kidsboostimmunity.com

KIDS BOOST IMMUNITY
KIDSBOOSTIMMUNITY.com

FREE ONLINE LESSONS

Fits **QUEBEC** Curriculum Grades 4-12
Social Studies | Science | Health Education

HOW IT WORKS

Each lesson is paired with an online quiz to solidify learning. Every time a student scores 80% or more, we donate a life-saving vaccine to UNICEF Canada. This enables students to directly connect their learning outcomes to a global context.

CONNECT YOUR CURRICULUM TO GLOBAL CITIZENSHIP

Over 60 lessons developed by teachers and health professionals to engage digital-age students in learning and inquiry.

KBI is brimming with carefully curated lessons linked to science, health or social studies curricula on a wide range of poignant topics including:

- Cross-curricular research and inquiry
- Critical thinking and evaluating information
- Factors affecting global child health equity
- Canada's three levels of government
- Canada's interactions with the global community
- The spread of infectious diseases & outbreaks
- The body's defence system/immune system and how vaccines help
- Understanding how antibiotics work

Elders and story writers lead the development of Indigenous perspectives on KBI.

Program can be teacher-led or self-directed by students

"I love how well the Kids Boost Immunity site aligns to the science unit." *Deborah, Grade 8*

"A telling sign of student buy-in is when they continue to use the program and explore the site even after the activity is finished." *Heidi, Grade 7-9 Socials*

Public Health Agency of Canada | Agence de la santé publique du Canada

British Columbia Ministry of Health

Public Health Association of BC

unicef CANADA

Kids Boost Immunity would not have been possible without the longstanding support of British Columbia's Immunization Promotions Working Group (IPWG). The IPWG membership includes the BC Ministry of Health, Public Health Association of BC, BC Centre for Disease Control, First Nations Health Authority, Fraser Health, Vancouver Coastal Health, Interior Health, Vancouver Island Health, Northern Health and the BC Pharmacy Association.
Kids Boost Immunity relies on other funders and partners to help purchase UNICEF vaccines earned by students.

Table of Contents

KBI IS DESIGNED FOR COMPLEX LEARNING NEEDS AND THE LOCAL CURRICULUM . . . 4

PREVIEW KIDS BOOST IMMUNITY LESSONS . . . 5

GETTING STARTED ON KIDS BOOST IMMUNITY . . . 6

KBI CONNECTIONS TO QUEBEC CURRICULUM . . . 7

TESTIMONIALS . . . 10

CROSS-CURRICULAR INQUIRY RESEARCH ASSIGNMENT (GRADES 4-7) . . . 11

CRITICAL THINKING AND EVALUATING INFORMATION (MULTIPLE SUBJECTS) . . . 12

The Power Of The Story (Grades 4-12) . . . 12
How To Collect Trustworthy Information: The Traap Test (Grades 4-7) . . . 12
How To Collect Trustworthy Information: The Craap Test (Grades 8-12) . . . 13
Thinking Critically About Information: Beware Of Bias (Grades 4-12) . . . 13
How To Test Ideas By Creating Experiments: The Scientific Method (Grades 4-12) . . . 14
Thinking Critically About Experiments: Try To Prove Yourself Wrong (Grades 8-12) . . . 14
Thinking Critically About Experiments: Correlation Vs Causation (Grades 8-12) . . . 15

GLOBAL INEQUALITY (SOCIALS) . . . 16

What Is Global Inequality? (Grades 4-12) . . . 16
Lack Of Funding And Poverty (Grades 4-12) . . . 16
Misinformation And Polio (Age-Appropriate Versions For Grades 4-5, 6-12) . . . 17
War And Violence (Age-Appropriate Versions For Grades 4-5, 6-8, 9-12) . . . 17
Helping Stop Inequalities In Childhood Immunization (Grades 4-12) . . . 18

CANADA'S THREE LEVELS OF GOVERNMENT (SOCIALS) . . . 19

Canada's Three Levels Of Government (Grades 4-7) . . . 19
The Municipal Government (Grades 4-7) . . . 19
The Provincial/Territorial Government (Grades 4-7) . . . 20
The Federal Government (Grades 4-7) . . . 20

CANADA'S INTERACTIONS WITH THE GLOBAL COMMUNITY (SOCIALS) . . . 21

Canada's Interactions With The Global Community – World Health (Grades 4-12) . . . 21
Reading A Map: Latitude And Longitude (Grades 4-12) . . . 21
Why Global Health Issues Require Cooperation (Grades 4-12) . . . 22
Why Did The World Health Organization Declare Vaccine Hesitancy As A Top 10 Issue? (Grades 4-12) . . . 22
Misinformation As A Health Threat (Grades 4-12) . . . 23
Measles, The Comeback Kid (Grades 4-12) . . . 23
Canada's Response To Vaccine Hesitancy At Home (Grades 4-12) . . . 24
Canada's Response To Vaccine Hesitancy Abroad (Grades 4-12) . . . 24
Case Study: Preventing Cancer With A Vaccine - Canada Vs Rwanda (Grades 4-12) . . . 25

THE SPREAD OF DISEASE & OUTBREAKS (SCIENCE/HEALTH) . . . 26

New Diseases On Turtle Island (Grades 4-12) . . . 26
What Are Infectious Diseases And How Do They Spread? (Grades 7-12) . . . 26
What Are Outbreaks, Epidemics And Pandemics? (Grades 4-12) . . . 27
How Can We Prevent The Spread Of Infectious Diseases? (Grades 7-12) . . . 27
An Investigative Activity: Fraser Valley Measles Outbreak (Grades 7-12) . . . 28

AN INQUIRY ACTIVITY - BECOME AN OUTBREAK INVESTIGATOR (GRADE 6 ONLY) . . . 28

Table of Contents

GERMS, THE BODY'S DEFENSE SYSTEM, & HOW VACCINES HELP (SCIENCE/HEALTH) 29
What Are Germs? (Grades 4-6) 29
How Are Infections Spread? (Grades 4-6) 29
What's The Best Way To Stop Spreading Infections? (Grades 4-6) 30
What Else Can Stop The Spread Of Infections? (Grades 4-6) 30
What Is The Immune System? (Grades 4-6) 31
What Are Vaccines And How Do They Work? (Grades 4-6) 31

THE IMMUNE SYSTEM & HOW VACCINES WORK (SCIENCE/HEALTH) 32
The Immune System (Grades 7-12) 32
The Innate Immune System (Grades 7-12) 32
The Adaptive Immune System (Grades 7-12) 33
How Vaccines Work (Grades 7-12) 33
How Effective Are Vaccines? (Grades 7-12) 34
Types Of Vaccines (Grades 7-12) 34

ANTIBIOTICS (SCIENCE/HEALTH) 35
What Are Antibiotics And How Do They Work? (Grades 4-12) 35
Antibiotic Resistance (Grades 4-12) 35
The Surprise Guest (Grades 4-12) 36
Antibiotic Stewardship And Vaccines (Grades 4-12) 36
The Good, The Bad, The Antibiotic (Grades 4-12) 37

PREPARE FOR IMMUNIZATION DAY (GRADE 4 AND SECONDARY LEVEL 3 ONLY) 38
How To Handle Your Shots Like A Champ (Grade 4 & Secondary Level 3 Only) 38
Hepatitis B Vaccine (Grade 4 catch-up Only) 39
Human Papillomavirus (Hpv) Vaccine (Grade 4 Only) 39
Meningococcal (Meningitis) Vaccine (Secondary Level 3 Only) 40
Tetanus Diphtheria And Pertussis (Tdap) Vaccine (Secondary Level 3 Only) 40

BONUS CONTENT 41

APPENDIX A - WORKSHEETS & MARKING RUBRICS 42
Cross-Curricular Inquiry Research Assignment (Grades 4-7) 42-54
An Investigative Activity: Fraser Valley Measles Outbreak (Grades 7-12) 55

APPENDIX B - NAVIGATING KBI 56
Creating An Account 56
Viewing The Lessons 57
Making A Team 58
Student Sign-Up 60
Types Of Quizzes 61
Assessment - Monitoring And Recording Student Quiz Scores 62

KBI IS DESIGNED FOR COMPLEX LEARNING NEEDS AND THE LOCAL CURRICULUM

Lessons are created by health and education/curriculum specialists and work well in any classroom

All online lessons are developed by a team of experienced specialists in the areas of immunization, health, education and curriculum. This teacher resource is updated as new lessons are made available on the KBI website.

Reading level fits grade Lessons link to provincial curriculum

Your students will only receive lessons designed for their grade reading level. Pairing stronger and weaker readers beside each other works well.

Quizzes linked to global citizenship

Each lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80% on these quizzes. Students can retake the lesson quizzes as many times as they want until they earn the vaccine. All vaccines are made available to children in developing countries through UNICEF.

Links to QUEBEC curriculum

- Gr. 7 Social Sciences: Geography
- Gr. 4 Science and Technology
- Gr. 9 Applied Science and Technology

As teachers, we know the importance of making learning meaningful and relevant for students.

Immunization programs occur in QC schools, and the impact on students' health is long lasting. Therefore, to make this a relevant experience for students, some of the lessons on KBI are designed to support learning during the ages when vaccines are given.

The school immunization schedule for QC:

- Grade 4
  - Human papillomavirus
  - Hepatitis B catch-up for those that didn't receive it at a younger age

- Secondary Level 3
  - Tetanus, diphtheria and pertussis (Tdap)
  - Meningococcal (meningitis)

PREVIEW KIDS BOOST IMMUNITY LESSONS

Want to try Kids Boost Immunity before registering?

You can see some sample lessons on www.kidsboostimmunity.com by clicking on **sample lessons.**

You can also preview the student experience by registering as a pretend student on our "teachers' test team". To do this click on the "Register" button at the top right and register as a student. You can use any name and password you'd like. This will be a temporary account, so don't worry about remembering your name or password.

For the 'Team Registration Code', use **TryKBIHere** (note this is not case sensitive and trykbihere works as well).

You will be able to experience Kids Boost Immunity as a BC grade 6 student.

Please be aware that student accounts associated with this team are temporary and will be deleted periodically. In addition, vaccines earned for UNICEF on this team will not be included as part of KBI's global vaccine counter.

GETTING STARTED ON KIDS BOOST IMMUNITY

Please follow the steps below to get started on Kids Boost Immunity.

KBI is easy to use. Within 5-10 minutes of registering, you'll understand how it works!

STEP 1

Go to Kids Boost Immunity and register as a teacher

Go to www.kidsboostimmunity.com. Create a teacher account by filling out a simple online form. Once your teacher email is verified we will approve your account. This one-time registration and approval usually takes about one business day.

STEP 2

Make a team

Create a team for your class. Teams will show up on leaderboards and you can compare your progress with other classrooms from across Canada.

STEP 3

Get your students to register

Take your students to Kids Boost Immunity where they complete a very simple online form. Students are automatically added to your team.

QUESTIONS AND SUPPORT

You can find answers to frequently questions here:
www.kidsboostimmunity.com/frequently-asked-questions

Also, please refer to Appendix B - Navigating KBI for more detailed information.

If you need further support please contact info@kidsboostimmunity.com

KBI CONNECTIONS to QUEBEC CURRICULUM

This section provides connections to QC curriculum outcomes that relate to content within Kids Boost Immunity (KBI) lessons. Teachers have developed and reviewed the lessons to ensure that KBI aligns with educational approaches. For example, KBI lessons promote critical thinking, inquiry, problem-solving, communication, and citizenship. **NOTE: Teachers find more curriculum connections than outlined here.**

KBI Curriculum Links to QUEBEC CRITICAL THINKING AND EVALUATING INFORMATION - MULTIPLE SUBJECTS (GRADES 4-12)

The Critical Thinking and Evaluating Information lessons for Kids Boost Immunity are aligned with multiple subjects within the QUEBEC curriculum. These lessons provide examples of how inaccurate information can sway opinion, often by creating a sense of fear. A checklist evaluation method enables student to assess the trustworthiness of information sources. Other evaluation strategies include learning how to recognize personal bias and using a scientific approach to test ideas. For older grades there are lessons in creating hypotheses to prove themselves wrong, and also exploring correlation versus causation.

KBI Curriculum Links to QUEBEC SOCIAL STUDIES

Grade 7 Social Sciences - Geography

KBI supports Quebec's curricular broader view for students to be engaged in Global Citizenship, namely,lessons support students in constructing "their consciousness of global citizenship by becoming aware of global issues and developing a sense of involvement." p. 260

As well, KBI lessons provide the following link to Quebec's Geography 7 curriculum. "By helping students to understand the significance of human actions in a territory, take a position on territorial issues and examine major global phenomena, the program contributes to educating informed, responsible citizens. In this sense, it ties in with the broad area of learning Citizenship and Community Life." p. 262

KBI Curriculum Links to QUEBEC SCIENCE AND TECHNOLOGY

Grade 4 Science and Technology

Elementary Cycle Two (grade 4) p. 176
Human growth and development

KBI lessons look at the human body's natural defence system and how we can protect ourselves from germs and infections by washing hands, keeping hands away from our mouth, nose and eyes, etc.

