Who Am I?

LESSON

GRADE LEVEL 2-12

CATEGORY Plants, Animals & Habitats

TOPIC Plants and Animals

TIME
15-20 minutes

MATERIALS

Not included

- Class set of cards with pictures of plants and animals

SETTING
Indoors or outdoors

GROUP SIZE
Any

SUBJECTS
Science

KEYWORDS
Amphibians, animals, birds, classification, consumer, decomposer, fish, invertebrates, mammals, native, non-native, plants, producers, vertebrates

HCTF Education

Overview

We so often learn about plants and animals from other places while not really seeing what is right in front of us. In this activity, students learn to recognize and classify native plants and animals.

Using only yes/no questions, students determine the identity of the plant or animal picture they are wearing on their back. Students then classify the organisms identified.

Objectives

Students will:

- Classify familiar plants and animals according to similarities and differences in appearance
- Compare the structures and behaviours of local animals and plants
- Analyze simple food chains and the roles of organisms as part of interconnected food webs, populations, communities and ecosystems
- Distinguish between life forms
- Demonstrate knowledge of the characteristics of living things

Making Connections

Children have a natural curiosity about living things. Learning about local plants and animals will serve to both stimulate this interest. Each place on earth is unique with its own weather, geology, flora and fauna. Learning the characteristics of one's own place brings with it an understanding of what makes 'home' so special and helps to develop a sense of place. What follows naturally from this development of a sense of place is stewardship. Only when we learn to truly see a place, will we learn to value and care for it. Learning to identify the native and non-native species in BC is the first step toward this.

Background

Approximately 1.75 million different living organisms have been identified and classified on earth by scientists. This is a small number when one considers that many living organisms have not been classified. Different estimates speculate that the actual number of organisms on earth is from 5 to 50 million, or more.

In 1753 a Swedish scientist, Carolus Linnaeus, developed a system to classify plants and animals, giving all organisms a two-part name. The first name is the genus and the second name is the specific species (e.g. Homo sapiens). Today

there is a modern system of classification divided into five "kingdoms": **Animalia** (animals), **Plantae** (plants), **Fungi** (fungus and lichens), **Protista** (single-celled creatures) and **Monera** (bacteria). This classification system then divides these kingdoms into phylum, class, order, family, genus and species.

Animals can also be divided into vertebrates (animals with backbones) and invertebrates (animals without backbones). There are seven different classes of vertebrates including:

Class Amphibia	**Amphibians**
Class Reptilia	**Reptiles**
Class Aves	**Birds**
Class Mammalia	**Mammals**
Class Osteichthyes	**Fish**
Class Chondrichthyes	**Rays and Sharks**
Class Agnatha	**Jawless fish with no scales**

Invertebrate classification is a little more complicated. There is a great deal of information available on line should you wish to have your students work on invertebrate classification.

Living things may also be classified by their role in food chains. Producers are green plants. They use light energy from the sun to produce food in the form of sugar from carbon dioxide and water. Consumers are (for the most part) animals. They cannot make their own food, so they eat plants and/or other animals. Herbivores (animals that eat only plants) are primary consumers because they eat the producers. Carnivores (animals that eat other animals) are secondary, or even tertiary, consumers because they eat the animals that eat the producers. Omnivores (animals that eat both plants and animals) can be primary, secondary or tertiary consumers. Decomposers (bacteria and fungi) feed on decaying matter in the decomposition process, which provides soil for plants to grow.

For younger students, it may be enough to have them make the distinction between a plant and an animal, followed by some very basic groupings. For older students, further classification of the organisms may be possible or required.

Materials

Prepare a class set of pictures of local plants and animals. Use calendars, magazines, printed photos, photocopied illustrations, etc for the pictures. The pictures should be large enough to be easily seen from a distance of about 90cm. The choice of images will depend on the focus for the lesson: organisms from a specific local ecosystem, related to a theme the class is focused on (even as focused as learning about local owl species and having cards of the different species), a variety of different types of local species, or a mix of native and non-native in order to classify native or non-native following the game.

