



UNIT FIVE

TURTLE CONSERVATION



UNIT FIVE: TURTLE CONSERVATION

Science Expectations met in this unit:

Activity Number: Activity Name	Strand	Specific Expectations		
		Understanding Basic Concepts	Developing Skills of Inquiry, Design and Communication	Relating Science and Technology to the World Outside the School
16: Lights, Camera, Action!	Grade 7 –Interactions Within Ecosystems			1, 6, 7
17: Wetlands Debate	Grade 7 –Interactions Within Ecosystems		1, 5	1, 6, 7
18: Turtle Hurdles	Grade 7 –Interactions Within Ecosystems	8		1, 6, 7
19: A Day In The Life	Grade 2 – Growth and Changes in Animals	2, 4, 8	1, 3, 4, 5	1, 3
	Grade 4 – Habitats and Communities	1, 5	1, 3, 5	2, 4
20: The Turtle Report	Grade 1 – Characteristics and Needs of Living Things			7
	Grade 2 – Growth and Changes in Animals			3, 6
	Grade 4 – Habitats and Communities			2
21: Be a Conservationist	Grade 7 –Interactions Within Ecosystems		1, 5	1, 6, 7
22: Wanted!	Grade 1 – Characteristics and Needs of Living Things		2, 3	7
	Grade 2 – Growth and Changes in Animals		1	3, 6
	Grade 4 – Habitats and Communities		2, 5	2, 4
	Grade 7 –Interactions Within Ecosystems		1, 5	1, 6, 7

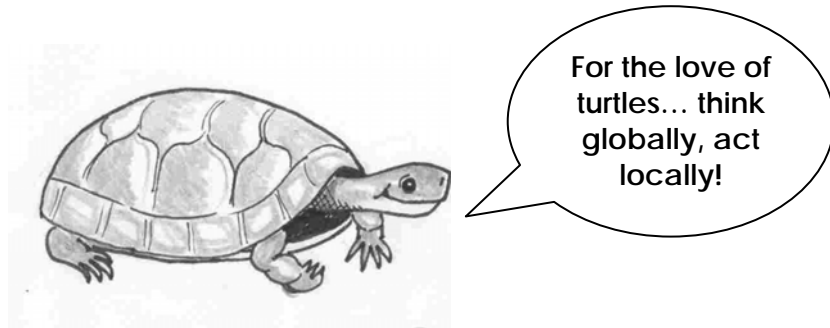
SECTION ONE:

Turtles at Risk

With the world's turtle populations in decline, the conservation of turtle **biodiversity** is becoming an increasingly important issue. Human causes of declining turtle populations include habitat destruction, pollution, the pet trade, over-hunting and road kill. Some species are already lost forever, while many others are endangered. The threat is an international problem that hits home in our own province. Six of the eight turtle species that live in Ontario are designated at risk by **COSEWIC**. Of these five, three are also designated at risk provincially in Ontario. The northern map turtle is designated a species of special concern by **COSEWIC**, while two others (spotted turtle and wood turtle) are designated vulnerable provincially and as species of special concern by **COSEWIC**. Even more concerning is the common musk turtle, which is designated threatened by **COSEWIC**, and the eastern spiny softshell turtle, which is designated threatened both provincially in Ontario and by **COSEWIC**. According to recent studies, there are less than 2,500 eastern spiny softshell turtles remaining in Ontario. In addition, the Blanding's turtle (Nova Scotia population) is designated threatened by **COSEWIC**, and leatherback turtle populations on both the Atlantic and Pacific coasts are designated endangered by **COSEWIC**.

You Can Make A Difference!

How we can help solve such a large ecological problem is overwhelming at best. However, even one person can make a difference! The following case studies and programs are a testament to what you can do locally to help this global concern.



Turtle Crossing Signs In Ontario

In the search of prime nesting sites, many female turtles have met an untimely demise. Many roads have been designated as areas where turtle mortality has been disturbingly high due to vehicles. Turtle S.H.E.L.L. Tortue and Kids 4 Turtles are two groups dedicated to helping turtles survive the dangerous trek across these roads. These groups have helped to erect many turtle crossing signs in Ontario.



Turtle S.H.E.L.L. Tortue

With donations from local residents, municipalities, the Toronto Zoo, Ontario Parks and other local groups, Turtle S.H.E.L.L. Tortue has helped to erect turtle crossing signs in certain Ontario localities.



