

**Teacher
Guide**

Inquiry-Based Learning,
Action Projects & Filmmaking
on Local Water Issues

Updated Sep 2021

A project of:





Founded in 1991 by a diverse group of youth, educators, business leaders, government and community members, *Learning for a Sustainable Future (LSF)* is a non-profit Canadian organization that was created to implement education for sustainable development (ESD) into Canada's education system.

LSF's goal is to work together with educators, students, parents, government, community and business to integrate the concepts and principles of sustainable development into education policy, school curricula, teacher education and lifelong learning across Canada!

LSF believes that building comprehensive programs starts with building a solid base. LSF's core programs include:

1. Working with governments, school boards and system administrators to influence education policy that supports sustainability learning
2. Convening education, business and community leaders, parents, youth and other stakeholders in round table dialogues to identify "what's worth knowing" about various sustainability themes and how to influence changes in practices
3. Collaborating with teachers and faculties of education to make sure educators have core sustainability knowledge and the best teaching practices at their fingertips
4. Engaging students directly in becoming active, engaged and responsible citizens

www.LSF-LST.ca

Ecologos (ee-ko-lo-goss) is a network of 2000 – active volunteers, advisors, supporters, friends – who drive an energetic program aimed at stirring Ontario's citizenry into **real action** for a sustainable future. It is one of the most active volunteer groups working to protect water in the province. As an organization that learns by doing, measuring and evaluating, *Ecologos* has been developing programs from concept to significant impact for 15 years – programs like *Water Hour*, *Stop the Mega Quarry*, the *Awakening the Dreamer Symposium*, and most recently the *Water Docs Film Festival* with its five interwoven water protection programs.



The vision of *Ecologos* is to educate people about significant challenges to the environment, and move them to a place of being willing, able and ready to take concrete action to make a difference. We know that storytelling is a critical form of learning for all cultures, which is why we are proud to present the *Water Docs Film Festival* each year around Canada Water Week. As an extension of that program we are now initiating *Water Docs at School Action Projects*.

We're very excited about this program, and look forward to seeing some exciting projects and fascinating films telling the stories of these projects and the students behind them.

All the best! www.waterdocs.ca



To the Teacher,

The Water Docs at School program promotes student exploration and understanding of local water issues. It combines inquiry-based, hands-on learning with Action Projects and filmmaking to enable students to protect their watersheds and our freshwater sources. The program is divisible into three parts:

- 1) **Lesson Plans:** The first part is rooted in the following lesson plans and provides students with an understanding of the importance of local water issues, the interconnection between humans and the environment, and the fundamental concept of sustainability.
- 2) **Action Project:** The second part of the program is comprised of Action Project development and completion. This part of the program offers students the opportunity to select a local water issue that is meaningful to them and engage in action to address it. Students are encouraged to engage other peers, teachers and local community members in their projects, as well as involving their families in at least one water conservation measure at home. During this and the final section of the program, teachers may wish to reference Learning for a Sustainable Future's [Engaging Students in Successful Action Projects Guide \(ESSAP Guide\)](#), [Protecting our Sacred Water Guide](#) or the [WDaS Action Project Guide](#). More resources are available on LSF's Resources for Rethinking database (www.R4R.ca).
- 3) **Filmmaking:** The last part of the program encompasses the filmmaking, evaluation, and celebration elements. Students are asked to capture their Action Projects through film by creating a short (4-minute) documentary about the issue and the actions they took to address it. Our [WDaS Filmmaking Basics Guide](#) can help you out. Selected documentaries will be screened at the *Water Docs at School Recognition Day* in Spring. All participating students are invited to attend this day to celebrate their individual and group achievements. By engaging in this interdisciplinary, hands-on, inquiry and action-based program, students are developing into active responsible citizens.

Goals:

- To teach the curriculum expectations through authentic opportunities for making positive changes in the local community
- To provide action experiences which cultivate the attitudes, knowledge and skills necessary for students to take action in the future
- To foster an appreciation for water
- To inspire students to be agents of change and stewards of water in their local community

Key Considerations for Grade Eight Learners

Abstract and Creative Thinking Skills: Students in this age group have developed their abstract and creative thinking skills; this allows them to understand the interplay of environmental and human social systems in greater depth. They are becoming familiar with how the world’s environmental, economic, social, cultural and political systems are linked. They can understand that human-caused changes have consequences for the immediate environment as well as for other places and future times.

Active Responsible Citizens: As learners become actively engaged in deciding for themselves what is right and wrong, educators can use environmental problems to help learners explore their own responsibilities and ethics. These students are beginning to see themselves as active members in their community; they have opinions regarding certain situations and whether action is needed. Students can understand that their actions have broad consequences and that they are responsible for these. These students understand that conflict arises over differing and changing viewpoints about the environment, especially the use of resources (including water). Lastly, at this age students are beginning to learn more about the global environment. This may lead them to expand their inquiry to make global connections.

Science, Systems, and Sustainability: Exploring local water issues with your students will undoubtedly bring about discussion of the water cycle. The challenges of instruction for understanding the water cycle should not be underestimated. It is best to explore the water cycle as a system in an environmental-social context. At this age, students can begin to investigate the interactions and system nature of the water cycle. To engage students in learning about the water cycle, first create the relevance and interest and then teach the more abstract, scientific elements. Note: a static perception of groundwater leads to students failing to associate human activity with water quality. Many students are unclear as to what a watershed is, restricting their definition to the connection of surface waterways. Consequently, these topics may need to be explored in more depth through additional lessons in order for students to fully grasp the human-environment interaction and its effects on water.

Model the Themes of the Course

Please try to ‘walk the talk’ with respect to the spirit of this guide. For example:

- Bring/use reusable water bottles/mugs
- Collect/provide/use paper that has been used on one side for your students to use on the other side (GOOS – good on one side paper)
- Turn off anything that does not need to be on (computer screens, some classroom lights, etc.)
- Use leftover water from activities to water plants indoors/outdoors
- Take students outside whenever possible to complete the activities

Your actions will speak louder than your words (and louder than these activities)!

Cultivate Good Communication Skills

Group work and communication skills are often taken for granted; students are assumed to have them or not. We believe that good communication skills are something that all of us, at any age, need to continue to develop. We need these in all areas of our lives; most notably here, we need them to be able to address the very complex environmental and social issues facing our communities. For this reason, we have developed some straight-forward, student-ready, communication skills development activities. We have included these in [Appendix B](#) and we hope that you will revisit these throughout your course.

Reflect on the Importance of Taking Action

The study of environmental problems is an exercise in despair unless it is regarded as only a preface to the study, design, and implementation of solutions.

-Stapp, Wals, & Stankorb 1996, 94

According to David Selby, “opportunities for practical involvement in projects and initiatives to effect change, with ongoing critical reflection back in the classroom, are essential if young people are to develop the confidence and competence for active and responsible citizenship” (1995, 55). An Action Project is distinct from an activity because it moves beyond investigation of an issue to identifying solutions and working towards a desired change—in personal lifestyle, in school, in the community, and on the planet (Laing, 170). The goal is to move students from “passive detachment” to “active involvement” in issues that affect us all (Stapp, Wals, and Stankorb 1996, i).

Some of the benefits of Action Projects are:

- Action Projects can transform feelings of apathy and powerlessness into genuine interest and a sense of personal agency.
- Action Projects are experiential; they cater to different learning styles.
- Action Projects offer *authentic, relevant, meaningful* opportunities for learning and for taking responsibility. This is motivating for students.
- Action Projects illuminate the trans-disciplinary and deeply interconnected nature of real problems.
- Action Projects that involve being outdoors provide students with opportunities to fall in love with Earth—which then becomes its own motivator to act.
- Action Projects create a natural relationship between the people in the school and the wider community.
- Action Projects model for students and for the wider community what active citizenship looks, sounds and feels like; this increases the likelihood that participants will engage in future Action Projects.
- The outcomes of Action Projects can have substantial, positive consequences for all of us.
- Action Projects cultivate skills, knowledge, attitudes necessary for active citizenship and that are transferable to many other applications.
- Action Projects can help students to appreciate complexity and to learn how to think from a systems perspective.

In this guide, students are provided with opportunities to take meaningful action. Please encourage your students to take these seriously and provide them with the appropriate time and support they require to complete these tasks.

Guiding Questions

1. Is water important?
 - a. To humans in your community? To other animals in your community? To you?
 - b. To humans and other animals that live far away?

2. How do water systems impact the place where **you** live?
 - a. Local watershed
 - i. Now
 - ii. In the future
 - b. Importance of the our watersheds

3. What are some concerns that other people have about water?
 - a. Amount
 - i. Not a lot to start with that is accessible/suitable for drinking
 - ii. Impact of climate change
 - b. Contaminants
 - i. How do household activities in **your community** impact local waterways?
 - ii. How do industries in **your community** impact local waterways?
 - iii. How do things that **you** do impact local waterways?

4. What concerns do **you** have about water?

5. Do you want to make a change related to water issues?
 - a. If so, what and how? If not, why not?

Ask Us How We Can Help

Contact us with any of your questions, big or small. Email Samantha Gawron at samantha@LSF-LST.ca or call 1-877-250-8202.

Curriculum Connections

These activities can be used to meet several specific and overall expectations from the grade 7 & 8 curricula in MB, ON and NB. Click the links below to see the general curriculum connections for each activity in this guide. The full list of curriculum connections for each activity can be found in [Appendix F](#).

- [Ontario Grade 7 Curriculum Connections](#)
- [Ontario Grade 8 Curriculum Connections](#)
- [Manitoba Grade 7 Curriculum Connections](#)
- [Manitoba Grade 8 Curriculum Connections](#)
- [New Brunswick Grade 7 Curriculum Connections](#)
- [New Brunswick Grade 8 Curriculum Connections](#)

Calendar of Learning Activities

This unit will span approximately four months, with lessons completed sporadically throughout this time. Lessons during the first month provide content that will inform the students' choice of issue and action, ultimately enhancing their Action Projects. The latter three months are dedicated to students' Action Projects, filmmaking, evaluation and celebration. Please note: these lessons should be conducted in order but they can be delivered over a series of weeks.

<p>Day 1</p> <p>A. Start word wall (Activity 1). Add to word wall throughout unit.</p> <p>B. Start Learning Tree (Activity 2). Add to Learning Tree throughout unit.</p> <p>C. Is water important in your local area? Suggested activity (Activity 3): Why is water important?</p> <p>D. Consider introducing active listening strategies with students (see Appendix A1)</p>	<p>Day 2</p> <p>Suggested activity (Activity 4): How much water do we have?</p>
<p>Day 3</p> <p>Suggested activity (Activity 5): Sustainability</p>	<p>Day 4</p> <p>Suggested activity (Activity 6):Local Watershed Walk</p>
<p>Day 5</p> <p>Suggested activity (Activity 7): Local Watershed – Maps into Models</p>	<p>Day 6</p> <p>Suggested activity (Activity 8): How Does that Contaminant Impact us?</p>
<p>Day 7</p> <p>Suggested activity (Activity 9): Preparing for the Water Brothers</p>	<p>Day 8</p> <p>Suggested activity (Activity 10): The Water Brothers</p>
<p>Day 9</p> <p>Suggested activity (Activity 11): Action Project Planning (over a series of weeks!)</p>	<p>Day 10</p> <p>Suggested activity (Activity 12): Filmmaking (over a series of weeks!)</p>
<p>Day 11</p> <p>Suggested activity (Activity 13): Debriefing and Evaluation</p>	<p>Notes</p>

*Note: [Appendix D](#) lists a number of other resources which may be of interest to you and this unit.

ACTIVITY 1: WORD WALL

1. Ask each student to choose a word from the vocabulary list below. Ask the students to create signs to be displayed around the classroom in which:
 - The word is written in letters large enough to read while sitting at your desk
 - The meaning is conveyed using words, pictures or “props” in a way that is meaningful to all students.

Vocabulary List

riparian zone	resources	invasive
area of influence	bubble pack (blister pack)	species solid
'yellow fish'	tetrabrick	waste
surface water	renewable	watershed
ground water	non-renewable	hydrosphere
wetlands	syringe	biosphere
hazardous	disposal	reservoirs
personal	endangered	saline
products storm	threatened	...
drain aquatic	organism	Etc
ecosystem	entanglement	.
detritus	grey water	
environmental impact	sewage	
creek	leaching	
river	toxins	
tributaries	potable	

ACTIVITY 2: THE LEARNING TREE

The Learning Tree is a concept from the popular education manual *Ready for Action* (1994). It is a visual display of ideas and is used as a “tool to explore the problems, solutions and ideals of an issue” (Anderson, Michol, & Silverburg, 1994, p. 70). Before beginning this unit, ask students to create a ‘trunk’ for the tree and put it on a bulletin board in a place that can be viewed by all students in the class. Also have students create paper branches, leaves, roots and fruits. Store these in a student-accessible location with dark-ink markers so they can be used throughout the unit.

1. Explain the concept of the learning tree¹ (5 minutes). It is a graphic organizer the class will use to collect the information, questions and concerns (all learning) they acquire as they complete this unit. Students are invited to add to the tree at any time but are encouraged to do so during the beginning and debriefing section of each lesson.

The parts of the tree represent the following:

Roots – Institutions that support the values and beliefs that cause the symptoms

Trunk – The values and beliefs that cause the symptoms

Branches – The symptoms of the

problem Leaves – Possible solutions to

the problem Fruit – Ideals

2. At the beginning and ending of each lesson, ask students to contribute ideas and knowledge to the learning tree. Students do so by:

Writing their ideas in letters large enough to read while sitting at your desk

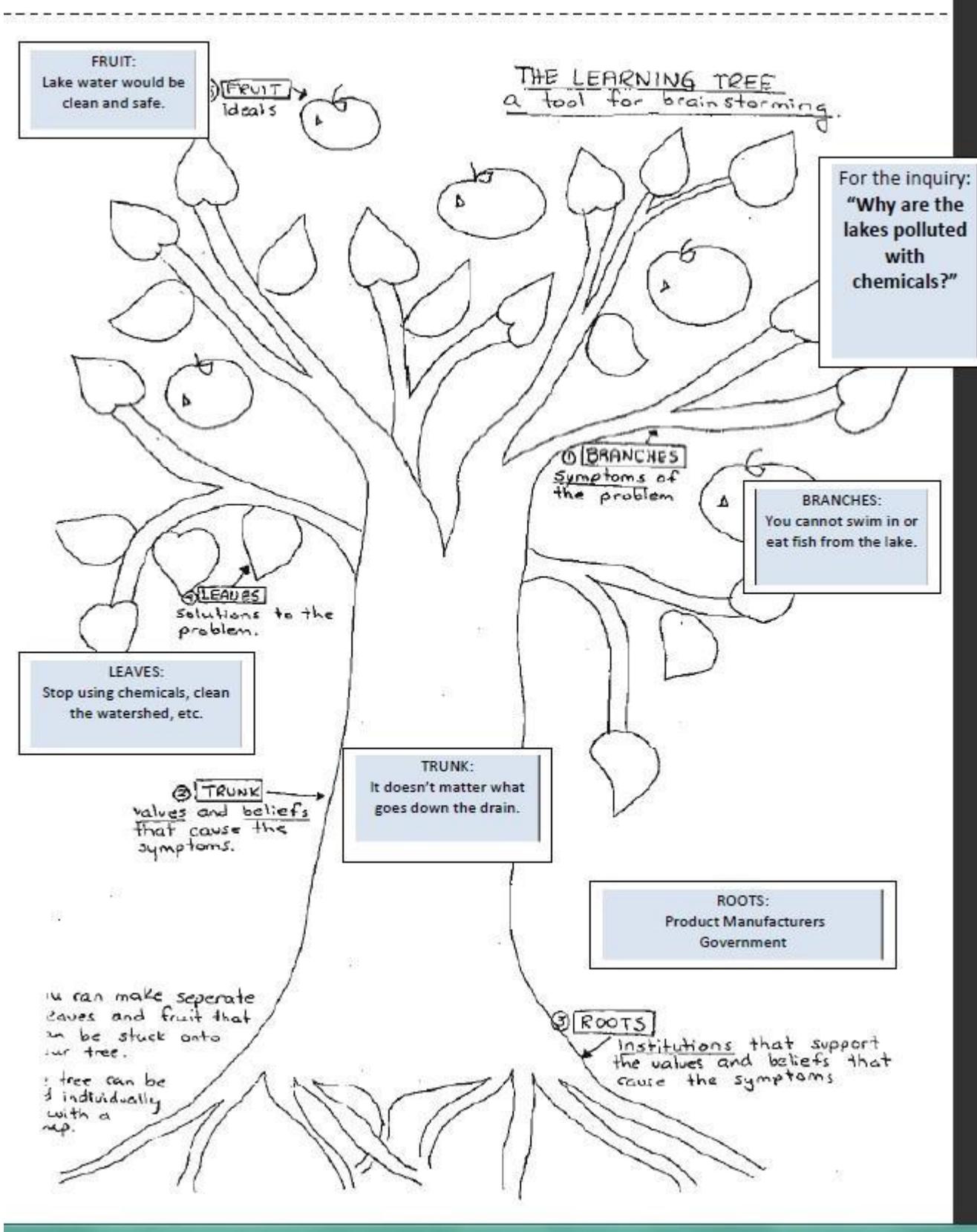
Conveying their idea using words, pictures or “props” in a way that is meaningful to all students.

