

# The Three Sisters



(Corn, beans and squash planted by the children  
of Muskoday First Nation)

**ancient wisdom of interdependence**

A resource about food for elementary classrooms

# The Three Sisters: Ancient Wisdom of Interdependence

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## Introduction:

# Local Foods and Nutrition for the Elementary Classroom

The [International Federation of Organic Agriculture Movements](#) (IFOAM) describes organic agriculture as "an agricultural system that promotes environmentally, socially and economically sound production of food, fibre, timber etc." These systems take local soil fertility as a key to successful production. By respecting the natural capacity of plants, animals and the landscape, it aims to optimize quality in all aspects of agriculture and the environment.

Organic agriculture significantly reduces external inputs by refraining from the use of chemo-synthetic fertilizers, pesticides, and pharmaceuticals. Instead it allows the powerful laws of nature to increase both agricultural yields and disease resistance.

Organic agriculture also includes social considerations in its holistic approach recognizing that people are as important as the organic system.

Organic agriculture adheres to globally accepted principles, which are implemented within local social-economic, geoclimatical and cultural contexts. Basic principles of organic agriculture:

- Enhancement of biological cycles within the farming system, involving micro-organisms, soil flora and fauna, plants and animals;
- Maintenance of long term fertility of soils;
- Promotion of the healthy use and proper care of water resources;
- Use of renewable resources in locally organized production systems;
- Creation of a harmonious balance between crop production and animal management;
- Providing livestock conditions of life with due consideration for the basic aspects of their natural behaviour;
- Allowing people working in organic production a quality of life which meets their basic needs and allows an adequate return and satisfaction from their work, including a safe working environment; and progressing toward an entire production, processing and distribution chain which is both socially just and ecologically responsible.

(<http://saskorganic.com/page/what-organic-farming>)

In order to teach elementary students about organic foods, teachers need to ensure that the students are aware of what herbicides and pesticides are. If possible, you should plant an organic garden. If not, then the students should make a trip to a local farmer's market or to a community garden.

As well, you need to plan a trip to the local grocery store to allow the students to have an opportunity to see nonorganic foods and organic foods. While at the grocery store, you should purchase organic and nonorganic foods to bring back to have a taste test.

Students should also become aware of how their food choices affect the environment. For example, is food packaging wasteful and how should food be disposed of properly. As a school project, you could create a portable compost bin and teach the students the benefits of composting. Individual classrooms can be in charge of composting food (daily or weekly) items that have been saved from lunches.

Lessons should be kept simple in order to ensure that the students master the necessary skills. The goal of this unit is to provide the students with the knowledge to make proper food choices. They will become aware of the different choices that can be made in terms of growing or purchasing food.

As a final project, students may choose to write a report or create a presentation about organic methods. (pesticides, weeding, etc.) A debate would also be a good idea because one side could debate the pros of organic farming/gardening while the other side is debating the cons of organic farming/gardening.

**An excellent resource for gardening is:** <http://www.growarow.org/indexENG.htm>

**More Excellent Resources About Organic Farming:**

<http://www.ocia.org/AboutOCIA/QuickFacts.aspx>

[http://www.cog.ca/about\\_organics/what\\_is\\_organics/](http://www.cog.ca/about_organics/what_is_organics/)

## Connecting with Saskatchewan's Ministry of Education

	Outcomes	Lesson Number
<b>K</b>	<b>LTK.1</b> Examine observable characteristics of plants, animals, and people in their local environment <b>NSK.1</b> Explore features of their natural surroundings (e.g. soil, water, landform, and weather conditions), including changes to those surroundings over time	Lessons 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 13, 17, 19, 21
<b>1</b>	<b>LT1.2</b> Analyze different ways that plants, animals, and humans interact with various natural and constructed environments to meet their needs.	Lessons 1, 8, 9, 11, 14, 15, 16, 17, 18, 19, 21
<b>2</b>	<b>AN2.3</b> Assess the interdependence of humans and animals in natural and constructed environments <b>AW2.2</b> Assess the importance of air and water for the health and survival of living things, including self, and the environment	Lessons 1, 5, 9, 11, 14, 15, 16, 19, 21
<b>3</b>	<b>PL3.1</b> Investigate the growth and development of plants, including the conditions necessary for germination <b>PL3.2</b> Analyze the interdependence among plants, individuals, society and the environment <b>ES3.1</b> Investigate the characteristics, including soil composition and ability to absorb water, of different types of soils in their environments <b>ES3.2</b> Analyze the interdependence between soil and living things, including the importance of soil for individuals, society, and all components of the environment	All lessons in this unit touch on these outcomes.
<b>4</b>	<b>HC4.1</b> Investigate the interdependence of plants and animals, including humans, within habitats and communities <b>HC4.3</b> Assess the effects of natural and human activities on habitats and communities, and propose actions to maintain or restore habitats.	All lessons in this unit touch on these outcomes.
<b>5</b>	<b>MC5.3</b> Assess how the production, use, and disposal of raw materials and manufactured products affects self, society, and environment <b>WE5.3</b> Analyze the impact of weather on society and the environment, including technologies that help humans address weather conditions	Lessons 1, 14, 15, 16, 19, 20, 21, 22

<https://www.edonline.sk.ca/webapps/moe-curriculum-BBLEARN/index.jsp?lang=en>

## Assessment and evaluation

**Assessment:** For ease of record keeping, two assessment tools have been created that can be used for all lessons in these resources:

1. A lesson chart to record, in a quick checklist style format, assessment of student performance and to keep record of objectives explored among the lessons.
2. An anecdotal record chart to record quick notes about a selection of students on a regular basis.

It is suggested that the teacher make multiple copies of these tools before teaching and note each lesson to be explored in the order the teacher plans to explore them. Then, as each lesson draws to a close, the teacher can keep a standard record of accomplishments of students and teacher for unit evaluation.

To augment this record keeping specific tools from the [Ministry of Education Curriculum](#), can be used as needed, for skills and abilities specific to English Language Arts, Social Studies and/or Science. A reference list is attached below.

**Evaluation:** Having assessment information collected and organized regularly will create a package of information from which to draw evaluative conclusions concerning students, and the effectiveness of instruction

<b><i>A Reference List for Assessment Techniques- copied from Saskatchewan Ministry of Education</i></b>		
<b>1</b>	<b>Anecdotal Records</b>	notions of evaluative impressions
<b>2</b>	<b>Contracts</b>	an individual assignment constructed and agreed upon by both teacher and student regarding any or all of the details concerning content, process, product, and evaluation.
<b>3</b>	<b>Observation Checklist</b>	a listing of specific criteria which a teacher looks for, and indicates the presence of, in observing a student's work
<b>4</b>	<b>Projects</b>	includes such things as independent student investigations, Science Fair projects, or other Science Challenge activities
<b>5</b>	<b>Rating Scales/Rubric</b>	a listing of specific outcomes which are observed by the teacher and evaluated using a scale.
<b>6</b>	<b>Student Portfolios</b>	a collection of student work samples which is used as a basis for interpretation of progress
<b>7</b>	<b>Tests</b>	<ol style="list-style-type: none"> <li>a. essay</li> <li>b. objective               <ul style="list-style-type: none"> <li>• fill-in-the-blanks (completion)</li> <li>• matching</li> <li>• multiple choice</li> <li>• short answer</li> <li>• true/false</li> </ul> </li> <li>c. oral</li> </ol>
<b>8</b>	<b>Test Stations</b>	a location where a student can complete a task in order to demonstrate a competence (e.g., finding the mass of a rock).
<b>9</b>	<b>Written Reports</b>	includes regular journal writing, illustrations, art projects, or laboratory reports at the Elementary Level.

**LESSON CHART RECORD**

<p align="center">LESSON _____ DATE _____</p> <p>5= wow factor, 4= very good, 3= satisfactory, 2= poor, 1= very poor  <u>OR</u> x= objective explored, + = criteria met</p>	Unit _____	St																	
	Teacher _____	St																	
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	Record Objectives below.																		

## Teacher Background Information: Principles of Organic Agriculture

### *Decentralization:*

- More local/regional production, processing, and marketing
- Dispersed production (more farms and farmers) control of land, resources, and capital

### *Independence*

- Smaller, lower input production units, less reliance on external sources of knowledge, energy, and credit
- More personal and community self-sufficiency
- Primary emphasis on personal values, knowledge, skills

### *Community*

- Increased co-operation
- Farming is a way of life and a business
- Emphasis on a holistic approach to production, optimizing all parts of the agro-ecosystem
- Emphasis on appropriate technology and scale of production
- Commitment to traditional family farm and rural community as an important “way of life”

### *Harmony with nature*

- Humans are part of and dependent on nature
- Nature provides resources but is also valued for its own sake
- Working with natural nutrient and energy cycles
- Working with an ecological/closed system approach – developing a diversified and balanced system
- Incorporating more natural products and processes
- Using cultural methods to build soil health

### *Diversity*

- Broad genetic base
- Incorporation of poly-cultures, complex rotation
- Integration of crops and livestock
- Heterogeneity of farming systems
- Interdisciplinary (natural and social sciences), participatory (inclusion of farmers) systems-oriented

### *Restraint*

- Full-cost accounting
- Short- and long-term outcomes equally important
- Greater use of renewable resources, conservation of non-renewable resources
- Sustainable consumption, simpler lifestyles,
- Equitable access to basic needs
- Recognition and incorporation of other knowledge and ways of doing – allowing for a more heterogeneous knowledge base.

**I believe a leaf of  
grass is no less than  
the journeywork of  
the stars.**

–Walt Whitman (1819-  
1892) from *Song of  
Myself*

## The Three Sisters

Grade 1  
Needs and Characteristics of Living Things

Grade 3  
Plant Growth and Changes

Grade 4  
Habitats and Communities

### Resources and Materials

Story from:  
<http://www.birdclan.org/threesisters.htm>

### Assessment

Lesson chart record

Anecdotal record of students' receptiveness to the story, its origins and the embedded lessons

### Teacher background information

This story is most appropriate for grades 3 and older. For younger children, the teacher should re-tell the story in a condensed version.

