



EDUCATION FOR SUSTAINABLE
DEVELOPMENT: KINDERGARTEN
TO GRADE 4 POSTER ACTIVITIES

Grade 3

GRADE 3 LEARNING EXPERIENCES

The lessons and activities presented in this website and related links are to supplement existing curriculum guidelines.

Sustainable Development Themes Related to the K-4 ESD Poster Learning Experiences

Learning Experience	Subject	Cluster Section	SLO	Page
1. Spot a Good Citizen	Social Studies	1. Connecting with Canadians (3.1.1: Canadian Citizenship).	KC-001: Recognize citizenship as membership in the Canadian community. KC-002: Give examples of responsibilities and rights of Canadian citizens. VC-002: Be willing to contribute to their groups and communities.	3-7
2. You in a Shoebox	Social Studies	1. Connecting with Canadians (3.1.3: Personal Identity)	KI-007: Identify factors that may influence their identities. <i>Examples: culture and language, time and place, groups and communities, arts and media . . .</i>	3-9
3. Be a Leading Class	Social Studies	1. Connecting with Canadians (3.1.4: Leadership)	VP-011: Respect positive leadership in their groups and communities and in Canada. KP-032: Give examples of formal and informal leadership and decision making in groups and communities.	3-11
	Physical Education/ Health Education	3. Safety	K.3.3.B.4: Recognize roles of individuals in school and community who provide safety services (e.g., school staff, crosswalk patrols, police officers, Block Parents, firefighters, doctors, nurses, elders, ski patrols, snowmobile patrols, forest rangers, coast guards . . .).	
4. Poems of Peace	Social Studies	1. Connecting with Canadians (3.1.5: Conflict Resolution)	KP-033: Identify ways of resolving conflict in groups and communities. KP-034: Identify ways to deal with bullying.	3-13

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Learning Experience	Subject	Cluster Section	SLO	Page
5. Comparing and Concluding	Social Studies	2. Exploring the World (3.2.3: Human Rights)	KC-005: Recognize that people around the world have basic human rights. <i>Examples: access to food, water, shelter, a secure environment, education, fair and equal treatment . . .</i>	3-15
6. Match Them Up	Social Studies	2. Exploring the World (3.2.4: Personal Responsibility)	KG-027: Give examples of concerns common to communities around the world.	3-17
7. Who's Who in Human Rights	Social Studies	2. Exploring the World (3.2.3: Human Rights)	KG-028: Identify organizations that support communities in all countries of the world. <i>Examples: United Nations and UNICEF, Red Cross, Médecins sans frontières . . .</i>	3-21
8. Fair Trade	Social Studies	2. Exploring the World (3.2.4: Personal Responsibilities)	KG-031: Give examples of personal decisions and actions that may positively affect people locally or globally. <i>Examples: charitable donations and projects, recycling . . .</i>	3-23
9. Can This Be Done Here?	Social Studies	3. Communities of the World (3.3.3: Resources)	KE-036: Give examples of how the natural environment influences work, goods, technologies, and trade in communities studied.	3-25
10. Harmful and Helpful Plants	Science	1. Growth and Changes in Plants	3-1-09: Identify plant adaptations that can be harmful to humans, and describe their effects. 3-1-16: Identify how humans from various cultures use plant parts for food and medicine. <i>Examples: use of roots for food (carrots) and medicine (ginseng) . . .</i>	3-27

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Learning Experience	Subject	Cluster Section	SLO	Page
11. Name that Tree	Science	1. Growth and Changes in Plants	3-1-02: Observe, compare, and contrast the structure and appearance of several types of plants. <i>Examples: plants with different types of roots, trees with needles and trees with leaves . . .</i> 3-1-03 Show respect for plants as living things.	3-31
12. The Day All the Plants Disappeared	Science	1. Growth and Changes in Plants	3-1-14: Describe ways plants are important to the environment. <i>Examples: improve soil, air, and water quality; reduce erosion . . .</i> 3-1-18: Explain how humans replenish the plants they use and the consequences if plants are not replenished. <i>Examples: after loggers harvest trees, new ones should be planted to ensure a future lumber supply . . .</i>	3-37
13. That's Made from Plants?	Science	1. Growth and Changes in Plants	3-1-17: Investigate to determine how humans from various cultures make useful products from plant materials. <i>Examples: lumber milling, paper making, rope making, fabric making . . .</i>	3-39
	Social Studies	3: Communities of the World (3.3.3: Resources)	KE-036: Give examples of how the natural environment influences work, goods, technologies, and trade in communities studied.	
14. Soils	Science	4. Soils and the Environment	3-4-08: Explain the importance of understanding the characteristics of different soils. <i>Examples: enables farmers to determine which crops can be grown in a particular area; enables gardeners to improve plant growth; enables engineers to know what types of foundations to set for structures . . .</i>	3-41

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Learning Experience	Subject	Cluster Section	SLO	Page
15. What Shall We Build?	Science	4. Soils in the Environment	<p>3-4-10: Describe ways to return organic matter to the soil.</p> <p><i>Examples: composting, spreading manure on fields . . .</i></p> <p>3-4-11: Use the design process to construct a simple composter that returns organic matter to the soil.</p> <p><i>Examples: classroom composter for left-over food, school composter for grass clippings and leaves . . .</i></p>	3-45
16. Mock Trials	Physical Education/ Health Education	4. Personal and Social Management	<p>K.4.3.B.3b: Show an understanding of the steps in a conflict-resolution process (i.e., identify the goal; identify constraints, limiting conditions, and possible options; choose best option; evaluate for effectiveness).</p> <p>K.4.3.B.3c: Identify mediation skills (e.g., allow person to express opinions, summarize other person's point of view, recognize feelings of others . . .) that can be used as part of the conflict resolution process.</p>	3-49
17. Taking Care of Yourself	Physical Education/ Health Education	5. Healthy Lifestyle Practices	<p>K.5.3.A.2: Identify common communicable diseases/illnesses/conditions (e.g., colds, flu, pink eye, head lice . . .) in the classroom and home, and ways to prevent the spread of diseases/illnesses/conditions (e.g., cover mouth when sneezing or coughing, wash hands regularly, share food appropriately, use own hair utensils and headwear . . .).</p> <p>K.5.3.A.3: Assess personal dental care habits and identify ways to promote dental health for self and/or others.</p>	3-51

Targeted Outcome/Intended Learning:

Social Studies: Cluster 1: Connecting with Canadians (3.1.1: Canadian Citizenship)

KC-001: Recognize citizenship as membership in the Canadian community.

KC-002: Give examples of responsibilities and rights of Canadian citizens.

VC-002: Be willing to contribute to their groups and communities.

Activity Centre #1 has an “application” activity.



Background:

Discuss the concept of citizenship, and describe what it means to be a good citizen. Use the following website word cards to generate ideas: reduce, protect, relate, safety, teach, consequences, contribute, defend, value, respect, predict, care, contribute, culture, recycle, cooperate, share, appreciate, understand, connect, communicate, listen, help.

Together, make a list of rules, responsibilities, and rights that exist in families, in the school, and in the community. Identify that with every right comes a responsibility (e.g., every student has the right to be safe; every student has the responsibility of controlling her or his actions so as not to hurt others; the corresponding rule is “do not hurt other students”).

Materials:

- poster paper
- create “good citizenship” forms
- class camera
- Suggested K-4 ESD Poster word cards: reduce, protect, relate, safety, teach, consequences, contribute, defend, value, respect, predict, care, contribute, culture, recycle, cooperate, share, appreciate, understand, connect, communicate, listen, help. Available online at www.edu.gov.mb.ca/k12/esd/poster.html.

Activity Directions:

Activity 1:

Create a classroom citizenship poster that lists characteristics that all students agree upon. Include such concepts as sharing, being fair, respecting others, following rules, helping one another, cleaning up, etc.

Activity 2:

Prepare small “good citizenship” forms that students can fill out when they see classmates perform an action that is included on the poster. The forms could say: “I saw _____ doing the following good citizenship action: _____, by doing _____ on date. Way to go! Submitted by _____.”

Have students deposit the forms in a class “citizenship” box. At the end of the week (or month), celebrate those who were recognized. As an alternative, have classroom “spotters” watch for good citizenship behaviours in their peers. Spotters can then ask the teacher to photograph the “good citizen” in action (each day, have new spotters so that everyone has a turn). Print out and arrange the photos on a poster at the end of the week or month. The spotters can label the photo of their “good citizens” with information on what they were doing to deserve the nomination. Note: Be sure that spotters are being fair and are including all students in their considerations.

From time to time, check the forms to see if students are recognizing their classmates for the appropriate reasons (e.g., how the person was showing fairness, respecting others, etc.). Where misunderstandings of a concept are displayed, take that opportunity to discuss the error with the student.

The social studies curriculum provides excellent discussion topics and suggestions for brainstorming, defining, using Venn diagrams, and engaging in sorting activities. It also provides links to online resources for this theme. This material can be found at <www.edu.gov.mb.ca/k12/cur/socstud/foundation_gr3/cluster1.pdf>.

Targeted Outcome/Intended Learning:

Social Studies: Cluster 1: Connecting with Canadians (3.1.3: Personal Identity)

KI-007: Identify factors that may influence their identities.

Examples: culture and language, time and place, groups and communities, arts and media . . .

Background:

Discuss the meaning of the word *identity*. List various factors that influence personal identity, including family (brothers a membership in groups, personal interests, exposure to and taste in music/art).

Brainstorm for positive character traits (kindness, responsibility, courage, trustfulness, respectful, cheerful, etc.). Record this information on the board for students to reference.

