols after the clues. Match up the code symbol with the code letter to reveal the secret code word about healthy hands.

1. A type of germ that causes influenza is a ________.
   🦠 🔔 🔔 🔔 🔔

2. When washing your hands, use ________ and warm water.
   🔔 🔔 🔔

3. Another way to wash your hands is to use ________.
   🔔 🔔 🔔 🔔 🔔 🔔 🔔

4. Make sure to wash your hands for at least ________ seconds.
   🏛 🏛 🏛 🏛 🏛 🏛 🏛 🏛 🏛 🏛

5. Germs like to live under ________.
   🕙 🔔 🔔 🔔 🔔 🔔 🔔 🔔

6. Always wash your hands ________ and after you eat.
   ❤ 🔔 🔔

7. Always wash your hands after using the ________.
   🏛 🕙 🔔 🔔 🔔

8. ________ and viruses are 2 types of germs that can make you sick.
   ❤ 🕙 🔔 🔔 🔔 🔔 🔔 🔔

North Bay Parry Sound District Health Unit
HEALTHY HANDS SECRET CODE (Answer Key)

You will find secret code symbols after the clues. Match up the code symbol with the code letter to reveal the secret code word about healthy hands.

1. A type of germ that causes influenza is a ___________. VIRUS

2. When washing your hands, use ________ and warm water. SOAP

3. Another way to wash your hands is to use ___________. SANITIZER

4. Make sure to wash your hands for at least ___________ seconds. TWENTY

5. Germs like to live under ___________. FINGERNAILS

6. Always wash your hands ________ and after you eat. BEFORE

7. Always wash your hands after using the ___________. WASHROOM

8. ___________ and viruses are 2 types of germs that can make you sick. BACTERIA
HEALTHY HANDS WORD SEARCH

Name ________________________________

BACTERIA        LATHER
GERMS           SANITIZER
HANDS           SOAP
HEALTHY         VIRUS
INFECTION        WATER

North Bay Parry Sound District Health Unit
Created with Puzzlemaker: http://www.discoveryeducation.com/free-puzzlemaker
HEALTHY HANDS WORD SEARCH (Answer Key)

(Over, Down, Direction)
BACTERIA (11,7,W)
GERMS (1,5,NE)
HANDS (2,1,SE)
HEALTHY (12,7,NW)
INFECTION (14,6,S)
LATHER (13,7,N)
SANITIZER (9,1,SW)
SOAP (6,2,SW)
VIRUS (5,12,E)
WATER (1,10,S)
HEALTHY HANDS STEPS OF HEALTHY HAND WASHING
(Adapted with permission from Ottawa Public Health)

Cut out the following 5 pictures and glue them below in the correct order for healthy hand washing.
HEALTHY HANDS STEPS OF HEALTHY HAND WASHING (Answer Key)

1. 

2. 

3. 

4. 

5.
HEALTHY HANDS FAMILY HAND WASHING SCOREBOARD (Take Home Activity)
(Adapted with permission from Ottawa Public Health)

Students complete and keep score for one week. This is a chart that indicates the date, name of each family member and when that person washed his/her hands. Post this in the kitchen and encourage family members to complete it over a one-week period. (Classroom sharing of the results is at the teacher’s discretion as this may be a sensitive issue).

Name ____________________________

<table>
<thead>
<tr>
<th>Date</th>
<th>Name of Family Member</th>
<th>Hand Washing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(place a √ each time hands are washed)</td>
</tr>
</tbody>
</table>
MATERIALS SAFETY DATA SHEET – GLO-GERM POWDER

Glo-Germ Powder
Glo-Germ Company
PO Box 537
Moab, Utah 84532

Emergency & Information Telephone Numbers
1-800-842-6622

April 7, 2009

Introduction The Glo Germ Powder is 100% synthetic Organic Colorant A-594-5 (Blaze Orange or Invisible Blue are the two available colors. The following information applies to both colors). The Glo Germ Powder is not diluted with any inert material. Therefore it is highly concentrated. The plastic particles are 5 microns and smaller. When the powder is ‘puffed’ or thrown into the air like dust, it is a lung irritant. The Glo Germ Company strongly recommends minimizing dust or powder in the air.

Section I – Product Information
Product code: A-594-5 NFPA Ratings H F R
Product class: Synthetic Organic Colorant 1 1 0
Product CAS: Mixture

Section II – Hazardous Ingredients
No hazardous ingredients known at this time

Section III – Physical Data
Boiling range: none
Vapor density: non-volatile
Evap. rate: non-volatile (Volatile. vol.% = 0, Wgt % = 0) Liquid density: heavier than water
Appearance: colorless powder
Weight per gallon: 11.41 pounds
V.O.C.: see section IX

Section IV – Fire and Explosion Hazard Data
Flammability Class: NA
Flash Point: None
F LEL: None
U EL: None
Extinguishing media: Based on the NFPA guide for class A fires, use dry chemical, water or another suitable extinguishing agent. For large fires, use water spray or fog, thoroughly drenching the burning area.
Unusual fire and explosion hazards: improper handling may lead to dust cloud formation, which, as with any organic compound, is an explosion hazard.