"The Native American story of the Three Sisters varies from tribe to tribe. This version of the story most likely stems from an oral account by Lois Thomas of Cornwall Island, compiled by students at Centennial College and found in Indian Legends of Eastern Canada." For more information see <http://www.birdclan.org/threesisters.htm>

Corn, beans and squash, planted together, complement one another in important ways. The corn provides a stalk on which the bean can grow. The bean, like all legumes, has bacteria on its roots that absorb nitrogen and make it available for plants to grow. Corn needs a lot of nitrogen. Lastly, squash provides shade for the soil to keep moisture and discourage weeds.

As well as helping one another grow well, the three sisters, prepared together, provide balanced nutrition. Among the nutrients corn has carbohydrates and amino acids; beans have protein and other amino acids and squash has vitamins and if you also prepare the seeds, healthy fats.

The Three Sisters as a planting method illustrates a key principle of organic agriculture, to trust healthy natural systems to produce healthy food in symbiotic relationships. This is embodied in the box on this page, quoted from a document from the Saskatchewan Organic Directorate.

- Harmony with nature***
- Humans are part of and dependent on nature.
  - Nature provides resources but is also valued for its own sake.
  - Working with natural nutrient and energy cycles
  - Working with an ecological/closed system approach – developing a diversified and balanced system
  - Incorporating more natural products and processes
  - Using cultural methods to build soil health

Depending on the time of year, the class can do different things with this story of the Three Sisters.

Set:  
Soft music playing  
Photo of the three sisters  
Recipe on board (see next page)



### Three Sisters Stew

(search for organic as it was traditionally without chemicals)

- One large squash, any kind
- Kernels from 3-4 corn on the cob
- 1.5 cups of dry beans, soaked overnight, cooked and drained
- Tomatoes, 3-4
- 1 small onion, chopped
- 1-2 tablespoons organic oil
- Vegetable bouillon, 2 cubes with 2 cups water or
- 2 cups of vegetable stock
- Carrots, 3-4, or other root vegetables
- ½ to 1 cup finely chopped leeks

Have the cooking implements and foods for all to see.

1. Begin by having students identify the foods that are on the table. As they do this, point to these on the recipe and explain that today we are preparing a stew called Three Sisters. Explain that these can be acquired close to home.
2. With students helping, put all the ingredients together in the slow cooker and turn it on a low-medium heat.
3. Tell students that as they wait for the food to be ready, they will study a story that is written about three ingredients that are considered the Three Sisters in many First Nations' traditions. They must listen carefully so that they can learn why they are called the three sisters and how the sisters help each other, just as human sisters do.

#### Materials:

Prior preparation:

- Have students bring a spoon and cup to school
- Purchase the foods
- Soak the beans overnight., cook and drain
- Fry the chopped onion in the two tablespoons of canola oil and store for use the next day

Printed directions for recipe

Crock pot or slow cooker

Ingredients for stew

Cutting board, knife and vegetable peeler

Napkins

Access to sink for hand washing and cleaning up  
Cup and spoon for each student  
Copy of story for each student  
Large blank sheets of paper folded into three panels (or more with older students) for story mapping  
Drawing and coloring utensils  
Soft music for background during storytelling

**NOTES about purchasing foods:**

1. Many Saskatchewan grown organic foods can be locally sourced at health organic food stores and farmers' markets, especially during the fall. Alternately, ask people you know with gardens.
2. Only organic oil is free of genetically modified elements.
3. Canned versions can be used as well, but add unnecessary ingredients. If needed, use frozen versions.

**Method:**

1. After students are settled, tell them that you wish to read a story to them called The Three Sisters. This is one version of a story held by many First Nations peoples. Explain or remind students that stories were used historically to teach and that as they listen, they are to try to learn the lessons that the story holds.
2. Have students get comfortable and close their eyes to listen, with heads on their desks or lying on the floor. After they are settled begin reading, pausing occasionally to allow students to visualize the story elements.
3. After finishing, have students "return" to the present and assign them into groups of three. Give each group a large sheet of paper folded into three panels and ask them to recreate the story visually, with beginning, middle and end (older students can segment the story into more panels). At the bottom of each panel, students are to explain the panel in writing.
4. When groups have finished, have them place their work on display and present their interpretations.
5. Close with a discussion of the lesson of the story:
  - that these plants complement each other by helping each other to grow well.
  - that the three sisters together provide a balance of nutrition.
  - that nourishing foods are easily available and prepared

Enjoy a cup full of Three Sisters stew and give each child a copy of the recipe to take home for the family to enjoy!

**Extension:**

1. Older students can research the specific nutritional qualities of the Three Sisters that combine for balanced nutrition.
2. You may choose to discuss with the students about the fact that organic oil is not grown on the prairies because the GMO (genetically modified) canola industry has polluted most of the canola capacity. Therefore, organic oil is imported from a distance and is not likely from the prairie provinces.

## The Three Sisters

Once upon a time there were three sisters who lived together in a field. These sisters were quite different from one another in their size, shape and way of dressing. One of the three was a little sister, so young that she could only crawl at first, and if she wanted to stand up she had to twine herself around her eldest sister. This sister wore velvet green with delicate tendril ribbons. The second of the three sisters, wore a frock of bright yellow and had a way of running off across the field when the sun shone and the soft wind blew in her face. The third sister was the eldest. She was always standing very straight and tall above the other sisters trying to guard them.

There was only one way in which the three sisters were alike. They loved one another very much and were never separated. They were sure that they wouldn't be able to live apart.

After a while, a stranger came to the sister's field. It was a little Iroquois boy. He was as straight as an arrow and as fearless as the eagle that circled his head far above in the sky. He knew the way of talking to the birds and the small brothers of the earth, the mouse, the groundhog, the chipmunk, squirrel and fox. The three sisters were very interested in this little Iroquois boy. They watched him fit his arrow in his bow, saw him carve a bowl with his knife and wondered where he went at night.

Late that summer, the youngest sister in green velvet who couldn't stand up without the help of her big sister, disappeared. Her sisters mourned for her until the fall, but she did not return.

Once again the little Iroquois boy came to the three sister's field. He came to gather reeds at the edge of the nearby stream to make arrow shafts. The two sisters who were left watched him and gazed at him with wonder at the prints of his moccasins marking his trail to the field.

That night the second of the sisters disappeared. This time it was the sister who dressed in brilliant yellow and always wanted to run off across the field. She left no mark of her going but it may have been that she set her feet in the moccasin tracks of the little Iroquois boy.

Now there was only one sister left. Tall and straight she stood in the field not once bowing her head with sorrow, but it seemed to her that she could not bear to live in her field alone. The days grew shorter and the night grew colder. Her green shawl faded and grew thin and old. Her hair once long and golden was now brown and tangled by the wind. Day and night she sighed for her sisters to return to her, but they did not hear her. Her voice when she tried to call them was low and sad like the wind.

But one day when it was the season of the final harvest, the little Iroquois boy heard the crying of the third sister. He felt sorry for her so he took her in his arms and carried her to the lodge of his father and mother. Oh what a surprise awaited her! Her two lost sisters were there in the lodge of the little Iroquois boy, safe and very glad to see her. They had been curious about the boy and they had gone home with him to see how and where he lived. They had liked his warm longhouse so well that they decided to stay there for the cold winter. And they were doing all they could to be useful.

The little sister in green, now quite grown up, was helping to keep the dinner pot full. The sister in yellow sat on the shelf drying herself for she planned to fill the dinner pot later. The third sister joined them, ready to grind some meal for the Iroquois family's bread. Ever since then the three sisters spend their spring and summers in the field together, and their winters in the longhouse, helping to feed the family of the little Iroquois boy. And the three have never been separated since.

Every child of today should know these three sisters and need them just as much as the little Iroquois boy did. The little sister is the bean who needs the eldest sister to keep her from crawling along the ground. The second sister is the squash, who has bright yellow flowers and tends to run away across the field. The eldest sister is the corn. Her kernels can be dried and ground up to make flour for bread. When the corn beans and squash are eaten, they provide a very nutritious meal with everything a person needs to be healthy.

*"The Native American story of the Three Sisters varies from tribe to tribe. This version of the story most likely stems from an oral account by Lois Thomas of Cornwall Island, compiled by students at Centennial College and found in Indian Legends of Eastern Canada." For more information see <http://www.birdclan.org/threesisters.htm>*

## The Web of Life: We are all connected.

Grade 1  
Needs and Characteristics of Living Things

Grade 2  
Animal Growth and Changes  
Air and Water in the Environment

Grade 3  
Plant Growth and Changes

Grade 4  
Habitats and Communities

Part 1 Resource  
<http://www.kidsplanet.org/wol/index.html>

Photographs for the second part of lesson are appended. Alternately, find and copy pictures of flora and fauna for your region, ensuring that there are about equal amounts of each, plus soil and sun.

### Teacher background information:

In these lessons, children will explore interdependence in relation to plants, animals and other natural elements as a web of life as opposed to a food chain or circle of life. The web as an analogy more clearly illustrates the complex interconnectedness of life forms and nutrients.

The resource for Part 1 is an online story of the web of life from the perspective of a spider, and is best utilized if the story can be projected on a large screen so that all students are focused on the same screen (a smart board, large computer screen or multi-media projector).

Part 2 enables the children to experience interdependence by becoming a plant, animal or other essential element of life.

In debriefing the above exercises, students will understand that all elements and living things have roles to ensure life.

NOTE: For young children the teacher can set a simple version of the web, based on local life forms that the children brainstorm.

### Set:

Tape pictures and names of prairie animals and plants, located after this lesson, on the board around the following advance organizer:

### Materials:

- Ball of yarn
- Pictures of plants and animals of the prairies (attached below)
- Tape
- Use of computer lab for <http://www.kidsplanet.org/wol/index.html> chalkboard

### Method:

#### The Spider's Story

Using the computer lab go to the website <http://www.kidsplanet.org/wol/index.html> and follow the links to the Web of Life for young children. Tell students to listen carefully because you will ask questions afterwards. After reading the spider's story, or having children take turns, ask students to name some of the creatures and elements that the spider talked about in the story (e.g.. spider, plants, sunshine, water, soil, birds, squirrel, deer, bugs, ants, crickets, caterpillar, fox, coyote, rabbits, mice, bears, wolf, ticks). As students are naming some animals or other elements that they encountered in the story, write these in a circle on the board. Ask: Can anyone tell us one creature or

element that is food for another? (e.g. water feeds plants, plants feed caterpillars, caterpillars feed spiders, birds eat spiders, and so on). Draw lines connecting examples as children provide them, until they have given as many examples as possible. Then, ask them to note what it looks like (spider's web) and what it teaches (e.g. all are food for others, all are connected, all are important, and so on).

