

WATER WATCHDOG



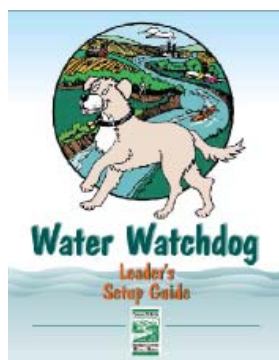
Water Watchdog is an ACTION AWARENESS program. Participants are encouraged to take action by testing and reporting on the water and water ecosystem in their own “backyard” streams, rivers, lakes and ponds.

The goal of the Water Watchdog program is to increase understanding about water quality and some management issues in the Saskatchewan River Basin and throughout the Prairie Provinces.

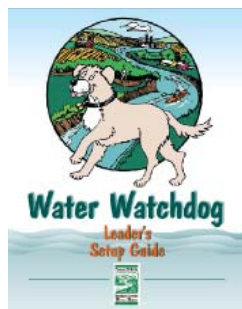
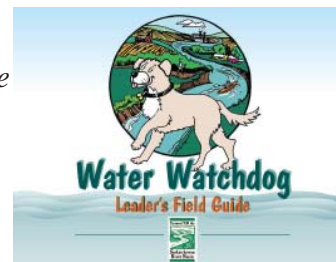
Where to Start

The *Leader’s Program Setup* provides you with important reminders for planning a field day, as well as some important information and additional activities.

pg 1-3	Program planner	Introduction
pg 4-5	Safety first	Tips for a successful trip, picking the monitoring site, legal responsibilities and safety considerations
pg 6	Data gathering and consensus building	Methods to involve all students comfortably with the decision making
pg 7	Assembling logbooks	Instructions for assembling the student logbooks
pg 8-9	Aquatic invertebrates	Tips for successful dipping, purpose of dipping, and building extra dip nets
pg 10-14	Extra activities	Additional activities that can be used to integrate the field day into daily life
pg 14	Answers	Answers to field guide questions and quizzes



The *Leader’s Field Guide* is the most important resource for the instructor. Each page displays one *Field Logbook page* that will be used by the children, side-by-side with instructions for the leader. By reading through the *Leader’s Field Guide* in its entirety, you will understand the program exercises and can then determine the best activity options for your particular group and time frame.



The *Information Files* booklet is a ‘mini textbook’ that provides more specific information on water, stewardship, and watersheds. It can be used to complete the *Check it Out*. These books were meant to be reused and should be returned to the group leader. Feel free to print as many copies as you require.

Remember the Water Watchdog kits are reusable.
So don’t give away the Information Files!

Additional Activities

The *Check it Out!* is a fun quiz that can be used to test your water knowledge. It can be found in the white *Envelope*. It is always open-book, so participants use the Information Files to solve these questions. This would best be completed prior to the field exercises, and is something that can be done indoors. This document may be photocopied as required.

Water Detective examines the water usage in your home or schools. *How Big is Your Water Footprint*, examines how much water you use in the bathroom. These are great tools to help teach about and take action towards water conservation.

Additional Activities

On pages 10-14 of the *Leader's Setup Guide*, there are many different activities which can easily be incorporated before, during or after the field trip. Most of these can also be used as stand alone activities.

Water Stories (pg 10)

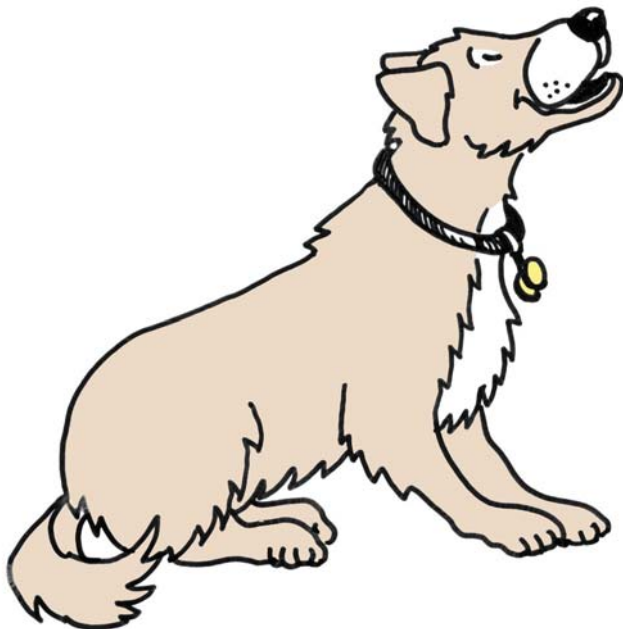
This activity lets students explore the diversity or commonality of water experiences that they have had.