Materials:

- boxes (one per student)
- wrapping paper, tissue, fabric (and other items to decorate box)
- paper, pencils, pens
- Suggested K-4 ESD Poster word cards: relate, value, respect, traditions, culture, citizen, share, appreciate, connect, communicate. Available online at www.edu.gov.mb.ca/k12/esd/poster.html.

Activity Directions:

Have students decorate and fill a shoebox with images, ideas, pictures, and objects that they feel represent their identity. Ask them to write a short explanation of how each item relates to their identity. Have students choose one of the following website word cards: relate, value, respect, traditions, culture, citizen, share, appreciate, connect, or communicate. Ask them to include something about the theme of the card as it relates to them. The outside of the box could feature a list of action verbs that describe the student's activities/actions; another side of the box could include a list of adjectives that

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Grade 3 Learning Experience #2: You in a Shoebox

describe the person. When the shoeboxes are complete, have students present their shoeboxes to the class, or have students try to guess the maker of each box according to its contents.

This is a fun way for students to explore this outcome in context. Teachers can assess students' understanding of various aspects of identity by examining their ongoing projects and providing feedback to enhance their understanding.

The social studies curriculum includes BLMs 3.1.3a and b, which provide a definition and positive character traits activities. They can be found at www.edu.gov.mb.ca/k12/cur/socstud/foundation_gr3/blms/index.html.

Targeted Outcome/Intended Learning:

Social Studies: Cluster 1: Connecting with Canadians
(3.1.4: Leadership)

VP-011: Respect positive leadership in their groups and communities and in Canada.

KP-032: Give examples of formal and informal leadership and decision making in groups and communities.

Physical Education/Health Education: 3. Safety

K.3.3.B.4: Recognize roles of individuals in the school and community who provide safety services (e.g., school staff, crosswalk patrols, police officers, Block Parents, firefighters, doctors, nurses, elders, ski patrols, snowmobile patrols, forest rangers, coast guards . . .).



Background:

Make a list of leaders in the community. Have students prepare a list of questions that they would like to ask a community leader. Invite the principal or other community leader to come into the class to discuss what it is like to be a leader.

Identify the qualities of a good leader: good listener, decisive, concern for others' well-being, fair, good planner, etc.

Materials:

- Suggested K-4 ESD Poster picture cards: 5, 8, 14, 15, 16, 18, 19, 20, 23, 24, 27, 32, 35. Available online at <www.edu.gov.mb.ca/k12/esd/poster.html>.

Activity Directions:

Activity 1:

In a think-pair-share activity, think of problems a leader can face (e.g., your friend wants to cut in line while you are line leader—what do you do?). Discuss findings with the class. In groups, have students create a series of problems for their peers to solve. Students should share all problem scenarios with their teacher to ensure that they are on topic and understand the task. Students could present their ideas in a game format. Once the project is complete, check for spelling and neatness. Students can share their projects with classmates. Discuss solutions that students suggest.

Activity 2:

Encourage students to design a class project to lead the school in a meaningful program emphasizing that kids can make a difference. Some ideas include a litter-less lunch day, a healthy lunch day, a cookie bake sale to raise money for a local charity, clean the school grounds day, a clean teeth or clean hands initiative, etc. Students can have different roles in the campaign (e.g., poster design, giving a speech at assembly, giving a presentation to other classes, doing announcements on the P.A., writing a letter to parents to announce the event, contacting sponsors, etc.). To help students choose a topic or explore topics, use the website poster or website picture cards 5, 8, 14, 15, 16, 18, 19, 20, 23, 24, 27, 32, and 35.

Social Studies Blackline Master 3.1.4. has useful information. It can be found at <www.edu.gov.mb.ca/k12/cur/socstud/foundation_gr3/blms/index.html>.

Targeted Outcome/Intended Learning:

Social Studies: Cluster 1: Connecting with Canadians (3.1.5: Conflict Resolution)

KP-033: Identify ways of resolving conflict in groups and communities.

KP-034: Identify ways to deal with bullying.

Activity Centre #2 has a complimenting activity.

Background:

This learning experience is designed to assist students in understanding conflict resolution and developing conflict resolution skills.

Materials:

- Suggested K-4 ESD Poster word cards: think, learn, relate, restore, teach, distinguish, consequences, contribute, evaluate, defend, value, respect, create, recognize, ideas, needs, predict, care, contribute, celebrate, culture, repair, citizen, extend, depend, cooperate, share, organize, appreciate, understand, enjoy, connect, communicate, listen, grow, help. Available online at <www.edu.gov.mb.ca/k12/esd/poster.html>.

Books:

Peace Begins with You by Katherine Scholes (1989). Manitoba Education Library Call #303.66 S36.

Activity Directions:

Activity 1:

As a group, read the book *Peace Begins with You* by Katherine Scholes. Discuss how conflicts can begin (e.g., when people's needs and wants do not fit together), and review what actions the author suggests to solve the problems.

Activity 2:

Have students write a poem or story about how they can work together to solve conflicts in their lives. Use the website word cards as vocabulary for their writing and to reinforce discussion. Discuss words whose meanings might be unclear.

See the Social Studies 3.1.5 Conflict Resolution section for lesson introductions, discussion, use of Y-charts, and Blackline Masters 3.1.5 a, b, c, and d. It can be found at <www.edu.gov.mb.ca/k12/cur/socstud/foundation_gr3/cluster1.pdf>. There are also resources at <www.edu.gov.mb.ca/k12/cur/socstud/foundation_gr3/blms/index.html> to support this topic.

Targeted Outcome/Intended Learning:

Social Studies: Cluster 2: Exploring the World
(3.2.3: Human Rights)

KC-005: Recognize that people around the world have basic human rights.

Examples: access to food, water, shelter, a secure environment, education, fair and equal treatment . . .



Activity Centre #3 has interactive games about world hunger available as a free downloadable PDF.

Background:

Ask students what the term *human rights* means to them. List their ideas on the board and discuss. Conclude that human rights are the conditions people require in order to live healthy, happy, safe lives. Ask them to identify things they believe all people in the world should have. Use the website poster to help them think of ideas. List their ideas. Look over the list together carefully. Are there things listed that are not necessary for survival? Are some things luxuries? Try to condense their ideas to represent the basic human rights of people all over the world (i.e., food, water, shelter, security, education, fair treatment, equality).

Some storybooks about the life of a child from another country may be useful. Some books from the Manitoba Education Library that might be useful are included in the materials section.

Materials:

- ESD website poster
- travel brochures and various magazines
- glue sticks, scissors, paper writing materials
- Suggested K-4 ESD Poster word card: protect, learn, safety, environment, value, respect, needs, care, traditions, citizen, diversity, cooperate, share, grow, communicate. Available online at www.edu.gov.mb.ca/k12/esd/poster.html.

Books:

Let's Eat! What Children Eat Around the World by Beatrice Hollyer (2004).
Manitoba Education Library Call #394.12 H64.

This is the Way We Go to School: A Book about Children Around the World by Edith Baer (1992). Manitoba Education Library Call #E. Bae.

Wake up, World: A Day in the Life of Children Around the World by Beatrice Hollyer (1999). Manitoba Education Library Call #305.2309 H64.

Videos:

All the Colors of the Earth by Sheila Hamanaka and Crystal Taliefero (8 minutes) (VHS). First recited, then sung, the poetic words reveal that, despite outward differences, children everywhere are essentially the same. Manitoba Education Library Call #10793.

Activity Directions:**Activity 1:**

Read a book about a child from another country. As you read, ask students to pay attention to what the child from that country eats, what his or her home looks like, where the child goes to school, what activities the child engages in, and how the child relates to the world. After the story, record their observations on a comparison chart. Record the human rights of children from that country on one section of the chart, and record the human rights of children in this country on another. Encourage all students to contribute. Conclude that, although there are differences in types of foods, shelters, the way schools might look, etc., the rights of children all over the world are basically the same.

Activity 2:

In pairs or on their own, invite students to write a story that compares components of basic human rights in two countries (e.g., they could create a story about two children—one from Canada and one from another country—and write about/illustrate a day in their lives, comparing what they eat, what their home looks like, where they go to school, who their friends and family are, where they get their water from, etc.). Encourage them to conclude that although their lives are different, their basic needs are the same. Have them include at least five of the website word cards in their writing.

Use the discussion to encourage participation and clarify learning. Activity Centre #2 will assist teachers in assessing students' understanding of the concepts studied.

Targeted Outcome/Intended Learning:

Social Studies: Cluster 2: Exploring the World
(3.2.4: Personal Responsibility)

KG-027: Give examples of concerns common to communities around the world.

Use the cards generated here as a memory game in Activity Centre #4.



Background:

After making comparisons between human rights in communities in different parts of the world, brainstorm for ideas about concerns associated with these rights (i.e., What things do we need in order to acquire these rights?). Concerns common to communities around the world revolve around the ability to obtain basic human rights.

Help students to extend their thinking to conclude that we are dependent upon Earth and that protection of the natural environment is essential to our ability to meet our basic needs.

Materials:

- cardboard cut to match the size of the picture cards
- markers
- Suggested K-4 ESD Poster picture cards: 1, 2, 4, 5, 7, 9, 11, 12, 13, 15, 16, 19, 21, 22, 24, 25 29. Available online at <www.edu.gov.mb.ca/k12/esd/poster.html>.

Activity Directions:

Activity 1:

List our basic human rights on the board: food, water, shelter, security, education, fair treatment/equality. Create a word web for each right. Ask students what we need in order to obtain that right:

- **Food:** They might say money, grocery stores, caregivers, gardens, etc. Lead them in their discussion to end the web with clean water, clean air, fertile soil, etc.
- **Water:** taps, bottled water, stores End with clean rivers, lakes
- **Shelter:** houses, apartment buildings, money, trees, building materials, natural resources.
- **Security:** police; leaders; well fed, healthy, happy people who can get along End with clean, nurturing natural environment.
- **Education:** teachers, schools End with healthy people who can afford time to learn.
- **Fair treatment:** getting along, understanding each other People who are healthy and happy have time and energy to consider the rights of others.