1. List the words prey, predator, scavenger, herbivores, and habitat. Ask students to describe the meaning of each, and record their answers on the board.
2. Ask students to look at the web and tell the class some examples of each.
3. Close by asking students to relate what they have learned from the spiders' story. Examples:
4. That animals and plants depend on each other to survive
5. That plants and animals also need sun and water
6. That when plants and animals die they return to the earth
7. That there is no one example that is more important than the other
8. That plants and soil also provide habitats for creatures and they must be healthy for creatures to be healthy
9. That each element is important

### Web of Life Game

In this game, children are given a picture and name tag from the board to wear as they are to become that element. Have students stand in a circle, the teacher holding a ball of yarn. As they organize themselves, ensure that their identity is visible to others, and saying that we will look a little more into the ideas that the spider explained in the first part of the lesson. Tell them that this time, there are some different characters. Ask each student to look carefully at all the characters and to think of an example to which they provide energy. The teacher is the sun, holds the loose end of the ball of yarn and explains that she/he will throw the ball to one person who represents a plant or animal to which the sun gives energy (e.g. one of the plants, to the person). Throw the ball to a plant, explaining that plants need the sun to create nutrients that are used by them and other creatures. Have each student do the same until a web is created, illustrating as in the first part of the lesson that all are Interdependent and important.

Have students hold the string tautly and ask them:

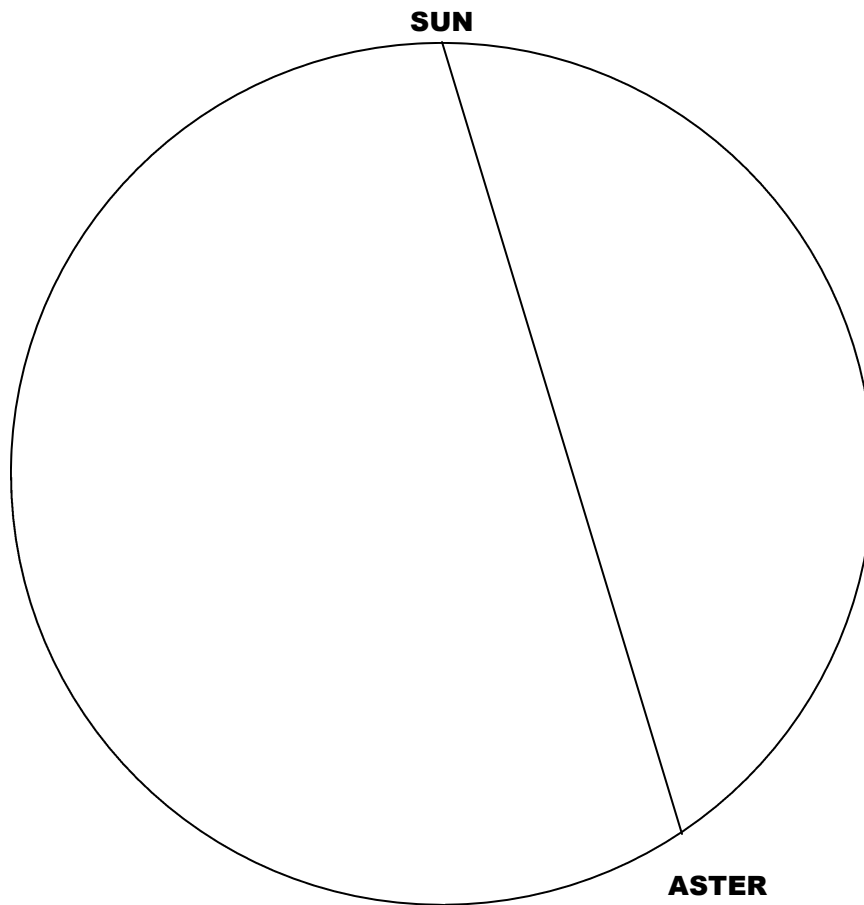
1. What does the web teach us (will retell earlier learning)?
2. What would happen:
  - if the plants would disappear (nothing else could survive)? What is one immediate effect (e.g. bees would have no pollen, herbivores would have no food)?
  - if the person would disappear (other life forms would continue to survive)? Explain that people are mostly omnivores (eat plants and animals) but are not normally a food for carnivores (meat eaters) or other omnivores.
  - if herbivores disappeared (would affect plants because they help spread plant seeds, some of which need to go through digestion, would lessen food for omnivores and carnivores)
  - if other omnivores disappeared (carnivores would have less food)
  - if carnivores disappeared (imbalance would cause too many herbivores and omnivores)
  - if the sun disappeared (all life would disappear, sun's energy a basic element of all life)

Still holding the web, explain that the balance they experience is critical for health and wellbeing. Each time one life form disappears, the others must adjust, but if too many disappear, it becomes more difficult to adjust and everything is affected. Have students place the yarn on the floor (rewind later) and place their name tags on the desk. Give each student the Web of Life activity sheet (attached) to complete and hand in for assessment.

# WEB OF LIFE

NAME \_\_\_\_\_

DATE \_\_\_\_\_



**Directions:**

1. On the circle above, place ten examples that you can recall from our Web of Life exercise.
2. Beginning with the sun, draw a line to another example that depends on the sun for survival. On the line, jot a few words to explain.
3. Then connect that example to another, and so on, explaining each time what one does for the other.

## Saskatchewan Plants and Animals



## Teachings of the Medicine Wheel

Grade 1  
Needs and Characteristics of Living Things

Grade 2  
Animal Growth and Changes  
Air and Water in the Environment

Grade 3  
Plant Growth and Changes

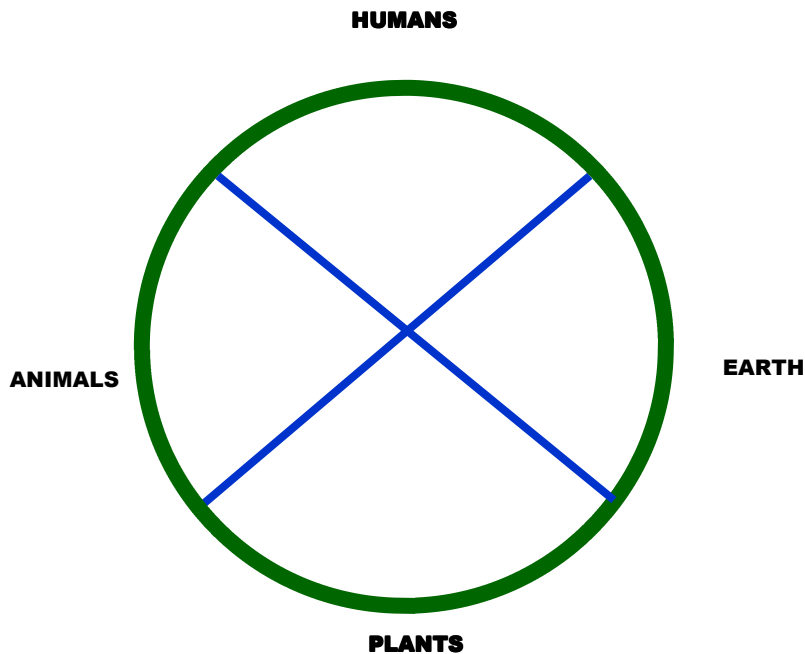
Grade 4  
Habitats and Communities

Assessment:  
[Lesson chart record](#)

### Teachings of the Medicine Wheel

#### Teacher background information:

The Medicine Wheel represents the interdependence of life on earth at many levels. For this lesson, students will transfer their learning about the web of life to the medicine wheel to underscore the importance of soil and plants to health within the animal world and of course, humans. The use of the wheel below illustrates a progression of dependency and interdependence in which the foundation is the earth itself. By placing photos from the previous lesson into each of these quadrants students will have an illustration of the total interdependence of life, beginning with the soils.



**Set:**

Have photos from previous lesson, and additional examples, placed on board in no particular order to one side of medicine wheel.

**Materials:**

Photos from previous lesson (attached) and additional examples  
Medicine wheel on board  
Large art paper with medicine wheel drawn on it (one for 4 students)  
Primary paints (yellow, blue, red)  
Brushes  
2 water containers for each group  
Plastic tray for mixing colours

**Method:**

1. Ask students to have a look at the displayed materials, the pictures from the Web of Life lesson and the medicine wheel.
2. Explain the medicine wheel, from First Nations wisdom, beginning with earth and its elements, the interdependence of plants with these elements, animals with plants and humans with plants and animals. Finally, life returns to the earth to nourish further generations of life.
3. Then, have each student choose the photo that was her/his “character” in the previous lesson. Taking turns have students place their photos on the medicine wheel.
4. Examine the resulting image and discuss how the quadrants relate, based on previous learning (e.g. plants depend on insects and animals to spread their seeds, humans are not really needed by other life forms, and so on). Note students’ ideas. Bring the discussion to conclude that one essential relationship among the quadrants is nourishment among various life forms.
5. Ask what might happen if certain life forms are destroyed, for example, spraying poisons on insects (plants can suffer and not be able to spread seeds, spray might be ingested by animals and people, more insects might die than intended, poison might go in the soil, and so on). Another example can be killing of predators. Take a predator from the wheel and ask students what might happen now (balance taken away, over population of prey, and so on). After a number of examples, ask students how people are affected when other life forms are damaged or destroyed, arriving at the conclusion that human health and wellbeing is affected.
6. Place students in groups of four and give each group the supply of art materials. Their task will be to paint a medicine wheel that shows examples of interdependence among the quadrants. Each person is responsible for one quadrant. The person who has the human quadrant will paint a person on her/his quadrant, and each of the others must then give an example from their quadrant that the person needs in some way. Then, each person does the same, each time having the others paint a connecting example in their quadrant. Continue until each quadrant has 4-5 examples painted. Try to fill the quadrants with colour, cut the wheels out and place them on display. NOTE: students may require a mini-lesson in mixing colours beginning with primary colours.
7. Have students explain a few of their examples for the rest of the class.
8. Tell students that during the next lesson they will be learning about people, farmers and gardeners, who grow food to help to keep the web of life and the medicine wheel healthy so that people and other life can be healthy. Because these people value nature and the web of life they are called organic farmers/ gardeners.

