

# Healthy Hands

## Hand Hygiene Resource Manual

**Ages: 4-14**



North Bay Parry Sound District  
**Health Unit**



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du district de North Bay-Parry Sound

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## INTRODUCTION

(Adapted with permission from Ottawa Public Health)

The World Health Organization (WHO) identified that proper hand hygiene is the simplest and most effective method of preventing the transmission of infectious disease (Snow, White, and Kim, 2008; Nandrup-Bus, 2009). Although this is a well known fact, there remains to be a low level of compliance with hand-washing initiatives geared toward health care professionals and school children alike (Lopez-Quintero, Freeman & Neumark, 2009). By encouraging teachers to incorporate a lesson on proper hand hygiene for elementary school students, there is the potential to improve absenteeism rates due to illness by ensuring that each student has the necessary knowledge and skills to prevent the spread of germs.

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. Healthy hand hygiene starts with children as a fundamental health practice, and has the potential to foster lifelong infection prevention practices among all persons.

Healthy Hands: Hand Hygiene Resource Manual, Ages: 4-14 (Winter 2019) 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. This resource provides lesson plans, activities, and materials for teachers to use to educate students about germs, how they are spread, and how to prevent the spread of germs through proper hand hygiene. The lesson plans and activities are intended to assist teachers with the incorporation of healthy hand hygiene into the daily routine of their classroom and students. 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 that proper hand hygiene begins

with our youth, both in and out of the classroom. Together, we can collaboratively build a safe and healthy world in which to live, starting with basic hand hygiene.

# ONTARIO CURRICULUM

Grades  
Kindergarten-Eight



Specific Expectations	Lesson Plan Number
<b>KINDERGARTEN</b>	
<p><b>Belonging and Contributing</b></p> <p>4. demonstrate an ability to use problem-solving skills in a variety of contexts, including social contexts</p> <p>22. communicate their thoughts and feelings, and their theories and ideas, through various art forms</p> <p>28. demonstrate an awareness of their surroundings</p> <p>30. demonstrate an awareness of themselves as dramatists, actors, dancers, artists, and musicians through engagement in the arts</p> <p>31. demonstrate knowledge and skills gained through exposure to and engagement in drama, dance, music, and visual arts</p>	<p>1, 3, 14</p> <p>1, 14</p> <p>1, 2, 3, 5</p> <p>1, 8, 14</p> <p>1, 8, 14</p>
<p><b>Self-Regulation and Well-Being</b></p> <p>1. communicate with others in a variety of ways, for a variety of purposes, and in a variety of contexts</p> <p>2. demonstrate independence, self-regulation, and a willingness to take responsibility in learning and other endeavours</p> <p>3. identify and use social skills in play and other contexts</p> <p>6. demonstrate an awareness of their own health and well-being</p>	<p>1, 2, 3, 5, 14</p> <p>2, 3, 5, 14</p> <p>2, 3, 5, 8</p> <p>1, 2, 3, 5, 8, 14</p>
<p><b>Demonstrating Literacy and Mathematic Behaviors</b></p> <p>9. demonstrate literacy behaviours that enable beginning readers to make sense of a variety of texts</p> <p>10. demonstrate literacy behaviours that enable beginning writers to communicate with others</p> <p>11. demonstrate an understanding and critical awareness of a variety of written materials that are read by and with their educators</p> <p>12. demonstrate an understanding and critical awareness of media texts</p>	<p>1, 2, 8</p> <p>1, 8, 14</p> <p>1, 2, 8, 14</p> <p>2, 8, 14</p>
<p><b>Problem Solving and Innovating</b></p> <p>6. demonstrate an awareness of their own health and well-being</p> <p>9. demonstrate literacy behaviours that enable beginning readers to make sense of a variety of texts</p> <p>10. demonstrate literacy behaviours that enable beginning writers to communicate with others</p> <p>14. demonstrate an awareness of the natural and built environment through hands-on investigations, observations, questions, and representations of their findings</p>	<p>1, 2, 3, 5, 8, 14</p> <p>1, 2, 8</p> <p>1, 8, 14</p> <p>1, 2, 3, 5, 8, 14</p>

<b>GRADE 1</b>	
<b>Active Living</b>	
<b>A1.1</b> Actively participate in a wide variety of program activities	1, 2, 3, 4, 5, 7, 8, 10, 11, 13, 14
<b>Healthy Living</b>	
<b>C1.2</b> Demonstrate an understanding of essential knowledge and practices for ensuring their personal safety	1, 2, 3, 4, 5, 7, 8, 14
<b>C2.4</b> Apply their knowledge of essential safety practices to take an active role in their own safety at school	7, 8, 14
<b>C3.1</b> 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	7, 8, 14
<b>Language</b>	
<b>Oral Communication</b>	
<b>Interactive Strategies 2.2</b> Demonstrate an understanding of appropriate speaking behaviour in a few different situations, including paired sharing and small- and large group discussions	2
<b>Clarity and Coherence 2.3</b> Communicate ideas and information orally in a clear, coherent manner	2
<b>Appropriate Language 2.4</b> Choose appropriate words to communicate their meaning accurately and engage the interest of their audience	2
<b>Vocal Skills and Strategies 2.5</b> Begin to identify some vocal effects, including tone, pace, pitch, and volume, and use them appropriately to help communicate their meaning	2
<b>Reading</b>	
<b>Demonstrating Understanding 1.4</b> Demonstrate understanding of a text by retelling the story or restating information from the text, including the main idea	1, 2, 7, 8, 14
<b>Extending Understanding 1.6</b> Extend understanding of texts by connecting the ideas in them to their own knowledge and experience, to other familiar texts, and to the world around them	1, 2, 7, 8, 14
<b>Reading Familiar Words 3.1</b> Automatically read and understand some high-frequency words and words of personal interest or significance, in a variety of reading contexts	1, 2, 7, 8, 14
<b>Reading Fluently 3.3</b> Read appropriate, familiar texts at a sufficient rate and with sufficient expression to convey the sense of the text to the reader	1, 2,, 7, 8, 14
<b>Writing</b>	
<b>Developing Ideas 1.2</b> Generate ideas about a potential topic, using a variety of strategies and resources	4, 6, 7, 8, 9, 10, 11, 14
<b>Form 2.1</b> Write short texts using a few simple forms	4, 6, 7, 8, 9, 10, 11,
<b>Word Choice 2.3</b> Use familiar words and phrases to convey a clear meaning	4, 6, 7, 8, 9, 10, 11,
<b>Sentence Fluency 2.4</b> Write simple but complete sentences that make sense	4, 6, 7, 8, 9, 10, 11,
<b>Spelling Familiar Words 3.1</b> Spell some high-frequency words correctly	4, 6, 7, 8, 9, 10, 11,

<p><b>Punctuation 3.4</b> Use punctuation to help communicate their intended meaning, with a focus on the use of: a capital letter at the beginning of a sentence; a period question mark, or exclamation mark at the end.</p> <p><b>Producing Finished Works 3.8</b> Produce pieces of published work to meet criteria identified by the teacher, based on the expectations</p>	<p>4, 6, 7, 8, 9, 10, 11,</p> <p>4, 6, 7, 8, 9, 10, 11,</p>
<p><b>Science</b></p> <p><b>Life Systems</b></p>	
<p><b>2.1</b> Follow established safety procedures and humane practices during science and technology investigations</p> <p><b>2.6</b> Use appropriate science and technology vocabulary, including investigation, explore, needs, space, and food, in oral and written communication</p> <p><b>2.7</b> Use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes</p> <p><b>3.4</b> Describe the characteristics of a healthy environment, including clean air and water and nutritious food, and explain why it is important for all living things to have a healthy environment</p>	<p>3, 10, 11</p> <p>3, 10, 11</p> <p>3, 10, 11</p> <p>3, 10, 11</p>
<p><b>Art</b></p>	
<p><b>D1.3</b> Use elements of design in art works to communicate ideas, messages, and personal understandings</p> <p><b>D1.4</b> Use a variety of materials, tools, and techniques to respond to design challenges</p>	<p>1, 7, 14</p> <p>1, 7, 14</p>
<p><b>Music</b></p>	
<p><b>C1.1</b> Sing songs in unison and play simple accompaniments for music from a wide variety of diverse cultures, styles, and historical periods</p> <p><b>C1.5</b> Demonstrate understanding that sounds can be represented by symbols</p>	<p>8</p> <p>8</p>
<p><b>GRADE 2</b></p>	
<p><b>Active Living</b></p>	
<p><b>A1.1</b> Actively participate in a wide variety of program activities, according to their capabilities (e.g., individual and small-group activities, dancing to music, cooperative games), while applying behaviours that enhance their readiness and ability to take part</p>	<p>1, 2, 3, 4, 5, 7, 8, 10, 11, 13, 14</p>
<p><b>Language</b></p> <p><b>Oral Communication</b></p>	
<p><b>Demonstrating Understanding 1.4</b> demonstrate an understanding of the information and ideas in oral texts by retelling the story or restating the information, including the main idea and several interesting details</p> <p><b>Extending Understanding 1.6</b> extend understanding of oral texts by connecting the ideas in them to their own knowledge and experience; to other familiar texts, including print and visual texts; and to the world around them</p> <p><b>Purpose 2.1</b> identify a variety of purposes for speaking</p> <p><b>Clarity and Coherence 2.3</b> communicate ideas, opinions, and information orally in a clear, coherent manner using simple but appropriate organizational patterns</p>	<p>2</p> <p>2</p> <p>2</p> <p>2</p>

<b>Appropriate Language 2.4</b> choose a variety of appropriate words and phrases to communicate their meaning accurately and engage the interest of their audience	2
<b>Vocal Skills and Strategies 2.5</b> identify some vocal effects, including tone, pace, pitch, and volume, and use them appropriately, and with sensitivity towards cultural differences, to help communicate their meaning	2
<b>Reading</b>	
<b>Variety of Texts 1.1</b> read some different literary texts	1, 2, 7, 8, 14
<b>Demonstrating Understanding 1.4</b> demonstrate understanding of a text by retelling the story or restating information from the text, with the inclusion of a few interesting details	1, 2, 7, 8, 14
<b>Extending Understanding 1.6</b> extend understanding of texts by connecting the ideas in them to their own knowledge and experience, to other familiar texts, and to the world around them	1, 2, 7, 8, 14
<b>Reading Familiar Words 3.1</b> automatically read and understand many high-frequency words, some words with common spelling patterns, and words of personal interest or significance, in a variety of reading contexts	1, 2, 7, 8, 14
<b>Reading Fluently 3.3</b> read appropriate texts at a sufficient rate and with sufficient expression to convey the sense of the text to the reader and to an audience	1, 2, 7, 8, 14
<b>Writing</b>	
<b>Purpose and Audience 1.1</b> identify the topic, purpose, audience, and form for writing	4, 6, 7, 8, 9, 10, 11,
<b>Developing Ideas 1.2</b> generate ideas about a potential topic, using a variety of strategies and resources	4, 6, 7, 8, 9, 10, 11,
<b>Form 2.1</b> write short texts using several simple forms	4, 6, 7, 8, 9, 10, 11,
<b>Word Choice 2.3</b> use familiar words and phrases to communicate relevant details	4, 6, 7, 8, 9, 10, 11, 14
<b>Sentence Fluency 2.4</b> use a variety of sentence types	4, 6, 7, 8, 9, 10, 11, 14
<b>Point of View 2.5</b> identify, initially with support and direction, their point of view and one or more possible different points of view about the topic	4, 6, 7, 8, 9, 10, 11, 14
<b>Spelling Familiar Words 3.1</b> spell many high-frequency words correctly	4, 6, 7, 8, 9, 10, 11, 14
<b>Punctuation 3.4</b> use punctuation to help communicate their intended meaning, with a focus on the use of: question marks, periods, or exclamation marks at the end of a sentence; commas to mark pauses; and some uses of quotation marks	4, 6, 7, 8, 9, 10, 11, 14
<b>Producing Finished Works 3.8</b> produce pieces of published work to meet criteria identified by the teacher, based on the expectations	4, 6, 7, 8, 9, 10, 11, 14
<b>Media Literacy</b>	
<b>Purpose and Audience 3.1</b> identify the topic, purpose, and audience for media texts they plan to create	7
<b>Form 3.2</b> identify an appropriate form to suit the purpose and audience for a media text they plan to create	7
<b>Producing Media Texts 3.4</b> produce media texts for specific purposes and audiences, using a few simple media forms and appropriate conventions and techniques	7
<b>Science</b>	
<b>Life Systems</b>	
<b>2.8</b> use a variety of forms (e.g., oral, written, graphic, multimedia) to communicate with different audiences and for a variety of purposes	4, 9, 10, 11