Section V – Health Effect Information
Eye contact: Minimal irritation upon contact.
Skin contact: Minimal irritation upon contact.
Inhalation: Similar to nuisance dust. Avoid inhaling.
Section VI – Emergency and First Aid
Eye contact: Flush with water for at least 15 minutes while holding eyelids open.
Skin contact: Wash with soap and water. Implement good industrial hygiene.
Inhalation: Remove victim to fresh air. Call a physician. Treat symptoms.
Ingestion: Do not induce vomiting. Give victim plenty of water. Call a physician.

Section VII – Personal Health Protection
Eye protection: Glasses or goggles recommended.
Skin protection: Required only for sensitive individuals.
Respiratory protection: In the case that levels above OSHA’s PEL are present, use a NIOSH approved respirator.
Ventilation: General ventilation for comfort conditioning is usually enough to maintain the dust within the nuisance limit of 5 mg/cu.m.

Section VIII – Reactivity Data
Stability: Stable
Hazardous polymerization: Will not occur
Incompatibility: Avoid contact with strong oxidizers (i.e., chlorine, peroxides, chromate, nitric acid, perchlorates, concentrated oxygen, permanganates) which can generate heat, fires, explosions, and the release of toxic fumes.
Conditions to avoid: Excessive dust in the vicinity of electrical or other spark generating equipment should be avoided, as should extremely warm temperatures.
Hazardous decomposition products: The fumes and smoke released contain oxides of carbon, sulfur, and nitrogen, which are highly toxic. Do not breath smoke or fumes. Wear suitable protective equipment.

Section IX – Spill or Leak Procedures
This product is not defined as a hazardous waste under EPA 40 CFR 261. Sweep up and dispose of substance as any dust or dirt should any be spilled or leak.

Section X – Regulatory Information
This product contains no ingredients covered by the Clean Water Act.
Product is not a regulated material under CERCLA/Superfund Amendments and Reauthorization Act (Title III) 40 CFR 117, 302.
Notification of spills is not required.
This product does not contain an ozone depleting substance (ODS) nor was it manufactured with them.
State: This product does not contain ingredients listed on the Michigan Critical Materials List.

Section XI – Transportation Information
Synthetic Organic Colorant 110, powder
MATERIALS SAFETY DATA SHEET – ULTRAVIOLET BLACK LIGHT

Ultraviolet Light (4-18 watts)
Glo-Germ Company
PO Box 189
Moab, Utah 84532

Emergency & Information Telephone Numbers
1-800-842-6622

February 28, 2009

Long-wave, **UV-A**, ultraviolet light, with wavelengths at 3500 to 3800 angstrom units, is totally harmless to skin and eyes. It causes no changes in the body and requires no protective precautions in normal use as recommended by the Glo-Germ Company.

Short-wave, **UV-B**, ultraviolet light, with wavelengths at 2537 angstrom units, does cause chemical changes in the body, such as the formation of Vitamin D. With prolonged exposure, reddening of the skin and inflammation of the eyes may occur. While these are uncomfortable effects, they are temporary and no permanent damage will result. Ordinary glass or plastic will completely filter out short-wave ultraviolet light.

UV-A long-wave light within the range outlined above is relatively safe. However, prolonged exposure of the black light to the eyes may cause eye irritation. Symptoms, which can include tearing of the eyes, a burning or painful sensation in the eyes, sensitivity to light, or a sensation like that experience when a foreign object is lodged in the eye, may not be present until several hours after exposure. To reduce likelihood of experiencing adverse symptoms, individuals should properly shield themselves and use the black lights only as directed. The above assumes a healthy eye and no corrective lenses. Therefore, the Glo-Germ Company recommends that the lamp never be held within **6 inches** of the eyes and do not look into the bulb at close range longer than three minutes. This lamp should be used under adult supervision.

Exposure to UV lights should be limited. Black lights should not be tampered with, nor should their shields or lenses be removed. The Glo-Germ Company uses black lights to detect "simulated" germs on hands and surfaces. Therefore, hands and surfaces only should be exposed to the light. Individuals should not look directly at the black light.

Please Note: Individuals sensitive to UV light, taking photosensitizing medications, or those who lack optic lenses or who may have other abnormal eye conditions may not be adequately protected against exposure to artificial UV light and should avoid it altogether.

Ultra Shortwave, **UV-C**, radiation has been known to cause blindness, ‘blind spots’ in the eyes, sun burning of the skin, and skin cancer. For these reasons, Glo-Germ Company does not use short-wave, UV-C, lights. These lamps are used to disinfect objects, to sterilize water or other liquids, in tanning booths, in special laboratory applications, and is the main ultraviolet wave length from the sun and welder torches. The wavelength is between 2000 and 2500 angstrom units.
REFERENCES