Explaining their ideas orally to the class

Sharing ‘air time’ and ‘tree space’ by allowing everyone an equal opportunity to share and post their ideas.

¹ The Learning Tree is a concept from Anderson, J., Michol, J., & Silverburg, J. (1994). *Ready for Action: A Popular Theater /Popular Education Manual*. Waterloo Public Interest Research Group.

Sample: The Learning Tree



ACTIVITY 3: WHY IS WATER IMPORTANT?

Description

Students will learn why and for whom water is important through this introductory lesson.

Curriculum Connections

Click here for Curriculum Connection for Activity 3 :

[ON Grade 7](#) | [ON Grade 8](#) | [MB Grade 7](#) | [MB Grade 8](#) | [NB Grade 7](#) | [NB Grade 8](#)

Materials

- ✓ Film screening equipment

For each student/group:

- ✓ several pieces of 8 1/2 x11 scrap paper torn into squares
- ✓ A variety of felt pens, pens or pencils (one colour marker for each group)
- ✓ GOOS (good on one side- used on the other) Chart paper
- ✓ Tape if necessary

Procedure

PART I: Who uses water?

1. **MINDS ON:** Watch the video “Introduction to Water” <http://www.youtube.com/watch?v=nSENoIWbyYQ> to give students some insight into the importance and daily use of water. Ask students to individually list as many different ways that they use water in one day.
2. **WORKING ON IT:** Place students in groups of three or four. Give students a few minutes to brainstorm and write down on each of their scraps of paper names of businesses, groups, or others who could be collectively called a ‘user of water’, i.e. the logging companies, a car wash, frogs, fishers, agricultural or recreational irrigation farmers, gardeners, etc.
3. Ask students to categorize their ‘users’ (5 minutes). For example, they might choose the following categories:

a) Businesses	d) Other Animals
b) Humans’ Day-to-Day Activities	e) Human Recreation/Enjoyment
c) Plants	f) Others
4. Discuss the different classification systems.

5. As a class, look at the placement of the cards. Ask students what would happen if any one of the user groups no longer had access to clean water.

PART II: Water issues

6. Give each group a piece of GOOS chart paper. Give students a few minutes to brainstorm and write down brief descriptions or titles of water issues in their local and global communities, e.g. lack of access to clean drinking water, polluted lakes, invasive species in watersheds, salt run-off into streams, rising sea levels, privatization and sale of water resources – bottled water, impact of mining on watershed, etc. Ask students to space their ideas out around the page so there is as much space as possible between the ideas. Under each issue ask students to label whether they think it is a ‘local’ or ‘global’ issue.
7. Ask students to take their ‘users’ from PART I of this activity and glue them onto their chart paper near the water issue which affects them and draw a line to connect them. If a ‘user’ is affected by more than one issue have the students draw more connections to illustrate this.
8. In their groups have students rotate around the room with their original marker to view other groups’ concept maps. Using their marker, have students add connections between ‘users’ and issues, issues and issues and ‘users’ and ‘users’ that the home group did not include. Additionally, student should review the ‘local’ or ‘global’ label the home group assigned to each issue. If the visiting group disagrees or believes the issue could be both local and global, they should write this under each issue on the concept map. Have each group visit all concept maps.
9. Students return to their concept maps. Give them time to review the new connections made by other groups, add more connections of their own and discuss their feelings and thoughts around these. If any issues were re-labeled as ‘local’ or ‘global’ ask students to discuss this.
10. **CONSOLIDATION:** Ask each group to share with the class one issue, its classification of ‘local’ and/or ‘global’, and the ‘users’ it affects. Ask them to share whether or not any of their issues were re-labeled as ‘local’ or ‘global’. Spend some time exploring the users who are affected and why, and how an issue can be both global and local (e.g. start in a country or region other than their own but spread to affect their local community, occur in both another region and in their local community, start locally and affect other countries or regions). Provide an opportunity for comment and discussion among classmates. Offer students an opportunity to add their ideas and thoughts to the Learning Tree.

ACTIVITY 4: HOW MUCH WATER DO WE HAVE?

Description

Students will work in groups to predict how much potable water we have, use water bottles to show their predictions and use a graph to display their predictions.

Curriculum Connections

Click here for Curriculum Connection for Activity 4 :

[ON Grade 7](#) | [ON Grade 8](#) | [MB Grade 7](#) | [MB Grade 8](#) | [NB Grade 7](#) | [NB Grade 8](#)

Materials

One set of materials for each group:

- ✓ 1-litre bottle filled with water
- ✓ 3 more identical empty 1-litre containers (preferably beakers or graduated cylinders)
- ✓ Scrap paper
- ✓ Different coloured pens or felt markers
- ✓ Rags for mopping up water
- ✓ Masking tape
- ✓ Demonstration bottles

Preparation – Demonstration Bottles

- ✓ A demonstration set of beakers that are clearly labeled with the following percentages to show to students after they have made their own estimates:

97% of the Earth's water is salt water in the oceans and 3% is freshwater. Of the 3%, 69% of the 3% is stored as ice. A lot of the remaining water is deep within the Earth or in the air as condensation. That leaves about 1% of the 3% of fresh water to be somewhat accessible (refer to Appendix C for more information).

NOTE: Be careful to model responsible use of water during this activity. Save the water used in this activity for something useful like watering plants, etc.

Procedure

1. **MINDS ON:** Write the quote: “Water, water, everywhere, nor any drop to drink” from *The Rime of the Ancient Mariner*’ by Samuel Taylor Coleridge. Ask students to think- pair-share what they think this quote means and what they think they will be exploring today.
2. **WORKING ON IT:** Place students in groups of three and give each one 4 identical 1- litre containers (1 filled with water), 1 piece of scrap paper and different coloured felt pens (4-7).

3. Ask students what makes water good, safe and healthy to drink, i.e. clean, no salt, etc. Tell students that the water they have in the bottle represents **ALL** the water on the planet, but that water comes in different forms (i.e. not all potable water). Ask each of them to choose an appropriate graph (e.g. pie) to display their estimates of the amount of:
 - Salt water
 - Frozen fresh water
 - Fresh water that is not frozen (underground and above ground in streams, rivers, etc.; water in the air, etc.)
 - Fresh and potable water that is available for us to drink
4. In groups, have students share their predictions and come to a consensus as to how much water is saline and how much is fresh. Have each group estimate and pour these representative amounts into two of the bottles. Ask the students to label the bottles appropriately using masking tape. Have each group hold up their bottles and compare them to one another.
5. Ignore the “salt water” bottle. Of the water that the group has designated as fresh, have them use their predictions to estimate the amount of fresh **flowing** water compared to the amount that is not really available to us to drink, i.e. water that is too far underground to pump to the surface or in the atmosphere as condensation, etc. Using their “fresh water bottle”, ask students to pour out the amount that is NOT ‘available’ fresh water into the empty bottle. Have each group hold up their bottles to compare.
6. Use a demonstration set of bottles to show the ‘true’ estimates or share the bottles of the group with the closest estimate. A teacher or pre-primed student can do the demo using commonly understood proportions of salt, fresh, potable water, i.e. 97% of the Earth’s water is salt water in the oceans and 3% is freshwater. Of the 3%, 69% of the 3% is stored as ice. A lot of the remaining water is deep within the Earth or in the air as condensation. That leaves about 1% of the 3% of fresh water for humans to have (fairly) easy access to.

MATH & SOCIAL JUSTICE CONNECTION: Ask students to convert each of these percentages into equivalent fractions and then determine what fraction of the total water on earth is accessible fresh water. Ask them: if this amount of water was distributed equally among the global population, how much would each person get? What percentage of all water on earth is this? Do you think that everyone uses the same amount? Why or why not? If not, who do you think uses more? Is this fair?

7. Discuss reasons for the differences between the teacher’s estimates and the students’ estimates. Why did you think you had XX% of fresh water? What social factors may have influenced your decision (media, textbooks, news, misconceptions, etc.)?

8. Tell students that you are about to give them two choices and you want them to vote for what choice they think is 'true' by giving a (discrete) thumbs up sign when you say the statement that they think is true.

- ✓ New water comes to Earth each month from space (False)
- ✓ New water does not often come to Earth (True) **Something to think about:** *Our only source of 'new' water is bits of comet that melt as they enter our atmosphere... who has seen one of those lately???* *Most of the water on Earth has been around in one form or another since the beginning of time*
- ✓ Pollution is one of the most significant threats to Canada's watersheds (True)
- ✓ Canada has 25 major watersheds of various shapes and sizes which are made up of over one hundred smaller sub watersheds. (True)
- ✓ Canada has more than two million lakes and one-fifth of the world's fresh water lie within our borders (True)
- ✓ Fifty percent of Canadians have no idea where their tap water comes from (False) (25%)
- ✓ Can you identify Canada's Five Main watersheds?

9. Ask the students: Should we protect Canada's watersheds? Why? Why not? If so, how? Why is it important that we protect the watersheds surrounding Canada's Five main watersheds ?

10. **CONSOLIDATION** Add to the learning tree after asking students to reflect on the amount of water that is available for us to drink and the importance of protecting [Canada's Five Main Watersheds](#) by writing answers to these guiding questions:

- | | |
|---|---|
| <ul style="list-style-type: none"> • Before the demonstration I predicted that... • I was surprised that... | <ul style="list-style-type: none"> • I wonder if... • I feel that... • I think that... |
|---|---|

ACTIVITY 5: SUSTAINABILITY

Description

Students will explore what ‘sustainability’ is, why it is important and what it means to them. Students identify the social, economic and environmental components of the water issues they identified in *Activity 3*. Students understand that water issues can originate from a lack of sustainable human behaviour.

Curriculum Connections

Click here for Curriculum Connection for Activity 5 :

[ON Grade 7](#) | [ON Grade 8](#) | [MB Grade 7](#) | [MB Grade 8](#) | [NB Grade 7](#) | [NB Grade 8](#)

Materials

- ✓ Index cards/ post-it notes or GOOS paper torn into squares in 4 different colour (enough for each student to have at least 3 pieces of each colour paper)
- ✓ Pen, pencils, or felt tip markers
- ✓ Film Screening Equipment

Procedure

1. MINDS ON: A few options:

- Watch **[“Dolime Dilemma: Water Proof?” video](#)**. This video is focused on Ontario but can apply to any province as an introduction to a discussion about concerns for their province's water supply. Access the video at <https://vimeo.com/39542804> (Password: waterdocs). *Note that the filmmaker is kindly making this available to use as a courtesy for the WDaS program; please honour her request to keep this password private and do not share it.*
 - Ask students to share their reactions to the film. Do you think everyone would have the same reaction as you? What was the main message? Who do you think made the film? From whose perspective was the film made? Why do you think this person made this film? Whose perspective was left out? What strategies, forms and conventions did the filmmaker use to communicate his/her point? Were the strategies effective?
- Check out the [WWF Watershed Report](#) for your area (watch [this info video](#) to start).
 - Find your watershed on the map and investigate the Profile, Threats and Health.

- Canada has [five main watersheds](#): the Arctic, the Atlantic (which includes the Great Lakes and the St. Lawrence River), Hudson Bay, the Pacific and the Gulf of Mexico. Research online to find your watershed "address" within one of these five areas.
 - Compare the health of your province's watersheds to the health of your local watershed.
 - Examine the health and threats of your local watershed and have students evaluate their own personal impact on their local watershed
 - Discuss how students can protect their local watershed and what they could be doing to ensure the sustainability of that watershed
2. **WORKING ON IT:** Distribute 8 index cards to each student (4 different colours, e.g. 2 yellow, 2 purple, 2 green, 2 blue). Place extra index cards in piles throughout the room so students can access them if they need more. Write the key words/phrases "sustainability", "social", "environmental" and "economic" on the board. Inform the students that on the index cards/ pieces of paper they are supposed to write a word, phrase or example to describe each of the four phrases/words on the board. For example, for "social" – people, "environmental" – plants, "economic" – money, "sustainability" – forever. All "social" descriptions should be placed on the yellow cards, the "environmental" descriptions on the purple cards, the "economic" descriptions on the green cards and the "sustainability" descriptions on the blue cards. Provide these examples (or your own) to the students to give them a context for the activity, but ask them to not reuse your examples. Encourage students to write anything they think of and to fill out as many cards as possible. Encourage them not to criticize their thoughts but to think broadly and openly about the words and phrases. Students can fill out more index cards if they need more, and they should not be forced to fill out all of their cards. All index cards will be anonymous.

[Note: As students fill out their index cards, they should put them face down in the middle of the circle in four piles (yellow, purple, green, blue). Give students approximately 5 minutes to complete this activity. *The purpose of this activity is to collect the thoughts of the group on these four key ideas: social, environmental, economic and sustainability in a non-threatening manner. It is a good first activity for groups who may be fearful of being criticized for their ideas by their peers.*]

Once all index cards have been placed face down in the middle of the circle, collect all the cards and have students assist you with taping them onto the board under the appropriate keyword/phrase. Once all cards are on the board, have volunteers read through them so everyone can hear how the group has defined these keywords/phrases. Encourage discussion about these ideas and the relationships between the definitions (i.e. one person may see a connection between their idea and 'economic' while another may see a connection between that same idea and 'social'. Each idea could fall into any number of categories. Encourage students to make connections.

3. Concept Attainment – Ask students to write down characteristics (e.g. drive cars, eat

local food, use electricity, etc.) of their society on ½ sheet pieces of scrap GOOS paper. (Have students print their ideas large enough so the whole class can read it from the board). Collect all ideas, shuffle them together, and redistribute to the groups. Ask students to make a t-chart and, using the understanding of sustainability they acquired in the previous task, sort the cards according to whether or not the characteristic/system of society that is listed on the card is sustainable. Ask each group to share their t-charts. Discuss the findings with the whole class.

4. Redistribute their concept map (on chart paper) from *Activity 3*. Ask students to identify the social, environmental and economic components of each of the issues on their mind map. Have them write these down on colour-coded sticky notes/ GOOS paper and attach them to their mind map. Then ask students to discuss in their group why each issue is not sustainable.

Guiding questions:

- What do you think caused this water issue?
 - Can you think of any specific human actions which may have contributed to creating the issue or making it worse? Do you think these actions arise from or are related to economic, social or environmental considerations?
 - What are the environmental, social and economic consequences of this issue?
 - What could we do to mitigate the economic, social and environmental consequences of this issue, and the issue as a whole?
5. **CONSOLIDATION:** Post the mind maps on the wall and have students conduct a gallery walk. Subsequently, engage the whole class in a discussion about their findings. Give students an opportunity to add to the Learning Tree.

ACTIVITY 6: LOCAL WATERSHED WALK

Part I: Watershed Walk

Description

Students go for a walk in their local watershed to identify important economic, social and environmental aspects of their place related to water. They look for and photograph or sketch features that they like and do not like and justify their choice. Ask students to make any observations they can about the bodies of water and/or access points (e.g. Who is living there? Are there things that shouldn't be there? etc.) Finally, they reflect on their findings, considering different perspectives people might have about their place and the interconnected nature of some of the features.

