



FOOD

ELEMENTARY LESSON PACKAGE

AN INITIATIVE OF



MADE POSSIBLE BY



PotashCorp
Helping Nature Provide

■ RATIONALE

Free from poverty and exploitation, free from disease, thirst, and hunger. These five freedoms are the driving force of the WE Villages holistic and sustainable development model, which unlocks the basis for change in the international communities we partner with. One of the most pressing issues directly affecting poverty alleviation today is the growing challenge of food security, the availability of and access to an adequate amount of healthy, nutritious food that meets populations' dietary needs and food preferences. That's why, thanks to PotashCorp, WE Villages has added an Food Pillar to development model.

Free The Children's WE Villages is an international development model that provides access to Pillars of Impact—Education, Water, Health, Food, and Opportunity—to empower a community with the means to forever lift itself from poverty. Why these pillars? Because together they can achieve a greater impact. All the pillars of the WE Villages model are owned and maintained by the community, and designed to be self-sustaining after the initial project implementation.

The Food Pillar focuses on innovative farming techniques and water management projects to help ensure developing communities have access to self-sustaining food sources, directly improving health, access to education and life outcomes. This lesson package was created to provide educators with comprehensive lessons on the purpose and inner workings of the Food Pillar. With this knowledge, students will learn the value of their participation in the WE Villages programming and understand the contribution they have made to address the problem of global hunger. The lessons are grounded in the WE Learning Framework, ensuring students develop the core skill sets that help them achieve the learning goals and outcomes that contribute to becoming a global citizen.

This lesson package is made possible thanks to support from PotashCorp.

PotashCorp and WE Villages partnership

PotashCorp is a Canadian crop nutrient company that plays an important role in global food production, and is a longstanding champion for global agriculture and food security. In response to this growing worldwide need, PotashCorp has partnered with WE Villages to found, develop and support the Food Pillar. Through this pillar, communities can grow the food they need and plant strong roots for the future.

Together, we're taking on the challenge by shining a spotlight on the need for better agriculture around the world and engaging young people to be part of the solution.

Core Skill Sets

Look for these icons at the top of each lesson. The icons identify the most relevant core skills being developed. Learn more about the WE Learning Framework at www.weday.com/weschools.



CRITICAL THINKING



RESEARCH AND WRITING



INFORMATION LITERACY



ARGUMENT FORMATION



LEADERSHIP SKILLS



ORGANIZATION



ACTION PLANNING



REFLECTION

■ DETAILS

Level: Elementary

Themes: Agriculture, food security, plant growth and nutrition cycle, weather, nutrition, growing gardens, character education, environment, global issues, health, poverty, team building, clean water.

Estimated time: 195 minutes

Learning goals:

Students will:

- Learn what food security entails
- Study the three key elements of food security
- Discover the complexities of the plant growth and nutrition cycle including the importance of water, soil nutrients and energy to healthy plant development
- Find out how extreme weather affects the plant growth and nutrition cycle around the world
- Explore different types of gardens in WE Villages communities and what is grown in each
- Work towards cultivating their own school garden or individual plant pots

Course connections: The Arts, Language, Science and Technology, Social Studies, History, Geography, Health and Physical Education

Resources required:

- Front board
- Paper and writing utensils, colouring utensils
- Computers with Internet capabilities
- Poster making supplies (optional: students may do this part of the activity at home)
- Materials and tools for growing a garden or individual plant pots
- Nutrition guides

Blackline masters:

- Plant Growth Cycle
- Gardens of Opportunity: Kenya

Assessment:

- Appendix 1: Assessment Rubric

■ INTRODUCTORY LESSON: THE THREE KEY ELEMENTS OF FOOD SECURITY



Purpose: Students will learn about food security and its key elements through the use of a word wall.

