

APPENDIX D

Sustainable Development Activity #1: Uses of Trees

Grade Level:

Kindergarten



Guiding Questions:

Students consider the following five guiding questions:

- What are my needs?
- What is the environment around me?
- Why is the environment important, especially trees?
- How can I safely explore my environment?
- How can I help?

Subjects:

- Social Studies Skills: Active Democratic Citizenship
- Social Studies, Cluster 3: The World Around Me
- Science, Cluster 1: Trees
- Physical Education/Health Education, Attitude Section
- Physical Education/Health Education, Section 3: Safety
- English Language Arts
- Arts Education (Music, Visual Arts)

Setting:

Inside and outside

Duration:

- 1A. Tree Song and Poem (two to three half-hour periods)
- 1B. Schoolyard Nature Walk (three to four half-hour periods with a half-hour outside)
- 1C. Taking Action: Tree Needs (Water) (one to two half-hours, three to four times a school year)

Group Size:

- Tree Song and Poem: classroom, individual
- Schoolyard Walk Activity: two to five students

Vocabulary:

Trees, maple, the names of the types of tree in your schoolyard, rubbing, branches, roots, bark, trunk, wood, leaves, altitude

Materials:

Tree song, tree poem, paper, run-off sheets, soft lead pencil, scissors, and glue

Safety:

1. Check and follow divisional and school policies for taking students beyond the classroom.
2. Obtain all relevant permissions to take your students on a nature walk in the schoolyard.
3. Walk the schoolyard, looking for safety concerns and appropriate trees, before you take the student outside.
4. Consult Bowman Kindergarten Nature Walks for safety advice (see http://bowman.lexingtonma.org/bigbackyard/grade_k/KFPTGuide.pdf).

Preparation**1A. Tree Song and Poem**

If you have a favourite tree song or poem, feel free to substitute for the examples provided. The sample song and poem can be found on the Can Teach website at www.canteach.ca/elementary/songspoems52.html. The site has many other resources.

1. Print out the song “Growth of a Tree” for display.
2. Print out a copy of the poem “Trees” for each student.

1B. Schoolyard Nature Walk

1. Obtain a sheet of paper and a sharpened soft lead pencil for each student.
2. Get the students looking forward to going on a nature walk. Bowman Kindergarten Nature Walks suggests asking students questions such as “Who

likes to explore and discover outdoors?" and "How do scientists learn about nature?"

3. Guide the students to tell you what safety rules are important for a nature walk.
4. Guide the students to tell you how they can respect nature when going on a nature walk.
5. Have the students practise a Seton sit or stand in the classroom.*
6. Prepare your follow-up question to be used after the walk.

1C. Tree Needs (Water)

1. Obtain enough buckets or sufficient length of garden hose to reach from the water supply to the trees.
2. Read the articles about watering
(see www.toronto.ca/trees/pdfs/Treesneedwater.pdf,
www.ottawa.ca/residents/healthy_lawns/forestry/water_tree_en.html, and
www.extension.org/pages/Watering_Evergreen_Trees_and_Shrubs).

Activity

1A. Tree Song and Poem

1. Sing the song "Growth of a Tree" with the students
(see www.canteach.ca/elementary/songspoems52.html).
2. Read the poem "Trees" to the students.
(see www.canteach.ca/elementary/songspoems52.html)
3. Ask students: "In the poem and song, what are the uses of trees?" (e.g., food, shelter, beauty, play...)
4. Ask students: "What use birds and other animals make of trees?" (e.g., food, shelter, beauty, play...)
5. Ask students to draw a picture of a tree on the page with the poem "Trees."
(see www.canteach.ca/elementary/songspoems52.html)

1B. Schoolyard Nature Walk

1. Brainstorm with the students about safety and environmental respect before embarking on the nature walk.
2. Take the students on a nature walk on the playground.
3. Have them examine a tree by smelling, touching, and making a bark rubbing.

* A Seton sit or stand is when a person stays in one place for a period of time using the senses of hearing, sight, and smell to observe the details of one small area of interest. The action is named after Earnest Thompson Seton, Manitoba's first official naturalist.

4. Have students find an interesting area to do a Seton walk or stand. Two to three minutes is a good period of time.
5. Collect leaves from the ground, seeds, and other flat items of interest for rubbing to be done in the classroom.

Hint: If you wish to preserve leaves or other flat objects so they do not crumble and so you can see the details and both sides of the object, cover the objects with clear sticky paper, which is available from craft shops and dollar stores.

1C. Taking Action: Tree Needs (Water)

If there is not enough rainfall, water the trees. After the broadleaf trees have dropped their leaves, it is a good time to give the evergreens a watering before winter.

Debriefing Questions

Affective questions

- Which part did you enjoy the most?
- Would you like to do this again?
- What was the neatest thing you saw, heard, felt, smelt?

Cognitive questions

- What did you learn about ____?
- What uses do you make of trees?
- What uses do the birds and other animals in our schoolyard have for trees?

Extensions

1. If the students examine their tree several times in the fall and spring, they can record changes in the tree and its use by animals.
2. Involve the students in tree planting. Information is available from the Manitoba Forestry Association or Manitoba Hydro. Manitoba Hydro has tree-planting programs, including a forest enhancement project. Information is available at www.hydro.mb.ca/environment/forest_enhancement/eligible_projects.shtml. Manitoba Forestry Association activities include tree planting and the distribution of seedlings. For more information, see www.thinktrees.org
3. Contact the Manitoba Forestry Association for current National Forestry Week activities and Trees for Tomorrow at www.thinktrees.org.
4. Have the student become involved in the April 22 Earth Day.

Sustainable Development Connections in Assignment

This assignment connects with the following Kindergarten ESD concepts:

Students will

- identify ways in which humans and animals use trees
- appreciate the beauty and importance of the natural environment, and learn how it influences their daily lives
- respect the natural environment while participating in physical activities (see www.edu.gov.mb.ca/k12/esd/pdfs/k-4_brochure.pdf, page 3)
- learn to contribute to groups and communities (see www.edu.gov.mb.ca/k12/esd/pdfs/k-4_brochure.pdf, page 3)

This assignment also makes connections to an appreciation of sustainable development by providing opportunities to stimulate the affective domain.

The connections to quality of life of the Venn diagram come from the intersection of the appreciation of nature, physical activity, and meeting the needs for food and shelter. Human survival is dependent on the environment. Thus, the environment aspect of sustainable development is demonstrated. The economy section of the Venn diagram is referenced by the uses we make of trees and tree products such as food and shelter.

One of the essential skills of arts education (music) is to have “Students connect music to contexts of time, place, and community, and understand how music reflects and influences culture and identity” (see www.edu.gov.mb.ca/k12/cur/arts/framework/index.php, page 1). The Quality of Life connection is made through the environment connection of time, place, and community, and the culture and identity part of human health and well-being.