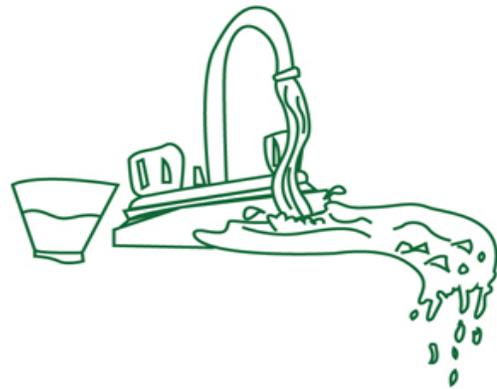


Name: \_\_\_\_\_ Course: \_\_\_\_\_ Date: \_\_\_\_\_

# VALUE CONSERVATION

## SAVING WATER

**Inquiry:** How does human water usage affect global sustainability?



<b>ACTION PLAN</b>	<ol style="list-style-type: none"> <li>1. MY WORLD VIEW</li> <li>2. MY ACTIONS</li> <li>3. GLOBAL RESEARCH</li> <li>4. LOCAL ACTIVITY</li> <li>5. CRITICAL THINKING</li> <li>6. ACTION SURVEY</li> <li>7. PRESENTATION</li> <li>8. SELF EVALUATION</li> </ol>
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Group Members and Contact Info

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### Goals

Please read over the following goals and keep them in mind as you complete your Action Pack. When you finish this, you will do a SELF EVALUATION to measure how much you have gained in each area below.

- I
**Inquiry:**  
 I can work with others to take a hands-on, minds-on, research-based approach to developing my knowledge and considering solutions to sustainability problems.
  
- T
**Creative/Critical Thinking:**  
 I can learn a lot about something, consider different points of view, and generate new ideas that will influence how I think and act in the future.
  
- C
**Communication:**  
 I can talk with others about my area of interest, consider their points of view, use digital media to gain knowledge, and deliver an interesting presentation on my topic.
  
- PS
**Personal & Social Responsibility:**  
 I know what my own values are and they help me make wise choices for the health and well being of myself, my community and my world.

## Glossary

Below are some key terms you will need to understand as you explore the inquiry of this Action Pack. They will appear in ***bold italic*** in your Action Pack. The simple definitions below are provided for ease of reference.

Climate Change	The long term changes and abnormal occurrences in weather patterns; in this case due to human activity.
Economic Impacts	Any change to the wealth and resources of a country or region, community or person. Often referred to in terms of the production and consumption of goods and services.
Ecosystem	A community of plants, animals and other organisms and all the interacting parts of their environment (air, water, soil, etc) that live, feed, reproduce and work together as a system.
Environmental Impacts	Any change to the living and non-living natural surroundings or conditions in which a person, animal or plant lives and interacts together. These impacts can be negative or beneficial, and can be created by an industry, project or Individual.
Family	For the purposes of this Action Pack, family will be considered the group of people that you are living with.
Government	A system or organization that exercises authority and performs functions for the people of a designated country, province or local community.
Natural Resources	Materials provided by the Earth, such as minerals, forests, water, and fertile land that can be used for life to continue and by humans for economic gain.
Social Impacts	The effect of an activity or event on the social well being of the people in a community, such as wealth, health, education, employment, and community values.
Sustainability	Meeting the environmental, social, and economic needs of the present without affecting the ability of future generations to meet their needs.
Water Privatization	When the private sector (businesses/corporations) take control over the management and distribution of water. Water sources and/or water utilities can be privatized. Public water has traditionally been managed by local governments through a democratic process.
Water Usage	The amount of water used by an individual, household, family, group, or community; the amount of water needed for production or industrial activities
Water Scarcity	A simple definition is a communities lack of enough clean water or the inability to access safe clean water

## 1. MY WORLD VIEW

A 'world view' is how you see the world. We all have different world views, depending upon our cultural background, our life experiences and personal values. Our world view changes as we gain more knowledge and experience and consider other points of view.

Please complete the **WORLD VIEW & VALUES SURVEYS** BEFORE and AFTER completing this Action Pack.



Aboriginal wisdom presents another world view and values to consider:



“Respect the water because it sustains the lives of all the things. It is a healer, cleanser and purifier. Always thank the water when you are using it and treat every drop of it with respect. Never waste it, always protect it and each time you use it, give thanks for its life-giving gifts.”

*AlineLaFlamme, Métis Elder*

## 2. MY ACTIONS

Our actions are directly related to our world view. We often see shifts in our actions as our knowledge about topics grows. You will be asked to take action through-out this project to try out what it is like to change habits.



