Halton Children's Water Festival
Classroom Preparation and Follow-up

Grade Two – Curriculum Expectations

Health and Physical Education
Movement Competence: Skills, Concepts, and Strategies
Overall Expectations:
B1. perform movement skills, demonstrating awareness of the basic requirements of the skills and applying movement concepts as appropriate, as they engage in a variety of physical activities
B2. apply movement strategies appropriately, demonstrating an understanding of the components of a variety of physical activities, in order to enhance their ability to participate successfully in those activities

Science and Technology
Understanding Life Systems – Growth and Changes in Animals
Overall Expectations:
1. assess ways in which animals have an impact on society and the environment, and ways in which humans have an impact upon animals and the places where they live
2. investigate similarities and differences in the characteristics of various animals
3. demonstrate an understanding that animals grow and change and have distinct characteristics

Understanding Matter and Energy – Properties of Liquids and Solids
Overall Expectations:
1. assess ways in which the uses of liquids and solids can have an impact on society and the environment
2. investigate the properties of and interactions among liquids and solids
3. demonstrate an understanding of the properties of liquids and solids

Understanding Earth and Space Systems – Air and Water in the Environment
Overall Expectations:
2. investigate the characteristics of air and water and the visible/invisible effects of and changes to air and/or water in the environment
3. demonstrate an understanding of the ways in which air and water are used by living things to help them meet their basic needs

Social Studies
Canada and World Connections: Features of Communities Around the World
Overall Expectations:
• explain how the environment affects people's lives and the ways in which their needs are met

Activities Prior to Attending the Halton Children's Water Festival

Grade 2

Health and Physical Education
Relay Race
Using buckets of balls or beanbags, students participate in a transfer relay (could be one line or two lines facing each other).

Science and Technology
Water Conservation - Saving or Wasting?
Working in pairs or triads, students examine each of the images and captions in the first page of the "Water Conservation - Saving or Wasting" sheet. Students print an "S" beside the action that they think saves water, and a "W" beside the action that they think wastes water. Students discuss why they made those choices, and what else they could do to reduce the impact on the environment. Debrief discussion with second page of "Water Conservation - Saving or Wasting" sheet (provides further information and helpful hints).

Water Conservation – Be Water Smart?
Students use this sheet to self-assess their water use, and make a personal pledge for reducing the amount of water they use.

Water Conservation – Hydro-Glyphics
Students complete a conservation-themed poem by decoding symbols that represent the letters of the alphabet.

Grade Three – Curriculum Expectations

Health and Physical Education
Movement Competence: Skills, Concepts, and Strategies
Overall Expectations:
B1. perform movement skills, demonstrating awareness of the basic requirements of the skills and applying movement concepts as appropriate, as they engage in a variety of physical activities
B2. apply movement strategies appropriately, demonstrating an understanding of the components of a variety of physical activities, in order to enhance their ability to participate successfully in those activities

Science and Technology
Understanding Life Systems – Growth and Changes in Plants
Overall Expectations:
1. assess ways in which plants have an impact on society and the environment, and ways in which human activity has an impact on plants and plant habitats
2. investigate similarities and differences in the characteristics of various plants, and ways in which the characteristics of plants relate to the environment in which they grow

Understanding Earth and Space Systems – Soils in the Environment
Overall Expectations:

1. assess the impact of soils on society and the environment, and of society and the environment on soils
2. investigate the composition and characteristics of different soils
3. demonstrate an understanding of the composition of soils, the types of soils and the relationship between soils and other living things

Social Studies
Heritage and Citizenship: Early Settlements in Upper Canada
Overall Expectations
• describe the communities of early settlers and First Nation peoples in Upper Canada around 1800
• use a variety of resources and tools to gather, process, and communicate information about interactions between new settlers and existing communities, including First Nation peoples, and the impact of factors such as heritage, natural resources, and climate on the development of early settler communities
• compare aspects of life in early settler communities and present-day communities

Canada and World Connections: Urban and Rural Communities
• identify and compare distinguishing features of urban and rural communities
• use a variety of resources and tools to gather, process, and communicate geographic information about urban and rural communities
• explain how communities interact with each other and the environment to meet human needs

Activities Prior to Attending the Halton Children's Water Festival

Grade 3

Health and Physical Education
Relay Race
Using buckets of balls (or other items found in Early Settlements), students participate in a transfer relay (could be one line or two lines facing each other).