Back the pictures onto construction or tag paper to give them a bit more weight. You may wish to put the common and scientific name of the animal on the back of the picture card. Laminate the picture card. At the top of the card, punch two holes and attach a string long enough to allow the picture card go over a student's head and hang down their back.

Procedure

Warm up

Preparation for this activity will depend on the grade level. For all grades, explain to the students that each one of them will become a different organism. They will not be able to see which organism they will represent, but will be able to ask yes/no questions to figure out what it is. For older students, discussions and diagrams can be used to establish different ways to classify living things. For younger students, or to do a quicker version of this activity, brainstorm types of yes/no questions that could be asked in order to determine which organism they represent. Give examples such as "am I an animal?", "am I a reptile?", "do I have feathers?", "am I blue?", "do I have thorns?" etc.

The Activity

1. Place a species card on the back of each student. Ensure that they do not see the picture and that other students do not call out the organism's name. Instruct the students that they have now become the living thing that is on their back. Their job is to find out what they are. They may only ask "yes" or "no" questions. They may only ask one or two questions per person and then must move on to someone else. This will help keep the activity moving.
2. Once a student has guessed what organism they are, they can bring their species card forward to their chest. It may be necessary to circulate through the group providing assistance in asking yes/ no questions or to give hints to the last few students who haven't guessed. Note: for younger students you can use general identification where appropriate such as bird or tree.
3. When everyone has their card on their chest, debrief by taking about what kinds of questions they used to figure out what they were. Then ask students to choose two other organisms that their organism is connected to in

some way – a relative, predator, prey, etc. Ask students what kind of habitat they think their organism needs. What does it eat?

Wrap Up

When students are clear on what their animal is and what it needs to survive, they can then divide themselves into groups of different types of classifications. These classifications could include:

- Plant or animal kingdom
- Producer, consumer or decomposer
- Herbivore, carnivore or omnivore
- Amphibian, reptile, bird, mammal, fish, etc

Assessment

Provide students with names and/or pictures of different plants and animals. Have students sort and classify them into groups based on criteria you provide. Alternately, have students sort and classify the organisms based on their own criteria that they provide to you (fuzzy/not fuzzy, two legs/four legs/no legs, etc).

Extensions

1. **The Web of Life** is a good follow up to this activity. It will be necessary to prepare additional picture cards with images of the sun, water, soil and perhaps a human, if a human has not already been included in the picture set. With their cards still on their chests and a few exchanged with the new cards students arrange themselves in a circle.

   A ball of string or rope is held by the student (or teacher) representing the sun. That student looks around the circle and finds someone they are connected to. The student then describes the connection (e.g. "I am connected to the tree because I give the tree sunlight to make it's food"). The student then throws the ball of string to that person, keeping hold of their end of the string. Each person follows the same procedure until everyone is connected around the circle and a 'web of life' has formed.

   This activity can be used to discuss basic concepts of an ecosystem. Elements such as the impact of the loss of a species can be illustrated by all the people who are that species pulling repeatedly on the string while it is still held tight by all players. Everyone who can feel the tug is affected by the loss of the species. This can also be shown by those representing lost species letting go of their end of the string. Participants will then see the web fall apart.

2. **Students research their species** and create a poster or report about it.
3. **Follow 'Who Am I?' with the activity 'Ecosystems in Motion'.** Have students carry out that activity with their species cards still on their chest.

Resources

Use local natural history field guides to choose the appropriate native species.

The Naturescape British Columbia program can provide lists of plants and animals native to specific areas of the province. They can be reached via their website at **www.hctf.ca/naturescape/about.htm**

The Electronic Atlas of the Fauna of British Columbia is also an excellent source for information about the animals of British Columbia. It can be found at **efauna.bc.ca**