

STEMterprise Grade 5

Student Resources



While student resources are provided within each stage, this document compiles them into a single file for easier printing or review.

Stage 1

- Canadian Entrepreneur Summary Table
- STEMterprise Pledge
- Fast Food Restaurants Case Studies
- Fast Food Restaurants Venn Diagram
- Market Research Case Study
- Market Research Article and 3,2,1

Stage 2

- Digestive System Diagram (fillable)
- Food Label Scavenger Hunt
- Fibre and Whole Grains Questions

Stage 3

- Pizza Survey
- Data Graph

Stage 4

- Pizza Recipe Template - optional (*2 versions*)
- Shopping List (*2x and 3x the recipe*)
- Active Viewing Questions
- Research and Reporting on Technology Questions (*use depending on lesson task choice*)

Stage 5

- Selling Price
- Pizza Shop Business Showcase To -Do List
- Pizza Scorecard (*optional*)

Stage 1 Lesson 1:
Canadian Entrepreneur
Summary Table



Fill in the following table.

Entrepreneur	Challenges they faced	Character traits that helped them succeed

STEMterprise Pledge

Today I will do my best to be MY best.



- I promise my business group and myself to use my curiosity to be innovative.
- I am ready to experiment with new learning and share ideas with my group.
- I won't give up.
- If I fail, I will use what I learned to help the group reach our goal.

Business Team Signatures

Date: _____

Congratulations! Keep this pledge safe by placing it inside of your business folder.

Stage 1 Lesson 2:

Fast Food Restaurants

Case Studies



CASE STUDY 1

BURGER KING vs. McDONALDS

Similarities:

1. Menu Items: Both McDonald's and Burger King offer a variety of burgers, fries, chicken nuggets, and drinks. Their menus also include salads, breakfast items, and desserts like ice cream and apple pies.
2. Fast Food: Both restaurants focus on serving food quickly, so people can get their meals fast and enjoy them on the go.
3. Drive -Thru: Both McDonald's and Burger King have drive -thru windows, making it easy for customers to order and pick up food without leaving their cars.
4. Worldwide: Both restaurants have locations in many countries, making them easily accessible to people all over the world.

Differences:

1. Burger Styles: One of the main differences is how the burgers are made. McDonald's burgers are typically cooked on a flat grill, while Burger King uses a flame -grill method. This gives Burger King's burgers a smoky taste that some people really like.
2. Signature Menu Items: McDonald's is famous for its Big Mac, a burger with two patties, special sauce, lettuce, cheese, pickles, and onions.

Burger King, on the other hand, is well known for the Whopper, a large burger with a flame-grilled patty, lettuce, tomato, pickles, and onions.



3. Taste: Because of the different cooking methods, many people say that McDonald's burgers taste a little more "standard" and simpler, while Burger King's burgers have a distinct smoky flavor from being flame-grilled.
4. Marketing and Mascots: McDonald's has a famous mascot named Ronald McDonald, a clown who represents the brand. Burger King has its own mascot, the Burger King, who is dressed in royal attire and is often seen as funny or quirky in commercials.

Conclusion: In the end, McDonald's and Burger King offer similar types of food, but the way they cook their burgers, their signature menu items, and their mascots make each distinct. Some people prefer McDonald's because of its simplicity, while others like Burger King's smoky, flame-grilled burgers. Both are popular fast-food choices, but it all depends on what kind of taste you prefer!

Go to the Burger King and McDonald's websites. What would you order? What is the cost of your meal? Do both restaurants offer the same thing? Which one is most cost-effective?

CASE STUDY 2

DOMINO'S vs. BOSTON PIZZA



Domino's and Boston Pizza are both well-known places to get pizza, but they have some key differences and similarities.

Similarities:

1. **Pizza Menus:** Both Domino's and Boston Pizza offer a wide variety of pizzas with different toppings, crust styles, and sauces. You can find traditional options like cheese and pepperoni, as well as more creative choices like BBQ chicken or veggie pizzas.
2. **Takeout and Delivery:** Both restaurants offer takeout and delivery services, making it easy to enjoy pizza at home or at a party.
3. **Family -friendly:** Both Domino's and Boston Pizza are great choices for families, offering meals that are fun and easy to share.