Science and Technology
Classroom Terrariums
Plant fast growing seeds (e.g., beans) or small plants in two or more terrariums (e.g., using pop bottle or old aquarium), and vary the growing conditions (e.g., water, light, heat).

Social Studies
Field Trip and Pioneer Kit
Visit Ireland House (or similar site) to learn about pioneer life (including farming), and/or borrow their Pioneer kit (which shows and describes different artifacts from pioneer life). Consider visiting the Halton Region Museum:
http://www.halton.ca/discovering_halton/halton_region_museum/

Grade Four – Curriculum Expectations

Health and Physical Education
Movement Competence: Skills, Concepts, and Strategies
Overall Expectations:
B1. perform movement skills, demonstrating an understanding of the basic requirements of the skills and applying movement concepts as appropriate, as they engage in a variety of physical activities;
B2. apply movement strategies appropriately, demonstrating an understanding of the components of a variety of physical activities, in order to enhance their ability to participate successfully in those activities.

Science and Technology
Understanding Life Systems – Habitats and Communities
Overall Expectations:
1. analyse the effects of human activities on habitats and communities;
2. investigate the interdependence of plants and animals within specific habitats and communities;
3. demonstrate an understanding of habitats and communities and the relationships among the plants and animals that live in them

Social Studies
Canada and World Connections: Canada's Provinces, Territories, and Regions
Specific Expectations:
- Explain how the St. Lawrence River and the Great Lakes systems shape or influence the human activity of their surrounding area (e.g., with respect to transportation, industry, recreation, commercial fishing)
- Describe and compare the environments of the physical regions of Canada (e.g., with respect to landforms and waterways)
- Locate on a map of Ontario and label the Great Lakes and other major bodies of water and waterways (e.g., Hudson Bay, James, Bay, Ottawa River)

<u>Activities Prior to Attending the Halton Children's Water Festival</u>

Grade 4

Health and Physical Education
Ecosystem Tag
(see HCWF Ecosystem Tag Instructions)

Science and Technology
Neighbourhood Nature Walk
Take a hike to a nearby natural area such as a woodlot or creek (could be the schoolyard, including looking at trees on the property), and look for living things and what they need to survive (consider a checklist or journal with drawings).

Social Studies
Waterways in Canada
After viewing a video (or related website or print resource) on bodies of water in Canada, identify on a map of Canada the major bodies of water and waterways (e.g., Great Lake, St. Lawrence River, St. Lawrence Seaway, Welland Canal, Trent-Severn Waterway)

Grade Five Curriculum Expectations

Health and Physical Education
Movement Competence: Skills, Concepts, and Strategies
Overall Expectations:
B1. perform movement skills, demonstrating an understanding of the basic requirements of the skills and applying movement concepts as appropriate, as they engage in a variety of physical activities
B2. apply movement strategies appropriately, demonstrating an understanding of the components of a variety of physical activities, in order to enhance their ability to participate successfully in those activities

Science and Technology
Understanding Matter and Energy – Properties of and Changes in Matter
Overall Expectations:
2. conduct investigations that explore the properties of matter and changes in matter
3. demonstrate an understanding of the properties of matter, changes of state, and physical and chemical change

Understanding Earth and Space Systems – Conservation of Energy and Resources
Overall Expectations
1. analyse the immediate and long-term effects of energy and resource use on society and the environment, and evaluate options for conserving energy and resources
2. investigate energy transformation and conservation
3. demonstrate an understanding of the various forms and sources of energy and the ways in which energy can be transformed and conserved.

Social Studies
Canada and World Connections: Aspects of Citizenship and Government in Canada
Overall Expectations:
• summarize the structures, functions, and interactions of Canada's federal, provincial/territorial, and municipal governments, and identify and describe significant Canadian symbols, ceremonies, buildings, and political figures;
• use a variety of resources and tools to gather and analyse information about government processes, the rights of groups and individuals, and the responsibilities of citizenship in Canada, including participation in the electoral process
• identify concrete examples of how government plays a role in contemporary society and of how the rights of groups and individuals and the responsibilities of citizenship apply to their own lives.

