

# Bachelor of Education (Elementary) & Bachelor of Education (Secondary) STEM Lesson Plan

**Lesson Title:** How to protect yourself and others from an unseen world!     
**Lesson #** 1     
**Date:** Aug 20<sup>th</sup>, 2020  
Physical and Health  
**Name:** Liam Edey     
**Subject:** Education     
**Grade(s):** 8

**Rationale:**

All students face the dangers of getting or spreading germs and sicknesses to and from other students each day. This lesson plan is designed to inform them of this unseen world of germs and teach them how to best manage their way through it safely. This lesson is very important because it will teach cleanliness and improve overall health (physical and mental wellness) by helping with preventing students getting sick in the first place.

**Core Competencies:**

Communication	Thinking	Personal & Social
<ul style="list-style-type: none"> <li>• Foster communication by allowing students to prepare for group discussion and presentation of ideas/answers</li> <li>• Opening the class up multiple times for conversation and idea discussion to promote new flow of information to all students</li> </ul>	<ul style="list-style-type: none"> <li>• Students are allowed to speak to other groups for exchange of information to allow new trains of thought</li> <li>• Clear room on worksheets opens up the option for students to be creative and personalize how they wish to organize and answer, and if they want guidelines there will be examples written on the board</li> </ul>	<ul style="list-style-type: none"> <li>• Students will always be working together in pairs/groups and working in or sharing roles, stimulating social skills and interaction</li> <li>• Working with other groups is encouraged and opens more opportunity for social interaction and cooperation</li> <li>• Roles for all kinds of learners are present so students should not have difficulties finding their niche</li> </ul>

**Big Ideas (Understand)**

Healthy choices influence our physical, emotional, and mental well-being.

**Learning Standards**

(DO)

(KNOW)

Learning Standards - Curricular Competencies	Learning Standards - Content
<ul style="list-style-type: none"> <li>• Identify and apply strategies to pursue personal healthy-living goals</li> <li>• Reflect on outcomes of personal healthy-living goals and assess the effectiveness of various strategies</li> <li>• Analyze how health-related decisions support the achievement of personal healthy-living goals</li> </ul>	<ul style="list-style-type: none"> <li>• How to identify areas containing high risk of germ spread</li> <li>• Strategies to improve personal lifestyle to help prevent spread of germs</li> <li>• How avoiding germ spread benefits school life and the community</li> <li>• The relationship of germs to humans</li> </ul>

**Instructional Objectives & Assessment**

Instructional Objectives (students will be able to...)	Assessment
<p>Students will be able to:</p> <ul style="list-style-type: none"> <li>• Point in a room at the areas with the highest chance for germs to spread</li> <li>• Implement the best strategies to prevent spreading of germs</li> <li>• Teach others the best strategies to prevent germ spread and explain why they are effective</li> <li>• Explain why healthier living is happier living</li> <li>• Answer the provided worksheet questions regarding hypothesis vs. reality</li> <li>• Present group findings clearly to the class</li> </ul>	<p>Observational:</p> <ul style="list-style-type: none"> <li>• Interactions within groups and group to group in regard to inclusiveness, support, and kindness</li> </ul> <p>Conversational:</p> <ul style="list-style-type: none"> <li>• Written responses to the respective questions on worksheet</li> <li>• Oral presentation of the various topics asked about and answers given to teacher posed questions</li> </ul> <p>Product:</p> <ul style="list-style-type: none"> <li>• Organization, clarity, conciseness, of answers to worksheet</li> </ul>

**Prerequisite Concepts and Skills:**

None
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**Indigenous Connections/ First Peoples Principles of Learning:**

<ul style="list-style-type: none"> <li>• Description of knowing how to take care of oneself and others supports the First Peoples Principles Of Learning</li> <li>• By learning the consequences of one’s actions this supports the First Peoples Principles Of Learning</li> <li>• A very brief history on how smallpox ravaged indigenous communities because their immune systems were not familiar to the germs that explorers had brought to their land. The main point being that your body may be able to handle germs in a student’s life or a student may only get a cold once a year, but many other students will be much more susceptible to the spreading of germs.</li> </ul>
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**Universal Design for Learning (UDL):**

- Moving around the classroom and identifying and writing down what the most germy things in the classroom highlights tactile learning style, and encourages/increases movement of students
- Information is displayed through visual, and auditory means to ensure all kinds of learners can understand.
  - Visual through YouTube videos and Information recorded on whiteboard
  - Auditory through YouTube videos, group discussion, and teacher instruction
- Worksheets have open space for writing instead of strict guidelines in order to not give limitations to how students want to record their data
  - Students can also alternatively download the worksheet to work on virtually
  - If students need guidelines or have organizational challenges, then there will be examples on the board
- Subtitles and slower speeds on videos to allow for better processing of the videos
- By working in pairs/groups students who are more shy or uncomfortable with presenting or answering out loud can opt out of that and instead a partner can take that role

**Differentiate Instruction (DI):**

- (The student (YK) has a visual processing disorder)
- All YouTube videos will have subtitles on as well as be played at 0.75 times speed to allow the student to have more time for processing and have options for how to process the video.

