Field Trip Planning Tips

The best way to learn about wetlands is to visit one. Now that your students have a good understanding of wetland characteristics and functions, plan for an excursion to a local wetland. If students are prepared for the trip, they will be able to learn many valuable things about wetlands. Included in this kit is *SQUISH! A Walk in a Wetland!* Photocopy one for each student and use the booklet as the framework for your field trip. Photocopy enough copies of *SQUISH!* for your parent helpers too.

The Teacher's Guide lists some pre-trip preparation suggestions (page 24). Below are some additional ideas.

Pre-Trip

1. Decide on objectives and outcomes for the field trip. What do you want your students to accomplish and learn?
2. Seek administrative support if a field trip is permissible, and the protocols you must follow for arranging off-school activities. You may need to seek out permission forms and/or waivers, as well as research bus fees and inquire about parent volunteers
3. Contact the field trip location to determine if there are costs associated with visiting. Some sites request a donation, to help maintain the site. You may need to, or want to, organize a fundraising event to help students and the school offset potential costs, or to contribute to the conservation of wetlands.
4. Find out if there is a field naturalist that can provide you with a tour of the site. It is suggested, if you have time, to visit the site prior to bringing students there, so you may learn more about wetlands, which will help your students, as well as the safety procedures for the site.
5. Draft a letter for students to take home, to inform their parents of the field trip, potential costs, attire for the day, bus schedule and soliciting volunteers. You may need to have this letter approved by administration before it is sent home. Ensure you have enough time between sending the letter home, having it returned (with permission or waiver forms and potential fee payments), and filing it with administration.
6. Organize the bus for the field trip, as well as arrange to have dipping nets either at the site or bring them from school (or you may have to make these ahead of time with the students. Refer to the CD folder *Wetlands Field Trip* - Homemade Bug Catchers). Ensure all students know what to bring for the trip. For example, rubber boots, warm clothes (maybe an extra pair), hats, sunscreen, insect repellent, perhaps a lunch or snack, depending on time spent at the site, etc.

Where to Go

For more information about places to visit, programs and field trips offered, contact a local nature center or park. Ducks Unlimited Canada has an online list of Alberta wetlands to visit (www.ducks.ca/province/ab/wetlands/index.html).

Field Trip Day

1. Ensure all student permission or waiver forms are brought in and you have retained copies. Check with your school's policies for field trip protocol.
2. Ensure you have a first aid kit and are aware of any special allergies or needs for all students and volunteers.
3. Ensure students have the required materials and supplies for the trip – proper attire and footwear, snacks and/or lunches, workbooks and pencils, etc.
4. Ensure you and the students have a safety system in place. The Buddy System is an easy one to administrate. Students could wear reflective clothing so you can see where students are at any time during the trip.
5. Ensure students know the proper care and procedures for collecting invertebrates, as well as not leaving any litter behind at the site. The idea is to leave the site in *even better condition* than when you arrived!
6. Take frequent head counts and ensure students check in with you (if the site is large). It is suggested you bring a class list copy, including emergency contact numbers, with you on the trip.

Post- Field Trip (Activity 14)

Once students are back in the classroom, some of the observations made during the field trip can be examined in more detail.

1. Investigate the invertebrates further – What do they eat? Did you correctly identify them? What are some of their adaptations?
2. Have students draw or photocopy large pictures of the invertebrates they found, or use other pictures. Students can assemble several different food chains using the invertebrates. With the food chains created, arrange the creatures into a food web and display it in the classroom. Expand this into a food web of an entire wetland ecosystem. Or, using removable tape (available from most stores) and string, the web could be "constructed" directly on the wetland poster.
3. Discuss wetland management issues:
    a. Was the wetland we visited a protected area? Who protects wetlands in Alberta? Canada?
    b. Is preservation justified for this wetland? Why or why not? Remind them to consider both the human values and the natural values, e.g. hydrology.
    c. Cooperative learning strategy (based on observations, discoveries and sharing) - in small groups, have the students discuss if, how or why this site should be preserved. How do people, including students, impact this wetland? Is it fair or possible to teach people about wetlands without them being able to visit one?
    d. Students could create a list of what they can do in their homes and at school to protect the wetland they visited. You may need to remind them of the concept of a watershed. Help them to recognize how their daily actions impact surrounding

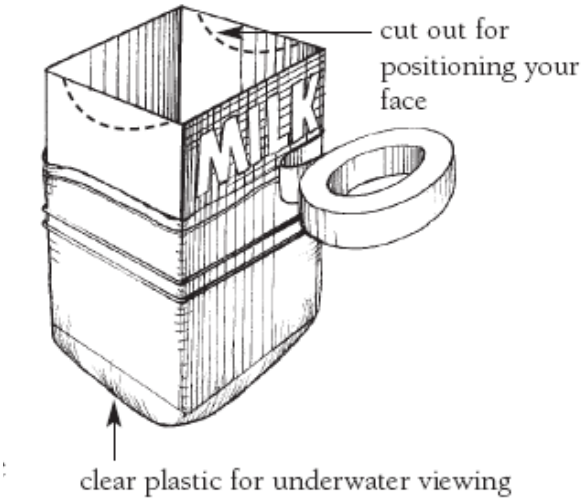
wetlands. Which of their activities have positive impacts? Which of their activities have negative impacts?