<b>Art</b>	
<b>D1.1</b> create two- and three-dimensional works of art that express feelings and ideas inspired by activities in their community or observations of nature	1, 7, 14
<b>D1.3</b> use elements of design in art works to communicate ideas, messages, and understandings	1, 7, 14
<b>D1.4</b> use a variety of materials, tools, and techniques to respond to design challenges	1, 7, 14
<b>Music</b>	
<b>C1.1</b> sing unison songs in tune and/or play simple melodies and accompaniments for music from a wide variety of cultures, styles, and historical periods	8
<b>C1.3</b> create simple compositions for a specific purpose and a familiar audience (e.g., create accompaniments for songs, stories,	8
<b>GRADE 3</b>	
<b>Active Living</b>	
<b>A1.1</b> actively participate in a wide variety of program activities	1, 4, 5, 7, 8, 9, 10, 11, 13, 14
<b>Healthy Living</b>	
<b>C2.2</b> apply their understanding of good safety practices by developing safety guidelines for a variety of places and situations outside the classroom	5, 7, 8, 14
<b>Language</b>	
<b>Oral Communication</b>	
<b>Active Listening Strategies 1.2</b> demonstrate an understanding of appropriate listening behaviour by using active listening strategies in order to contribute meaningfully and work constructively in groups	2
<b>Extending Understanding 1.6</b> extend understanding of oral texts by connecting the ideas in them to their own knowledge and experience; to other familiar texts, including print and visual texts; and to the world around them	2
<b>Clarity and Coherence 2.3</b> communicate orally in a clear, coherent manner, presenting ideas, opinions, and information in a logical sequence	2
<b>Vocal Skills and Strategies 2.5</b> identify some vocal effects, including tone, pace, pitch, and volume, and use them appropriately, and with sensitivity towards cultural differences, to help communicate their meaning	2
<b>Reading</b>	
<b>Variety of Texts 1.1</b> read a variety of literary texts	1, 2, 7, 8, 14
<b>Extending Understanding 1.6</b> extend understanding of texts by connecting the ideas in them to their own knowledge and experience, to other familiar texts, and to the world around them	1, 2, 7, 8, 14

<b>Reading Familiar Words 3.1</b> automatically read and understand most high-frequency words, many regularly used words, and words of personal interest or significance, in a variety of reading contexts	1, 2, 7, 8, 14
<b>Writing</b>	
<b>Research 1.3</b> gather information to support ideas for writing in a variety of ways and/or from a variety of sources	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Form 2.1</b> write short texts using a variety of forms	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Word Choice 2.3</b> use words and phrases that will help convey their meaning as specifically as possible	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Sentence Fluency 2.4</b> vary sentence structures and maintain continuity by using joining words	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Spelling Familiar Words 3.1</b> spell familiar words correctly	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Vocabulary 3.3</b> confirm spellings and word meanings or word choice using several different types of resources	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Punctuation 3.4</b> use punctuation to help communicate their intended meaning, with a focus on the use of: quotation marks to indicate direct speech; commas to mark grammatical boundaries within sentences; capital letters and final punctuation to mark the beginning and end of sentences	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Producing Finished Works 3.8</b> produce pieces of published work to meet identified criteria based on the expectations related to content, organization, style, use of conventions, and use of presentation strategies	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Media Literacy</b>	
<b>Purpose and Audience 1.1</b> identify the purpose and intended audience of some media texts	7
<b>Form 2.1</b> identify elements and characteristics of some media forms	7
<b>Purpose and Audience 3.1</b> identify the topic, purpose, and audience for media texts they plan to create	7
<b>Form 3.2</b> identify an appropriate form to suit the specific purpose and audience for a media text they plan to create	7
<b>Producing Media Texts 3.4</b> produce media texts for specific purposes and audiences, using a few simple media forms and appropriate conventions and techniques	7
<b>Art</b>	
<b>D1.1</b> create two- and three-dimensional works of art that express personal feelings and ideas inspired by the environment or that have the community as their subject	1, 7, 14
<b>D1.3</b> use elements of design in art works to communicate ideas, messages, and understandings	1, 7, 14
<b>D1.4</b> use a variety of materials, tools, and techniques to respond to design challenges	1, 7, 14

<b>Music</b>	
<b>C1.1</b> sing, in tune, unison songs, partner songs, and rounds, and/or play accompaniments from a wide variety of cultures, styles, and historical periods	8
<b>C1.3</b> create compositions for a specific purpose and a familiar audience	8
<b>GRADE 4</b>	
<b>Active Living</b>	
<b>A1.1</b> actively participate in a wide variety of program activities	4, 5, 7, 8, 9, 10, 11, 13
<b>Healthy Living</b>	
<b>C2.2</b> apply a decision-making process to assess risks and make safe decisions in a variety of situations	5
<b>Langue Writing</b>	
<b>Purpose and Audience 1.1</b> identify the topic, purpose, and audience for a variety of writing forms	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Developing Ideas 1.2</b> generate ideas about a potential topic using a variety of strategies and resources	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Research 1.3</b> gather information to support ideas for writing using a variety of strategies and oral, print, and electronic sources	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Organizing Ideas 1.5</b> identify and order main ideas and supporting details and group them into units that could be used to develop a summary, using a variety of graphic organizers	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Form 2.1</b> write more complex texts using a variety of forms	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Word Choice 2.3</b> use specific words and phrases to create an intended impression	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Sentence Fluency 2.4</b> use sentences of different lengths and structures	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Spelling Familiar Words 3.1</b> spell familiar words correctly	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Vocabulary 3.3</b> confirm spellings and word meanings or word choice using different types of resources appropriate for the purpose	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Punctuation 3.4</b> use punctuation appropriately to help communicate their intended meaning, with a focus on the use of: the apostrophe to indicate possession, and quotation marks to indicate direct speech	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Producing Finished Works 3.8</b> produce pieces of published work to meet identified criteria based on the expectations related to content, organization, style, use of conventions, and use of presentation strategies	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Media Literacy</b>	
<b>Purpose and Audience 3.1</b> describe in detail the topic, purpose, and audience for media texts they plan to create	7

<b>Form 3.2</b> identify an appropriate form to suit the specific purpose and audience for a media text they plan to create	7
<b>Conventions and Techniques 3.3</b> identify conventions and techniques appropriate to the form chosen for a media text they plan to create	7
<b>Producing Media Texts 3.4</b> produce media texts for specific purposes and audiences, using a few simple media forms and appropriate conventions and techniques	7
<b>Art</b>	
<b>D1.1</b> create two- and three-dimensional works of art that express feelings and ideas inspired by their interests and experiences	6, 7
<b>D1.4</b> use a variety of materials, tools, and techniques to determine solutions to design challenges	6, 7
<b>Music</b>	
<b>C1.1</b> sing and/or play, in tune, from musical notation, unison and two-part music with simple accompaniments from a wide variety of cultures, styles, and historical periods	8
<b>C1.3</b> create musical compositions for specific purposes and audiences	8
<b>GRADE 5</b>	
<b>Active Living</b>	
<b>A1.1</b> 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	4, 5, 7, 8, 9, 10, 11, 13
<b>Language</b>	
<b>Writing</b>	
<b>Purpose and Audience 1.1</b> identify the topic, purpose, and audience for a variety of writing forms	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Developing Ideas 1.2</b> generate ideas about a potential topic and identify those most appropriate for the purpose	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Research 1.3</b> gather information to support ideas for writing, using a variety of strategies and a range of print and electronic resources	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Organizing Ideas 1.5</b> identify and order main ideas and supporting details and group them into units that could be used to develop several linked paragraphs, using a variety of strategies	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Form 2.1</b> write longer and more complex texts using a variety of forms	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Word Choice 2.3</b> use some vivid and/or figurative language and innovative expressions to add interest	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Sentence Fluency 2.4</b> vary sentence types and structures, with a focus on using conjunctions to connect ideas, and pronouns to make links within and between sentences	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Spelling Familiar Words 3.1</b> spell familiar words correctly	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Vocabulary 3.3</b> confirm spellings and word meanings or word choice using a variety of resources appropriate for the purpose	4, 6, 7, 8, 9, 10, 11, 13, 14

<p><b>Punctuation 3.4</b> use punctuation appropriately to help communicate their intended meaning, with a focus on the use of: a comma before and or but in compound sentences to join principal clauses; quotation marks for direct speech; and the placement of commas, question marks, and exclamation marks inside quotation marks in direct speech</p> <p><b>Producing Finished Works 3.8</b> produce pieces of published work to meet identified criteria based on the expectations related to content, organization, style, use of conventions, and use of presentation strategies</p>	<p>4, 6, 7, 8, 9, 10, 11, 13, 14</p> <p>4, 6, 7, 8, 9, 10, 11, 13, 14</p>
<b>Media Literacy</b>	
<p><b>Purpose and Audience 3.1</b> describe in detail the topic, purpose, and audience for media texts they plan to create</p> <p><b>Form 3.2</b> identify an appropriate form to suit the specific purpose and audience for a media text they plan to create, and explain why it is an appropriate choice</p> <p><b>Conventions and Techniques 3.3</b> identify conventions and techniques appropriate to the form chosen for a media text they plan to create, and explain how they will use the conventions and techniques to help communicate their message</p> <p><b>Producing Media Texts 3.4</b> produce a variety of media texts for specific purposes and audiences, using appropriate forms, conventions, and techniques</p>	<p>7</p> <p>7</p> <p>7</p> <p>7</p>
<b>Science</b>	
<b>Life Systems</b>	
<p><b>1.1</b> 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</p> <p><b>2.4</b> use appropriate science and technology vocabulary, including circulation, respiration, digestion, organs, and nutrients, in oral and written communication</p> <p><b>3.4</b> identify common diseases and the organs and/or body systems that they affect</p>	<p>4, 5, 6, 7, 9, 10, 11, 12, 13</p> <p>4, 5, 6, 7, 9, 10, 11, 12, 13</p> <p>4, 5, 6, 7, 9, 10, 11, 12, 13</p>
<b>Art</b>	
<p><b>D1.1</b> create two- and three-dimensional art works that express feelings and ideas inspired by their own and others' points of view</p> <p><b>D1.4</b> use a variety of materials, tools, and techniques to determine solutions to design challenges</p>	<p>6, 7</p> <p>6, 7</p>
<b>Music</b>	
<p><b>C1.1</b> sing and/or play, in tune, from musical notation, unison and two-part music with accompaniments, from a wide variety of cultures, styles, and historical periods</p> <p><b>C1.3</b> create musical compositions for specific purposes and audiences</p>	<p>8</p> <p>8</p>

