Investing in Nature

A Partnership for Plants in Canada
Un partenariat canadien pour les plantes

LOOKING AT LAWNS

Basic description:
Students investigate the importance of plants to animals by exploring their own schoolyard.

Source:
Adapted from The Kids Canadian Plant Book by Pamela Hickman, Toronto: Kids Can Press, 1996.

Curriculum connections:
Overall Expectations
- Describe ways in which plants are important to other living things, and the effects of human activities on plants.

Specific Expectations
- Record relevant observations, findings, and measurements, using written language, drawings, charts, and graphs (e.g., produce a series of drawings to show a plant at different stages of development)
- Communicate the procedures and results of investigations for specific purposes and to specific audiences, using drawings, demonstrations, simple media works, and oral and written descriptions (e.g., make a graph that shows the number and kinds of trees found in different yards; design and construct a terrarium or garden that reproduces the conditions that they found to be requirements of specific plants).
- Describe ways in which humans can protect natural areas to maintain native plant species (e.g., establishing conservation areas, wildlife reserves, wetland sanctuaries).
- Describe ways in which plants and animals depend on each other (e.g., plants provide food for energy, and animals help distribute pollen and seeds).
- Identify some functions of different plants in their local area (e.g., trees provide shade; grass binds soil to prevent soil erosion).

Preparation Time: 1-3 weeks

Duration: 45 minutes

Materials:
- Magnifying glasses (optional) - one per person is ideal or students could share with a partner
- Hula Hoops - one per group
- 4-8 wooden stakes or tall sticks
- String
- Clipboards (optional)
- Pencils

Preparation:
1. Fence off a small portion of the schoolyard lawn with string and tall sticks or stakes. Ask your administrator and maintenance staff that this little area be left uncut. Let this area continue to grow until the plants have grown tall and are beginning to flower and go to seed (1-3 weeks). If you already have a naturalized area within your schoolyard, you can use it instead.
2. Print a copy of the Data Recording Sheet and photocopy enough pages to allow one page per group.
3. Gather together all necessary materials.

Procedure:

1. Organize your glass into partners or small groups.
2. Provide each group with one Data Recording Sheet and a clipboard (or ask the students to bring a binder or hard covered book to write on). Inform the students that each group will also need a pencil.
3. Head outside with your class to a part of the schoolyard lawn (*not* the uncut part). Hold up a Hula-hoop and explain to the class that this is no longer a 'Hula-hoop'; it is a RSD (Random Sampling Device). A RSD is a very technical piece of scientific equipment. It is used to mark an area for investigation. Demonstrate how to use the RSD (*lightly* toss the RSD, where it lands is the area in which the students will be working). Explain to the students that they may wish to spread out a bit so that they are not bumping into other groups.
4. Explain that once the group has tossed their RSD, their mission is to thoroughly search the area within the RSD. Using the magnifying glass, the students are to look for living animals (these will most likely be very small; they will have to look carefully!), and different kinds of plants within the sample area.
5. Show the students how to record their observations on the Data Recording Sheet. On the sheet there are two columns, Plants and Animals. Under the Plants column, the students should write the name of the different plants that they find. Explain that if the students don't know the name of the plant, they are to make up their own name for the plant based on the characteristics of that plant (for example, a plant with a white flower might be named 'The Snow Flower'). The students do not have to keep count of the number of each type of plant they find. The same instructions apply to the Animal column as well, although the students should keep a tally of the numbers of each animal they find.
6. Provide each group with an RSD and let them get to work. While the students are working, circulate around to the groups, encouraging the students to look closely and carefully within their sample area.
7. Once the students have completed their investigations of the cut part of the lawn, lead them to the part of the lawn that has been left uncut. Explain to the students that this is what the whole yard would look like if it were not mowed.
8. Repeat step #5 within this area (depending on the size of the naturalized area, you may decide not to use the RSDs. Instead, have your students sit outside of the roped off area and investigate only the area inside the rope that they can see/reach from their location (this will also ensure that nothing gets trampled).
9. Once everyone has finished recording all their data, clean up all materials and gather the class together for a discussion (this can be done outside if it is a nice day!).

Questions and Follow-up:

1. Instruct the students to take a look at their Data Recording Sheets. Ask a number of questions that encourage the students to examine their data:
   - How many animals did you find in each sample area?
   - How many different kinds (species) of animals did you find in each sample area?
   - How many different kinds (species) of plants did you find in each sample area?
2. Where did you find the greatest number of animals – in the cut part of the lawn or in the naturalized part of the lawn? Why do you think this is?
3. Where did you find the greatest number of *different kinds* of animals? Why is this important? (Introduce the term *diversity*.)
4. Lead a discussion on the topic of the importance of plants to wildlife. What do animals use plants for? (Food, shelter and homes.) If you were a small animal (such as a mouse), would you rather live in the cut or uncut portion of the lawn? Why?
5. Ask the students if they think it is important to protect plants so that wildlife can survive. Why or why not? What can we do to help protect or provide plants for wildlife? (Schoolyard

naturalization project, tree planting projects with school groups or community groups, stay on the trails when walking in natural areas, don't pick flowers or other plants from natural areas, decrease the amount of paper we use, don't litter.)

Extension:

Schoolyard Naturalization

Since you already have the beginnings of a naturalized area, why not take this opportunity to begin a schoolyard naturalization project with your class and the whole school! Depending on time constraints and your students' ambitions, naturalization projects can be as big or as little as you like (from leaving the area that you have already roped off to continue to grow, to planning, planting and weeding a native species garden).

There are many resources available to you to help get your project off the ground. A good beginning point for your investigations may be The Evergreen Foundation. The Evergreen Foundation is a non-profit environmental organization dedicated to bringing nature to the city through naturalization projects. Check out their website at www.evergreen.ca for information, resources and case studies on Schoolyard Naturalization Projects.

PlantWatch is a national plant-monitoring program aimed at charting the green wave of spring as it sweeps across Canada. Through this program, students gather information on flowering plants and report their findings via the Internet. With the help of these observations, scientists can compare past and present data and forecast future climate changes. This is a great opportunity for students to get involved in the world of plants! Find out more information by visiting http://www.naturewatch.ca/english/plantwatch/ .

Resources:

- Focus on Forests: An Activity Guide for Primary and Junior Teachers on Forests and Forest Management, Ministry of Supply and Services and the Queen's Printer for Ontario, 1989.
- Science Is… by Susan V. Bosak, Scholastic Canada Ltd. and The Communication Project, 2000.
- Project WILD: Activity Guide, The Council for Environmental Education, 1999.

DATA RECORDING SHEET

	PLANTS	ANIMALS
CUT LAWN		
NATURALIZED LAWN		