Instructional method(s): Word wall, class discussion

Differentiated instruction:

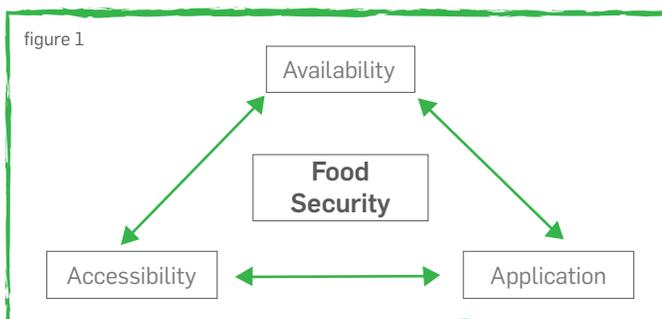
- Have students define the three key elements of food security in their notes individually or by using a think-pair-share format.
- Answer the follow-up questions as a class with a brainstorming session.

Course connections: English, Social Sciences and the Humanities, Science, Canadian and World Studies, Health and Physical Education, the Arts, Interdisciplinary Studies

Estimated time: 25 minutes

Steps:

1. Introduce the definition of food security and the three key elements of food security by creating (or adding to) a word wall. Write "Food Security," "Availability," "Accessibility" and "Application" on four pieces of paper, making small signs. Use the shape of a triangle to illustrate the interconnectedness of each element as they relate to food security. Use the three elements as points on a triangle placing "Food Security" in the middle when working with students to define the terms and when displaying the words on the word wall (see figure 1).



2. First, ask students what "food security" might mean. Working with their suggestions, establish a clear definition.
 - Food Security—A condition in which all people, at all times, have physical and economic access to sufficient,

safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

Educator's Note: Definitions are based on food security definitions from the World Health Organization and Ryerson University's Centre for Studies in Food Security.

3. Then ask what each of the words "Availability," "Accessibility" and "Application" might mean.
 - **Availability**—Having sufficient quantities of food available to all people at all times.
 - **Accessibility**—Having physical and economic access to nutritious and culturally acceptable foods.
 - **Application**—Applying knowledge of basic nutrition, safe food use and care with clean water, proper sanitation and health care to achieve well-being.
4. Ask students how the terms work within the definition of food security. Write the answers on the board, ultimately forming clear definitions. Help guide students to understand the provided definitions. Then ask for volunteers or select students who might benefit from going over the definitions again. Have them write the definitions on the four small signs. Post the words on the wall for students to reference while they work.
5. To help students make real-life connection with the terms, create a farm-to-table timeline on the front board. Ask students to think of a typical dinner (e.g. fish, corn, broccoli, rice and milk). Have students suggest the process their foods need to take to get from their origin to the dinner plate. Ask students how this dinner is available, accessible and applicable. Do they live with food security or insecurity? Is someone who uses a food bank food secure or insecure? (Someone who uses a food bank is considered food secure. Through government and private support, food is available, accessible and acceptable.)
6. To help students understand the Food Pillar, instruct students to create a T-chart comparing the needs of a plant and a person.
7. Divide students into pairs and tell them to list all the components a plant needs to grow strong and healthy on the right side of the T-chart.
8. Next, on the left side of the chart, ask students to list the related components to keeping a person strong and healthy, e.g. sunlight and vitamin D.

9. Ensure that by the end of the lesson, students understand what food security is, the three elements of food security and the connection between healthy plants and healthy people.

For younger students:

Ask students to suggest a visual for each of the definitions to help them remember the meaning of the words. Incorporate the drawings onto the card.

■ CORE LESSON:

GROWING THE FOOD WE NEED



Purpose: Students will discover how the plant growth cycle is affected by extreme weather conditions, moisture levels and soil nutrients. Students will share with their peers the severe impacts these conditions have on agriculture.

Instructional method(s): Class discussion, group work, research, gallery tour

Differentiated instruction:

- Rather than having students create a poster, have students develop dioramas that simulate the effect of an extreme weather condition on crops.
- Have students work independently rather than in partners or small groups.

