



STAGE 4

FOOD SYSTEMS AND FARMING

Students will explore where food comes from and factors that influence ingredient choice. They will also learn how farmers use technology that can impact the ways we can grow food efficiently and sustainably.

Lesson 1 • Food Origins

Overview

In this lesson, students will consider whether it is important to know where food ingredients come from and why that matters. They will explore factors that influence ingredient choices, including nutrition, environmental impact, and cost, and examine how food choices connect to human health, natural resource use, and environmental sustainability. Through Farm-to-Table videos featuring wheat and pineapple, students will develop food literacy while exploring the connections between food, agriculture, and the environment.

An optional planting activity helps students connect their learning to food production and discover that wheat, used to make flour, is grown right here in Ontario.

Learning Goals

Students will:

- Investigate where our pizza ingredients come from and which are grown in Ontario
- Consider the benefits of using ingredients that can be found locally (and seasonally, when available)

Materials Needed

- [Stage 4 Lesson 1 Teaching Slides](#)
 - [Student Resource Packet](#) (all lessons, printable)
 - [STEMterprise Deliverables Tracker](#)
 - Video:
 - [Wheat](#)
 - [Pineapple](#)
 - [What does an agronomist do?](#)
 - Careers: [Grain Farmer](#)
 - [AgScape Crop Farmers link](#)
 - Micro:Bit task [making a Sunlight Sensor](#)
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Teachers' Notes

In this lesson, students will first explore where food comes from and reconstruct the journey of several pizza ingredients, including wheat for the crust and pineapple for toppings. Next, they will consider how food origins and transportation can influence business decisions. Finally, students will examine the benefits of locally sourced ingredients and learn that wheat, used to make flour, is grown right here in Ontario.

Options:

- If your class chose the grain **planting** activity, this is a great time to make an **observation** and see how their crops are doing
 - There is a MicroBit [Coding Connections Slides](#) on the last slide to coding a sunlight sensor to discuss the importance of sunlight for plants
 - There is a Grain Farmer [Career Connections Slides](#) on slide 17
 - If your grocery store or garden centre is selling fresh herbs, consider introducing them to your class as a potential ingredient for the pizzas
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Time Frame: 60 min

Career Connection

There is an optional Career Connection at the end of this and all lesson slides and the [Career Connections Slides](#) can be found at this link. Career: Grain Farmer

Curriculum Expectations

Science - Earth and Space Systems

E1.1 Students analyze the long-term impacts of human uses of energy and natural resources, including climate change, and suggest ways to mitigate these impacts.

Human Health and Body Systems

B1.3 explain how food literacy can support decisions that affect physical and mental health

Environmental Education

The Ontario curriculum emphasizes the importance of understanding the relationship between people and the natural world.

Agriculture/Agri-Food Theme

Many of the foods used to make pizza, including grains, are grown right here in Ontario!

STEMterprise References for Educators

STEMterprise Webpage: <https://goodineverygrain.ca/ontario-farming-stemterprise/>

Video Links

- [Ontario Farming STEMterprise: Grade 5 Pizza Shop Business](#)
- [Students: Are you ready for your own pizza business?](#)

STEMterprise Teacher Support Resources

- [Ontario Farming Grade 5 Educator Information Packet](#)
- [STEMterprise Grade 5 Assessment Planning](#)
- [Project Overview](#)
- [Combined Grade Activities](#)
- [Career Connections Slides](#)
- [Coding Connections Slides](#)
- [Good in Every Classroom Education Blog](#)
- [Good in Every Classroom Newsletter Sign-Up](#)

