



Food

Secondary Lesson Package for Scotland



Food: Secondary Lesson Package for Scotland

■ Background

Free from poverty and exploitation, free from disease, thirst, and hunger. These five freedoms are the driving force of Free The Children's WE Villages, a 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, the Food Pillar has been added to WE Villages.

WE Villages provides access to five key Pillars of Impact—Education, Water, Health, Food, and Opportunity—to empower a community with the means to forever lift itself from poverty. Why these five Pillars of Impact? Because together they can create powerful change. All five Pillars of Impact 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 teachers with a comprehensive lesson on the purpose and inner workings of the Food Pillar. With this knowledge, students will learn the value of their participation and understand how their contribution can address the problem of global hunger. The lessons are grounded in the WE Schools Learning Framework, ensuring students develop the core skill sets that help them achieve the learning goals that contribute to the outcomes of creating a global citizen.

PotashCorp and WE Partnership

PotashCorp is a Canadian crop nutrient company that plays an important role in global food production, and is a long-standing champion for global agriculture and food security. In response to this growing worldwide need, PotashCorp has partnered with WE to found, develop and support the Food Pillar. Through this Pillar of Impact, 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.

This lesson package has been designed to meet the Experiences and Outcomes set out in Curriculum for Excellence. It follows

the principles of "Getting it Right for Every Child" (GIRFEC) by developing the promotion and support of the eight Well-being Indicators. Where possible, Scottish resources and references have been used to ensure it is relevant to young people in Scotland today. Each lesson in the package is organised into starters, main activities and plenaries, with suggestions for differentiation. Clear learning objectives and success criteria following Bloom's Taxonomy of Learning ensure progression within each lesson and the package as a whole.

These lessons develop many aspects of character education, with a holistic and tangible approach, encompassing local and global social awareness and action, and empowering young people to make positive changes in the world around them.

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 Schools Learning Framework at WE.org/weschools.



Critical Thinking



Research and Writing



Information Literacy



Argument Formation



Leadership Skills



Organisation



Action Planning



Reflection

■ Details

Suitable for: S1-S6, Third and Fourth Level, and Senior Phase.

Themes: Community, environment, ethical shopping, farming, food, global action, global issues, growing gardens, hunger, nutrition, poverty, sustainable crops, team building, and weather.

Curriculum links: Please see individual lesson plans for links to Curriculum for Excellence.

UNCRC: Each lesson is linked to the United Nations Convention on the Rights of a Child articles, and can be used as evidence for schools working towards UNICEF's Rights Respecting Schools Award.

■ Introductory Lesson: The Three Key Elements of Food Security



Learning objective:

To understand the three elements of food security and explore how environmental factors can inhibit food security.

Success criteria:

- I can **explain** the three elements of food security.
- I can **research** the environmental factors that inhibit food security.
- I can **create** a detailed presentation about the specific, regional, environmental factors that inhibit food security.

Differentiation:

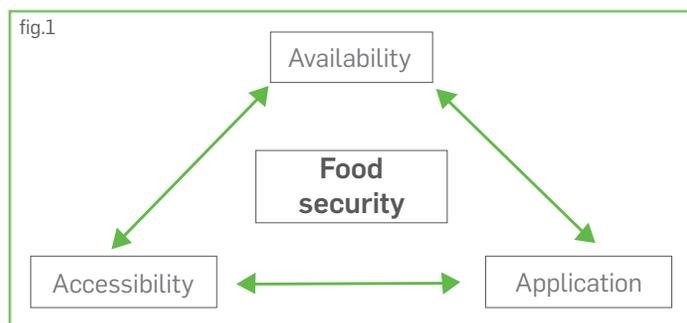
- Support less able students by providing them with a research writing frame to scaffold their ideas.
- Encourage more able students to make clear reference to the three elements of food security within their presentation.

Resources required: Computers with access to the Internet.