Activity 2:

The object of this activity is to create a series of cards that list concerns that are common to communities all over the world. These cards will match with website picture card numbers 1, 2, 4, 5, 7, 9, 12, 13, 15, 16, 19, 21, 22, 24, 25, and 29.

Model the activity for them by using two of the cards as examples. Take card #20 (a man digging in a compost). Ask students how this picture could relate to a concern shared by most communities around the world. Record all answers, and write the most commonly accepted answer on a strip of cardboard the approximate size of the website picture card. (Hint: a suitable answer would be that communities require nutrient-rich soils to grow food. An alternative might be that composting reduces the amount of garbage in landfills. The need to reduce waste going to landfills is also a concern to many communities). Another card to model might be card #25 (children reading books). The expected response would be that all communities want their children to be educated and able to read.

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Grade 3 Learning Experience #6: Match Them Up

As a pair-share activity, divide the remaining picture cards among the students. Ask students to create a word or phrase for each picture card. The phrase must outline a related concern common to communities throughout the world (e.g., *hydro card* represents access to electricity; *marsh card* represents protection of watersheds/a reliable water source; *playground card* represents safe places for kids to play; *kids holding hands* represents friendship, understanding, fair treatment, acceptance; *garden card* represents access to healthy sources of food; *wind wheels* represents cleaner sources of power; *children reading* represents access to education; *washing hands* represents healthy disease-free living, clean water; *housing* represents shelter for all, etc.).

Once they are done, have groups share their ideas with the class. Invite comments from classmates. Once revisions are made and spelling is checked, invite children to record their phrases onto playing cards to be used as a class match-up game.

The social studies curriculum is rich in information and activities associated with this topic. Check out brainstorming ideas at <www.edu.gov.mb.ca/k12/cur/socstud/foundation_gr3/cluster2.pdf>, and BLMs 3.2.4 a, b, and c at <www.edu.gov.mb.ca/k12/cur/socstud/foundation_gr3/blms/index.html>.

Targeted Outcome/Intended Learning:

Social Studies: Cluster 2: Exploring the World (3.2.3: Human Rights)

KG-028: Identify organizations that support communities in all countries of the world.

Examples: United Nations and UNICEF, Red Cross, Médecins sans frontières . . .

This learning experience would also be suitable as an activity centre.

Background:

Some human rights groups work in Manitoba. Some of the worldwide human rights organizations have Manitoba chapters. All have websites and might provide speakers.

Materials:

- computers
- paper and writing materials
- names of various organizations that support communities worldwide and locally (e.g., UNICEF, Red Cross, Doctors Without Borders, Christian Children's Fund [CCF], Free the Children, Canadian Feed the Children Fund, Canadian Hunger Foundation [CHF], Oxfam Canada, United Nations World Food Program [UNWFP], International Relief Fund for the Afflicted and Needy [IRFAN], Samaritan's Purse, Red Cross; Locally: Salvation Army, Light House Mission, Siloam Mission, The United Way, Jewish Federation of Winnipeg, Mennonite Central Committee [MCC], etc.)
- Suggested K-4 ESD Poster picture card: 26. Available online at www.edu.gov.mb.ca/k12/esd/poster.html.
- Suggested K-4 ESD Poster word cards: reduce, sustainable, think, protect, learn, relate, restore, consequences, contribute, defend, environment, value, respect, conserve, ideas, needs, care contribute, reuse, recycle, citizen, cooperate, appreciate, understand. Available online at www.edu.gov.mb.ca/k12/esd/poster.html.

Activity Directions:

Activity 1:

Have available a list of organizations that support communities worldwide and locally. In pairs, have students select a specific organization (or suggest one of their own). Ask them to find out how their organization helps people. Does it work with children, housing, clean water projects, health education, etc.? What countries or location does it serve? What other information did they find interesting about the organization studied? Have students record their findings (in a report/poster or story) in their own words. (Encourage students to use the word cards for their vocabulary.) Based on their findings, have students tell the class the organization's activities. The reports could be compiled into a class book on human rights/humanitarian aid organizations.

Activity 2:

As a class, discuss each of the presentations, and decide which organization they feel they as a class could support—either by volunteering, promoting the organization locally, raising funds, or by collecting goods for that cause.

Note: *Hands On Social Studies*. Jennifer Lawson (ed.). Winnipeg, MB: Portage and Main Press, 2003. Manitoba Education Library Call #372.83044 L38. Grade 3, pp. 123–128, has descriptions of several service organizations.

Targeted Outcome/Intended Learning:

Social Studies: Cluster 2: Exploring the World
(3.2.4: Personal Responsibilities)

KG-031: Give examples of personal decisions and actions that may positively affect people locally or globally.

Examples: charitable donations and projects, recycling . . .



Activity Centre #3 has a related activity about world hunger.

Background:

Fair Trade Manitoba has information about other fair trade products available at <http://fairtrademanitoba.ca/>. In its FAQ section, it lists the requirements for a product to be listed as a fair trade product.

The website for Kids Can Make a Difference has examples of projects students have created in order to help others. Find it at www.kidscanmakeadifference.org/.

Materials:

- writing materials
- Suggested K-4 ESD Poster picture cards: 1, 3, 5, 6, 8, 11, 13, 14, 16, 18, 20, 23, 24, 27, 30, 32, 29, 33, 35, 36. Available online at www.edu.gov.mb.ca/k12/esd/poster.html.
- Suggested K-4 ESD Poster word cards: reduce, sustainable, think, protect, learn, relate, restore, consequences, contribute, defend, environment, value, respect, conserve, ideas, needs, care contribute, reuse, recycle, citizen, cooperate, appreciate, understand. Available online at www.edu.gov.mb.ca/k12/esd/poster.html.

Activity Directions:

Activity 1:

Read the *Child Voice* article about fair trade chocolate. Discuss what makes a product a fair trade product. Ask students how they might be able to help. One way to help is for students to consider and ask their parents to consider buying fair trade products when they shop.

Activity 2:

Many products come packed in excessive non-biodegradable packaging that will take up valuable space in the landfill site. Students can raise awareness of their concerns about excessive packaging either in the school or in the local community by creating posters that bring this problem to the attention of others, by being careful consumers themselves, and by lobbying to change packaging practices by writing letters to government officials and companies. As a positive approach to this concern, write a thank-you letter to companies that are changing their packaging practices. Encourage students to use the word cards listed above for vocabulary.

Activity 3:

Sharing Circle: Examine website picture cards 1, 3, 5, 6, 8, 11, 13, 14, 16, 18, 20, 23, 24, 27, 30, 32, 29, 33, 35, and 36. Place the cards in a basket. One at a time, have students pick a card (the person holding the card will be the speaker) and share with the class what is happening in the picture that would positively affect people, locally or globally, and why. Give an example of how they personally could make a difference regarding the theme of the card. This activity can provide teachers with an observational record of how well students have grasped this concept, and also provides an opportunity to address any misconceptions.

Social studies uses sharing circles, discussion, decision trees, and small-group activities for this topic. See Blackline Master 3.2.4c. It is available at www.edu.gov.mb.ca/k12/cur/socstud/foundation_gr3/blms/index.html.

Targeted Outcome/Intended Learning:

Social Studies: Cluster 3: Communities of the World (3.3.3: Resources)

KE-036: Give examples of how the natural environment influences work, goods, technologies, and trade in the communities studied.

Background:

This activity helps students acquire knowledge about the natural environment of the communities studied and apply that knowledge to an investigation of how the natural environment affects the livelihood of the people of that community.

Materials:

- Suggested K–4 ESD Poster picture cards: 1, 2, 4, 7, 11, 12, 22, 24. Available online at <www.edu.gov.mb.ca/k12/esd/poster.html>.

Books:

- books about work, trade, and agriculture in the community studied
- books or pictures about the natural environment of the community studied
- a list of farming types (e.g., dairy farms, grain farms, orchards), businesses, and goods that could be produced
- photos of the area where the community studied is located

Activity Directions:

Activity 1:

Provide students with a simple list of potential farming types, technologies, and businesses that can be carried out in a variety of communities (e.g., cattle ranch, dairy farming, grain farm, sugar production, rice production, mining, fishing, oil production) and website picture cards 1, 2, 4, 7, 11, 12, 22, and 24. In groups of two or three, have students examine the list and picture cards and decide which of those businesses, technologies, or farming practices might be carried out in the community studied.

To help them decide, provide photos and books about the environment in and around the community studied. Discuss how certain activities require special characteristics of the natural environment to be present in order to carry out the activity. For example, cattle farming requires open pasture land. Therefore, this is not an activity that could be carried out easily in a mountainous region. Similarly, forestry could not be carried out in an open grassland area. Some activities require a reliable source of water (fisheries, lumber mills, rice fields); others require areas with rock formations (mining).

Share and discuss students' findings. The accuracy of their predictions will help you assess how well students understand the correlation between the natural environment and the economy of a community.

Social studies Blackline Master 3.3.3c, which discusses global diversity, has useful information for discussions. Find it at <www.edu.gov.mb.ca/k12/cur/socstud/foundation_gr3/blms/index.html>.

Targeted Outcome/Intended Learning:

Science: Cluster 1: Growth and Changes in Plants

3-1-09: Identify plant adaptations that can be harmful to humans, and describe their effects.

3-1-16: Identify how humans from various cultures use plant parts for food and medicine.

Examples: use of roots for food (carrots) and medicine (ginseng) . . .



Some of the activities might be incorporated in an activity centre.

Background:

Use the lesson to engage students and acquire information about plants. The activity centre lessons (including book and website references) would be suitable for furthering their knowledge and applying that knowledge to a contextual activity.

