

Biodiversity and You Program – Teacher/Educator Guide

Introduction

This biodiversity program was designed by a certified teacher and by educators at Longwoods Road Conservation Area and Ska-Nah-Doht Village. The program was subsidized by Union Gas – A Spectra Energy Company, as part of their 100th Anniversary celebration.

Recognizing the needs of many educators to address curriculum needs regarding biodiversity and threats to it such as invasive species and habitat loss, this program was developed to explain, engage, and have students realize and internalize the problems that exist. This program is meant to serve as a broad introduction covering the topics of biodiversity, species at risk, invasive species, habitat loss and First Nations regard for the environment. Actions students themselves can take to help our local and global environments are outlined, and the structure of this program is conducive to discussion and student input as to what they think/feel should be done. The native heritage strand within the program instils the feeling of how we are all connected to our earth and acts to heighten a respect for it.

It is recommended that students be familiar with the terms and concepts outlined in the included “What is a Species at Risk? and Key Terms that Describe Them” sheet prior to experiencing the program. All materials needed for the presentation of the program are included in the Biodiversity and You Program package which is provided to subsidized schools free of charge. Other interested schools and nature interpretation/Conservation Authority facilities may obtain the program by downloading it free of charge from our website at www.ltvca.ca. The Medicine Wheel is not included for these unsubsidized educational facilities, but can be ordered through our website for \$20 CND plus shipping, or a free print facsimile can be obtained from the Biodiversity and You webpage and used as an exercise page to reinforce elements of the program.

Lists of current websites that pertain to Species at Risk and Invasive Species are also provided for teacher and student access.

Materials Needed

For subsidized programs all materials are included in the Biodiversity and You Program package. For other educational facilities/parties you will need to download the package from the www.ltvca.ca website, free of charge. You will also need to obtain large paper clips or similar objects which can be exchanged by students during the game (see game instruction sheets).

- Materials:**
- Biodiversity and You DVD presentation, **a text version of this presentation is available in the Biodiversity and You! Teacher Package webpage for students who may be hearing challenged.**
 - Teacher/Instructor Guide
 - Biodiversity Games (“What’s at Risk” and “Mussel Invasion! What to Do?”) instruction sheets
 - Equipment (Species at Risk and Invasive Species cards, paper clips) for Biodiversity Game
 - Optional data sheet made by teacher (based on example on p.2 of Game instruction sheets) if it is wished to have students incorporate a math/graphing strand
 - Photocopies for class of “Websites for Species at Risk and Invasive Species” reference sheet for students to do their own research
 - Photocopies for class of Anishinabek Medicine Wheel sheet
 - Photocopies for class of Biodiversity Game 1-What’s at Risk worksheet
 - Copy of Classroom Medicine Wheel sheet (see (6) below for classroom exercise suggestion).
 - Copy of Anishinabek Medicine Wheel – What Does It Mean? for each student if classroom exercise is desired (see (6) below).

Presentation

The breakdown for the presentation of the Biodiversity and You Program is as follows;

- 1) Biodiversity and You introductory DVD (15-20 minutes including a brief discussion of messages in DVD)
- 2) What’s At Risk? Game (approximately 5 minutes per run through of the game {should be done at least twice}, 10 for discussion of what was discovered during game)
- 3) Mussel Invasion! What to Do? (10 minutes for game)
- 4) Student Discussion reviewing problems (i.e. impact of invasive species on natural ecosystems, spread of invasive species, challenges facing species at risk, habitat loss) and how we can address them.

Here students can record and:

- a) conceptualize ways they would deal with the problems,
 - b) identify which threats are important and categorize them as to their impact on natural ecosystems,
 - c) itemize general and specific goals to be achieved regarding protection of species at risk and combating invasive species,
 - d) list the things they would need to know about native species they wish to protect or invasive species they wish to eradicate.
- 5) Anishinabek Medicine Wheel page (10 minutes) – at this time the Anishinabek Medicine Wheel handout is distributed to the classroom. The

- former contains the symbols for each of the four segments of the wheel. These can be discussed with the class emphasizing the connection we all share with the environment. Inform the class that different First Nations peoples have different symbols for their animal guardians and plant components of the wheel. The Classroom Medicine Wheel can then be held up/handed out and the presenter can ask the class what symbols they would use to represent the animal guardian and plant components (which have been left blank on this copy). A discussion can be initiated as to which Species at Risk would be good representatives for their own Classroom Medicine Wheel and/or students could individually receive a copy and list their personal choices on it with the presenter then using those deemed most popular for the Classroom Medicine Wheel. This process will involve students, reflect on their species at risk and internalize the important message of the Medicine Wheel.
- 6) If desired, a classroom exercise can be incorporated subsequent to the program presentation. This exercise could be used to fill a literacy period. The “Anishinabek Medicine Wheel - What Does It Mean?” handout is a summary review sheet that contains all of the pertinent information regarding the importance of the Medicine Wheel and its connection to our natural world. Three questions at the end of the handout encourage students to reflect and relate their own concerns and ideas. Student copies of the Classroom Medicine Wheel should be given each student along with the above handout and a piece of lined paper to effectively complete this assignment.
 - 7) Further Research Possibilities – Once students have completed (4) above as a classroom group, they can research (individually or as a small group) their given species at risk (green card) and their invasive species (red card) using the websites provided in the package. Group representatives or individuals can then present their species at risk and tell of the challenges facing them and also the challenges their invasive species pose and how we can try to overcome them.
 - 8) If it is wished to expand on the native studies and multicultural strands students may use the included website page entitled First Nations Websites to research native people’s attitudes toward nature and the environment. Further projects could arise from this research.

Literacy, art, social studies, math as well as science can all be enhanced using the theme of biodiversity. It is hoped that the above program will serve educators as a broad introduction to a very “diverse” subject.



uniongas
A Spectra Energy Company



SKA-NAH-DOHT
Village and Museum