Duration: 60 minutes

Starter:

1. Introduce the definition of "food security" and the three key elements, using the figure below as a guide. Use the shape of a triangle to illustrate the interconnectedness of each element as they relate to food security.



2. First, ask students what food security might mean. Working with their suggestions, establish a clear definition.

Teacher'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. Ask the students what the words "availability," "accessibility" and "application" might mean, and discuss the definitions together.
 - **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 healthcare to achieve well-being.
4. Ask the students to discuss the following questions in pairs:
 - How is the food you eat available, accessible and applicable?
 - Do all people live with food security?
 - What barriers are there to food security?
5. Explain to students that this is where agriculture can help. Discuss with the students how farming supports each element of food security in developing communities.

Main:

6. We know that farming can help support food security, but the agricultural realities and geological specifics of the land in some WE Villages countries can make this very difficult.
7. Organise the students into groups of three or four and assign them a WE Villages country and region from the list below:
 - a. **Ecuador**
 - Chimborazo region
 - b. **Haiti**
 - Central Plateau region
 - c. **India**
 - Rajsamand district, Rajasthan state
 - d. **Kenya**
 - Maasai Mara, Narok South constituency
 - e. **Nicaragua**
 - Carazo department

- f. **Rural China**
 - Northern provinces of Hebei, Gansu and Liaoning
 - Central southern provinces of Jiangxi and Sichuan
 - g. **Sierra Leone**
 - Kono district
 - h. **Tanzania**
 - Maasai Mara, Longido and Arusha districts
8. Students will create a diorama/model that illustrates geologic advantages and disadvantages for agriculture. They should include a spoken presentation to accompany their model, or written material if they wish.
 9. Groups should research:
 - Geology
 - Soil nutrient composition
 - Types of flora and fauna
 - Types of agriculture in the area
 - Local agricultural and food security challenges
 - What it takes to cultivate successful crops in the region
 10. Give students at least 25 minutes to research and create their presentations. You may wish to ask students to develop their presentations in greater detail as homework, and present their work at a later date.

Plenary:

11. As a class, discuss some of the barriers to food security they have encountered in their research, and possible ways in which these could be overcome.

Links to the UNCRC:

Article 24
Article 27

Experiences and outcomes covered:

EXA 3-01a, EXA 4-01a
RME 3-08a, RME 4-08a
HWB 3-09a, HWB 4-09a, HWB 3-34a, HWB 4-34a
TCH 3-04a, TCH 4-04a
SOC 3-08a, SOC 4-08a, SOC 3-15a, SOC 3-16a, SOC 4-16b
LIT 3-02a, LIT 4-02a
SCN 3-03a, SCN 4-03, SCN 3-17a

Teacher's note: Free The Children's WE Villages is designed to empower communities to break the cycle of poverty and support themselves over the long-term by identifying and creating initiatives that address the needs of the community in a holistic way. Sustainability is a focus from the outset of project planning. All development plans are informed by a needs and assets assessment performed at the beginning of each new community partnership. Each pillar is implemented when each community is ready for and needs it, through a process that usually begins with our first Pillar of Impact, Education. The fifth Pillar of Impact, Food, may not yet be in place in each of our WE Villages' partner communities. For the purposes of this activity, have students research and report as though each community will have full implementation of all WE Villages Pillars of Impact.

■ Core Lesson:

From Field to Fork



Learning objective:

To understand what makes food healthy and nutritious as it journeys from the farm to our homes.

Success criteria:

- I can **explain** the **connection** between each stage of a food journey.
- I can **investigate** ways food products are kept healthy and nutritious in the different stages of a food journey.
- I can **combine** my ideas and research to **create** an informative and engaging presentation.

Differentiation:

- Support less able students by allowing them to create the visual elements of the presentations.
- Encourage more able students to take on the role of project manager in the group work.

Resources required: Eatwell Guide (Appendix 1), poster paper, computers, and reference books.