Curriculum Connections

Click here for Curriculum Connection for Activity 6 :

[ON Grade 7](#) | [ON Grade 8](#) | [MB Grade 7](#) | [MB Grade 8](#) | [NB Grade 7](#) | [NB Grade 8](#)

Materials

- ✓ digital cameras or sketching materials (one per group)
- ✓ permission form for walk
- ✓ Reflection journal made from recycled paper
- ✓ GOOS chart paper
- ✓ Pencil, pens, and/or felt tip markers

Preparation

It is essential to walk the route before you take your class out. Look for potential safety concerns and time the walk. Obtain a simple road map of the area in which you will be walking. You may wish to consider printing a map from: maps.google.ca

<p><i>Procedure</i></p>

1. **MINDS ON:** Ask students how they arrived at school today (car, walk, bus, bike, etc). Ask them if they took notice of the route they took and any natural landmarks on the way. Tell them that today they have an opportunity to explore their local community. Work with students to plan out the route for your walk. Note: *Please utilize your local community and school yard. Part of the benefit of this lesson is for students to identify features of their local community, to understand the link between water and human settlement, and the positive and negative impact they can have in their region. Travelling to an area outside of their local community to do the walk reduces the impact this lesson can have on student empowerment.* The teacher or students should plan out the local route to include a variety of sights including (if possible):

Storm drains
Streams/rivers/creeks
Marshland
Bridges Farms/Gardens

Ponds
Fountains/Sprinklers
Naturalized areas/Parks
Buildings with rain spouts

2. **WORKING ON IT:** Review expected behaviour norms and safety procedures with students. Organize students into groups of 3-4, with a digital camera or cell phone in each group (to be provided by students if possible). With at least one of the students in the photo, each group should take photos of:
 - a. Each of the sights of interest as determined by the teacher and/or the class
 - b.** Three additional places that are of particular interest to the students— students should choose these sites **individually**
 - c.** Three places that the students do not like—students should choose these sites **individually**

*These photos will be used in the next assignment – a town map
3. Go on the walk. Take time to look for features which illuminate the interconnections between different species and places. Make connections to *Activity 3* and the issue- user interaction. Ask students if they noticed that their community is near water. Ask them why they think people chose to settle here.
4. If the weather is nice, have the students complete the following post-walk reflection questions outside in a location of their choice. *Note to Teachers: Decide on a clear boundary with the students which they are not to go beyond when they are selecting the sites to complete their reflection questions.*
Post-walk reflection questions (to be done individually):
 - a. Describe at least 3 ways that the places in your watershed are connected.
 - b. For three of your favourite places on your walk, describe why you like these particular places. Explain who in the community (human or

- animal) might use these places and for what they might be used.
- c. For three of the places on your walk that you did not like, describe why you did not like these particular places. Explain who in the community (human or animal) might use these places and for what they might be used.
 - d. Do you think that someone who is concerned about the plants and animals in your area would agree with your likes and dislikes? What about someone who is concerned about the economy? What about someone who is concerned with social interaction in your community? Why or why not? Organize your answers in a chart.
 - e. In general, do you care about the place that you walked? Why or why not?
 - f. Consider how each of these places might be valued by people of different professions and backgrounds and animals (e.g. a squirrel, a canoeing company, a road developer, a farmer, a Government official, etc.)
5. Ask students to share any observations that they made concerning local bodies of water. Generate a list of concerns about local threats to local bodies of water (e.g. homeowners may wash their cars with harmful soaps. This soap runs down the driveway and into the storm drain. When this happens, the chemicals enter the watershed and affect the plants, animals and other organisms which live there).
 6. Have students divide into groups. Provide each group with a large piece of paper (preferably GOOS chart paper). In a small box (or other shape) in the centre of the paper, ask each student to draw a picture of a body of water that they have visited and enjoyed. If students cannot think of one, challenge them to think of ditches, puddles, creeks, lakes, oceans...anything! If they are really stuck, they can imagine a place. Show your students an example of a mind map and provide some explicit instructions.
 7. Around the picture, have students develop a mind map with pictures that depict connections such as:
 - What else would you like to do in the water (e.g. swim, paddle a kayak, look for insects and fish, go windsurfing, etc.)?
 - Who else uses that water?
 - Sources of pollution
 - o Obvious sources
 - o Less noticeable/further away sources (e.g. soaps, fertilizers, etc. that we use on our lawns and in our driveways for more information, see Trout Unlimited Canada's [Yellow fish Road project](#))
 - What are the consequences of polluting the water?
 - o For humans?
 - o For other animals?
 - o For plants?

8. Regarding consequences, encourage students to ask 'so what' regarding each consequence and to be explicit about why they do or do not care about the consequence. Ask them to depict these thoughts on their concept map.
9. **CONSOLIDATION:** Post mind maps around the room and conduct a gallery walk. Regroup with students and as a class discuss the connections and implications they identified. Provide students with an opportunity to add to the Learning Tree.

ACTIVITY 7: LOCAL WATERSHED-MAPS INTO MODELS

Description

Students will study local maps and build their own three-dimensional model in order to understand the concept of a watershed and local water sources.

Curriculum Connections

Click here for Curriculum Connection for Activity 7 :

[ON Grade 7](#) | [ON Grade 8](#) | [MB Grade 7](#) | [MB Grade 8](#) | [NB Grade 7](#) | [NB Grade 8](#)

Materials

- | | |
|--|--|
| ✓ a local map showing streams and rivers | ✓ spray bottle with water |
| ✓ aluminum pie plates or cookie sheets | ✓ a bit of soil, cocoa powder and coloured drink mix |
| ✓ Monopoly-size models of homes | ✓ historical, aerial photos of your area (optional—contact local museum) |
| ✓ clay | |

Procedure

1. **MINDS ON:** Ask students to recall the route they took on their community walk from *Activity 6*. Ask them to share the different elements of the watershed they discovered during their walk.
2. **WORKING ON IT:** Ask students to sketch a local map that includes the following information:
 - a) The closest creek to the school
 - b) The closest river to the school

- c) The closest lake to the school
 - d) The source of the school's drinking water
 - e) The (drinking) water treatment plant
 - f) The sewage treatment plant
 - g) The first place water that runs off the school driveway goes after the storm drain
 - h) The storm drain closest to their classroom
3. Find a large topographic map (or several small maps) of the watershed in which your school is located. Your local drinking water management office, municipal office, or conservation authority may be able to help you to locate a map.
 4. With a partner, ask students to find some of the items (creeks, rivers, lakes, etc.) on their own map (from step 1) on the official watershed map. Ask them to predict how the water will flow through the areas on the map. Explain to students that a watershed is the area that includes all the tributaries that lead into a local water body. You may want to point out that in urban and suburban areas, humans have covered over many of the creeks that run through our communities.

Optional: historical, aerial photos of your area are often very interesting to students and informative about the nature and scale of changes to your watershed. You may be able to access these through your local museum. Many museums now have photos online.

5. Formative Assessment: create a little quiz (oral or written) to ensure that the students understand the different aspects of their local watershed before they build their model.
6. Ask students the following questions:
 - What is a model?
 - What is a three-dimensional model?
 - What should you consider when creating a 3-D model? (e.g. elevation, etc)
7. Explain to students that they are going to make a three-dimensional model of a watershed; students can work in pairs or in groups of three.
8. Develop a rubric with the students to determine how the models and their understanding of the models should be assessed (a rubric has been provided below to assist you). You may wish to have the students audio or video tape their demonstrations and their explanation of what is happening in order to fully assess their understanding of the point of the models.
9. Provide a chunk of clay and an aluminum pie plate or cookie sheet for each group.
10. Ask students to use the clay to design their local watershed in the pie plate/cookie sheet. They should mold the local geographic features.
11. Ask students to experiment with the following ideas and record their observations:
 - Place some homes, factories, farms (i.e. the little Monopoly pieces) where they think they should go based on their model.

- Use a spray bottle to spray their watershed and observe the runoff. How does the runoff appear? Cloudy? Clear? Dirty?
 - Place two tablespoons of soil on the highest part of the model. Spray their watersheds with water and observe runoff. Discuss what happens to the soil. How does the runoff appear? Cloudy? Clear? Dirty?
 - Ask students to predict how plants growing on the steep parts would affect water runoff. Challenge them to use materials of their choice to experiment with plants and water runoff.
 - Ask students to predict consequences to aquatic organisms and bodies of water when soil is washed into streams and rivers.
12. In their groups, ask students to brainstorm possible sources of water pollution (see [Appendix B](#)) for background information to assist students). Choose a model with an appropriate scale to demonstrate the following:
- “Where on this model could oil be found?” A possible response would be the gas station or on any road.
 - Use a mixture of cocoa and water to represent engine oil. Ask students to place the oil where suggested.
 - “Where on this model could soil with pesticides be found?”
 - Use cocoa powder to represent soil with pesticides. Ask students to place where suggested.
 - “Where on the model could soil with other types of chemicals be found?” Use coloured drink mix to represent chemicals. Ask students to place the chemicals where suggested.
 - Use water spray bottles to mimic rain. Have students observe what occurs in the watershed. Discuss. What are the implications of this for your own watershed and the substances that we put down our drains, in our yards and on our roadways?
13. Individually, ask students to reflect by writing answers to the following questions:
- a) Were there any surprises for you during these activities?
 - b) What else would you like to know?
 - c) If you could do a giant experiment on your watershed, what would you do?
 - d) How is a watershed a system?
 - e) How does the siting of different facilities impact the environment? How does it impact the quality of life of the residents in that community?
14. **CONSOLIDATION:** Ask students to share their answers. Provide students with an opportunity to add to the Learning Tree.

ACTIVITY 8: HOW DOES THAT CONTAMINANT IMPACT US?

Description

Students explore the economic, social and environmental impacts of different pollutants on their local watershed.

Curriculum Connections

Click here for Curriculum Connection for Activity 8 :

[ON Grade 7](#) | [ON Grade 8](#) | [MB Grade 7](#) | [MB Grade 8](#) | [NB Grade 7](#) | [NB Grade 8](#)

Materials

- ✓ Models from *Activity 7*
- ✓ GOOS chart paper
- ✓ Pens, pencils and/or felt-tip markers
- ✓ Tape/Magnets
- ✓ Film screening equipment

<i>Procedure</i>

1. **MINDS ON:** Watch the video “Keepers of the Water” <http://vimeo.com/18447592>. Ask students to individually reflect on the video by writing the economic, environmental and social implications of the issue identified in this film and their reactions to it. Additionally, ask students to Think-Pair-Share their reactions to the film using these questions: Do you think everyone would have the same reaction as you? What was the main message? Who do you think made the film? From whose perspective was the film made? Why do you think this person made this film? Whose perspective was left out? What strategies, forms and conventions did the filmmaker use to communicate his/her point? Were the strategies effective?
2. **WORKING ON IT:** Divide students into the same groups they used to build their watershed models. Let each group choose one of the pollutants listed in Figure 1. Provide each group with a slip of paper that has the source and effects information related to their pollutant. Do not allow the other groups to see the source and effects information related to other students’ pollutants.
3. Ask students to draw a picture of what is happening in the center of a piece of chart paper. Ask them to make the picture as graphic as possible so that someone who had not read the information can tell what is happening.
4. Post the chart paper around the room. Ask each student to tour the pictures. Have the students choose five of the pictures and write a short description (highlighting cause and effect) of what is happening in each picture.
5. As a whole group, ask volunteers to describe what they think is happening within a particular picture. Then, ask the authors/illustrators to add any missing details to the description.
6. Ask each group to take back their pictures and to retrieve their 3D watershed models. Students should use their models to predict the effect of their pollutant and complete the following activity. From each effect (for example, high concentrations of pollutants can kill fish eggs and adult fish), ask the students to draw a line to a rectangle. On the line, write the question ‘so what?’. In the rectangle, use words and pictures to answer the question ‘so what’ (for example, if fish eggs die, there will be fewer fish). From the rectangle, create a new line (with the question ‘so what’) and a new rectangle (for example, if there are fewer fish, there will be less food for animals, including humans that eat the fish). Have students continue one line of thinking until they cannot answer any more ‘so what’s’. Then, have students determine if there are other directions the line should go in (e.g. a different consequence of the same effect). Ask students to repeat this process with all of the effects.

7. As a class discuss the following questions:
 - ✓ How does the use and location of different pollution sources impact the environment?
 - ✓ How does it impact the quality of life of the residents in that community?

8. **CONSOLIDATION:** Have groups present their predictions and the potential social, environmental and economic impacts of the pollutant on their community in a creative manner (e.g. song, dance, skit, etc.). As a class, identify actions to prevent the impacts from occurring. Provide an opportunity to add to the Learning Tree.

Math Extension: Ask students to investigate the concentration levels of different pollutants in their local fresh water. If you have access to water testing kits, do this as a hands-on Action Project and compare the amount of pollutants in different water samples (drinking water, lake/river water, rain water, etc)

ACTIVITY 9: PREPARING FOR THE WATER BROTHERS

Description

Students will assess what they already know, what they want to know and what they want to ask the Water Brothers.

Curriculum Connections

Click here for Curriculum Connection for Activity 9 :

[ON Grade 7](#) | [ON Grade 8](#) | [MB Grade 7](#) | [MB Grade 8](#) | [NB Grade 7](#) | [NB Grade 8](#)

Materials

✓ GOOS Chart paper

✓ Film screening equipment

Procedure

1. **MINDS ON:** Students pre-screen Water Brothers episode(s) “On Thin Ice” (<http://thewaterbrothers.ca/thin-ice/>) and/or “More Food Less Water” (<http://thewaterbrothers.ca/food-less-water/>) and engage the students in discussion about the episode.

Some suggested questions:

On Thin Ice	More Food Less Water
<ul style="list-style-type: none"> ● What are some of the economic, social and environmental implications of warming waters in Canada? ● How do snow and glaciers in the Rocky Mountains affect other places in North America? ● Have you noticed any changes to the weather or climate in your lifetime? ● The Great Lakes are some of the fastest-warming lakes in the world. Discuss the impacts of warming waters on your community specifically. ● How do you think that the warmer waters will affect the fisheries of Canada? 	<ul style="list-style-type: none"> ● How do you think the environment is impacted by farms? ● How might you go about changing the mindset of North America to accept insects as a healthy, nutritious protein? ● What are some ways that you can reduce food waste in your own household? And in your school/community? ● Does the appearance of fruit and vegetables affect your consumption habits? Why or why not? ● Should Canadians shift our dietary habits to include less dairy and meat? Why or why not? How could we go about doing this?

<ul style="list-style-type: none"> • Do you think action on climate change should come from governments, businesses, individuals, or all three? Why? • What are some actions that you can take as an individual or a group to mitigate climate change? 	<ul style="list-style-type: none"> • Do you think there is enough being done to address the issue of water consumption in agriculture? • Identify the key message of the film and discuss
--	---

2. **WORKING ON IT:** In groups, students create a chart listing what they already know about water issues and sustainability, what they would like to learn, and what they want to ask the Water Brothers during the live Q&A (generally scheduled in Oct/Nov).
3. Ask students to critique the episode(s) from a media literacy standpoint. For example, ask students to identify the point of view of the documentary, whose voices are included and whose are excluded, the makers of the film, and the key message of the film. Have students make a T-chart to outline the positive and negative aspects of this form of media.
4. Students share their two charts with the whole class. Together the class selects two questions for The Water Brothers. As a class, students identify the elements of a good documentary film and create a chart with this information.
5. **CONSOLIDATION:** The whole class then engages in a knowledge-building circle to identify how the students could learn what they want to learn.

ACTIVITY 10: THE WATER BROTHERS

Description

Students will have the opportunity to discuss documentary filmmaking and water issues with TVO's *The Water Brothers*. Students will also have the opportunity to meet fellow students from across the GTA to discuss water issues.

*Teachers: You and your students may wish to connect with other participating teachers and students to collaborate on Action Projects, brainstorm and bounce ideas off each other, obtain different perspectives, and provide constructive feedback and peer review.

Curriculum Connections

Click here for Curriculum Connection for Activity 10 :

[ON Grade 7](#) | [ON Grade 8](#) | [MB Grade 7](#) | [MB Grade 8](#) | [NB Grade 7](#) | [NB Grade 8](#)

Materials

- ✓ Film screening equipment
- ✓ Video conferencing equipment (e.g. Skype, webcam, microphone, screen/ SmartBoard)

Procedure

- o **MINDS ON:** Have students review their question for *The Water Brothers*.
- o **WORKING ON IT:** Screen “*On Thin Ice*” and/or “*More Food Less Water*” and engage in the live Q&A session with *The Water Brothers*.
- o **CONSOLIDATION:** After the live Q&A, have students discuss the film and the Q&A session. Analyze the video according to Media Literacy expectations (e.g. purpose, audience, point of view, making inferences, evaluating texts, etc). Have the students compile a list of what they learned through the Q&A along with a list and short description of the top 5 local water issues they are interested in addressing. Provide an opportunity to add to the Learning Tree.