<b>GRADE 6</b>	
<b>Active Living</b>	
<b>A1.1</b> 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	4, 5, 7, 8, 9, 10, 11, 13
<b>Language</b>	
<b>Writing</b>	
<b>Purpose and Audience 1.1</b> identify the topic, purpose, and audience for a variety of writing forms	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Developing Ideas 1.2</b> generate ideas about a potential topic and identify those most appropriate for the purpose	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Research 1.3</b> gather information to support ideas for writing, using a variety of strategies and a range of print and electronic resources	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Form 2.1</b> write longer and more complex texts using a wide range of forms	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Sentence Fluency 2.4</b> create complex sentences by combining phrases, clauses, and/or simple sentences	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Spelling Familiar Words 3.1</b> spell familiar words correctly	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Punctuation 3.4</b> use punctuation appropriately to communicate their intended meaning in longer and more complex sentences, with a focus on the use of: commas to separate words in a list or after an introductory word or phrase; quotation marks in dialogue; and some uses of the colon, semi-colon, and brackets	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Producing Finished Works 3.8</b> produce pieces of published work to meet identified criteria based on the expectations	4, 6, 7, 8, 9, 10, 11, 13, 14
<b>Media Literacy</b>	
<b>Purpose and Audience 1.1</b> explain how a variety of media texts address their intended purpose and audience	7
<b>Purpose and Audience 3.1</b> describe in specific detail the topic, purpose, and audience for media texts they plan to create, and identify challenges they may face in achieving their purpose	7,
<b>Form 3.2</b> identify an appropriate form to suit the specific purpose and audience for a media text they plan to create, and explain why it is an appropriate choice	7,
<b>Producing Media Texts 3.4</b> produce a variety of media texts for specific purposes and audiences, using appropriate forms, conventions, and techniques	7,
<b>Art</b>	
D1.1 create two-dimensional, three-dimensional, and multimedia art works that explore feelings, ideas, and issues from a variety of points of view	6, 7
D1.4 use a variety of materials, tools, techniques, and technologies to determine solutions to design challenges	6, 7

<b>Music</b>	
C1.3 create musical compositions for specific purposes and audiences	8
<b>GRADE 7</b>	
<b>Active Living</b>	
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	6, 7, 8, 9, 10, 11, 12, 13
<b>Healthy Living</b>	
Healthy Eating C3.1 demonstrate an understanding of personal and external factors that affect people's food choices and eating routines	6, 7, 8, 9, 10, 11, 12, 13
<b>Language</b>	
<b>Writing</b>	
Purpose and Audience 1.1 identify the topic, purpose, and audience for more complex writing forms	6, 7, 8, 9, 10, 11, 12, 13
Developing Ideas 1.2 generate ideas about more challenging topics and identify those most appropriate for the purpose	6, 7, 8, 9, 10, 11, 12, 13
Research 1.3 gather information to support ideas for writing, using a variety of strategies and a wide range of print and electronic resources	6, 7, 8, 9, 10, 11, 12, 13
Organizing Ideas 1.5 identify and order main ideas and supporting details and group them into units that could be used to develop a multi-paragraph piece of writing, using a variety of strategies	6, 7, 8, 9, 10, 11, 12, 13
Form 2.1 write complex texts of different lengths using a wide range of forms	6, 7, 8, 9, 10, 11, 12, 13
Word Choice 2.3 regularly use vivid and/or figurative language and innovative expressions in their writing	6, 7, 8, 9, 10, 11, 12, 13
Sentence Fluency 2.4 vary sentence structures to give their writing rhythm and pacing by using a variety of connecting and/or introductory words and phrases	6, 7, 8, 9, 10, 11, 12, 13
Spelling Familiar Words 3.1 spell familiar words correctly	6, 7, 8, 9, 10, 11, 12, 13
Vocabulary 3.3 confirm spellings and word meanings or word choice using a variety of resources appropriate for the purpose	6, 7, 8, 9, 10, 11, 12, 13
Punctuation 3.4 use punctuation appropriately to communicate their intended meaning in more complex writing forms, including forms specific to different subject areas, with a focus on the use of: periods after initials, in abbreviations, and in decimal numbers; parentheses; punctuation to indicate intonation, pauses, or gestures	6, 7, 8, 9, 10, 11, 12, 13
Producing Finished Works 3.8 produce pieces of published work to meet identified criteria based on the expectations	6, 7, 8, 9, 10, 11, 12, 13
<b>Media Literacy</b>	
Purpose and Audience 3.1 explain why they have chosen the topic for a media text they plan to create	7
Form 3.2 identify an appropriate form to suit the specific purpose and audience for a media text they plan to create	7
Producing Media Texts 3.4 produce a variety of media texts of some technical complexity for specific purposes and audiences, using appropriate forms, conventions, and techniques	7

<b>Art</b>	
<b>D1.1</b> create art works, using a variety of traditional forms and current media technologies, that express feelings, ideas, and issues, including opposing points of view	6, 7
<b>D1.4</b> use a variety of materials, tools, techniques, and technologies to determine solutions to increasingly complex design challenges	6, 7
<b>Music</b>	
<b>C1.3</b> create musical compositions in a variety of forms for specific purposes and audiences	8
<b>GRADE 8</b>	
<b>Active Living</b>	
<b>A1.1</b> actively participate according to their capabilities in a wide variety of program activities	6, 7, 8, 9, 10, 11, 12, 13
<b>Language</b>	
<b>Writing</b>	
<b>Purpose and Audience 1.1</b> identify the topic, purpose, and audience for more complex writing forms	6, 7, 8, 9, 10, 11, 12, 13
<b>Developing Ideas 1.2</b> generate ideas about more challenging topics and identify those most appropriate to the purpose	6, 7, 8, 9, 10, 11, 12, 13
<b>Research 1.3</b> gather information to support ideas for writing, using a variety of strategies and a wide range of print and electronic sources	6, 7, 8, 9, 10, 11, 12, 13
<b>Organizing Ideas 1.5</b> identify and order main ideas and supporting details and group them into units that could be used to develop a summary, a debate, or a report of several paragraphs, using a variety of strategies	6, 7, 8, 9, 10, 11, 12, 13
<b>Form 2.1</b> write complex texts of a variety of lengths using a wide range of forms	6, 7, 8, 9, 10, 11, 12, 13
<b>Word Choice 2.3</b> regularly use vivid and/or figurative language and innovative expressions in their writing	6, 7, 8, 9, 10, 11, 12, 13
<b>Sentence Fluency 2.4</b> vary sentence types and structures for different purposes	6, 7, 8, 9, 10, 11, 12, 13
<b>Spelling Familiar Words 3.1</b> spell familiar words correctly	6, 7, 8, 9, 10, 11, 12, 13
<b>Vocabulary 3.3</b> confirm spellings and word meanings or word choice using a wide variety of resources appropriate for the purpose	6, 7, 8, 9, 10, 11, 12, 13
<b>Punctuation 3.4</b> use punctuation appropriately to communicate their intended meaning in more complex writing forms, including forms specific to different subjects across the curriculum, with a focus on the use of: commas to separate introductory phrases from the main part of a sentence and to separate words, phrases, and clauses in a series; quotation marks to distinguish words being discussed as words and to indicate titles; ellipses (...) and dashes to indicate sentence breaks, ambiguities, or parenthetical statements	6, 7, 8, 9, 10, 11, 12, 13
<b>Grammar 3.5</b> use parts of speech correctly to communicate their meaning clearly, with a focus on subject/verb agreement and the use of nouns, pronouns, adjectives, adverbs, and prepositions	6, 7, 8, 9, 10, 11, 12, 13

<b>Producing Finished Works 3.8</b> produce pieces of published work to meet identified criteria based on the expectations	6, 7, 8, 9, 10, 11, 12, 13
<b>Media Literacy</b>	
<b>Purpose and Audience 3.1</b> explain why they have chosen the topic for a media text they plan to create	7
<b>Form 3.2</b> identify an appropriate form to suit the purpose and audience for a media text they plan to create	7
<b>Conventions and Techniques 3.3</b> identify conventions and techniques appropriate to the form chosen for a media text they plan to create, and explain how they will use the conventions and techniques to help communicate their message	7
<b>Producing Media Texts 3.4</b> produce a variety of media texts of some technical complexity for specific purposes and audiences, using appropriate forms, conventions, and techniques	7
<b>Science</b>	
<b>Life Systems</b>	
<b>2.1</b> follow established safety procedures for handling apparatus and materials (e.g., wash hands after preparing materials for slides) and use microscopes correctly and safely	7, 9, 10, 11, 12
<b>2.2</b> use a microscope correctly and safely to find and observe components of plant and animal cells	12
<b>2.3</b> prepare dry- and wet-mount slides of a variety of objects for use with a microscope	12
<b>Art</b>	
<b>D1.1</b> create art works, using a variety of traditional forms and current media technologies, that express feelings, ideas, and issues, including opposing points of view	6, 7
<b>D1.4</b> use a variety of materials, tools, techniques, and technologies to determine solutions to increasingly complex design challenges	6, 7

## THE 5 STEPS OF HEALTHY HAND WASHING:

**Did You Wash Your Hands?**

- 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**

North Bay Parry Sound District  
**Health Unit**  
Bureau de santé  
de district de North Bay-Parry Sound

**CAN'T WASH? USE AN ALCOHOL-BASED HAND SANITIZER:**

## How to Use Hand Sanitizer



**1** Use loonie sized amount or 1-2 pumps onto palm



**2** Spread on fingertips, between fingers, back of hands, base of thumbs



**3** Rub hands 15-20 seconds until dry

**Protect Yourself, Protect Your Family**

North Bay Parry Sound District  
**Health Unit**  
  
**Bureau de santé**  
du district de North Bay-Parry Sound

- 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:

	<b>Low</b>				<b>High</b>
1. Can explain how germs are spread	1	2	3	4	5
2. Can state the best way to prevent germs from spreading	1	2	3	4	5
3. Can recall the 5 steps of healthy hand washing	1	2	3	4	5
4. Can simulate proper hand washing techniques	1	2	3	4	5
5. Can identify <u>when</u> to wash hands	1	2	3	4	5
6. Can tell the difference between the need for hand washing and for using hand sanitizer	1	2	3	4	5

# LESSON PLANS

Grades  
Kindergarten-Eight



## **LESSON PLAN #1: WHAT ARE GERMS?**

1- 2 hours or multiple lessons

(Adapted with permission from GOJO Industries, Inc., creators of PURELL Instant Hand Sanitizer, [www.education.gojo.com](http://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
- Projector/Apple TV
- Internet access
- Paint
- Ipad/Laptop

### **Method:**

1. The teacher will ask the class if they have ever heard of germs before. They can ask the following probing questions:
  - a. Does anyone know what a germ is?
  - b. Has anyone ever seen a germ?
  - c. What does a germ do to people like me, you and our parents?
2. 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.
3. The teacher can show the class a picture of a Germ on a projector screen/apple TV
4. Provide each student with a "Germs" - Colouring Sheet.
5. Have students discuss the shape of the germs. The teacher can ask the students to talk with a partner about germs for a few minutes and then they can discuss as a class.
6. Give the students a blank piece of paper to draw a germ of their own and give it a name. The students can paint/draw/use technology.
7. Use classroom materials to build a model germ. The teacher can separate the class into small groups- the groups will create a 3D germ model.