Course connections: Language, Social Studies, Science and Technology, Health and Physical Education, the Arts, Geography

Estimated time: 110 minutes

Steps:

1. For homework the night before this lesson, ask students to bring a container of water to school. For diversity, encourage students to be creative when selecting the container, the amount of water and the source of the water (e.g. rain water, from a drinking fountain, from a tap, bottled water, river water, etc).
2. To begin the class, have each student take out their container of water. Allow each student to stand up, present their container and tell the class where they got the water from.
3. When everyone is finished, ask students a few follow-up questions:
 - Whose water in the class do you think is the freshest?
 - Whose water is the newest?
 - Whose water is the oldest?
4. Have students vote for their favourite answers and come to a class consensus.
5. Tell students that while each of their water collections comes from different sources, it is all actually the same age. Every ounce of water, no matter where it comes from on the entire globe, has been here since the beginning of the Earth. Ask students if they think it is the same with soil:
 - What are some different types of soil?
 - Can new soil be created?
 - What makes "new" soil?
 - What in the soil helps plants grow? (E.g., soil nutrients like nitrogen, phosphorus and potassium.)
 - Where might soil nutrients come from?
6. Soil that has the proper nutrients helps grow healthy plants which, when consumed, are a part of a nutritious diet. Tell students that the rotation and revitalization of water and soil nutrients combined with the energy from the sun are essential for growing healthy plants.
7. Go through a basic nutrition and plant growth cycle with the class (use Blackline Master 1 as reference), ensuring they understand the process before moving onto the next step, which will build on this knowledge.
8. Ask students to predict the growth of a plant if the three elements (water, soil nutrients and sunlight) are typical, using the following questions:
 - What would happen to a bean plant that is kept in the dark?
 - What would it look like?
 - How would that affect the amount of beans it would produce?
 - How do soil nutrients affect a bean plant's growth?
 - Why is it important to have nutrient-rich soil for plants?
 - If a corn plant is not watered, what happens?
 - What happens if it gets too much water?
 - What happens if it gets too hot? Too cold?
9. Have students divide into groups of two to three. To ensure there are no repeats, limit the number of groups to 14. Write each of the following 14 extreme weather conditions on scraps of paper: hurricane, flood, tsunami, drought, typhoon, cyclone, tropical storm, earthquake, fire, unseasonable frost, ice storm, torrential rains, mudslides, storm surge. Place the scraps of paper in a container. Circulate through the room, allowing each group to select one from the container; this will be their topic for the exercise.
10. Instruct each group to create a poster that describes the extreme weather condition assigned to them. The poster must illustrate a plant's life in the growth cycle during and after the effects of their weather condition. In addition, it must show the detailed effects on the agriculture growth in the region as a whole before, during and after the weather condition.

11. On the front board, as a class, create a list of elements each poster should incorporate. This list may include, but is not limited to:
 - a. A catchy title
 - b. An explanation of the assigned extreme weather condition
 - c. A visual representation of the plant growth cycle with the effects of the extreme weather condition
 - d. A description of the soil and the impact the weather condition has on the soil
 - e. A clear description of the consequences the extreme weather has on agriculture in the affected region and how it thus affects food security
 - f. Regions of the world that are most affected by the extreme weather condition
 - g. A historic example of when the weather condition affected a particular region
 - h. A proposed solution for better preparedness to save crops from this severe weather condition (e.g. irrigation in regions affected by drought, proper soil nutrients for more drought resistant crops, mulching to protect against frost, etc.)
 - i. Labelled pictures or photos
 - j. List of sources
12. Give students 20 to 30 minutes in class to conduct research using trusted Internet websites and sources, encyclopedias, classroom textbooks, newspapers, etc.
13. Suggest students create a rough draft to organize ideas. Provide students 20 to 30 minutes to create the posters.
14. Assign the remainder of the work for homework.
15. On the due date, hold a gallery tour for students to share their work with their classmates. Move desks to the outer edges of the classroom. Have students display their posters around the room. Encourage students to take pride in their work and share their new knowledge with their peers. Instruct groups to take turns touring the classroom so each poster has a presenter ready to explain their weather condition, plant growth and nutrition cycle, and how the weather condition affects agriculture to visitors. Open the tour to other classes and guests in the school.
16. After the gallery tour have students hand in their posters for grading. To ensure students have a firm understanding of the connection between weather conditions, soil nutrients and food security, finish with a brief discussion question: What might happen to people in developing countries who are

affected by weather patterns and extreme conditions when alternative food sources are not easily accessible? (E.g., no nearby grocery stores, markets, etc.) Display posters in the hallways of the school to spread the word.