Be a Water Molecule in the Saskatchewan River Basin (pg 10-11)

This is a quiet, guided imagery activity. Children use their imagination as you tell the story of a water molecule.

Chunky Chemical Soup (pg 12)

This hands on 'science' activity will help participants understand the terms "dissolve" and "turbidity".



Pike and Walleye (pg 12-13)

This is a physical 'tag' type game which you have 2 teams "True" and "False". You read a True-False question. Those who are on the correct answer chases tries to tag the wrong answer! (i.e. if the answer is true -the "True" team try to tag the "False" team members before they reach the safe zone. This is a great activity to help wear off extra energy.

Do the Acid Test (pg 14)

Discuss the purposes of pH testing and test everyday household items to determine their pH.

Sharing Circle (pg 14)

This quiet post-evaluation activity brings closure to the field trip. It allows the participants to reflect upon their experiences.

Your TIPS and Advice

If you have any suggestions, games, activities, or tips to help make the activities easier, please share them with us. We will gladly put your comments and ideas on our website!



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Sample Schedule

Prep Time

- Read through Water Watchdog materials (*Leader's Setup Guide*, *Leader's Field Guide*, and *Information Files*).
- Choose the activities you want to use and develop a schedule to plan your day.
- Locate, visit site and mark field site (*Leader's Setup Guide* pg 2-5).
- Collect required materials for the activities
- Photocopy *Check it Out!* and any additional *Logbooks* needed.

Day of Field Trip

9:00 - 9:15	Fill in journal entry (<i>Logbook</i> pg 2)	
9:15 - 9:30	Group introduction to <ul style="list-style-type: none">• share journal entries,	
9:30 - 10:30	<ul style="list-style-type: none">• discuss the questions (“<i>Document Your Journey</i>” <i>Logbook</i> pg 2) Read the <i>Information Files</i> . Answer the “ <i>Check it Out</i> ” on pg 13 of the <i>Leader's Setup Guide</i> . optional: <ul style="list-style-type: none">• read through the <i>Information Files</i> and then break the students into smaller groups to answer the questions• ask the questions found on page 13 of the <i>Leaders Setup Guide</i>• print out the word search puzzles from www.saskriverbasin.ca	
10:30 - 10:45	Discussion of the questions and answers	
10:45 - 11:15	One optional activity, such as “Be a Water Molecule” (<i>Leader's Setup Guide</i> pg 12-13)	
11:15 - 11:45	One optional activity such as “Pike and Walleye” (<i>Leader's Setup Guide</i> pg 12)	
11:45 - 12:00	Clean-up, preparation for the field, and preparation for lunch	
12:00 - 12:30	Lunch	
	Field Trip	
12:30 - 2:45	Station 1: (<i>Leader's Field Guide</i> pg 3-4, 14-18)	(30 min)
	Station 2: (<i>Leader's Field Guide</i> pg 5-12)	(30 min)
	Station 3: (<i>Leader's Field Guide</i> pg 22)	(30 min)
	Station 4: (<i>Leader's Field Guide</i> pg 19-21)	(30 min)
	Action Clean Up (<i>Leader's Field Guide</i> pg 24)	(15 min)
2:45 - 3:30	Discussion time (back at school or on grass) Getting on the Barking Chain (<i>Leader's Field Guide</i> pg 25) Bringing it Home/Water Conservation Pledge (<i>Leaders Field Guide</i> pg 27-28) Record the second Journal Entry (<i>Logbook</i> pg 28)	(10 min) (10 min) (15 min)

Follow-up

- Take home exercises for the students
 - *Be a Water Detective* and find out if your home has any hidden water leaks.
 - *How Big is your Water Footprint?* and find out how much water you use in the bathroom.
- Fill in the *Program Evaluation Form*. Fax or mail to the Partner's Office.
- At a later meeting, ask the children about their pledges.

Station Grouping and Shorter Educational Sessions



If you want to focus for 1 to 2 hours on an educational component, any of the below Stations will work well. When completing the Stations, there are corresponding pages in the *Logbook* for the children to fill out. Copies of specific pages being used can be easily made from the Water Watchdog Masters sheets (located in the white envelope).

