



World Vision

WATER IS LIFE

An educational resource for grades
7-12, supporting science, geography
and language arts curricula



Produced by World Vision Canada, Education and Public Engagement.

Introduction



It is the basis of all life. It determines the way we live. One billion people on Earth do not have reliable access to it, while others waste it daily. It can be obtained for free or at very high prices. Water is one of life's most precious ingredients.

This supplementary resource was designed for science and social studies teachers of students in grades 7 through 12. The activities challenge students to question what they know and understand about water. Conflicting ideas are raised, and students are encouraged to weigh into the debate.

The activities in *Water is Life* fulfill curriculum expectations in disciplines such as geography, Earth and space science, and biology. They also fit well in language

arts classes as a tool to help generate ideas and practise communications skills. The *Water is Life* resource is an ideal teaching tool for World Water Day (March 22), celebrated every year.

Included in this guide

- background information and additional resources for getting started
- a lesson plan that begins with a group activity and wraps up with an individual research project on a current water issue
- Water Issues cards to be copied and distributed to students
- suggested assignment sheet and rubric (also available as Word documents online at worldvision.ca/resources)

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Writer: Zeljka Adzija

Editors: Doug Blackburn, Sarah Hutchison

Design: World Vision Creative Services

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Background Information and Additional Resources

“Water for Life” Decade 2005-2015

Water Day in 2005 (March 22) marked the beginning of the “Water for Life” Decade. The focus of this decade is to encourage the international community to meet the UN Millennium Declaration target for water and sanitation: to reduce by half the number of people that do not have access to safe drinking water and basic sanitation by 2015. This is considered foundational for sustainable development in the 21st century.

For more information:

www.unicef.org/wes/mdgreport/index.php
www.un.org/waterforlifedecade

Water as a Basic Human Right

The United Nations Committee on Economic, Social and Cultural Rights has affirmed that access to sufficient clean water for domestic and personal use is a fundamental human right. The right to water is considered critical to human dignity. Access to clean water is crucial to human health, food production and economic development. At the same time, many profit-motivated corporations see water as a commodity. According to *Fortune* magazine, water is “one of the world’s great business opportunities. It promises to be to the 21st century what oil was to the 20th.” Selling water for profit risks making access to water more readily available to those who can afford it rather than a basic human right available to all.

For more information:

www.ohchr.org/english/about/publications/docs/wehab.final.doc
www.who.int/water_sanitation_health/rightowater/en

Complicated Resource Issues

Water is the most widespread resource on Earth. It covers 70 per cent of the planet, but the large majority is salt water with less than one per cent of all water available for human consumption. Accessible freshwater sources are currently being depleted much faster than they can be replaced, and water pollution is rendering some sources unsafe.

The sustainable management of water resources has become increasingly complicated with rising populations, increasing consumption of material goods (which require large amounts of water for their production) and multiple stakeholders with conflicting agendas vying for limited water resources. Explosive debates about the privatization, management, ownership and use of water are pitting groups against each other, leaving some to question when this natural resource became defined by money rather than as a necessity for life.

For more information:

www.unesco.org/water/wwap/facts_figures/water_industry.shtml
www.globio.info/press/2005-09-05.cfm

Background Information and Additional Resources

Access to Clean Water

Where there is water there is the possibility of life. But when a water supply dries up, hardship and death will soon follow. This is why citizens in many African countries commonly use the expression “water is life.”

While many Canadians are only now just realizing how vital safe water is, citizens of lesser-developed countries have been painfully aware of this reality for years. In many parts of Canada, we can simply turn on a tap and have an endless supply of clean water. In water-stressed countries, the small amount of water available is often contaminated and unsafe. On average, Canadians consume more than 250 litres of clean water every day. Where water is not readily accessible, many people use less than 10 litres daily.

For more information:

www.worldvision.ca/daretocare
www.ec.gc.ca/water/e_main.html

Water, Faith and Culture

Water is viewed by many faiths and cultures as a sacred element symbolizing life. To Christians, the sacrament of baptism with water symbolizes the cleansing of sins and the gift of eternal life in Christ. In Islamic law, the three resources of fire, grazing grass and water are common and should be shared equally by all. And, in Hinduism, water’s scarcity or abundance is viewed as the result of reward or punishment from previous lives. For billions of people around the world, water is also life in spiritual or cultural dimensions.

For more information:

www.thewaterpage.com/religion.htm
www.iwha.net/religion.htm



Lesson Plan

Students will:

- research a current water issue
- develop, express and defend a position on a water issue

Time:

- This lesson can be adapted to suit your schedule. The lesson itself will require 35 to 45 minutes to complete, while the student research component can take from one or two class periods to a week.

Materials:

- computer and multimedia projector to view *Water is Life* flash presentation
- assignment sheet and rubric (one per student)
- Water Issues cards (one card per student)
- chalkboard and chalk or flip-chart paper and markers
- computers for student use

To download the *Water is Life* flash to your computer, visit www.worldvision.org.nz/watermatters | Teacher resources | Other resources.



Group Introductory Exercise

1. Show the *Water is Life* flash. The flash is a series of couplets that make up a riddle. Don't tell the students what *Water is Life* is about—let them figure it out. After viewing, engage students in a general discussion about the topic of the flash.
2. Show *Water is Life* again. This time ask the students to focus on the specific issues raised about water while they watch it.
3. Do a mind map to engage the students' own knowledge and experiences of water issues. Organize the students into groups of three or four, each group with a blank piece of chart paper. Have each group write "Water is Life" in the middle of their papers, then work for 10 to 15 minutes brainstorming current water issues that are important to them. Themes can be based on the flash presentation or the students' general knowledge.

4. Highlight your students existing knowledge about water. Then set the scene for more in-depth research by having groups share some of their mind maps with the class. You could ask each group to share something that surprised them; what they consider their most positive theme about water; their most worrisome theme, etc. Discuss any themes that need further explanation or that fit with your water curriculum.

Individual Research Assignment

1. Assign students a couplet from the *Water is Life* flash presentation by giving each student one Water Issues card with an assignment sheet and rubric. Note that the assignment sheet and rubric are also available as Word documents online at worldvision.ca/resources.
2. Explain to the students:
 - The *Water is Life* flash presentation uses contrasting couplets to raise current issues about water. You are going to research the portion of the flash presentation that you have been assigned then decide on one aspect of your issue to research more fully and present.
 - Your Water Issues card has a quote, some brief information and some suggested Web sites to help you get started.

Criteria	Level 1 (novice)	Level 2 (novice)	Level 3 (novice)	Level 4 (novice)
Knowledge Understanding	present concepts with limited detail	present concepts with some detail	present concepts with considerable detail	present concepts with significant detail
Thinking Inquiry	develops a broad understanding of the topic	develops some understanding of the topic	develops an effective understanding of the topic	uses a synthesis to present research process and makes observations from a wide range of sources
Communication	shares information from only one resource	develops some knowledge of research strategy and uses information from one resource	develops an effective research strategy (includes information from a variety of sources)	uses a synthesis to present research process and makes observations from a wide range of sources
Application/Planning	research of general information or indicates ability to identify some issues	research of general information with ability to identify some issues	research of general information on a topic to identify some issues	research of general information on a topic to identify some issues
Communication	present ideas with limited organization	present ideas with some organization	present ideas with considerable organization	present ideas with a high level of organization
Quality	presents the ideas and explanation of the problem with limited clarity	presents a consistent clear theme and explanation of the problem	present a consistent clear theme and explanation of the problem	present a clear theme and explanation of the problem
Application/Planning	research on very little effect on the process	research on some effect on the process	research on a good effect on the process	research on a significant effect on the process
Application/Planning	uses information with little to complete the task or to complete the task with little to complete the task	uses information with some to complete the task or to complete the task with some to complete the task	uses information with considerable to complete the task or to complete the task with considerable to complete the task	uses information with significant to complete the task or to complete the task with significant to complete the task

Lesson Plan

Extension Activity

To delve deeper into water issues, engage in a debate.

Suggested topics:

- Water is the new oil of the 21st century.
- Wars of the future will be fought over water.
- Water is a basic human right.
- The Millennium Development Goal to halve the number of people living without safe water and sanitation by 2015 is attainable.
- The privatization of water will further increase the gap between the rich and the poor.
- Countries should have ownership over all water within their borders.
- Water determines the way we live.

Rules for democratic debate:

- Listen and speak with respect.
- Bolster your case with information from legitimate sources.
- Argue against the points being made, not with the person making them.
- Honour the decisions of the moderator.
- Observers make no judgments until they hear both sides.



Water is Life: Individual Research Assignment

Assigned:

Due:

- The purpose of this assignment is to research a current water issue in the *Water is Life* flash presentation and present one aspect of your findings in a clear, creative way.
- After viewing the *Water is Life* flash presentation with your class, you will be assigned one of the couplets from the riddle to research individually.
- You will receive a Water Issues card indicating the couplet that you are responsible for. There will be some background information included on your card, as well as suggested Web sites you can search for more information on your topic.
- You are to begin by researching the questions on the card using the Web sites listed as well as other Web sites. Then choose one aspect of your research findings that you think is particularly important about water and present that aspect to the class in a format to be determined by your teacher (possibly including visual, oral or written aids).
- All assignments must have accompanying references.