Extension Activity: Use the questions from step 8 as a guide for a plant growth experiment. Help students understand the effects of light, water and soil on the health and vitality of growing plants.

Educator's Note: What is a gallery tour? This gallery tour consists of student-created presentations with written and visual content. Student groups take turns circulating in a room set up like a gallery. Students stationed with their posters describe their work and answer any questions their peers may have.

Soil Nutrients:

- **Nitrogen (N):** Nitrogen comes from the Earth's atmosphere. It keeps cells vibrant and dividing for strong growth. Nitrogen helps plants absorb soil nutrients to maintain their healthy green appearance. It also makes the food we eat healthier by increasing the plant's protein content.
- **Phosphorus (P):** Phosphorous comes from the fossilized remains of ancient marine life that is found in rock deposits. It helps plants grow by capturing light and harnessing water during photosynthesis. Phosphorous helps fight external stress like heat and drought to prevent disease. Additionally, it helps plants produce seeds for more plants to grow from.
- **Potassium (K):** Potassium comes from ancient dried up seas and oceans. It signals the pores on leaves to open and close, creating water balance. Potassium also regulates chemical intake for strong growth, improves root strength and disease resistance, and enhances the taste, colour, and texture of food.

For younger students:

Have students create a more visual poster with less emphasis on the written element. Ask students for a split poster, one side showing agriculture and the growth and nutrition cycle of a plant in good times, the second side depicting the effects of the extreme weather condition.

■ CORE LESSON 2: FROM FIELD TO YOUR PLATE



Purpose: Students will understand what makes their food healthy and nutritious by following the growth and journey of their food from the field to their plate. They will also compare and contrast food and nutrition programs in their community and around the world.

Instructional method(s): Individual research, visual timeline

Differentiated instruction:

- Create a wall-sized food guide that represents all of the different foods students enjoy as part of a healthy diet.
- Have students create a timeline independently rather than as a class.

Course connections: Health and Physical Education, Science and Technology, Social Studies

Special materials: Canada's Food Guide. Order hard copies from the Ministry of Health website or display the electronic version on an overhead/smartboard.

Estimated time:

- **Part 1:** 30 minutes
- **Part 2:** 90 minutes

Steps: Part 1

1. We all know what we should do to be healthy: eat well, stay active, get plenty of sleep. But what does that really mean? Is eating well just sticking to low-fat, no-carb, zero-calorie food? Does staying active mean going to the gym every day to run on a treadmill? And how much sleep is enough? No one has all the answers, but the Canadian Ministry of Health has resources to help us figure out what is best. One thing is for sure: it will be different for each person. For most of us, eating whole foods, being active through simple daily movements and getting a good night's sleep is just right. In order to know which foods are healthy, refer to Canada's Food Guide.
2. Distribute a copy of Canada's Food Guide to each student, or project the electronic version on the board. Go through the guide with students, highlighting the four food groups, the different nutritional needs of different age groups and genders, the number of servings appropriate for students' ages, and what qualifies as a serving. Ask students to individually read the parts you did not go over as a class.
3. For homework, ask students to keep a food journal over the next three days (or one week if it fits into your classroom schedule). Students should write down what they eat, categorizing it into the four food groups, noting the number of servings. Tell students they won't have to share this with anyone else. While you will check for completeness, this is for their personal reflection so they should be as accurate as possible.
4. At the end of the assigned time, ask students to review their current diets using their journals. What have they learned about their diets? Are they eating as Canada's Food Guide suggests they should? What can they do to help have a better, more well-rounded diet? What types of foods should they eat more of or less of? Which food nutrients are missing from their diet? Which nutrients are they getting enough of? If they could grow a garden (at home, on a farm, in a community garden plot, on a balcony, etc.), what would they grow to supplement their diet to make it more healthy?
5. Instruct students to make a list with an accompanying diagram of what the garden or garden-like plot looks like. What soil nutrients are needed to grow a garden? What does each soil nutrient do for your garden? While fruits and vegetables are natural home garden considerations, allow students to think outside of the produce box. Would they include a chicken coop for fresh eggs, a dairy cow for milk products, soya beans for tofu and soy milk, etc.?
6. Tell students that a healthy diet is not always easy to follow, especially for those affected by one of the three key elements of food security: availability, accessibility and application. (See the introductory lesson for definitions, and review these definitions with students if necessary.) It is essential for children to get the nutrition they need to grow up healthy. For this reason, around the world, during different times in history, programs were developed to help those in need get proper nutrition. Some examples include:
 - Food banks that provide supplemental food for individuals and families. A national program, Food Banks Canada, works to meet short-term needs while looking for long-term solutions. They are largely supported by donations from the local community.
 - The National School Lunch Act in the United States. Passed by Congress in 1946, the program was led by President Truman to help school-age children focus on their studies rather than their hunger. It has since expanded to include breakfast, snack and summer programs.