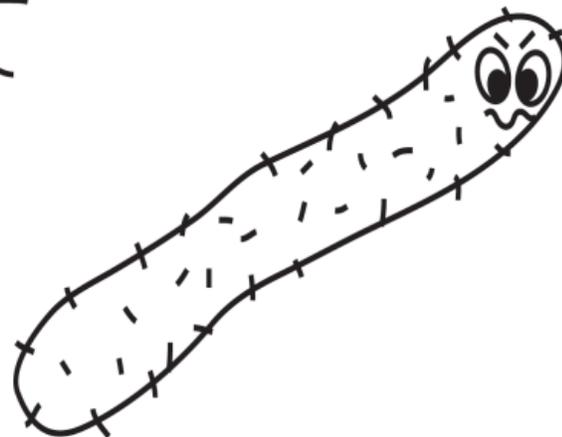
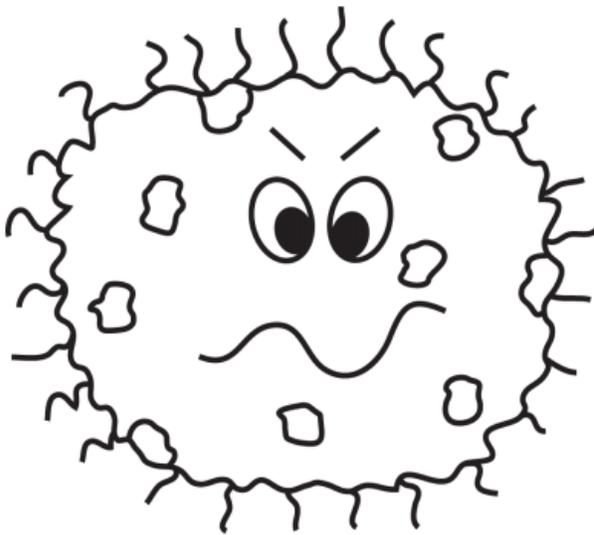
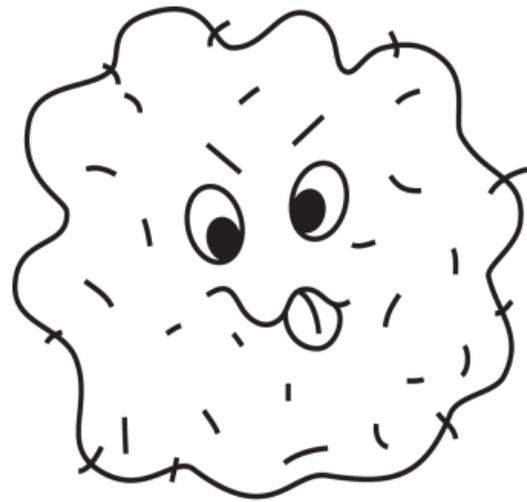
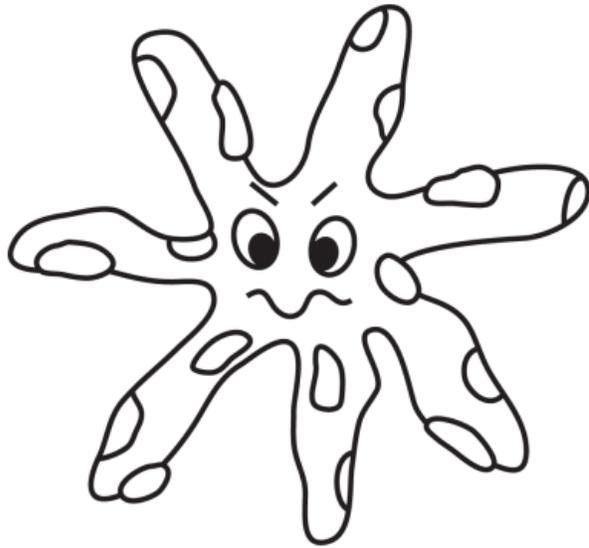
**How to differentiate instruction:**

1. Students can use an iPad, laptop or any form of technology in higher grades to create their germs.
2. Students with fine motor skill difficulties can use pain and legal sized paper to draw and create their germs.
3. For older classrooms the teacher can show the students pictures of real germs under a microscope from Google Images. The teacher can find many pictures by googling

**Assessment: Method:**

1. The teacher should take notes reflecting the students work habit and specifically chosen learning skill. The teacher can use a notepad, checklist or rating scale.

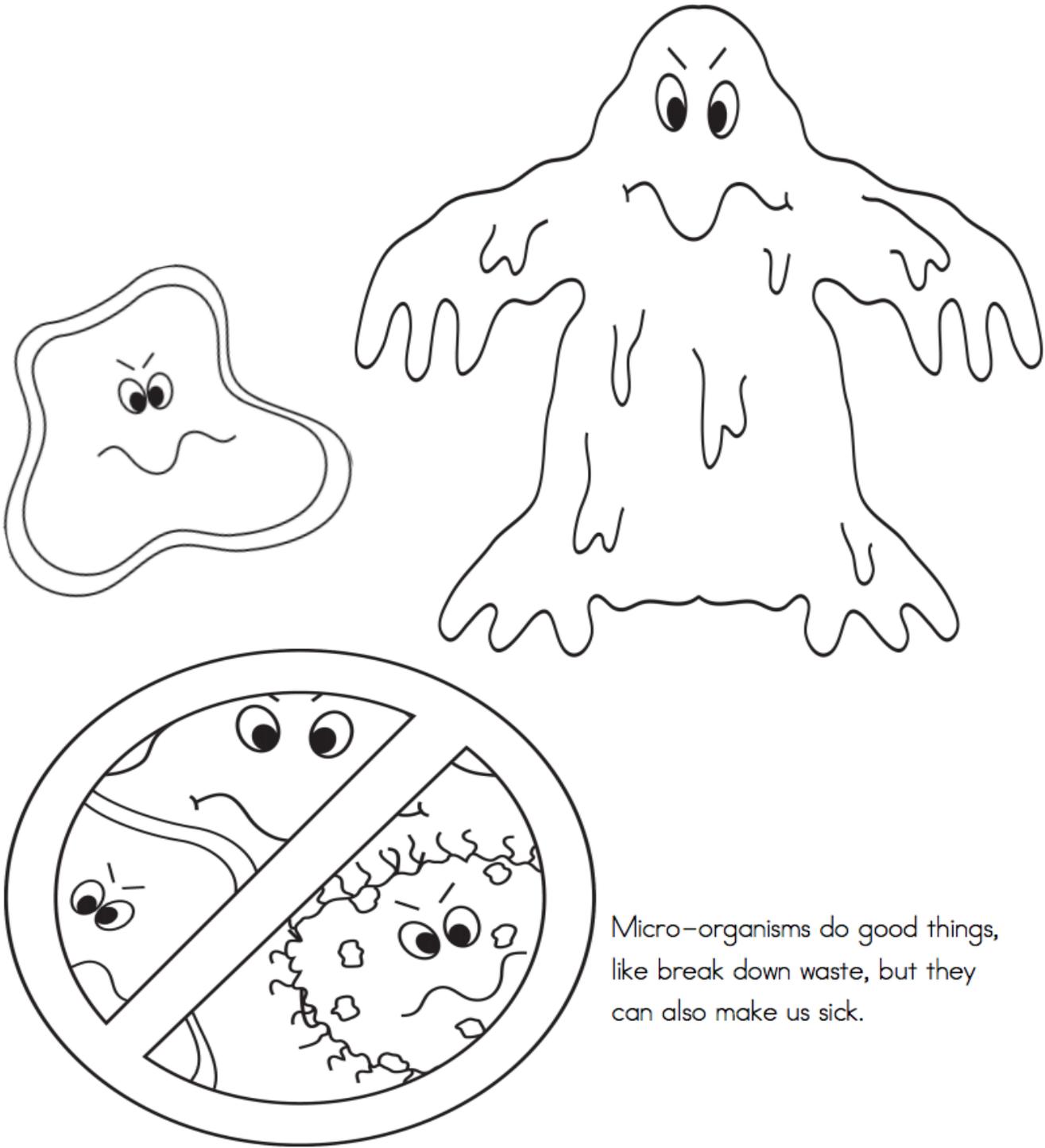
## GERMS - COLOURING SHEETS



Micro-organisms are tiny germs that cannot be seen with our eye.

They are also known as viruses, bacteria and some fungi.

For more educational printables visit [crystalandcomp.com](http://crystalandcomp.com).



Micro-organisms do good things, like break down waste, but they can also make us sick.

For more educational printables visit [crystalandcomp.com](http://crystalandcomp.com).

Name: \_\_\_\_\_

## LESSON PLAN #2: SICK SIMON READING WITH SPRAY BOTTLE?

45 Minutes- 1.5 Hours

### Learning Objective:

The students will enjoy this experiential learning activity to learn more about where germs come from and how they are spread. At the end of this lesson student should be aware of the basics of how germs are spread and what to do to

### Materials:

- *Sick Simon* hard cover book or YouTube link.  
<https://www.youtube.com/watch?v=LIWXpiy8ww0>
- Computer and internet access (if using YouTube).
- Spray bottle filled with fresh clean water. Setting should be on a very fine mist.
- Cut out of a cartoon face. The teacher will cut out a nose and use the spray bottle as a nose.

### 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.
2. Have the students sit in a circle on the carpet, or arrange their seats how you typically would for *story time*.
3. Explain to the students that in this book there is a little boy who has a very bad cold- at this point introduce the *Simon Spray Bottle* to the students.
4. The teacher or the YouTube video will begin to read the story, when book says "Achooo!" or insinuates/says that Simon has coughed/sneezed/spread germs in anyway, the teacher will spray the bottle of water on the class. It is important that the spray bottle is on a very fine mist setting to mimic a sneeze or cough. With a class of younger students, you may tell the students that they will be getting sprayed and for older level classes you can keep it a surprise for a more realistic experience.

### How to differentiate instruction:

1. For a group of older students who are capable of reading on their own, the teacher may separate the students into pairs or small groups. The teacher can the circulate the classroom and take notes for Reading and Oral Communication grades.
2. In a classroom that cannot facilitate a reading circle, the teacher may circulate the classroom while reading or listening on YouTube, with *Simon Spray Bottle* and spray a different area of students each time.

3. For students that may be scared of the spray bottle or do not understand- the YouTube video does a good job of making the sneeze sound very real, without having to use the spray bottle.

**Assessment Method:**

1. The teacher should take notes reflecting the students work habit and specifically chosen learning skill. The teacher can use a notepad, checklist or rating scale.
2. If the teacher is incorporating this hand washing lesson into a language lesson the teacher should be sure to have a rating scale or checklist with specific expectations, they would like to see. The teacher should also tell the students that he or she will be circulating the class to look for said criteria.

**Grade 3 Language- Rating Scale Example:**

- The student can communicate in a clear and coherent manner  
**1      2      3      4      5**
- The student can use different vocal effects including tone, pace, pitch and volume.  
**1      2      3      4      5**
- The student can read a variety of literary texts (story in this case)  
**1      2      3      4      5**
- The student can read at sufficient rate with sufficient expression.  
**1      2      3      4      5**



### **LESSON PLAN #3: GERM SENSORY BIN**

45 Minutes- multiple periods (needs a break in between)

#### **Learning Objective:**

At the end of this lesson the students will have a better understanding of how to properly wash. The students will wash different items using soap, water and sponges.