**Materials and Resources**

- Premade worksheets with questions and room for additions if the students choose to
- Access to a projector to display YouTube videos

**Lesson Activities:**

Teacher Activities	Student Activities	Time
<p>Introduction:</p> <p>Teacher will:</p> <ul style="list-style-type: none"> <li>• Assemble the students into predetermined pairs/groups</li> <li>• Open the class up to group discussion and asks questions like <i>“who here knows what germs are? Who here likes germs? Who here would like to stay away from bad germs as much as possible?”</i></li> </ul> <p>Then say something like “Well today we are going to learn some of the best tactics to avoid germs and how they affect our physical and mental health as well as the physical and mental health of everyone around you”</p> <ul style="list-style-type: none"> <li>• Show class the Mythbusters contamination video (<a href="https://www.youtube.com/watch?v=3wPKBpk7wUY">https://www.youtube.com/watch?v=3wPKBpk7wUY</a>) up until they are done the set-up explanation in the video.</li> <li>• Get the students to make predictions and write them down as well as reasonings for their choice in their notebooks within their pairs of how many people out of 6 will be contaminated and how contaminated will the items on the table be (ranging from not contaminated at all, fairly</li> </ul>	<p>Students will:</p> <ul style="list-style-type: none"> <li>• Answer questions posed by teacher</li>   <li>• Work together with their partner(s) to come up with and write down predictions and reasonings</li> </ul>	<p>15 min</p>

<p>contaminated, very contaminated, almost completely contaminated)</p> <ul style="list-style-type: none"> <li>• Watch the rest of the video and get students to share how their predictions compared to the results in the video</li> <li>• Explain how germs can be spread very easily but also can be prevented very easily through some easy steps</li> </ul>	<ul style="list-style-type: none"> <li>• Write down how predictions compared to results and share to the class</li> </ul>	
<p>Body:</p> <p>Teacher will:</p> <ul style="list-style-type: none"> <li>• Ask the students how the last video made them feel and address some of the answers</li> <li>• Instruct the class on how one of the first steps of preventing germ spread is first identifying and understanding what to watch out for</li> <li>• Tell the class how we all know how people with colds will sneeze quite a bit but do we actually know how powerful a sneeze is?</li> <li>• Watch the set up and explanation on the MythBusters video “art of the sneeze” <a href="https://www.youtube.com/watch?v=0f4sUNWkq60">https://www.youtube.com/watch?v=0f4sUNWkq60</a></li> <li>• Have students work with their pairs/groups and make then write down their predictions for the outcome of the experiment. (such as distance the sneeze travels)</li> <li>• Watch the rest of the video and get students to share how their predictions compared to the results in the video</li> <li>• Tell students how sneezes are obviously powerful germ spreaders but ask if students know the safest way to sneeze? Because many people have a different opinion</li> <li>• Watch the set up and explanation on the MythBusters video “Safest sneeze clip” <a href="https://www.youtube.com/watch?v=wrx7OpFEk2E">https://www.youtube.com/watch?v=wrx7OpFEk2E</a></li> <li>• Have students work with their pairs/groups and make then write down their predictions and reasonings for the outcome of the experiment.</li> <li>• Watch the rest of the video and get students to share how their predictions compared to the results in the video</li> <li>• Tell the students how they just learned how to handle airborne germ spread but what about contact germ spread</li> <li>• Hand out premade worksheet of the map of the classroom and its contents with room for writing</li> <li>• Instruct students to stand up and move around the classroom with their partner(s) and circle a minimum of 5 locations on the map with the highest likelihood of germ spread and in the writing space list those selections from least to greatest likelihood of germ spread, as well as a brief explanation of their choices</li> <li>• Have the students return to their desks and share their answers and explanations and provide feedback</li> </ul>	<p>Students will:</p> <ul style="list-style-type: none"> <li>• Verbally answer questions posed by teacher</li> <li>• Work together with their partner(s) to come up with and write down predictions and reasonings</li> <li>• Write down how predictions compared to results and share to the class</li> <li>• Work together with their partner(s) to come up with and write down predictions and reasonings</li> <li>• Write down how predictions compared to results and share to the class</li> <li>• Walk around classroom with partner(s) analyzing and recording items or locations thought to have the highest chance for contact germ spread</li> </ul>	<p>10 min</p> <p>10 min</p> <p>30 min</p>



**Proactive, Positive Classroom Learning Environment Strategies:**

- Pairs/groups are premade and puts some of the more advanced students with the less advanced students as well as placing students who may not have interacted much before (peer teaching)
- Having students in groups saves time and less time must be spent individually on students, thus allowing more movement to other groups
- Actively supervise to check in with students and offer guidance and assist as needed.
- Monitor student's interactions within their pairs to see if a combination of students works; make notes for future combinations if needed.

**Extensions:**

- If students are looking to challenge themselves, they can be instructed to run the same contact germ spread activity at home or in a different room of the school to try to find even higher risk items or locations
- Other Videos can be provided to students who are wondering more what to and what not to worry about regarding germs. Such as this video on if double dipping foods is actually a bad habit:  
<https://www.youtube.com/watch?v=FYxccSTDH4k>

**Reflections (if necessary, continue on separate sheet):**