**Assessment**

Have the groups of students explain their paintings. Use the following rubric on cooperative learning to assess whether or not each student worked in the project.

## Cooperative Learning Rubric

	1	2	3	4
<b>Contribution to group goals</b>	Works toward group goals only when prompted	Works toward group goals with occasional prompting	Works toward group goals without occasional prompting; accepts and fulfills individual role within group	Consistently and actively works toward group goals; willingly accepts and fulfills individual role within group
<b>Consideration of others</b>	Needs occasional reminders to be sensitive to the feelings of others	Shows sensitivity to the feelings of others	Shows and expresses sensitivity to the feelings of others; encourages the participation of others	Shows sensitivity to the feelings and learning needs of others; values the knowledge, opinion, and skills of all group members and encourages their contribution
<b>Contribution of knowledge</b>	Contributes information to the group only when prompted	Contributes information to the group with occasional prompting or reminding	Contributes knowledge, opinions, and skills without prompting or reminding	Consistently and actively contributes knowledge, opinions, and skills without prompting or reminding
<b>Working and sharing with others</b>	Participates in needed changes when prompted and encouraged; always or often relies on others to do the work	Participates in needed changes with occasional prompting; often needs reminding to do the assigned work	Willingly participates in needed changes; usually does the assigned work and rarely needs reminding	Helps the group identify necessary changes and encourages group action for change; always does the assigned work without having to be reminded

## Growing Food Organically

Grade 1  
Needs and Characteristics of Living Things

Grade 2  
Animal Growth and Changes  
Air and Water in the Environment

Grade 3  
Plant Growth and Changes  
Exploring Soils

Grade 4  
Habitats and Communities

Saskatchewan Organic Directorate  
<http://www.saskorganic.com> and Food Mile Campaign <http://foodmiles.saskorganic.com/content/producers>  
<http://www.ocia.org/AboutOCIA/QuickFacts.aspx>  
[http://www.cog.ca/about\\_organics/what\\_is\\_organics/](http://www.cog.ca/about_organics/what_is_organics/)

### Teacher background information:

“Organic food crops are grown without the use of chemical pesticides or fertilizers. Genetically modified organisms do not qualify as organic nor do irradiated foods or crops fertilized with sewage sludge.

Organic farmers build healthy soil -- fertilizing and building the soil's organic matter through the use of cover crops, compost, and biologically based soil amendments.

Organic meat, dairy products, and eggs are produced from animals which are fed organic feed and are usually allowed free range and outdoor access.

Organic livestock and poultry are not given antibiotics, hormones, or medication (other than vaccinations) in the absence of illness.

(source: <http://saskorganic.com> )

Prior to this lesson, find an organic farmer in your area who is able to visit your class and explain to her/him about the unit and what they would talk about:

1. Why healthy soils mean healthy plants and animals and ultimately, healthy people.?
2. What they do to build and keep soils healthy?

It would be helpful if the farmer had photos of the farm and types of organic products he/she grows or raises, to create a display for the presentation. Alternately, place other photos of the product types.

### Set:

Invite an organic farmer to your class. Remind students of their study of the medicine wheel and how everything is interdependent. Health of one area is dependent on the health in another. Explain that an organic producer also understands this and that the guest will talk about why and how she/he looks after the soil as an important part of keeping us all healthy. Introduce the guest and show the class where the guest is from on a local area map. Explain that the pictures illustrate the types of organic products that the farmer has on her/his farm. Tell the students to listen carefully and think of questions to ask after the guest finishes speaking.

### Materials:

Guest  
Local area map  
Photos of types of organic products placed on display behind the guest speaker  
Gift or card for the presenter and a student to present  
Large Venn diagram drawn on chart paper and on display

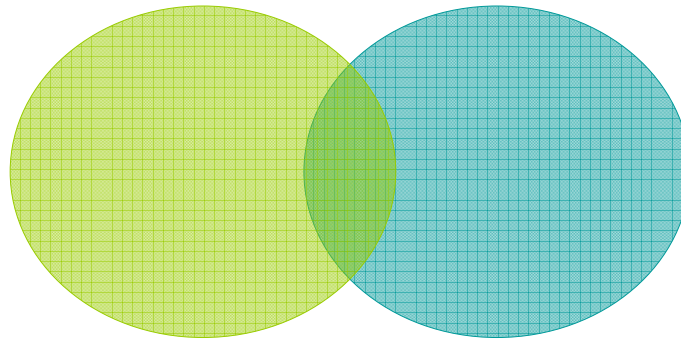
### Method:

After the guest is finished the presentation, have students ask questions that emerged. When questions have been asked and answered, have the student chosen to present the gift thank the guest and present the gift.

Once the class is settled, refer the students to the Venn diagram.

Medicine Wheel

Organic  
Farmer



What we learned from  
the medicine wheel....

What they  
have in  
common

What we learned from  
our guest....

Have the students compare and contrast what they have learned in the previous lesson in reference to the medicine wheel and what the guest had to offer. They should arrive at the conclusion that both illustrate that life forms are interdependent and that our health as people is dependent on looking after the health of other life forms, including what exists in the soil.

## Looking After and Building Our Soil

Grade 1  
Needs and Characteristics of Living Things

Grade 2  
Air and Water in the Environment

Grade 3  
Plant Growth and Changes  
Exploring Soils

Grade 4  
Habitats and Communities

### Resources:

Discovery Education:

Soil Safari- excellent materials about soil and a virtual tour of soil, developed for children

<http://school.discoveryeducation.com/schooladventures/soil/>

“Layer away: A lesson on the importance of soil”

Michigan Dept. of Agriculture

[http://www.michigan.gov/mda/0,1607,7-125-2961\\_2971-65293--,00.html](http://www.michigan.gov/mda/0,1607,7-125-2961_2971-65293--,00.html)

This lesson has students examine soil types and why farmers must test soil quality .

### Purpose

During this lesson, students will examine:

1. What soil is made up of
2. Properties of different soils

### Materials:

- Samples of different types of soils (Find and label these and retrieve them from different areas.)
- Large jars with lids
- Magnifying glasses
- Stop watches or a timer
- Coffee filters
- Photocopied cards
- Something to write with (pencils are preferred)
- Water
- Measuring containers
- Jars big enough to fit the coffee filters
- Chart paper

### Experiment

- It is important to get the students to understand that they need to always wash their hands after they touch the different soil samples.
- Before the experiment, you need to get several soil samples ready.
- 1. Allow the students to examine the soil types. Get them to touch them to determine the different textures and look at them through the magnifying glasses to observe the soil's colour and what might be in the soil samples.
- 2. Once the students have observed and touched each soil sample, discuss with the large group about what they think the soil is made from. Record their ideas on chart paper so that the students can refer back to them. This is easily done by creating a graphic organizer that has a box for each soil sample.

3. Put a soil sample in a large jar with water and screw the lid on tightly. Shake the jar until the soil is mixed in the water.
4. Set the jar aside so the contents can separate and settle while you finish the lesson.
5. Divide the class into small groups.
6. Have each group investigate one soil type more closely.
7. Have each group measure the same amount of soil and place them into the jars that are big enough for the coffee filters. Tape the filter, place the soil into the filter, and add water.
8. Make predictions about whose soil will filter through first, second, and so on. Record these predictions in a chart on the board.
9. Once all the soil has filtered through, discuss why the soils filtered in the order that they did. This may be caused by the soil composition. (plant or animal matter)

#### **Write-up**

- Have the students record their responses on the science experiment form that incorporates Bloom's Revised Taxonomy. This form can be found at the end of this unit or at the following website:

<http://www.kurwongbss.eq.edu.au/thinking/Bloom/blooms.htm>

#### **Extension**

- Discuss that water and nutrients (what is in the soil) contained in the soil are necessary for plant growth. Have the students predict what the third component, light, is.
- You may also try to grow seeds in each soil type to see what seeds grow best in what soil type. If you do this, make sure that each plant is provided with the same amount of water and light.

This experiment was adapted from the following website:

<http://www.suite101.com/content/introduction-to-soil-lesson-a50728>

**To find out how to properly collect soil samples, there are lots of great videos to help you on youtube.**

## Protecting Our Water

Grade 1  
Needs and Characteristics of Living Things

Grade 2  
Animal Growth and Changes  
Air and Water in the Environment

Grade 3  
Plant Growth and Changes  
Exploring Soils

Grade 4  
Habitats and Communities

Students will be able to:

1. understand the water cycle
2. illustrate a map explaining how chemicals get into lakes
3. know the importance of not using chemicals on land

### **Protecting our water:**

1 cup blueberry juice

4 cups of water

measuring cup

liquid dropper

labels of commonly used cleaners and other household chemicals or pictures from magazines and flyers

Water Food Web and ecological pyramid:

[http://www.waterontheweb.org/under/lakeecology/11\\_foodweb.html](http://www.waterontheweb.org/under/lakeecology/11_foodweb.html)

an excellent resource to explain the linkage among life forms and to illustrate the cumulative effect of pesticide use

Pond Food Web:

Interactive tool for young students to understand food webs:

[http://www.harcourtschool.com/activity/food/food\\_menu.html](http://www.harcourtschool.com/activity/food/food_menu.html)

The following links will take you to sites regarding pesticide uses and issues in Saskatchewan:

1. In publication of Canadian Centre for Policy Alternatives

[http://www.policyalternatives.ca/documents/Saskatchewan\\_Pubs/2007/sasknotes6\\_2\\_pesticides\\_primer.pdf](http://www.policyalternatives.ca/documents/Saskatchewan_Pubs/2007/sasknotes6_2_pesticides_primer.pdf)

2.The Saskatchewan Environmental Society:

<http://www.environmentalsociety.ca/issues/pesticides/index.html>

3.The Saskatchewan Eco-Network:

<http://www.econet.sk.ca/issues/pesticides/use.html>

*Project Wild*

This lesson is designed for the grades 4-6 and will need to be changed to suit younger grades

- As stated in the previous lesson sometimes harmful chemicals get into our water system.
- Now would be a good time to have them draw the water cycle on a piece of paper and a map of a pretend lake, river and adjacent farmland. You may have to draw one with them, or have one made up so that they can just colour it.
- They can use a coloured pencil to draw a line where the chemical entered the water system and how it got to the lake.
- You will need to explain what an ecologist is and what parts per million means in order for this to make sense.
- By definition an ecologist is “the branch of biology dealing with the relations and interactions between organisms and their environment, including other organisms.” Or simply put a biologist studies organisms.
- Parts per million (ppm) simply means the amount of something compared to 1 million.
- You may want to relate these poisonous materials to common household materials. Have examples of labels of common cleaners and other household chemicals on display in front of class. Show the warning labels and talk about poisons. The students will know what they are about. Talk about the warning signs on the products and the effects that we may encounter if we swallow them.
- We see the effect of pesticide use on watersheds in a case study from “*Project Wild*”
- Illustrate this on the chalkboard

An ecologist studied the presence of a toxic chemical in a lake. He found the water had one molecule of the chemical for every billion molecules of water (1 ppb). The algae had one part per million (1 ppm) of the toxic chemical. Small animals, zooplankton, which eat the algae, had 10 ppm. Small fish like minnows, which eat the zooplankton, had 100 ppm. Large fish like Pike, Walleye and Trout, which eat the minnows, had 1000 ppm.