Overall, a variety of field exercise combinations can be used to create a short lesson in an educational context. Weather, resources, location and group size should be taken into account when choosing which Station to use. The *Logbooks* provide helpful worksheets which reinforce what children learn in the field, and can be complimented or replaced with other materials to suit the group.

Station 1

Physical Data and Water Quality Testing

The purpose of this section is to help students understand the different types of data, as well as how to collect and interpret some basic water quality data.

Please note, you will require a site with safe, easy access to water. If a safe access point is not available, then you may bucket a water sample and have the tests done on that.

Test strips will be required for the acid and nitrate tests.

- Physical Data (*Leader's Field Guide* page 3-4)
- Go for a Dip? (*Leader's Field Guide* page 14)
- Acid (*Leader's Field Guide* page 15-16)
- Nitrates (*Leader's Field Guide* page 17-18)

Station 3

Delineating your monitoring site

Take time to properly instruct the children in this activity. The students should sketch in the major features of the site, such as water, buildings, trees, animals, etc. You should also mark down on the map where you did your water quality sampling and where you did/or plan to do the invertebrate sampling.

You can find a copy of the monitoring map on page 22 of the *Leader's Field Guide* and the *Logbook*.

Station 2

Plant cover, loosestrife, wildlife

This station allows students to view and increase their understanding of various types of habitats. This station primarily uses visual identification and discussion questions. For further expansion, you can bring a plant or animal identification guide for the students to use.

- Plant Cover (*Leader's Field Guide* page 5-6) helps to teach about riparian and aquatic habitats.
- Loosestrife (*Leader's Field Guide* page 7-8) helps to understand invasive plants.
- Wildlife (*Leader's Field Guide* page 9-12) helps to teach that we share our habitat with others.

Station 4

Invertebrates

This activity requires easy access to water. See the *Leader's Setup Guide* page 8-9 for tips on invertebrate sampling. You should have 1 bucket per pair of students so they can view at the same time. Pictures of the invertebrates are included in the *Logbook* on pages 19-20 with questions to complete on page 21.

- Fill a white ice cream pail with pond water.
- Dip net around plants and rocks near shoreline.
- Place net into bucket. Turn inside out and gently swish in the water releasing the debris from the net.
- View the ice-cream pail in the shade to ensure that you do not harm the invertebrates.
- Observe, and then release back into the wild.

Small Versus Large Groups

The standard 'Water Watchdog Kit' was designed for 1 leader and 5 children. However, the program is very versatile and can easily be adapted for larger groups. For groups with more than 5 children, make additional copies of the *Logbooks* (using the masters provided in the white *Masters Envelope*).

One of the challenges to using the program is what to do with large numbers of children. Although 'Water Watchdog' can be followed fairly easily with a small group of 5 children and one leader, it can become more challenging as numbers increase.

The first step is to divide the children into manageable groups (10 or less). After that there are two simple ways to deliver this program.

- 1) Each group can be assigned to one leader who is responsible to lead the group through each of the four Stations. In this case, each leader runs through their own 'Water Watchdog' program. Therefore, you will need one kit and any additional supplies per leader.
- 2) The groups can rotate to a new leader for each Station (see page 4 of this Handout for Station Grouping). In this case, each leader would be responsible for delivering one particular Station to all of groups of children. The leader will only require the instructions and supplies for that particular Station. The appropriate pages of the *Leader's Field Guide* can be photocopied so each leader has their own copy of the instructions.

Example
Group
Schedule

Leader & Station	Station Starting Times			
	1:00 pm	1:30 pm	2:00 pm	2:30 pm
Anna (#1)	Group A	Group B	Group C	Group D
Barb (#2)	Group D	Group A	Group B	Group C
Carol (#3)	Group C	Group D	Group A	Group B
Debbie (#4)	Group B	Group C	Group D	Group A

Individual Activities Easily Adapted for Larger Groups

Large group sizes are mostly likely problematic when activities require supplies and detailed instructions. If you don't have time to run the entire field day program, you can easily choose particular activities. There are many activities which are suited or can easily be adapted for larger groups.

- Water Stories (*Leader's Setup Guide pg 10*)
- Be a Water Molecule in the Saskatchewan River Basin
(*Leader's Setup Guide pg 10, 11*)
- Pike and Walleye (*Leader's Setup Guide pg 12*)
- Field Guide Questions (*Leader's Setup Guide pg 13*)
- Sharing Circle (*Leader's Setup Guide pg 14*)