ACTIVITY 11: ACTION PROJECT PLANNING

Description

Students work through a series of activities to identify a local water issue that is important to them and engage in an action to address it. Some students may already have an issue they want to explore, however they are still encouraged to complete some (if not all) of the issue identification activities. Students are encouraged to engage other peers, teachers and local community members in their projects, as well as involving their families in at least one water conservation measure at home.

Interested in starting or doing Action Projects on water but you don't know how? See Appendix E for examples of existing student-led Action Projects that can be adapted as your own. You can use these projects as case studies and encourage your students to break down and highlight their vision, goal, who was involved, their action plan and so forth.

Additional projects can be found on the Our Canada Project Platform (www.OurCanadaProject.ca).

Curriculum Connections

Action Projects should be inter-disciplinary and cover curriculum expectations from multiple subjects. Teachers can use the curriculum expectations introduced or addressed earlier in the unit as a guide (see [Appendix F](#)).

Materials

- ✓ GOOS paper cut into small strips
- ✓ Film screening equipment
- ✓ Scrap paper
- ✓ [LSF's Engaging Students in Successful Action Projects \(ESSAP\) Guide](#)

<p><i>Procedure</i></p>

1. **MINDS ON:** Students watch “Mega Quarry: Save our water”
<https://vimeo.com/channels/610105/62655680>

2. **WORKING ON IT: Issue Identification Activities**
 - a) Value Line – *Activity 2B (pg. 21)* from LSF’s [Engaging Students in Sustainable Action Projects \(ESSAP\) Guide](#). Students are asked to anonymously write down as many water-related issues as they can which affect their local community (one issue per slip of paper). Note: Encourage students to think broadly about water (for example, not just polluted lakes, but also destroyed wetland habitat, endangered wetland species, safe drinking water, water conservation, water use in industry, safe water recreation, etc.). Refer to pg. 21 from LSF ESSAP Guide for further instructions.

 - b) Visioning A Change for a School – *Activity 2C (pg. 24)* [ESSAP GUIDE](#)

Ask students to group themselves according to a shared interest in a water issue.

3. **CONSOLIDATION:** Ask each group to share with the class which issue they plan on addressing. Provide an opportunity to add to the Learning Tree.
 Note: Over the next few weeks, guide your students through the Action Planning Process in the ESSAP guide (steps 2-7). During this time students begin to brainstorm ways that they can address their chosen issue. Students create an initial draft of action steps for carrying out the project. They begin to consider what they will need to know by completing a K-W-L chart, identify possible sources of information as well as the barriers and strengths they may encounter during the process. They begin thinking about what measures they will use to quantify their success and develop a list of criteria which they will use to assess their level of success. By the end of this lesson, students should have a rough idea of their issue and Action Project.

Student 2 Student Collaboration: You may wish to set up a date and time to video chat or other channels so your students can communicate with other students from other schools in the Water Docs at School program about their project. Students may wish to partner with students from a nearby participating school and complete their project together. Contact samantha@LSF-LST.ca to get connected!

ACTIVITY 12: FILMMAKING

Description

Students utilize digital media to create a documentary film about their Action Project and local water issue. This activity will likely take a series of lessons over a period of a few weeks.

Remember:

- **Films are to be 4 minutes long (not including credits)**
- **All footage, images, music, clip art, sound effects, etc. MUST be original creations or royalty free**
- **All students appearing on camera must have signed Media Release Forms (ask samantha@LSF-LST.ca for these if you don't have them)**
- **Don't forget to check out the [WDaS Filmmaking Basics Guide](#) for tips!**

Curriculum Connections

Students' documentaries should be holistic and demonstrate their competency in as many, if not all, of the curriculum expectations in this unit from Language, Math, Geography, Science, Arts and Health and Physical Education. Teachers can use the curriculum expectations introduced or addressed earlier in the unit as a guide. When students are preparing the storyboard for their films and are determining what information to include and what to exclude, they should use the expectations in the Geography – Global Settlement and Global Inequalities section as a guide.

Materials

✓ Filmmaking equipment

✓ Scrap paper

Procedure

1. Students work in their Action Project groups to create a documentary film highlighting their Action Project and the water issue they addressed. Students should work collaboratively to create a storyboard for their film, write a script, plan digital effects and contact different community stakeholders to gather information and conduct interviews. As a class, students should create criteria to determine what a good documentary looks like, feels like and sounds like.
2. Note: The documentary films should provide information about the local water issue and answer the following questions:

- i. What is your local water issue?
- ii. Why is it an issue?
- iii. Who does it affect? (humans, non-humans) What parts of the community (geographically) does the issue affect?
- iv. Does it have social, economic or environmental implications? If so which ones? Why is this important?
- v. What did you do to address the issue?
- vi. How did you do it?
- vii. What can others do to address the issue?
- viii. What was the impact?

ACTIVITY 13: DEBRIEFING, EVALUATION AND CELEBRATION

Description

Students assess their projects and films according to the assessment criteria created in *Activity 11* and *12*. Students and teachers assess the Water Docs at School program and provide feedback to samantha@LSF-LST.ca

Curriculum Connections

Click here for Curriculum Connection for Activity 13 :

[ON Grade 7](#) | [ON Grade 8](#) | [MB Grade 7](#) | [MB Grade 8](#) | [NB Grade 7](#) | [NB Grade 8](#)

Procedure

1. **MINDS ON:** Students watch their own documentary films.
2. **WORKING ON IT:** Students individually assess their group films and Action Projects using the criteria they created in *Activity 11* and *12*. As a group, students discuss their assessments and create a group assessment of their project and documentary. Note: Teachers this is a perfect opportunity to assess your metacognitive piece in the curricula. Please devise questions appropriate to your students and these expectations (i.e. If you were going to repeat your Action Project, what would you change? Why did you choose this issue for your project?)
3. **CONSOLIDATION:** Each group shares their assessment with the whole class and explain their rationale for their assessment. The entire class completes an evaluation of their projects, films and the Water Docs at School program as a whole.

4. **CELEBRATION:** During your Action Project planning and implementation, encourage your students to share their vision/action on the [Our Canada Project](#) (OCP) platform (a space to share with all Canadians the work you are doing – big or small – individually or collectively – to make Canada a better place). By posting your project, you will be able to join a community where you can view other projects, comment and engage with other responsible citizens across the country. You can also post up photos/videos, link to your project’s website/blog and other forms of social media.

Did you know that your project on OCP is **eligible for a chance to win \$3,000?** The LSF-RBC Our Canada Project Award recognizes the creativity and innovation of Canadian Youth in modeling responsible citizenship. By sharing your youth-led Action Project, you get a chance to win one of 3 awards. 1st place is \$3000, 2nd place is \$2000, 3rd place is \$1000. For more information please visit our website!

www.ourcanadaproject.ca

What is Our Canada Project? *Our Canada Project* was the brain child of a diverse group of 22 youth from across Canada. These youth were brought together for 48 hours to figure out how to inspire all youth from every area in Canada to be more responsible citizens. The answer: give youth a chance to share their voice and they will take action. And so, the *Our Canada Project* was born. OCP is a space to share with all Canadians the work you are doing, big or small, individually or collectively, to make Canada a better place. Share your vision, story and action for a more sustainable Canada today!

APPENDIX A1: LISTENING AND FACILITATION SKILLS ACTIVITIES

Active Listening



What are some things that you can do to convey to the speaker that you are listening?

(Examples: nod your head, repeat what you just heard, eye contact, ‘interested’ facial expression, encouraging noises [uh huh, right, etc.]).

What are some things that you can do to help you to understand and remember what is being said?

(Examples: retell what has been said in your own words; make written notes; repeat important information in your head; in your head, try to relate what has been said to your own experiences, etc.)

Example Assessment Checklist

Listening Cue	Self Assessment (never, sometimes, mostly)	Other Assessment (peer, teacher)
1. Nodded my head		
2. Repeated what I heard		
3. Looked directly at the speaker		
4. Had an ‘interested’ facial expression		
5. Made encouraging comments/noises (uh huh, right, etc.)		
6. Retold what had been said in my own words		
7. Made written notes		
8. Repeated important information in my head		
9. In my head, tried to relate what had been said to my own experiences		
10. _____		

APPENDIX A2: SHARING AIR TIME

Materials

Bags of some type of token, for example: pennies, dried beans, etc. (approximately 5 per student)

Before the activity:

- After students have worked in a group (on any given geography topic without any particular direction about sharing air time), ask each student to privately address questions on the student sheet below.
1. Provide each student with approximately 5 tokens. Tell students that each time they speak they must spend a token. Rules:
 - a. Once all of your tokens are spent, you may not speak again until everyone's tokens have been spent, but you must listen actively to each of your peers.
 - b. You must spend all of your tokens.
 - After the token experiment, ask students to answer the appropriate questions on the student sheet. In their journal, have students reflect on the similarities and differences between the free form group work and the token experiment group work.
 - In order to work toward not needing the tokens, participants need strategies regarding how to share the air time in a group situation. Teacher and students model the scenarios below.
 - c. A person is speaking more than her/his fair share. Other group members can help to share the air time by saying things like:

Examples:

“Sarah, I really like what you’ve said, but I would like to hear what the others think...”

“Nasim, we’ve heard how you feel about this, what do you think Farah?”

“Christian (who is taking up a lot of air time), would you please listen to Ayesia’s idea”

- d. A person is speaking less than her/his fair share. Other group members can help to share the air time by saying things like:

“Kiyoka, we haven’t heard from you; would you please share what you think?”

“Jacob, would you please elaborate on Tomer’s idea?”

(make cue cards with these phrases on them)

APPENDIX B: POLLUTION

Non-point Source Pollution

Non-point source pollution is pollution spread over a large area and not from one specific location; this type of pollution is hard to trace to its source , e.g. litter, acid rain, etc.

Point Source Pollution

Point source pollution is easily traced to its source, e.g. factories and sewage treatment plant wastewater. Nonpoint source pollution, unlike point source pollution, comes from many different sourcesⁱ.

Non-point Source Pollution is the single largest contributor to water pollution!

How does Pollution get into our Water System?

As runoff water from rainfall or melting snow moving over and through the ground passes through the watershed, it picks up and carries away natural and human-made substances such as chemicals, sediment and debris and deposits them into lakes, rivers, wetlands, coastal waters and underground sources of drinking water.

Pollutants do **not** enter the local water body through the storm drain system at a constant rate over the year. For example, there is a large increase in non-point source pollution in the springtime. This is the peak time for runoff from melting snow and rain which ends up in the storm drain system, untreatedⁱⁱ.

Water slowly moves through soil (groundwater) and naturally gets filtered. Since about 70% of towns and cities are paved or built over, about half of the precipitation that falls on our cities never touches the soil. Water running over pavement collects debris and chemicals and often goes directly into the storm drain system without moving through soilⁱⁱⁱ.

Where do these pollutants come from?

There are many sources of water pollutants, including industrial and agricultural sources. However, Canadian households annually generate more than 60,000 tonnes of hazardous wastes. Common examples of hazardous household wastes include: old car batteries, lighter fluid, turpentine, gasoline, used motor oil, antifreeze, pool chemicals and pesticides. Other pollutants that commonly end up in the water system are soap and fertilizer. These may not be toxic, but in high concentrations they can have a negative impact on the aquatic ecosystem by changing pH levels of water sources.

What are the effects of non-point source pollution?

Non-point source pollution in our waterways impacts not only humans but also the other animals and plants that depend on that water. Non-point source pollution can affect the food supply and is the major source of human exposure to persistent toxic chemicals. For example, food can become contaminated when it is exposed to hazardous waste, which can happen at any point in its life; this is especially true with fish and wild game.

The water in your watershed continues on to the next community's watershed. Municipal water is treated before reaching households, but if the water going into the treatment plant is contaminated, it takes more time and energy to clean it^{iv}.

Non-point source pollution also impacts the watershed ecosystem. Different levels of different pollutants will affect plants and animals in and around the water (Figure 1).

Figure 1: Pollutant Effects on Aquatic Ecosystems^v

Pollutant	Source	Effects
Detergents	<ul style="list-style-type: none"> • Washing cars in the driveway • Dumping wash water onto the street • Washing siding or windows 	<ul style="list-style-type: none"> • Can strip away the protective mucous coating on a fish – without this protective coating, fish will absorb more chemicals and are more susceptible to disease. • High concentrations can kill fish eggs and adult fish. • Phosphorous In detergents encourages the growth of algae. When the algae dies it uses up a lot of oxygen. This means that there is less oxygen available for other plants and animals. Many types of fish cannot survive in water with low oxygen levels.
Garbage	<ul style="list-style-type: none"> • Litter from people, houses, parks, industrial areas and construction sites 	<ul style="list-style-type: none"> • Can cause unsightly debris and bad odours. • When ingested by an animal, litter can be dangerous, often causing death. • Sharp litter can harm people or animals (e.g. glass). • Animals can become entangled and strangled by litter, which is dangerous and can cause death (e.g. beer plastic rings and plastic bags).
Heat	<ul style="list-style-type: none"> • Even heat can be a pollutant! • Because the storm drain water is coming from runoff over land and roads, storm drain outfall is usually warmer than the local water body. 	<ul style="list-style-type: none"> • Increased temperatures can affect certain species of fish, invertebrates and plants, which are adapted to living in a certain range of temperatures. Fish are particularly sensitive to temperature changes during spawning. • Warmer water holds less dissolved oxygen, which can be a problem for species that require a certain oxygen level in the water. Coldwater fish, such as trout, prefer waters that are cooler than 14°C.
Heavy Metals	<ul style="list-style-type: none"> • Industrial sites • Washing cars in the driveway • Metal corrosion (e.g. from cars and pipes) • Pesticides and herbicides 	<ul style="list-style-type: none"> • The levels of heavy metals found in water are generally low, however, due to bioaccumulation, higher concentrations can be found in wildlife. • Bioaccumulation is an increase in the concentration of a chemical in an organism over time. As an organism drinks and eats contaminated sources, it will accumulate chemicals in its body over time.
Nitrates and Phosphates	<ul style="list-style-type: none"> • Nitrates come mainly from fertilizers, and some from animal waste • Phosphates are found in detergents 	<ul style="list-style-type: none"> • Can cause eutrophication or algal bloom. • Nitrates and phosphates are nutrients that plants need for growth. Algae will grow very quickly if there is a high concentration of these nutrients in the water, causing algal blooms. • Too much algae in the water leads to less oxygen for other organisms, less light reaching other plants and can clog the gills of fish.
Oil and Grease (Hydro-carbons)	<ul style="list-style-type: none"> • Leakage of oil and other lubricating agents from cars and other motorized machines 	<ul style="list-style-type: none"> • There is a wide array of hydrocarbon compounds, some of which are known to be toxic to aquatic life. • More oil comes from storm drain pollution than from oil tanker spills!

Pollutant	Source	Effects
Pathogens (disease causing organisms)	<ul style="list-style-type: none"> • Can be found in pet and livestock wastes and can move into the water system as a result of run off from lawns and farm fields. • Can get into the water system as a result of faulty septic systems. 	<ul style="list-style-type: none"> • Pathogens include bacteria like E. coli and Salmonella, protozoan parasites like Giardia lamblia (beaver fever), and viruses like Norwalk. • They can cause illnesses in humans and wildlife.
Pesticides	<ul style="list-style-type: none"> • Excess herbicides and insecticides from residential and agricultural lands 	<ul style="list-style-type: none"> • Can harm plants, wildlife and humans through chronic low concentration or sudden high concentration exposures. • Effects include: loss in production, changes in growth, development and/or behaviour and death of species. • Cancer, endocrine disruption.
Salts	<ul style="list-style-type: none"> • Sidewalk and roadway application • Irrigation practices 	<ul style="list-style-type: none"> • Salt dissolves very easily in runoff and can increase the salinity of the local waterbody. In some places, spring runoff can cause the salinity of the local waterbody to reach ocean salinity levels! • Freshwater species of plants and animals are not adapted to the high level of salinity, like saltwater species are, and can be adversely affected. • The dissolved salts are difficult and expensive to remove. • High salinity water may also be corrosive to piping systems.
Sediments	<ul style="list-style-type: none"> • Includes organic debris, silt and sand from roadways, improperly managed construction sites, crop and forest lands and eroding stream banks 	<ul style="list-style-type: none"> • Can increase turbidity, or the cloudiness of the water, which can clog fish gills, decrease the amount of dissolved oxygen in the water and suffocate trout and other organisms' eggs. • Added sediments can change the course of a river or a stream and damage habitat – it doesn't take much sediment to do this!