So it may look like this:

- Water 1 ppb
- Algae 1 ppm
- Zooplankton 10 ppm
- Minnows 100 ppm
- Jackfish 1000 ppm

1. You can ask “How do you explain the increase in this toxic chemical to 1000 ppm for the large fish?” Use a drawing to help support your answer.  
During the study it was discovered that the chemical was a pesticide which has been sprayed on cropland 160 kilometers away from the lake.
2. Ask “How did so much of it get into the lake?”
3. You can now show what Parts per million means.
4. You can demonstrate this by getting a liter of water in a clear container to represent the healthy organisms.

Now take the blueberry juice (or other dark juice) And add one drop to a container of 1 L of water. This water now represents the amount of poison in water. For each step in the above mentioned cycle, add more food juice, remembering that minnows eat a lot of the Zooplankton which eats a lot of algae and etc... that is why they have such a high concentration.

The following chart will show you how much juice to add to the water for each organism:

Algae	10 drops
Zooplankton	10ml
Minnows	10ml
Jackfish	100ml

-The students can make note of the colour change in the water.

Then they will answer: Why it is important to know this and how we could change this for the future.

### Evaluation

The above Question and Activity

## Saying “No” to Pesticides

### Students will be able to:

- illustrate the effects of pesticide use on the water cycle.
- identify the possible effects of pesticide use

### Useful Websites

1. <http://ga.water.usgs.gov/edu/pesticidesgw.html>
2. <http://ga.water.usgs.gov/edu/urbanpest.html>
3. [http://www.pesticidefreebc.org/index.php?option=com\\_content&view=article&id=117:the-environmental-impact-of-pesticides&catid=46:the-environmental-impact-of-pesticides&Itemid=92](http://www.pesticidefreebc.org/index.php?option=com_content&view=article&id=117:the-environmental-impact-of-pesticides&catid=46:the-environmental-impact-of-pesticides&Itemid=92)
4. <http://www.youtube.com/watch?v=4Cb3SIMRCIE&feature=related>
5. <http://www.youtube.com/watch?v=v4wIVJCAbfk>
6. <http://exchange.smarttech.com/search.html?q=%20water%20cycle>

### Materials:

Pictures of product poison labels from common products found in stores/ homes/farms (e.g. cleaners, Roundup, 2-4-D). A way to get these is to take photos of products that have poison warnings on them and create 8.5 inch x11 inch posters for class display.

Pesticides are chemicals that assist farmers in the production of grain. Pesticides are used to control unwanted critters, to kill plants, and to kill insects. They are made from chemicals and poisons. When sprayed they often go where they are not wanted. This can cause problems for the plants, animals, water, soil and people. For example DDT was a chemical used to control insects and was sprayed on most crops and food until it was discovered that it was getting into the food web. The insects would either be killed, sick or deformed, and would be eaten by fish (for example). Larger predators such as eagles, pelicans and humans would eat the fish. In the birds it caused egg shells to become weak and the freshly laid eggs would be crushed by their parent bird. Also the birds were sometimes born with deformities such as a twisted or a half of a beak. Because of these the insecticide DDT was banned and it is now illegal to use this in Canada, but not in other parts of the world. Even though DDT is banned here, there are still other harmful chemicals still being used today.

The pesticides remain in the soil or plant until slowly washed away by rain. Then it can enter the water supply through lakes, rives, streams etc..

If and when we eat fish, crops or cattle, sheep or pigs that eat these contaminated crops etc.. the chemical builds up in our bodies and we cannot pass them out of our system.

### Lesson

1. Look at the pesticide labels and discuss what they mean.
2. Ask the students what the word cycle means.
3. Introduce the water cycle through a youtube video.
4. Use students as visuals to work through the various steps in the water cycle. (One student is ground water, one is evaporation, etc.)
5. Once the students have examined the water cycle, use the above information on how pesticides affect water, break the students into small groups and have them determine how pesticides would affect water supplies. Make sure that you get them to think about how pesticides would affect animals as well.
6. Come back together and have the groups report their discussions to the rest of the class.

### Evaluation

Get the students to draw and illustrate this cycle on a piece of paper to show their understanding. For younger students, you will want to give them a picture of the water cycle. They will be able to colour and label the various parts of the water cycle. Good worksheets can be found at the following sites:

1. [http://bogglesworldesl.com/watercycle\\_worksheets.htm](http://bogglesworldesl.com/watercycle_worksheets.htm)
2. <http://www.kidzone.ws/water/> (Useful notes on evaporation, condensation, and precipitation as well as a good diagram)
3. <http://www.teachers.ash.org.au/jmresources/water/cycle.htm>

**If time permits, it might be useful to do a water cycle experiment. A good resource for this would be <http://mypages.iit.edu/~smart/abduima/lesson2.htm>**

## Respecting All Beings

Students will learn that plants are sacred. During this lesson you should invite a family member such as a grandparent, a family friend, or an acquaintance to talk to the class. The guest speaker should be someone who has a farming or land background. An elder may also be a good idea as he/she will be able to talk about their connection to the land and how land is sacred.

Students will be able to:

1. Listen to an Elder, family member, or family acquaintance
2. Follow proper protocol for having a guest speaker in the class.
3. Participate in a discussion that is led by the guest speaker.
4. Learn to create interview questions.

### Guest Speaker Protocol

Make sure you talk to your students about respecting the guest. They need to know that they are an adult in the classroom. It must be made apparent to the students that they listen without talking and always raise their hands. Interrupting is considered rude and will not be tolerated.

### Lesson

1. Ask a local person to join your classroom discussion.
2. Be sure to follow proper protocol for guest speakers.
3. The guest speaker will be able to talk about the sacredness of the land and the connection and sacredness of plants, animals and minerals.
4. She or he should tell you proper procedure of picking plants. Where possible you should find an area outside near a sage, sweet grass or even berries patch so that the students can participate in the procedures of the ceremony of collecting plants. This would be relevant if you were able to have an elder come into your classroom.

### Evaluation

participation- using anecdotal records to determine whether or not students were listening

## Learning to Nurture Life of Plants

Effects of Harmful “pesticides”

\* adapted from Project Wild\*

Students will be able to:

1. Give examples of how pesticides enter the food chain
2. Describe possible effects of pesticides entering the food chain.

Observation Chart is located on page 46 in the resources section of document.

As previously discussed pesticides are used to control unwanted plants and insects.

It is thought that each year in North America we use approximately 136 million pounds of pesticides on lawns and gardens, and in the home. And therefore homeowners use about three times the amount of pesticides as conventional farmers.

This is an alarming fact and should be enough to get everyone to change the ways that they care for their yards.

### Lesson

Have on display two identical plants labeled #1 and #2. They can be random “weeds” from a garden or whatever plant you choose. Keep in mind that one will die.

Have the students record observations onto the chart provided.

Every two days water the plants as follows:

#1- ½ cup of water

#2- ½ cup of vinegar (to represent harmful pesticides)

Each day the students can record the date, the amount and type of liquid, and the observation of the plants condition in the proper place on the chart.

### Evaluation

the completed observation charts.

## Watch Our Classroom Sprout Garden Grow!

Grade 1

Needs and Characteristics of Living Things

Grade 2

Animal Growth and Changes

Air and Water in the Environment

Grade 3

Plant Growth and Changes

Exploring Soils

Grade 4

Habitats and Communities

Organic/Heritage seeds: Growing Sprouts

Students will be able to:

- grow sprouts for food
- appreciate the nutritional value in the sprouts

Saskatchewan Organic Directorate

<http://www.saskorganic.com>

Mumm's Seeds

[www.sprouting.com](http://www.sprouting.com)

The following link takes you to directions for easy classroom and home sprouting:

<http://www.sprouting.com/homesprouting.htm#What%20You%20Need>

### Teacher background information:

This lesson will teach students about organic seeds, nutrition and growing sprouted seeds (sprouts). Heritage organic seeds have been saved from plants for many generations and replanted each year, so that the fruits or vegetables from the seeds are just as they were generations ago. They are in contrast to hybrid varieties which are a combination of two or more varieties.

Jim and Maggie Mumm of Parkside, Saskatchewan, own and operate Mumm's Seeds, certified organic sprouting seeds, on Hazelwood Farm near Shellbrook, Saskatchewan. On their website, [www.sprouting.com](http://www.sprouting.com), you'll find how to simply sprout seeds in jars or in soil with your students and at home, the types of seeds available, health benefits of various seeds, and reference to many articles concerning researched nutritional benefits of sprouts and issues around genetic modification.

Why eat sprouts? "They carry plenty of vitamins, minerals, proteins, and enzymes, all necessary for the body to function optimally... Sprouts are very inexpensive... and they grow until you chew them... and have the potential to help solve hunger in our communities and in developing countries, because they are so rich in nutrients, and affordable... Sprouts are great in winter, when the quality of fresh fruits and vegetables is declining as their price increases."

The nutritional values of bean sprouts vary but one cup of bean sprouts or Mung Beans contain about: 30 calories, 3 grams of protein, 6 grams of carbohydrates, 2 grams of fat, and enzymes, and are also a good source of fibre, iron, potassium, and vitamin C. Some varieties even contain vitamins A, E and K as well as B complex vitamins, amino acids, all the essential amino acids, calcium and are high in lecithin, unsaturated fats, and other live nutrients. They are also high in and a good source of protein.

