



curriculum links

Grade 3:

- ◆ Canada and World Connections:
Urban and Rural Communities
- ◆ Understanding Life Systems:
Growth and Changes in Plants



overview

This activity helps students visualize how Green Roof plantings help to reduce storm water runoff and improve air quality. Students will pour the same amount of water to simulate rain over a standard roof and a Green Roof. The runoff will be measured and compared.

grade 3 expectations

Social Studies

Canada and World Connections: Urban and Rural Communities

Overall Expectations

- ◆ identify and compare distinguishing features of urban and rural communities;
- ◆ use a variety of resources and tools to gather, process, and communicate geographic information about urban and rural communities;
- ◆ explain how communities interact with each other and the environment to meet human needs.

Specific Expectations

Knowledge and Understanding

- ◆ identify geographic and environmental factors that explain the location of various urban and rural communities;
- ◆ compare land use and access to natural resources in urban and rural communities;
- ◆ compare population density and diversity in urban and rural communities;
- ◆ compare buildings and structures in urban and rural communities.

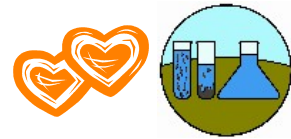
Inquiry / Research and Communication Skills

- ◆ ask questions to gain information about urban and rural communities;
- ◆ use secondary sources to locate key information about urban and rural communities;
- ◆ use appropriate to communicate the results of inquiries and observations about urban and rural communities.

Application

- ◆ describe ways in which they and their families use the natural environment;





Science and Technology

Understanding Life Systems: Growth and Changes in Plants

Overall Expectations

- ◆ assess ways in which plants have an impact on society and the environment, and ways in which humans activity has an impact on plants and plant habitats;
- ◆ investigate similarities and differences in the characteristics of various plants, and ways in which the characteristics of plants relate to the environment in which they grow;
- ◆ demonstrate an understanding the plants grow and change and have distinct characteristics.

Specific Expectations

Relating Science and Technology to Society and the Environment

- ◆ assess ways in which plants are important to humans and other living things, taking different points of view into consideration, and suggest ways in which humans can protect plants;
- ◆ assess the impact of different human activities on plants, and list personal action they can engage in to minimize harmful effects and enhance good effects.

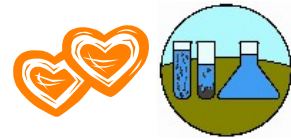
Developing Investigation and Communication Skills

- ◆ observe and compare the parts of a variety of plants;
- ◆ investigate ways in which a variety of plants adapt and/or react to their environment, including changes in their environment, using a variety of methods;
- ◆ use scientific inquiry/experimentation skills and knowledge acquired from previous investigations, to investigate a variety of ways in which plants meet their basic needs;
- ◆ use appropriate science and technology vocabulary, including *stem, leaf, root, pistil, stamen, flower, adaptation, and germination*, in oral communication.

Understanding Basic Concepts

- ◆ describe the basic needs of plants, including air, water, light, warmth, and space;
- ◆ identify the major parts of plants, including root, stem, flower, stamen, pistil, leaf, seed, and fruit, and describe how each contributes to the plant's survival within the plant's environment;
- ◆ describe how most plants get energy to live directly from the sun, and how plants help other living things to get energy from the sun;
- ◆ describe ways in which plants and animals depend on each other;
- ◆ identify examples of environmental conditions that may threaten plant and animals survival.





key terms

Green Roof - Any roof that is built to accommodate living plants in order to capture and reduce the amount of stormwater run-off.

Habitat - The arrangement of food, water, shelter and space within an ecosystem to meet an organism's health and survival.

Infiltration - The process by which water seeps into the ground to feed plant roots and ground water supplies. Once water infiltrates the ground it begins to be filtered by soils and plants before entering a watercourse.

Stormwater Management - The ability to direct or capture water run-off in order to allow more time for infiltration. Roofs, ponds, river and lakes should be buffered with native vegetation in order to slow stormwater run-off and allow natural filtering of water.