What can we do?

We can help improve storm water management in a number of ways:

- Reduce fertilizer, pesticide and insecticide use on gardens and lawns
- Don't dispose of used oil or grease down storm water drains, and clean up spilled brake fluid, oil, grease and antifreeze, i.e. do not hose them into the street where they can eventually reach local streams and lakes.
- Don't wash your car where the detergent water can run into the storm water drains
- Keep litter, pet wastes, leaves and debris out of the street gutters and storm drains
- Control soil erosion on your property by planting ground cover and stabilizing erosion-prone areas^{vi}.

Water Cycle Overview

Precipitation that falls on the Earth's surface forms from condensation when water vapour in the air cools and condenses into drops of liquid water or ice crystals. Some of this precipitation infiltrates the ground and becomes part of the groundwater; some is intercepted by plants or by human structures while the remainder runs off the land as surface water. Water returns to the atmosphere through the combined processes of evaporation and transpiration through plants^{vii}.

Approximately 97 percent of the Earth's total supply of water is found in the oceans. The remaining 3 percent is fresh water, which is mostly unavailable for use by plants, humans and other animals. Most of this water is either frozen in glaciers or polar ice caps or located deep beneath the Earth's surface where it is not economically feasible to extract. This leaves only 0.5% of the Earth's total water supply available as fresh water from rivers, lakes or underground aquifers.

- Our only source of 'new' water is bits of comet that melt as they enter our atmosphere... who has seen one of those lately??? Most of the water on Earth has been around in one form or another since the beginning of time which means, in a sense, we've been drinking the same water that was contained in the dinosaurs' pee!

Where does our drinking water come from?

Most cities of fewer than 5,000 people get their drinking water by drilling wells into groundwater supplies. Larger cities obtain their water from surface waters such as rivers and lakes. Cities that rely on rivers as a source usually dam the river. The average Canadian uses about 335 litres of water per day^{viii}.

Treatment of Water Before it Reaches our Homes

Our public water systems supply cities with water. Since most water sources are not pure, water is treated before it reaches our homes.

Three processes are involved in water treatment.

1. **coagulation and settling:** mixing water with chemical coagulants to allow bacteria, mud and other impurities to stick to the chemicals and settle at the bottom.
2. **filtration:** water is passed through a filter or screen to trap particles
3. **disinfection:** chlorine and other chemicals are added to kill remaining bacteria. Once drinking water is treated, the water flows to a pumping station where it is pumped through large water mains to homes, businesses, schools, etc.^{ix}

APPENDIX C: SUMMARY NOTES – WHY CARE ABOUT WATER

Roughly 70% of the Earth's surface is covered with water but most of this is salt water. Only 3% is fresh water and most of that is frozen in polar ice caps and glaciers. Less than 1% of all the water on Earth is “usable water,” the water that we depend on for our needs^x.

- We use water in many ways: for drinking, bathing and recreational activities such as swimming, etc.
- A common misconception amongst Canadians is that we all have an abundance of clean drinking water.
- Water is an integral part of our web of ecosystems, necessary for wildlife and plants.
- Water serves as habitat for aquatic wildlife.
- We need water to grow our food.
- It is important for students to start thinking about water issues so that they can shift their habits and change the way they use water and dispose of waste.

APPENDIX D: ADDITIONAL RESOURCES

Learning for a Sustainable Future (2007) – Water: Key Themes in Education for Sustainability.

<http://LSF-LST.ca/en/projects/key-themes-in-sustainability-education/canadian-sustainability-curriculum-review-initiative/esd-the-me-documents/water-education-resources>

Take Action! A Guide to Active Citizenship By Craig Kielburger and Marc Kielburger. Available for purchase online and in some libraries.

Active Citizenship: Student Action Projects Roland Case, Cliff Falk, Neil Smith and Walt Werner

Caring for Young People’s Rights Editor: Roland Case. Available for purchase online.

Taking it Global Action Guide

http://www.takingitglobal.org/action/guide/Guide_to_Action.pdf

Amnesty International Activist Toolkit

<https://www.amnestyusa.org/tools-and-reports/toolkits-guides/>

Poverty toolkit

[https://plancanada.ca/downloads/planyouth/poverty-toolkit.p](https://plancanada.ca/downloads/planyouth/poverty-toolkit.pdf)

[df](#)

Making a Commitment Matter Toolkit UN -

<http://www.un.org/esa/socdev/nyin/documents/toolkit.pdf>

Peace Child - <http://www.peacechild.org/>

Yellow Fish Road™ Program Procedures Manual, Trout Unlimited Canada, 2004.

<https://tucanada.org/wp-content/uploads/2018/11/YFR-Program-Guide-with-activity.pdf>

O’Connor, Maura and Kathy McGlaufflin (1992). Living Lightly in the City. Milwaukee: Schlitz Audubon Center.

Environment Canada. Did you know? Retrieved April 12th, 2007

[https://www.canada.ca/en/services/environment/natural-resources/water.ht](https://www.canada.ca/en/services/environment/natural-resources/water.htm)

[ml](#)

APPENDIX E: EXAMPLES OF ACTION PROJECTS

Interested in starting/doing an Action Project on water but don't know how? Check out the following examples of existing student-led Action Projects which can be adapted as your own. You can use these projects as case studies and encourage your students to break down and highlight their vision, goal, who was involved, their action plan and so forth. The following examples are found on LSF's [Our Canada Project](#) platform:

Duffins' Defenders by DDSB@Home Elementary, ON

The Duffins' Defenders led a grassroots activism movement to help stop the proposed warehouse and parking lot development on a wetland connected to Duffins Creek. The students were inspired to take action not only because this wetland is an important part of their local watershed but also because the treaty territory of MSIFN was not consulted on the development. To take action, the students wrote a petition that Mike Schreiner, MPP and the Ontario Green Party Leader, agreed to read on their behalf in the Ontario legislature. This petition was so successful that a spokesperson from Amazon stated that they would not build a warehouse on a provincially significant wetland and the developer has promised not to develop on the land! This is an exceptional project, made even more impressive by the fact that this was an all-virtual class!

Only Rain Down the Drain by Jack Chambers PS, ON

Grade 8 students at Jack Chambers PS made a documentary about the stormwater management pond that is in the school's backyard. They surveyed the school and found that few people understood the function of the pond and its relationship to the urban water cycle and the ecosystems. They decided to teach the school community about the pond and leave a lasting reminder to the neighbourhood. Students used the slogan "Only Rain Down the Drain" to educate the public. Grade 8 students taught the importance of the pond to every class in the school. Every student and staff member decorated a wooden amphibian or reptile. Over 800 amphibians and reptiles were hung on the front school fence as public art. The art along with a sign will remind the community about the pond's relationship to the environment. The slogan was also stenciled on

storm drains on the neighbourhood roads and information cards were placed on door knobs. The students collaborated with the City of London to design new signs for storm water ponds across the City. The school also decided to help support the pond and the park by participating in the Adopt-a-Park program. The documentary won Best Project at the Water Docs@School Action Projects and will be used by the School and the City to promote the wellness of the pond. The students are very proud of their work and know the public art will stand as a reminder about the importance of our water systems for years to come.

No More Water Bottles! By Balmoral Senior Public School, ON
Vision

Our plan as an Eco Club was to reduce the amount of non-reusable water bottles in our school by 90%.

Action

Earlier in the year, the Region of Peel came in to present on Water Systems and Water Treatment to the grade 8 classes in the school. Each student in grade 8 received a free water bottle. Later on, we conducted a water bottle survey of the classes during a Data Management Fair to get an idea on the school's usage. In March we held an Eco Fair and gave out water bottles to game winners in grade 6 and 7 (approximately 300). The Teacher-Librarian asked students how many were still using non-reusables. She then showed a Water Brothers video to explain to students in grades 7 and 8 why water bottles are such a big problem and change the mindset of the students towards tap water. For Earth Week, all students were to sign the Eco Pledge to not use non-reusable water bottles. In June, we plan to have a celebration for the reduction of water bottle usage in the school.

Lu Lax Kyook Ecological Monitoring Project By Hartley Bay School, BC
Vision

Our goal was to connect students to their ecology and collect baseline scientific, data along with ethnographic data, in order to support Gitga'at land use planning and connect students with their territory.

Action

Collect the following scientific data: Ethnographic, Salinity levels (Deep water / Shallow Estuary-River / River), Temperature levels (Deep water / Shallow Estuary-River / River), Fish Populations in Estuary (via Beach Seining), River Flow Rates, Harvestable Plant locations and population.

Water Rockers By Erin Public School, ON

Vision

To have all of our staff, students, and community members use reusable bottles every day!

Action

The Erin P.S. gr. 6 Water Rocker students persuaded 90% of our staff and students to use reusable bottles. We persuaded 100% of our Erin downtown stores to join the Blue water conservation program. We also organized a successful \$5000 fundraiser so that the local Town Council could install refilling stations in the Hillsburgh and Erin arenas. The Water Rockers program, now in its second year, spread to Montgomery Village P.S. in Orangeville this year (That's our group photo of both schools!). Now that the Water Rockers curriculum document has been completed, hopefully it will spread to other schools across the board and the province. Why? Because our local water rocks!!

APPENDIX F: Curriculum Connections

Ontario Grade 8 – Curriculum Connections

Subject	Strand	Overall Expectation	Addressed in Activity #
Geography	Global Settlement	Application	3, 6, 7, 8, 9, 10
		Inquiry	3, 4, 6, 7, 8, 9, 10
		Understanding Geographic Context	3, 5, 6, 7, 8, 9, 10
	Global Inequalities	Application	7, 8, 9
		Inquiry	4, 7, 8, 9
Science	Understanding Earth and Space Systems	Relating Science and Technology to Society and the Environment	3, 4, 5, 7, 9
		Developing Investigation and Communication Skills	3, 4, 6, 7, 9
		Understanding Basic Concepts	4, 6, 7
Physical Education	Active Living	Active Participation	6
		Safety	6
Language	Oral Communication	Listening to Understand	3, 4, 5, 6, 7, 8, 9, 10, 13
		Speaking to Communicate	3, 4, 5, 6, 7, 8, 9, 10, 13
	Reading	Reading for Meaning	4, 8
		Reading with Fluency	4, 8
	Writing	Developing and Organizing Content	3, 4, 6, 7, 8, 9, 13
		Using Knowledge of Form and Style in Writing	6, 7, 8, 9
		Applying Knowledge of Language Conventions and Presenting Written Work Effectively	3, 4, 6, 7, 8, 9, 13
	Media Literacy	Understanding Media Texts	5, 8, 9, 10
		Understanding Media Forms	5, 8, 9, 10
		Creating Media Texts	13
		Reflecting on Media Literacy Skills and Strategies	13
Math	Number	Number Sense – Fractions, Decimals and Percent	4
	Data	Data Literacy - Collection and Organization	4
		Data Literacy - Visualization	4
Arts	Dance	Creating and Presenting	8
		Reflecting, Responding, and Analyzing	8, 13
	Drama	Creating and Presenting	8
		Reflecting, Responding, and Analyzing	8, 13
	Music	Creating and Performing	8

		Reflecting, Responding, and Analyzing	13
	Visual Arts	Creating and Presenting	6, 7, 8
		Reflecting, Responding, and Analyzing	8, 13

Ontario Grade 7 – Curriculum Connections

Subject	Strand	Overall Expectation	Addressed in Activity #
Geography	Physical Patterns	Application	3, 6, 7, 8, 9, 10
		Inquiry	3, 6, 7, 8, 9, 10
		Understanding Geographic Context	3, 4, 5, 6, 7, 8, 9, 10
	Natural Resources	Understanding Geographic Context	5, 7, 8
Science	Understanding Life Systems – Interactions in the Environment	Relating Science and Technology to Society and the Environment	5, 7, 9
		Developing Investigation and Communication Skills	3, 4, 6, 7, 9
		Understanding Basic Concepts	3, 4, 6, 7, 9
Physical Education	Active Living	Active Participation	6
		Safety	6
Language	Oral Communication	Listening to Understand	3, 4, 5, 6, 7, 8, 9, 10, 13
		Speaking to Communicate	3, 4, 5, 6, 7, 8, 9, 10, 13
	Reading	Reading for Meaning	4, 8
		Reading with Fluency	4, 8
	Writing	Developing and Organizing Content	3, 4, 6, 7, 8, 9, 13
		Using Knowledge of Form and Style in Writing	6, 7, 8, 9
		Applying Knowledge of Language Conventions and Presenting Written Work Effectively	3, 4, 6, 7, 8, 9, 13
	Media Literacy	Understanding Media Texts	5, 8, 9, 10
		Understanding Media Forms	5, 8, 9, 10
		Creating Media Texts	13
Reflecting on Media Literacy Skills and Strategies		13	
Math	Number	Number Sense – Fractions, Decimals and Percent	4
	Data	Data Literacy - Collection and Organization	4
		Data Literacy - Visualization	4
Arts	Dance	Creating and Presenting	8
		Reflecting, Responding, and Analyzing	8, 13

	Drama	Creating and Presenting	8
		Reflecting, Responding, and Analyzing	8, 13
	Music	Creating and Performing	8
		Reflecting, Responding, and Analyzing	13
	Visual Arts	Creating and Presenting	6, 7, 8
		Reflecting, Responding, and Analyzing	8, 13

Manitoba Grade 8 – Curriculum Connections

Subject	Strand	Expectation	Addressed in Activity #
Social Studies	Understanding Societies Past and Present	Appreciate the importance of sustaining the natural environment for future societies.	13
Science	Water Systems on Earth	Use appropriate vocabulary related to their investigations of water systems.	3, 4, 5, 6, 7, 8, 9, 10
		Identify environmental, social and economic factors that should be considered in the management of water resources.	3, 4, 5, 6, 7, 8, 9, 10
		Identify substances that may pollute water, related environmental and societal impacts and ways to reduce pollution or eliminate offsets of pollution.	6, 8
English Language Arts	Sense Making	Selecting and applying strategies and processes for making sense of and creating different types of text for different purposes and audiences.	3, 4, 5, 6, 7, 8, 9, 10, 13
	Exploration and Design	Selecting, assessing and organizing a variety of sources and information for different purposes.	3, 4, 5, 6, 7, 8, 9, 10, 13
	System	Using their understanding of a wide range of text structures to understand and communicate clearly and effectively.	3, 4, 5, 6, 7, 8, 9, 10, 13
	Power and Agency	Exploring multiple perspectives, point of view and interpretations.	3, 4, 5, 6, 7, 8, 9, 10, 13
Math	Number	Number Sense – Fractions, Decimals and Percent	4

	Statistics and Probability	Data	4
Arts	Visual Arts	Understanding visual arts media, tools and processes	7, 8, 13

Manitoba Grade 7 – Curriculum Connections

Subject	Strand	Expectation	Addressed in Activity #
Social Studies	Human Impact in Europe or the Americas	Give examples of the impact of human activity on the natural environment in a society of Europe or the Americas.	6, 7, 8, 9, 10, 13
Science	Interactions within Ecosystems	Use appropriate vocabulary related to their investigations of ecosystems.	3, 4, 5, 6, 7, 8, 9, 10
		Identify environmental, social and economic factors that should be considered in the management and preservation of ecosystems.	3, 4, 5, 6, 7, 8, 9, 10
		Identify and describe positive and negative examples of human interventions that have an impact on ecological makeup of ecosystems.	6, 8
English Language Arts	Sense Making	Selecting and applying strategies and processes for making sense of and creating different types of text for different purposes and audiences.	3, 4, 5, 6, 7, 8, 9, 10, 13
	Exploration and Design	Selecting, assessing and organizing a variety of sources and information for different purposes.	3, 4, 5, 6, 7, 8, 9, 10, 13
	System	Using their understanding of a wide range of text structures to understand and communicate clearly and effectively.	3, 4, 5, 6, 7, 8, 9, 10, 13
	Power and Agency	Exploring multiple perspectives, point of view and interpretations.	3, 4, 5, 6, 7, 8, 9, 10, 13

Math	Number	Number Sense – Fractions, Decimals and Percent	4
	Statistics and Probability	Data	4
Arts	Visual Arts	Understanding visual arts media, tools and processes	7, 8, 13