- Free school dinners in the United Kingdom for students. Rationing continued in post-war England making it difficult for low-income families. The program suffered during government cutbacks but was recently improved when famous chef Jamie Oliver turned the nation's attention to the failing health of young people due to the lack of nutritious food.
- Students in many of WE Villages partner communities receive lunches through school nutrition programs. These programs use food grown in school gardens and farms tended by community members and by the school's environmental club. This helps make the programs sustainable. Superfoods (foods that are especially rich in vitamins and nutrients) such as kale, butternut squash, spinach and tomatoes are examples of foods grown in these gardens and farms.

Part 2

7. Canada's Food Guide is just a snapshot of food during its journey to help make us healthy. Tell students they will be learning about the food they eat, from a farmer's field to their plate, to learn more about this journey.
8. Students should select a food group: vegetables and fruit, grain products, milk and dairy alternatives, or meat and protein alternatives. Make sure there is a good balance of food groups represented. Instruct students to choose a food from their category that they like to eat or would like to know more about. Have students share their knowledge of the journey food takes from the field to their plate with a visual timeline.

Educator's Note: A visual timeline is a chronological catalogue that uses words and pictures.

9. As a class, create a timeline by brainstorming a list of stages food takes during its journey (see example below). Write them on the board. The timeline should be easily understood by people just passing the display while also having content for those who stop to learn more. The overarching theme of the timeline should be "what makes a healthy person?" Visuals may include but are not limited to the following key moments:
 - **Plate:** at mealtime, the food we eat.
 - **Store shelves:** while waiting to be purchased. In the store, or on its way between the store and the farm, does food lose any of its nutritional value? What happens to it? How can you ensure it is at its peak healthiness?
 - **Farmer's field:** growing up healthy.
 - **Soil and seed:** healthy beginnings.

10. Timelines should answer the following questions and follow a similar flow:
 - **What makes a person healthy?**
Nutritious food [insert student selected food item]
 - **What makes this food nutritious?**
Vitamins, protein, antioxidants, etc.
 - **Why do we need these to be healthy?**
 - **How did it become nutritious?**
It gets nutrients while it grows.
 - **What do you need to grow healthy food?**
Nutrient-rich soil.
 - **What makes healthy soil?**
Primary nutrients such as nitrogen, phosphorous and potassium (NPK), secondary nutrients (Ca, Mg and S) and micronutrients.
 - **How does each of these elements make the soil healthy and perfect for growing food? Why does the soil need NPK? Why does your body need NPK?**
11. Allow students time in class to work on the research and timeline development. Assign what is not finished in class for homework. Set a due date.
12. Display the finished timelines in a busy hallway or in your classroom to share food's nutritional journey with the rest of the student body.

For younger students:

Students can use Canada's Food Guide to help them track the food they eat. For the visual timeline, create one large timeline the whole class will work on. Divide the project into three parts and create a team for each: writers, artists and project leaders. Assign tasks that best suit the skills and interests of students. Have the groups research different stages of the food journey from field to plate and create the timeline components. Compile them and post them in a busy hallway or on a prominent wall in your classroom.

■ CONCLUDING LESSON:

HOW DOES YOUR GARDEN GROW?