Projects generated from this activity centre can help to assess students' understanding of harmful and helpful plants for humans.

Materials:

- Suggested K-4 ESD Poster picture cards: 11, 12, 17, 19, 21, 24. Available online at <www.edu.gov.mb.ca/k12/esd/poster.html>.
- Suggested K-4 ESD Poster picture cards: think, protect, learn, safety, distinguish, consequences, walking, evaluate, environment, access, value, conserve, recognize, needs, ideas, predict, care, reuse, repair, recycle, diversity, activity depend, cooperate, share, organize, identify, appreciate, understand, enjoy, communicate, listen, grow, help. Available online at <www.edu.gov.mb.ca/k12/esd/poster.html>.

Websites:

Information about poisonous plants from websites such as <www.wikihow.com/Identify-Poison-Ivy>.

Books:

A Taste of Wild Fruits by Manitoba Forestry Association Inc. and Manitoba Natural Resources (1984).

A Field Guide to Edible Wild Plants (Eastern/Central North America) by L.A. Peterson (1977).

Magic and Medicine of Plants by Reader's Digest (1986). Manitoba Education Library Call #615.321 M33.

Food Plants of Coastal First Peoples by Nancy Turner (2006). Manitoba Education Library Call #641.6 AS4.

The Good Earth: A Guide to Vegetables, Fruits, Grains, Spices, Culinary Herbs of Our Planet by Jon Gregerson (1992). Manitoba Education Library Call #581.632 G74.

Wild Plants of Central North America for Food and Medicine by Stephen Jackson and Linda Prine (1978). Manitoba Education Library Call #581.63097 J32.

Forest Pharmacy: Medicinal Plants in American Forests by Steven Foster (1995). Manitoba Education Library Call #615.32097 F68.

You Can Eat Them, You Know: Wild Food Plants by Oscar Nito (1977). Manitoba Education Library Call #641.603 M35.

Medicines to Help Us: Traditional Métis Plant Use by Christi Belcourt, et al. (2007). Manitoba Education Library Call #K615.321 M33.

Videos:

How Plants Are Used by National Geographic Society (17 minutes) (VHS).

African Plant Explorer: Fatimah Jackson by Canadian Learning Company (15 minutes) (VHS). Manitoba Education Library Call #8717.

Plants by Bill Nye (26 minutes) (VHS). Manitoba Education Library Call #D-6080.

Activity Directions:

Activity 1:

Help students to identify and avoid harmful plants by showing them pictures of stinging nettle and poison ivy. Note that poison ivy has a different appearance in different seasons, so seasonal pictures are needed.

Activity 2:

To engage students in thinking about plants as food, show them website picture cards 12, 17, 19, 21, and 24. Ask them what plants in the picture could be used as food by humans and how they could be prepared. The pictures of flowers and wetlands might give them some trouble! Suggest that certain flower species are used for food in many parts of the world (e.g., dandelion roots can be dried, ground, and used to make a coffee-like drink; chamomile tea is made from flowers of the chamomile plant; fancy restaurants sometimes add certain flowers to salads, etc.). The marsh can provide many good foods for people to eat (e.g., wild rice; the grains from cane grasses and phragmite reeds can be ground and used as flour; the roots and stems of cattails can be peeled and eaten raw or cooked, etc.). Encourage students to contribute other ideas.

Activity 3:

Invite students to learn more about edible wild plants during reading time by providing them with some of the books suggested above. To further their knowledge, show one of the videos or the DVD suggested above.

Activity Centre or Whole-Class Activities:

See suggested activities in Grade 3 Activity Centre #6: Create a Menu, Solve a Mystery.

Targeted Outcome/Intended Learning:

Science: Cluster 1: Growth and Changes in Plants

3-1-02: Observe, compare, and contrast the structure and appearance of several types of plants.

Examples: plants with different types of roots, trees with needles and trees with leaves . . .

3-1-03: Show respect for plants as living things.

Background:

There are so many different types of plants and tree species, all with their own special needs and qualities. Each has its own contribution to make to the natural environment. This lesson will help students to discover that a forest is not “Just a bunch of trees.”

The *Native Trees of Manitoba Field Guide* is also available in print form from Manitoba Conservation at <www.gov.mb.ca/conservation/forestry/contact.html>.

Materials:

- notebooks, pencils, erasers
- magnifying glasses
- markers or mini-flags on posts (optional)
- key to the tree leaves sheet
- one branch from an oak tree, spruce, or other common species
- leaf morphology sheet
- leaves
- paper and pencil crayons
- Suggested K-4 ESD Poster picture cards: 11, 12, 17, 19, 21, 24. Available online at <www.edu.gov.mb.ca/k12/esd/poster.html>.
- Suggested K-4 ESD Poster word cards: protect, restore, distinguish, value, replenish, respect, conserve, recognize, care, beauty, depend, appreciate, help. Available online at <www.edu.gov.mb.ca/k12/esd/poster.html>.

Websites:

Poison Ivy. Available online at <<http://landscaping.about.com/od/galleryoflandscapephotos/ig/Pictures-of-Poison-Ivy/>>.

Stinging Nettle. Available online at <http://landscaping.about.com/od/weedsdiseases/p/stinging_nettle.htm>.

Native Trees of Manitoba Field Guide. Available online at <www.gov.mb.ca/conservation/forestry/pdf/health/fieldguidefinal.pdf>.

Books:

One of several available tree guides, such as *Science Nature Guides—Trees of North America* by Alan Mitchell (2003). San Diego, CA: Thunder Bay Press, ISBN 1 85028 265 X.

Activity Directions:**Activity 1:**

Discuss the plants found in picture cards 11, 12, 17, 19, 21, and 24. Create a chart on the board with the following columns: type of plant, habitat, soil type, other needs, uses to humans. Either in groups or as a class activity, ask students the following questions and record their answers on the chart: “What kinds of plants do you see in this picture?” “What natural environment are the plants in this picture living in?” “Where else might you find them growing?” “What kind of soil do they need?” “What other needs do you think they have?” “How do these plants help humans?” (*Answers could include: Trees give us shade, building materials, and oxygen. Berry and vegetable plants give us food and oxygen. Flowers are nice to look at, provide oxygen for us to breathe, support insects that also pollinate crops, and you can eat some of them. Marsh grasses provide shelter for animals and ducks, hold water, filter water, and clean it.*) The marsh picture might require some discussion and guidance from the teacher.

Activity 2:

Armed with a magnifying glass, notebook, and pencil, have students set out on an exploration of a natural area (even the schoolyard can reveal some amazing diversity). Inform students that their job is to find as many different types of plants as possible. In order to verify their claim, students must very carefully draw a picture of each plant species that they find, including in their

picture the stem, a branch, a leaf (paying special attention to the shape of the leaf), and, if present, a flower or seed pod from each specimen. At the end of the activity, the class can gather together to tally the results. If a field guide is available, the class can try to identify the species.

Important Note: Remind students not to pick any of the plants. The objective is to appreciate the species diversity, not decrease it! Also, **beware of poison ivy and stinging nettle**. Tell students not to touch plants in or along the edges of wooded areas. Show students pictures of poison ivy and stinging nettle before starting the walk.

Variation: In addition to drawing their specimens, if working in the schoolyard or an open area, the class could make markers (stakes or wires with a flag on it) to mark out their discoveries. This helps to avoid duplication and provides the opportunity for the class to share their discoveries onsite, as well as to discuss the natural environment the plant is growing in. The following are some questions to help students appreciate their plants:

- Is it on gravel, which is a harsh environment, or in rich soil?
- If seeds are present, how do students think the seeds might be dispersed? (Does it have a seed pod that springs open? Do the seeds fall to the ground? Does it have prickly seeds that stick to animals that pass by, or fruit that birds and animals eat and then eliminate the seeds at another location? Does it have parachute seeds that use the wind to take them to other places? etc.)
- How abundant is the species? Are there several of them in one location, or is the plant all alone?

Activity 3:

Students will be amazed by just how many tree species live in their community. Use a guide to North American trees such as: *Native Trees of Manitoba Field Guide* and *Science Nature Guides—Trees of North America* to look at the variety of trees that live in our country. Note the distinctive shapes the body of each tree has (some are tall and slender, some are very rounded, some have branches starting at the bottom of the tree, while others have branches starting halfway up the trunk).

Ask students why they think different trees have different shapes (some grow tall and straight to try to reach for the sun in dense forests, while others try to push away competitors by having their branches spread far from the trunk, etc.). Have children act out the shape of various trees with their arms and legs. (Note: in the forest, not all members of a species will have the same shape, competition for light, space, disease, and soil conditions can change the

shape of individual specimens. Therefore, shape is not always a reliable form of identification.) Look at pictures of different types of seed pods and cones of various species. Discuss how the seeds might get from one place to another (e.g., squirrels, airborne, etc.).

Hand out the sheet about leaf morphology. Discuss the shapes of leaves, and familiarize students with the terminology associated with leaf morphology. Ask them what the word *toothed* might mean in relation to a leaf shape. Ask for a volunteer to draw a toothed leaf on the board. How about a lobed leaf or a needle-shaped leaf? Invite students to collect leaves on their way to school. Try to identify the shapes of these leaves. Save the leaves for a leaf rubbing art activity.