#### **Materials:**

- Rubbermaid bin or sensory bin.
- Sink, soap, water and sponges.
- Play-dough, clay or something that will stick to object to model germs.
- Random water proof objects for students to clean- small action figures/dolls, blocks, Tupperware, frisbe, etc.
- Towel/paper towel.
- Hand sanitizer.

#### **Method:**

1. The teacher will present all of the objects to the students. The teacher will pass out on object per student/pair (depending on class size). The teacher also pass out small pieces of play dough/clay.
2. The teacher will 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.
3. The teacher will explain to the students that in this activity the play dough will be modeling germs. The teacher will then let the students fill their objects with germs (play dough). Once the class is done the students will sit their objects by a window to dry and harden for a period of time.
4. Once the play dough is dry the students will wash the germs off of their objects.
5. The teacher can set up multiple sensory bins or the students can take turns coming to clean their objects. The teacher will insure to reiterate the importance of the five steps of hand washing.
6. The students will clean their objects with soap and water, they should use the sponges to ensure their objects are extra clean. The students should then dry their objects and to finish use a hand sanitizer on their own hands.
7. This lesson should end with a group discussion on hand washing and the five steps to healthy hands.

#### **How to differentiate instruction:**

1. For a group of older students (grade 2 and higher) this activity can be an introduction to hand washing. The students can have a thorough discussion at the end of the activity regarding what techniques worked best for cleaning their objects. Students could also write a self reflection or journal after this assignment.
2. If the teacher does not have access to enough sensory bins the teacher can have pairs of students come in front of the class to take turns cleaning their objects. The teacher can explain to the class how the pair is cleaning, if the dirt is coming off and what steps they are using.
3. If the teacher has a very busy class, this can also be done as just a teacher demonstration. The students can sit in a circle around the sensory bin while the teacher demonstrates the five steps of hand washing. The students could then discuss as a class what was done.

**Assessment Method:**

1. The teacher should take notes reflecting the students work habit and specifically chosen learning skill. The teacher can use a notepad, checklist or rating scale. The teacher should let the students know what he or she will be looking for during this activity.

**Grade 1 Learning Skills - Rating Scale Example**

- The student accepts various roles and shares work in groups.  
**1      2      3      4      5**
- The student manages and takes responsibility for their behavior.  
**1      2      3      4      5**
- The student participates in a variety of activities.  
**1      2      3      4      5**

## LESSON PLAN #4: WHERE DO GERMS LIVE?

45 Minutes- 1.5 Hours

### Learning Objective:

The students will think, pair and share as a class their ideas about where germs are from, where they live and continue to learn about how we can stay safe from germs.

### Materials:

- Where do germs live hand out.
- Pencils
- Internet
- iPads or technology
- Kahoot
- <https://create.kahoot.it/share/where-can-you-find-germs/3446222d-64e4-4787-a25c-eacab2c87e1d>

### 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. Hand out the *Where do germs live* hand out. Explain to the students that this is an individual activity and there are no correct or incorrect answers. The students will spend a few minutes writing about where they think germs come from. The students will then pair up with a partner and share their ideas.
3. The teacher can then discuss germs with the students- the teacher can explain to the students that germs can be found everywhere and that is why it is important to keep our hands and bodies extra clean so we do not get sick.
4. The teacher can then complete a *Kahoot* with the students- <https://create.kahoot.it/share/where-can-you-find-germs/3446222d-64e4-4787-a25c-eacab2c87e1d>
5. It is important that the teacher explains the answer to each Kahoot question. For example, there is a question regarding germs in our food. The teacher needs to explain that there can be germs in our food and that is why we always wash fruit and vegetables before we eat them.

### How to differentiate instruction:

1. For a group of students that do not have access to technology the teacher can discuss the different questions:
    - a. Can you find germs in a school?
    - b. Can you find germs in a bathroom?
- The teacher can ask the students to discuss in pairs and then discuss as a class.

**Assessment Method:**

1. The teacher should take notes reflecting the students work habit and specifically chosen learning skill. The teacher can use a notepad, checklist or rating scale. The teacher should let the students know what he or she will be looking for during this activity.
2. The teacher can also collect the handouts and evaluate the students for language marks. The teacher will tell the students that they are looking for the following:

**Grade 3 Language- Rating scale example:**

- The student can generate an idea.  
**1      2      3      4      5**
- The student can spell high frequency words.  
**1      2      3      4      5**
- The student can use a punctuation to complete their sentences.  
**1      2      3      4      5**

Name:

Date:

# Where do Germs Live?



Do germs make people sick?

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---

Can you see germs?

---

---

Where can you find germs?

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## **LESSON PLAN #5: CLEAN TAG**

15-25 Minutes

(Used with permission from GOJO Industries, Inc., creators of PURELL Instant Hand Sanitizer, [www.education.gojo.com](http://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. The students will participate in healthy living and DPA.

### **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:**

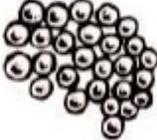
- "Magnified Bacteria and What They Do!" chart
- 2 cups of flour (500 ml)
- 1 cup of salt (250 ml)
- 1 tablespoon of oil (15 ml)
- 1 cup of hot water (250 ml)
- Food colouring or paint

### **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 short 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)

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

**Grade 7 Language- Rating scale example:**

- The student can gather information to support their ideas and determine what is appropriate for this project.

**1      2      3      4      5**

- The student can generate ideas on a more challenging topic- out of their normal reach.

**1      2      3      4      5**

- The student can establish a specific point of view or *stance* in their writing.

**1      2      3      4      5**

- The student incorporates a variety of sentence structure, by using a variety of introductory and/or connection words (therefore, however, as a result, etc.)

**1      2      3      4      5**

- The student uses the correct punctuation to give their story meaning and effect.

**1      2      3      4      5**

## **LESSON PLAN #7: SCHOOL POSTERS**

45 minutes-1 hour or multiple days

### **Learning Objective:**

The students will create posters to raise awareness around the school regarding hand washing and how to stop spreading germs. Students will use their language skills to demonstrate their learning on hand washing.

### **Materials:**

- Construction paper
- Scissors
- Glue
- Various arts and crafts supplies- pompoms, glitter, pencil crayons etc.
- 5 steps of hand washing original poster

### **Method:**

1. The teacher will remind the students of the 5 steps of hand washing from the North Bay Parry Sound District Health Unit.
2. The students will be instructed to create their own posters to inform their fellow students, teachers and guests of the school of healthy hand washing practices.
3. \*\*The teacher will tell the students that although this project is fun and exciting- it will be graded using a rating school (if the teacher wants!).

### **How to differentiate instruction:**

1. For a group of older students, or a student with fine motor skill difficulties, the teacher may choose to give the option of using technology. The students may use a graphic design program if available or a typing program to assist with writing. A student with visual impairments would also benefit from the use of a graphic design program with enhanced size.
2. The teacher can pair students up together- a stronger with a weaker, two weaker with 2 strong.

### **Assessment Method:**

1. The teacher should take notes reflecting the students work habit and specifically chosen learning skill. The teacher can use a notepad, checklist or rating scale. The teacher should let the students know what he or she will be looking for during this activity.
2. If the teacher would like they can also use this activity to grade students in the languages and art curriculum. This activity can also be easily transformed into the French Language. The teacher can also take elements from both rating scale examples and grade the students on both areas of curriculum.

### **Grade 5 Language- Rating Scale Example:**

- The students can use come vivid and/or figurative language to add expression and interest.

**1      2      3      4      5**

- The student can confirm spelling and word choice using a variety of methods (dictionary, word chart, asking peers/teachers)

**1      2      3      4      5**

- The student can identify the purpose and audience for this poster and develop the project accordingly.

**1      2      3      4      5**

- The student can create an appealing and appropriate poster for this project.

**1      2      3      4      5**

### **Grade 5 Art- Rating Scale Example:**

- The student can determine what what tools and techniques are best to use on a Hand Washing Poster.

**1      2      3      4      5**

- The student can effectively use this poster to express ideas and feelings to others around the school.

**1      2      3      4      5**

### **\*\*Learning Skills\*\***

- The student can manage their time in class to produce work.

**1      2      3      4      5**

- The student can build healthy relationships with peers to complete group work.

**1      2      3      4      5**

- The student can devise and follow a plan for creating their poster.

**1      2      3      4      5**

## **LESSON PLAN #8: HAND WASHING SONGS**

20 – 40 minutes

(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
- \*To add to the experience a sink\*

### **Method:**

1. Review the five steps of proper hand washing.
2. Teach and sing 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.
4. To add to the experience for the students the class can wash their hands in the class sink, or take turns in the school bathroom. If you do not have a sink in the classroom it would be helpful to have both a male and female teacher for the visit to the bathroom.

### **How to differentiate instruction:**

1. For a group of older students the teacher may challenge them to write their own Hand Washing Song. The teacher may pair the students up or initiate group work. The teacher can remind the students of other classic sing along songs such as *Happy Birthday, Wheels on the Bus, Frere Jacque, Head Shoulders Knees and Toes, etc.*
2. The teacher can print out the Hand Washing song for the students, they can then add this to their Poster(if doing that project) or add their own song to the posters.

### **Assessment Method:**

1. The teacher should take notes reflecting the students work habit and specifically chosen learning skill. The teacher can use a notepad, checklist or rating scale. The teacher should let the students know what he or she will be looking for during this activity.
2. If the teacher chooses to have the students write their own song this assignment can be tied into a language or music assessment.

**Grade 4 Language- Rating Scale Example:**

- The student can use a variety of vocal effects using range, pitch, volume, etc. to add to the effectiveness of the song.

**1      2      3      4      5**

- The student can write a song that is appropriate for their grade level.

**1      2      3      4      5**

- The student can recognize how the songs are written (like a poem) and mimic the style in their own song.

**1      2      3      4      5**

**Grade 5 Music- Rating Scale Example:**

- The student can sing to the correct tune.

**1      2      3      4      5**

- The student can create a song appropriate for the audience.

**1      2      3      4      5**

**\*Learning Skills\***

- The student approaches the project with a positive attitude.

**1      2      3      4      5**

**Songs:**

**This is the Way We Wash our Hands (tune: Mulberry Bush)**

This is the way we wash our hands

Wash our hands

Wash our hands

This is the way we wash our hands

Before we eat our food..... (continue the song with variations; After we cough or sneeze, after we use the bathroom, After we play outside, etc.)

**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?



## **LESSON PLAN #9: BREAD EXPERIMENT**

First lesson- 30 minutes - 1 hour. Multiple days.

### **Learning Objective:**

The student will study how easily it is to transfer germs. The students will hypothesize and complete an experiment regarding the transfer of germs. The students will learn about proper hand washing techniques and how to stay safe from germs.

### **Materials:**

- Very fresh bread-preferably from a local bakery (this experiment will not work if you decide to use big box store brands; *Demptsters, Wonder Bread, etc.*)
- *Ziplock* plastic bags
- Bread experiment worksheet
- Somewhere to hang bread without puncturing a hole in the bag (magnets, clothes pins, etc)

### **Method:**

1. The teacher will 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. The Bread experiment will be introduced to the classroom. The teacher will wash his or her hands using the five step method and will then place one piece of fresh bread into a *Ziplock* bag.
3. The teacher will explain to the classroom that it is very easy to transfer germs around- the teacher will pass a piece of fresh bread around the classroom. The students will be asked to look at it, examine it and see that it is just a normal piece of bread. Once the bread has made it all the way around the classroom the teacher will take the bread and put it into the *Ziplock* bag.
4. All of the students will then be asked to go and wash their hands, using the five step method. The teacher will also wash his or her hands.
5. The students will then be given the bread experiment worksheet. The students will individually fill out the work sheet and hypothesize what they think will happen to each piece of bread. The students will complete a daily journal regarding what the bread looks like and if there are any changes.