**Complete 6.1 in your ACTION SURVEY on [page C4.14](#) of this Action Pack BEFORE completing anything else in your Action Pack.** Indicate which actions you already do by giving yourself points in Column A. **Only complete Column A at this time.**

**DURING** your Action Pack inquiry you will be asked to choose different Actions to try out and tick off your choices in Column B. Make sure that you have completed at least one Personal action and one action from any of the other categories before completing your Action Pack. But don't do that now – that's for later.

**AFTER** you have completed the entire Action Pack you will complete Column C, but don't do that now either! Just focus on filling out Column A at this time.

Name: \_\_\_\_\_ Course: \_\_\_\_\_ Date: \_\_\_\_\_

### 3. GLOBAL RESEARCH

Important information on this topic has been pre-researched for you. Register online by inserting the 6-digit 'class code' number that your teacher will provide to complete the url below:

[www.bethechangeearthalliance.org/user/register?classcode=\\_\\_\\_\\_\\_](http://www.bethechangeearthalliance.org/user/register?classcode=_____)

Then check out the websites and videos on this issue here:

[www.bethechangeearthalliance.org/SLS](http://www.bethechangeearthalliance.org/SLS)



User Name: \_\_\_\_\_ Password: \_\_\_\_\_

Make notes on interesting and important information for the Critical Thinking questions in Section 5 and the Presentation you will be making in Section 7. Discuss and compare different perspectives with other members of your group.

#### Research Questions

Based on what you have learned in your research, answer the following questions. Group discussions are encouraged but answers to the research questions are to be written independently. To avoid plagiarism, your answers must be in your own words. Please list the links you used to answer your questions.

- 3.1 Provide an explanation of the two types of water scarcity and why they occur.

#### Did you know...?

In Canada a person uses an average of 343 liters a day. In developing nations the average usage is less than 10 liters a person a day.

According to the World Health Organization, "between 50 and 100 litres of water per person per day are needed to ensure that most basic needs are met and few health concerns arise."

~[UNESA](http://www.unesa.org)

#### Links:

3.2 Describe an example of water scarcity in a Canadian community, and an example of water scarcity in a community outside of Canada. Include the ways that this scarcity is impacting the people that live there.

a) Canadian example:

b) International example:

**Links:**

3.3 Water is required to produce the different foods we eat. Complete the chart listing 4 foods that you like to eat that require a lot of water to produce. Then list 4 foods that you like to eat that require very little water to produce.

High water-use Food Type	Unit Amount	H2O Footprint	Low water-use Food Type	Unit Amount	H2O Footprint

**Links:**

3.4 When we consider how essential water is to life, and all the different ways that water is used by people and industries, the implications of ‘Water Privatization’ are very large. What are some of the impacts of Water Privatization that we should be aware of?

**Links:**

3.5 a) List the three main areas where Canada wastes water?

b) From your research, outline a number of ways that Canadian citizens could waste less water, with and without government support.

Links:

## Taking Action

Choose ONE or MORE actions from your **ACTION SURVEY** in the back of your Action Pack and do the action(s) now. Choose something that you are not already doing or increase an action that you have done occasionally to become a regular practice.



Make a check mark in **Column B** beside the action you will be taking and record it below.

**My chosen action is:** \_\_\_\_\_

**I will complete it by:** \_\_\_\_\_

Name: \_\_\_\_\_ Course: \_\_\_\_\_ Date: \_\_\_\_\_

### 4. LOCAL ACTIVITY



How does water usage relate to you personally? How much water does your family use in its home? Complete the following activity and research chart.

Each member of your group will observe their home’s water usage for 4 days. Using the chart below, focus on utilities such as laundry and dishwashing, as well water used for watering plants, showering, and flushing toilets.

1. To help you fully track your households water usage, you can interview a family member to determine how often laundry and dishes are done. Calculate the number of liters of water used by using the following averages:

- Clothes washer- 200 litres of water per cycle
- Dishwasher- 30 litres of water per cycle
- Standard showerhead, you will use 17.1 liters a minute.
- Standard toilet, you will use 19 liters per flush.

You can use more accurate numbers as well, by referencing the information on Environment Canada’s site [Link20](#).

2. Record how often the laundry machine and dishwasher is run, how many times you and your family flush the toilet (put a piece of paper by the toilet and ask family members to put a mark on the paper each time they flush), the number of minutes you and your family take to shower (done through personal tracking and interviews).

3. At the end of the 4 days, total the amount of water used for each category and notice where the most water was used, and then brainstorm ways to reduce your household usage.

### Research Chart

4.1 Complete Research Chart (use note paper if more space is needed)

WATER USE AT HOME			Number of People in Household:		
DAY	LAUNDRY # of cycles	DISHWASHER # of cycles	# OF HOUSEHOLD TOILET FLUSHES	THE TIME OF MY SHOWERS	THE TIME OF MY FAMILY’S SHOWERS
1					
2					
3					
4					
TOTAL LITRES					

## IDEAS FOR REDUCING WATER IN YOUR HOUSEHOLD:

4.2 Brainstorm a list below. You can use more accurate numbers as well, by referencing the information on the Environment Canada site [Link20](#).

### So What?

4.3 What are the similarities and differences you found from comparing your activity results to others in your group?

4.4 What are some conclusions or observations you gained from this Activity?

### Taking Action

Choose ONE or MORE actions from your **ACTION SURVEY** in the back of your Action Pack and do the action(s) now. Choose something that you are not already doing or increase an action that you have done occasionally to become a regular practice.



Make a check mark in **Column B** beside the action you will be taking and record it below.

**My chosen action is:** \_\_\_\_\_

**I will complete it by:** \_\_\_\_\_

Name: \_\_\_\_\_ Course: \_\_\_\_\_ Date: \_\_\_\_\_

## 5. CRITICAL THINKING

Global *sustainability* issues are complex, and considering different points of view can give us a stronger understanding in order to change for the better.



### Critical Reflections

To avoid plagiarism, write your answers IN YOUR OWN WORDS.

5.1 What are the long-term environmental and social justice implications of continuing to consume water at such a high rate? Think of local and global implications.

5.2 Brainstorm why you think some people or companies have challenges reducing the water they use, and then connect those challenges with potential solutions.

5.3 **STAKEHOLDERS** are individuals or groups (companies, communities, etc) who have concerns or could be impacted by an issue. Below is a list of stakeholders and environments that could experience **environmental, social** or **economic impacts** by our current water consumption rate and patterns. Write down two or three benefits or concerns for each stakeholder(s).

<b>Stakeholder(s) / Environments</b>	<b>Impacts: Benefits &amp; Concerns</b>
1. Myself, my <b>family</b> & my Community	
2. The Natural World (Animals, Plants, <b>Ecosystems</b> and planetary life-support systems)	
3. Industries that use or rely on a lot of water to function	
4. People in places that have <b>water scarcity</b> challenges	
5. <b>Government(s)</b>	
6. Other	

Name: \_\_\_\_\_ Course: \_\_\_\_\_ Date: \_\_\_\_\_

## Costs & Benefits

What if I was to choose differently, and actively reduce the amount of water I consume?

5.4 What would I need to do to take this action (e.g. commitment, time, something I'd need to stop doing, asking people to support me, taking responsibility, shifting comfort zones, etc.)? List at least 3 specific examples.

1.

2.

3.

5.5 What would the benefits be?

1. To me, personally (health, knowledge, values, etc.)

2. Environmentally (locally to globally) put in examples?

3. Socially (who may be impacted by this?)

4. Economically (money or resources saved or spent)

5.6 If I chose NOT to reduce the amount of water I consume, what would the ***environmental***, ***social*** and ***economic impacts*** be?

Name: \_\_\_\_\_ Course: \_\_\_\_\_ Date: \_\_\_\_\_

## 6. ACTION SURVEY

Our actions are directly related to our world view.



**Complete the following ACTION SURVEY step by step.**

6.1 **BEFORE** starting your Action Pack, indicate which actions you already do by giving yourself points in COLUMN A. Add these up in the Total for COLUMN A.

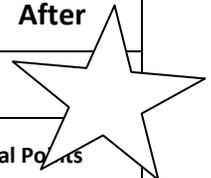
<b># of points</b>	<b>If this statement is true for you or not</b>
<b>0 points</b>	= Not true
<b>1 point</b>	= Sometimes true
<b>2 points</b>	= I have done this (not something one does regularly)
<b>3 points</b>	= True most of the time

6.2 **DURING** your Action Pack inquiry, set your goals and tick off the Actions you intend to take in COLUMN B... and then do them! IF you have already done all of the suggested actions, think of a new action, get it approved by your teacher and write it into the last open space.

### Action Survey

	<b>What Actions have I taken before?</b> <b>What Actions will I start taking?</b>	<b>A</b> <i>Done before Action Pack</i>	<b>B</b> <i>I intend to do this Action ✓</i>	<b>C</b> <i>I have done these Actions</i>
<b>Personal Actions</b>	1. Whenever possible, I spot wash and air-dry my clothes instead of throwing them in the laundry.			
	2. I never leave the water running in the kitchen or bathroom			
	3. I don't buy bottled water.			
	4. I have cut back my shower time by 5 minutes.			
	5. Most of my showers are shorter than 10 minutes			
	6. I consistently choose foods that require less water			
	7. I'm sure the dishwasher is full before turned on.			
	8. I will use my towels more frequently to reduce laundry loads each week.			

<b>Household Actions</b>	9. I have displaced water in our toilet, to make it a low flow toilet			
	10. I discussed with family members the “if it’s yellow let it mellow, if it’s brown flush it down’ practice used by many people on septic systems.			
	11. I have figured out ways to reuse my ‘grey water’ For example – a bucket in the shower to catch the cold water before it warms up can be used to flush the toilet.			
	12. I researched how to set up a large rain barrel to save gutter run off for use in our garden or house.			
<b>School Actions</b>	13. I have worked towards making my school a disposable water bottle free zone.			
	14. I have advocated for a water purification system and reusable water bottle system at school			
	15. I have checked all the taps in school to ensure there are no dripping faucets, and reported the ones that were dripping to the custodial staff.			
	16. I have discussed with someone who has influence at my school a rain collection systems and where possible, ‘zeroscaping’. <a href="http://www.wisegeek.com/what-is-zeroscaping.htm">www.wisegeek.com/what-is-zeroscaping.htm</a>			
<b>Community Actions</b>	17. I have a friend cutting back on water usage.			
	18. I found out what government department regulates water privatization and which elected politician is responsible for this department.			
	19. I wrote a letter to the department staff and/or to the politician stating the change that I think is appropriate.			
	20. My customized action (teacher approved): _____			
	<b>What Actions have I taken?</b>	<b>A Before</b>		<b>C After</b>
<b>Totals:</b>				
	<b>Starting Points Sustainability</b>		<b>Total Points Sustainability</b>	



## Points for Sustainability

6.3 **AFTER** completing your Action Pack, fill in COLUMN C by giving yourself points for all the actions you are now taking. Add up the total of COLUMN C to see your **TOTAL POINTS FOR SUSTAINABILITY**.

<b>5-15</b>	This is a good place to start! And you have lots of choices for actions to increase your score
<b>16-31</b>	You are well on your way to creating healthy, sustainable habits!
<b>32 or more</b>	WOW, Superstar! You are here to inspire others. Lead on!

## Points for Change

6.4 **CHANGING** our habits is a big accomplishment! As we increase our awareness we will see the impact of each choice we make and even more ways to 'be the change'. To give yourself points for trying new actions and being willing to change old habits, subtract the total of COLUMN A from the total of COLUMN C to get your total **POINTS FOR CHANGE**.

**Total Column C:** \_\_\_\_\_ - **Total Column A:** \_\_\_\_\_ = \_\_\_\_\_ **TOTAL POINTS FOR CHANGE**

<b>3-6</b>	Way to go – you've overcome the hardest part to change – <b>STARTING!</b> Keep it up!
<b>7-15</b>	Well done – keep consistent with your changes to create new habits.
<b>16 or more</b>	Way to be a <b>CHANGE AGENT!</b> Check out other Action Packs for more ideas

## Reflection on Taking Action

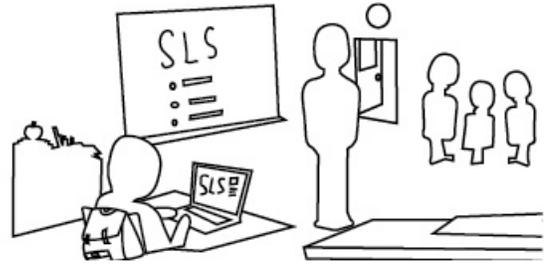
Answer these questions after completing your Action Pack (use more paper as needed)

6.5 What was rewarding about making a commitment to action and changing your behaviour?

6.6 What was challenging?

## 7. PRESENTING YOUR EXPERIENCE AND KNOWLEDGE

Your final Action Pack assignment is to give a presentation to your class summarizing your thoughts on the Inquiry you did in this Action Pack. This is your chance to share what you have learned and invite your peers to take action!



Presentation length: 5 - 15 min.

See ideas for your presentation below. Ask your teacher for further details.

Make sure your presentation includes:

1. **I Inquiry Process**
  - State the Inquiry question that you explored. Is this an important question we all need to be asking ourselves?
  - List the top 3 most interesting facts that you learned in your research.
  - Share the experience and results of your local activity
2. **T Creative/Critical Thinking**
  - Name some key *stakeholders* or *ecosystems* and their concerns or interests.
  - List some ways we can approach this issue more sustainably (both industry and personal).
  - Share new ideas or conclusions you gained from completing the Action Pack.
3. **PS Taking Action for Personal & Social Responsibility**
  - What actions did you take?
  - What was it like to take personal action?
  - Share your personal experience exploring this topic, inspire others to take action.
  - Suggest ways your classmates can take action.
4. **C Creative Communication**
  - Engage with your audience; make eye contact, don't read off a piece of paper the entire time, and project your voice.
  - Be creative; how can you make learning about this topic fun and interesting? Consider the different presentation formats below.
  - Share personal stories that deliver key points.
  - Be passionate, persuasive and creative.

## Creative Format Options

1. **A VERBAL TESTIMONIAL** Acting as a stakeholder (person, community, animal, river, etc) you tell your personal story about how important this topic is to you and how it can affect your life, positively and negatively. You could do it like a talk show where one interviews the other about your experience.
2. **GRAPHIC DEPICTION** Drawings that are labeled and explain the information you learned in the research. This could be pictures, images, a storyboard, timeline, and includes how you will make changes in your life.
3. **MOCK DEBATE** You and your partner present two points of view, or two stakeholders, showing the facts that support both sides in the issue.
4. **PAINTING OR COLLAGE** An artistic representation of what you learned in the research and how you will make changes in your life.
5. **MOCK NEWSCAST** You are a TV journalist on the scene of an environmental situation and you are interviewing both sides of the issue. For example, trees being cut down, industry's waste going into a river, protesters with signs at a government office.
6. **NEWSPAPER** Create a newspaper page with various articles about both sides of the issue. You may include a cartoon that is relevant, a letter to the editor about the issue and columns with the scientific facts. Include what changes are needed to help with this issue in the world.
7. **POEM/PROSE/SONG/RAP** Present a piece of creative writing that expresses personal feelings and facts together around your issue/topic.
8. **SKIT** Act out a script to demonstrate your understanding of the issue/topic. Explain the stakeholders on both side of the issue and how you will change your life to help.
9. **WEBSITE** Create a well designed website that clearly leads the reader through the major issues, facts and opinions on this topic.
10. **POWERPOINT/PREZI** Create a visual presentation with strong images, graphs, even video, that complements and strengthens your verbal presentation. Remember images – not words!
11. **VIDEO** Create a video that describes the key points of the issue in a compelling way. This video can be animation.

## 8. SELF EVALUATION

While helping you learn about a sustainability topic, the goal of this Action Pack was to help you increase your ability in a number of life skills.

By completing the self evaluation below you can acknowledge the areas that you have developed and the areas that need more work. Please keep in mind that your abilities will continue to develop over the years.

*Please rate yourself from 1 – 5 for each of the following statements.*

- 1** = I did not develop this skill with this project and I do not feel confident in this life skill.
- 2** = I developed this skill a little, but I need to do more work in this area.
- 3** = I developed this skill a fair bit, and I see how I could use it in the future.
- 4** = I developed this skill a lot and I am quite confident about using this skill in the future.
- 5** = This goal was fully met... I actively use this life skill in many areas of my life.

<i>Action Pack Goal</i>	<i>Your Self Evaluation</i>				
<b>I Inquiry Process:</b>					
• I can work well with others to explore a topic.	1	2	3	4	5
• I can research a question using internet links.	1	2	3	4	5
• I am willing to get personally engaged to use my own experience as part of my research.	1	2	3	4	5
• I am willing to look for solutions even when a clear and easy answer is not obvious.	1	2	3	4	5
<b>T Creative/Critical Thinking:</b>					
• I learned a lot about this topic.	1	2	3	4	5
• I considered different points of view.	1	2	3	4	5
• I have generated some new ideas.	1	2	3	4	5
• My understanding of this topic will now influence how I think and act in the future.	1	2	3	4	5



**Communication:**

- I am comfortable speaking with others about my area of interest. 1 2 3 4 5

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- I can hear and respect different opinions during a discussion 1 2 3 4 5

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- I can use digital media to research information. 1 2 3 4 5

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- I can use digital media to share information. 1 2 3 4 5

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- I can deliver an interesting presentation on my topic. 1 2 3 4 5



**Personal & Social Responsibility:**

- I know what my own values are. 1 2 3 4 5

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- I use my values to decide on my actions. 1 2 3 4 5

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- I take responsibility for how my actions impact on my life. 1 2 3 4 5

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- I take responsibility for how my actions impact on the lives of others, my community & my planet. 1 2 3 4 5