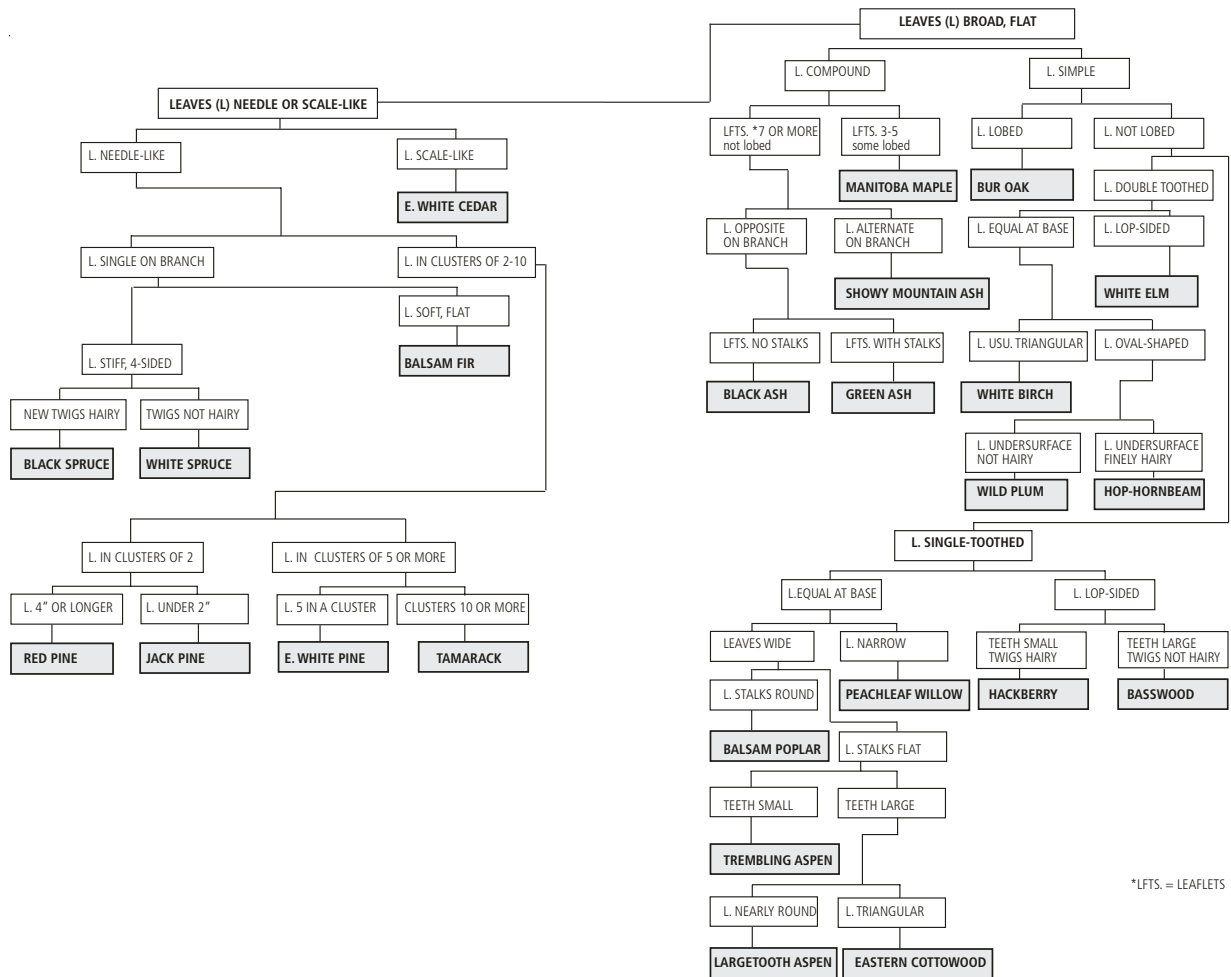
As a group, model how to identify a tree using the key to plant leaves included on this website. Using a branch from a tree species common to your area, work through the key, practising the terminology and referring to the leaf morphology sheet. (Note: As many ornamental and introduced species exist in urban areas, not all trees can be identified accurately, but this activity will give students a good idea of how diverse our tree species population is.)

Divide students into groups of three or four. Hand out the key to plant leaves. Tell students that they will now have the opportunity to try identifying a tree on their own. Remind them to stay close to the group, and to choose a tree that has a distinct trunk and that is taller than they are (this will eliminate most shrub species). When they have identified their tree, have them share their results with the group.

Activity 4:

For leaf rubbings, have students save one or two leaves from their tree identification field trip. Using the side of a crayon or pencil crayon, have them make a rubbing of their leaf, and share the leaves that others have collected to make a leaf rubbing collage. Preserve some of the leaves collected by pressing them in phone books or other heavy books for three to five days. Students can then glue the dried leaves to their leaf collage.

Leaf Key

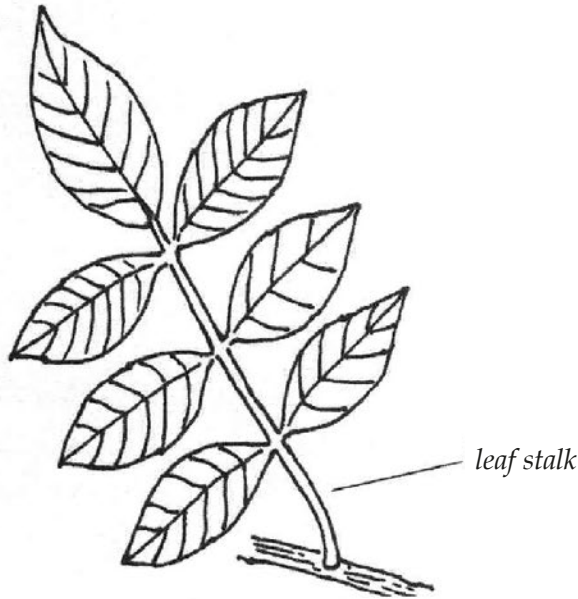


*LFTS. = LEAFLETS

* Reproduced from *Field Guide to the Native Trees of Manitoba*, by E.T. Oswald and F.H. Nokes, Canadian Forestry Service/Manitoba Natural Resources, 1988 (pp. 14 & 15). Available online at www.gov.mb.ca/conservation/forestry/pdf/health/fieldguidefinal.pdf.

Illustration 1: "Leaf Language"

Compound leaf (with 7 leaflets)



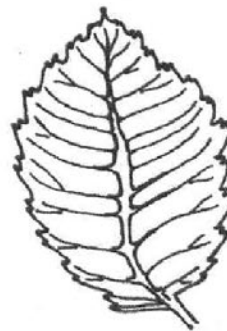
simple leaf



Leaf single-toothed



Leaf lobed



Leaf double-toothed

Illustration by Barbara Batulla.

Targeted Outcome/Intended Learning:

Science: Cluster 1: Growth and Changes in Plants

3-1-14: Describe ways plants are important to the environment.

Examples: improve soil, air, and water quality; reduce erosion . . .

3-1-18: Explain how humans replenish the plants they use and the consequences if plants are not replenished.

Examples: after loggers harvest trees, new ones should be planted to ensure a future lumber supply . . .

Background:

This learning experience will assist students in learning the importance of plants in our world. The materials section includes a number of very useful websites.

Materials:

- writing materials, paper
- Suggested K-4 ESD Poster picture card: 11. Available online at www.edu.gov.mb.ca/k12/esd/poster.html.
- Suggested K-4 ESD Poster word card: replenish. Available online at www.edu.gov.mb.ca/k12/esd/poster.html.

Websites:

Manitoba Hydro has a forest enhancement program for small-scale tree plantings. Information on this program can be found at www.hydro.mb.ca/environment/forest_enhancement/funding_criteria.shtml.

Links to several sites outlining the benefits of trees to urban, rural, and riparian environments can be found at www.treelink.org/linx/?navSubCatRef=56.

For statistics about how important trees are in a community and information about how trees around a yard benefit the environment, go to www.arborday.org/trees/benefits.cfm.

For general tree information as well as information about Los Angeles and its one million trees program, go to <www.fs.fed.us/psw/programs/uesd/uep/products/1/psw_cufr741_LA_Million_Trees_gtr.pdf>.

For interesting online lessons from Manitoba Fisheries, go to <www.gov.mb.ca/conservation/sustain/educate.html> and click on *Grade 3*.

Search the World Wildlife Federation Kids for a Living Planet website for its “Forests Alive” lesson.

Activity Directions:

Activity 1:

Look at website picture card #11. Ask students what is happening in the picture. Ask them if they know of anyone who has planted trees recently. Ask them if they know why they were planting trees. Brainstorm why trees are important: in the city, in the country; in a big forest. Have students visit the websites listed. Ask each student to find two or more important facts about the usefulness of trees. Read about the Los Angeles One Million Trees project. Why do they want to plant so many trees? Read about rainforest destruction. What happens when trees are not re-planted?

Activity 2:

Have students write a story called “The Day All the Plants Disappeared.” Include the impact on animals, people, and the environment. See <www.edu.gov.mb.ca/k12/cur/science/found/kto4/3c1.pdf>.

Activity 3:

Develop a plan to plant a tree or shrub in your school ground or a nearby park. Maintain or clean an existing flower bed or forested area, or support a local natural areas program.

Oak Hammock Marsh offers an activity kit in its *Wonders of Wetlands* series called “Treatment Plants.” This kit helps students to describe how plants remove pollutants from the water. For more information, go to <www.oakhammockmarsh.ca>.

Targeted Outcome/Intended Learning:

Science: Cluster 1: Growth and Changes in Plants

3-1-17: Investigate to determine how humans from various cultures make useful products from plant materials.

Examples: lumber milling, paper making, rope making, fabric making . . .



replenish

Social Studies: Cluster 3: Communities of the World (3.3.3: Resources);

KE-036: Give examples of how the natural environment influences work, goods, technologies, and trade in the communities studied.

Background:

There are many items we use that are directly made from plants. This learning experience will assist students in identifying some common articles made from plants.