### Materials needed:

To grow sprouts in the classroom you will need :

Organic or heritage sprouting seeds from Mumm's (available from website or many health foods stores in Saskatchewan)

Many types of beans and grains (look for organic) are available in any food store

Sprouting containers- jars with elastic and mesh for top and/or trays for soil sprouting

Sprout Type	Soaking Time	Germination Time
Mung Bean or bean sprouts	12 hours	4-5 days
Alfalfa	4 hours	6-8 days
Radish	12 hours	4-5 days
Quinoa	2-4 hours	12 hours

Storage place out of direct sunlight

How to grow sprouts:

Soak the seeds following the chart below. For a more detailed explanation, visit the following websites:

<http://www.sprouting.com/homesprouting.htm#What%20You%20Need>

<http://www.i4at.org/lib2/sprouts.htm>

Jar sprouting: Soak the seeds or beans. Then drain, rinse with cold water, drain again and place in a dark place for sprouting (e.g. cupboard or place a towel over the container). Rinse and drain twice a day until sprouted. Then enjoy!

Soil sprouting: see <http://www.sprouting.com/homesprouting.htm#What%20You%20Need> for a detailed explanation for soil sprouting.

After sprouts are ready to eat, keep them in a cool place as you would with any salad greens. Sprouts can be used in the classroom for sandwiches, in salads, or just having a nourishing snack of sprouts when students wish.

NOTE: Sprouted seeds provide excellent examples of nourishing snacks. (example: bean sprouts)

This classroom project could be done for the whole year or just for the duration of this unit; it is up to the individual teacher.

You may think that you need a specific type of container that is hard to find, but many things will work to grow sprouts.

-A glass jar with a piece of cheese cloth used for rinsing,

-the "Sproutmaster container"

-a clear plastic container

-a homemade container

To make your own container see Lesson 10 resources in the Teacher Resources section of this unit.

## Learning to Nurture the Life of Animals

Students will gain an understanding about how animals are sacred, just like plants.

This lesson may be combined with the Respect all Beings lesson. The elder/grandparent/family acquaintance may combine his discussion about plants with animals.

### Lesson

1. Talk about what we use animals for in our daily lives.
2. What animals do we use for eating purposes?
3. What animals do we use for recreation purposes?
4. Lead the discussion into one about how First Nations used the buffalo while they were hunting. Make sure to get the students to realize that all parts of the buffalo were used. They did not waste any because the buffalo was sacred to them.

### Evaluation

Have the students complete an exit card. On this exit card, they should tell you about what they learned from this lesson. They may draw pictures or write their answer down. Either way is acceptable as long as they are portraying what they learnt about why we need to nurture the lives of all animals.

The following website is extremely useful when talking about the buffalo and how they were used:

<http://www.saskschools.ca/~gregory/firstnations/bison.html>

## Learning About Beans

Grade five Science- Evergreen Curriculum

<http://www.sasked.gov.sk.ca/docs/elemsci/gr5ucesc.html>

Useful Websites For Planting Beans

<http://www.youtube.com/watch?v=c8aGx3E0VbM>

<http://www.youtube.com/watch?v=2vO1hzLjN8>

<http://www.green-planet-solar-energy.com/plant-science-experiment.html>

<http://naturalsciences.sdsu.edu/ta/classes/lab2.1/exp1tg.html>

<http://www.lessonplanspage.com/ScienceExTempGravityAffectSeedGerminationMO68.htm>

<http://teacher.scholastic.com/lessonrepro/lessonplans/ect/magicbeans.htm>

[http://biology.arizona.edu/sciconn/lessons2/Roxane/teach\\_sec.htm](http://biology.arizona.edu/sciconn/lessons2/Roxane/teach_sec.htm)

### Teacher background information:

The following lesson idea is from the Evergreen Curriculum, grade five Science but can be adapted for earlier grades, especially for the grade two unit "Plant Growth".

### Lesson

1. Cover the drainage holes of an unglazed clay flower pot with adhesive tape so that the pot will hold water.
2. Stand it in the corner of a large flat container and put a 3 cm to 4 cm layer of soil in the rest of the flat.
3. Plant some beans (lima beans grow quickly) in the soil at various distances from the pot in the corner of the flat.
4. Fill the pot with water, and keep it full, but don't water the rest of the flat. Water will seep out of the pot into the soil. Keep a daily record of the growth of the beans.
5. After two weeks, dig up a sample of the bean plants so that each group has one.
6. Examine their root systems and record the data on a master chart representing the flat in which the plants are being grown.
7. Repeat this examination after three and four weeks.

### Evaluation

Get the students to do a science experiment write-up from Bloom's Taxonomy. This experiment form was utilized in a previous lesson.

You may also choose to have the students complete a science journal. In this journal, you can have the students record the daily growth record.

## Become a baker, from grain to bread!

### Teacher background information:

The following lesson works well for lower elementary students. They may need assistance with the recipe. Older students can prepare the recipe in small groups. Organic food stores will have stone ground organic whole wheat flour. All you will need is a bread maker to make the bread using the recipe below.

### Lesson

1. Obtain a portable flour mill, or make a stone mill by using a large stone and a smaller one. (The latter method may help to show students how people used to grind wheat or corn a long time ago. Also, note that some types of coffee grinders work well for grinding wheat.)
2. Grind some wheat into flour.
3. Prepare as much ground flour as you will need, depending on what will be baked.
4. Make some cookies or bread using the flour

Integrate this activity with a unit in Health. Discuss related cereal products, such as whole wheat bread and oat bran. Share some of the ground wheat with the students in grade 1 and grade 3, to enable them to make use of it in their study of animals (i.e., for use in bird feeders).

The following is a recipe for bannock or biscuits that could be used for this activity:

2 cups flour  
4 teaspoons baking powder  
1 teaspoon salt  
1/4 cup shortening  
2/3 cup water.

Blend all ingredients, except the water. Add water and stir. Turn out on a flour-sprinkled board. Pat smooth and place in a pan. Bake in the oven at 450 °F (230 °C) for 10 minutes. For biscuits pat the mixture smooth to 3/4" thickness. Cut into 2" squares and bake on an ungreased sheet.

How to Make Organic Bread Using a Bread Maker:

1. Choose your favorite bread recipe or use the one provided.
2. Substitute all the ingredients with organic ingredients. Organic ingredients can be found at organic food stores or your local grocery store.
3. Bake the bread following the recipe you have chosen.

### Ingredients for Organic Bread:

4 cups organic whole grain flour  
2 teaspoons organic honey  
2 tablespoons organic olive oil  
1/2 teaspoon kosher salt  
500ml of warm water  
2 teaspoons active dry yeast

### Directions:

1. Sift dry ingredients together in a large mixing bowl until well blended.
2. If are using a bread machine, place dry ingredients into bread machine's bread pan.
3. Add the remaining ingredients and either set bread machine to a dough kneading cycle, or knead the dough by hand.
4. Allow the dough to rise for 30 minutes and repeat the kneading process.
5. Select the Whole Wheat setting on your bread machine, or bake the bread in a preheated oven at 350F for 30 minutes or until a toothpick inserted into the center comes out clean.

### Evaluation

Older students should be evaluated on their ability to have a finished product.

Younger students should be evaluated on their ability to follow directions and to work together to create a finished product. (bannock, cookies, etc.)

## Learning From Our Elders- 1

### Organic Elder Wisdom Stories

Students will be able to:

1. generate questions to use for their own interviews.
2. conduct an interview.

- Computer access
- Send home a note requesting that the student ask their grandparent or great grandparent about the land.
- Sample letter is located in the Teacher Resources section of document.
- Oral History Interview Checklist from Teacher Section (Interview Tips and Websites for Sample Procedures and Questions)

<http://www.saskorganic.com>

### Lesson

1. It is important to tie children's lives to that of their grandparents, great grandparents, or a family friend.
2. You will need computer access to share a video from Over the Hill Orchards in Saskatchewan with your students. The video link is: [http://www.youtube.com/watch?v=f92\\_ShYJ2Hg](http://www.youtube.com/watch?v=f92_ShYJ2Hg) As well another good site is: <http://www.youtube.com/watch?v=tFOWh0Nx5K8>
3. After viewing the video discuss what their thoughts are.
4. Give the students the letter/questionnaire to take home for their parents/grandparents.
5. Give them a week or more to complete this assignment.
6. Hand out a copy of the Oral History Interview Checklist for the grade 3-6 students to use as a guideline for their interview.
7. They will be sharing their story during a later class.
8. They can video tape or audio record the interview, and they may also do the interview via phone, internet or in person.
9. The story should be in written form.
10. They can choose to present it, it can be either orally or visually presented.

### Evaluation

Their completed written or recorded interview and, for the older students, the Oral History Interview Checklist.

## Learning From our Elder 2

Students will be able to:

1. appreciate the past history of farming in Saskatchewan
2. organize information by collecting and recording information

<http://www.saskorganic.com>

### Lesson

1. You will need to review the two youtube videos from lesson 1.
2. These videos are available for the whole class to watch together or may be viewed individually. Each student can access the video by computer, watch it and then answer questions if you choose to make it an individual activity
3. The video encompasses two stories about Saskatchewan organic gardeners.
4. As well, you may choose to show a video about Elmer Laird. It is found on youtube by typing elmer laird. It is a series of eight short videos. It is about his life, his involvement with "Back to the Farm Research Foundation" and their goals and accomplishments. Elmer Laird was the first organic farmer in the province. He was recently inducted into the Agricultural Hall Of Fame and the hall of fame ceremonies are also available on the Saskatchewan Organic Directorate website.

For lower elementary students, you can provide the following sample questions for the students to work with. Sample questions (based on Over the Hill Orchard video) could be:

1. What started the Over the Hill Orchards?
2. What can't be used when organic farming?
3. How do they take care of weeds?
4. How do they deal with grasshoppers?
5. What is the difference between the apricots grown on the orchard compared to the ones bought in the store?
6. What types of fruit are grown on Over the Hill Orchards?
7. What are fruit trees grown in?
8. How did the owners learn about organic farming?
9. How long does it take the trees to grow before they start to produce?
10. How are the strawberries grown? How is this minding the earth?
11. How does planting the strawberries in the eaves trough easy for weeding?
12. How do they irrigate the strawberries?
13. What is cross breeding of fruit?
14. What is the biggest challenge of organic farming?
15. Why are costs higher for organic products?
16. How much does it cost to produce organic products versus traditional products?
17. Why do people choose to be organic?