Kids 4 Turtles

The students at Rollin’ Acres independent school outside Peterborough noticed that turtles crossing the road near their school were being run over by vehicles. The students decided to make their own signs to help caution motorists about the turtles. The signs, however, were damaged.

Instead of being discouraged, the children, aged 4–10, began writing letters to local merchants and organizing fund raising events to raise money. They raised over \$4,000 for turtle crossing signs. Kids 4 Turtles obtained the approval of municipal authorities to erect their signs in 14 known turtle crossing areas. The project is ongoing.



Kawartha Turtle Trauma Centre

Inspired by Kids 4 Turtles, local veterinarians, biologists, zookeepers, and other conservationists decided to open a facility to help injured native turtles. The KTTC mandate is:

- Treat injured turtles for eventual release;
- Educate the public about turtle conservation;
- Assist species at risk recovery projects.

Anyone who finds an injured turtle can bring it to the Centre for veterinary care and rehabilitation. Many of the turtles brought in are nesting females, and it is very rewarding to see them return to their habitat, although many patients are at the Centre for up to a year.

Visit the website (<http://www.kawarthaturtle.org>) to read articles on turtles and conservation, or to meet our patients and explore the methods used to treat them. There is a section on Kid Heroes as well, highlighting the efforts of young people to help turtles in different and creative ways!



Adopt-A-Pond

The Adopt-A-Pond Wetland Conservation Programme was established in 1991 with a mission to conserve wetland biodiversity. The programme is “about people and helping them to recognize they can make a difference.” The program has three objectives:

- Restore, protect and create local wetlands;
- Inspire individual action at a community level;
- Educate community members about the importance of wetlands and the species that depend on them.

Creating, restoring and protecting wetlands are central activities of Adopt-A-Pond. To find out more visit www.torontozoo.com/adoptapond



Toronto Zoo's Ontario Turtle Tally

During the first two weeks of June, and anytime during the year, you can monitor turtles in your area. The Turtle Tally is a coordinated effort throughout Ontario for educators, students, community groups and families. Visit a lake, river, wetland or pond in your area and report your findings to Adopt-A-Pond. These results will then be displayed on their web page, www.torontozoo.com/adoptapond/. Get your turtle identifier printed by Toronto Zoo to help you identify and learn more about Ontario's turtles.



Kawartha Turtle Watch

Kawartha Turtle Watch is a program designed to encourage residents to report turtle sightings to a coordinated data bank. Since much is still unknown about turtles, this project is an opportunity to learn more about the environmental needs of turtles. It also helps scientists to interpret changes in turtle populations and distribution. Beginning in May and ending in October, you can record information such as species and numbers of turtles, date and time, specific location, weather,

habitat, activity and condition of animal. Watch for turtles in lakes, ponds and rivers and post your observations on the Kawartha Turtle Watch website:

www.trentu.ca/biology/turtlewatch.

For more information on this program, visit the Kawartha Turtle Watch website or e-mail at turtlewatch@trentu.ca.



Various Leatherback Turtle Working Groups

There are many groups involved in the conservation and recovery of leatherback turtles, on both the east and west coasts of Canada. On the east coast, conservation efforts are being carried out by the Nova Scotia Leatherback Turtle Working Group, the Leatherback Turtle Working Group, and the Newfoundland Leatherback Turtle Conversation Working Group. On the west coast, the Vancouver Aquarium Marine

Science Centre is working on leatherback turtle outreach activities through the Pacific Leatherback Awareness and Community Education Initiative, which received a grant in 2002-2003 from the federal government's Habitat Stewardship Program for Species at Risk.



ACTIVITY #16: LIGHTS, CAMERA, ACTION!

TOPIC

What can we do to help turtles at risk?

BACKGROUND INFORMATION

Turtle populations are on the decline due to habitat destruction, pollution and other human caused factors. One of the best ways to help the plight of the turtle is through public awareness. Many of the organizations mentioned in Section One: Turtles at Risk, are educating the public about turtles and the fragility of their ecosystems. There is still much to learn about turtles. As turtle habitats continue to decline, researchers, with the help of the public, are working to determine the needs turtles have so that they can help these special creatures.