Materials:

- For the display table, arrange a collection of items made from plants, such as paper, popsicle sticks, wooden musical instruments, cotton, hemp cloth or string, rice paper (or other handmade paper), rattles or other items made from vegetable gourds, items made from bamboo, etc.
- microscope
- containers of water
- microscope slides
- newspaper (1 sheet)
- food processor
- magazines and flyers featuring gift items and objects from other countries.
- glue, scissors, 11x17-inch paper
- Suggested K-4 ESD Poster picture cards: 3, 4, 7, 8, 14, 20, 21, 24, 25, 30. Available online at <www.edu.gov.mb.ca/k12/esd/poster.html>.
- Suggested K-4 ESD Poster word card: replenish. Available online at <www.edu.gov.mb.ca/k12/esd/poster.html>.

Activity Directions:

Activity 1:

Invite students to bring in objects they may have at home that are made from plant material (in particular, items from other countries). Brainstorm for items that are made from plants.

Look at the website picture cards 3, 4, 7, 8, 14, 20, 21, 24, 25, and 30. Can students spot things that are made from plant materials in each picture?

Activity 2:

As an experiment; combine shredded paper with enough water to cover the paper in a bowl. Let it soak for an hour. Process paper and water in a food processor until smooth. Place a drop of the pureed paper on a microscope slide. Invite students to examine the paper under various magnifications. Add a drop of food colouring or ink. Now what do they see? Ask them to draw what they see. Discuss how fibres of cellulose help plants to be structurally strong and, in turn, help materials made from plants to be strong too. Students could then enter their observations in a science journal.

Activity 3:

Use photographs from magazines, travel brochures, and flyers to create a collage of the various uses of plant materials. Have students create a collage of items made from plants.

Targeted Outcome/Intended Learning:

Science: Cluster 4: Soils and the Environment

3-4-08: Explain the importance of understanding the characteristics of different soils.

Examples: enables farmers to determine which crops can be grown in a particular area, enables gardeners to improve plant growth, enables engineers to know what types of foundations to set for structures . . .

Background:

This learning experience will assist students in understanding different soil characteristics.

Materials:

- samples of garden soil
- clear jars or containers (with lids)
- samples of clay, loam, humus, sand, small pebbles
- mortar and pestle
- microscope
- science journal
- containers to hold water
- water
- Suggested K-4 ESD Poster picture cards: 11, 19, 21, 22. Available online at <www.edu.gov.mb.ca/k12/esd/poster.html>.

Websites:

The Great Plant Escape. This site, which can be found at <<http://urbanext.illinois.edu/gpe/case2/c2facts2.html>>, helps students understand the characteristics of soil.

Journey to Forever. This is an excellent site linking to a variety of other sites as well as providing background information about soil composition, soil fauna, and a variety of experiments that can be performed in class. It can be found at <www.journeytoforever.org/edu_compost.html>.

14 Grade 3 Learning Experience #14: Soils

Books:

The Amazing Dirt Book by Paulette Bourgeois (1990). Manitoba Education Library Call #631.4 B69.

It's Moving Day by Pamela Hickman (1990). Manitoba Education Library Call #591.5648 H52.

Amazing Mud by Jean Anderson (2006).

Dirt by Steve "the Dirt Meister" Tomecek (2002). Manitoba Education Library Call #631.4 T64.

Backyard Biology: Observing Nature at School and Home by Bob DeWeese (1994). Manitoba Education Library Call #372.35044 S36b.

Videos:

How to Make Mud Pie by Michael Grayson (15 minutes) (VHS). Manitoba Education Library Call #8594.

All about Soil by Desiree Coleman (23 minutes) (VHS). Manitoba Education Library Call #5578.

Rocks and Soil by Bill Nye (26 minutes) (DVD). Manitoba Education Library Call #D6003.

Activity Directions:

Activity 1:

Use the websites and books as an introduction to understanding the characteristics of soils. Discuss what is needed to create a fertile garden. How can we keep our gardens fertile? Try testing a cup of soil to determine its composition by adding the soil and two cups of water to a clear bottle or jar. Put a lid on the jar, give it a shake, and then let it sit for a few minutes. Organic material will float to the top, clay will remain suspended in the water for a while, and sand/minerals will precipitate to the bottom. A good soil will have a mixture of all components. (See *Journey to Forever* website for more details.)

Activity 2:

In a discussion about soil types and the importance of understanding soil characteristics for building and gardening, in a sharing circle pass around website picture cards 1, 2, 11, 19, 21, and 22. Have pairs of students choose a card and brainstorm for ideas of why understanding soil types would be important to someone involved with the picture (either for building the site, planting there, managing the area . . .).

Activity 3:

Examine different types of soil components under a microscope. Which are the finest and which have the most texture to them? How will this affect the way water moves through them? Now try adding water to each type of soil component (let it sit for a few minutes). What happens to the water? Does it flow through quickly? Does it pool in spots? What does the material feel like when it is wet? Does it ooze around your fingers or is it solid to the touch? How would that affect a building that was placed on it? Have students record their observations in their journal. What conclusions can they draw about the different soil components?

Assessment:

Read student journals to check for understanding.

Targeted Outcome/Intended Learning:

Science: Cluster 4: Soils in the Environment

3-4-10: Describe ways to return organic matter to the soil.

Examples: composting, spreading manure on fields . . .

3-4-11: Use the design process to construct a simple composter that returns organic matter to the soil.

Examples: classroom composter for leftover food, school composter for grass clippings and leaves . . .



sustainable

Background:

There is an amazing amount of information about composting available for educators. The resources listed in the materials section of this lesson are just a sampling!

Materials:

- Suggested K-4 ESD Poster picture cards: 20, 26. Available online at <www.edu.gov.mb.ca/k12/esd/poster.html>.
- Suggested K-4 ESD Poster word cards: reduce, sustainable, think, protect, safety, restore, consequences, contribute, defend, compost, environment, value, replenish, respect, conserve, needs, recycle, reuse, contribute, care, citizen, depend, cooperate, share, appreciate, understand, grow, help. Available online at <www.edu.gov.mb.ca/k12/esd/poster.html>.

Websites:

Journey to Forever. This site provides background information about soil composition, links to building a composter in the school, experiments with pop bottles including building a “Soda Bottle Bioreactor,” and more. Find it at <www.journeytoforever.org/edu_compost.html>.

Garden Organic. This site provides simple step-by-step instructions on how to build a composter, as well as definitions and safety hints to mind along the way. It is available at <www.gardenorganic.org.uk/schools_organic_network/lz_comp.htm>.

Manitoba's Green Action Centre has excellent composting information and information about its Master Composters program. Find out more at <<http://greenactioncentre.ca/>>.

Books:

Animals Under the Ground by Allan Fowler (1997). Manitoba Education Library Call #591.757 F69.

Compost Critters by Bianca Lavies (1993). Manitoba Education Library Call #591.526404 L39.

Worms Eat Our Garbage: Classroom Activities for a Better Environment by Mary Appelhof, et al. (1997). Manitoba Education Library Call #372.357 A66.

Lunch Box for Plants by Rhea Brillinger. Manitoba Education Library Call #K372.35 L85.

Video:

Diary of a Worm by Alexander Gould (8 minutes) (DVD). Norwalk, CT. 2004. A diary story follows a few months in the life of a young worm. Manitoba Education Library Call #D-10779.

Activity Directions:

Activity 1:

Visit someone in the neighbourhood who has a compost bin. Ask them to explain how they use their compost. Find out if your city, town, or municipality has a compost program for grass clippings, leaves, and Christmas trees. What is done with the compost? If no program exists, how can one be started?

Activity 2:

Create a composter for your school or classroom. If you already have a composter from the previous year, create activities to maintain interest (to keep the project “sustainable”). You could have students examine the soil from the composter and compare it with garden soil, or you could do an experiment where plants are grown in soil from the composter as well as soil from the schoolyard. Measure plant growth from the two samples and make note of leaf colour and the overall health of the plant. Discuss any differences with reference to the benefits of composting to plants. You could also do a worm population study. Divide the composter into sections and place only certain kinds of plant waste in each section. Do some types of plants decompose faster than others? Do some make a better compost? etc.

Activity 3:

Using the books, websites, and kits listed above (along with resources available in the school), have students write a newsletter for their parents and other classes about the benefits of composting. Encourage students to work in groups or as individuals to create a series of articles about the life of a worm, critters of the soil, the importance of healthy soil, benefits to people of healthy soils, what happens when soil is not taken care of (e.g., poor farming practices, strip logging), how to build a composter in your yard, how they built one in the classroom, and what happened during the process, etc.

Some students can be illustrators, some can be researchers, and others can be writers and editors. To help them with vocabulary, encourage them to use the following word cards in their articles: *reduce, sustainable, think, protect, safety, restore, consequences, contribute, defend, compost, environment, value, replenish, respect, conserve, needs, recycle, reuse, contribute, care, citizen, depend, cooperate, share, appreciate, understand, grow, and help.*

The newsletter articles (an application process) will give teachers insight into how well students have understood the concept, as well as an opportunity to clarify and further student learning.

Targeted Outcome/Intended Learning:

Physical Education/Health Education: 4. Personal and Social Management

K.4.3.B.3b: Show an understanding of the steps in a conflict-resolution process (i.e., identify the goal; identify constraints, limiting conditions, and possible options; choose best option; evaluate for effectiveness).

K.4.3.B.3c: Identify mediation skills (e.g., allow person to express opinions, summarize other person's point of view, recognize feelings of others . . .) that can be used as part of the conflict-resolution process.

Background:

This activity could be done as an application lesson to help students practise their mediation skills and conflict resolution strategies.

Materials:

- Suggested K-4 ESD Poster picture cards: 8, 9, 11, 17, 19, 21, 23, 27, 30, 33, 35. Available online at <www.edu.gov.mb.ca/k12/esd/poster.html>.

