

Material Covered:

The course is comprised of the following five units:

- Personal and Public Health Practices
- Personal and Workplace Safety
- Climate Change
- Natural Resources
- Pandemics

Notebook:

Your notebook should be neatly organized, as this will help you study for tests. Label the unit and topic headings clearly at the top of the page. Answer questions fully, so that the information makes sense and can be used later for studying. Show what page number in the textbook the information comes from so you can look it up again easily.

Projects:

Each of the units has a list of projects at the end, from which you will choose two, and there is also a culminating project at the end of the course. Each project has suggested guiding questions for you to investigate. Or, you can negotiate your own topic with your teacher. Be sure to get permission first if you are investigating your own topic!

Textbook:

This course does not have an assigned textbook.

Assessment:

Your final mark for the course is based 10% on the Unit Worksheets, 75% on the Unit Projects, and 15% on the Culminating Project. What you get as a final mark will be commensurate with how much effort you put in. Be curious!

Theme: Personal and Public Health Practices**Goal:**

The goal of this unit is to investigate how science is used to help us to maintain healthy minds and healthy bodies for ourselves and others. This unit also introduces the idea of bias and how our biases affect our thinking.

Key Curricular Competencies:

After completing this unit, you should be able to do the following:

- Demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal, local, or global interest.
- Apply First Peoples perspectives and knowledge, other ways of knowing, and local knowledge as sources of information.
- Use local knowledge to experience and interpret the local environment.
- Demonstrate an awareness of assumptions, question information given, and identify bias in their own work and in primary and secondary sources.
- Contribute to care for self, others, community, and world through individual or collaborative approaches
- Express and reflect on a variety of experiences, perspectives, and worldviews through place.

What to Do in this Unit:

- Ask your teacher for the Unit 1 Workbook and the Unit 1 Worksheet, and follow the instructions found there.
- When you have handed in the Unit 1 Worksheet, ask your teacher for the Unit 1 Inquiry Projects. Choose two projects you wish to complete from that list. When your inquiry projects are complete, hand them in to your teacher for marking.

Theme: Personal and Workplace Safety**Goal:**

The goal of this unit is to investigate how science plays a role in our personal safety as well as safety in our workplaces.

Key Curricular Competencies:

After completing this unit, you should be able to do the following:

- Demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal, local, or global interest
- Formulate multiple hypotheses and predict multiple outcomes
- Use knowledge of scientific concepts to draw conclusions that are consistent with evidence
- Analyze cause-and-effect relationships
- Evaluate their methods and experimental conditions, including identifying sources of error or uncertainty, confounding variables, and possible alternative explanations and conclusions
- Assess risks in the context of personal safety and social responsibility
- Implement multiple strategies to solve problems in real-life, applied, and conceptual situations
- Communicate scientific ideas and information, and perhaps a suggested course of action, for a specific purpose and audience, constructing evidence-based arguments and using appropriate scientific language, conventions, and representations

What to Do in this Unit:

- Ask your teacher for the Unit 2 Workbook and the Unit 2 Worksheet, and follow the instructions found there.
- When you have handed in the Unit 2 Worksheet, ask your teacher for the Unit 2 Inquiry Projects. Choose two projects you wish to complete from that list. When your inquiry projects are complete, hand them in to your teacher for marking.

Theme: Climate Change**Goal:**

The goal of this unit is to investigate our role in climate change and analyse data as evidence.

Key Curricular Competencies:

After completing this unit, you should be able to do the following:

- Demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal, local, or global interest.
- Make observations aimed at identifying their own questions, including increasingly abstract ones, about the natural world.
- Use knowledge of scientific concepts to draw conclusions that are consistent with evidence.
- Analyze cause-and-effect relationships.
- Describe specific ways to improve their investigation methods and the quality of their data.
- Evaluate the validity and limitations of a model or analogy in relation to the phenomenon modelled.
- Exercise a healthy, informed skepticism and use scientific knowledge and findings to form their own investigations to evaluate claims in primary and secondary sources.
- Implement multiple strategies to solve problems in real-life, applied, and conceptual situations.
- Formulate physical or mental theoretical models to describe a phenomenon.
- Communicate scientific ideas and information, and perhaps a suggested course of action, for a specific purpose and audience, constructing evidence-based arguments and using appropriate scientific language, conventions, and representations.

What to Do in this Unit:

- Ask your teacher for the Unit 3 Workbook and the Unit 3 Worksheet, and follow the instructions found there.
- When you have handed in the Unit 3 Worksheet, ask your teacher for the Unit 3 Inquiry Projects. Choose two projects you wish to complete from that list. When your inquiry projects are complete, hand them in to your teacher for marking.

Theme: Natural Resources**Goal:**

The goal of this unit is to investigate how obtaining natural resources requires the specific application of science to maximize efficiency.

Key Curricular Competencies:

After completing this unit, you should be able to do the following:

- Demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal, local, or global interest.
- Make observations aimed at identifying their own questions, including increasingly abstract ones, about the natural world.
- Assess risks and address ethical, cultural, and/or environmental issues associated with their proposed methods.
- Apply First Peoples perspectives and knowledge, other ways of knowing, and local knowledge as sources of information.
- Analyze cause-and-effect relationships.
- Demonstrate an awareness of assumptions, question information given, and identify bias in their own work and in primary and secondary sources.
- Contribute to finding solutions to problems at a local and/or global level through inquiry.
- Express and reflect on a variety of experiences, perspectives, and worldviews through place.

What to Do in this Unit:

- Ask your teacher for the Unit 4 Workbook and the Unit 4 Worksheet, and follow the instructions found there.
- When you have handed in the Unit 4 Worksheet, ask your teacher for the Unit 4 Inquiry Projects. Choose two projects you wish to complete from that list. When your inquiry projects are complete, hand them in to your teacher for marking.

Theme: Pandemics**Goal:**

The goal of this unit is to investigate the science of disease transmission including the immune system. Students will explore pandemics, past and present, and understand the concept of vaccines.

Key Curricular Competencies:

After completing this unit, you should be able to do the following:

- Demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal, local, or global interest.
- Formulate multiple hypotheses and predict multiple outcomes.
- Assess risks and address ethical, cultural, and/or environmental issues associated with their proposed methods.
- Seek and analyze patterns, trends, and connections in data, including describing relationships between variables, performing calculations, and identifying inconsistencies.
- Use knowledge of scientific concepts to draw conclusions that are consistent with evidence.
- Analyze cause-and-effect relationships.
- Describe specific ways to improve their investigation methods and the quality of their data.
- Exercise a healthy, informed skepticism and use scientific knowledge and findings to form their own investigations to evaluate claims in primary and secondary sources.
- Connect scientific explorations to careers in science.
- Assess risks in the context of personal safety and social responsibility.
- Implement multiple strategies to solve problems in real-life, applied, and conceptual situations.
- Formulate physical or mental theoretical models to describe a phenomenon.

What to Do in this Unit:

- Ask your teacher for the Unit 5 Workbook and the Unit 5 Worksheet, and follow the instructions found there.
- When you have handed in the Unit 5 Worksheet, ask your teacher for the Unit 5 Inquiry Projects. Choose two projects you wish to complete from that list. When your inquiry projects are complete, hand them in to your teacher for marking.

Congratulations! You've finished Science for Citizens 11!