\*At the end of the week if the bread was fresh enough the bread that was passed around the classroom should have started to grow mold and turn different colors. The bread

that was touched with clean hands and not passed around should look the same as it did at the beginning of the week. Sometimes if the classroom environment is not right (too hot, no sun, etc.) this experiment will not work- it may be beneficial to try the experiment quietly on your own before introducing it to the students.

### **How to differentiate instruction:**

- For a group of older students this experiment can be the introduction to a science lesson surrounding biology. This can also be graded as a science mark regarding making hypothesis and studying something for a longer period of time.
- This experiment can easily tie into a language activity for younger classes. Students can be instructed to practice using full sentences and punctuation in their journals and hypothesis.
- If you have a classroom that is very busy this experiment can be done without passing the bread around the classroom. The teacher can cough in this hands, touch the ground and then touch the bread and put it in the bag.

### **Assessment Method:**

1. The teacher can collect the hypothesis and give the students a yes or no mark for completion. The students should not be graded on whether their hypothesis is correct, rather if it is an educated guess. If the teacher would like to add a language component to the assignment they may.

### **Grade 2 Language- Rating Scale Example:**

- The student can spell words that they have been familiarized with.  
**1      2      3      4      5**
- Gather information and ideas for their hypothesis.  
**1      2      3      4      5**
- The student recognizes that a hypothesis should be a statement, not a question.  
**1      2      3      4      5**

### **Grade 6 Science- Rating Scale Example:**

- The student recognizes that the bread will change in some way after one week.  
**1      2      3      4      5**
- The student uses appropriate science terminology and vocabulary to explain their hypothesis.  
**1      2      3      4      5**

- The student demonstrates an understanding of biodiversity and how germs work in the environment.

**1      2      3      4      5**

**Checklist Example:**

- The student used full sentences to complete their hypothesis: **Yes** \_\_\_\_ **No** \_\_\_\_
- The student made an educated guess and previous science knowledge to create a hypothesis: **Yes** \_\_\_\_ **No** \_\_\_\_
- The student actively participated in the lesson: **Yes** \_\_\_\_ **No** \_\_\_\_
- The student completed their hypothesis independently: **Yes** \_\_\_\_ **No** \_\_\_\_

## **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 students hand. 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 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.

**How to differentiate instruction:**

- For a group of older students this experiment can be the introduction to a science lesson surrounding biology. This can also be graded as a science mark regarding making hypothesis and studying something for a longer period of time.
- There are a number of variations for students that do or do not want to participate in handshaking.
- For older groups of students relate this activity back to microscopes and how germs can only be seen through a small microscopic lens.

**Assessment Method:**

1. The teacher can collect the hypothesis and give the students a yes or no mark for completion. The students should not be graded on whether their hypothesis is correct, rather if it is an educated guess. If the teacher would like to add a language component to the assignment they may.
2. The teacher can use a rating scale or notes to give students a mark based on their hypothesis and knowledge of cells/germs.

**Grade 8 Science- Rating Scale Example:**

- The student uses appropriate science terminology and vocabulary to explain their hypothesis.

**1      2      3      4      5**

- The student demonstrates an understanding of germs in relation to microscopic elements. The student recognizes that germs cannot be seen without a microscope

**1      2      3      4      5**

- The student can assess the role of a microscope and what it is most useful for.

**1      2      3      4      5**

- The student recognizes that germs are cells that can have harmful effects on human life.

**1      2      3      4      5**

## **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

NOTE: Material Safety Data Sheets for Glo-Germ Powder and UV Flashlight are included in this resource kit (pages 76-78)

### **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.
2. Place a small amount of Glo-Germ Powder on each students 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 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:**

- 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.
- 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.
- 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.
- 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).

### **How to differentiate instruction:**

- For a group of older students this experiment can be the introduction to a science lesson surrounding biology. This can also be graded as a science mark regarding making hypothesis and studying something for a longer period of time.
- There are a number of variations for students that do or do not want to participate in handshaking.
- For older groups of students relate this activity back to microscopes and how germs can only be seen through a small microscopic lens.

### **Assessment Method:**

1. The teacher can collect the hypothesis and give the students a yes or no mark for completion. The students should not be graded on whether their hypothesis is correct, rather if it is an educated guess. If the teacher would like to add a language component to the assignment they may.
2. The teacher can use a rating scale or notes to give students a mark based on their hypothesis and knowledge of cells/germs.

**Grade 8 Science- Rating Scale Example:**

- The student uses appropriate science terminology and vocabulary to explain their hypothesis.

**1      2      3      4      5**

- The student demonstrates an understanding of germs in relation to microscopic elements. The student recognizes that germs cannot be seen without a microscope

**1      2      3      4      5**

- The student can assess the role of a microscope and what it is most useful for.

**1      2      3      4      5**

- The student recognizes that germs are cells that can have harmful effects on human life.

**1      2      3      4      5**

## **LESSON PLAN #12: GROWING GERMS**

(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.

**How to differentiate instruction:**

- For a group of older students this experiment can be the introduction to a science lesson surrounding biology. This can also be graded as a science mark regarding making hypothesis and studying something for a longer period of time.
- For classrooms that have microscopes available, the teachers can put these samples under a microscope to examine.

**Assessment Method:**

1. The teacher can collect the hypothesis and give the students a yes or no mark for completion. The students should not be graded on whether their hypothesis is correct, rather if it is an educated guess. If the teacher would like to add a language component to the assignment they may.
2. The teacher can use a rating scale or notes to give students a mark based on their learning skills.

**Grade 8 Science- Rating Scale Example:**

- The student uses appropriate science terminology and vocabulary to explain their hypothesis.

**1      2      3      4      5**

- The student demonstrates an understanding of germs in relation to microscopic elements. The student recognizes that germs cannot be seen without a microscope

**1      2      3      4      5**

- The student can follow correct safety procedures for handling a microscope.

**1      2      3      4      5**

- The student can use a microscope correctly and safely to observe cells.

**1      2      3      4      5**

- The student can prepare and mount a variety of slides to the microscope.

**1      2      3      4      5**

## LESSON PLAN #13: SKITTLES ACTIVITY

30 minutes - 1 hour.

### Learning Objective:

The students will investigate how easily a few *infected* people can spread bacteria to multiple people-both directly and indirectly. The students will use skittles and smarties to represent germs and pathogens that we carry on our skin and in our body.

### Materials:

- 1-3 bag of Skittles- *harmful germs* (depending on class size)
- 1-3 bag of Smarties (depending on class size)
- Dixie cups with separated skittles and Smarties
- Interesting Fact handout

### Method:

1. Before the students arrive to class the teacher will arrange the cups. The teacher will mark about  $\frac{1}{4}$  of the class with *infected* cups- the teacher will write *infected* at the bottom of said cups. Each cup will be  $\frac{1}{3}$  of the way filled with Smarties- but the infected cups will have 4-5 Skittles added to them. In this activity the Skittles will act as the harmful germs. The teacher will set one cup on each students desk before they arrive.
2. The teacher will ask the students to NOT EAT THE CANDY- they may once the activity is completed.
3. The teacher will then hand out the Interesting Fact handout. The teacher will explain to the students that they are to find out three interesting facts about three different people in the classroom. When the students pair up they are also to pour all of their candy into one of the cups, shake and then evenly separate their candy again.
4. The teacher must explain to the students to be careful, as we will not be eating any candy that has fallen on the floor.
5. Once all of the students have found their interesting facts the teacher will call the classes attention once again. The teacher will the instruct the students to careful pour the contents of their cups on their worksheets. The teacher will then ask the students to look and see if they have any Skittles in their cup- the students with skittles will be asked to stand up. The teacher will then as the students to see if they had *infected* written on their cup, or if the Skittles were transferred when sharing interesting facts.

6. The teacher can then start a discussion on the importance of hand washing and how easily it is to spread germs- as the class just spread *germs* without even knowing!

**How to differentiate instruction:**

- If the teacher does not want the class to walk around with their candy they may call two students at a time to the front of the class to swap
  - o Example: Pick two students to come to the front of the class for a Rock, Paper, Scissors fight. The student that wins gets to have his or her cup filled, shake and then evenly separate again.
- If the teacher wishes they may change the interesting fact sheet to something more related to the curriculum they are covering.
- Example:
  - o Ask three friends for one of the hand washing steps
  - o Ask three friends to name one province in Canada
  - o Ask three friends to answer the following math problem-  $4 \times 7 = \dots$  etc.

**Assessment Method:**

1. The teacher should take notes reflecting the students work habit and specifically chosen learning skill. The teacher can use a notepad, checklist or rating scale. The teacher should let the students know what he or she will be looking for during this activity.
2. If the teacher chooses to make an activity sheet that is more reflective of the curriculum currently being covered, they may collect the sheets to assess where the students are at.

Name: \_\_\_\_\_

**INTERESTING FACTS WORK SHEET**

Name	Interesting Fact

## **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:**

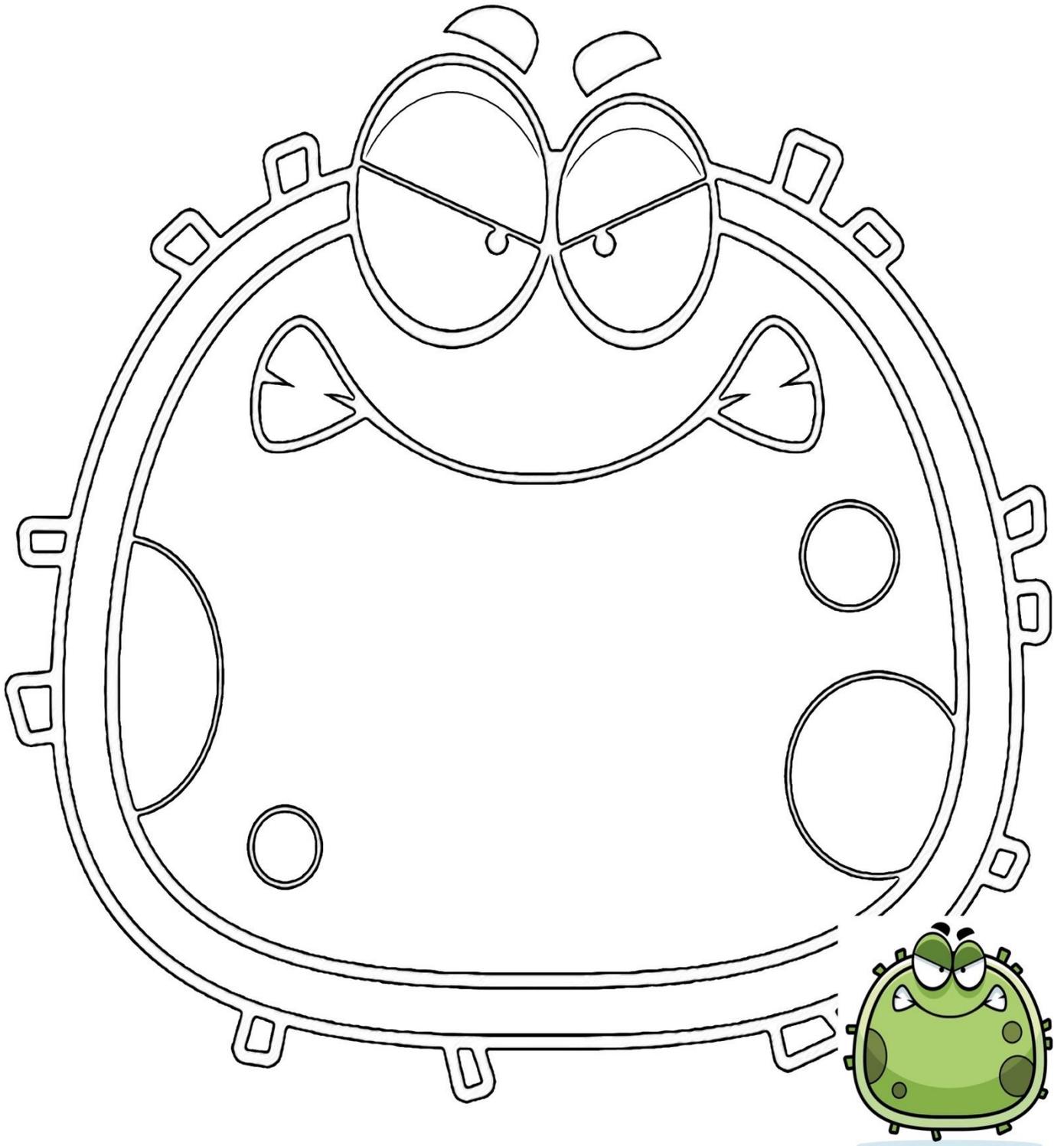
- Crayons or pencil crayons
- Colour Me Pages
- Healthy Hands Maze
- Connect the Dots activity sheet
- Healthy Hands Crossword
- Healthy Hands Word Scramble Puzzle
- Healthy Hands Secret Code
- Healthy Hands Word Search
- Healthy Hands Family Hand Washing Scoreboard (Take Home Activity)
- Teacher will have all answer sheets