Stage 4 | Lesson 1: Food Origins

Slide 5: Business Connection	This Business Connection slide is intended to get kids thinking about the learning ahead as it specifically relates to their pizza business. Encourage the students to make early connections about the learning goals and the connection to their business. These simple signposts give students a sense of where they are on their learning journey. You can note the number of stages and which lesson you're on in that particular stage.
Slide 6: Minds On!	Have you ever thought about where the food you ate today came from? Maybe you've helped with grocery shopping and would say food comes from a store. But where did it come from before that? Write each of the 4 categories (animals, trees, underground, fields) on an anchor paper or whiteboard. Ask Students - Working in pairs, write item(s) that could be found in your lunchbox for each category - animals, trees, underground, or fields. For "Did you know... pizza actually grows on farms?" you can share with the students that... While you can't pick a pepperoni pizza straight off a tree, almost every single ingredient comes from a plant or an animal raised by a farmer. • The Crust: Comes from wheat (a type of grass) that is harvested and ground into flour. • The Sauce: Comes from tomatoes that grow on vines. • The Cheese: Comes from milk provided by dairy cows. • The Toppings: Vegetables like peppers and onions grow in the soil, and meats come from farm animals. Teachers may also want to discuss ingredients that don't come from a farm: • Salt, which is mined or evaporated from seawater • Yeast, which is commercially produced • Some spices that are actually flavorings made from chemicals • Some olive oils that are blended with artificial flavourings • Are there others?
Slide 7: Where is it grown?	Ask students to predict what distance the foods travel from their origins to Ontario. Click to reveal the answers.

Slide 8: Journey of our ingredients	This food diagram applies to local food such as wheat, tomatoes, and peppers that are grown in Ontario. Locally grown foods travel from farm, to processing plant, to distribution centre (like the grocery store) to table.
Slide 9: Wheat	Have students watch the Wheat video and note the steps from field to fork. Although this video takes place in the UK, the process is the same in Ontario.
Slide 10: Pineapple	Have students watch the Pineapple video and note the steps from field to fork. After watching, ask kids to compare wheat and pineapple. Prompt them to notice that distance is the key contrasting aspect to these two ingredients and it is an opportunity to discuss why distance matters when considering ingredients.
Slide 11: Map it!	As a class, make a list of the common ingredients found in pizza (flour, pineapple, olives, pepperoni, cheese, etc.) Give each business group 1-3 ingredients. Ask them to research where they come from, and then make a note of it on the map. Cheat Sheet: • Pineapple - South and Central America • Cheese - Ontario • Olives - Spain, Italy, Greece, Turkey, Morocco • Sweet Peppers - Ontario • Tomato - Ontario • Pepperoni - Ontario
Slide 12: Our Pizza Ingredients	Ask students to work with their business groups. Give each group a piece of anchor paper with “LOCAL” or “IMPORTED” written at the top. •Ask students to list pizza ingredients from their category •Students can use the chart to consider environmental, financial, and nutritional impacts on their choices.
Slide 13: Wrap Up	Alternate consolidation question: “When designing our recipes in our next lesson, do we need to consider which vegetables will be readily available at this time of year? Why?” Now is a great time to create a THINGS TO CONSIDER chart for your class. Provide students with sticky notes, one per business group or pair. Have them add one thing they need to remember (in relation to this lesson) as they develop their pizza business.

Slide 14: Ingredients	If your class is growing the Good in Every Grain seeds, it's a great time to check on them. What do you notice? What do you wonder?
Slide 15: What's Next?	The "What's Next?" slide is intended to be flexible and may be customized or filled in by teachers based on their classroom needs, pacing, and next steps.
Slide 17: Career Connection	See AgScape link for career profile to learn more about Crop Farmers Bonus video: What does an agronomist do? (1:41)
Slide 19: Sunlight Sensor with Microbits	If you are planting in your class, this lesson is a complement at any time during the project. Open with a discussion about why sunlight is important for plants. See points below that relate Discuss Micro:Bit task of making a Sunlight Sensor NOTES: Relating to the Ontario Science Curriculum - Life Systems: Interactions in the Environment strand, sunlight is important for plants because it's their main source of energy for making food. Photosynthesis involves water, carbon dioxide and energy from the sun. Sun helps plants grow, stay healthy, make flower/fruit