Differences:

1. **Restaurant Atmosphere:** One big difference is the setting. Domino's is primarily focused on takeout and delivery, so many locations don't have a place to eat inside. It's all about getting your pizza quickly and taking it home. On the other hand, Boston Pizza has a sit-down dining experience with a full

restaurant. You can go there to enjoy pizza, pasta, and other meals in a comfortable setting.



2. Menu Variety: While both restaurants offer pizzas, Boston Pizza has a much broader menu. In addition to pizza, they also serve pasta, burgers, salads, and even some seafood. Domino's, on the other hand, is mostly known for pizza, although they also offer sides like chicken wings, cheesy bread , and pasta.
3. Cooking Style: Domino's pizzas are made quickly and are known for their classic crust and simple yet tasty toppings. They focus on making pizza fast and affordable. Boston Pizza offers more gourmet -style pizzas, often with higher -quality ingredients and mo re unique toppings. Their crust options are also a bit more varied.
4. Price and Service: Domino's is often seen as a budget -friendly option with lower prices for pizza, especially when ordering online or using promotions. Boston Pizza, because of its sit -down service and wider menu, tends to be more expensive.

Conclusion: Both Domino's and Boston Pizza are great places to get pizza, but they are different in many ways. Domino's is perfect for a quick pizza delivery or takeout, while Boston Pizza offers a more relaxed dining experience with a variety of food opti ons. If you're looking for a fast meal at home, Domino's might be the better choice. But if you want to enjoy pizza along with other dishes in a restaurant, Boston Pizza could be the place to go!

Stage 1 Lesson 2:

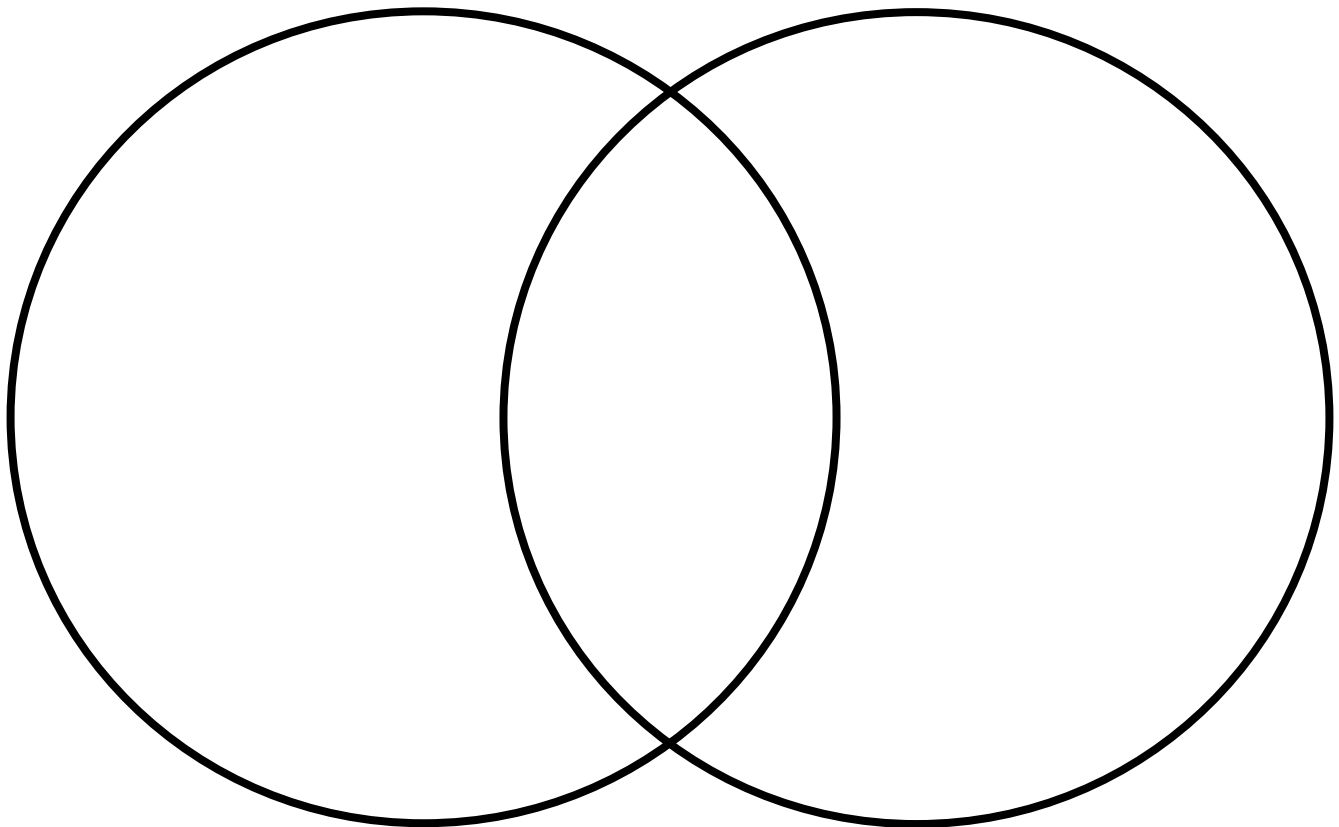
Fast Food Restaurants

Venn Diagram



Use the Venn diagram to compare and contrast two restaurants from the [Food Restaurants Case Studies](#). Then write about their similarities and differences.

[Fast](#)





Which restaurant do you prefer? Why?

What stands out to you?

Stage 1 Lesson 3

Market Research



Choose a case study to read. Think about what Market Research the students had to do for their business. Imagine you are part of their business. What market research would you need to do? Write the case study title and your market research ideas in the squares.

Case Study

Case Study Options:



Hope Blooms	Biz Kids - Colouring Books
Biz Kids - Earrings	Biz Kids - Indigenous Scarves to Scrunchies
Pizza or other businesses in your community:	
<i>For schools with access to YouTube</i> - Check out Learning About Ag with Mady Mady Adamson is a fifth -generation Saskatchewan grain farmer. She is passionate about education, especially spreading awareness about agriculture. In April 2021, she started "Learning About Ag with Mady" on various social media platforms. She believes it i s essential to tell the story of where food comes from in a way that is accessible and easy to understand for various audiences. Mady believes that the entrepreneurial mindset has helped her grow significantly and expand the audience she can communicate with. Beyond the videos and online posts, she has been invited to various public speaking opportunities and collaborations. One imp ortant partnership she has developed is with a local company that helped her create merchandise with her logo. Mady has chosen to donate all proceeds from the products to Stars Air Ambulance as she is committed to their life -saving mission for those living in rural areas. Her story continues to be an inspiration to other students and she is a PowerPlay ambassador through our Youth Advisory Council. <i>This information is from</i> PowerPlay, Young Entrepreneurs on the Rise	

Stage 1 Lesson 3:

Market Research 3,2,1

Make notes about Market Research using this organizer.



3 things I learned:

1.

2.

3.

2 interesting things:

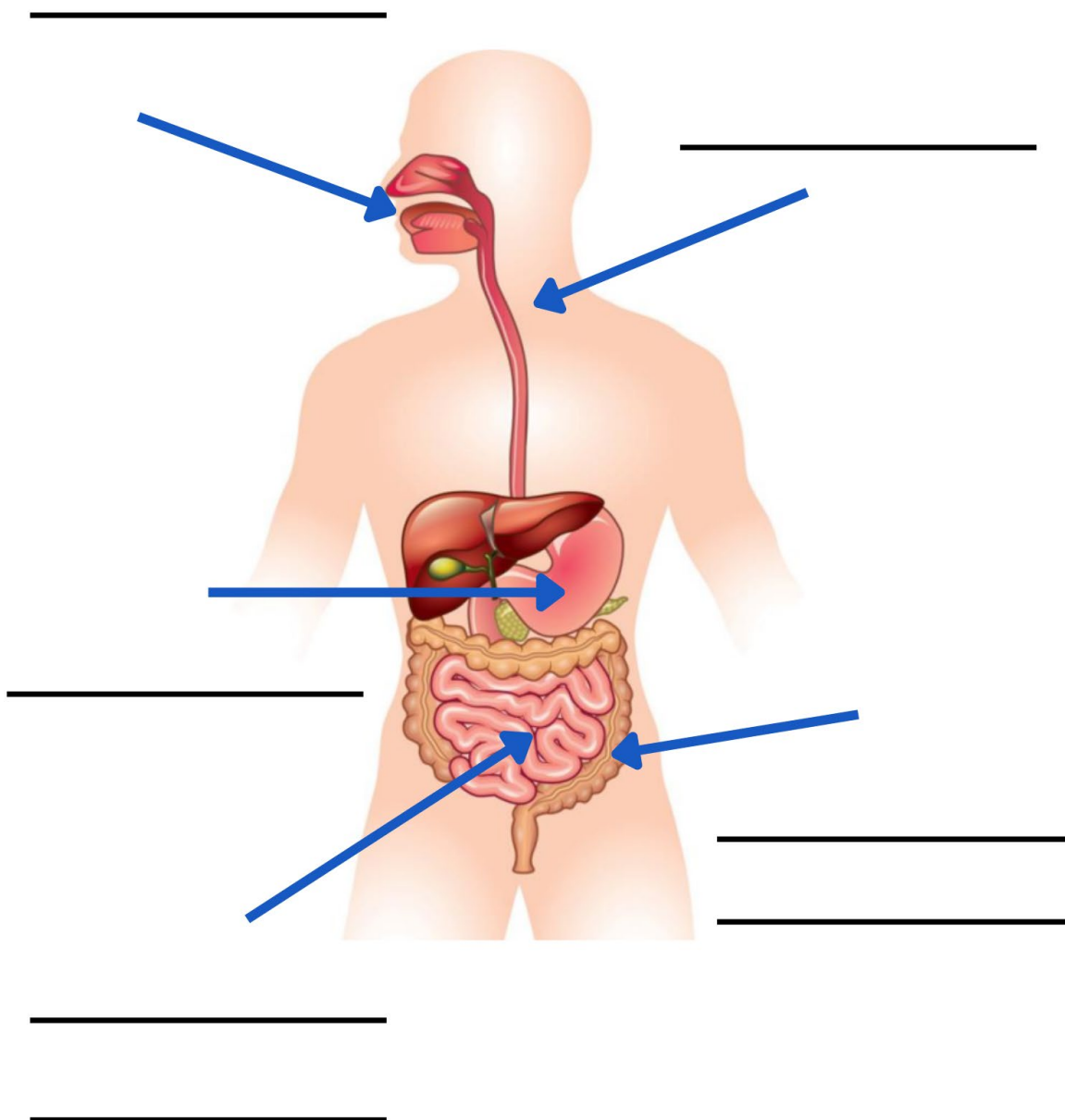
1.

2.

1 question:

1.

Stage 2 Lesson 1: Digestive System Diagram



Stage 2 Lesson 2

Food Label Scavenger Hunt



Name: _____

Business Group Name: _____

Work as a team to find foods with these characteristics. Write the name of the product below the clue.

Find a bakery product that is low in saturated fat.	Find a can of food	Find a product that contains whole grains.
Find a food high in dietary fibre.	Find a food that you've never eaten before.	Find a food that was made in Canada!
Find a food that has one or more of the following vitamins or minerals: B vitamins, iron, zinc and magnesium.	Find a cereal that is high in fibre and contains whole grain ingredient(s).	Find a food that has a potential allergen.

Stage 2 Lesson 3: Fibre and Whole Grains Questions



After reading the [Fibre and Whole Grains](#) from the Heart and Stroke Foundation, write about how fibre prevents cholesterol from building up in the arteries.

[illegible]

Stage 2 Lesson 3 - The Circulatory System

After reading the [Fibre and Whole Grains Article](#), write about how fibre prevents high cholesterol from building up in the arteries.

Stage 3 Lesson 1:

Pizza Survey



Using Random Sampling

The method of your survey is a **random sample** . The number of people you will survey is your **sample population** . How many friends, family, or people in your school community do you plan to survey?

The **purpose** of your survey is the question you want answered. Write your question(s) below with the answer choice options in the boxes below. As you gather your data, use tally marks in the second row.