Duration: 60 minutes

Starter:

1. Ask the students to discuss what elements make a healthy diet. Food Standards Scotland have produced the **Eatwell Guide (Appendix 1)** to help people understand that a healthy diet consists of a balanced diet. Display this to the students and guide a discussion using the following questions:
 - How does your diet compare to the recommended Eatwell Guide?
 - What can you do to have a more balanced diet?
 - What types of food should you eat more/less of?
2. We all know that eating nutritious food is a key part of living a healthy life, but the journey to healthy food starts before the food is on our plate. It begins on the farm.
3. Ask the students to think about the journey food takes from the farm to our plates, considering where and how it must travel if it is grown abroad.

Main:

4. Organise the class into groups of three or four and ask them to choose a food group from the Eatwell Guide. Make sure there is a good balance of food groups represented.
5. The students should choose a food from their category that they like to eat or would like to know more about. They will use reference books and Internet research to create a visual timeline of the journey their chosen food takes, from farm to table. The overarching theme of the timeline should be "what makes a healthy person." The timeline may include, but is not limited to:
 - Farm
 - Travel by air
 - Travel by road
 - Shop shelves
 - Home
6. Their timeline should answer the following questions and follow a similar flow:
 - What makes a person healthy?
 - What makes this food nutritious?
 - Why do we need these to be healthy?
 - What do you need to grow healthy food?
 - What makes healthy soil?
 - How does each of these elements make the soil healthy and perfect for growing food?
7. Give the groups at least 20 minutes to create their presentations.

Plenary:

8. Ask each group to display their timeline in the classroom and discuss how each stage of the journey links in with each other.
9. As a class, reflect on what actions they can take in order to have a healthier diet themselves, and raise awareness of healthy eating in their school and local community.

Links to the UNCRC:

Article 24

Article 27

Experiences and outcomes covered:

RME 3-08a, RME 4-08a

HWB 3-09a, HWB 4-09a, HWB 3-30a, HWB 4-30a, HWB 3-31a,

HWB 4-31a, HWB 3-34a, HWB 4-34a

SOC 3-08a, SOC 4-08a, SOC 4-09a, SOC 3-15a

LIT 3-28a, LIT 4-28a

SCN 3-03a, SCN 4-03a

■ Concluding Lesson:

Nutrition Works



Learning objective:

To understand the nutritional element of the Food Pillar.

Success criteria:

- I can **examine** the diets of families in WE Villages partner communities.
- I can **evaluate** the nutritional value of a recipe.
- I can **compare** different recipes and **determine** which is the most nutritious.

Differentiation:

- Support less able students by providing them with their own copy of the **Eatwell Guide (Appendix 1)** to help them recognise if the recipe represents a balanced meal.
- Encourage more able students to find the nutritional value of several recipes and compare them within their groups.

Resources required: Eatwell Guide (Appendix 1), and Recipes From WE Villages Partner Communities (Appendix 2).

Duration: 60 minutes

Starter:

1. Explain to students that nutrition is a large part of the Food Pillar as WE Villages aims to ensure the communities are healthy and sustainable. This is promoted through multiple programmes. Discuss the programmes using the points below as a guide:
 - Education concerning proper nutrition, food preparation and agriculture techniques through classes, clubs and demonstrations are a vital part of implementing the Food Pillar.
 - Which element of food security is this supporting?
 - How will it help people in WE Villages communities?
 - School gardens help support lunch programmes and are tended by environmental clubs. If there is a water source nearby, a school farm may be established.
 - What wider effect will a school lunch programme have on the community?
 - What are the long-term benefits of this?

- With the support of WE Villages, women's groups create kitchen gardens, which help supply household nutrition. If there is an abundance, it may also be used to generate income for the family.
 - What is the importance of generating alternative income for families?
- Medicinal gardens, used as demonstration gardens for entire communities, highlight the nutritional properties of different plants. At Baraka Health Clinic in Kenya, the Moringa tree is used for education and is also used by the staff at the clinic.
 - How will this support other Pillars of Impact in the WE Villages model?