**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.

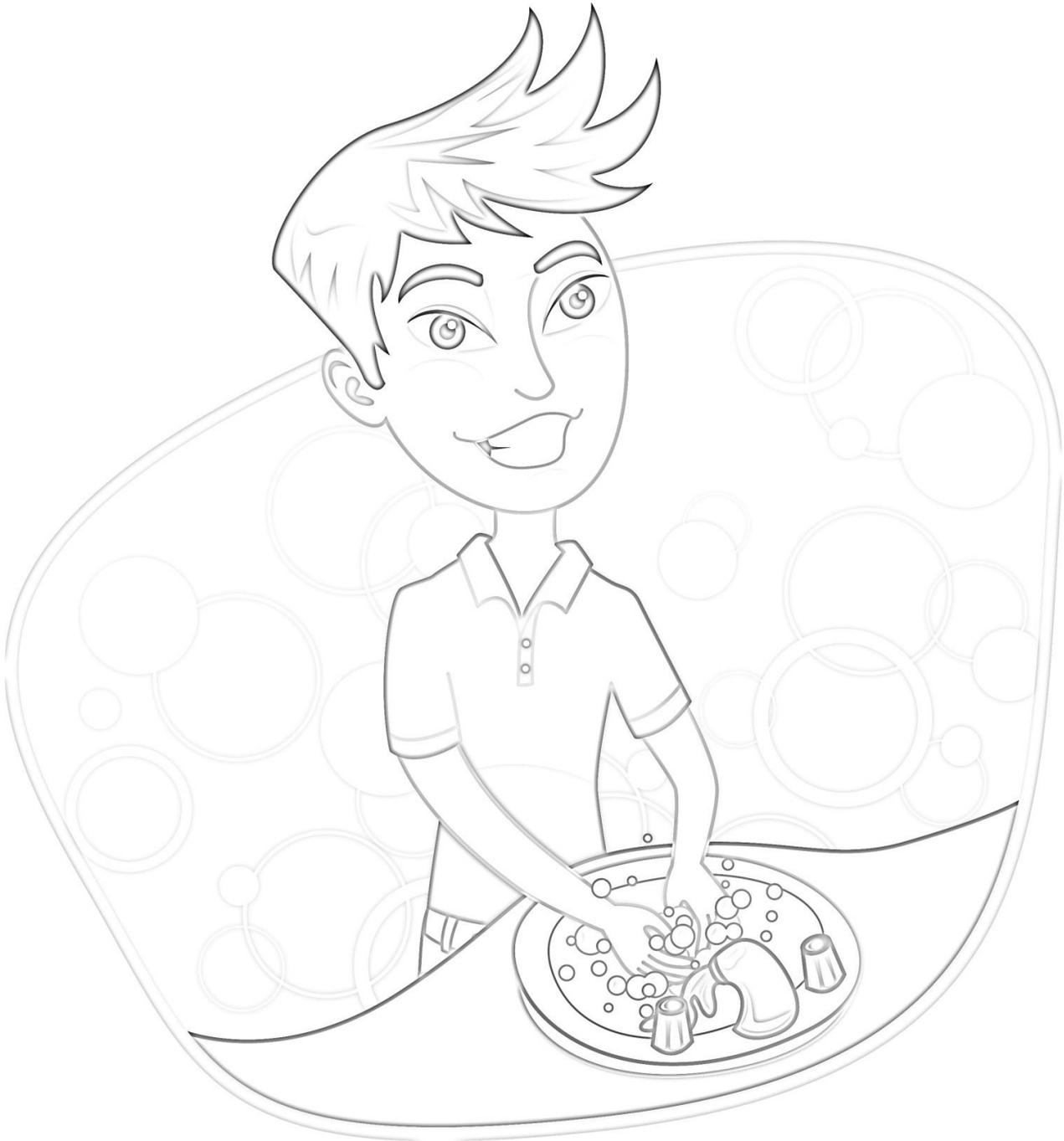
**COLOUR ME**

Name: \_\_\_\_\_



**COLOUR ME**

Name: \_\_\_\_\_



**COLOUR ME**

Name: \_\_\_\_\_



**COLOUR ME**

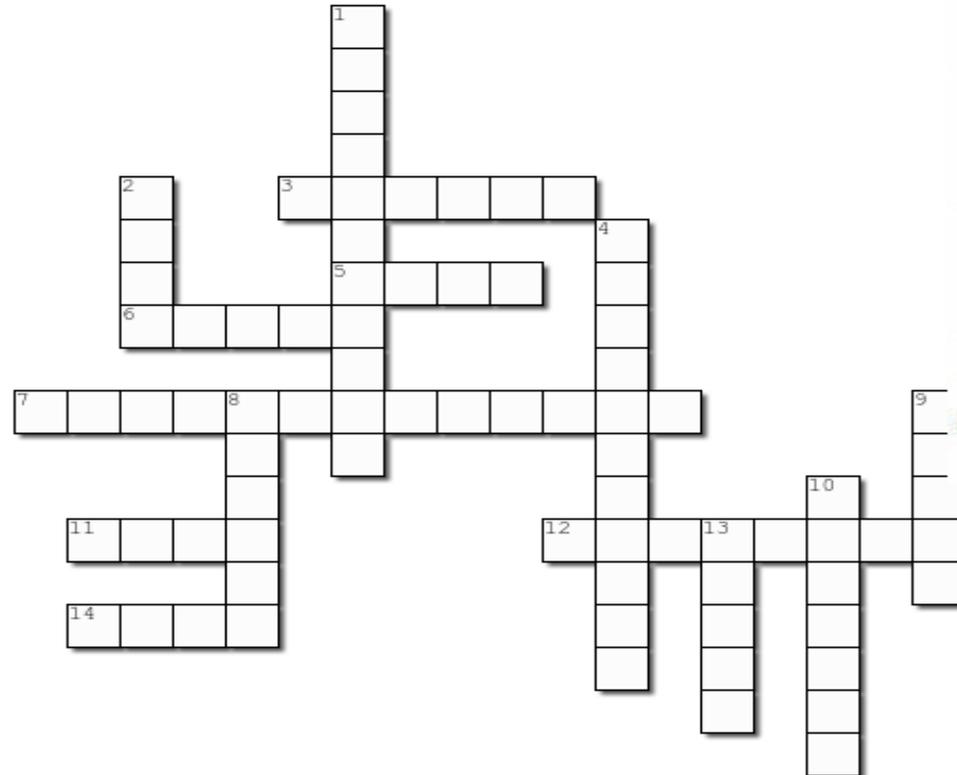
Name \_\_\_\_\_



Name: \_\_\_\_\_

## Hand Washing

Complete the crossword below.



Created using the [Crossword Maker](#) on [TheTeachersCorner.net](#)

**Across**

- 3. I should wash my hands for this many seconds.
- 5. What do you use with water to wash your hands?
- 6. Cover this when you cough.
- 7. Use this after washing your hands.
- 11. Stay here if you are coughing and sneezing a lot.
- 12. Always wash your hands after going to this room.
- 14. There are this many steps to hand washing.

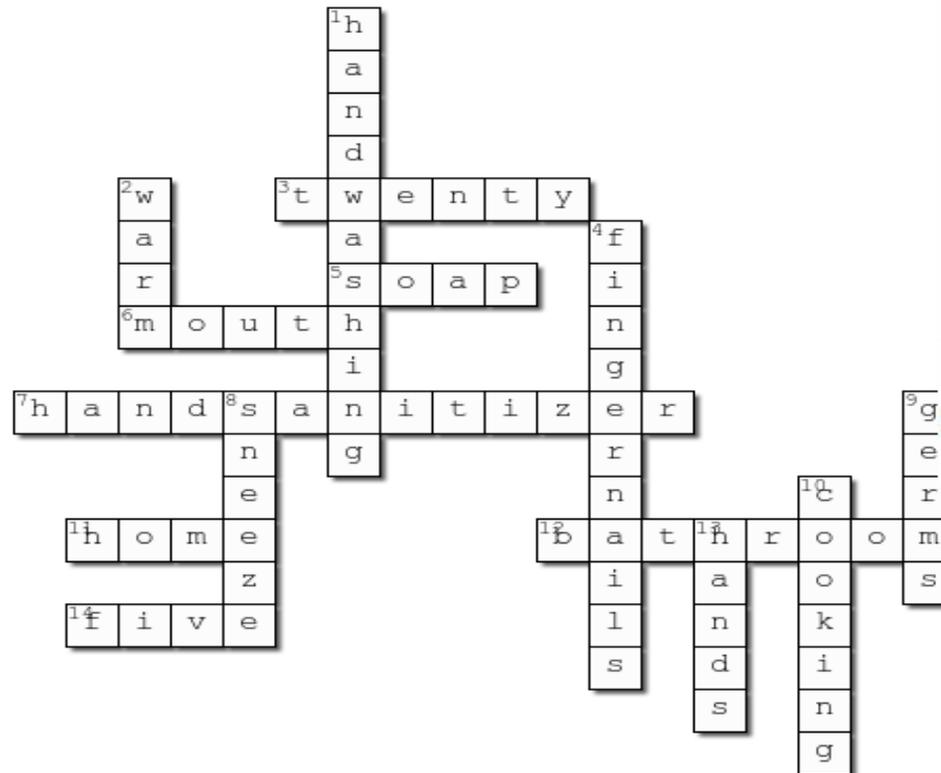
**Down**

- 1. The best way to prevent spreading germs.
- 2. What temperature is the best water for washing hands?
- 4. Remember to clean under here, germs like to hide there.
- 8. Achooo!!
- 9. You cannot see this but it can make you sick.
- 10. Always wash your hands before doing this activity.
- 13. Keep these clean to stay safe from germs.