Evolution of life forms

KBI lessons examine viruses and bacteria and the affect these can have on the human body. *Age-appropriate lessons also explain the help vaccines provide and describe the vaccines received in grade four.*

Grade 9 Applied Science and Technology Secondary Cycle Two

KBI supports Quebec's curricular broader view for students to be engaged in learning "related to major issues of today. In its specific way of dealing with reality, each subject sheds a different light on these issues, helping students develop a broader world-view." p. 4

As well, KBI provides students the opportunity to engage in "Citizenship", following Quebec's curricular intention. Namely, "the scientific and cultural literacy that students gradually acquire gives them a new perspective on certain social issues, which may improve the quality of their participation in the classroom, the school or society in general." p. 5

Relevant Curricular areas:

- Biotechnology
- The Living World - systems

Relevant Process topics

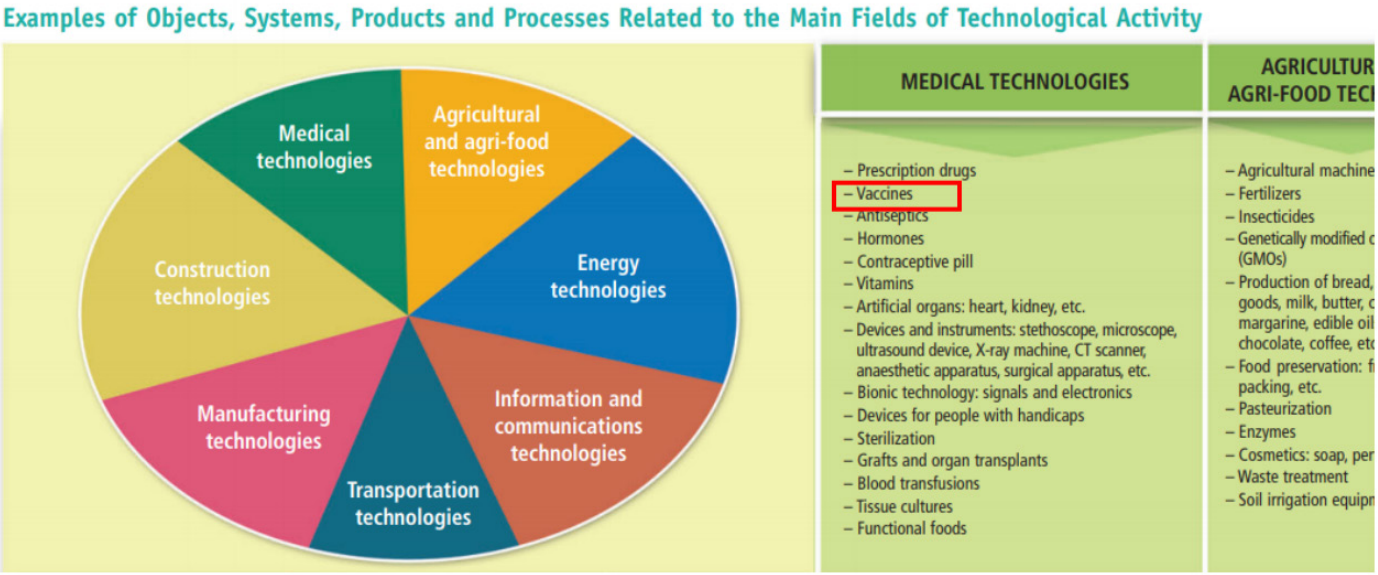
- Manufacture of vaccines

KBI Curriculum Links to QC SCIENCE AND TECHNOLOGY Cont.

The hopes and fears associated with recent spectacular advances in biotechnology make it a major issue. The study of the related content should therefore combine the conceptual, ethical and practical aspects of biotechnology, in particular the processes involved. Some of these will be examined more closely:

pasteurization, the manufacture of vaccines, artificial insemination and cell culture. p. 32

The main goal of vaccination is to enable the body to produce certain natural biological agents, thereby improving the organism's defence against identified pathogenic elements. p. 32
The discovery and production of vaccines helped eradicate serious diseases such as smallpox and control the propagation of the influenza virus. New DNA-based vaccines may revolutionize the treatment of metabolic diseases such as diabetes. p. 35



KBI lessons cover the immune system (innate and adaptive), the discovery and development of vaccines, the disease preventing vaccines available, and the impact of these on health for individuals, communities and globally.

TESTIMONIALS

"I love how well the Kids Boost Immunity site aligns to the science unit. It's a great resource which helps the students understand the importance of vaccination."
Deborah, Grade 8 Science Teacher

"My students really loved using the KBI lessons. Not only were they proud of all the vaccines they raised for UNICEF, but it sparked important questions about why we get vaccines and how they protect us. I will definitely be using this for my students next year."
Janet, Grade 5 & 6 Socials Teacher

"They were able to work at their own pace and delve into subject material at any time. Many were keen to work after hours as well as during class time."
Dana, Grade 8 Science Teacher

"As soon as my classes realized they could actually help other children around the world by learning about concepts we would be studying anyway, they became very invested. A telling sign of student buy-in is when they continue to use the program and explore the site even after the activity is finished. Walking down the hall and hearing discussions about herd immunity or T versus B cells, I could tell that the learning would continue for my students because they had been given the opportunity to have a positive global impact with their efforts."
Heidi, Grade 7-9 Socials Teacher

"My students felt like global citizens learning about bacteria and viruses in class, then completing a quiz to earn a vaccine for a child in a developing country. Thank you for the opportunity to make a small difference in a big way."
Lisa, Grade 7 Science Teacher

They are excited. When I told them they can earn vaccines for others, their eyes lit up. They only had 15 minutes this class, but it was soooo engaging for them. Thank you for this great resource!
Michelle, Grade 8 Science Teacher

"It was fun earning vaccines with the class, and it helped the students learn the curriculum. It also resulted in good discussions about health care in developing countries."
Geoff, Grade 8 Science Teacher

"It helped make us more aware of the importance and truth about vaccinations. We were educated and learned about the vaccinations we were given instead of someone just saying, "Come here and let me poke your arm!" We learn, and then earn, so others will have a fair turn."
Wendy, Grade 6 & 7 PE and Health Teacher

"My students and I enjoyed using Kids Boost Immunity because it's both science and health at the same time. There is a real world connection with public health campaigns or advocacy and science learning outcomes. Our next move will be to draw our understanding on the issue of immunization and how it could be shared on various digital platforms. Thanks KBI!"
Gigi, Grade 6-9 Science, Health, Education and Technology Teacher

FOR GRADES 4-7

CROSS-CURRICULAR INQUIRY RESEARCH ASSIGNMENT

Students can choose from seven research topics on significant issues. These issues all relate to health trends and quality of life. To support students in their inquiry, each research task includes relevant lessons that have been developed from a variety of reliable, primary sources. Students have an opportunity to consider differing perspectives, as well as possible environmental, social, political, and economic factors. Despite the complexity of the topics, information is presented in an engaging and age-appropriate style. The research tasks are action-oriented, using a variety of presentational techniques for students to share their reflective understanding.

Research Topics

There are seven reserch topics to choose from:

1 - Create a virtual tour of municipal, provincial, and federal government services related to keeping you safe from infectious diseases.

2 - Describe the actions you think we should take to eliminate global inequality in immunization.

3 - If you were prime minister, how would you solve the issue of misinformation?

4 - Create a poster of some of the things you can do to keep yourself healthy from diseases.

5 - As an evil villain, you just got caught promoting a campaign trying to get everyone as sick as possible, and now have to write an apology letter explaining to the world why this was wrong.

6 - An Indigenous story writer worked with Elders to share stories about Turtle Island. Explore the themes in these stories.

7 - Create a world map highlighting some of the impacts of infectious diseases.

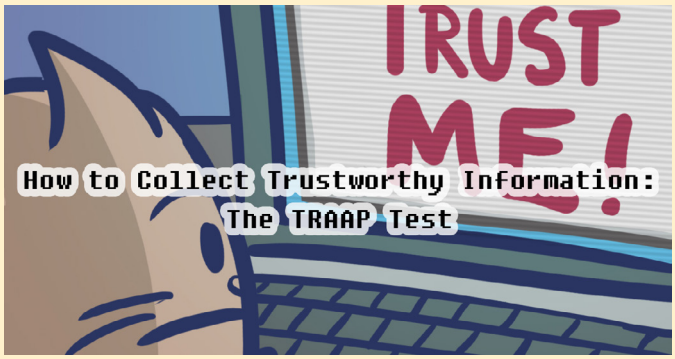
Support materials for a number of the research topics are provided in Appendix A - Worksheets & Marking Rubrics, pages 42-54. As more are added, this KBI Teacher Resource will be updated on the KBI website.

SUPPORTING LEARNING	ASSESSMENT
This research assignment would work well both as a starting point and as a culminating activity after students have been through the socials lessons. Each of the seven topics has an activity that students will complete. There are grade appropriate options for ways students can demonstrate their learning. As noted above, please see Appendix A for support materials. As more are added, we will update this KBI Teacher Resource on the KBI site.	A number of marking rubrics are provided in Appendix A. As more are developed, we will update this KBI Teacher Resource on the KBI site. Please use or adapt as needed. This assignment does not have a quiz. Therefore, no vaccines can be earned.

FOR GRADES 4-12
THE POWER OF THE STORY

This lesson uses a discovery learning approach with three short news stories (adapted from real anti-vaccine information found online) that sound extremely terrifying, only to discover that this is about a common object they use every day: a pencil. The purpose is to illustrate how easy it is to create misinformation on the internet, and how easy it is to be swayed emotionally to become afraid of a common object. Through the quiz questions, students are introduced to the idea that learning to evaluate sources of information is an important skill to develop.

SUPPORTING LEARNING	ASSESSMENT
Explain how easy it is to post information online. Also explain how easy it is to become swayed by what you read, especially things about health.	After reading the "fake" stories students reinforce/test understanding of how information can be misrepresented. This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.



FOR GRADES 4-7
HOW TO COLLECT TRUSTWORTHY INFORMATION: THE TRAAP TEST

The TRAAP checklist is an evaluation method that helps you know where and how to find trustworthy information. The TRAAP checklist is so called because each letter stands for something you should look for in reliable information: **T**imeliness, **R**elevance, **A**ccuracy, **A**uthor, and **P**urpose (TRAAP).

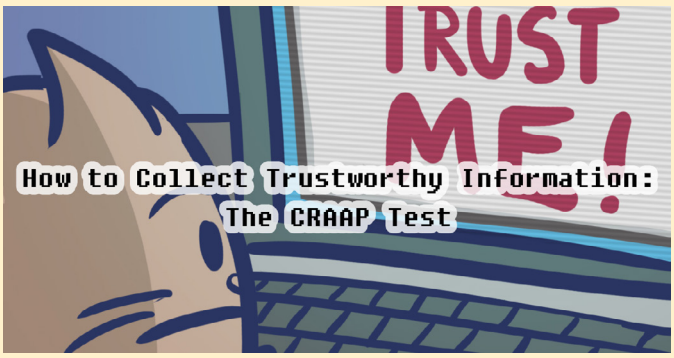
An 11-minute video, "Evaluating Websites (for Elementary students)" developed by the Oregon School Library Information System.

SUPPORTING LEARNING	ASSESSMENT
Explain how easy it is to post information online and to become swayed by what you see, hear or read. That is why it helps to have a way to check whether the information we find is trustworthy.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

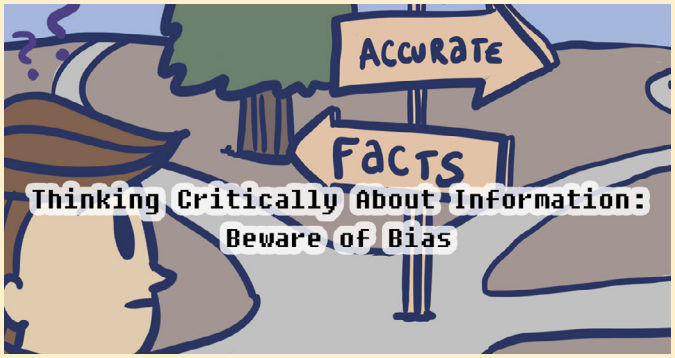
FOR GRADES 8-12

HOW TO COLLECT TRUSTWORTHY INFORMATION: THE CRAAP TEST

A 2-minute video explains in simple language how to evaluate information using a checklist to test: **C**urrency, **R**elevance, **A**uthority, **A**ccuracy, and **P**urpose (CRAAP). It was created by SenecaLibraries for educational purposes and shared through Creative Commons Attribution licence. A 5-minute video developed by the Academy of Art University, San Francisco, CA, provides a more detailed explanation of the CRAAP evaluation method. This video is widely used by high schools and post-secondary institutions throughout North America.



SUPPORTING LEARNING	ASSESSMENT
Explain how easy it is to post information online and to become swayed by what you see, hear or read. That is why having a method to check the information is beneficial. It does not take long to become trained in recognizing unreliable information, and to keep looking for better sources/websites.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.



FOR GRADES 4-12

THINKING CRITICALLY ABOUT INFORMATION: BEWARE OF BIAS

Web article describes one of the thinking errors known as bias. The article describes different examples of how bias can make it hard to accept new information that doesn't agree with what we already believe.

SUPPORTING LEARNING	ASSESSMENT
There are ways to introduce bias in an age-appropriate manner. For example, students can consider whether they have ever tried to convince others to agree with their opinion. Ask them to consider movies, games, music, sport/physical activities, clothes, etc. Have them pair-up and try to convince their partner to like something they like. It will be easy if the person already has the same opinion, but if not, it may be much more difficult.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

Back to Table of Contents

FOR GRADES 4-12
HOW TO TEST IDEAS BY CREATING EXPERIMENTS: THE SCIENTIFIC METHOD

A web article looks at how to test ideas using the scientific method. It explains the six steps of the scientific method using a story about dangerous pencils as an example.

A 7-minute video, “The SCIENTIFIC METHOD (Elementary Version)” developed by LombardiLabs.

SUPPORTING LEARNING	ASSESSMENT
Explain that using a scientific method to test ideas helps us think more critically, rather than going on “gut feelings” alone.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 8-12
THINKING CRITICALLY ABOUT EXPERIMENTS: TRY TO PROVE YOURSELF WRONG

A web article starts with a video that challenges people to find the pattern ‘rule’ in a list of three numbers to illustrate how we can fall into the “thinking trap” of trying to fit new information into established patterns or ways of thinking and prove ourselves right.

A 4-minute video, “Can You Solve This?” developed by Veritasium.