Main:

2. Ask the students to discuss the importance of nutrition in the overall health of a person. Explain to students that they will be examining the diets and meals of families in WE Villages communities.
3. Organise the class into eight groups, and give each group one card from **Recipes From WE Villages Partner Communities (Appendix 2)**.
4. In their groups, the students will use the below websites to find the nutritional information for their dish. They should find out the health benefits of their assigned dish, as well as identifying ways in which it could be made more nutritious.
 - The World's Healthiest Foods: www.whfoods.com/foodstoc.php
 - Nutrition and You: www.nutrition-and-you.com
5. Once the groups have completed this, they should compare the recipes with each other, to explore which is the most nutritious and why.

Teacher's note: If you have access to a classroom equipped with kitchen equipment, allow students to make their dishes and share the meals together.

Plenary:

6. If possible, ask for permission from your school to begin your opportunity garden on the school property, or create one in the classroom with plants in pots. Have a selection of fruit and vegetable seeds and allow students to give reasons why they should plant particular crops.

7. Depending on the time of year, germinate the seeds in the classroom, prepare the soil, plant the seeds and maintain the garden or potted plants by watering and weeding them, then harvest the bounty. Encourage students to take the responsibility of caring for and maintaining the crops themselves.
8. Discuss the ways in which your opportunity garden can support people in WE Villages communities. Students can raise awareness of the importance of agriculture and food security, and could even sell the crops to raise money for Food Pillar.

Links to the UNCRC:

Article 24

Article 27

Experiences and outcomes covered:

RME 3-05b, RME 4-05b, RME 3-08a, RME 4-08a

HWB 3-09a, HWB 4-09a, HWB 3-12a, HWB 4-12a, HWB 3-30a,

HWB 4-30a, HWB 3-31a, HWB 4-31a, HWB 3-33a, HWB 4-33a,

HWB 3-34a, HWB 4-34a

LIT 3-28a, LIT 4-28a

Eatwell Guide

Source: www.foodstandards.gov.scot/nutrition-healthy-eating/eating-healthy/eatwell-guide



Eatwell Guide

Use the Eatwell Guide to help you get a balance of healthier and more sustainable food. It shows how much of what you eat overall should come from each food group.

■ Appendix 2:

Recipes From WE Villages Partner Communities

Kenya

Ugali

Ugali is served with meat, fish or vegetable stews. To eat ugali, pull off a small ball of the mush of white maize/cornmeal with your fingers, form an indentation with your thumb and use it to scoop up tasty stews and other dishes. This recipe is for four to six people.

Ingredients:
1.4 litres water 900 grams of finely ground white maize meal/cornmeal

Directions:

1. Boil the water in a heavy cooking pot. Stir in the cornmeal slowly.
2. Reduce heat to medium-low and continue stirring regularly, smashing any lumps that may form with a cooking stick.
3. As ugali continues to cook, it gets very thick. You can continue adding flour until it is thicker than mashed potatoes.
4. Leave it cooking for about 15 minutes, but make sure you keep turning it so that it does not get burned.
5. Using the cooking stick, mash it into a dome shape. Tip out your ugali into a serving bowl.

Kenya

Sukuma wiki

To accompany the Ugali, cook an east Kenyan stew called sukuma wiki.

Ingredients:
1 bunch kale 2 small onions, chopped
2 garlic cloves 450 grams tomato (about 4 plum tomatoes)
200-400 ml water 1 tsp paprika
2 tsp olive oil salt and pepper

Directions:

1. Heat up a pot with olive oil and toss in the onions and spices. Add the garlic once the onions are translucent. Add tomatoes, water and kale.
2. Cook in a covered pot for 30 minutes then eat!

India

Chapatis

Chapati is an Indian flatbread that is great to serve with various Indian dishes, such as curries or stews. Many poorer communities will only have chapatis with a bit of weak curry or pickles. This recipe does not take very long, and makes about 10 chapatis.