TIP
Refer to *Marsh Web of Life* from the poster back to see the direction of the arrows in a food chain. If students read the arrows as, "is eaten by" it may help them draw their own food chains and webs. The arrow indicates the transfer of energy from one organism to another higher on the food chain.

Homemade Underwater Viewer

Materials:

- Milk carton
- Tape
- Plastic wrap
- Elastic band (to fit around milk carton)
- Scissors



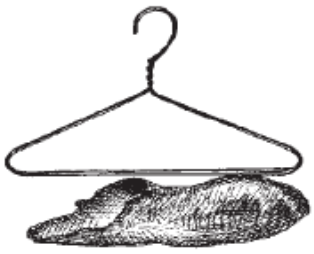
Instructions:

1. Cut the ends off of the milk carton.
2. Wrap plastic wrap around the bottom of ONE SIDE of the milk carton, so that is can be sealed with the elastic and tape; this is you underwater viewing end
3. Wrap the elastic around the ends of the plastic wrap and then secure with tape
4. cut out notches in the other end of the underwater viewer so that your face can easily rest inside (your cheeks!)

Homemade Dipping Net

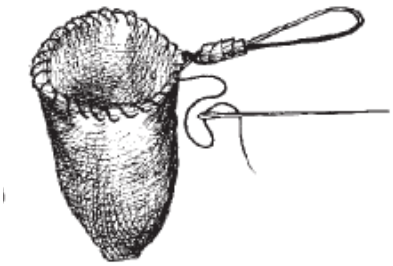
Materials:

- Coat hanger
- Netting
- String, large needle



Instructions:

1. Unravel the coat hanger and make a loop on one end, large enough to be your catching or dipping end.
2. Fashion the netting into a basket shape and hang the ends over the loop end of the hanger. Make sure you left enough space at the other end of the loop for a handle.
3. Sew the netting onto the loop with the string and tie off tightly. Now you have a dipping net to catch invertebrates with!



Other ideas

Another way to make an insect catcher is with an old kitchen sieve that has been taped (use duct or other strong adhesive) to an old broom handle or broken hockey stick. The advantage is a sturdy open sieve with a very long handle. The same technique can be used to extend the handle of aquarium nets.

Invertebrates scooped up by the students can be gently tapped out of the sieve and into a large container with pond water in it. From there, students can use white plastic spoons to transfer individual invertebrates to small, cleaned yogurt or sour cream (or other) containers for closer observations.

Pour-a-Pond

Another great invertebrate viewing technique is to create a Pour-a-Pond. All you need is four 2 by 4s, a white or light-coloured or unpatterned sheet and a sheet of clear plastic. White plastic sheet or white sheet can also be used. Place the white sheet on the ground, lay the 2X4's in a rectangular shape on top, and then lay the clear plastic down on top of the 2x4 edges. Tape the edges of the plastic to the wooden frame. This creates a shallow, white area to hold water and so students can gather round and see the invertebrates.

Tip: Print off the *Wetland Invertebrates* identification key sheet included on the CD (in folder entitled, *Wetlands Fieldtrip,* open folder to find *Activity 12 – Investigating Aquatic Invertebrates*). There are two versions of the same information. If you like bigger pictures, copy the two page version back to back. If you want students to view one page without flipping the paper over and over, print the one page version.

Handling Frogs

Frogs are not animals to pet. Frogs and toads should not be handled frequently or, preferably not at all. If students are handling frogs, use extreme care. It is best to gently grasp the shoulder blades with a thumb and forefinger. Be careful not to squeeze the abdominal area and be careful not to allow the frog to slip from the grasp. Touch frogs with wet hands clean of all sunscreens, lotions and insect repellents, which can be harmful to frogs, tadpoles and eggs. Be aware that handling frogs, turtles and snakes may transmit salmonella (a bacterium related to typhoid). Wash hands after handling.

They Have Extraordinary Skin

Frogs are special animals with delicate skin. Any foreign residues on human hands will affect their skin.

- They breathe with their lungs and also through their skin by absorbing oxygen from the water.
- Frogs, toads and salamanders drink with their skin rather than their mouths. They have a highly vascular patch of skin on their belly and groin area called the “seat patch”, which they use to drink the water that they sit in.
- Because they live on the edge between water and land, they are sensitive to pollution and other environmental changes.
- Amphibians cannot tolerate the high salt content of sea water and are the only vertebrate that does not live in marine habitats.

Frogs in the Classroom? Teacher Information

Keeping frogs in the classroom can provide inspiring opportunities for students, leading to a greater understanding of and appreciation for animals and their habitats.

Caring for live animals can help students develop responsible attitudes, respect and compassion for wildlife and the environment. It encourages observation skills and learning about life cycles, habitat and identification unique to the animal being kept.

Consider the following information before you decide to collect or rear frogs in the classroom.

Is Keeping Frogs in the Classroom Legal?