This lesson uses the example of the Michelson-Morley experiment (about light waves) to describe how important it can be to test our hypotheses.

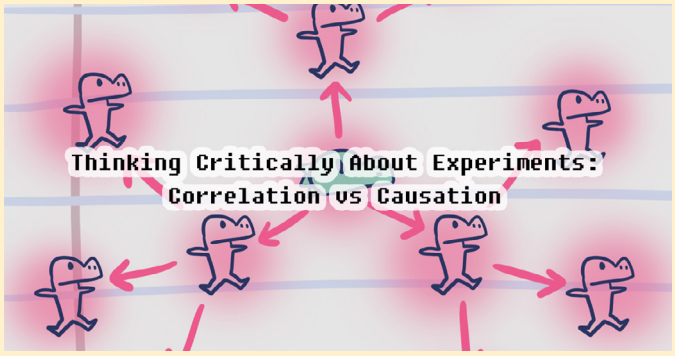
A 4-minute video, “Neil deGrasse Tyson explains the Michelson-Morley experiment excerpt from UNDAUNTED” from Future Science Media.

SUPPORTING LEARNING	ASSESSMENT
Explain that if we really want to think critically, we need to examine an opposite point of view to see if it has any merit.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 8-12

THINKING CRITICALLY ABOUT EXPERIMENTS: CORRELATION VS CAUSATION

This web article is about how to make good hypotheses about the patterns we see in the world. It uses examples to show how correlation is different from causation, and how we need to investigate so we don't mistakenly see causation in things that are related to each other in other ways.



SUPPORTING LEARNING	ASSESSMENT
In this lesson, students will learn how to make good hypotheses, and how to avoid being tricked into making bad ones. Explain that there are three different ways that correlation can be misleading, and that correlation does not always mean causation.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

Back to Table of Contents

FOR GRADES 4-12
WHAT IS GLOBAL INEQUALITY?

This web article explains the meaning of global inequality in childhood immunization and why this is happening. An infographic from UNICEF shows that 2.5 million children's lives are saved by vaccines but still 1.5 million children die because they are not given life-saving vaccines.

There is a 3-minute video called "If the World Was Only 100 People" by Knovva Academy.

There is also a 5-minute video called "Global Issues: Health" by 100 People Foundation.

SUPPORTING LEARNING	ASSESSMENT
Explain how students are helping to save the lives of children in developing countries by answering quiz questions on KBI. Read over the web article together. Have students list the three main reasons that children don't get vaccines. These are: • Lack of funding and poverty • Misinformation • War and violence	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-12
LACK OF FUNDING AND POVERTY

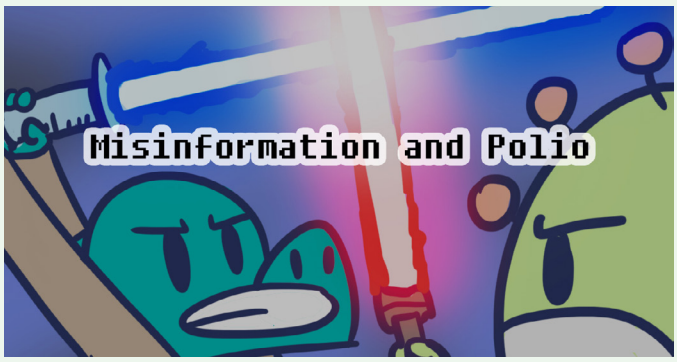
A web article explains what it takes to make vaccines and get them to children in isolated areas far from health facilities. Vaccines have to stay cold while being delivered, which creates another challenge. There are two videos from UNICEF:

- A 4-minute video showing the long journey vaccines take in Chad, a large country in Africa.
- A 2-minute video of two South African mothers trying to get their children vaccinated shows unequal access to vaccines.

An infographic from Gavi (Global Alliance of Vaccines and Immunizations) shows how vaccines help prevent poverty in some areas of the world.

SUPPORTING LEARNING	ASSESSMENT
Explain how children do not always have the same health-care in some countries. The three videos show how hard it can be to get vaccines to children in rural and remote places. Also, when people become ill (from diseases that could have been prevented by a vaccine), they are not as able to work and live a healthy and happy life. In fact, millions of people live in poverty because of having diseases they could have avoided had they been able to get vaccinated.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-5 6-12
MISINFORMATION AND POLIO



There are age-appropriate versions of this lesson for grades 4-5, and grades 6-12.

A web article describes what polio is and how misinformation is making it difficult to immunize children in some places. A UNICEF video shows religious leaders in Pakistan who taught people that the polio vaccine was not dangerous but life-saving.

A 1-minute video, “Polio Survivor Dennis Ogbe” from Rotary International (shown to grades 4 and 5).
A 7-minute video, “The Last Few Polio Survivors – Last of the Iron Lungs” from Gizmodo (shown to grades 6-12).
A 3-minute video, “Religious leaders help in changing misconceptions about the polio vaccine” from UNICEF (shown to grades - 4-12).

SUPPORTING LEARNING	ASSESSMENT
Ask students to share examples of misinformation. Explain that the religious leaders in this Pakistan community decided to stop misinformation by educating people about the life-saving benefits of the polio vaccine.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-5 6-8 9-12
WAR AND VIOLENCE

There are age-appropriate versions of this lesson for grades 4-5, grades 6-8, and grades 9-12.

A web article describes the war in Syria, how people there have been affected by war (people killed and displaced) and its effects on children, and how the war lowered the vaccination rate from 80% to 43% in three years (2010-2014). During war people lose their possessions and cannot access information. Vaccines are also either unavailable or health workers have difficulty getting to the people to immunize them.

This includes an aerial image of areas of a neighbourhood damaged or destroyed by violence.

4-minute video, “This Is Home: Children Document Life in Largest Syrian Refugee Camp” from ABC News (grades 4-5 only).

5-minute video, “The war in Syria explained in five minutes” from Guardian Animations (grades 6-12).

3-minute video, “Syrian kids explain the war” from BBC News (grades 9-12).

6-minute video, “Saving Kids From Polio in Islamic State Territory “ from National Geographic. This National Geographic video shows the difficulty health workers face when trying to get polio vaccines to children in Syria.
WARNING: Please review the video before showing to your students as the gunfire and situations presented are graphic and real. This video was made by journalists in war-torn Syria (grades 4-12).

SUPPORTING LEARNING	ASSESSMENT
Introduce the lesson by explaining war and violence is unknown to us here in Canada; however, this is not the case in Syria.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-12

HELPING STOP INEQUALITIES IN CHILDHOOD IMMUNIZATION

A web article explains the different organizations provincially, nationally, and internationally that help support better health for children around the world with a focus on immunization. There is a 3-minute video on WHO UNICEF and Gavi (Global Alliance for Vaccines and Immunizations), organizations that support immunization efforts.

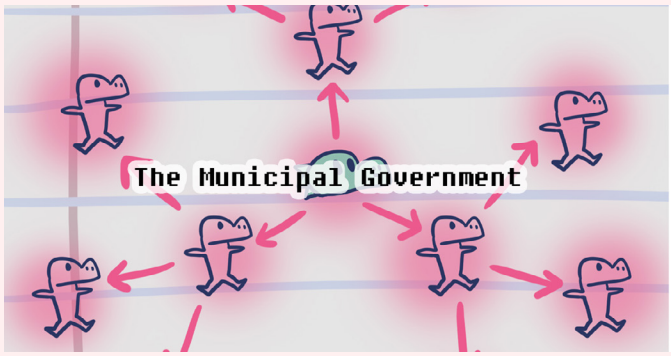
SUPPORTING LEARNING	ASSESSMENT
The literacy level is most appropriate for grades 6 and up; however, this lesson topic is covered in some grade 4 and 5 curricula. Please adapt as needed for your classroom. Explain how students are helping children in developing countries receive vaccines, and helping save lives by answering quiz questions on KBI related to global quality of life.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-7 11-12
CANADA'S THREE LEVELS OF GOVERNMENT

Imagine starting a society from scratch. What are the things that need to be considered for a society to work? In Canada, there are three levels of government: Municipal, Provincial/ Territorial, and Federal. Some areas have overlap from one level to another, and examples related to health are used to illustrate this.

A 3-minute video, "The Levels of Government" from Student Vote, a program from CIVIX.ca.

SUPPORTING LEARNING	ASSESSMENT
Brainstorm with students about what sort of considerations would be involved in starting a society from scratch. Explain that they are going to learn how government works.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.



FOR GRADES 4-7 11-12
THE MUNICIPAL GOVERNMENT

The municipal government mostly deals with matters that affect local cities/towns.
For example:

- Public Parks
- Libraries
- Social Services
- Local Police and Fire
- Garbage and Recycling
- Public Transportation
- Water and Sewage
- Public Health

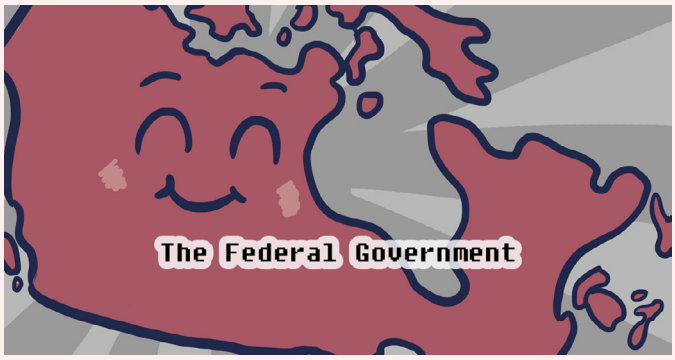
SUPPORTING LEARNING	ASSESSMENT
Ask students to think of services that are offered from the local government. Perhaps they use a local recreation centre or have been to a local health clinic.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-7 11-12
THE PROVINCIAL/TERRITORIAL GOVERNMENT

The provincial government mostly deals with matters that affect a province/territory. The provincial legislatures are limited to the powers that areexplicitly given to them in the Constitution. They are not allowed to take over powers given to the federal government. Provincial government matters include:

- Education
- Road Signs
- Lottery
- Tourism
- Transportation
- Driver's License
- Provincial Parks
- Marriage Certificates
- Birth Certificates
- Energy (such as electricity)
- Health Care

SUPPORTING LEARNING	ASSESSMENT
The literacy level is most appropriate for grades 6 and up; however, this lesson topic is covered in some grade 4 and 5 curricula. Please adapt as needed for your classroom.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.



FOR GRADES 4-7 11-12
THE FEDERAL GOVERNMENT

The federal government deals with matters that affects everybody in Canada. They are not allowed to take over powers given to the provincial government. Federal government matters include:

- Global Affairs
- Criminal Law
- Canadian Currency (money)
- Army
- Canada Post
- Citizenship
- Copyrights
- Civil Rights
- Fisheries
- Royal Canadian Mounted Police (RCMP)
- Old Age Pensions

SUPPORTING LEARNING	ASSESSMENT
Explain that the Federal Government is at the national level, meaning Canada-wide. Kids Boost Immunity is funded nationally by the Public Health Agency of Canada, so it has to be made available in every province and territory.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-12

CANADA'S INTERACTIONS WITH THE GLOBAL COMMUNITY – WORLD HEALTH

Canada is part of a global community that is made up of about 200 countries and over 7.5 billion people. In this shared world community, many factors affect health. Factors explored in this lesson include geographical, environmental, political, economic, and social aspects of health.

SUPPORTING LEARNING	ASSESSMENT
Grades 4-6 students may need some background to understand the terms geography, environment, politics, the economy and social aspects of health. For example, bullying is an issue many will know about. Review the lesson for appropriate reading level for these younger grades. It works well to pair stronger and weaker readers.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-12

READING A MAP: LATITUDE AND LONGITUDE

Looking at data can help you find patterns in health issues and understand which factors might be causing them. This web article explains how to identify a location on a map using latitude and longitude. Examples of data from a global perspective are presented through a series of world maps. A number of health-related factors are shown such as climate, gross national income (GNI), diabetes, and others.

SUPPORTING LEARNING	ASSESSMENT
Explain that learning about longitude and latitude is important because these coordinates are used in many ways.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-12

WHY GLOBAL HEALTH ISSUES REQUIRE COOPERATION

This lesson includes a student research activity. A web article explains how solutions to health issues require a cooperative effort from governments, non-government organizations (NGOs), international groups, and individuals working together to help keep everyone healthy. The World Health Organization has identified the top ten world health threats. Students are asked to choose one of these to investigate further, and to think of ways that they as individuals can help fight the specific global health threat. Some guiding sentences are provided to help focus students in their investigation.

SUPPORTING LEARNING	ASSESSMENT
Brainstorm as a class about global news topics anyone has read or heard about recently. Ask students to see whether any of these relate to the top ten world health threats that they will read about in this lesson. For example, air pollution and climate change, war, flu or other epidemics.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-12

WHY DID THE WORLD HEALTH ORGANIZATION DECLARE VACCINE HESITANCY AS A TOP 10 ISSUE?

A web article exploring one of the top ten world health threats, which is "Vaccine Hesitancy". Questions are answered related to what vaccines do, and how they work.

A 4-minute TedEd video, "How we conquered the deadly smallpox virus" by Simona Zompi.

Myths and facts about vaccines are presented. For example, whether vaccines are made with safe ingredients, and whether vaccines cause autism.

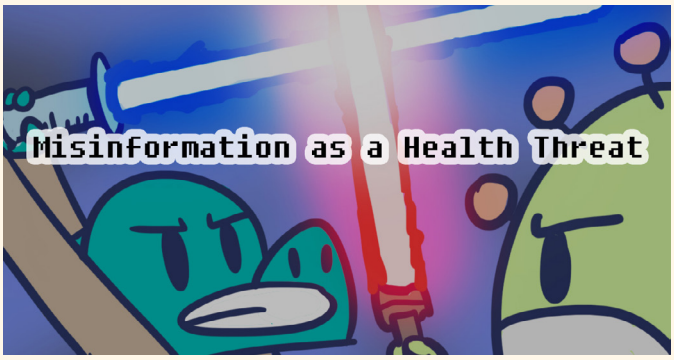
A 7-minute video, "Debunking AntiVaxxers" by ASAP-Science. This episode is sponsored by Bill and Melinda Gates.