Purpose: Students will learn about the types of gardens and crops cultivated in WE Villages partner communities and begin planning a school garden or experiment with potted plants in the classroom.

Instructional method(s): Listening, individual research, matching, peer learning

Differentiated instruction:

- Have students work in small groups to complete the entire handout.
- Work as a class to complete the handout.

Course connections: Language, Social Studies, Science and Technology, Health and Physical Education, the Arts, Geography

Estimated time: 60 minutes immediate classroom time, plus more time for gardening project or potted plant experiment throughout the year.

Steps:

1. Distribute copies of Blackline Master 2: Gardens of Opportunity: Kenya for students to use during this lesson.
2. Tell students they will be filling in information and matching based on both the information they are provided and the additional information they will need to research. Give students a few minutes to read and review the handout.
3. Read the following material. Students should listen and fill in what they think applies on their handout. Inform students how the Food Pillar promotes nutrition through multiple programs:
 - a. Education concerning proper nutrition, food preparation and agriculture techniques through classes, clubs and demonstration is a vital part of implementing the Food Pillar.
 - b. School gardens help support lunch programs with the help of environmental clubs. If there is a water source nearby, a school farm may be established.
4. Students should have filled out the garden information on their sheet. Instruct students to do independent research. Encourage them to use class textbooks, encyclopedias and library books in addition to the Internet. Give students 15 minutes to complete the handout to match the crop to the type of garden.
5. Once the time is up, ask students to return to their seats and compare their work with that of their seatmate. Have students take five minutes to fill in any remaining blanks.
6. In WE Villages partner communities, environmental clubs cultivate the land, plant the seeds, maintain the garden and harvest the crops. Now that students have learned the types of gardens and varieties of crops grown, have students plan a garden of their own.
7. If possible, get permission from your school to begin a class garden. This garden may be on school property or in the classroom with plants in pots. Depending on the time of year, germinate seeds in the classroom, prepare the soil, plant the seeds and plants, maintain the garden or potted plants by watering and weeding, and then harvest the bounty.

Consider experimenting with different levels of exposure to the three elements of soil nutrients, water and sunlight.
8. Working as a class, have students suggest what should be planted. Remind students to consider the amount of sunlight, the space available, the soil nutrients and amount of water available in order to select suitable plants.

9. Once students have agreed on what to grow, have them research how to begin the garden and care for it. Turn the garden into a yearlong project to teach students about environmental stewardship, caring for living things, nutrition, cooperation and more.
10. Review with students how school gardens help WE Villages communities. Ask students how growing gardens helps with the development of communities locally and around the world. Compile their answers on the board to create clear connections for students.

For younger students:

Work through the worksheet as a class. Read to students Lynne Cherry's book *How Groundhog's Garden Grew* to excite students about growing a garden and help them understand the process of gardening.

Educator's Note: Document your class' growing garden and share your experiences with us. Your school might be honoured in future WE Villages or PotashCorp features.

Connect with your WE Schools Coordinator or contact weschools@we.org for fundraising posters and more information on the Food Pillar.

Let us know what you think. We are always working to make our educational resources better for teachers and students. Answer the short survey and help shape the educational content we offer.

Food Pillar:

www.surveygizmo.com/s3/2446714/A-FS.

■ ADDITIONAL RESOURCES

In addition to the lesson plans, share these resources with your students:

- Free The Children's WE Villages Story: www.freethechildren.com/what-we-do/adopt-a-village/
- WE Villages Food Pillar
www.freethechildren.com/what-we-do/adopt-a-village/agriculture-and-food-security/
- Canadian Fertilizer Institute's resource hub Nutrients for Life: www.nutrientsforlife.ca
- Food and Agriculture Organization of the United Nations: www.fao.org/index_en.htm
- World Health Organization, Food Security: www.who.int/trade/glossary/story028/en/
- Ryerson University Centre for Studies in Food Security: www.ryerson.ca/foodsecurity/
- Canada's Food Guide: www.hc-sc.gc.ca/fn-an/alt_formats/hpfb-dgpsa/pdf/food-guide-aliment/print_eatwell_bienmang-eng.pdf
- Canada's Food Guide, also available in French, Inuktitut, Ojibwe, Plains Cree and Woods Cree:
www.hc-sc.gc.ca/fn-an/pubs/fnim-pnim/index-eng.php
- Health Canada: www.hc-sc.gc.ca/fn-an/food-guide-aliment/order-commander/index-eng.php#a1
- Canada's Food Guide viewer friendly version:
www.hc-sc.gc.ca/fn-an/alt_formats/hpfb-dgpsa/pdf/food-guide-aliment/view_eatwell_vue_bienmang-eng.pdf
- Canada's Food Guide printer friendly version
www.hc-sc.gc.ca/fn-an/alt_formats/hpfb-dgpsa/pdf/food-guide-aliment/print_eatwell_bienmang-eng.pdf
- Order free copies of the Canada's Food Guide for your class
www.hc-publication-sc.hc-sc.gc.ca/paccb-dgapcc/cmcd-dcmc/webpubs.nsf/Web1/4651?OpenDocument&lang=eng&