For upper elementary students, you can create questions as a class or place the students into small groups and have each group create their own questions. This should be done after the students have viewed the video once or twice. You can then pass the questions from one group to another to have other groups answer the questions. As well, you may have the upper elementary students write comparison/contrast paragraphs on the two videos.

### Evaluation

- Answered questions regarding the video and its contents.
- Comparison/Contrast paragraphs (If you do this assignment, it is recommended to co-create a rubric with your students prior to writing.)

## Learning From Our Elders 3

Students/grandparent interviews

Students will be able to:

1. listen attentively to speaker
2. orally share their story
3. gain an appreciation for nature

Oral Presentations: Holistic Rating Scale and Oral Presentation Audience Report are located in the Teacher Resources section of document.

- In Lesson 7 the students were given an assignment of an interview.
- You can have the students share their stories that they have collected of their grandparent connection to the land.
- as they share the other students will write the various ways people are connected to the land or this can be done as a discussion after each presentation as well as at the end when everyone is done.

The students will answer the following questions:

1. What did I learn about the land and nature?
2. If you could do anything differently next time, what would it be?
3. What was the most interesting part of the interviewing process?

Evaluation: Oral Presentations: Holistic Rating Scale, notes taken during others' presentation and the answered above questions.

## Planting a Garden

### Materials

- Bedding plants
- Planting areas
- Vegetable seeds
- Student helpers

### Lesson

1. In grade 1, plant a small vegetable garden.
2. It would be great to ask a local greenhouse for leftover bedding plants. They are usually very generous when providing schools with plants. You may choose to tell the greenhouse owners that you will thank them through the local paper and school newsletter.
3. The garden should be ready once the students return in the fall.
4. Make sure to have somebody looking after the garden during the summer. A custodian is usually willing to water the garden for you.
5. A flower garden will work well for this. You may choose to plant perennial beds that can decorate a school for years to come. Students will also get a sense of making their school beautiful from year to year.
6. You may also obtain permission to use a small plot of land for the garden. Instead of having a garden to look after, you may offer your services to a local Senior's Complex that grows vegetables. You may offer to help plant, weed, and water during the months of may and June. In the fall, you can offer harvesting services.
7. Before planting, examine the different kinds of seeds carefully.
8. Visit the garden regularly during the growing season to see how the plants are progressing.
9. Weed the garden and water it when necessary.
10. Take photographs or make a video to record how things in the garden are progressing. The pictures should be taken weekly so the students can see the plant growth.
11. Plan a fall harvest activity so that the grown food is put to good use.
12. You may also choose to sell the food to raise money for a school greenhouse or some other sort of project.
13. Some of the food could be donated to a food bank to help families in need.
14. You could also use the food to prepare a welcome back feast for the school.

### Evaluation

participation

## Dealing With Pests

Imagine how simple gardening would be if we did not have to deal with pests that attack our plants. Instead, we have to watch these little insects wreak havoc while trying everything possible to get rid of them.

However, you can take certain steps to ensure that you make it as difficult as possible for garden pests to destroy your plans. Make sure that you maintain strict cleanliness around the garden. Heaps of waste are breeding grounds for pests. This does not mean that you should do away with your compost heap; but you should ensure that the spot is well cared and not messy.

Instead of using pesticides to kill pests, you can deal with garden pests in a different way. You can take help from earthworms, insects, birds and toads. Earthworms are responsible for keeping the soil open to air and water. Many birds like sparrows, robins, chickadees and orioles eat insects in your garden. There are some insects that feed on insects that are harmful for our garden. Ladybugs are insects that do a lot of good for your garden along with ichneumon fly. Toads eat a large number of insects in just one meal.

<http://ezinearticles.com/?How-To-Deal-With-Garden-Pests&id=1153517>

### Lesson

1. Use the above information taken from the provided website to have a discussion about garden pests with the class.
2. Ask them how many of their parent's or grandparents plant a garden. Those that do, ask them to question them to see how they deal with pests in their gardens.
3. The next website will give you a handout to discuss with the students. <http://www.bordbia.ie/aboutgardening/organicgardening/Worksheets/Pests%20and%20Predators%20-%20making%20an%20insect%20hotel.pdf> Another excellent site is: <http://thailand.ipm-info.org/pesticides/problems.htm>
4. The next websites will provide you with a guide to garden pests. (<http://home.howstuffworks.com/guide-to-vegetable-garden-pests.htm>) ([http://eartheasy.com/grow\\_nat\\_pest\\_cntrl.htm](http://eartheasy.com/grow_nat_pest_cntrl.htm))
5. The next website will provide you with a way to make homemade organic garden pesticides. <http://www.suite101.com/content/make-homemade-organic-garden-pesticide-a101437>
6. Have groups of students use the above information to present the information to the class. You will need to make 3 or 6 groups. If you have access to computers, you may decide to let the students print off the information themselves and try to find other information. If not, you may provide the students with copies of the information.
7. Once done researching the topics, have them be creative in terms of their presentation. Give them options like creating a PowerPoint, video, poster, storyboard, etc.

Here is an example of a homemade pesticide for mites and other insects: Mix two tablespoons of hot pepper sauce or cayenne pepper with a few drops of Ivory soap into a quart of water. Let stand overnight, then stir and pour into a spray bottle and apply as above. Shake container frequently during application.

### Evaluation

Create a rubric to evaluate the student's presentations with the class. This way the students are aware of exactly what they are being assessed on.

## Gathering From Nature

Students will be able to:

1. identify various berries
2. pick, cull, and clean berries

Eat Well Guide: Food miles campaign SOD.  
Google map of producers

Apples, cherries

This can be a great class trip in the fall. -There are various berries and nuts ready to be picked during the first few weeks of school. Black and red currants, chokecherries, hazelnuts and cranberries are all ripe around the first week of September.

-Locate a nice patch, ask for parent helpers, take your class and pick.

-Below are pictures of pincherries, Saskatoon berries, hazelnuts, cranberries, red currents, chokecherries, and blueberries. They are ripe at various times closer to the summer months.

-The first is ripe in end July- beginning of August. Saskatoon's are ripe at the end of June and into July and the blueberries are ready in mid-late August

*Use these berries that you pick as a class to make jam in the next lesson.*

### Evaluation

participation- using anecdotal records

As well, have each student do a journal writing on what types of pests were around the berry patch. You may also choose to get them to include a description of the berry patch surroundings. For example, what does the soil look like, what types of things are living in the soil, etc. This will relate back to the "Looking After Our Soil Lesson" on page 21.



Pincherry



Hazelnuts



Cranberries



Saskatoons



Red Currents



Blueberries



Chokecherries

## Making Jam and Preserving for Winter

### Students will be able to:

1. 1. Follow directions given on a recipe card.
2. 2. Understand some of the work that used to go on at a farm.

### Materials

Pots, CERTO (2 packs/recipe), berries, jars and lids, and a canning pot.

### Lesson

A great follow-up activity to the berry picking is to make jam or some other preserve. This may take a couple of classes or the better part of two hours.

- Fall is a busy time for farmers in Saskatchewan. Many farmers are busy swathing and combining their crops, fixing machinery, and preparing the fields for winter. Others are at the homestead cleaning and culling the garden and preparing fruit and vegetables for winter storage.
- On many farms today preserving vegetables is a common way to store food for the winter months.
- Years ago canning was the way that everyone saved their fruit and vegetables because stores were not as convenient a way to get their fruits and veggies. People still needed to buy flour, baking soda and other items from stores.
- Many people did not have refrigerators around to store food like there is today.
- This was the way that people years ago might have made a cold storage for the summer months-
  1. They would dig a hole in the ground.
  2. Fill it with snow or blocks of ice in the winter.
  3. Cover it with straw.
  4. Put a building or plywood over the hole to keep things cool during the summer months.
  5. Then they could store eggs and cream.

You can have the students copy or locate definitions for the following words:

- swathing- to cut and place (grain) in a row with a swather to be combined later
- combining- to harvest (grain) with a combine
- culling- to gather or collect
- gelatin- a nearly transparent, faintly yellow, odorless, and almost tasteless glutinous substance obtained by boiling in water the ligaments, bones, skin, etc., of animals, and forming the basis of jellies, glues, and the like.
- pectin- a white, amorphous, colloidal carbohydrate of high molecular weight occurring in ripe fruits, esp. in apples,
- currants, etc., and used in fruit jellies, pharmaceuticals, and cosmetics for its thickening and emulsifying properties and its ability to solidify to a gel.
- canning- the act, process, or business of preserving cooked food by sealing in cans or jars.
- preserving- to prepare (fruit, vegetables, etc.) by cooking with sugar, pickling, canning, or the like.
- jam- a preserve of whole fruit, slightly crushed, boiled with sugar: *strawberry jam*.
- jelly- a food preparation of a soft, elastic consistency due to the presence of gelatin, pectin, etc., esp. fruit juice boiled down with sugar and used as a sweet spread for bread and toast, as a filling for cakes or doughnuts, etc

\*\*Most definitions taken from <http://www.dictionary.com>

- Following the directions given by the teacher, the students should be able to produce jars of jam to take home.
- You will need to locate a canner (canning pot), jars, canning lids, and gelatin or pectin.
- Then you will need to read the directions provided by your pectin package.
- The instructions will tell you how to prepare fruit and jars/lids, for canning.

### Evaluation

participation- using anecdotal records

You may decide to have a taste test and have local organic farmers be the judges.

## Visiting an Organic Farm or Having a Guest Speaker

### Students will be able to:

1. Observe the work it takes to run an organic farm.
2. Answer questions regarding the trip
3. Appreciate the diversity of farms and of the land.

### References

<http://www.saskorganic.com>

### Lesson

- You will have to follow proper school division policy regarding field trips.
- Then you will need to contact a local organic farmer (a list of organic producers is available on the Saskatchewan Organic Directorate website) and ask if you can have a tour of their farm operation.
- For younger students you may wish to go to a place that also has animals, but the older students can take a tour of just equipment and fields.
- Get students into groups to create questions and then come back as a class group to compile a questionnaire page. As well, make sure you know who will be in charge of asking what questions while on the field trip.
- Some questions that can be asked are:
  1. What are some of the different machines that you use that other farmers do not?
  2. How do you keep weeds out of your crops?
  3. What kind of crops do you grow?
  4. What are the benefits of growing organic grains?
  5. How do you fertilize your crops?
  6. How do you control pests?
  7. How do you control diseases?

