

AQUATIC ECOSYSTEM

TOOL KIT

TEACHER'S GUIDE

Welcome to Inside Education's Aquatic Ecosystem Tool Kit!

In this kit you will find everything that you need to take your students outside to study a wetland or other aquatic ecosystem near you!

CHOOSING A WATER BODY

This kit has been designed for use in whatever kind of aquatic ecosystem that you have near your school! Whether you live near a bog, marsh, stream or stormwater pond, this kit will help you bring your students out for a day of hands-on learning!

When choosing where to bring your students, we recommend a site with easy access to water, and a clear area for the students to work at each station.

THE STATIONS

We recommend dividing your students into groups, and giving them **approximately 10 minutes** at each station to complete the tasks. Each station has an instruction card that will guide your students through the activity, along with some follow up exploration questions that they can work through in the field or in the classroom.

WHAT WILL YOU NEED?

Other than making sure your students are dressed appropriately to head outside, you will require the aquatic ecosystems tool kit, along with a notebook and pencil/pen for each of your students.

KIT MATERIALS REQUIRED FOR STATION ACTIVITIES

1 | ECOSYSTEM ASSESSMENT

- Alberta Watershed Map
- Aquatic Ecosystem Identification Chart

2 | AQUATIC INVERTEBRATE POND DIPPING

- Aquatic Invertebrate ID Guide
- Observation Tub
- Dip Net
- Two Way Viewer
- Aquatic Health Species indicator Card

3 | WATER CHEMISTRY

- 5-in1 Test strips and colour chart
- Plastic measuring cup
- Conductivity meter
- Thermometer

4 | AQUATIC PLANTS & ANIMALS

- Labelled species photos (4)
- Biofacts (4)
- Physical adaptation card (4)
- Behavioural adaptation cards (4)
- Plant Identification Cards
- Dice (2)
- Wetland Riddle & Word Scramble (6)
- Food Web Card

5 | SPECIES AT RISK & AQUATIC INVASIVE SPECIES

- Trout poster
- Caribou poster
- Aquatic invasive species story cards (9)
- Zebra and Quagga Mussels & Flowering Rush Information Sheet

6 | AQUATIC ECOSYSTEM FUNCTIONS

- Peat pucks
- Beaker
- Funnel
- Sponges
- Food colouring
- Measuring Cup

7 | WATER USES & CONSERVATION

- None

ADDITIONAL RESOURCES

Inside Education

Check out more water & wetlands education resources including:

- *The Running Water Poster & Teachers Guide*
- *Wetland Wonders Online Presentation & Pond Dipping Tips Video*
- *WISE Kit - Water Innovation & Stewardship Teachers Guide*
- *Hidden Water Video*
- *Aquatic Ecosystems YouTube Playlist*

Discover Inside Education's full suite of **LEARNING RESOURCES**, **TEACHER PROFESSIONAL DEVELOPMENT PROGRAMS**, **CLASSROOM AND FIELD PROGRAMS**, **YOUTH EDUCATION SUMMITS**, & **GRANTS** at

WWW.INSIDEEDUCATION.CA

Alberta Water Portal - www.albertawater.com

The Alberta WaterPortal provides inclusive research, community engagement, and educational activities to improve the public's understanding of the importance of water in Alberta, as well as providing Albertans with the knowledge needed to make better water management decisions.

Alberta Tomorrow - www.albertatomorrow.ca

Alberta Tomorrow empowers young people to understand the process of sustainable planning to balance land-uses such as agriculture, oil and gas and forestry with ecological integrity. They provide educational tools including an online land use simulator, educational videos, classroom presentations and lesson plans.

Ducks Unlimited Canada - www.ducks.ca/education

Educating youth about wetlands and waterfowl is a big part of our mission at Ducks Unlimited Canada (DUC). To protect and sustain the health of precious natural resources like wetlands and watersheds, we need to make sure young people understand conservation concepts and practices.

RiverWatch Institute of Alberta - www.riverwatch.ca

RiverWatch delivers science-based education programs, environmental awareness and guided river experiences on and along Alberta's rivers and creeks. RiverWatch and CreekWatch is about using aquatic monitoring as a first step in taking care of rivers.

This learning resource was made possible through the generous support of our partners including:



WE WISH YOU TONS OF FUN LEARNING AND EXPLORING!