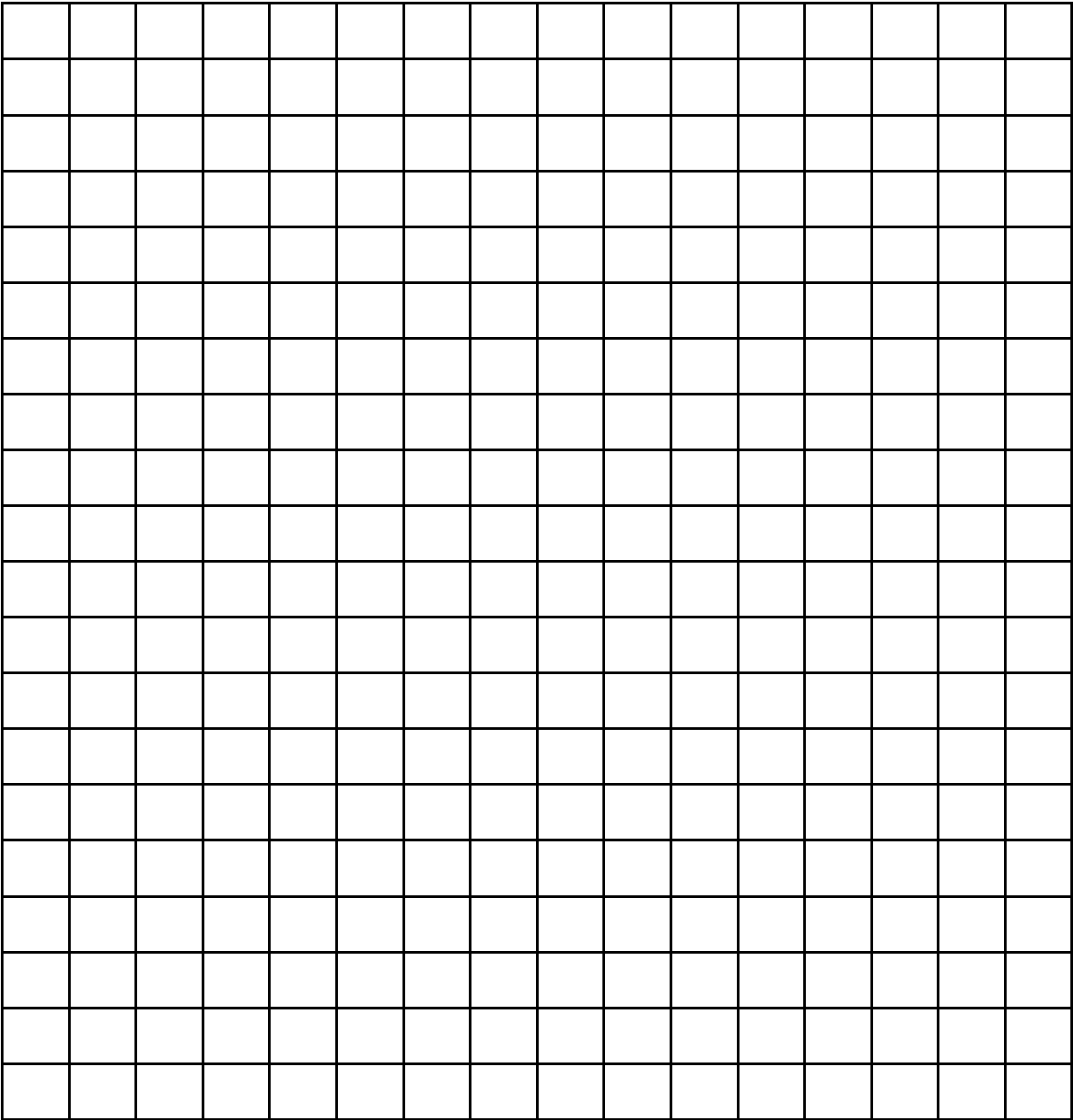
Question :

Option 1	Option 2	Option 3	Option 4	Option 5

Stage 3 Lesson 2:
Bar Chart Template



Bar Chart Title: _____



Stage 4 Lesson 2:

Pizza Recipe Template

(Version 1)



Recipe Name:

Team Name:

Servings: [Number]

Prep Time: [Time]

Cook Time: [Time]

Total Time: [Time]

Ingredients:

- [Ingredient 1]
- [Ingredient 2]
- [Ingredient 3]
- [Ingredient 4]
- [Ingredient 5]
- [Add more ingredients as needed, using bullet points for clarity]

Instructions:

1. [Step 1: Use numbered steps for clear instructions]
2. [Step 2: Be specific and provide details]
3. [Step 3: Explain any techniques or special equipment]
4. [Step 4: Use separate steps for each part of the process]
5. [Step 5: Add more steps as needed]

Notes:

- [Tips, substitutions, or variations on the recipe]
- [Information about storage or serving suggestions]
- [Any other relevant information]

Nutrition Information (Optional):

- [Calories per serving]
- [Fat (grams per serving)]
- [Protein (grams per serving)]
- [Carbohydrates (grams per serving)]

Stage 4 Lesson 2:

Pizza Recipe Template

(Version 2)



Recipe Name:	Team Name:
Servings:	Prep Time: Cook Time: Total Time:
Description:	

Ingredients:

• • • • • • • •	• • • • • • • •
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Instructions:

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Notes and Nutritional Information:

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Stage 4 Lesson 2:



Shopping List

Business Name: _____

Our pizza choice is: _____

Based on your chosen recipe, write the ingredients and the amounts needed to make your pizza in the table below. Include the amounts needed to double and triple your recipe.