Activity Directions:

Explain to students that they are going to be presented with a series of conflicts and scenarios to solve. For each scenario/conflict, there will be a complainant (two students), a perpetrator (one or two students), a judge/mediator (one or more students), and a jury (the rest of the class). The complainant will state the problem and provide evidence that an actual problem exists. The perpetrator will defend his or her reasons for creating the "problem." The jury can decide who has made the stronger argument, and the judge will decide who was right and what the consequence (if any are required) should be. Each of the website picture cards 8, 9, 11, 17, 19, 21, 23, 27, 30, 33, and 35 will represent a conflict or scenario. Students should have the opportunity to play judge, jury, and perpetrator or complainant.

Card 8 Scenario: Students/teachers are now required to turn off computers at the end of the day and to check classroom electrical power bars to ensure that they are turned off as well. "Complainant" is against this practice; "perpetrator" is determined to enforce the new rule. Both sides must defend their positions. Can there be a peaceful solution?

Card 9 Scenario: There is considerable discussion about safety issues and space usage on the school playground. The “complainant” claims that someone is destroying his snow forts and, because the “perpetrator” is always complaining about the fort activities, the complainant is sure that the perpetrator is to blame. The perpetrator denies the accusation, but insists that the schoolyard should be open to everyone. Can there be a peaceful resolution?

Alternately, students can create their own conflict scenario for this picture. The card lends itself well to a discussion of bullying and safety issues

Card 11 Scenario: Tree-planting debate. The “complainant” does not want trees planted on the school ground. She says that the trees are messy and take up valuable playing space. The “perpetrator” argues that there are many benefits to having planting trees near the school. Whose argument is better and why?

Card 17, 19 Scenario: Flowerpots or mini-garden patch for the schoolyard. The “complainant” group argues against greenery; the “perpetrator” group argues in favour.

Card 21 Scenario: Fitness trail or wetland habitat. A small marsh near the school is being considered as a site for a new fitness trail. That would mean bulldozing/filling in the marsh and destroying the habitat. The community and the school really need a fitness trail. The “complainant” and the “perpetrator” are on opposite ends of the problem. They must come up with convincing evidence to support their sides of the argument. Can the judge/mediator help them find a middle ground?

Card 23 Scenario: It has been decided by student council to provide funds to buy phosphate-free detergent for the canteen as part of a greener school project. The “complainant” is worried that this will take away valuable funds needed for a field trip. The “perpetrator” argues why this is important.

Card 30 Scenario: The “complainant” lodges a complaint that the teacher (the “perpetrator”) is keeping the gym too cold (students are freezing!). The teacher defends her decision (prevents overheating during exercising, lowers heating costs, cuts carbon emissions, etc.).

Card 33 Scenario: New light bulbs have been installed in the school. The “complainant” complains that the new light bulbs are hard on the eyes, unattractive, risks to landfill sights, more costly, etc. The “perpetrator” defends the decision (does a poll on how many people find these lights to be hard on the eyes, etc.).

Card 35 Scenario: The Grade 3 class has decided to hold a class garage sale to raise funds for either a new action game for the class or a new class computer game, but they have to decide which one to get.

Targeted Outcome/Intended Learning:

Physical Education/Health Education: 5. Healthy Lifestyle Practices

K.5.3.A.2: Identify common communicable diseases/illnesses/conditions (e.g., colds, flu, pink-eye, head lice . . .) in the classroom and home, and ways to prevent the spread of diseases/illnesses/conditions (e.g., cover mouth when sneezing or coughing, wash hands regularly, share food appropriately, use own hair utensils and headwear . . .).

K.5.3.A.3: Assess personal dental care habits and identify ways to promote dental health for self and/or others.

Background:

Read a story about taking care of yourself. Invite students to share their ideas about how we can stay healthy. Have various storybooks about exercising, healthy eating, and proper hygiene available for students to read.

Encourage students to research to discover more about disease prevention.

Materials:

- clay from the garden, or clay slurry from a pottery studio
- water
- a Manitoba Health hand-washing kit
- Suggested K-4 ESD Poster picture cards: 7, 10, 15, 16, 24, 28. Available online at <www.edu.gov.mb.ca/k12/esd/poster.html>.
- Suggested K-4 ESD Poster word cards: think, protect, consequences. Available online at <www.edu.gov.mb.ca/k12/esd/poster.html>.

Activity Directions:

Activity 1:

Use picture cards 7, 10, 12, 15, 16, 24, and 28 to get students thinking about the different activities involved in taking care of oneself. In a sharing circle, place the picture cards in the centre of the circle. Invite students (one at a time) to select a card, and explain how they think the people in the picture are taking care of themselves (e.g., wearing warm clothing or exercising by going for a walk). Accept all answers, and guide children to think of alternative viewpoints.

Activity 2:

Check with your local community health nurse for the availability of a hand-washing kit (they are excellent) and, if possible, invite the nurse to give a presentation on hand washing. Alternately, mix clay with water to create a soupy mix (a local pottery artist might be able to provide this). Have students dip their hands into the mix. Let dry for a minute. Blindfold each student and have them wash their hands as thoroughly as they can. Have students share the results of their efforts. How much mud is left on their hands? If that mud were actually germs, how well did they do at getting rid of them? Discuss how they felt about the hand-washing activity. Demonstrate and have children practise proper hand washing: using soap, wash the front and back of hands for a count of 10 per side, wash in between fingers, and rub fingertips gently (remind them to turn the water tap off while they are soaping their hands). Assure them that if they follow this procedure, they will get all of the dirt off of their hands.

Discuss what to do when you have a cold. Encourage them to contribute suggestions. Discuss sneezing or coughing into your elbow and not your hands. Have the class practise this activity. During activity time, encourage children to create a play about hand washing or what to do when you have to cough or sneeze. This play, along with the hand-washing activity, or a demonstration on how to brush your teeth properly could then be presented to the Kindergarten class.

GRADE 3 ACTIVITY CENTRES

The lessons and activities presented and related links are to supplement existing curriculum guidelines. The activity centres presented here can be used on their own, in combination with other activity centres, or, in some cases, as a whole-group activity. References to related learning experiences are given where applicable.

Sustainable Development Themes Related to the K-4 ESD Poster Activity Centres

Activity Centre	Subject	Cluster Section	SLO	Page
1. Create a Match-up Game	Social Studies	1. Connecting with Canadians (3.1.1: Canadian Citizenship)	KC-002: Give examples of responsibilities and rights of Canadian citizens.	3-55
2. Sorting and Classifying	Social Studies	1. Connecting with Canadians (3.1.5: Conflict Resolution)	KP-033: Identify ways of resolving conflict in groups and communities.	3-57
3. Interactive Online Activity	Social Studies	2. Exploring the World (3.2.3: Human Rights)	KC-005: Recognize that people around the world have basic human rights. <i>Examples: access to food, water, shelter, a secure environment, education, fair and equal treatment . . .</i>	3-59
4. A Memory Game	Social Studies	2. Exploring the World (3.2.4: Personal Responsibilities)	KG-027: Give examples of concerns common to communities round the world.	3-61

continued

Activity Centre	Subject	Cluster Section	SLO	Page
5. Tree Charades	Science	1. Growth and Changes in Plants	<p>3-1-01: Use appropriate vocabulary related to their investigations of growth and changes in plants.</p> <p>Include: growing medium, nutrient, energy, root, stem, leaf, flowers, pistil, stamen, ovule, pollen, seed, fruit, adaptation, life cycle.</p> <p>3-1-07: Identify the basic parts of plants and describe their functions.</p> <p>Include: roots, stems, leaves, flowers, pistil, stamen, ovule, pollen, seeds, fruit.</p>	3-63
6. Create a Menu, Solve a Mystery	Science	1. Growth and Changes in Plants	<p>3-1-16: Identify how humans from various cultures use plant parts for food and medicine</p> <p><i>Examples: use of roots for food (carrots) and medicine (ginseng) . . .</i></p>	3-65

Targeted Outcome/Intended Learning:

Social Studies: Cluster 1: Connecting with Canadians
(3.1.1: Canadian Citizenship)

KC-002: Give examples of responsibilities and rights of Canadian citizens.



Background:

This could be used as “application” activities to be done after a list of students’ rights at school have been established.

Materials:

- 15-cm. long cardboard or heavy gauge paper cardstock
- writing materials
- Suggested K-4 ESD Poster picture cards: 9, 25. Available online at www.edu.gov.mb.ca/k12/esd/poster.html.
- Suggested K-4 ESD Poster word card: rethink. Available online at www.edu.gov.mb.ca/k12/esd/poster.html.

Activity Directions:

With input from the class, make a list of rights students have at school. Have students match each “right” with a “responsibility,” or these “rights,” “responsibilities,” and “rules” can be recorded on cards and used as a classroom match-up game.

Observation of students’ responses will help you to verify understanding and provide the opportunity to correct any misconceptions students might have, and thus clarify the concept of rights versus rules and responsibilities in their minds.

The social studies curriculum provides many good suggestions on this topic in the Canadian citizenship section of www.edu.gov.mb.ca/k12/cur/socstud/foundation_gr3/cluster1.pdf. The Blackline Master 3.1.1a, which can be used to sort and classify examples of responsibilities and rights, is great for an application activity in an activity centre. It is available at www.edu.gov.mb.ca/k12/cur/socstud/foundation_gr3/blms/index.html.

Targeted Outcome/Intended Learning:

Social Studies: Cluster 1: Connecting with Canadians
(3.1.5: Conflict Resolution)

KP-033: Identify ways of resolving conflict in groups and communities.

Learning Experience #4 could be used as an “engage” activity.

Background:

Cooperating with other people is an important social skill. This activity centre helps to provide an introduction to conflict resolution. Conflict resolution skills are useful skills in many situations including dealing with sustainable development issues.