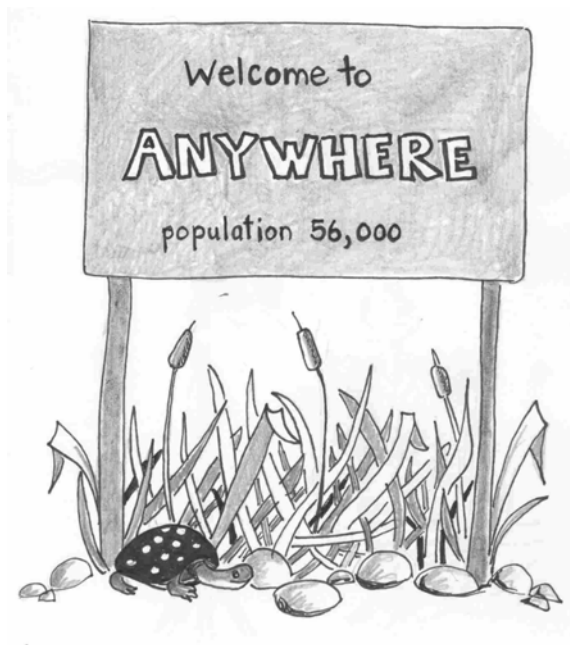
MATERIALS

Research material
Student work sheet
Props and costumes needed for skit
Video camera (optional)

METHOD

In this activity, students (in small groups) will research one of the organizations/projects that is occurring in Ontario to help turtles. Students may choose one of the projects mentioned in Section One: Turtles at Risk or find one on their own.

Using the handout provided, students will gather information that is pertinent to their organization/project. Once the research is completed, the students will present their information in the form of a commercial or public awareness announcement. As such, students will need to develop a skit and assign roles to group members.



ACTIVITY #17: WETLANDS DEBATE

Adapted from "Wetland Curriculum Resource"

TOPIC

Many turtle populations are decreasing due largely to habitat destruction caused by human development.

BACKGROUND INFORMATION

In a small town called Anywhere, Ontario, a 40 ha marsh known as Turtle Marsh exists along the shoreline of a large lake. As the population is booming in Anywhere, land for houses is becoming scarce and accommodations need to be made for the ever-growing population. The marsh is located on property that was recently bought by Reliable Homes, a housing developer. Reliable Homes has a planned community that will place 50 homes on the site of the marsh, after it has been filled. The marsh supports a diversity of living things, including several turtle populations. The turtle population includes a small community of spotted turtles, the last one of its kind in Anywhere. Much debate has been sparked over the proposal. Anywhere's residents are outraged that this fragile habitat could be destroyed. Before development can proceed, Reliable Homes must make a presentation to the town council about its proposed plans. A hearing panel has been convened to decide whether Reliable Homes may proceed with its development. Many experts have been invited to the hearing, so that the panel can make an informed decision.

METHOD

1. Elect five people from the class to represent the hearing panel. They receive the written submissions, listen to presentations, evaluate proposals, and decide on the outcome of the proposal. The panel should elect a chairperson.
2. Assign the following roles to the remaining students in the class. Some students may wish to work in teams:
 - The mayor of Anywhere;
 - The residents of Anywhere who now live beside Turtle Marsh;
 - A spokesperson for an environmental group;
 - An employee of Reliable Homes;

- A Conservation Authority spokesperson;
 - A lawyer representing Reliable Homes;
 - A city councillor up for re-election;
 - A Ministry of Natural Resources biologist;
 - A student at Anywhere School who watches turtles at the marsh;
 - A student researcher who is studying the rare turtles;
 - Representatives of families wishing to buy homes in the new development.
3. Alone or in small groups, students should research their roles and obtain necessary background information to support their positions.
 4. Each student or team should prepare a written proposal to be submitted to the hearing panel, and a five minute oral presentation.
 5. The hearing panel listens to the presentations in an unbiased manner. The panel should ask at least one question of each presenter.
 6. When the hearing is complete, allow the panel time to review submissions before making its decision. While deliberating, the panel should devise a cost/benefit analysis based on the environmental, economic and societal implications that could arise.
 7. The chairperson of the hearing panel should present the decision and the rationale supporting the decision. Enough compromise should be made to keep both sides happy (e.g. fewer houses or protecting some of the best areas of the marsh).
 8. Have students produce a reflective essay on whether they agree or disagree with the hearing panel's decision.

EXTENSIONS

1. Write a persuasive speech, letter to a newspaper editor, or letter of concern to a local politician describing your opposition to, or support for, the proposed development of Turtle Marsh by Reliable Homes. Present your opinion.
2. Identify the different wetlands or turtle nesting areas in your area and find out if there are similar developments planned for them. It might be a new landfill, a new subdivision, or cottage development, a plan for peat extraction, a plan to harvest timber nearby or a plan to locate a new industry upstream. Find out what you can do about these plans and determine ways that you can become involved in helping your community to make the best decision possible.