SUPPORTING LEARNING	ASSESSMENT
It is common for people to have concerns about vaccines. Discuss the pros and cons of vaccinations as a class. Then have students do the lesson to learn the facts about some of the myths surrounding vaccines. After the lesson, ask if this information has helped provide some clarification.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-12

MISINFORMATION AS A HEALTH THREAT

Interactive web article presenting a true misinformation story about dihydrogen monoxide (DMHO) with a 4-minute video, "We Need to Ban This" by Reagan Wolf. After watching the video, students select whether they agree that DMHO is dangerous, or disagree and believe it is safe. Misinformation caused city councillors in a town in Orange County, California, to be fooled about DMHO, as presented in a news article by World Dispatch US news. The ease with which we can be fooled by misinformation is compared to that which is causing one of the top ten global health threats around vaccine hesitancy. This is comically



SUPPORTING LEARNING	ASSESSMENT
Explain that "misinformation" means false or inaccurate information, especially that which is deliberately intended to deceive. Ask students to share any examples they have of misinformation. Then introduce the lesson by saying that even those in leadership positions can be fooled by misinformation.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-12

MEASLES, THE COMEBACK KID

A web article explaining how measles, which was eradicated in Canada in 1998, is now a serious health issue, not only here in Canada but in other parts of the world. The World Health Organization (WHO) reported that in 2017 there were 110,000 deaths globally, mostly among children under the age of five. News headlines from The UK Guardian and NBC News show that measles is a top news issue. In Canada and Europe, vaccine misinformation has some parents choosing not to protect their children against measles and other vaccine preventable diseases. A 5-minute video, "Measles Explained - Vaccinate or Not?" by Kurzgesagt, sheds light on the topic.

SUPPORTING LEARNING	ASSESSMENT
Explain to students that for much of the 20th century (1900s), diseases such as polio, measles, and whooping cough were fairly common, causing serious health problems. Measles is now back, and it is important to learn about why that is and what we can do about it.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-12
CANADA'S RESPONSE TO VACCINE HESITANCY AT HOME

A web article provides information about health organizations whose job it is to make sure that accurate information is made publicly available. The term "health authority" is explained. A group that is fighting vaccine misinformation is BC's First Nations Health Authority.

A 7-minute video from CBC News, Calgary, presents an interview with the national manager of Kids Boost Immunity, Ian Roe, about the program. Ian talks about the many lessons related to provincial curriculum outcomes in health, social studies, and science for grades 4-12.

SUPPORTING LEARNING	ASSESSMENT
Explain that health professionals from many different organizations are coordinating efforts to help keep Canadians safe from preventable diseases. This lesson sheds some light on these organizations.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-12
CANADA'S RESPONSE TO VACCINE HESITANCY ABROAD

A web article explains how Canada helps fight vaccine hesitancy around the world by building alliances and helping other countries dispel myths and vaccine misinformation. Two examples are provided to illustrate Canada's role in this.

The first example is the Vaccine Safety Net (VSN), formed by the World Health Organization (WHO) in 2003 to identify websites that provide reliable information on vaccine safety. The VSN is a global network of over 60 websites in 16 languages across 28 countries.

The VSN websites are evaluated by the WHO to ensure that they provide accurate information on vaccine safety. The rules are strict and it's not easy to get approved. This way, it can be easy for people around the world to identify if a website is trustworthy.

A 2-minute video, "What is the WHO Vaccine Safety Net" created by the World Health Organization" (WHO).

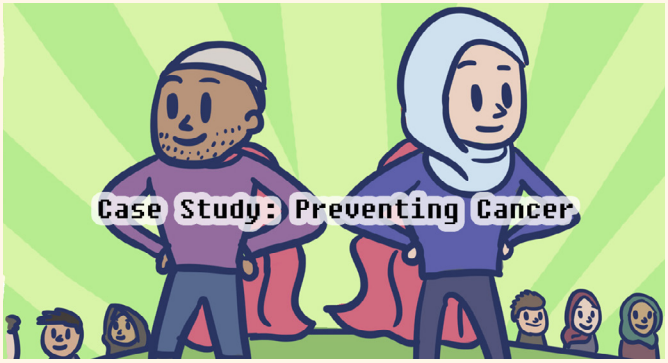
Gavi (formerly the Global Alliance for Vaccines and Immunizations) is an international organization that brings together government, NGOs, for-profit companies, and inter-governmental organizations. A 5-minute video, "A Gavi Pledging Conference - 2015" from MSNBC, helps provide better understanding around this.

SUPPORTING LEARNING	ASSESSMENT
Explain that Canada helps fight vaccine hesitancy around the world by building alliances and helping other countries dispel myths and vaccine misinformation.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-12

CASE STUDY: PREVENTING CANCER WITH A VACCINE - CANADA VS RWANDA

Canada's health system is compared to that of a low-income country: Rwanda, Africa. Despite Canada being a wealthy country known to have good public healthcare, Rwanda has a 93% vaccination rate for the human papillomavirus (HPV) compared to Canada's 70%.



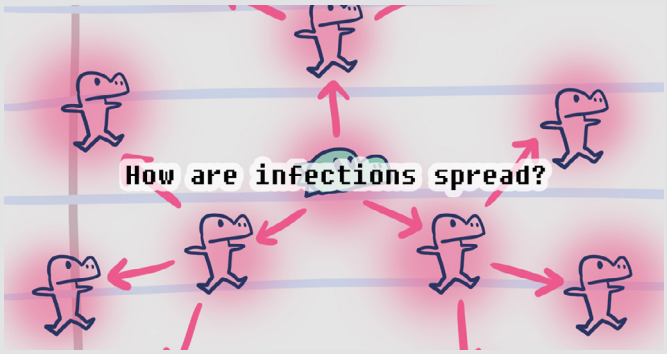
SUPPORTING LEARNING	ASSESSMENT
Explain how Canada may seem like one of the healthiest countries, but when it comes to children receiving certain vaccines, that is not the case. Rwanda is challenged by poverty and healthcare infrastructure, but is doing a better job.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-12

NEW DISEASES ON TURTLE ISLAND

This lesson includes a story describing the historical impacts of vaccine preventable diseases on Indigenous people in BC, with a focus on smallpox and an epidemic in 1862. Dani asks her family why she needs to get a needle (immunization) at school. She learns some history from an Elder in her community and her aunt, who is a community health nurse. The story ends by describing the resiliency of Indigenous peoples, despite the loss of so many people to diseases that can now be prevented by vaccines. It includes original illustrations by Shawna Duncan. The words above the door on the original illustration mean “Hi Everybody” in the Cree language.

SUPPORTING LEARNING	ASSESSMENT
Introduce the lesson by explaining that this is a story about a girl who is curious about why she needs to get immunized at school, and she ends up learning about history and the impacts of serious diseases, like smallpox, in the past. The words above the door on the drawing say “Hi Everybody” in the Cree language. The story writer and artist is a Cree and English woman who lives in British Columbia.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.



FOR GRADES 7-12

WHAT ARE INFECTIOUS DISEASES AND HOW DO THEY SPREAD?

A web article explains how infections are spread through the air, by touching something someone has touched, through direct contact, through contaminated food or water, and by some insects and animals. Includes images.

SUPPORTING LEARNING	ASSESSMENT
Explain that diseases are spread in so many ways: through the air, through direct contact, through indirect contact, and through contaminated food or water, and through animals and insects. We’re surrounded by disease, so let’s learn how to fight it.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-12

WHAT ARE OUTBREAKS, EPIDEMICS AND PANDEMICS?

A short web article explains the differences between outbreaks, epidemics and pandemics. An 8-minute Ted Talk video looks at pandemics, how they spread, and how to prevent them.

SUPPORTING LEARNING	ASSESSMENT
Introduce the lesson explaining that infectious disease outbreaks are a regular occurrence and these can become very serious.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 7-12

HOW CAN WE PREVENT THE SPREAD OF INFECTIOUS DISEASES?

This interactive web article provides an illustrated guide on washing hands properly, which reduces the spread of infections by 80%.

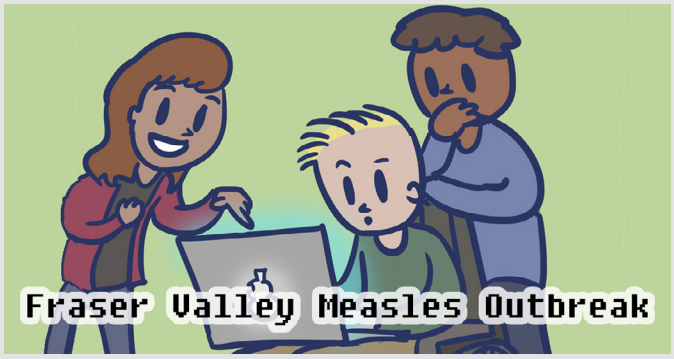
SUPPORTING LEARNING	ASSESSMENT
Explain that washing hands properly is one of the best ways to stop spreading infections. This protects yourself and others up to 80%. That's huge!	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

Back to Table of Contents

FOR GRADES 7-12
AN INVESTIGATIVE ACTIVITY: FRASER VALLEY MEASLES OUTBREAK

Students take on the role of journalist and are presented with different data sources on the BC Fraser Valley measles outbreak that began in March of 2014, in a small community that had low vaccination rates. Students analyze the information and create a journal blog about the outbreak, based on:

- Media articles
- Interviews with a public health nurse
- Descriptions about the spread of the measles and the measures for containment



SUPPORTING LEARNING	ASSESSMENT
Introduce the lesson by explaining that the students are going to report on the BC Fraser Valley Measles Outbreak of 2014 and that they need to gather as many facts from the various data sources provided as they can. They will then write a journal blog to explain to a public audience what happened. Tell them to include key information and develop a logical flow to their story. Suggest having a partner edit punctuation, spelling, grammar, etc. before handing in.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

THIS ACTIVITY HAS ITS OWN SECTION ON KBI

FOR GRADE 6 ONLY
AN INQUIRY ACTIVITY: BECOME AN OUTBREAK INVESTIGATOR

In this cross-curricular inquiry activity students play a starring role as a disease outbreak investigator helping with a measles outbreak that has occured in a local elementary school. Students work through a series of scenarios and tasks using language arts skills as they build vocabulary and write reports on their findings. For each task, students are given data to analyze as well as specific math problems to solve. The activity finishes with the outbreak investigator communicating their understanding through a creative presentation.

SUPPORTING LEARNING	ASSESSMENT
This activity allows students to experience what it is like to work as a public health disease outbreak investigator. It is flexible and engaging as teachers/students choose which people to interview to gain answers needed to solve tasks. Use the accompanying KBI Outbreak Investigator Teacher Resource to access all of the instructional and support materials. This can be downloaded from the link above (in the Teacher's Guide section of the site). There is an easy to follow Activity Plan which helps teachers pace this activity over a number of sessions. See also a Student Activity Booklet of worksheets: vocabulary/health facts, tasks, math notes, and reports. Students complete these and hand in. There is a supported learning version of the worksheets, i.e., some information is filled in and less writing is required. For assessment there are answer keys, marking suggestions, marking rubrics, etc. There is also a guide for tracking students scores on the final quiz. **Find activity under LESSONS just above Bonuses & Quizzes, on KBI.**	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

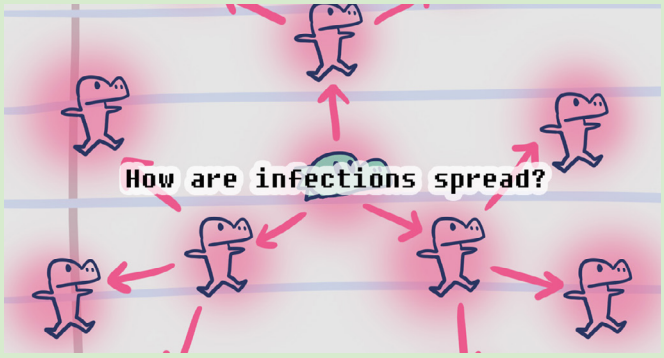
Back to Table of Contents

FOR GRADES 4-6

WHAT ARE GERMS?

Web article explains about germs and the body's natural defences. Includes cartoon images.

SUPPORTING LEARNING	ASSESSMENT
Introduce the lesson by explaining that students are learning about germs and infections because in schools, students receive a number of vaccines that protect them against some really bad infections/diseases.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.



FOR GRADES 4-6

HOW ARE INFECTIONS SPREAD?

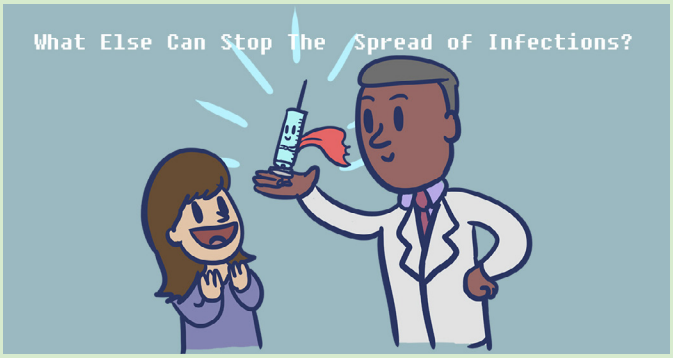
A web article explains how infections are spread through the air, by touching something someone has touched, through direct contact, through contaminated food or water, and by some insects and animals. Includes images.

SUPPORTING LEARNING	ASSESSMENT
Introduce the lesson by explaining that infections are not easy to see so it is important to know how they are spread.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-6
WHAT'S THE BEST WAY TO STOP SPREADING INFECTIONS?