Mathematics
Measurement
Overall Expectations:
1. estimate, measure, and record perimeter, area, temperature change, and elapsed time, using a variety of strategies

Activities Prior to Attending the Halton Children's Water Festival

Grade 5

Health and Physical Education/ Mathematics
Obstacle Race

Design and set up identical obstacle/relay courses for two or more teams ensuring that the obstacles in each course are the same distance apart (use appropriate measurement units and tools).
Carrying beanbag-filled buckets (to simulate carrying a buckets of water), students move through the obstacle course in a transfer relay (could be one line or two lines facing each other).
Each team uses a stopwatch or similar device to time their team's relay. Repeat relay and try and improve time. Repeat several times and record results as you go.

Science and Technology
Ban the Bottle
Raise awareness about the hazards of plastic water bottles and the use of tap water (which in Halton Region is of the highest quality) by conducting a school-wide survey of the use of single use plastic water bottles; use the information from the survey to implement a campaign to encourage your school to reduce or eliminate the use of single use plastic water bottles (including promoting the use of stainless steel or aluminum refillable water bottles).
NOTE: For additional information see "The Story of Bottled Water" (http://storyofstuff.org/bottledwater/)

Social Studies
Waste Water
Watch *Down the Drain* video (8 minutes; check school library for a copy) using the following viewing guide:

***Down the Drain* Video Viewing Guide**

(http://www.halton.ca/cms/One.aspx?portalId=8310&pageId=15641)

Prior to viewing the video (http://www.halton.ca/cms/One.aspx?portalId=8310&pageId=15641), ask the following questions:

1. When you flush the toilet (or let water go down the drain) where does the waste and water go?
2. What is done to waste water before it returns to Lake Ontario?

3. Why is it important to treat waste water?
(Supplementary: What used to be done with waste water over a hundred years ago, and what was the impact?)
4. How do we know the water is free of pollutants when it is returned to Lake Ontario?

After viewing the video, repeat the above questions.

Activities Following the Halton Children's Water Festival

Grade 2

Science and Technology
***Project Wet* (available to borrow from Conservation Halton)**
See "The Incredible Journey" (pages 161 -165) for ideas related to the water cycle that could be adapted for Grade 2 (e.g., "role playing a water molecule helps students to conceptualize the water cycle as more than a predictable two-dimensional path [page 161]).
See "Molecules in Motion" for ideas related to changes in state (pages 47-49).
See "Water in Motion" for ideas related to characteristics of water (pages 450-453; see K-2 option on pages 452-453).

See the Region of Peel's "The Peel Water Story" website for Lessons adapted to this (and other Grades): http://www.peelregion.ca/pw/waterstory/grades/g2.htm

NOTE: Schools might consider purchasing a sampler of the *Project WET Curriculum and Activity Guide, Generation 2*, to be released early 2011 (see website below); teachers would still have to go through the workshop to receive the complete guide.
http://store.projectwet.org/index.php/water-activities-water-lesson-plans-sampler-2.html

Grade 3

Science and Technology
School Garden and Rain Barrel Project
Plant a school garden with native plants, and install a rain barrel to save water when taking care of it.
See http://ecoleague.ca/en/greening/overview.php

Grade 4

Science and Technology
Educate Others
Prepare a presentation about the importance of protecting our water resources, and deliver it to other classes at your school and/or other schools.
See http://r4r.ca/en/project-flow/success-stories

Grade 5

Social Studies
Halton Region Tour
Learn about Halton Region's landfill site, and waste water treatment and water purification plants on a tour that features connections to regional government.

Social Studies
Waste Minimization Inquiry
Survey the class and/or school (could be family also) about the use of recycling and composting. Use this information to have students develop inquiry questions with an action component (e.g., improve Blue Box system, implement a GreenCart program).

Science and Technology
Yellow Fish Road
In this project students paint yellow fish on storm drains in school neighbourhoods and distribute fish hangers to homes in order to raise awareness of the importance of the proper disposal of hazardous waste.
See http://www.conservationhalton.on.ca/ShowCategory.cfm?subCatID=822

All Grades

Stream of Dreams
The Stream of Dreams program raises awareness about local watersheds (including the goal of improving water quality) through environmental education and an exceptionally impressive work of student art (mural of hand-painted wooden fish wired to a chain link fence) that reminds the entire community of our environmental responsibilities related to bodies of water.
For more information see:
http://www.conservationhalton.on.ca/ShowCategory.cfm?subCatID=1020

***Green Teacher* Magazine**
Issue 92 (Spring 2011 – "A New Look at Marine Education") has numerous water-related articles and activities; both Halton DSB and Halton Catholic DSB have digital subscriptions to this magazine.