Under Alberta's legislation, you may keep the following native frog and toad species in your classroom:

- wood frog (*Rana sylvatica*)
- boreal chorus frog (*Pseudacris maculata*)
- western (boreal) toad (*Bufo boreas*)

For proper identification of these species and other amphibians of Alberta visit: www.srd.alberta.ca/fishwildlife/wildlifeinalberta/amphibiansalberta/identifying.aspx

Some amphibian species from other countries are *illegal* to possess under Alberta's *Wildlife Act*. It is important to research the legal implications of importing, exporting and keeping frogs in general.

Is Releasing Frogs from the Classroom Legal in Alberta?

Although it is legal to capture and keep wood frogs, boreal chorus frogs and boreal toads, it is illegal to subsequently release them from captivity.

The long-term care of a frog or toad at any stage of its lifecycle, including egg and tadpole, must be taken into consideration before acquiring the animal. Even more than other classroom "pets", amphibians and reptiles require specific environments and special care. This includes weekends and holiday care. These special conditions are based on the life history of the animal and include the proper type and quantity of food, and proper temperature, light and humidity. Failure to address these conditions may cause suffering to the animal.

There are other compelling reasons to avoid releasing captive amphibians. For example, releasing frogs at sites *other than where they were collected* can be unhealthy for the ecosystem. Introduced or released animals can also spread viral infections and other diseases to wild populations.

Amphibians are Meant to Stay in the Wild

Generally, biologists do not recommend keeping amphibians outside of their natural setting. If an amphibian is taken into captivity and the captor suddenly realizes there is a lot of work involved in the care of an amphibian and consequently releases it into the wild, that frog's survival rate goes down considerably because it has been accustomed to a confined space with a regular food source and no competition and no predators.

Frogs are also closely tied to seasonal cycles that involve length of daylight hours and air temperatures. Mature amphibians will breed in spring, giving the young frogs enough time to grow and develop. This cycle starts early. It is nature's way to ensure frogs can build up sufficient stores of fat to prepare for hibernation. Disturbance of their schedules could have deleterious effects on the animals. The timing of release back into the wild can be a limiting factor for frogs. There are still many unknowns about a frog's biology including when they begin to find their winter homes and go into hibernation. Captive animals should not be released back onto the environment.

Protecting Frogs: Choices through Personal Actions

Frog populations could be impacted if every teacher in Alberta collected wild frogs or eggs for their classroom. Other activities that could impact amphibian populations include: over-collecting egg masses at one site; removing numerous breeding-aged individuals; or collecting the eggs or tadpoles of species that are illegal to keep, like the northern leopard frog.

Alternatives: What Else Can You Do?

Monitoring Frogs in their Natural Habitat

Monitoring frogs and other amphibians in the wild allows students to understand a frog's habitat requirements at different times of the year, and its appearance during different stages of its life cycle.

You and your students can get involved in a province-wide amphibian monitoring program called the *Alberta Volunteer Amphibian Monitoring Program.* This program encourages the public – including classrooms – to monitor amphibians in their natural environment. Observations are reported to the province, where they will contribute to Alberta's database of amphibian populations.
To learn more visit www.srd.gov.ab.ca/fishwildlife/wildlifeinalberta/amphibiansalberta/monitoring.aspx

The Best Advice is, "Study Amphibians in their Natural Habitat"

Students can model the behaviour of biologists by studying amphibians in their natural habitat. It is fairly easy to find and observe eggs, tadpoles and frogs in the wild. Care must be taken to not trample the edges of ponds, and to handle frogs with care (no insect repellent or sunscreen on hands).

Creating a pond in a schoolyard to encourage the *natural colonization* of amphibians or visiting a park or nature centre is another idea to consider.

The Best Time

A class can visit a wetland and easily see eggs, adults and maybe even some tadpoles the last two weeks of May and the first two weeks of June. In late June, a class will have an even greater chance of seeing tadpoles. Depending on the weather, a visit to a wetland first thing in September some young of the year will be seen.

The Choice is Yours: To Keep or Not to Keep

This information can help you make an informed decision that will benefit your students and amphibians. You may want to discuss with the pros and cons of keeping eggs and frogs with students. It may be a "nice to have" in the classroom but is it a necessity. Have them share what they think would be the best choice.

For more information, contact your local Fish and Wildlife Office, or the Alberta Conservation Association's Volunteer Amphibian Monitoring Program in Edmonton by visiting www.ab-conservation.com

Frogs from Pet Stores and Biological Supply Companies

A number of frog species, including their eggs and tadpoles, are available through biological supply companies and pet stores. These frogs are reared for the purposes of "captive living" and some species are better adapted to captive conditions than those species collected from the wild.

Frogs obtained from pet stores or biological supply companies **must never be released from captivity into the wild**. Doing so presents a risk of introducing disease to wild populations and competition to native frogs for habitat and other resources. Such risk factors can cause serious ecosystem harm and may reduce the survival of native frogs or other wildlife in Alberta.

If you decide to use frogs from pet stores or biological supply companies, have a plan in place for what to do with the frogs once the lesson is over…a plan that does *not* involve releasing captive-bred, non-native frogs into the wild.

Adapted from: Alberta Conservation Association and Alberta Fish and Wildlife