This interactive web article provides an illustrated guide on washing hands properly, which reduces the spread of infections by 80%.

SUPPORTING LEARNING	ASSESSMENT
Introduce the lesson explaining that everyone can lower their chance of getting an infection by 80%.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.



FOR GRADES 4-6
WHAT ELSE CAN STOP THE SPREAD OF INFECTIONS?

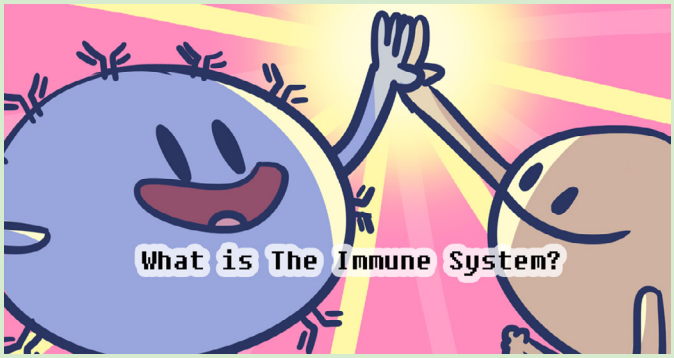
A web article explains other ways to stop the spread of infections including avoiding touching mouth, eyes and nose, staying home when sick, keeping vaccines up to date, cleaning where germs are likely to be found, and preparing food safely. Includes images.

SUPPORTING LEARNING	ASSESSMENT
Introduce the lesson by explaining that there are a number of things that we can do in addition to washing hands properly to prevent the spread of infections.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-6

WHAT IS THE IMMUNE SYSTEM?

This interactive web article uses the metaphor of a castle to explain how the human body uses white blood cells to fight off infections. Students can also read the scientific explanation. Includes cartoon images.



SUPPORTING LEARNING	ASSESSMENT
Introduce the lesson by explaining that students are going to learn about how the human body has its own way of fighting off infections. Some really bad diseases require protection through vaccines, and students will learn about some of these vaccines later.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-6

WHAT ARE VACCINES AND HOW DO THEY WORK?

A web article explains how in Canada between 1949 -1957 11,000 people were paralyzed by polio. Thankfully, scientists knew how the immune system works and were able to create a vaccine so we no longer worry about getting polio in Canada. Vaccines and how they work are explained. There is an infographic that shows how well vaccines work.

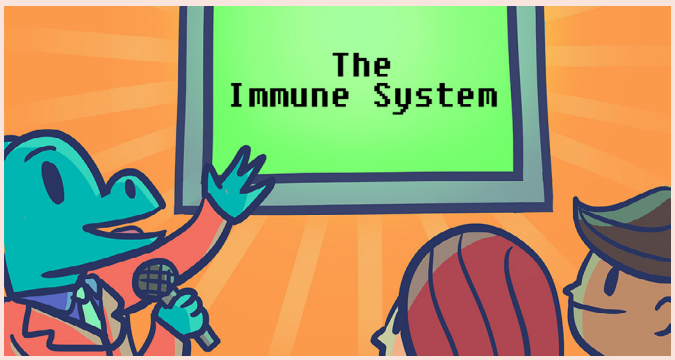
SUPPORTING LEARNING	ASSESSMENT
Introduce the lesson explaining that people need medical help to fight certain bad infections/diseases like polio, measles, smallpox, and many others that the students will learn about.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

Back to Table of Contents

FOR GRADES 7-12

THE IMMUNE SYSTEM

Web article that explains the functions of the immune system looking at cells, organs, and tissues.



SUPPORTING LEARNING	ASSESSMENT
Introduce the immune system by reading the web article provided. You may want to have students record the explanations for the capitalized words, as they are the focus of the quiz questions.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 7-12

THE INNATE IMMUNE SYSTEM

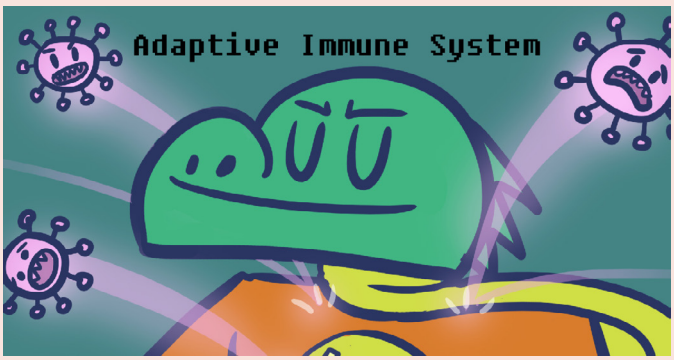
A short web article explains that the innate immune system is our body's first line of defence against pathogens. A 3-minute video from Crash Course covers phagocytes, neutrophils, macrophages, and killer cells. The whole video is 9 minutes long if students elect to watch it all.

SUPPORTING LEARNING	ASSESSMENT
This lesson is self-explanatory. The quiz is to be completed after reading the web article and viewing the video.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 7-12

THE ADAPTIVE IMMUNE SYSTEM

A short web article explains that the adaptive immune system is our body's second line of defence against pathogens. Antigens and B and T cells are explained in a way grade 8 students will understand. This includes a 2-minute video from Crash Course. The whole video is 9 minutes long if students elect to watch it all.

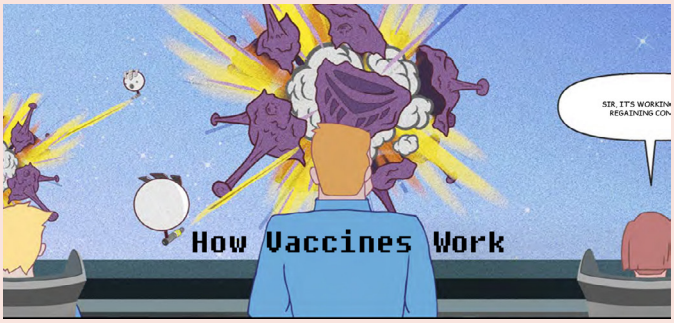


SUPPORTING LEARNING	ASSESSMENT
This lesson is self-explanatory. The quiz is to be completed after reading the web article and viewing the video.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 7-12

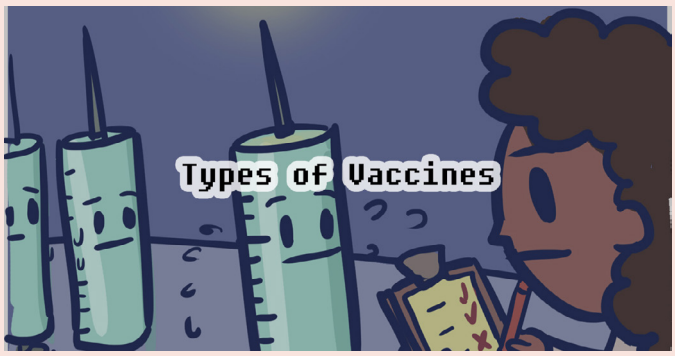
HOW VACCINES WORK

A short web article introduces key terms. A 4-minute video from YouREKA Science describes vaccines and how they work. The visual representation of key terms is excellent for supporting student learning. Immunity Warriors is a 12-minute motion comic from canimmunize.ca that uses a metaphorical zombie war to explain how vaccines work.



SUPPORTING LEARNING	ASSESSMENT
After reading/viewing the lesson, students may want to create an artistic representation of part or all of the immune system i.e., develop a metaphor, rap, song, picture, etc.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

Back to Table of Contents



FOR GRADES 7-12

TYPES OF VACCINES

A web article and a 4-minute TED Talk video that describes how different types of vaccines are made including live attenuated vaccines, inactivated vaccines, and subunit vaccines.

SUPPORTING LEARNING	ASSESSMENT
Introduce the lesson by explaining that the science behind vaccines is interesting and there are a number of ways that vaccines are created.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 7-12

HOW EFFECTIVE ARE VACCINES?

A short web article outlines the success rate of vaccines in Canada. A vaccine infographic poster from the Public Health Agency of Canada illustrates the effectiveness of vaccines. This compares the number of cases of vaccine-preventable diseases before and after the introduction of the vaccine.

SUPPORTING LEARNING	ASSESSMENT
If possible, put this poster up in the classroom/ school.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-12

WHAT ARE ANTIBIOTICS AND HOW DO THEY WORK?

A short web article provides some history on how penicillin, the first antibiotic, was accidentally invented. Two short videos from the BC Centre for Disease Control (BCCDC) discuss the importance of antibiotics.

SUPPORTING LEARNING	ASSESSMENT
The reading level should work for all grades, although it is suggested that the lesson be read aloud to grade 4-5 students. Provide clarification on any words that are unknown, prior to students taking the quiz.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-12

ANTIBIOTIC RESISTANCE

A web article describes what antibiotic resistance is, how it occurs, why it is a concern, and how we can prevent it. Four short videos from the BC Centre for Disease Control (BCCDC) are provided.

SUPPORTING LEARNING	ASSESSMENT
Introduce the lesson by explaining that if antibiotics are not taken properly, they can stop having any effect because bacteria become resistant to them. The reading level is too advanced for grades 4-5 and therefore the lesson should be read aloud to students. A few words can be simplified. For example, “eliminate” could be phrased as “stop”. The videos reinforce the key message and these strategies will be enough to prepare younger students for the quizzes.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-12

THE SURPRISE GUEST

This lesson includes a story based on the personal history of Elder Fred John and the impact of tuberculosis (TB) on his family. It includes content related to the history of Indigenous peoples at residential schools and Indian hospitals in Canada. The story explains what TB is, how it is transmitted, treatment before and after the discovery of antibiotics, antibiotic resistance, and the need for antibiotic stewardship. Includes original illustration by Shawna Duncan. This story is based on the personal history of Elder Fred John from the Xaxli'p [pronounce HAA-clip] First Nation in British Columbia.

SUPPORTING LEARNING	ASSESSMENT
Explain that this lesson on tuberculosis is based on the personal history of Elder Fred John from the Xaxli'p [pronounce HAA-clip] First Nation in British Columbia.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-12

ANTIBIOTIC STEWARDSHIP AND VACCINES

This web article uses whooping cough (pertussis), a bacterial infection, to illustrate how antibiotics, as well as a pertussis vaccine developed in the 1960s, practically eradicated the disease. However, a decade later, whooping cough came back because people were unfamiliar with the disease and not enough children were being vaccinated. Using Great Britain as an example, deaths from whooping cough were close to zero in the 1960s. Unfortunately, by the 1970s, people started to forget how successful the vaccine had been in combating this serious disease. As a result, immunization rates went down from about 80% to 30%, and in some places rates were as low at 10%! This resulted in more than 100,000 cases and at least 36 deaths in Great Britain alone.

To further expand on this topic, there is a 4-minute TEDEd video, "What Causes Antibiotic Resistance?" by Kevin Wu to explain the proper use of antibiotics.

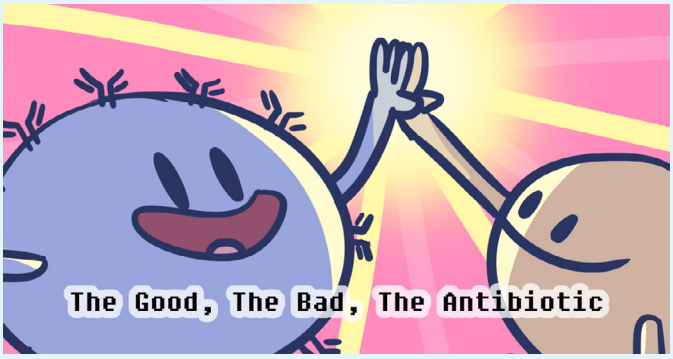
SUPPORTING LEARNING	ASSESSMENT
Introduce the lesson by explaining that students will learn the term "antibiotic stewardship". They will also learn how sometimes, both vaccines and antibiotics are needed to treat a disease.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADES 4-12

THE GOOD, THE BAD, THE ANTIBIOTIC

This web article discusses germ prevention such as handwashing with regular soap (not antibacterial soap), and explains that antibiotics only work against infections caused by bacteria. It shows how necessary part of antibiotic stewardship is not using antibiotics for infections caused by a virus, like the common cold and flu (influenza). Using antibiotics wisely helps to keep the good bacteria in your body. That is why you only use important antibiotic medicines when needed.

A 2-minute video, “Good Germs vs Bad Germs” helps explain this further.



SUPPORTING LEARNING	ASSESSMENT
Introduce the lesson explaining the proper use of antibiotics is a really important	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

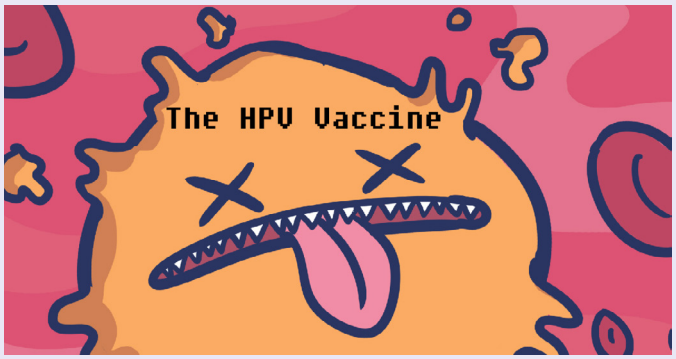
FOR GRADE 4 AND SECONDARY LEVEL 3 ONLY

HOW TO HANDLE YOUR SHOTS LIKE A CHAMP

Immunization Day is coming! This short web article is for students to learn about vaccines (also called shots) and what they can do to make Immunization Day easier. It includes a 4-minute video called “School Vaccinations – What you need to know about vac-

SUPPORTING LEARNING	ASSESSMENT
Explain that nurses, schools, and families work together to protect children against preventable diseases by making vaccines available in school on Immunization Day. Being informed about how vaccines work, that they are safe, and learning about the diseases that can occur without getting the vaccine is important knowledge for students to gain as part of Immunization Day. For some, getting “shots” can be stressful and students will get some tips to help with that.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

Back to Table of Contents



FOR GRADE 4 ONLY

HUMAN PAPILLOMAVIRUS (HPV) VACCINE

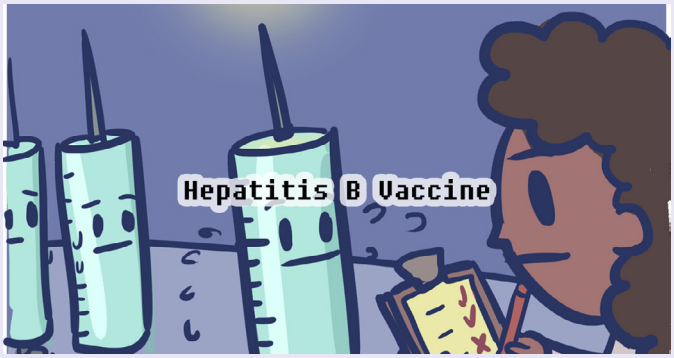
This short web article on HPV and three-minute video were developed by the Cancer Council Victoria, Australia, and New Zealand Ministry of Health called "HPV vaccine for teenagers".