Ingredients:
450 grams wholemeal flour 170 ml water
1 tsp salt 2 tbsps olive oil

Directions:

1. In a large bowl, stir together the flour and salt. Use a wooden spoon to stir in the olive oil and enough water to make a soft dough that is elastic but not sticky. Knead the dough on a lightly floured surface until it is smooth. Divide into ten parts, or less if you want bigger breads. Roll each piece into a ball. Let rest for a few minutes.
2. Heat a skillet on medium until hot; grease lightly. On a lightly floured surface, use a floured rolling pin to roll out the balls of dough until very thin like a tortilla. When the pan starts smoking, put a chapati on it. Cook for about 30 seconds until the underside has brown spots then flip and cook on the other side. Continue with remaining dough.

China

Sweet Potatoes

In rural villages of China, many communities do not have substantial fresh vegetables or meat to provide healthy meals to children. Only a few times a year do communities have access to meat, dairy or fresh vegetables.

Ingredients:
Sweet potato Syrup or oil

Directions:

1. Cut sweet potato into chunks.
2. Put pan over oven (open fire) and fill with oil or syrup.
3. Wait until boiling then put chunks of sweet potato into pan.
4. Cook until fried and serve.

China

Suan cai

Suan cai, or pickled vegetables, are often eaten in colder communities of rural China. This dish can be served with steamed buns or potatoes and is most commonly in the form of pickled cabbage or pickled beans.

Ingredients:

Napa cabbage	Vegetable oil
Dry red chili peppers	White vinegar
Chinese chilli oil	Sugar and salt

Directions:

1. In a large colander, add cabbage and a sprinkling of salt, rinse, toss, and drain for approximately 30 minutes.
2. In another bowl, stir vinegar and sugar together until it dissolves.
3. In a skillet, heat vegetable oil and add the chilli and remaining salt. Stir in the cabbage.
4. Add vinegar and chilli oil, cook for a few seconds and then turn the cabbage mixture into a large bowl.
5. Before serving, keep in the fridge for two weeks to pickle.

Haiti

Plantain Puree
(Labouyi Bannann)

Bananas and plantains in any form are very popular in Haiti. This dish is hearty and filling and is often served in the evenings for supper, however, it is so good that it could be served at breakfast or lunch as well. Serves four.

Ingredients:

1 green plantain	340 ml evaporated milk (or soy milk)
450 ml water	340 ml coconut milk (may use light coconut milk or 200 ml milk)
1 ripe banana	100 grams sugar (white or brown)
3 cinnamon sticks	$\frac{1}{2}$ tsp grated lime rind or $\frac{1}{2}$ -inch whole lime rind
2 whole anise stars	

Directions:

1. Peel the plantain and cut into $\frac{1}{2}$ -inch slices. In the blender purée plantain pieces, water, and ripe banana. Or grate the plantain, mash the banana, and mix both with water to get a purée.
2. In a saucepan, add plantain purée and bring to a boil on low-medium heat. Add evaporated milk, vanilla extract, cinnamon sticks, anise stars, nutmeg, sugar and lime rind. Cook for 15-20 minutes, stirring occasionally so that it does not stick to the bottom of the pot. The consistency should be like that of porridge.

■ Additional Resources:

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

- Free The Children's WE Villages: www.WE.org/gb/we-villages/our-development-model
- WE Villages' Food Pillar: WE.org/food
- Food and Agriculture Organization of the United Nations: www.fao.org/index_en.htm
- World Health Organization, Nutrition and Food Security: www.who.int/foodsafety/areas_work/nutrition/en
- Ryerson University Centre for Studies in Food Security: www.ryerson.ca/foodsecurity
- Food Standards Scotland, Healthy Eating Guide: www.foodstandards.gov.scot/nutrition-healthy-eating/eating-healthily/eatwell-guide
- Eat Better, Feel Better: www.eatbetterfeelbetter.co.uk