New Brunswick Grade 8 – Curriculum Connections

Subject	Strand	Expectation	Addressed in Activity #
Social Studies	Physical Setting	Link human activity to the natural resources of the Atlantic Region	3, 4, 5, 6, 7, 8
	Interdependence	Environmental issues that impact directly on Atlantic Canada and the global village. Identify student activities that contribute to global citizenship.	3, 4, 5, 6, 7, 8, 9, 10
English Language Arts	Speaking and Listening	Speak and listen to explore, extend, clarify and reflect	3, 4, 5, 6, 7, 8, 9, 10, 13
	Reading and Viewing	Respond personally to a variety of texts.	3, 4, 5, 6, 7, 8, 9, 10, 13
	Writing	Create texts collaboratively and independently using a variety of forms for a range of audiences and purpose.	3, 4, 5, 6, 7, 8, 9, 10, 13
Math	Number	Percent's	4
	Statistics and Probability	Data	4
Arts	Visual Arts	Understanding visual arts media, tools and processes	7, 8, 13
Technology Education	Technological Operations and Concepts	Communicate information using a variety of multimedia.	13

New Brunswick Grade 7 – Curriculum Connections

Subject	Strand	Expectation	Addressed in Activity #
Science	Earth Surface Processes	Apply scientific and technological knowledge to demonstrate an understanding of sustainable practices	3, 4, 5, 6, 7, 8, 9
English Language Arts	Speaking and Listening	Speak and listen to explore, extend, clarify and reflect	3, 4, 5, 6, 7, 8, 9, 10, 13
	Reading and Viewing	Respond personally to a variety of texts.	3, 4, 5, 6, 7, 8, 9, 10, 13
	Writing	Create texts collaboratively and independently using a variety of forms for a range of audiences and purpose.	3, 4, 5, 6, 7, 8, 9, 10, 13
Math	Number	Percents	4
	Statistics and Probability	Data	4
Arts	Visual Arts	Understanding visual arts media, tools and processes	7, 8, 13
Technology Education	Technological Operations and Concepts	Communicate information using a variety of multimedia.	13

Activity 3: Ontario Grade 8

Subject	Strand	Overall Expectation	Specific Expectation(s)
Geography	Global Settlement: Patterns and Sustainability	Application: Interrelationships between Settlement and the Environment	A1.1
		Inquiry: Human Settlements and Sustainability	A2.1
		Understanding Geographic Context: Settlement Patterns and Trends	A3.3
Science	Understanding Earth and Space Systems: Water Systems	Relating Science and Technology to Society and the Environment	1.1
		Developing Investigation and Communication Skills	2.4 2.6 2.7
		Understanding Basic Concepts	3.2
Language	Oral Communication	Listening to Understand	1.2 1.3 1.4 1.6
		Speaking to Communicate	2.2 2.3 2.4 2.7
	Writing	Developing and Organizing Content	1.4 1.6
		Applying Knowledge of Language Conventions and Presenting Written Work Effectively	3.1 3.2

Activity 3: Ontario Grade 7

Subject	Strand	Overall Expectation	Specific Expectation(s)
Geography	Physical Patterns in a Changing World	Application: Interrelationships between People and the Physical Environment	1.2, 1.4
		Inquiry: Investigating Physical Features and Processes	2.5, 2.6
Science	Understanding Life Systems – Interactions in the Environment	Developing Investigation and Communication Skills	2.3, 2.4, 2.5
		Understanding Basic Concepts	3.8
Language	Oral Communication	Listening to Understand	1.2, 1.3
		Speaking to Communicate	2.3, 2.7
	Writing	Developing and Organizing Content	1.2, 1.4

		Applying Knowledge of Language Conventions and Presenting Written Work Effectively	3.1, 3.2
--	--	--	----------

Activity 3: Manitoba Grade 8

Subject	Strand	Specific Expectation(s)
Science	Water Systems on Earth	Use appropriate vocabulary related to their investigations of water systems. (8-4-01)
		Identify environmental, social and economic factors that should be considered in the management of water resources, (8-4-18)
English Language Arts	Language as Sense Making	Learners are strategically selecting and applying strategies and processes for making sense of and creating different types of text for different purposes and audiences.
	Language as Exploration and Design	Learners are selecting, assessing and organizing a variety of sources and information for different purposes.
	Language as System	Learners are using their understanding of a wide range of text structures to understand and communicate clearly and effectively.
	Language as Power and Agency	Learners are exploring multiple perspectives, point of view and interpretations.

Activity 3: Manitoba Grade 7

Subject	Strand	Specific Expectation(s)
Science	Interactions within Ecosystems	Use appropriate vocabulary related to their investigations of water systems. (7-1-01)
		Identify environmental, social and economic factors that should be considered in the management and preservation of ecosystems. (7-1-05)
English Language Arts	Language as Sense Making	Learners are strategically selecting and applying strategies and processes for making sense of and creating different types of text for different purposes and audiences.
	Language as Exploration and Design	Learners are selecting, assessing and organizing a variety of sources and information for different purposes.
	Language as System	Learners are using their understanding of a wide range of text structures to understand and communicate clearly and effectively.
	Language as Power and Agency	Learners are exploring multiple perspectives, point of view and interpretations.

Activity 3: New Brunswick Grade 8

Subject	Strand	Specific Expectation(s)
Social Studies – Atlantic Canada in the Global Community	Physical Setting	Link human activity to the natural resources of the Atlantic Region (1.2.7)
	Interdependence	Discuss an environmental issue that impacts directly on Atlantic Canada and the global village. (5.2.6)
		Identify student activities that contribute to global citizenship. (5.3.3)
English Language Arts	Speaking and Listening	Students will be expected to speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences.
		Students will be expected to communicate information and ideas effectively and clearly, and to respond personally and critically
	Reading and Viewing	Students will be expected to select, read, and view with understanding a range of literature, information, media, and visual texts.
		Students will be expected to respond personally to a range of texts
	Writing and Other Ways of Representing	Students will be expected to create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes

Activity 3: New Brunswick Grade 7

Subject	Strand	Specific Expectation(s)
Science	Earth Surface Processes	Students will consider factors that support responsible application of scientific and technological knowledge and demonstrate an understanding of sustainable practices.
English Language Arts	Speaking and Listening	Students will be expected to speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences.
		Students will be expected to communicate information and ideas effectively and clearly, and to respond personally and critically
	Reading and Viewing	Students will be expected to select, read, and view with understanding a range of literature, information, media, and visual texts.
Students will be expected to respond personally to a range of texts		

	Writing and Other Ways of Representing	Students will be expected to create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes
--	--	---

Activity 4: Ontario Grade 8

Subject	Strand	Overall Expectation	Specific Expectation(s)
Geography	Global Inequalities: Economic Development and Quality of Life	Inquiry: Development and Quality of Life Issues	2.4, 2.6
Science	Understanding Earth and Space Systems: Water Systems	Relating Science and Technology to Society and the Environment	1.1
		Developing Investigation and Communication Skills	2.1 2.4 2.6 2.7
		Understanding Basic Concepts	3.1 3.3
Language	Oral Communication	Listening to Understand	1.2 1.3 1.4 1.5 1.6
		Speaking to Communicate	2.2 2.3 2.4 2.7
	Reading	Reading for Meaning	1.5
		Reading with Fluency	3.1
	Writing	Developing and Organizing Content	1.2 1.4 1.6
		Applying Knowledge of Language Conventions and Presenting Written Work Effectively	3.1 3.2 3.3 3.4 3.5 3.6
Math	Number	Number Sense – Fractions, Decimals and Percent	B1.4
	Data	Data Literacy – Data Collection and Organization	D1.1, D1.2
		Data Literacy – Data Visualization	D1.3, D1.4

Activity 4: Ontario Grade 7

Subject	Strand	Overall Expectation	Specific Expectation(s)
Geography	Physical Patterns in a Changing World	Understanding Geographic Context: Patterns in the Physical Environment	3.4, 3.5
Science	Understanding Life Systems: Interactions in the Environment	Developing Investigation and Communication Skills	2.4, 2.5
		Understanding Basic Concepts	3.8
Language	Oral Communication	Listening to Understand	1.2, 1.3
		Speaking to Communicate	2.2, 2.3, 2.4, 2.7
	Reading	Reading for Meaning	1.5
		Reading with Fluency	3.1
	Writing	Developing and Organizing Content	1.2, 1.4, 1.6
		Applying Knowledge of Language Conventions and Presenting Written Work Effectively	3.1, 3.2, 3.3

Math	Number	Number Sense – Fractions, Decimals and Percent	B1.7
	Data	Data Literacy – Data Collection and Organization	D1.1, D1.2
		Data Literacy – Data Visualization	D1.3, 1.4

Activity 4: Manitoba Grade 8

Subject	Strand	Specific Expectation(s)
Science	Water Systems on Earth	Use appropriate vocabulary related to their investigations of water systems. (8-4-01)
		Identify environmental, social and economic factors that should be considered in the management of water resources, (8-4-18)
English Language Arts	Language as Sense Making	Learners are strategically selecting and applying strategies and processes for making sense of and creating different types of text for different purposes and audiences.
	Language as Exploration and Design	Learners are selecting, assessing and organizing a variety of sources and information for different purposes.
	Language as System	Learners are using their understanding of a wide range of text structures to understand and communicate clearly and effectively.
	Language as Power and Agency	Learners are exploring multiple perspectives, point of view and interpretations.
Math	Number	Demonstrate an understanding of percents greater than or equal to 0% (8.N.3)
	Statistics and Probability	Critique ways in which data are presented (8.SP.1)

Activity 4: Manitoba Grade 7

Subject	Strand	Specific Expectation(s)
Science	Interactions within Ecosystems	Use appropriate vocabulary related to their investigations of water systems. (7-1-01)
		Identify environmental, social and economic factors that should be considered in the management and preservation of ecosystems. (7-1-05)
English Language Arts	Language as Sense Making	Learners are strategically selecting and applying strategies and processes for making sense of and creating different types of text for different purposes and audiences.
	Language as Exploration and Design	Learners are selecting, assessing and organizing a variety of sources and information for different purposes.
	Language as System	Learners are using their understanding of a wide range of text structures to understand and communicate clearly and effectively.

	Language as Power and Agency	Learners are exploring multiple perspectives, point of view and interpretations.
Math	Number	Solve problems involving percents from 1-100% (7.N.3)
	Statistics and Probability	Construct label and interpret circle graphs to solve problems. (7.SP.3)

Activity 4: New Brunswick Grade 8

Subject	Strand	Specific Expectation(s)
Social Studies – Atlantic Canada in the Global Community	Physical Setting	Link human activity to the natural resources of the Atlantic Region (1.2.7)
	Interdependence	Discuss an environmental issue that impacts directly on Atlantic Canada and the global village. (5.2.6)
		Identify student activities that contribute to global citizenship. (5.3.3)
English Language Arts	Speaking and Listening	Students will be expected to speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences.
		Students will be expected to communicate information and ideas effectively and clearly, and to respond personally and critically
	Reading and Viewing	Students will be expected to select, read, and view with understanding a range of literature, information, media, and visual texts.
		Students will be expected to respond personally to a range of texts
Writing and Other Ways of Representing	Students will be expected to create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes	
Math	Number	Demonstrate an understanding of percents greater than or equal to 0%. (N.3)
	Statistics and Probability	Critique ways in which data is presented. (SP.1)

Activity 4: New Brunswick Grade 7

Subject	Strand	Specific Expectation(s)
Science	Earth Surface Processes	Students will consider factors that support responsible application of scientific and technological knowledge and demonstrate an understanding of sustainable practices.
English Language Arts	Speaking and Listening	Students will be expected to speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences.
		Students will be expected to communicate information and ideas effectively and clearly, and to respond personally and critically
	Reading and Viewing	Students will be expected to select, read, and view with understanding a range of literature, information, media, and visual texts.
		Students will be expected to respond personally to a range of texts
Writing and Other Ways of Representing	Students will be expected to create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes	
Math	Number	Solve problems involving percents from 1% to 100% (N.3)
	Statistics and Probability	Construct, label and interpret circle graphs to solve problems, (SP.3)

Activity 5: Ontario – Grade 8

Subject	Strand	Overall Expectation	Specific Expectation(s)
Geography	Global Settlement: Patterns and Sustainability	Understanding Geographic Context: Settlement Patterns and Trends	3.5 3.6
Science	Understanding Earth and Space Systems	Relating Science and Technology to Society and the Environment	1.2
Language	Oral Communication	Listening to Understand	1.2 1.3 1.4 1.5 1.6 1.7 1.9
		Speaking to Communicate	2.2 2.3 2.4 2.7
	Media Literacy	Understanding Media Texts	1.1 1.2 1.3 1.5 1.4 1.6
		Understanding Media Forms, Conventions and Techniques	2.1 2.2

Activity 5: Ontario Grade 7

Subject	Strand	Overall Expectation	Specific Expectation(s)
Geography	Natural Resources around the World: Use and Sustainability	Understanding Geographic Context: Using Natural Resources	3.1, 3.2, 3.5
Science	Understanding Life Systems: Interactions in the Environment	Relating Science and Technology to Society and the Environment	1.1, 1.2
Language	Oral Communication	Listening to Understand	1.2 1.3 1.4 1.5 1.6
		Speaking to Communicate	2.3 2.4 2.7
	Media Literacy	Understanding Media Texts	1.1 1.2 1.3 1.5

Activity 5: Manitoba Grade 8

Subject	Strand	Specific Expectation(s)
Science	Water Systems on Earth	Use appropriate vocabulary related to their investigations of water systems. (8-4-01)
		Identify environmental, social and economic factors that should be considered in the management of water resources, (8-4-18)
English Language Arts	Language as Sense Making	Learners are strategically selecting and applying strategies and processes for making sense of and creating different types of text for different purposes and audiences.
	Language as Exploration and Design	Learners are selecting, assessing and organizing a variety of sources and information for different purposes.
	Language as System	Learners are using their understanding of a wide range of text structures to understand and communicate clearly and effectively.
	Language as Power and Agency	Learners are exploring multiple perspectives, point of view and interpretations.

Activity 5: Manitoba Grade 7

Subject	Strand	Specific Expectation(s)
Science	Interactions within Ecosystems	Use appropriate vocabulary related to their investigations of water systems. (7-1-01)
		Identify environmental, social and economic factors that should be considered in the management and preservation of ecosystems. (7-1-06)
English Language Arts	Language as Sense Making	Learners are strategically selecting and applying strategies and processes for making sense of and creating different types of text for different purposes and audiences.
	Language as Exploration and Design	Learners are selecting, assessing and organizing a variety of sources and information for different purposes.
	Language as System	Learners are using their understanding of a wide range of text structures to understand and communicate clearly and effectively.