SUPPORTING LEARNING	ASSESSMENT
Introduce the lesson explaining that students are going to learn about the Human Papillomavirus (HPV). A surprising fact is that 75% of adults get a form of HPV and this sometimes leads to cancer. This is why it is important to learn more about it. HPV is sexually transmitted and the vaccine is best given at a young age, which is why they are studying it now.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

FOR GRADE 4 CATCH-UP ONLY

HEPATITIS B VACCINE

Web article on Hepatitis B. 6-minute video developed by ImmunizeBC illustrates how hepatitis B affects the body and how to protect against it.



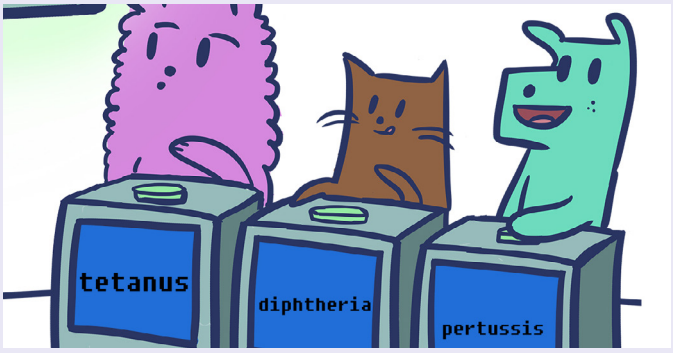
SUPPORTING LEARNING	ASSESSMENT
Introduce the lesson by explaining that students are going to learn about the Hepatitis B vaccine that protects against a dangerous virus that attacks the liver. The catch-up hepatitis B vaccine is only offered in grade 4 to students that did not get it at a younger age.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

Back to Table of Contents

FOR SECONDARY LEVEL 3 ONLY
MENINGOCOCCAL VACCINE (MENINGITIS)

This lesson includes a short web article about the meningococcal infection, which is caused by different bacteria types and a 2-minute video from Toronto Public Health. Permanent complications of some meningococcal infections include brain damage, deafness, and loss of limbs.

SUPPORTING LEARNING	ASSESSMENT
Introduce the lesson by explaining that students are going to learn about meningococcal vaccines that protect against dangerous infections such as meningitis (infection in the lining of the brain) and septicemia (infection of the blood).	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.



FOR SECONDARY LEVEL 3 ONLY
TETANUS DIPHTHERIA AND PERTUSSIS (Tdap) VACCINE

This 4-minute video was developed by the Immune Hero Department of Health & Human Services, State Government of Victoria, Australia. “Everything a teen should know about the DTP vaccine”.

A web article explains the small differences between the information presented in the video for Australia and vaccine practices in Canada.

SUPPORTING LEARNING	ASSESSMENT
Introduce the lesson by explaining that students are going to learn about the tetanus, diphtheria, and pertussis vaccine, which protects against these three diseases.	This lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80%. Students can retake the lesson quiz as many times as they want until they earn the vaccine.

BONUS CONTENT

This section is a good place to find a variety of extra content that provides students with other learning materials. Different types of content that might be available are described below.

Additional Lessons/Quizzes

Lessons/quizzes that don't quite fit the topics on the KBI site will be provided here.

Career Connections

KBI will be adding various career profiles related to the field of health.

Correspondence

Sometimes groups such as UNICEF Canada, send us an update. For example, last year KBI received a letter from UNICEF highlighting the impact that donated vaccines had on children around the world. UNICEF Canada thanked all of the students on KBI for their contribution. This included photographs of some of the children who had received vaccines.

Current Relevant News

There might be news items that will be highlighted and turned into a lesson. For example:

- A sporting event and how athletes are trying to stay healthy
- Recent disease outbreaks
- Information about health vaccines

Relevant Stories

There might be stories of interest to students such as stories about new movies, games, etc.

t

PAGES 43-55 CONSIST OF NOTE-TAKING WORKSHEETS AND MARKING RUBRICS FOR LESSONS OUTLINED BELOW. USE/ADAPT AS NEEDED.

FOR GRADES 4-7
CROSS-CURRICULAR INQUIRY RESEARCH ASSIGNMENT

Research Topics

1. Create a virtual tour of municipal, provincial, and federal government services related to keeping you safe from infectious diseases.
   pages 43-45

2. Describe the actions you think we should take to eliminate (get rid of) global inequality in immunization.
   pages 46-48

3. If you were Prime Minister, how would you solve the issue of misinformation?
   pages 49-51

4. Create a poster of some of the things you can do to keep yourself healthy from diseases. None.

5. As an evil villain, you just got caught promoting a campaign trying to get everyone as sick as possible, and you have to write an apology letter to the world.
   pages 52

6. An Indigenous story writer worked with Elders to share stories about Turtle Island. Explore the themes in these stories.
   pages 53

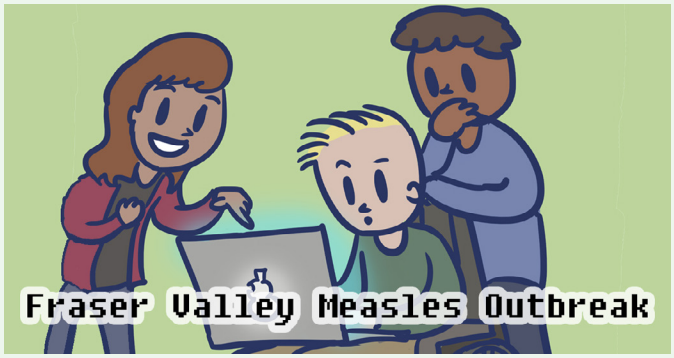
7. Create a world map highlighting some of the impacts of infectious diseases.
   pages 54

FOR GRADES 7-12
FRASER VALLEY MEASLES OUTBREAK

Students take on the role of journalist and are presented with different data sources on the BC Fraser Valley measles outbreak that began in March of 2014, in a small community that had low vaccination rates. Students analyze the information and create a journal blog about the outbreak, based on:

- media articles
- interviews with a public health nurse
- descriptions about the spread of the measles and the measures for containment

pages 55



Research Topic 1 NOTES

Create a virtual tour of municipal, provincial, and federal government services related to keeping you safe from infectious diseases.

Grade 4/5 - Identify **four** or more services from at least two government levels (municipal, provincial, federal)
Grade 6/7 - Identify **six** or more services from three government levels (municipal, provincial, federal)

NAME

Type of Service	Level of Govt.	Service Provided	Importance?
Identify the type of health service. For Example: • Physical activity • Mental wellness/support • Nutritional - food/drink • Substance abuse: alcohol &/or drug use • Medical conditions: diabetes, heart health, cancer, others	Identify the level of government that this service is offered. Some services may be offered at different levels and they will do different things: • Municipal • Provincial • Federal	Describe what is provided by the service. Consider: • What ages of people get the service? Children, teens, adults, seniors? • How often do people have to get the service? Weekly, monthly, when needed? • Where do people go to get the service?	How important do you think this service is? Choose from the following ratings: • Very important • Important • Kind of important • Not important Give clear reasons for your rating

MARKING RUBRIC Grade 4/5

Research Topic 1
Identify **four** or more services from at least two government levels (municipal, provincial, federal) that help keep us safe from infectious diseases

Name Date

Chart/Poster Project

	0	1	2	3	4
Title	No title	Partial/ incomplete title	Title is present but spelling or capitalization are incorrect	Title is correctly and neatly written	Title is correct, neat, creative and colorful
Name government service and level: • **municipal** • **provincial** • **federal**	No government services are identified	1 government service and level is partially identified	2 government services and levels are identified and are mostly correct	3 government services from two different levels are identified and are mostly correct	4 or more government services from two or more different levels are identified correctly
Describe services	No government services are described	1 government service is partially described	2 government services are described in some detail (2-3 sentences for each)	3 government services are described in detail (3-4 sentences for each)	4 or more government services are described in detail (4 or more sentences for each)
Give your opinion on importance of service: • **very important** • **important** • **kind of important** • **not important**	No opinion on importance given for any services	Opinion and reason given for 1 service	Opinions and reasons given for each of 2 services	Opinions and reasons given for each of 3 services, mostly clear explanations	Opinions and reasons given for each of 4 or more services, all are clearly explained
Appearance of content and use of space	Chart/Poster lacks neatness and is poorly organized	Chart/Poster lacks neatness and is mostly disorganized	Chart/Poster is somewhat organized and neat	Chart/Poster is organized, neat and clear	Chart/Poster is very organized, has good flow, with neat, easy-to-read lettering
Use of color and/or images	No color or visuals	1 use of color and/or a visual related to the topic	2 uses of color and/or visuals related to the topic	3 uses of color and/or visuals related to the topic, presented in a mostly neat, creative way	4 or more uses of color and/or visuals related to the topic, presented in a neat, clear and creative way
TOTAL					

MARKING RUBRIC Grade 6/7

Research Topic 1
Identify **six** or more services from at least two government levels (municipal, provincial, federal) that help keep us safe from infectious diseases

Name Date

Chart/Poster Project

	0	1	2	3	4
Title	No title	Partial/ incomplete title	Title is present but spelling or capitalization are incorrect	Title is correctly and neatly written	Title is correct, neat, creative and colorful
Name government service and level: • **municipal** • **provincial** • **federal**	No government services are identified	1-2 government services and level are partially identified	3-4 government services from at least two different levels are identified and are mostly correct	5 government services from three different levels are identified and are mostly correct	6 or more government services from three different levels are identified correctly
Describe services	No government services are described	1-2 government services are partially described	3-4 government services are described in some detail (3-4 sentences for each)	5 government services are described in detail (5-sentence paragraph for each)	6 or more government services are described in detail (5-sentence paragraph for each)
Give your opinion on importance of service: • **very important** • **important** • **kind of important** • **not important**	No opinion on importance given for any services	Opinion and reasons given for 1-2 services	Opinions and reasons given for each of 3-4 services	Opinions and reasons given for each of 5 services, mostly clear explanations	Opinions and reasons given for each of 6 or more services, all are clearly explained
Appearance of content and use of space	Chart/Poster lacks neatness and is poorly organized	Chart/Poster lacks neatness and is mostly disorganized	Chart/Poster is somewhat organized and neat	Chart/Poster is organized, neat and clear	Chart/Poster is very organized, has good flow, with neat, easy-to-read lettering
Use of color and/or images	No color or visuals	1 use of color and/or a visual related to the topic	2 uses of color and/or visuals related to the topic	3 uses of color and/or visuals related to the topic, presented in a mostly neat, creative way	4 or more uses of color and/or visuals related to the topic, presented in a neat, clear and creative way
TOTAL					

Research Topic 2 NOTES

Describe the actions you think we should take to eliminate (get rid of) global inequality in immunization.

Grade 4/5 - Identify at least **3 causes, impacts (ways children are affected) and suggest actions** that can help
Grade 6/7 - Identify at least **5 causes, impacts on children, and suggest actions** that can help

NAME

Causes of Global Inequality	Impact on Children	Organization that Help	Other Action Suggestions
Describe causes of global inequality in immunization . Some things to consider: • geographical limitations • political problems • war and violence • lack of funding and poverty	Explain how not being able to get certain vaccines affects children. Describe diseases that children who don't have access to health-care might catch. How might this affect a child's • schooling? • activities? • future?	Identify a few organizations that help. Describe what these organizations do. They might be: • NGOs (non-governmet organizations) • international or global organizations • national organizations	What other suggestions do you have that could help? Be creative. If you were a world leader, what would your wish list be?