It is important to get the kids involved in the question making process. The questions above are just samples to get them thinking.

You may find more than just bulk sales at the following websites:

<http://organicfarmdirectory.ca/>

<http://www.saskorganicmarket.ca/>

<http://foodmiles.saskorganic.com/content/where-find-local-organic>

### Evaluation

Participation- using anecdotal records

## Sharing Our Learning With Our Family and Friends

As a final learning project, each student must create a presentation to show what they have learned throughout this unit. You can hold a parent, family, or friend afternoon. To prepare for this afternoon, you must assign groups of students to prepare different projects. This can be done randomly or you can pull group names from a hat and they can choose a topic in order that they were picked. Topics should be chosen from the lesson title page. Once again, for evaluation, you should co-create rubrics with the students. You need to create rubrics for the content of the work and one for the presentation itself.

Make sure that each group includes the following topics in their write-up:

1. What they learned about their topic
2. What connections they can make to their own lives
3. Why their topic relates to organic farming/gardening
4. Any further ideas about their topic that they may have learned while creating their presentation
5. Any other ideas to put into their project

During the afternoon, you could get groups of visitors to start at different stations. This could be set up like a mini science fair. You will be able to listen to each group's project this way.

It would be appropriate to have some of the jam that was made for the visitors to taste.

## Teacher Resources

Welcome to the resources section of the unit.  
The following pages are the resources that were indicated in the unit.  
They follow the lessons and are in numeric order.

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Lesson 1– The Three Sisters Reporting Rating Scale page 44  
All Lessons—Anecdotal Record Sheet page 45  
Lesson 9 Observation Chart page 46  
Lesson 10 How To Make a Homemade Sprout Jar page 47  
Lesson 14 Blank Letter page 48  
    Oral History Interview Checklist page 49  
Lesson 16 Holistic Rating Scale page 50  
    Oral Presentation page 51  
Lesson 20 Jam Recipes page 52

***The Three Sisters- Representing Rating Scale***

<b>Rating</b>	<b>Criteria</b>
1 2 3 Comments:	There is evidence of careful planning and revision.
1 2 3 Comments:	Main ideas are depicted clearly.
1 2 3 Comments:	Key supporting details are depicted appropriately.
1 2 3 Comments:	Sources, if used, are referenced in some way.
1 2 3 Comments:	Appropriate form (e.g., drama, diagram, sound piece, graph, three-dimensional object, chart, dance, map) is chosen.
1 2 3 Comments:	Message (or idea represented) is clear.
1 2 3 Comments:	Care is given to choice of words, visuals, actions, sounds, and materials.
1 2 3 Comments:	Titling is clear and appropriate.
1 2 3 Comments:	Labeling, if used, is clear and accurate.
1 2 3 Comments:	Design features work to create a clear and effective message.
1 2 3 Comments:	Creation informs the audience.

**ANECDOTAL RECORD**

<b>ANECDOTAL RECORD:</b> RAS _____ What I'm looking for _____ Lesson _____ Date _____							
Student	Student	Student	Student	Student	Student	Student	Student
Student	Student	Student	Student	Student	Student	Student	Student
Student	Student	Student	Student	Student	Student	Student	Student
Student	Student	Student	Student	Student	Student	Student	Student
Student	Student	Student	Student	Student	Student	Student	Student

### Observation Chart

Day	Observation Plant 1 With Water	Observation Plant 2 With Vinegar
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		

## How To Make a Homemade Sprout Jar

Growing sprouts in a jar

The easiest method is to grow sprouts in a glass canning jar. Any size jar will do. To provide plenty of fresh air, cover the top of the jar with muslin, cheese cloth or nylon mesh screen and secure with a rubber band. You can also buy specially sprouting lids designed for this purpose.

<http://www.essortment.com/grow-sprouts-jar-53568.html>

<http://diyrobj98168.blogspot.com/2009/02/how-to-grow-sprouts-and-garden-inside.html>

Excellent youtube video:

<http://www.youtube.com/watch?v=xoalpZZfcFc>



Dear \_\_\_\_\_,

Our class is currently learning about organic farming/gardening. We would like to know more about you and your experiences while farming. I would like to know about what life was like for you when you were young as well as your background in farming. I am able to interview at your convenience. Please contact me when you will be able to conduct the interview. I would like to thank you in advance for your help and cooperation.

Sincerely,

\_\_\_\_\_

## Oral History Interview Checklist

### Interview Tips

1. Ask questions that require more of an answer than “ye” or “no” answers. Questions should begin with “why”, “how”, “where”, “what kind of”, etc. For example, “Was Mr. Sam Smith a good boss?”
2. Ask one question at a time. Sometimes interviewers ask a series of questions all at once.
3. Ask brief questions.
4. Start with questions that are not controversial. Save the delicate questions, if any, until the last. A good place to begin is with the narrator’s youth and background.
5. Don’t let periods of silence fluster you. Give your narrator a chance to think of what she wants to add before you hustle him/her along with the next question. Relax, write a few words on your notepad.
6. Stay engaged. People are more likely to share their stories when they feel you are truly interested in what they have to say.
7. If possible, ask to record the interview. This is easier than trying to write everything the narrator is saying.
8. Don’t worry if your questions are not as beautifully phrased as you would like them to be.
9. Don’t interrupt a good story because you have thought of a question, or because your narrator is straying from the planned outline. If the information is pertinent, let him/her go on, but jot down your question on your notepad to remember to ask it later.
10. Interviews usually work out better if there is no one present except for the interviewer and the narrator.
11. End the interview at a reasonable time. An hour and a half should be the maximum.
12. First, you must protect your narrator against over-fatigue.
13. Second, you will be tired even if he/she isn’t. Some narrators tell you very frankly if they are tired, or their spouses will.

### Sample Oral History Questions and Procedures

<http://www.jewishgen.org/infofiles/Quest.html>

[http://genealogy.about.com/od/oral\\_history/](http://genealogy.about.com/od/oral_history/)

[Oral Histories Interviewing Relatives and Collecting Oral History.htm](http://dohistory.org/oral_histories/interviewing_relatives_and_collecting_oral_history.htm)

[http://dohistory.org/on\\_your\\_own/toolkit/oralHistory.html](http://dohistory.org/on_your_own/toolkit/oralHistory.html)

<http://home.earthlink.net/~ahickling/interviewsuggestions.html>

[http://fcs.tamu.edu/families/aging/reminiscence/oral\\_history\\_techniques.php](http://fcs.tamu.edu/families/aging/reminiscence/oral_history_techniques.php)

[http://www.ehow.com/how\\_2050935\\_conduct-oral-history-interview.html](http://www.ehow.com/how_2050935_conduct-oral-history-interview.html)

## Holistic Rating Scale for Oral Presentations

### Scale: 3

- Words are clear.
- Voice has good modulation.
- Speed of speech is well-paced.
- Pauses or emphases are appropriate.
- Voice is loud enough to be heard easily.
- Presentation is organized, logical, and interesting.
- Large amount of student preparation is evident.
- Material in presentation is relevant to topic.
- Language used in presentation is appropriate.
- Evidence of creativity exists in presentation of topic.
- Audience appears 'involved' in the presentation.

### Scale 2

- Some words are not clear.
- Voice has some modulation.
- Rate of speech is at times too quick for the listener to catch the full meaning.
- Sentences have some inappropriate pauses or run on together, hampering meaning.
- Voice dropping in volume at times makes it difficult to get the full importance of the presentation.
- Presentation shows signs of organization; however, there may be portions that do not tie together.
- Presentation has 'clown' portions with regard to keeping the audience interested.
- There is evidence of a fair amount of student preparation.
- Material in presentation is, for the most part, appropriate.
- Format of presentation is predictable.
- Audience is passive listener.

### Scale 1

- Many words are not clearly spoken.
- Voice is more monotone in presentation.
- Rate of speech is either too fast or too slow.
- Pauses or emphases for effect are not in evidence.
- Voice is low, making hearing of the presentation difficult.
- Presentation shows poor organization.
- The audience reacts in a disinterested manner.
- There is minimal student preparation in evidence.
- Material in presentation is inappropriate or does not appear relevant to the topic.
- Format of presentation lacks structure.
- Audience is not engaged.

Taken from [www.sasked.gov.sk.ca/docs/policy/studeval/hroralpres.pdf](http://www.sasked.gov.sk.ca/docs/policy/studeval/hroralpres.pdf)

**Oral Presentation Audience Report**

	<b>Very Good</b>	<b>Satisfactory</b>	<b>Poor</b>
<b>Gave an interesting Introduction</b>	<b>3</b>	<b>2</b>	<b>1</b>
<b>Presented clear explanation of topic</b>			
<b>Presented information in acceptable order</b>			
<b>Used complete sentences</b>			
<b>Offered a concluding summary</b>			
<b>Speaks clearly, correctly, distinctly, and confidently</b>			
<b>Maintained acceptable posture</b>			
<b>Used visual/audio aids well (if used at all)</b>			
<b>Handled questions and comments from the class well</b>			
<b>Total</b>	<b>/27</b>		

**Comments**

**Taken from:** [www.reading.ac.uk/nmsruntime/saveasdialog.aspx?IID=39287&sID...](http://www.reading.ac.uk/nmsruntime/saveasdialog.aspx?IID=39287&sID...)

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## Jam Recipes

[http://www.canadianliving.com/food/menus\\_and\\_collections/canning\\_and\\_preserving\\_juicy\\_jam\\_recipes.php](http://www.canadianliving.com/food/menus_and_collections/canning_and_preserving_juicy_jam_recipes.php)

[http://www.canadianliving.com/food/seed\\_to\\_supper/canadian\\_strawberry\\_jam\\_recipes.php](http://www.canadianliving.com/food/seed_to_supper/canadian_strawberry_jam_recipes.php)

<http://www.razzledazzlerecipes.com/flavorsoffall/canning.htm>

<http://www.fastrecipes.com/recipes/jelly-and-jam-recipes/>

<http://www.cooksrecipes.com/sauces/jams-and-preserves-recipes.html>

As well, you can google jam recipes and find one that is suitable for your needs. The recipe on the back of the certo box is excellent.