	Language as Power and Agency	Learners are exploring multiple perspectives, point of view and interpretations.
--	------------------------------	--

Activity 5: New Brunswick Grade 8

Subject	Strand	Specific Expectation(s)
Social Studies – Atlantic Canada in the Global Community	Physical Setting	Link human activity to the natural resources of the Atlantic Region (1.2.7)
	Interdependence	Discuss an environmental issue that impacts directly on Atlantic Canada and the global village. (5.2.6)
		Identify student activities that contribute to global citizenship. (5.3.3)
English Language Arts	Speaking and Listening	Students will be expected to speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences.
		Students will be expected to communicate information and ideas effectively and clearly, and to respond personally and critically
	Reading and Viewing	Students will be expected to select, read, and view with understanding a range of literature, information, media, and visual texts.
		Students will be expected to respond personally to a range of texts
	Writing and Other Ways of Representing	Students will be expected to create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes

Activity 5: New Brunswick Grade 7

Subject	Strand	Specific Expectation(s)
Science	Earth Surface Processes	Students will consider factors that support responsible application of scientific and technological knowledge and demonstrate an understanding of sustainable practices.
English Language Arts	Speaking and Listening	Students will be expected to speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences.
		Students will be expected to communicate information and ideas effectively and clearly, and to respond personally and critically
	Reading and Viewing	Students will be expected to select, read, and view with understanding a range of literature, information, media, and visual texts.
Students will be expected to respond personally to a range of texts		

	Writing and Other Ways of Representing	Students will be expected to create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes
--	--	---

Activity 6: Ontario Grade 8

Subject	Strand	Overall Expectation	Specific Expectation(s)
Geography	Global Settlement: Patterns and Sustainability	Application: Interrelationships between Settlement and the Environment	1.1 1.2 1.3
		Inquiry: Human Settlements and Sustainability	2.1 2.2 2.3 2.4 2.5 2.6
		Understanding Geographic Context: Settlement Patterns and Trends	3.2 3.3 3.5 3.6
Language	Oral Communication	Listening to Understand	1.2 1.3 1.4 1.9
		Speaking to Communicate	2.2 2.3 2.4 2.7
	Writing	Developing and Organizing Content	1.2 1.4
		Using Knowledge of Form and Style in Writing	2.1 2.3 2.4 2.5
		Applying Knowledge of Language Conventions and presenting Written Work Effectively	3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8
Arts	Visual Arts	Creating and Presenting	1.1 1.3
Science	Understanding Earth and Space Systems	Developing Investigation and Communication Skills	2.6 2.7
		Understanding Basic Concepts	3.1 3.2 3.3
	Active Living	Active Participation	1.1
		Safety	3.1

Activity 6: Ontario Grade 7

Subject	Strand	Overall Expectation	Specific Expectation(s)
Geography	Physical Patterns in a Changing World	Application: Interrelationships between People and the Physical Environment	1.2
		Inquiry: Investigating Physical Features and Processes	2.1, 2.5
		Understanding Geographic Context: Patterns in the Physical Environment	3.2, 3.4
Language	Oral Communication	Listening to Understand	1.2, 1.3
		Speaking to Communicate	2.1, 2.2, 2.3, 2.4, 2.7
	Writing	Developing and Organizing Content	1.2 1.4
		Using Knowledge of Form and Style in Writing	2.2, 2.3
		Applying Knowledge of Language Conventions and presenting Written Work Effectively	3.1, 3.2, 3.3
Arts	Visual Arts	Creating and Presenting	1.1 1.3
Science	Understanding Life Systems: Interactions in the Environment	Developing Investigation and Communication Skills	2.1, 2.3, 2.4, 2.5
		Understanding Basic Concepts	3.1, 3.8
	Active Living	Active Participation	1.1
Safety		3.1	

Activity 6: Manitoba Grade 8

Subject	Strand	Specific Expectation(s)
Science	Water Systems on Earth	Use appropriate vocabulary related to their investigations of water systems. (8-4-01)
		Identify environmental, social and economic factors that should be considered in the management of water resources, (8-4-18)
		Identify substances that may pollute water, related environmental and societal impacts and ways to reduce pollution or eliminate offsets of pollution. (8-4-17)
English Language Arts	Language as Sense Making	Learners are strategically selecting and applying strategies and processes for making sense of and creating different types of text for different purposes and audiences.
	Language as Exploration and Design	Learners are selecting, assessing and organizing a variety of sources and information for different purposes.
	Language as System	Learners are using their understanding of a wide range of text structures to understand and communicate clearly and effectively.
	Language as Power and Agency	Learners are exploring multiple perspectives, point of view and interpretations.

Activity 6: Manitoba Grade 7

Subject	Strand	Specific Expectation(s)
Science	Interactions within Ecosystems	Use appropriate vocabulary related to their investigations of water systems. (7-1-01)
		Identify environmental, social and economic factors that should be considered in the management and preservation of ecosystems. (7-1-06)
		Identify and describe positive and negative examples of human interventions that have an impact on ecological makeup of ecosystems. (7-1-05)
English Language Arts	Language as Sense Making	Learners are strategically selecting and applying strategies and processes for making sense of and creating different types of text for different purposes and audiences.
	Language as Exploration and Design	Learners are selecting, assessing and organizing a variety of sources and information for different purposes.
	Language as System	Learners are using their understanding of a wide range of text structures to understand and communicate clearly and effectively.
	Language as Power and Agency	Learners are exploring multiple perspectives, point of view and interpretations.
Social Studies	Human Impact in Europe or the Americas	Give examples of the impact of human activity on the natural environment in a society of Europe or the Americas. (7-KL-029)
	World Geography	Appreciate the diversity of the global natural environment. (7-VL-008)

Activity 6: New Brunswick Grade 8

Subject	Strand	Specific Expectation(s)
Social Studies – Atlantic Canada in the Global Community	Physical Setting	Link human activity to the natural resources of the Atlantic Region (1.2.7)
	Interdependence	Discuss an environmental issue that impacts directly on Atlantic Canada and the global village. (5.2.6)
		Identify student activities that contribute to global citizenship. (5.3.3)
English Language Arts	Speaking and Listening	Students will be expected to speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences.
		Students will be expected to communicate information and ideas effectively and clearly, and to respond personally and critically
	Reading and Viewing	Students will be expected to select, read, and view with understanding a range of literature, information, media, and visual texts.
		Students will be expected to respond personally to a range of texts
Writing and Other Ways of Representing	Students will be expected to create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes	

Activity 6: New Brunswick Grade 7

Subject	Strand	Specific Expectation(s)
Science	Earth Surface Processes	Students will consider factors that support responsible application of scientific and technological knowledge and demonstrate an understanding of sustainable practices.
English Language Arts	Speaking and Listening	Students will be expected to speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences.
		Students will be expected to communicate information and ideas effectively and clearly, and to respond personally and critically
	Reading and Viewing	Students will be expected to select, read, and view with understanding a range of literature, information, media, and visual texts.
Students will be expected to respond personally to a range of texts		

	Writing and Other Ways of Representing	Students will be expected to create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes
--	--	---

Activity 7: Ontario Grade 8

Subject	Strand	Overall Expectation	Specific Expectation(s)
Geography	Global Settlement: Patterns and Sustainability	Application: Interrelationships between Settlement and the Environment	1.1 1.2 1.3
		Inquiry: Human Settlements and Sustainability	2.1 2.2 2.3 2.4 2.5 2.6
		Understanding Geographic Context: Settlement Patterns and Trends	3.2 3.3 3.5 3.6
	Global Inequalities: Economic Development and Quality of Life	Inquiry: Development and Quality of Life Issues	2.1, 2.2, 2.3, 2.5, 2.6
Science	Understanding Earth and Space Systems	Relating Science and Technology to Society and the Environment	1.3
		Developing Investigation and Communication Skills	2.4 2.6 2.7
		Understanding Basic Concepts	3.1 3.2 3.3
Language	Oral Communication	Listening to Understand	1.2 1.3
		Speaking to Communicate	2.2 2.3 2.4 2.7
	Writing	Developing and Organizing Content	1.2 1.4
		Using Knowledge of Form and Style in Writing	2.1 2.3 2.4 2.5
Applying Knowledge of Language Conventions and presenting Written Work Effectively	3.1 3.2 3.3 3.4 3.5 3.6		
Arts	Visual Arts	Creating and Presenting	1.1 1.3 1.4

Activity 7: Ontario Grade 7

Subject	Strand	Overall Expectation	Specific Expectation(s)
Geography	Physical Patterns in Changing World	Application: Interrelationships between People and Physical Environment	1.1
		Inquiry: Investigating Physical Processes	2.1, 2.2, 2.3, 2.4, 2.5, 2.6
		Understanding Geographic Context: Patterns in the Physical Environment	3.2, 3.3, 3.5
	Natural Resources around the World: Use and Sustainability	Understanding Geographic Context: Using Natural Resources	3.1, 3.2, 3.3
Science	Understanding Life Systems: Interactions in the Environment	Relating Science and Technology to Society and the Environment	1.1
		Developing Investigation and Communication Skills	2.4, 2.5
		Understanding Basic Concepts	3.1, 3.8
Language	Oral Communication	Listening to Understand	1.1, 1.2, 1.3
		Speaking to Communicate	2.2 2.3 2.4 2.7
	Writing	Developing and Organizing Content	1.1, 1.2, 1.4, 1.5
		Using Knowledge of Form and Style in Writing	2.2, 2.3
		Applying Knowledge of Language Conventions and presenting Written Work Effectively	3.1, 3.2, 3.3
Arts	Visual Arts	Creating and Presenting	1.1 1.3 1.4
		Reflecting, Responding and Analyzing	2.1

Activity 7: Manitoba Grade 8

Subject	Strand	Specific Expectation(s)
Science	Water Systems on Earth	Use appropriate vocabulary related to their investigations of water systems. (8-4-01)
		Identify environmental, social and economic factors that should be considered in the management of water resources, (8-4-18)
		Identify substances that may pollute water, related environmental and societal impacts and ways to reduce pollution or eliminate offsets of pollution. (8-4-17)
English Language Arts	Language as Sense Making	Learners are strategically selecting and applying strategies and processes for making sense of and creating different types of text for different purposes and audiences.
	Language as Exploration and Design	Learners are selecting, assessing and organizing a variety of sources and information for different purposes.
	Language as System	Learners are using their understanding of a wide range of text structures to understand and communicate clearly and effectively.
	Language as Power and Agency	Learners are exploring multiple perspectives, point of view and interpretations.
Visual Arts	Making	Demonstrates understanding and facility with visual arts tools and processes.

Activity 7: Manitoba Grade 7

Subject	Strand	Specific Expectation(s)
Science	Interactions within Ecosystems	Use appropriate vocabulary related to their investigations of water systems. (7-1-01)
		Identify environmental, social and economic factors that should be considered in the management and preservation of ecosystems. (7-1-06)
		Identify and describe positive and negative examples of human interventions that have an impact on ecological makeup of ecosystems. (7-1-05)
English Language Arts	Language as Sense Making	Learners are strategically selecting and applying strategies and processes for making sense of and creating different types of text for different purposes and audiences.
	Language as Exploration and Design	Learners are selecting, assessing and organizing a variety of sources and information for different purposes.
	Language as System	Learners are using their understanding of a wide range of text structures to understand and communicate clearly and effectively.
	Language as Power and Agency	Learners are exploring multiple perspectives, point of view and interpretations.
Social Studies	Human Impact in Europe or the Americas	Give examples of the impact of human activity on the natural environment in a society of Europe or the Americas. (7-KL-029)
	World Geography	Appreciate the diversity of the global natural environment. (7-VL-008)
Visual Arts	Making	Demonstrates understanding of and facility with visual arts media, tools and processes.

Activity 7: New Brunswick Grade 8

Subject	Strand	Specific Expectation(s)
Social Studies – Atlantic Canada in the Global Community	Physical Setting	Link human activity to the natural resources of the Atlantic Region (1.2.7)
	Interdependence	Discuss an environmental issue that impacts directly on Atlantic Canada and the global village. (5.2.6)
		Identify student activities that contribute to global citizenship. (5.3.3)
English Language Arts	Speaking and Listening	Students will be expected to speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences.
		Students will be expected to communicate information and ideas effectively and clearly, and to respond personally and critically
	Reading and Viewing	Students will be expected to select, read, and view with understanding a range of literature, information, media, and visual texts.
		Students will be expected to respond personally to a range of texts
Writing and Other Ways of Representing	Students will be expected to create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes	
Visual Arts	Making	Demonstrate skill in organizing the elements of art to create images that convey a personal message and provide evidence of observation skills.

Activity 7: New Brunswick Grade 7

Subject	Strand	Specific Expectation(s)
Science	Earth Surface Processes	Students will consider factors that support responsible application of scientific and technological knowledge and demonstrate an understanding of sustainable practices.
English Language Arts	Speaking and Listening	Students will be expected to speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences.
		Students will be expected to communicate information and ideas effectively and clearly, and to respond personally and critically
	Reading and Viewing	Students will be expected to select, read, and view with understanding a range of literature, information, media, and visual texts.
		Students will be expected to respond personally to a range of texts
Writing and Other Ways of Representing	Students will be expected to create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes	
Visual Arts	Making	Demonstrate skill in organizing the elements of art to create images that convey a personal message and provide evidence of observation skills.

Activity 8: Ontario Grade 8

Subject	Strand	Overall Expectation	Specific Expectation(s)
Geography	Global Settlement	Application	1.1 1.2 1.3
		Inquiry	2.1 2.2 2.3 2.4 2.5 2.6
		Understanding Geographic Context	3.3 3.5 3.6
	Global Inequalities	Application	1.1
		Inquiry	2.1 2.2 2.5 2.6
Language	Oral Communication	Listening to Understand	1.2 1.3 1.4 1.5 1.6 1.7
		Speaking to Communicate	2.2 2.3 2.4 2.5 2.6 2.7
	Writing	Developing and Organizing Content	1.2 1.4
		Using Knowledge of Form and Style in Writing	2.1 2.3 2.4 2.5
		Applying Knowledge of Language Conventions and presenting Written Work Effectively	3.1 3.2 3.3 3.4 3.5 3.6
	Reading	Reading for Meaning	1.1 1.2 1.3 1.4 1.5 1.6 1.8
		Reading with Fluency	3.1 3.2 3.3
	Media Literacy	Understanding Media Texts	1.1 1.2 1.3 1.5 1.4 1.6
		Understanding Media Forms, Conventions and Techniques	2.1 2.2
	Arts	Visual Arts	Creating and Presenting
Reflecting, Responding and Analyzing			2.1
Drama		Creating and Presenting	1.1 1.2 1.3 1.4
		Reflecting, Responding and Analyzing	2.1
Dance		Creating and Presenting	1.1 1.2 1.3
		Reflecting, Responding and Analyzing	2.1
Music		Creating and Performing	1.2 1.3 1.4

Activity 8: Ontario Grade 7

Subject	Strand	Overall Expectation	Specific Expectation(s)
Geography	Physical Patterns in a Changing World	Application	1.1
		Inquiry	2.1 2.2 2.4 2.5
		Understanding Geographic Context	3.5
	Natural Resources	Understanding Geographic Context	3.1 3.2
Language	Oral Communication	Listening to Understand	1.2 1.3
		Speaking to Communicate	2.1 2.2 2.3 2.4 2.7
	Writing	Developing and Organizing Content	1.1 1.2 1.3 1.4 1.5
		Using Knowledge of Form and Style in Writing	2.2 2.3
		Applying Knowledge of Language Conventions and presenting Written Work Effectively	3.1 3.2 3.3
	Reading	Reading for Meaning	1.1 1.2 1.4 1.5 1.6 1.9
		Reading with Fluency	3.1 3.2
Media Literacy	Understanding Media Texts	1.1 1.2 1.3 1.5	
Arts	Visual Arts	Creating and Presenting	1.1 1.3
		Reflecting, Responding and Analyzing	2.1
	Drama	Creating and Presenting	1.1
		Reflecting, Responding and Analyzing	2.1
	Dance	Creating and Presenting	1.2
		Reflecting, Responding and Analyzing	2.1
Music	Creating and Performing	1.2 1.3	

Activity 8: Manitoba Grade 8

Subject	Strand	Specific Expectation(s)
Science	Water Systems on Earth	Use appropriate vocabulary related to their investigations of water systems. (8-4-01)
		Identify environmental, social and economic factors that should be considered in the management of water resources, (8-4-18)
		Identify substances that may pollute water, related environmental and societal impacts and ways to reduce pollution or eliminate offsets of pollution. (8-4-17)
English Language Arts	Language as Sense Making	Learners are strategically selecting and applying strategies and processes for making sense of and creating different types of text for different purposes and audiences.
	Language as Exploration and Design	Learners are selecting, assessing and organizing a variety of sources and information for different purposes.
	Language as System	Learners are using their understanding of a wide range of text structures to understand and communicate clearly and effectively.
	Language as Power and Agency	Learners are exploring multiple perspectives, point of view and interpretations.
Visual Arts	Making	Demonstrates understanding and facility with visual arts tools and processes.

Activity 8: Manitoba Grade 7

Subject	Strand	Specific Expectation(s)
Science	Interactions within Ecosystems	Use appropriate vocabulary related to their investigations of water systems. (7-1-01)
		Identify environmental, social and economic factors that should be considered in the management and preservation of ecosystems. (7-1-06)
		Identify and describe positive and negative examples of human interventions that have an impact on ecological makeup of ecosystems. (7-1-05)
English Language Arts	Language as Sense Making	Learners are strategically selecting and applying strategies and processes for making sense of and creating different types of text for different purposes and audiences.
	Language as Exploration and Design	Learners are selecting, assessing and organizing a variety of sources and information for different purposes.
	Language as System	Learners are using their understanding of a wide range of text structures to understand and communicate clearly and effectively.
	Language as Power and Agency	Learners are exploring multiple perspectives, point of view and interpretations.
Social Studies	Human Impact in Europe or the Americas	Give examples of the impact of human activity on the natural environment in a society of Europe or the Americas. (7-KL-029)
	World Geography	Appreciate the diversity of the global natural environment. (7-VL-008)
Visual Arts	Making	Demonstrates understanding of and facility with visual arts media, tools and processes.