MARKING RUBRIC Grade 4/5

Research Topic 2
Identify at least **3 causes, impacts (ways children are affected) and suggest actions** that can help

Name Date

Blog Post/News Article

	0	1	2	3	4
Title	No title	Partial/ incomplete title	Title is present but not clear, spelling or capitalization are incorrect	Title is correctly and neatly written	Title is written correctly and creatively captures topic
Causes of global inequality in immunization	No causes are identified	1 cause is partially identified and described	2 causes are identified and described somewhat (1-2 sentences each)	3 causes are identified and described somewhat (1-2 sentences each)	3 or more causes are identified and described in detail
Ways children are affected by not being immunized	Nothing is described	1 way children are affected is partially described	2 ways children are affected are described in some detail (1-2 sentences for each)	3 ways children are affected are described in some detail (1-2 sentences for each)	4 ways children are affected are described in detail (3 or more sentences for each)
Organizations that help	No organization is identified	1 organization is identified and partially described	2 organizations are identified and partially described	3 organizations are identified and described	3 or more organizations are identified and described in detail
Other action suggestions	No suggestion given	1 suggestion is partially explained	2 suggestions are partially explained	2 suggestions are clearly explained	2 or more suggestions are clearly explained and show thought and creativity
TOTAL					

MARKING RUBRIC Grade 6/7

Research Topic 2
Identify at least **5 causes, impacts on children, and suggest actions** that can help

Name Date

Blog Post/News Article

	0	1	2	3	4
Title	No title	Partial/ incomplete title	Title is present but not clear, spelling or capitalization are incorrect	Title is correctly and neatly written	Title is written correctly and creatively captures topic
Causes of global inequality in immunization	No causes are identified	1-2 causes are partially identified and described	3 causes are identified and described in some detail (1-2 sentences each)	4 causes are identified and described in detail (2-4 sentences each)	5 or more causes are identified and are creatively described in way that is engaging
Ways children are affected by not being immunized	Nothing is described	1-2 ways children are affected are partially described	3-4 ways children are affected are described in some detail (3 sentences for each)	3-4 ways children are affected are described in detail and meaning is clear	5 or more ways children are affected are described in detail and meaning is clear
Organizations that help	No organization is identified	1 organization is identified and partially described	2 organizations are identified and partially described	3 organizations are identified and described	3 or more organizations are identified and described in detail
Other action suggestions	No suggestion given	1-2 suggestions are partially explained	2 suggestions are explained so they are somewhat clear	3 suggestions are clearly explained	4 or more suggestions are clearly explained, and show thought and creativity
TOTAL					

Research Topic 3 NOTES
If you were Prime Minister, how would you solve the issue of misinformation?

Grade 4/5 - Find at least **2 examples of misinformation** and **describe actions** you would take to fix this
Grade 6/7 - Find at least **4 examples of misinformation** and **create an action plan to solve the issue**

NAME

Examples of Misinformation	Ways to Check Information	Canada's Fight Against Misinformation	Other Action Suggestions
Misinformation is defined as false or inaccurate information, especially that which is deliberately intended to cause people to believe something that is not true. Typically this is done in order to gain some personal advantage. Here are some ways misinformation might be used: • getting people to spend money on something • persuading others to like a product or group • causing others harm	One way to check for misinformation is to think critically. Also, use the TRAAP Test checklist. Describe these strategies..	Identify a few organizations that help fight misinformation. Describe what they do. They might be: • NGOs (non-governmet organizations) • international or global organizations • national organizations	What other suggestions do you have that could help? Be creative. If you were a world leader what would your wish list be?

MARKING RUBRIC Grade 4/5

Research Topic 3
Find at least **2 examples of misinformation** and **describe actions** you would take to fix this

Name Date

Campaign Platform or Poster or Research Essay

	0	1	2	3	4
Title	No title	Partial/ incomplete title	Title is present but not clear, spelling or capitalization are incorrect	Title is correctly and neatly written	Title is written correctly and creatively captures topic
Causes of global inequality in immunization	No causes are identified	1 cause is partially identified and described	2 causes are identified and described in some detail (1-2 sentences each)	3 causes are identified and described in some detail (1-2 sentences each)	3 or more causes are identified and described in detail
Ways children are affected by not being immunized	Nothing is described	1 way children are affected is partially described	2 ways children are affected are described in some detail (1-2 sentences for each)	3 ways children are affected are described in some detail (1-2 sentences for each)	4 ways children are affected are described in detail (3 or more sentences for each)
Organizations that help	No organization is identified	1 organization is identified and partially described	2 organizations are identified and partially described	3 organizations are identified and described	3 or more organizations are identified and described in detail
Other action suggestions	No suggestion given	1 suggestion is partially explained	2 suggestions partially explained	2 suggestions clearly explained	2 or more suggestions are clearly explained and show thought and creativity
Quality of writing	Nothing developed	Main parts are missing such as introduction, and actions, there are many writing errors, poorly organized	Some spelling and punctuation errors, and is somewhat developed but not clear, or easy to follow	Only a few spelling & punctuation errors. introduction, sentences and order are quite well thought out, and some actions are described	No spelling or punctuation errors, introduction is strong, all sentences are well-written, order is easy to follow, creative and thoughtful action suggestions
TOTAL					

MARKING RUBRIC Grade 6/7

Research Topic 3
Find at least **4 examples of misinformation** and **create an action plan to solve the issue**

Name Date

Campaign Platform or Poster or Research Essay

	0	1	2	3	4
Title	No title	Partial/ incomplete title	Title is present but not clear, spelling or capitalization are incorrect	Title is correctly and neatly written	Title is written correctly and creatively captures topic
Causes of global inequality in immunization	No causes are identified	1-2 causes are partially identified and described	3 causes are identified and described some-what well (1-2 sentences each)	4 causes are identified and described well (2-4 sentences each)	5 or more causes are identified and described in a way that is engaging for the reader
Ways children are affected by not being immunized	Nothing is described	1-2 ways children are affected are partially described	3-4 ways children are affected are described in some detail (3 sentences for each)	3-4 ways children are affected are described well and meaning is clear	5 or more ways children are affected are described in a way that is engaging for the reader
Organizations that help	No organization is identified	1 organization is identified and partially described	2 organizations are identified and partially described	3 organizations are identified and described	3 or more organi-zations are identified and described in a way that is engaging for the reader
Other action suggestions	No suggestion given	1-2 suggestions are partially explained	2 suggestions are explained so they are somewhat clear	3 suggestions are-clearly explained	4 or more suggestions are clearly explained and show thought and creativity
Quality of writing	Nothing developed	Partially developed but lacks an introduction, parts are missing, there are many writing errors, poorly organized	Some grammar & puntuation errors, organization and meaning are somewhat clear, actions is underdeveloped	Minor grammar & puntuation errors, overall it is well thought out, includes some actions	Minimal grammar or punctuation errors, organiza-tional flow and content are creatively developed and are engaging through-out, strong ending around action
TOTAL					

Research Topic 5 NOTES

As an evil villain, you just got caught promoting a campaign trying to get everyone as sick as possible by spreading misinformation about infectious diseases. You've now been ordered to write an apology letter to the world. In your apology letter you must include what your plan was, what kind of wrong things you suggested to the people, and why that was wrong. Remember to apologize at the end!

NAME		Use sections below to make planning notes for your letter
Be creative	Think of a creative way to fool people into believing misinformation that would get them sick. For example, maybe you created a super laser that could write messages in the sky, and you used it to write misinformation about vaccines. Or maybe you replaced famous youtube creators with clones that spread lies!	
Greeting	Your audience is everyone in the world. How will you address them?	
Give details about how you came up with the plan	How long have you been planning? What influenced or motivated you to develop this plan? Did you aim to start small in one or two countries, or was your plan global from the start? Explain the details of how you intended to make this happen on such a large scale. Consider levels of government and services you might have involved.	
What wrong things did you suggest?	What kind of misinformation did you plan to spread? Was it related to one specific infectious disease or a number of them? Provide details about the specific infectious disease(s) you created misinformation for. What would have happened to people if they had got sick. How long would it have taken them to start getting sick? What would their symptoms have been. Might some people have died from the infectious disease(s).	
How can people stay healthy?	Explain what people should do instead of what you suggested, to keep themselves healthy.	
Apology	Remember to apologize at the end!	

Research Topic 6 NOTES

An Indigenous story writer worked with Elders to share stories about Turtle Island. Explore the themes in these stories. Write a research essay or create an illustration.

NAME

Describe Turtle Island and Indigenous Peoples before the arrival of Europeans and colonization.

What were some of the diseases that Europeans brought to Turtle Island? Why were these new diseases so deadly?	Describe one action you can take to keep you healthy for each of the following: mental, spiritual, emotional and physical health.	Why does the First Nations Health Authority include culture in their approach to healthcare?

Other Ideas:

Research Topic 7

Create a world map highlighting some of the impacts of infectious diseases NAME_____

There are many stories from around the world about the impact of infectious diseases.
Grade 4/5 choose at least 3 to highlight. Grade 6/7 choose at least 5 to highlight.

1. Identify the name and location of each story on this world map, showing the longitude and latitude.

2. Write a short summary about each story on the map. Get a partner to edit, and hand-in computer printed or neatly written final copy.

Suggested for Grade 4/5 – write at least 5 sentences for each. Think about where and when it happened and when it ended, how it started, in what ways people got sick, and what kind of medical help was given, if any.
Suggested for Grade 6/7 – write half a page for each. Consider geographic, social, and economic conditions that might have been a factor. How many of the population were affected? What health measures were put in place? How effective were these?

Back to Table of Contents

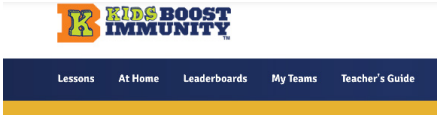
Investigative Activity - Fraser Valley Measles Outbreak

You are a reporter for your school blog. Produce a print or digital report explaining your understanding of the Fraser Valley measles outbreak of 2014. Remember to provide evidence to support your findings.
This sheet may be helpful to organize some of the information.

NAME	
What is measles?	
What constitutes an outbreak?	
What caused the Fraser Valley measles outbreak?	
How far geographically did the outbreak spread?	
How long did the outbreak last?	
How did the health sector respond ?	
What did we learn and how can we prevent it from happening again?	

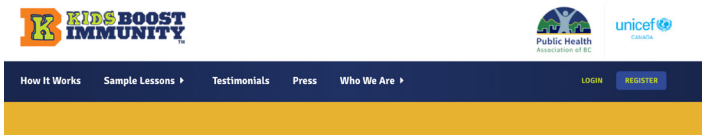
NAVIGATING YOUR WAY ON KIDS BOOST IMMUNITY

This is a quick overview of the basic functions on KBI. We also provide more detailed instructions and cover advanced functions which can be found under the Teacher's Guide menu item on the KBI site.



CREATING AN ACCOUNT

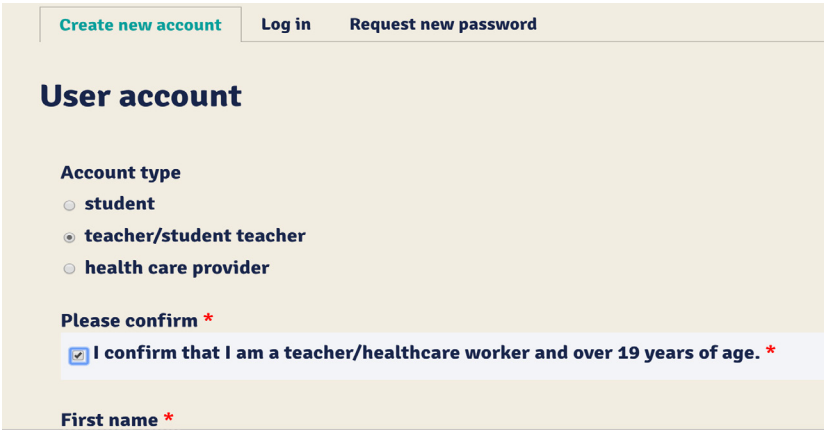
Go to www.kidsboostimmunity.com and click the **REGISTER** button on the top right of the screen.



Click **Create new account**
Select **teacher/student teacher**
Check "I confirm I am a teacher/health-care worker over 19 years of age."

Complete the rest of the information (name, school, etc.)

Then select **Create new account.**



To register as a teacher, please fill out the teacher option in the registration form that includes your email address. If possible, please use your school email as general emails (gmail, windows live, etc.) take longer to verify for approval. NOTE - if this is an issue contact us at info@kidsboostimmunity.com.

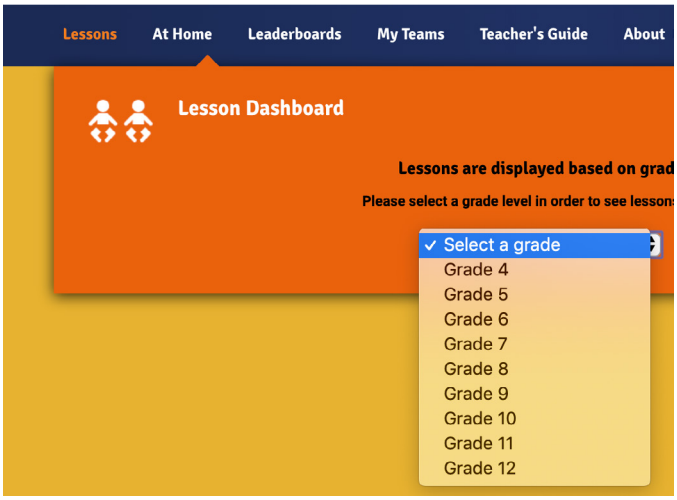
To finish the approval process, we will be sending an email to verify your email address. You will need to click on a link in the email. It's super easy! If you don't receive the email, make sure to check your junk/spam folders. If you still don't see it, please email us at info@kidsboostimmunity.com. Once you have verified your email address, it can take up to two business days to be approved, giving you full site access. This is a one-time registration process. You will not have to sign-up every year.

APPENDIX B - NAVIGATING KBI

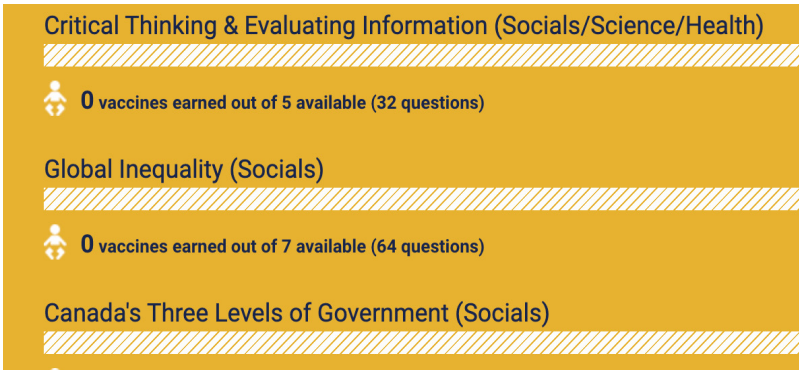
VIEWING THE LESSONS

To view lessons click on LESSONS on the top left. Here you will be prompted to **select a grade.** Different grades are shown different lessons specifically designed to meet curriculum outcomes by subject. All teachers, regardless of the grade they are teaching, are able to see all lessons in all grades.