Ingredient	Quantity (g/ml)	Double	Triple
whole wheat flour	2 ½ cups, 300 g	5 cups, 600 g	7 ½ cups, 900 g
active dry yeast	2 ¼ tsp	4 ½ tsp	6 ¾ tsp
salt	¾ tsp	1 ½ tsp	2 ¼ tsp
olive oil	1 tbsp	2 tbsp	3 tbsp
sugar	1 tbsp	2 tbsp	3 tbsp
cheese			
sauce			

Recipes:

- [Good in Every Grain Pizza Dough Recipe](#)
- [Good in Every Grain Pizza Pinwheels](#)
- [Good in Every Grain homemade pizza](#)



Stage 4 Lesson 3:

Active Viewing Questions

Video 1 - Drones in Agriculture: Weed Detection (1:00)

What is an advantage of using a drone to check on a large field of crops?

Video 2 - What is Precision Agriculture (4:28)

How does using technology like GPS and sensors help farmers be more precise with their crops?

Video 3 - Dino: Autonomous Mechanical Weeding Robot (1:43)

A robotic tractor or machine sees and thinks without a human behind the steering wheel. How is the robotic weeding machine able to drive through a field and do its job safely?

Video 4 - What is Agriculture Technology? (9:00)

As you watch, listen for one example of how technology collects or uses information to help farmers make decisions. How do you think coding is involved?

Video 5 - Renewable Energy on Farms

a) As you watch the video, check off the types of renewable energy you see. The "Energy Checklist": Which of these are mentioned?

- Solar Power (Energy from the sun)
- Wind Power (Energy from the air)
- Bioenergy (Energy from plants or waste)
- Hydro Power (Energy from moving water)

From the video, write an example of solar, wind, or bioenergy?

Why is it a good idea for a farm to have more than one type of renewable energy?

Stage 4 Lesson 3

Researching Technology in Grain Farming



Use class created criteria to complete research for this inquiry:

**How is technology changing the way Ontario farmers
grow grains like barley, corn, oats, soybeans, and
wheat?**

Sample Research Questions: Use books, videos, interviews, or reliable websites (like GoodinEveryGrain.ca) to help you answer these questions.

A. Understanding the Big Idea

- What kinds of grains do Ontario farmers grow?
- What do we mean by *technology in farming* ?
- How has technology changed farming over time?

B. Technology on the Farm

- How do tractors, combines, or planters use computers or GPS?
- What is a *robotic* or *self-driving* tractor?
- How are *drones* used on grain farms?
- How do *satellites* or *soil sensors* help farmers make decisions?
- What are some *apps or programs* that farmers use?

C. Farming and Sustainability

- How does technology help farmers use less water, fuel, or fertilizer?
- How does technology help protect the environment?
- How can technology help farmers take care of their soil for the future?

D. The Human Side of Farming

- How does technology make farmers' work safer or easier?
- Do all farmers use the same tools? Why or why not?
- How do farmers learn to use new technology?

- What might make it hard for a farmer to use new tech?

Stage 4 Lesson 3:

Reporting on Technology

Sample Questions



Inquiry Focus: How is technology changing the way Ontario farmers grow grains like barley, corn, oats, soybeans, and wheat?

Getting Started – Understanding the Big Idea

1. What kinds of grains do Ontario farmers grow?
 2. What do we mean by “technology in farming?”
 3. How do machines and digital tools help farmers today compared to 50 years ago?
-

Technology on the Farm

4. How do tractors, combines, or planters use technology (like GPS, sensors, or computers)?
 5. What is a robotic or self-driving tractor, and how does it help farmers work more efficiently?
 6. How are drones used on grain farms? (What do they help farmers see or measure?)
 7. How do satellites or sensors in the soil give farmers information about their crops?
 8. What are some examples of apps or computer programs farmers use to track their crops or weather?
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Connecting to Sustainability