Activity 8: New Brunswick Grade 8

Subject	Strand	Specific Expectation(s)
Social Studies – Atlantic Canada in the Global Community	Physical Setting	Link human activity to the natural resources of the Atlantic Region (1.2.7)
	Interdependence	Discuss an environmental issue that impacts directly on Atlantic Canada and the global village. (5.2.6)
		Identify student activities that contribute to global citizenship. (5.3.3)
English Language Arts	Speaking and Listening	Students will be expected to speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences.
		Students will be expected to communicate information and ideas effectively and clearly, and to respond personally and critically
	Reading and Viewing	Students will be expected to select, read, and view with understanding a range of literature, information, media, and visual texts.
		Students will be expected to respond personally to a range of texts
Writing and Other Ways of Representing	Students will be expected to create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes	
Visual Arts	Making	Demonstrate skill in organizing the elements of art to create images that convey a personal message and provide evidence of observation skills.

Activity 8: New Brunswick Grade 7

Subject	Strand	Specific Expectation(s)
Science	Earth Surface Processes	Students will consider factors that support responsible application of scientific and technological knowledge and demonstrate an understanding of sustainable practices.
English Language Arts	Speaking and Listening	Students will be expected to speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences.
		Students will be expected to communicate information and ideas effectively and clearly, and to respond personally and critically
	Reading and Viewing	Students will be expected to select, read, and view with understanding a range of literature, information, media, and visual texts.
		Students will be expected to respond personally to a range of texts
Writing and Other Ways of Representing	Students will be expected to create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes	
Visual Arts	Making	Demonstrate skill in organizing the elements of art to create images that convey a personal message and provide evidence of observation skills.

Activity 9: Ontario Grade 8

Subject	Strand	Overall Expectation	Specific Expectation(s)
Geography	Global Inequalities	Application	1.1 1.2 1.3
		Inquiry	2.5 2.6
	Global Settlement: Patterns and Sustainability	Application: Interrelationships between Settlement and the Environment	1.2
		Inquiry: Human Settlements and Sustainability	2.1 2.5 2.6
		Understanding Geographic Context: Settlement Patterns and Trends	3.3 3.5 3.6
Science	Understanding Earth and Space Systems	Relating Science and Technology to Society and the Environment	1.2 1.3
		Developing Investigation and Communication Skills	2.6
Language	Oral Communication	Listening to Understand	1.2 1.3 1.4 1.5 1.6 1.7 1.9
		Speaking to Communicate	2.2 2.3 2.4 2.5 2.6 2.7
	Media Literacy	Understanding Media Texts	1.1 1.2 1.3 1.5 1.4 1.6
		Understanding Media Forms, Conventions and Techniques	2.1 2.2
	Writing	Developing and Organizing Content	1.2 1.4 1.5 1.6
		Using Knowledge of Form and Style in Writing	2.1 2.3
		Applying Knowledge of Language Conventions and Presenting Written Work Effectively	3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8

Activity 9: Ontario Grade 7

Subject	Strand	Overall Expectation	Specific Expectation(s)
Geography	Physical Patterns in a Changing World	Application	1.2
		Inquiry	2.1 2.5 2.6
		Inquiry	2.1 2.5 2.6
		Understanding Geographic Context	3.2 3.6
Science	Understanding Life Systems: Interactions in the Environment	Relating Science and Technology to Society and the Environment	1.1 1.2
		Developing Investigation and Communication Skills	2.4 2.5
		Understanding Basic Concepts	3.1 3.8
Language	Oral Communication	Listening to Understand	1.2 1.3 1.4 1.5 1.6
		Speaking to Communicate	2.1 2.1 2.3 2.4 2.5 2.6 2.7
	Media Literacy	Understanding Media Texts	1.1 1.2 1.3 1.5 1.6
		Understanding Media Forms, Conventions and Techniques	2.1 2.2
	Writing	Developing and Organizing Content	1.1 1.2 1.3 1.4 1.5
		Using Knowledge of Form and Style in Writing	2.1 2.2 2.3
		Applying Knowledge of Language Conventions and Presenting Written Work Effectively	3.1 3.2 3.3 3.4 3.5 3.6 3.7 3.8

Activity 9: Manitoba Grade 8

Subject	Strand	Specific Expectation(s)
Science	Water Systems on Earth	Use appropriate vocabulary related to their investigations of water systems. (8-4-01)
		Identify environmental, social and economic factors that should be considered in the management of water resources, (8-4-18)
English Language Arts	Language as Sense Making	Learners are strategically selecting and applying strategies and processes for making sense of and creating different types of text for different purposes and audiences.
	Language as Exploration and Design	Learners are selecting, assessing and organizing a variety of sources and information for different purposes.
	Language as System	Learners are using their understanding of a wide range of text structures to understand and communicate clearly and effectively.

	Language as Power and Agency	Learners are exploring multiple perspectives, point of view and interpretations.
Social Studies	Understanding Societies Past and Present	Appreciate the importance of sustaining the natural environment for future societies. (8-VL-008)

Activity 9: Manitoba Grade 7

Subject	Strand	Specific Expectation(s)
Science English Language Arts	Interactions within Ecosystems	Use appropriate vocabulary related to their investigations of water systems. (7-1-01)
		Identify environmental, social and economic factors that should be considered in the management and preservation of ecosystems. (7-1-06)
	Language as Sense Making	Learners are strategically selecting and applying strategies and processes for making sense of and creating different types of text for different purposes and audiences.
	Language as Exploration and Design	Learners are selecting, assessing and organizing a variety of sources and information for different purposes.
	Language as System	Learners are using their understanding of a wide range of text structures to understand and communicate clearly and effectively.
	Language as Power and Agency	Learners are exploring multiple perspectives, point of view and interpretations.
Social Studies	World Geography	Describe the impact of various factors on quality of life in Canada and elsewhere in the World. (7-KC-002)
	Human Impact in Europe or the Americas	Be willing to take actions to help sustain the natural environment in Canada and the World. (7-VL-009) Describe social, environmental and economic consequences of climate change. (7-KL-027)

Activity 9: New Brunswick Grade 8

Subject	Strand	Specific Expectation(s)
Social Studies – Atlantic Canada in the Global Community	Physical Setting	Link human activity to the natural resources of the Atlantic Region (1.2.7)
	Interdependence	Discuss an environmental issue that impacts directly on Atlantic Canada and the global village. (5.2.6) Identify student activities that contribute to global citizenship. (5.3.3)
English Language Arts	Speaking and Listening	Students will be expected to speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences.
		Students will be expected to communicate information and ideas effectively and clearly, and to respond personally and critically
	Reading and Viewing	Students will be expected to select, read, and view with understanding a range of literature, information, media, and visual texts.
		Students will be expected to respond personally to a range of texts
Writing and Other Ways of Representing	Students will be expected to create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes	

Activity 9: New Brunswick Grade 7

Subject	Strand	Specific Expectation(s)
Science	Earth Surface Processes	Students will consider factors that support responsible application of scientific and technological knowledge and demonstrate an understanding of sustainable practices.
English Language Arts	Speaking and Listening	Students will be expected to speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences.
		Students will be expected to communicate information and ideas effectively and clearly, and to respond personally and critically
	Reading and Viewing	Students will be expected to select, read, and view with understanding a range of literature, information, media, and visual texts.
Students will be expected to respond personally to a range of texts		

	Writing and Other Ways of Representing	Students will be expected to create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes
--	--	---

Activity 10: Ontario Grade 8

Subject	Strand	Overall Expectation	Specific Expectation(s)
Geography	Global Settlement: Patterns and Sustainability	Application	1.2
		Inquiry	2.1 2.5 2.6
		Understanding Geographic Context	3.3 3.5 3.6
Language	Oral Communication	Listening to Understand	1.2 1.3 1.4 1.6
		Speaking to Communicate	2.1 2.2 2.3 2.4 2.5 2.6
	Media Literacy	Understanding Media Texts	1.1 1.2 1.3 1.4 1.5 1.6
		Understanding Media Forms, Conventions and Techniques	2.1 2.2

Activity 10: Ontario Grade 7

Subject	Strand	Overall Expectation	Specific Expectation(s)
Geography	Physical Patterns in a Changing World	Application	1.2
		Inquiry	2.1 2.6
		Understanding Geographic Context	3.6
Language	Oral Communication	Listening to Understand	1.2 1.3
		Speaking to Communicate	2.1 2.2 2.3 2.4 2.7
	Media Literacy	Understanding Media Texts	1.1 1.2 1.3 1.5
		Understanding Media Forms, Conventions and Techniques	2.1 2.2

Activity 10: Manitoba Grade 8

Subject	Strand	Specific Expectation(s)
Science	Water Systems on Earth	Use appropriate vocabulary related to their investigations of water systems. (8-4-01)
		Identify environmental, social and economic factors that should be considered in the management of water resources, (8-4-18)
English Language Arts	Language as Sense Making	Learners are strategically selecting and applying strategies and processes for making sense of and creating different types of text for different purposes and audiences.
	Language as Exploration and Design	Learners are selecting, assessing and organizing a variety of sources and information for different purposes.
	Language as System	Learners are using their understanding of a wide range of text structures to understand and communicate clearly and effectively.
	Language as Power and Agency	Learners are exploring multiple perspectives, point of view and interpretations.
Social Studies	Understanding Societies Past and Present	Appreciate the importance of sustaining the natural environment for future societies. (8-VL-008)

Activity 10: Manitoba Grade 7

Subject	Strand	Specific Expectation(s)
Science	Interactions within Ecosystems	Use appropriate vocabulary related to their investigations of water systems. (7-1-01)
		Identify environmental, social and economic factors that should be considered in the management and preservation of ecosystems. (7-1-05)
English Language Arts	Language as Sense Making	Learners are strategically selecting and applying strategies and processes for making sense of and creating different types of text for different purposes and audiences.
	Language as Exploration and Design	Learners are selecting, assessing and organizing a variety of sources and information for different purposes.
	Language as System	Learners are using their understanding of a wide range of text structures to understand and communicate clearly and effectively.
	Language as Power and Agency	Learners are exploring multiple perspectives, point of view and interpretations.
Social Studies	Human Impact in Europe or the Americas	Be willing to take actions to help sustain the natural environment in Canada and the World. (7-VL-009) Describe social, environmental and economic consequences of climate change. (7-KL-027)

Activity 10: New Brunswick Grade 8

Subject	Strand	Specific Expectation(s)
Social Studies – Atlantic Canada in the Global Community	Physical Setting	Link human activity to the natural resources of the Atlantic Region (1.2.7)
	Interdependence	Discuss an environmental issue that impacts directly on Atlantic Canada and the global village. (5.2.6)
		Identify student activities that contribute to global citizenship. (5.3.3)
English Language Arts	Speaking and Listening	Students will be expected to speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences.
		Students will be expected to communicate information and ideas effectively and clearly, and to respond personally and critically
	Reading and Viewing	Students will be expected to select, read, and view with understanding a range of literature, information, media, and visual texts.
		Students will be expected to respond personally to a range of texts
Writing and Other Ways of Representing	Students will be expected to create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes	

Activity 10: New Brunswick Grade 7

Subject	Strand	Specific Expectation(s)
Science	Earth Surface Processes	Students will consider factors that support responsible application of scientific and technological knowledge and demonstrate an understanding of sustainable practices.
English Language Arts	Speaking and Listening	Students will be expected to speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences.
		Students will be expected to communicate information and ideas effectively and clearly, and to respond personally and critically
	Reading and Viewing	Students will be expected to select, read, and view with understanding a range of literature, information, media, and visual texts.

		Students will be expected to respond personally to a range of texts
	Writing and Other Ways of Representing	Students will be expected to create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes

Activity 13: Ontario Grade 8

Subject	Strand	Overall Expectation	Specific Expectation(s)
Language	Oral Communication	Listening to Understand	1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9
		Speaking to Communicate	2.2 2.3 2.4 2.5 2.6 2.7
		Reflecting on Oral Communication	3.1 3.2
	Writing	Review	1.6
		Applying Knowledge of Language Conventions and Presenting Written Work Effectively	3.1 3.2 3.3 3.4 3.5 3.6
		Reflecting on Writing Skills and Strategies	4.1 4.2 4.3
	Media Literacy	Creating Media Texts	3.1 3.2 3.3 3.4
Metacognition		4.1 4.2	
Arts	Dance	Reflecting, Responding and Analyzing	2.2 2.3
	Drama	Reflecting, Responding and Analyzing	2.2 2.3
	Music	Reflecting, Responding and Analyzing	2.2 2.3
	Visual Arts	Reflecting, Responding and Analyzing	2.4

Activity 13: Ontario Grade 7

Subject	Strand	Overall Expectation	Specific Expectation(s)
Language	Oral Communication	Listening to Understand	1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9
		Speaking to Communicate	2.2 2.3 2.4 2.5 2.6 2.7
		Reflecting on Oral Communication	3.1 3.2
	Writing	Review	1.6
		Applying Knowledge of Language Conventions and Presenting Written Work Effectively	3.1 3.2 3.3 3.4 3.5 3.6
		Reflecting on Writing Skills and Strategies	4.1 4.2 4.3
	Media Literacy	Creating Media Texts	3.1 3.2 3.3 3.4
Metacognition		4.1 4.2	
Arts	Dance	Reflecting, Responding and Analyzing	2.2 2.3
	Drama	Reflecting, Responding and Analyzing	2.2 2.3
	Music	Reflecting, Responding and Analyzing	2.2 2.3
	Visual Arts	Reflecting, Responding and Analyzing	2.4

Activity 13: Manitoba Grade 8

Subject	Strand	Specific Expectation(s)
English Language Arts	Language as Sense Making	Learners are strategically selecting and applying strategies and processes for making sense of and creating different types of text for different purposes and audiences.
	Language as Exploration and Design	Learners are selecting, assessing and organizing a variety of sources and information for different purposes.
	Language as System	Learners are using their understanding of a wide range of text structures to understand and communicate clearly and effectively.
	Language as Power and Agency	Learners are exploring multiple perspectives, point of view and interpretations.
Social Studies	Understanding Societies Past and Present	Appreciate the importance of sustaining the natural environment for future societies. (8-VL-008)
Visual Arts	Making	Demonstrates understanding of and facility with visual arts media, tools and processes.

Activity 13: Manitoba Grade 7

Subject	Strand	Specific Expectation(s)
English Language Arts	Language as Sense Making	Learners are strategically selecting and applying strategies and processes for making sense of and creating different types of text for different purposes and audiences.
	Language as Exploration and Design	Learners are selecting, assessing and organizing a variety of sources and information for different purposes.
	Language as System	Learners are using their understanding of a wide range of text structures to understand and communicate clearly and effectively.
	Language as Power and Agency	Learners are exploring multiple perspectives, point of view and interpretations.
Social Studies	Human Impact in Europe or the Americas	Be willing to take actions to help sustain the natural environment in Canada and the World. (7-VL-009)

Activity 13: New Brunswick Grade 8

Subject	Strand	Specific Expectation(s)
English Language Arts	Speaking and Listening	Students will be expected to speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences.
		Students will be expected to communicate information and ideas effectively and clearly, and to respond personally and critically
	Reading and Viewing	Students will be expected to select, read, and view with understanding a range of literature, information, media, and visual texts.
		Students will be expected to respond personally to a range of texts
Writing and Other Ways of Representing	Students will be expected to create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes	
Technology Education	Understanding technological operations and concepts	Students will communicate information and ideas using a variety of multimedia. (1.4)

Activity 13: New Brunswick Grade 7

Subject	Strand	Specific Expectation(s)
English Language Arts	Speaking and Listening	Students will be expected to speak and listen to explore, extend, clarify, and reflect on their thoughts, ideas, feelings, and experiences.
		Students will be expected to communicate information and ideas effectively and clearly, and to respond personally and critically
	Reading and Viewing	Students will be expected to select, read, and view with understanding a range of literature, information, media, and visual texts.
		Students will be expected to respond personally to a range of texts

	Writing and Other Ways of Representing	Students will be expected to create texts collaboratively and independently, using a variety of forms for a range of audiences and purposes
Technology Education	Understanding technological operations and concepts	Students will communicate information and ideas using a variety of multimedia. (1.4)