Name: \_\_\_\_\_

## Hand Washing

Complete the crossword below.



Created using the [Crossword Maker](#) on TheTeachersCorner.net

### Across

3. I should wash my hands for this many seconds. **(twenty)**
5. What do you use with water to wash your hands? **(soap)**
6. Cover this when you cough. **(mouth)**
7. Use this after washing your hands. **(handsanitizer)**
11. Stay here if you are coughing and sneezing a lot. **(home)**
12. Always wash your hands after going to this room. **(bathroom)**
14. There are this many steps to hand washing. **(five)**

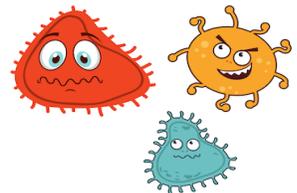
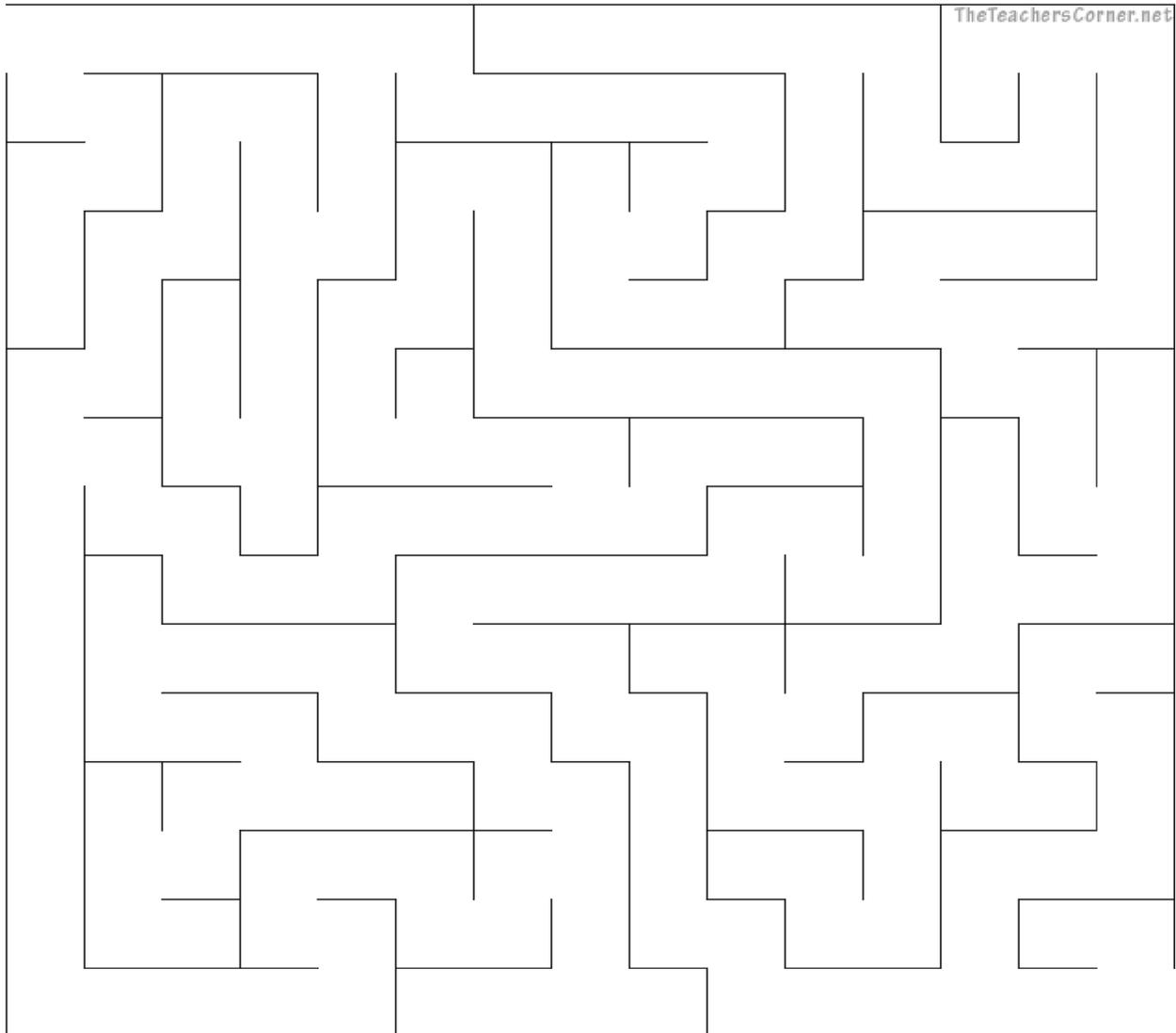
### Down

1. The best way to prevent spreading germs. **(handwashing)**
2. What temperature is the best water for washing hands? **(warm)**
4. Remember to clean under here, germs like to hide there. **(fingernails)**
8. Achooo!! **(sneeze)**
9. You cannot see this but it can make you sick. **(germs)**
10. Always wash your hands before doing this activity. **(cooking)**
13. Keep these clean to stay safe from germs. **(hands)**

Name: \_\_\_\_\_

# Healthy Hands Maze

Help the soap find the germs to fight off colds and flu!



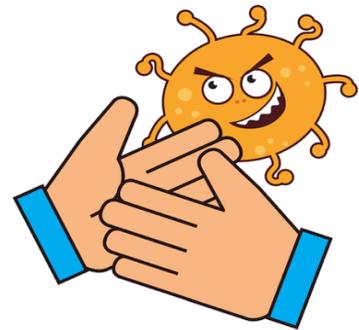
Name: \_\_\_\_\_

# Healthy Hands Word Scrambler

Unscramble the following words.

1. coinlften	4. Hdna rnaeStiiz	7. Tntywe secnSod
2. etBcriaa	5. aSop nda teraW	8. odCl nda ulF
3. Vsuir	6. nHasd	9. zneSee
		10. ahsW urYo Hdsan

- 1. \_\_\_\_\_
  - 2. \_\_\_\_\_
  - 3. \_\_\_\_\_
  - 4. \_\_\_\_\_
  - 5. \_\_\_\_\_
  - 6. \_\_\_\_\_
  - 7. \_\_\_\_\_
  - 8. \_\_\_\_\_
  - 9. \_\_\_\_\_
  - 10. \_\_\_\_\_
- \_\_\_\_\_



Name: \_\_\_\_\_

# Healthy Hands Word Scrambler

Unscramble the following words.

1. coinlften

4. Hdna rnaeStiiz

7. Tntywe secnSod

2. etBcriaa

5. aSop nda teraW

8. odCl nda ulF

3. Vsuir

6. nHasd

9. zneSee

10. ahsW urYo Hdsan

1. Infection

2. Bacteria

3. Virus

4. Hand Sanitizer

5. Soap and Water

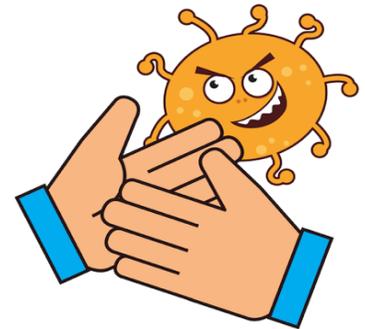
6. Hands

7. Twenty Seconds

8. Cold and Flu

9. Sneeze

10. Wash your Hands



Name: \_\_\_\_\_

# Healthy Hands Word Search

Find the following words in the puzzle

Germs	Soap	Sanitizer	Virus
Bacteria	Water	Hands	
Healthy	Infection	Lather	

I	N	F	E	C	T	I	O	N	X	I	A
A	R	H	E	A	L	T	H	Y	Z	S	F
G	H	A	N	D	S	Z	Z	G	U	W	E
K	E	D	P	Y	K	K	S	R	U	E	Z
S	U	R	B	B	Q	E	I	E	P	X	P
E	U	J	M	A	U	V	L	Y	S	K	L
W	D	K	B	S	C	W	C	Q	S	Z	S
A	A	S	A	N	I	T	I	Z	E	R	B
L	A	T	H	E	R	O	E	S	O	B	T
N	S	T	E	O	W	P	T	R	S	M	L
M	V	Y	R	R	R	V	R	A	I	R	R
V	D	E	A	Y	I	N	E	S	O	A	P



Name: \_\_\_\_\_

# Healthy Hands Word Search

Find the following words in the puzzle

Germs	Soap	Sanitizer	Virus
Bacteria	Water	Hands	
Healthy	Infection	Lather	

I	N	F	E	C	T	I	O	N	X	I	A
A	R	H	E	A	L	T	H	Y	Z	S	F
G	H	A	N	D	S	Z	Z	G	U	W	E
K	E	D	P	Y	K	K	S	R	U	E	Z
S	U	R	B	B	Q	E	I	E	P	X	P
E	U	J	M	A	U	V	L	Y	S	K	L
W	D	K	B	S	C	W	C	Q	S	Z	S
A	A	S	A	N	I	T	I	Z	E	R	B
L	A	T	H	E	R	O	E	S	O	B	T
N	S	T	E	O	W	P	T	R	S	M	L
M	V	Y	R	R	R	V	R	A	I	R	R
V	D	E	A	Y	I	N	E	S	O	A	P



Name: \_\_\_\_\_

# Healthy Hands Secret Code

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

Code Symbol	Code Letter
	A
	B
	C
	D
	E
	F
	G
	H
	I
	J
	K
	L
	M
	N
	O
	P
	Q
	R
	S
	T
	U
	V
	W
	X
	Y
	Z

1. A type of germ that causes influenza is a  \_\_\_\_\_.

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

3. Another way to clean your hands is to use

 \_\_\_\_\_.

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

5. Germs live to live under  \_\_\_\_\_.

6. Always wash your hands  and after you eat.

7. Always wash your hands after using the

 \_\_\_\_\_.

8.  and viruses are two types of germs that can make you sick.



Name: \_\_\_\_\_

# Healthy Hands Secret Code

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

Code Symbol	Code Letter
	<b>A</b>
	<b>B</b>
	<b>C</b>
	<b>D</b>
	<b>E</b>
	<b>F</b>
	<b>G</b>
	<b>H</b>
	<b>I</b>
	<b>J</b>
	<b>K</b>
	<b>L</b>
	<b>M</b>
	<b>N</b>
	<b>O</b>
	<b>P</b>
	<b>Q</b>
	<b>R</b>
	<b>S</b>
	<b>T</b>
	<b>U</b>
	<b>V</b>
	<b>W</b>
	<b>X</b>
	<b>Y</b>
	<b>Z</b>

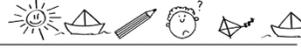
1. A type of germ that causes influenza is a .  
**VIRUS**

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

3. Another way to clean your hands is to use .  
**SANITIZER**

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

5. Germs live to live under .  
**FINGERNAILS**

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

7. Always wash your hands after using the .  
**BATHROOM**

8.  and viruses are two types of germs that can make you sick.  
**BACTERIA**



**CONNECT THE DOTS**

Name: \_\_\_\_\_



## 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 \_\_\_\_\_

Date	Name of Family Member	Hand Washing (place a $\checkmark$ each time hands are washed)

## 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 (Volatiles 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 UEL: 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.
Special firefighting procedures:	Clear area of personnel. Approach upwind. Wear self-contained breathing apparatus.
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

Federal: OSHA Hazard Communication Rule, 29 CFR 1910.1200: See Section II for hazardous ingredients as defined.  
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 1 1 0, 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.

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