Materials:

- scissors
- laminator (optional)
- Suggested K-4 ESD Poster picture card: 4. Available online at www.edu.gov.mb.ca/k12/esd/poster.html.
- Suggested K-4 ESD Poster word card: cooperate. Available online at www.edu.gov.mb.ca/k12/esd/poster.html.

Books:

We Can Work it Out: Conflict Resolution for Children by Barbara K. Polland (2000). Manitoba Education Library Call #303.69 P64.

Hands On Social Studies Jennifer Lawson (ed.) (2003). Manitoba Education Library Call #372.83044 L38.

Activity Directions:

Activity 1:

Read the book *We Can Work it Out* by B.K. Polland. It provides good photographs of children interacting with one another, and suggestions for working things out. It is useful as an introduction to conflict resolution or for a review discussion prior to using the conflict resolution cards suggested below.

Activity 2:

Hands On Social Studies (pp. 62–67) has some excellent information on the six forms of conflict resolution and the importance of admitting when you are wrong. The conflict resolution cards on pages 64–67 would work well in an activity centre or as an application activity (i.e., sort the cards as to what form of conflict resolution each represents).

The social studies Blackline Masters provide two activities suitable for an activity centre: 3.1.5b: Bullying Survey and 3.1.5d: Role-Playing.

Targeted Outcome/Intended Learning:

Social Studies: Cluster 2: Exploring the World
(3.2.3: Human Rights)

KC-005: Recognize that people around the world have basic human rights.

Examples: access to food, water, shelter, a secure environment, education, fair and equal treatment . . .



Lesson #5 has complementary activities.

Background:

This activity centre will assist students in learning about basic human rights.

Materials:

- computer
- Suggested K-4 ESD Poster picture card: 26. Available online at www.edu.gov.mb.ca/k12/esd/poster.html.
- Suggested K-4 ESD Poster word card: relate. Available online at www.edu.gov.mb.ca/k12/esd/poster.html.

Activity Description:

Activity 1:

The United Nations World Food Programme has created interactive games about world hunger for teachers and students alike. Do an internet search for its “Food Force” series of games and find some that are appropriate for Grade 3 students.

Targeted Outcome/Intended Learning:

Social Studies: Cluster 2: Exploring the World (3.24: Personal Responsibilities)
KG-027: Give examples of concerns common to communities around the world.

This centre could be used as an application activity to follow Learning Experience #6, which has activities required to complete Activity #1 of this activity centre.

Background:

This activity centre provides an opportunity for students to apply their understanding of human rights to familiar and new situations.

Materials:

- board cut to match the size of the picture cards
- markers
- cards generated from Lesson 6
- an assortment of recycled materials, magazines, and flyers
- a three-metre long piece of construction paper
- glue, scissors
- Suggested K-4 ESD Poster picture cards: 1, 2, 4, 5, 7, 9, 12, 13, 15, 16, 19, 21, 22, 24, 25 29. Available online at <www.edu.gov.mb.ca/k12/esd/poster.html>.
- Suggested K-4 ESD Poster word card: recognize. Available online at <www.edu.gov.mb.ca/k12/esd/poster.html>.

Activity Directions:

Activity 1:

Use cards created in Learning Experience #6. Invite students to arrange the cards on a table face side up. Allow a few minutes for viewing, and then flip them over. Students must then try to remember and match the picture cards with their corresponding card, listing the community concern associated with the picture (see Learning Experience #6 for further details).

Activity 2:

Create a human rights mosaic using recycled materials and pictures from magazines, flyers, etc. Divide a large strip of paper into sections (one per student or student group). Each student (or pair of students) chooses one aspect of basic human rights (e.g., safety, clean water, nutritious food, love, housing). Using various recycled materials and pictures from magazines, invite them to create a picture on their section of the mural that represents the basic human right that they have chosen (encourage them to try a “dry mock-up” of the picture before they attach everything to the mural). After the mosaic is complete, invite students to interpret their section of the mural for the class.

Variation: The mural could focus on organizations that help people locally or around the world.

Students’ interpretations of the human right represented will give you a window into their understanding and provide an opportunity for one-on-one discussion about aspects of human rights.

For access to a wonderful array of recycled materials for classroom use, consider joining ArtsJunktion. It’s free! For more information, go to <www.ArtsJunktion.mb.ca>.

Targeted Outcome/Intended Learning:

Science: Cluster 1: Growth and Changes in Plants

3-1-01: Use appropriate vocabulary related to their investigations of growth and changes in plants.

Include: growing medium, nutrient, energy, root, stem, leaf, flowers, pistil, stamen, ovule, pollen, seed, fruit, adaptation, life cycle.

3-1-07: Identify the basic parts of plants and describe their functions.

Include: roots, stems, leaves, flowers, pistil, stamen, ovule, pollen, seeds, fruit.



diversity

Background:

Two websites have some excellent online activities and lesson plans about plants for K-3 classes. The Tree Link website at www.treelink.org/kids/activities.html has a variety of areas to explore. The second website at www.urbanext.uiuc.edu/gpe/tg/c6-intro.html takes students directly to an online interactive site called *The Great Plant Escape*, which provides a series of lessons that help students learn plant vocabulary, anatomy, and the importance of plants in our lives.

Materials:

- Suggested K-4 ESD Poster picture cards: 11, 12, 17, 19, 21. Available online at www.edu.gov.mb.ca/k12/esd/poster.html.
- Suggested K-4 ESD Poster word card: diversity. Available online at www.edu.gov.mb.ca/k12/esd/poster.html.

Activity Directions:

Activity 1:

Access the Tree Link website to find appropriate activities among a variety of areas to explore. Clicking *resources* and then *kids and community trees* leads to a wide variety of resources. The second website takes students directly to an

online interactive site called *The Great Plant Escape*, which provides a series of lessons that help students learn plant vocabulary, anatomy, and the importance of plants in our lives. These activities are designed for Grades 4 and 5 but might be useful with Grade 3 students.

For more information about Project Learning Tree, contact the Manitoba Forestry Association at <www.mbforestryassoc.ca> or Project Learning Tree at <www.plt.org>.

Activity 2:

In pairs, have students pick out a website picture card from among cards 11, 12, 17, 19, and 21, and act out the type of plant shown on the card. Other students at the centre must try to guess what type of plant is being depicted by its shape and movement (perhaps the second student is “picking” something from the plant, etc.). This activity would be good for engaging students in the topic of plant diversity.

Targeted Outcome/Intended Learning:

Science: Cluster 1: Growth and Changes in Plants

3-1-16: Identify how humans from various cultures use plant parts for food and medicine.

Examples: use of roots for food (carrots) and medicine (ginseng) . . .

Background:

This centre is useful in helping students develop their research/information-gathering and -reporting skills, as well as applying their learning to real-life situations.

Use the kits and/or videos as part of engaging and acquiring information about plants.

The activity centre lesson (including book and website references) would be suitable for furthering their knowledge and applying that knowledge to a contextual activity. Projects generated from this activity centre can help to assess students' understanding of the importance of plants to food and medicine for humans.

Materials:

- Suggested K-4 ESD Poster picture card: 12. Available online at www.edu.gov.mb.ca/k12/esd/poster.html.
- Suggested K-4 ESD Poster word card: identify. Available online at www.edu.gov.mb.ca/k12/esd/poster.html.

Websites:

Forest Survival: These sites discuss how to use Mayan knowledge of plants to survive in a South American forest. Available online at www.Newtonsapple.tv/teacherguide.php?id=1418 and www.reachutmichigan.org/funexperiments/agesubject/lessons/jungle.html.

Books:

A Taste of Wild Fruits by Manitoba Forestry Association and Manitoba Natural Resources (1991).

A Field Guide to Edible Wild Plants (Eastern/Central North America) by L.A. Peterson (1977).

Magic and Medicine of Plants by Reader's Digest (1986). Manitoba Education Library Call #15.321 M33.

Food Plants of Coastal First Peoples by Nancy Turner (2006). Manitoba Education Library Call #41.6 AS4.

The Good Earth: A Guide to Vegetables, Fruits, Grains, Spices, Culinary Herbs of Our Planet by Jon Gregerson (1992). Manitoba Education Library Call #581.632 G74.

Wild Plants of Central North America for Food and Medicine by Stephen Jackson and Linda Prine (1978). Manitoba Education Library Call #581.63097 J32.

Forest Pharmacy: Medicinal Plants in American Forests by Steven Foster (1995). Manitoba Education Library Call #615.32097 F68.

Manitoba Education Kits:

You Can Eat Them, You Know: Wild Food Plants by Oscar Nito (1977). Manitoba Education Library Call #J641.603 M35.

Medicines to Help Us: Traditional Metis Plant Use by Christi Belcourt, et al. (2007). Manitoba Education Library Call #K615.321 M33.

Videos:

How Plants are Used by National Geographic Society (17 minutes) (VHS). Manitoba Education Library Call #3124.

African Plant Explorer: Fatimah Jackson by the Canadian Learning Company (15 minutes) (VHS). Manitoba Education Library Call #8717.

Plants by Bill Nye (26 minutes) (VHS). Manitoba Education Library Call #D-6080.

Activity Directions:

Activity 1:

In groups or as individuals, using the resources listed above, have students create a menu using edible forest plants.

OR

Activity 2:

Have students write a story about surviving in the forest. They could be provided with various scenarios (e.g., They have cut themselves and they need to use plants to heal their wound. They have eaten something that made their stomach sick and they need to use something to calm their stomach. They have to make a meal for their family and they need to use food from the forest, etc.).

Activity 3:

Have them look for a plant, fruit, or vegetable that they are unfamiliar with (preferably from another country), and create a poster or report about how people use that plant for food or medicine or both.