9. How does technology help farmers use less water, fuel, or fertilizer?

10. How can digital farming help reduce waste or protect the environment?
 11. How does technology help farmers make decisions that protect the soil for future generations?
-

Human Side of Farming

12. How does technology make farmers' work safer or easier?
 13. Do all farmers use the same technology? Why or why not?
 14. How do farmers learn to use new tools or machines?
 15. What challenges might farmers face when adopting new technology?
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Critical Thinking & Reporting

16. What surprised you the most about technology in grain farming?
 17. What do you think people in your community *don't know* about modern farming?
 18. What's one message you'd like your audience to remember after watching your report?
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Optional Extension for Broadcast Prep

- What visuals, sounds, or interviews could make your story more interesting?
- Whom could you interview (a farmer, agronomist, or local expert)?
- How could you make your report clear and easy to understand for your audience?

Stage 4 Lesson 1: Selling Price



Business Name: _____

Copy the ingredients and quantities from your shopping list onto this table. The [Homemade dough recipe](#) has been calculated for you. One dough recipe costs \$1.31. Your team might be using store - bought dough and will need to include that cost.

	Ingredient	Quantity (g/ml)	Price
o	whole wheat flour	2 ½ cups <i>1 cup of flour = 120 g 120 g x 2.5 c = 300 g</i>	<i>\$0.16/100g \$0.16 x 3 =</i> \$0.48
	active dry yeast	2 ¼ tsp <i>1 tsp = 5g 5 g x 2.25 tsp = 11.25 g</i>	<i>\$4.86/100g 4.86/100 = \$0.0486/g 0.0486 x 11.5 =</i> \$0.56
	salt	¾ tsp <i>0.75 x 5g = 3.75g</i>	<i>\$0.15/100g 0.15/100 = \$0.0015/g 0.0015 x 3.75 =</i> \$0.01
	olive oil	1 tbsp <i>1 tbsp = 15ml</i>	<i>\$1.50/100ml 1.50/100 = \$0.015/ml 0.015 x 15 =</i> \$0.23
	sugar	1 tbsp <i>1 tbsp = 15g</i>	<i>\$0.17/100g 0.17/100 = \$0.0017/g 0.0017 x 15 =</i> \$0.03
b	cheese		
	sauce		
y			

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Each ingredient requires a calculation.

1. Calculate your **ingredients cost** and put it on the selling price table?
2. Total the **recipe cost** and add it to the table below?
3. After considering the data and all that has been researched and discussed, decide on your **selling pizza** and explain how you decided on your **selling price** .
4. Complete this table to calculate your profit for one unit (pizza).
Add your amounts in the row below the example.

Cost of Business Materials	Cost of Recipe	Total Cost column 1 + column 2	Price of Pizza	Profit <i>per pizza</i> column 4 - column 3
Example : \$1.20	\$3.60	$1.20 + 3.60 =$ \$4.80	\$6.00	$6.00 - 4.80 =$ \$1.20

Ingredients and prices for the dough:

 Prepared in Canada \$8.00 No Name Whole Wheat Flour 5 kg, \$0.16/100g	 Prepared in Canada \$5.49 Fleischmann's Pizza Yeast 113 g, \$4.86/100g	 Prepared in Canada \$1.50 Windsor Iodized Table Salt 1 kg, \$0.15/100g	 \$14.99 Gallo Extra Virgin Olive Oil 1 l, \$1.50/100ml	 Prepared in Canada \$3.49 Lantic Granulated Sugar 2 kg, \$0.17/100g
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Prices are from the [Real Canadian Superstore website](#) .

Stage 5 Lesson 2: Pizza Shop Business Showcase To-Do List



It is an exciting point in your STEMterprise project. Your team needs to make sure you have everything covered. Use your business planning document and make a list of work that needs to be done as you prepare for the Business Showcase.

- Choose a leader to keep your team on track.
- Create other roles such as: marketing manager, finance lead, packaging person
- Decide who among your team would like to complete the tasks.
- Make sure tasks are fairly divided.
- Work together and help each other.
- The whole team is responsible for cleaning up.

[illegible]

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Business Name:



Give your pizza a score out of 5 and comment on its presentation, texture, and taste.

Category	Comment
Presentation	
Texture	
Taste	

Score out of 5:

Business Name:



Give your pizza a score out of 5 and comment on its presentation, texture, and taste.

Category	Comment
Presentation	
Texture	
Taste	

Score out of 5: