

# DURHAM CHILDREN'S WATERSHED FESTIVAL ACTIVITIES

Activities are linked Ontario Curriculum for Grade 4 students and pending availability may change without notice  
 WC: Water Conservation WA: Water Attitudes WT: Water Technology WP: Water Protection WS: Water Science



## Giizhig (Sky) Area

Activity	Description	Learning Opportunities	Location
<b>3 (X) TIMES A DAY WC</b>	In a simulation, students will have the opportunity to examine brushing their teeth and comparing water consumption using a variety of techniques. How much water can you save 3(X) times a day?	Estimate, calculate and record volume using appropriate units. Identify environmental problems and propose solutions to ensure a sustainable future. Use a variety of strategies to pose and solve everyday problems with mechanical, scientific or technical dimensions and evaluate and justify conclusions.	outside
<b>3Ps - Pee, Poo &amp; Paper (Durham Region's Works Department)</b>	The toilet is only meant to flush the three P's – pee, poo and paper (toilet). Unfortunately, many people flush lots of things down the toilet, such as, medications, wipes, cigarette butts, dead fish, kitty litter, etc. Flushing these things down the toilet can cause home pipes to clog, and damage our sewer systems, as well as cause contamination in our rivers and lakes.	Work collaboratively and effectively in teams on a common task. Develop an understanding of how sewer systems work	outside
<b>BUCKET BRIGADE WA</b>	Fire! Students must work together using a historic method to save the burning building from destruction. Discover how municipal water service is necessary to modern firefighting techniques.	Investigate the effects of changes in technology and describe their impact on society. Work collaboratively and effectively in teams on a common task. Describe and apply safety procedures in the home, school and community. Observe and discuss changes in industrial processes, safety, quality and efficiency.	outside
<b>CLOCA Engineering and Operations Staff Groundwater and Wells WT</b>	This activity will familiarize the students with groundwater component of hydrologic cycle. The students will learn about groundwater occurrence/storage, recharge, use, protection, and conservation. The students will also have an actual experience on pumping groundwater from wells.	Students will understand the Hydrologic cycle focusing on groundwater component of the process and get hands-on experience in groundwater sampling	outside behind Council Hall
<b>CLOCA Engineering and Operations Staff Water Quality</b>	The students will learn about water quality parameters and significance of soil moisture and how they relate to habitats and how animals have adapted to specific	Using hands-on experience with sampling procedures, this activity will familiarize the students with water quality sampling and soil moisture measurements.	outside

<b>and Soil Moisture Activity WT</b>	water conditions. Changes to water quality can impact the animals that live there.		
<b>CLOCA Natural Heritage Staff Habitat Chat WA</b>	Central Lake Ontario Conservation Authority (CLOCA) Natural Heritage monitoring staff discuss the variety of habitats that can be found throughout the watershed	Students are engaged by playing a habitat game using a variety of skulls/pelts/specimens an answer questions about the different species	outside
<b>DOING THE LAUNDRY WA</b>	Why was Monday Laundry Day? Try doing laundry using old methods and equipment and compare water consumption to the present day.	Discover the practical application of labour saving devices to water availability. Examine the ways in which technology influences people’s daily lives both past and present. Examine the interrelationship of science and technology in making a machine.	outside
<b>GREAT GREEN CHOICES – LETS DO LUNCH WP</b>	To teach students the environmental impact of their choice when packing their lunch for school	Students will be able to understand and make better choices that will reduce the amount of garbage created when making their school lunches. Studies show that student lunches are the highest category of waste generated at schools.	outside
<b>OFF I GO! WA</b>	Children in some parts of the world have to walk for hours to fetch water for the family’s daily use. In this team relay, students race through an obstacle course with a bucket of water, to experience what is like for children on their water fetching journeys.	Work willingly alone or with others, as required by the project. Identify similarities and differences found in various cultures in the past and present. Identify, describe and explain connections among ideas, cultures or subjects using simulation as a form of communication.	outside
<b>SETTLER WATER RACE WA</b>	Students will be encouraged to examine the importance of water to the survival of the settlers. Taking a trip back in time, students can investigate how farm buildings were located near a water source, and how water was obtained for the animals and the family, and how much water was required. Discover hand power and the role of the child in settler families. Help us fetch a bucket!	Develop an understanding of the importance of drawing conclusions based on observation and evaluation. Examine the role of simple machines in our lives. Identify the interrelationship of technology, people and the environment. Show concern and care for the environment and for the wise use of energy. Identify scientific and technological skills and knowledge and relate their importance to society.	outside
<b>WE USE THAT MUCH? WC</b>	Students have an opportunity to discover how much water is used in producing everyday items	Develop an understanding of how water is used for drinking and the manufacturing of products.	outside
<b>WELL, WELL, WELL... WT</b>	Students will learn about underground aquifers, wells and the water table and the threat of contaminants.	Students will gain a better understanding of groundwater and wells and to learn how easily a well can become contaminated.	outside

<b>WHERE ARE THE TAPS? WA</b>	Students have the opportunity to discover how difficult it is to get water when there are no taps	Develop an understanding and respect for water sources Discuss that water is just as precious as before and not to waste it just because it is easier to obtain in today's society.	outside
<b>Nibi (Water) Area</b>			
<b>3 STRIKES YOU'RE OUT WP</b>	The students can see the impact that humans have on wetland habitat.	Through role playing students confront the challenges that many wetland creatures face as they go through their life cycles.	outside
<b>AQUATIC ADVENTURES WS</b>	Aquatic habitats such as wetlands and streams are one of the most important links in the ecosystem chain. Streams sustain and support a tremendous variety of plant and animal life. Discover the wonder of streams.	Observe and examine a variety of plant and animal life forms in their habitats. Use scientific and technological methods during inquiry. Understand how science and technology can be used to protect and manage habitats to enhance biodiversity. Suggest positive and negative outcomes of people's interaction with the environment.	outside Samac Lake Dam
<b>ENVIROSCAPE/ Drinking Water &amp; Wastewater Treatment WP</b>	Our hands-on models of typical communities help students understand how water pollution occurs & how we can all help to prevent it. Come and test your theories.	Use models to represent complex concepts (point & non-point source pollution; how a watershed works). Design & perform experiments in which physical properties of materials are compared. Formulate practical solutions to environmental problems	outside
<b>KNOW BEFORE YOU THROW (Durham Region Waste Department)</b>	Students will learn to properly sort their waste at home in a fun relay race.	Identify waste items that are acceptable in the Region of Durham's Blue Box Recycling and Green Bin Composting programs.  Use the Region's online tool, Know Before You Throw ( <a href="http://durham.ca/waste">durham.ca/waste</a> ), when unsure about where a waste item belongs.	outside
<b>NO WATER OFF A DUCK'S BACK WP</b>	Students take the role of wildlife biologist observing feathers when they are wet, dry, or soaked in oil and give verbal descriptions of their observations. Students are encouraged to think about ordinary actions, such as pouring used oil or other contaminants down road sewers or household drains and how these could cause pollution that endangers wildlife habitats and damages ecosystems.	Identify, through observations, various factors that affect plants and animals in a specific habitat. Show the effects on plants and animals of the loss of their natural habitat. Describe ways in which humans can affect the natural world. Formulate questions about and identify the needs of animals and plants in a particular habitat and explore possible answers to these questions.	outside

<b>RUNOFF OR RECHARGE</b>	This activity illustrates what happens to precipitation: it either runs off the land into surface water (rivers and lakes) or infiltrates down into the ground and becomes groundwater.	Students investigate and hypothesize as to what happens to surface water runoff when coming into contact with various surfaces and how it impacts the surrounding environments and habitats.	outside
<b>SO YOU THINK YOU CAN ENVIRO DANCE? WP</b>	Students test their knowledge on environmental issues covered at the festival	Students are asked questions while dancing	outside
<b>THE SCOOP ON POOP – PROTECT THE WATERSHED WP</b>	Students are reminded of connections existing throughout the watershed and why dog feces should be picked up and disposed of properly.	Use appropriate vocabulary in describing their investigations and observations. Analyze ways in which humans and natural systems are connected. Describe ways in which humans can affect the natural world.	outside

### **Aki (Land) Area**

<b>BALANCING H2O WS</b>	Students can balance their weight with a water and sand ratio	Students discover via a hands-on activity the 70% water to 30% solid mass of the human body	outside
<b>BRING BACK THE SALMON MIGRATION GAME (OFAH)</b>	Students will hear a story, learning about what an Atlantic Salmon is, their arrival into the Lake Ontario watershed, and the events that led to their disappearance. They will then learn about the Lake Ontario Atlantic Salmon Restoration Program before playing a running game to learn about the challenges that migrating salmon face.	Learn about salmon life cycle, habitats, and predator/prey relationships. Identify human actions that can have negative environmental consequences and stewardship actions that can mitigate these impacts.	outside
<b>CAN WE DRINK THAT? WA</b>	Test your knowledge on safe water practices	Investigating some common practices that may or may not be safe for water.	outside
<b>CLIMATE CHANGE - WEIGHING THE FACTS WS</b>	This activity is designed to show the effects of making different choices in the students' daily activities on the earth's climate	Students can see how delicately balanced our environment is.	outside
<b>DOWN THE STORM DRAIN WP</b>	Students categorize a variety of hazardous and non-hazardous waste material containers. They learn the meaning of the warning symbols that are common on household items.	Describe ways in which humans can affect the natural world. Discuss the effects of dumping household hazardous waste in the storm sewer or down the drain.	outside
<b>EGGS TO ADULTS WP</b>	Did you think hatching was just for chicks? Not a chance! Students will learn the importance of clean water for fish as well as the different life stages of salmon.	Recognize that animals and plants live in specific habitats because they are dependent on those habitats and have adapted to them. Use appropriate terminology, in observing and describing their explorations and observations.	inside Kitchie Lodge

		Describe ways in which humans can affect the natural world	
<b>Invasive Species Centre (ISC) WP</b>	The Invasive Species Centre (ISC) will run two activities to demonstrate how aquatic invasive species can spread and their impacts on lakes and ponds. Students will have the opportunity to move toy boats between different "bodies" of water, working to prevent the transport of aquatic invasive plants using the "Clean, Drain, Dry" method. Students will also be able to play a card game where they'll discover what happens to food resources as more and more invasive goldfish are released into an ecosystem.	Describe ways in which humans can affect the natural world. Recognize that animals and plants live in specific habitats due to dependency and adaptations. Identify a variety of interrelationships in natural environments. Analyze ways in which humans and natural systems are connected.	outside
<b>LOW SALT DIET WP</b>	Canadians know the importance of snow and ice removal. Salt is most often used to get rid of ice because it melts ice and is inexpensive. When salt melts ice it dissolves into the water and is carried into streams and lakes (surface water) or is absorbed into the ground (groundwater). This impacts our drinking water quality. The goal is to keep people safe from ice and safe from salty drinking water. Can we do both?	Use investigation skills to gather, analyze, interpret, and evaluate information. Suggest positive and negative outcomes of people's interaction with the environment. Describe ways in which humans can affect the natural world.	outside
<b>MEDICAL MYSTERY WA</b>	Students are called upon to solve the historical medical mystery. Diagnose the patient's illness and determine how did they get sick? Students can compare medical and scientific knowledge from the past to present day.	Use investigation skills to gather, analyze, interpret and evaluate information. Identify needs and systems functions of the human body and apply that knowledge to healthy living. Identify and explain relationships among technology, people and the environment. Describe environmental cause and effect relationships, explain how or why they occur and suggest possible solutions to environmental problems.	outside
<b>MIGRATION STATION WS</b>	Students learn about coastal wetland habitats in the Durham Region and their importance to migrating birds, the impacts of human actions and why they need to be protected.	Describe ways in which humans can affect the natural world. Recognize that animals and plants live in specific habitats due to dependency and adaptations. Identify a variety of interrelationships in natural environments. Analyze ways in which humans and natural systems are connected.	outside
<b>MOCCASIN IDENTIFIER</b>	The vision of the Moccasin Identifier is to advance Treaty and Indigenous awareness by covering Canada in moccasins. Through	Understand the interrelationships between the environment and the life of members of the First Nation communities.	inside Kitchie Lodge

	<p>this activity the hope is to develop a greater understanding of Treaties and Indigenous relationship to the land for the benefit of reconciliation: to restore harmony between Indigenous and non-Indigenous Peoples. Students will gain understanding as to why the land remains important to the Michi Saagiig Nishnaabeg (pronounced mi-jih SAW-geeg uh-NISH-in-NAH-bek) (Mississauga Anishinaabeg) which include the First Nation communities of Scugog Island, Alderville, Hiawatha, Curve Lake, New Credit and Mississauga.</p>	<p>The land remains important to the First Nation communities and must be protected for future generations.</p>	
<p><b>OSPREY SURVIVOR WS</b></p>	<p>Students role play as osprey parents searching for suitable food for their offspring.</p>	<p>This exercise provides an understanding of survival if the food chain is impacted by pollution. Math skills are used to calculate their scores to see if they survived.</p>	<p>outside</p>
<p><b>POROSITY &amp; PERMEABILITY WA</b></p>	<p>The pore spaces within earth materials and their ability to conduct water are key factors in determining how groundwater moves.</p>	<p>Use appropriate vocabulary in describing their investigations and observations.</p>	<p>outside</p>
<p><b>ROLLING THRU THE SHED WP</b></p>	<p>Students pretend to be drops of rain which, through precipitation, enter the watershed. They move through a model watershed to see how water in the air and on land, interacts with pollutants, soil and human development.</p>	<p>Students use verbal descriptions to pose questions, predict results and relay their observations. Describe ways in which humans can affect the natural world. Define a watershed and learn the various forms of precipitation. Identify ways in which people can help to protect their watersheds.</p>	<p>outside</p>
<p><b>SHAPING WATERSHEDS – AUGMENTED REALITY SANDBOX</b></p>	<p>This activity gives students the opportunity to interact with kinetic sand to understand watersheds and how topography impacts water runoff.</p>	<p>Predict some changes in the world. Analyze ways in which humans and natural systems are connected within a watershed.</p>	<p>inside Kitchie Lodge</p>
<p><b>SOMETHIN' FISHY'S GOIN' ON WP</b></p>	<p>Students discover what lives in lakes of different pH. They compare each lake's pH to the pH of common household materials (cola, vinegar, orange juice, water). Students conclude that as the acidity increases, the search for aquatic creatures becomes very challenging.</p>	<p>Investigate the influence of technologies on human and natural communities. Predict some changes in the world. Explain how difference in some characteristics of individuals of the same species allows them to survive and reproduce when their living conditions change. Analyze ways in which humans and natural systems are connected.</p>	<p>outside</p>

<b>THE INCREDIBLE JOURNEY WS</b>	Students can role play as a water molecule	Children make the connection that the water cycle is more than a predictable two-dimension path	outside
<b>WATER CYCLE MADNESS WS</b>	The model and study cards show how the water cycle is a continuous repetition of events	This activity introduces students to the water cycle model	Inside Kitchie Lodge

**Special Guests (Council Hall)**

- TUESDAY – Reptilia
- WEDNESDAY – Royal Canadian Falconry
- THURSDAY - Ontario Turtle Conservation Centre
- FRIDAY - Wild Ontario