■ Appendix 1

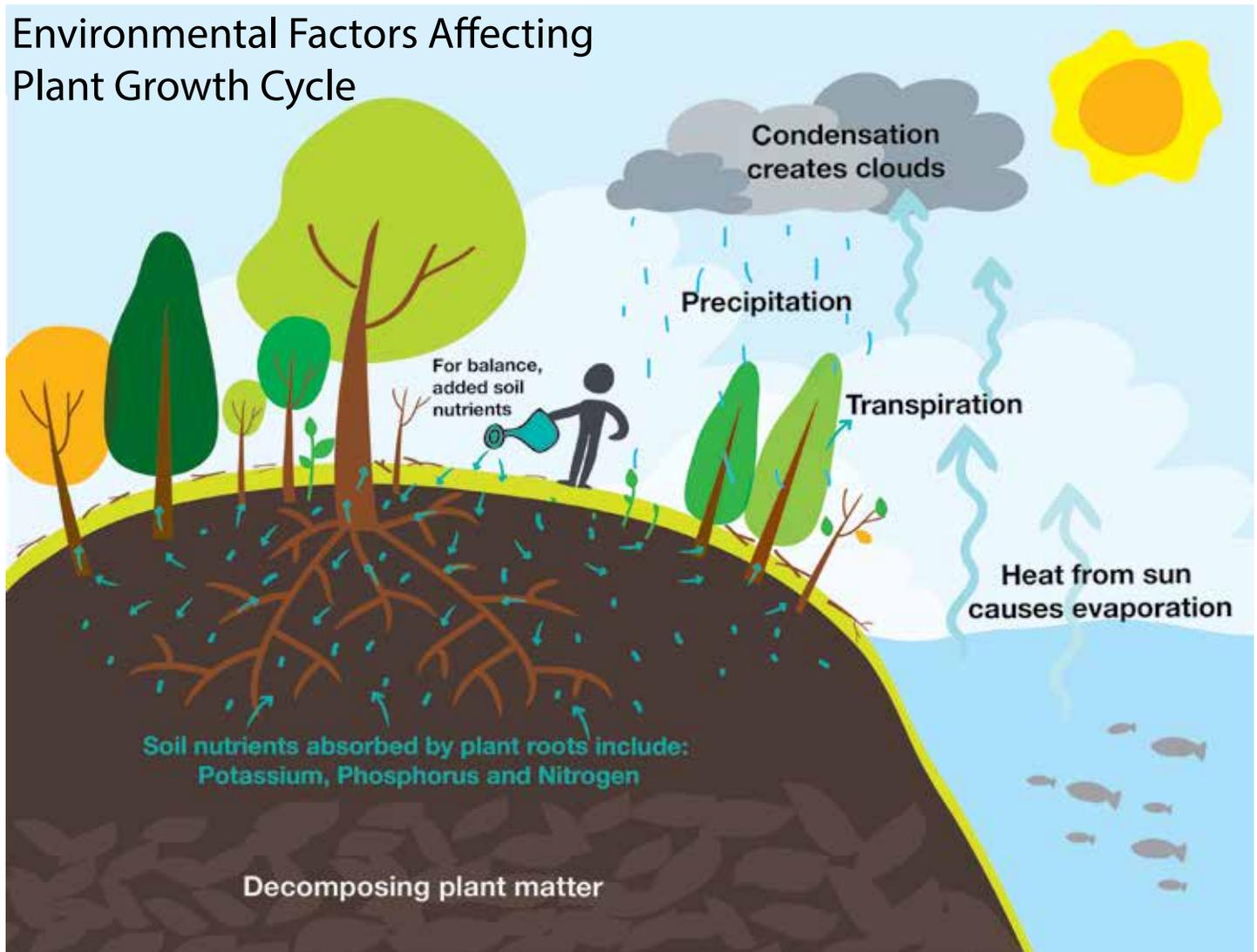
ASSESSMENT RUBRIC

This assessment rubric is based on Bloom's taxonomy, a multi-tiered model to classify cognitive levels of complexity to evaluate students' comprehension of issues and participation with the lessons.

	Level 1: 50-59%	Level 2: 60-69%	Level 3: 70-79%	Level 4: 80-100%
KNOWLEDGE AND COMPREHENSION	Demonstrates limited knowledge and understanding of the relationships among facts, ideas and concepts	Demonstrates some knowledge and understanding of the relationships among facts, ideas and concepts	Demonstrates considerable knowledge and understanding of the relationships among facts, ideas and concepts	Demonstrates thorough knowledge and understanding of the relationships among facts, ideas and concepts
APPLICATION AND ANALYSIS	Uses critical and creative thinking processes and develops examples with limited effectiveness	Uses critical and creative thinking processes and develops examples with some effectiveness	Uses critical and creative thinking processes and develops examples with considerable effectiveness	Uses critical and creative thinking processes and develops examples with a high degree of effectiveness
SYNTHESIS AND EVALUATION	Demonstrates knowledge and makes connections with limited effectiveness	Demonstrates knowledge and makes connections with some effectiveness	Demonstrates knowledge and makes connections with considerable effectiveness	Demonstrates knowledge and makes connections with a high degree of effectiveness
ORGANIZATION AND COMMUNICATION	Expresses and organizes information while using appropriate language for different audiences and purposes with limited effectiveness	Expresses and organizes information while using appropriate language for different audiences and purposes with some effectiveness	Expresses and organizes information while using appropriate language for different audiences and purposes with considerable effectiveness	Expresses and organizes information while using appropriate language for different audiences and purposes with a high degree of effectiveness

BLACKLINE MASTER 1

Environmental Factors Affecting Plant Growth Cycle



BLACKLINE MASTER 2

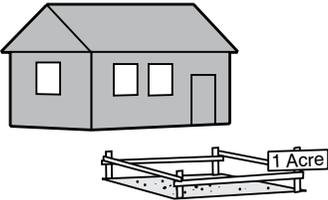
Gardens of Opportunity: Kenya

Label the gardens and match resources to gardens.
Keep in mind the crops may go in more than one garden.

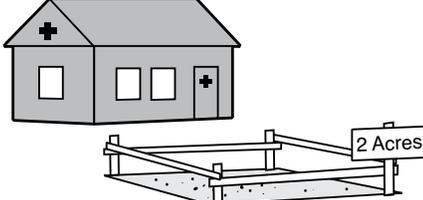


Moringa Tree

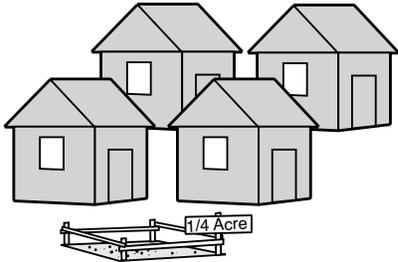
The moringa tree is a hardy tree highly rich in protein and vitamin A, B and C. It is highly valuable for nutrition for people and livestock.



1 Acre



2 Acres



1/4 Acre



Moringa Tree



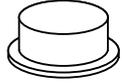
Beet Roots



Cabbage



Carrots



Borehole



Kale



Spinach



Cauliflower



Papaya



Garlic



Onions



Tomatoes



Ginger



Mangoes



Sorghum