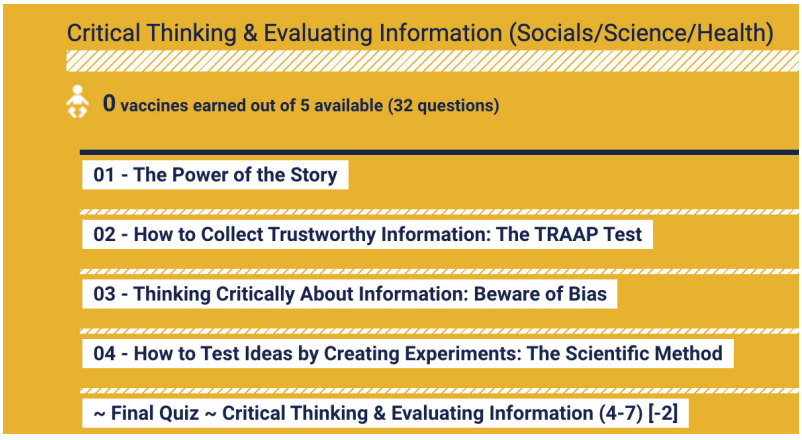
NOTE - students do not have the same view as teachers. Students can only see the lessons for their grade.



Once you have selected a grade, you will see a list of different topics.



When you click on a topic, the lessons for that topic appear below.

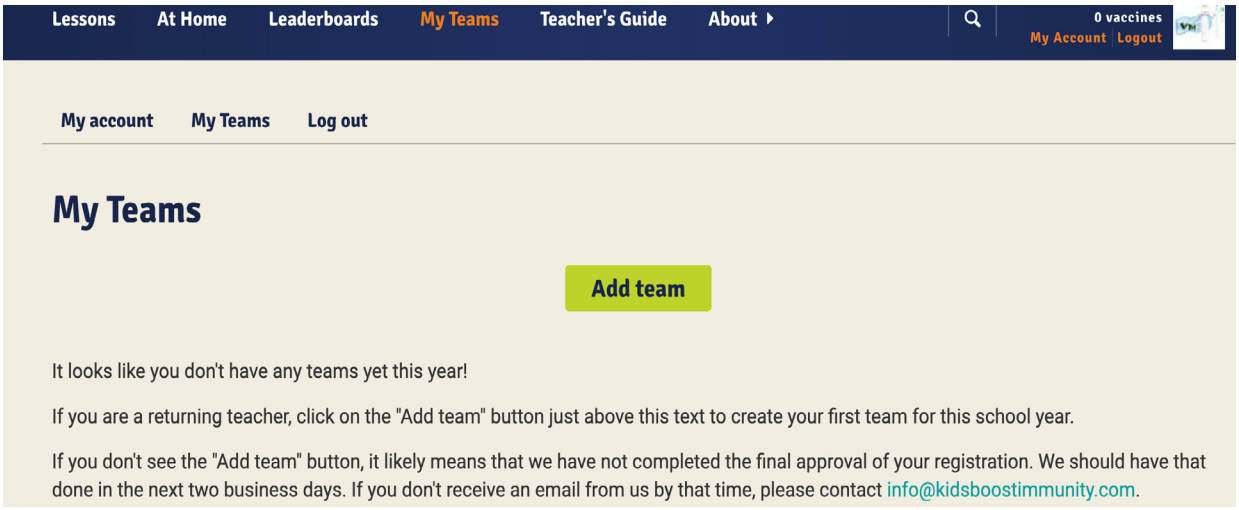


Click on a lesson, and away you go!

Back to Table of Contents

MAKING A TEAM

In order for students to use Kids Boost Immunity, teachers must create a team for their class(es). To do this, go to **My Teams** and click on the **Add Team** button. See below.



To create a team you will be asked to fill out a form. This just take a few minutes to complete.

Title
Choose a name for your team. Be creative and unique as this name will show up on the leaderboard.
Examples of unique team names: Garfields Great Lasagna, Portleys Pelicans 7.

School
VERY IMPORTANT! Make sure to select your correct school. This affects the lessons that will be offered to students on this team. If you mistakenly select a school which happens to be in a different province (such as a school that has a similar name) students will be shown the wrong lessons.

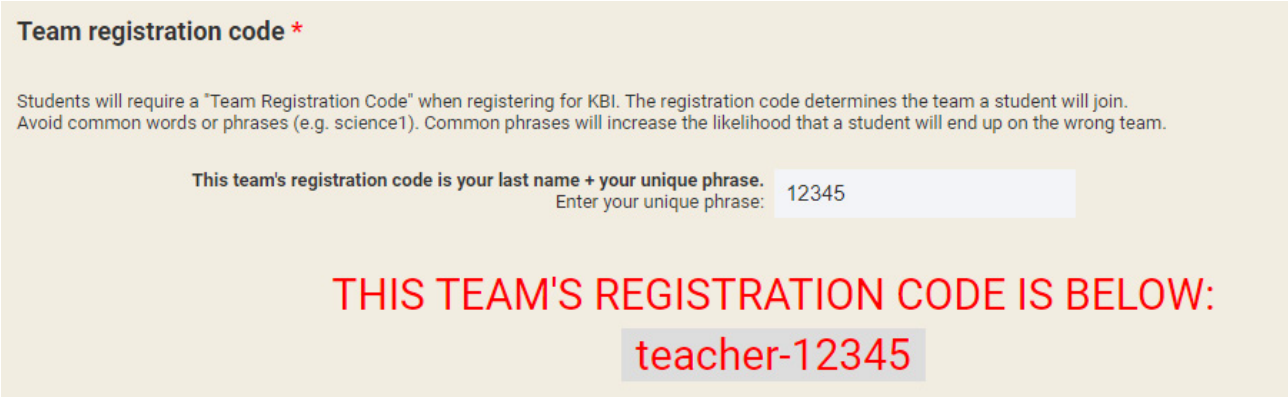
Team description (optional)
You might want to add a fun description. This can be seen by anyone who has access to the site.

Team image (optional)
You might want to add an image. Please select an image that does not personally identify any of the team members.

Team size
Please fill-in the number of students that will be on this team. There is a maximum of 35. Try to be as accurate as you can. Some students attempt to sign-up multiple times. This raises our costs for operating the site, so we appreciate when teachers keep an accurate count. There have also been instances where students to thre wrong team by accident. An accurate count mitigates this issue.

Team registration code
Students will require a “Team Registration Code” when registering for KBI. The team registration code determines the team a student will join. Avoid common words or phrases (e.g. science1). Common phrases will increase the likelihood that a student will end up on the wrong team.

You will be asked to make a unique phrase that is specific for just THIS TEAM, and that is at least 5 characters long. The team registration code will be a combination of your last name and this unique phrase.



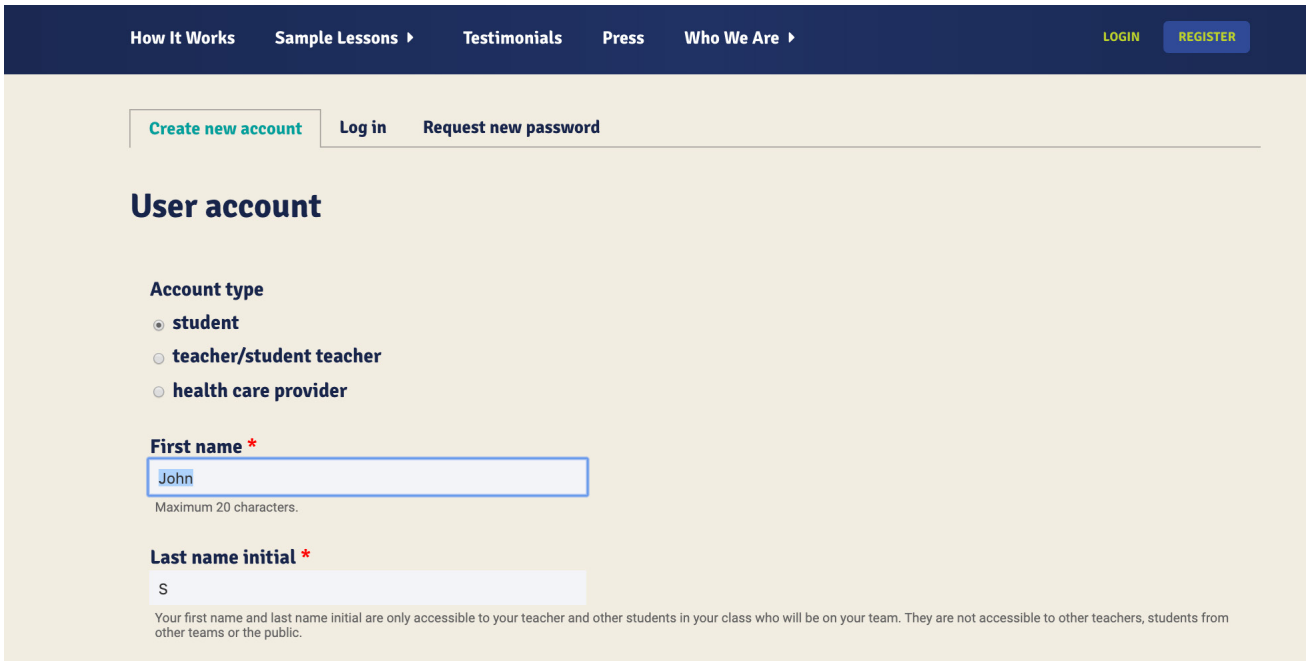
Grade
Make sure to select the correct grade. This affects the lessons that will be offered to students on this team.

Leaderboard settings
When students go to this team’s page, they will see a leaderboard for this specific team. As the teacher, you can adjust what is shown on this leaderboard. You can choose from the following options:
List all students
List Top 10 students
Do not display leaderboard

STUDENT SIGN-UP

In order for students to use Kids Boost Immunity, they must be registered to a team. Please refer to the instructions for how to “Make a Team” to create your own team.

Students can register by going to the **REGISTER** link (top right). They will fill out a very easy form. It takes about a minute.



Back to Table of Contents

TYPES OF QUIZZES

Introduction Quiz
Students automatically get the introduction quiz when they start on KBI. Teachers and students can find the introduction quiz at any time at the top of the lesson dashboard. The introduction quiz explains how to use KBI.

Trivia Quiz
Most topics have a very short, one-time trivia quiz. Students cannot earn vaccines doing these. All other lessons in that topic section are locked until students finish the trivia quiz. The trivia quiz serves as a pretest. This provides us with aggregate comparative data to help determine if on average, students are improving in knowledge. This information helps us in our reporting to our government funders. Without this type of evaluation, KBI might not be able to be offered for free to schools.

Lesson Quiz
Each lesson is accompanied by a quiz. Students can earn a vaccine by scoring at least 80% on these quizzes. Students can retake the lesson quizzes as many times as they want until they earn the vaccine.

Final Quiz
When students finish all the quizzes in a topic, students unlock a special quiz: Final Quizzes. Final Quizzes can let students earn extra vaccines if they do well! But they have to be careful - they can only earn vaccines for Final Quizzes the first time they take them.

At Home Quiz
In addition to the lessons, there is extra content called “At Home” quizzes. These quizzes can be accessed by clicking on “At Home”, on the main menu. These quizzes do not have a lesson attached and are just questions. Students can earn a vaccine by scoring at least 80% on these quizzes. Students can retake these “At Home” quizzes as many times as they want until they earn the vaccine.

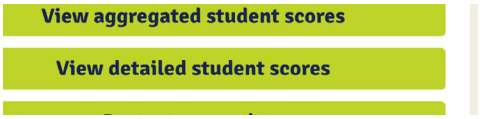
ASSESSMENT

MONITORING AND RECORDING STUDENT QUIZ SCORES

Kids Boost Immunity (KBI) has a number of assessment options to support teachers. The assessment options are related to student scores on quizzes that are available at the end of every lesson. If students score 80% or higher they can earn vaccines for a child in a developing country through UNICEF. Students are able to retake the quiz until they are successful. Teachers may want to look at each student's quiz score for tracking and assessment. Below are instructions for accessing the different assessment options.

Teachers acces the assessment information by going to "My Teams" at the top menu and seeing each team/class.

Click on the team/class then scroll down a little and you will see a box on the right with several menu items. Click on "View detailed student scores."



You are then able to see all the quiz scores by all the students, including all repeat attempts. This means you can also see if any students have tried to raise their scores over several tries.

STUDENT	TOPIC	QUIZ	SCORE	RESULT	DATE
BL	Critical Thinking & Evaluating Information (Socials/Science/Health)	01 - The Power of the Story	100	PASS	Oct 25
BL	Critical Thinking & Evaluating Information (Socials/Science/Health)	02 - How to Collect Trustworthy Information: The CRAAP Test	86	PASS	Oct 25
BL	Global Inequality (Socials)	00 - Trivia: Global Inequality	50	FAIL	Oct 25

Here are the functions of all the dropdown menus. Using these, teachers can filter the results to find out the exact information they are looking for. From the left to the right, filters include:

- Specific students (or all)
- Topic area (or all)
- Specific quiz (or all)
- Score (use < and > symbols to see who has scored more than a certain score. This includes all attempts, so a student may show up with scores that are less than 50 and greater than 50)
- Result (this is a pass/fail, with pass being 80% or above)
- Date (to see an attempt on a specific date)

Teachers can develop records of students' progress by copying and pasting results into a preferred spreadsheet program.