Water Issues Cards



“As children of a culture born in a water-rich environment, we have never really learned how important water is to us. We understand it, but we do not respect it.”
—William Ashworth



In its smallest form water is remarkably simple, just three tiny atoms. Yet there exists on Earth an incredibly complex web of life, all dependent on this one incredible molecule.

- What are the properties of water that allow it to sustain life?
- In what ways is water the basis for all life?
- How do humans show their disrespect for water?

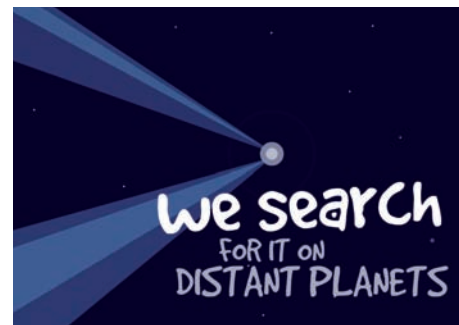
Suggested sites:

www.un.org/waterforlifedecade

http://encarta.msn.com/related_761573158_18/human_body_and_water.html



“All the water that will ever be is, right now.”
—National Geographic
(October 1993)



Water is critical to sustaining human life. Scientists have forever been fascinated by the connection between living things and this elixir of life. So much so that they have searched in far off places for evidence of water—desperate to claim that life once existed there or still does. The irony is that the resources we expend to find water on other planets could be used to protect and restore our source of water here at home.

- Where and how have scientists been searching for water in far off places?
- What can we be doing to better manage and protect our water resources on Earth?

Suggested sites:

www.space.com/scienceastronomy/solarsystem/mars_water_000620.html

www.un.org/waterforlifedecade

Water Issues Cards



“Between Earth and the Earth’s atmosphere, the amount of water remains constant; there is never a drop more, never a drop less. This is a story of circular infinity, of a planet birthing itself.”
—Linda Hogan



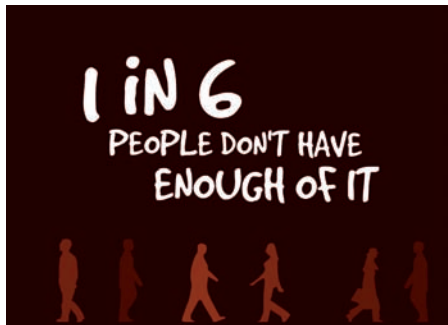
The amount of water on Earth is all there ever was, and all there will ever be. We drink the same water that someone living long ago drank, and we bathe in the same water that dinosaurs once used. The water cycle ensures that water is continuously recycled. Water is a timeless resource.

- If a resource is renewable, can humans use as much of it as we want? Why or why not?
- Name some key ways that humans can be better stewards of their water for future generations?

Suggested sites:

www.eco-pros.com/renewableresources.htm

www.pacinst.org/topics/water_and_sustainability



“We never know the worth of water till the well is dry.”
—Thomas Fuller



One billion people on this earth do not have access to safe water. And yet there are people living in water-rich nations who treat water as if it is a limitless resource. The world has declared safe water a priority for development by including it in the Millennium Declaration (www.un.org/millenniumgoals).

- What can be done to improve access to safe water in developing countries?
- What can be done to discourage water misuse in developed countries?

Suggested sites:

www.un.org/waterforlifedecade

www.who.int/water_sanitation_health/en

Water Issues Cards



“Life has no price, so water has no price.”
—Virginia Museo



In New Zealand and other industrialised nations, we take safe, clean water for granted. Our tap water is safe to drink and affordable, yet the bottled water industry in New Zealand is a billion-dollar-a-year industry.

- How much water does the average New Zealander use? How does this compare with the amounts of water used by consumers in other industrialized countries?
- Do you think it is a good thing that we drink so much bottled water in New Zealand? Why or why not?

Suggested sites:

www.ec.gc.ca/water/en/manage/use/e_data.htm

www.nrdc.org/water/drinking/bw/bwinx.asp



“For many of us, water simply flows from a faucet, and we think little about it beyond this point of contact. We have lost a sense of respect for the wild river, for the complex workings of a wetland, for the intricate web of life that water supports.”
—Sandra Postel



Water scarcity has many far-reaching effects. Sometimes it means travelling several kilometres a day in search of water. Other times it means using a water supply that is contaminated or unsafe. The disparities between water-rich countries and water-stressed countries are staggering.

- Research the relationship between water and women in countries where water is scarce.
- New Zealand has more than its fair share of the world’s available fresh water. What is that share and what are some implications of this relative water wealth?

Suggested sites:

www.ec.gc.ca/water/e_main.html

www.fao.org/focus/e/women/water-e.htm

Water Issues Cards



“Water has become a highly precious resource. There are some places where a barrel of water costs more than a barrel of oil.”
—Lloyd Axworthy



There is much controversy over water. Some people believe it is a basic human right that should be available to all. Others think they have a right to own it. There is a struggle between the public and private sectors over who should be in control of our waters.

- Is water a basic human right for all? Why or why not?
- The privatization of water could further increase the gap between the rich and the poor. Do you agree? Why or why not?

Suggested sites:

[www.citizen.org/documents/bolivia_\(pdf\).pdf](http://www.citizen.org/documents/bolivia_(pdf).pdf)

www.jubileesouth.org/news/EpZyVVlyFygMevRBey.shtml



“Water is the driving force of all nature.”
—Leonardo da Vinci



Most of us take for granted the importance of water. Water is not only critical for life and good health, it is also important for a healthy economy.

- Think about all the ways that water had an impact on your life today. Can you think of any product that you might use in your day-to-day activities that did not involve water in some part of its production?
- Research the amount of water used in some typical production processes using the sites below.

Suggested sites:

www.gemi.org/water/index.htm

www.unesco.org/water/wwap/facts_figures/water_industry.shtml

Water Issues Cards



“The wars of the future are going to be fought over water.”

—Maude Barlow



Water can be a reason for people to work together, or a reason for people to fight. Some countries have rich water resources, while others have none. Some bodies of water are contained within the boundaries of one country, while others are shared between two or more countries.

- Do you think countries should have ownership over all the water within their borders?
- In the future, do you think wars will be fought over water? How can these wars be prevented?

Suggested sites:

www.worldwater.org/conflictIntro.htm

www.jubileesouth.org/news/EpZyVVZykEBFJPggbba.shtml



“There is no substitute for water, this precious liquid so essential to life.”

—Vandana Shiva



Water is the basis of all life. It sustains us and all living things on Earth. In Africa, where water is often scarce, there is a saying that “water is life.”

- How can water give life and take life too?
- What could you do to help shape a future in which there is water for all?

Suggested sites:

www.wateraid.org/learn_zone

www.un.org/waterforlifedecade

www.worldvision.org.nz/watermatters | Take action



Water is Life Rubric

Criteria	Level 1 (50-59%)	Level 2 (60-69%)	Level 3 (70-79%)	Level 4 (80-100%)
Knowledge/ Understanding				
content	presents content with limited detail	presents content with some detail	presents content with considerable detail	presents content with significant detail
understanding of the topic	demonstrates a limited understanding of the topic	demonstrates some understanding of the topic	demonstrates significant understanding of the topic	demonstrates thorough understanding of the topic
use of resources	obtains information from only one resource	demonstrates some knowledge of research strategy and uses information from more than one resource	demonstrates an effective research strategy; obtains information from a variety of sources	uses a systematic research process and obtains information from a wide variety of resources
Thinking/ Inquiry				
critical-thinking skills	material presented demonstrates an inadequate ability to critically assess issues	material presented demonstrates some ability to critically assess issues	material presented demonstrates an ability to critically assess issues	material presented demonstrates a well-developed ability to critically assess issues
Communication				
organization	presents ideas with limited organization	presents ideas with some organization	presents ideas with considerable organization	presents ideas with a significant level of organization
clarity	presents the theme and explanation of the product with limited clarity	presents a moderately clear theme and explanation of the product	presents a somewhat clear theme and explanation of the product	presents a clear theme and explanation of the product
creativity	demonstrates very little effort to be creative	demonstrates some effort to be creative	demonstrates a good effort to be creative	demonstrates a significant effort to be creative
Application/Making Connections				
extends to real-life examples	no connections were drawn to examples in life that students could relate to	few connections were drawn to examples in life that students could relate to	some connections were drawn to examples in life that students could relate to	several connections were drawn to examples in life that students could relate to

Overall Level:

Comments:

Water is Life



World Vision was founded in 1950 and is a non-profit, Christian humanitarian relief and development organization. Active in more than 90 countries, World Vision works in partnership with people around the world to overcome poverty and injustice, and to provide opportunity and hope.

To support World Vision's work, visit www.worldvision.org.nz or call **0800 800 776**.

World Vision educational videos, publications and classroom activities are available to help New Zealanders develop a greater understanding of global issues and take action for positive change.

For more information on global education resources visit www.worldvision.org.nz/catalogue, or contact us at:

World Vision
Global Education

Education Team
World Vision New Zealand
Private Bag 92078, Auckland
Phone: 0800 800 776
Fax: (09) 580 7799
Email: education.nz@worldvision.org.nz
Web: www.worldvision.org.nz/education

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