



Unlocking Agriculture



Students will examine local commodities grown in British Columbia with the use of a GIS (Graphic Information Systems) Map accessed through the British Columbia Agriculture in the Classroom Foundation website. Students will develop their core competency skills through investigation, research analysis, and the sharing of findings and collaboration. Students will also extend their collaboration outside of the classroom with an interview with a local farm.

Subject Levels/ Suggested Grade

English Language Arts 8 + 9

Career Education 8 + 9

Social Studies 8 + 9

Science 8 + 9

ADST (Food Studies) 8 + 9

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Rationale

Agriculture is an important area that teachers of all grades should implement in their everyday teaching and unit planning. Agriculture teaches students important lessons and ideas that will help solve local and global issues.

The goal of this unit is to introduce grade 8 and 9 students to BC commodities, the importance of the industry, the challenges, and what they can do to make a positive change. This unit is designed to help students learn about BC commodities in hopes to provide students with greater global awareness. Students will learn more about agriculture industries, food security, why buying local is important for the environment, in addition to learning about nutrition.

Within the unit plan, students will explore BC commodities through a group research assignment. This exploration will teach students about food security and the challenges that industries face and the ways that they overcome it, where they are produced, how they are produced and the steps of production. Food security is an important topic to teach students as our society depends on food production to feed people in Canada and around the world (Vågsholm et al., 2020). Lessons will show students how dependent Canada is on agriculture and students will gain a better appreciation for local farmers. Through learning about food security, the project encourages students to "synthesize ideas from a variety of sources to build understanding" (English Language Arts 8) while they, "critically analyze and prioritize competing factors, including social, ethical, and sustainability considerations, to meet community needs for preferred futures" (ADST 8). The assignment gives students an insight into the process from farm to fork. It will also allow them to think critically about the ways the industry can become more sustainable.

Further, students will get a first-hand look at their chosen commodity through a virtual interview with a local farmer. This is an important component of the unit as students will learn about food production, the duties it entails as well as careers within the industry. Students will, "exchange ideas and viewpoints to build shared understanding and extend thinking" (English Language Arts 8) and, "recognize and explore diverse perspectives on how work contributes to our community and society" (Career Education 8).

An issue facing the agricultural industry is an aging population of agricultural workers. Currently, those that work in the farming and agriculture industry belong to an older demographic and this will create a significant need in the agriculture industry when this population retires. This unit is a great tool to introduce students to a rewarding industry that is integral to Canadian society. It also is an opportunity for students to gain perspective of the industry and get answers with regards to daily tasks, how current workers got started in the farming industry and gain further insight into how agricultural workers provide for communities directly from an industry professional. Students will gain a better grasp of the importance of agriculture to society, and potential career opportunities.

Another issue that the unit explores is nutrition. Teaching students about agriculture will also help provide an insight into nutrition. A looming health issue occurring in Canada today is obesity (Murray, 2020). One of the leading factors is a poor diet (Wallinga, 2010). To learn more about this, students will be engaged in cooking/baking a chosen recipe with a focus on nutritional values in class. Not only will they learn about nutrition, but also have the opportunity to appreciate how delicious local food is. During the lesson, students will have to "identify and use appropriate tools, technologies, materials, and processes for production" (ADST 8). The lesson gives students skills and resources to make healthier choices. It also provides students an understanding of the importance of buying local food for the environment. Students will reflect on their own decisions/habits and the effects it has on the greater population and environment. The unit hopes to spark a change by encouraging students to buy more locally produced products in the future.

The unit will expand students' curiosity while giving them autonomy in the direction and area they want to explore. The target audience for this unit is Grades 8 and 9, but the activities can also be adjusted for students in older grades.

Lesson 1: Unlocking Agriculture- Investigating BC Commodities

Students will discover BC commodities by completing an in-depth research about a commodity of their choice

Grade and Subject	Curricular Competencies	Content Connections
English Language Arts 8	<ul style="list-style-type: none"> • Synthesize ideas from a variety of sources to build understanding • Think critically, creatively, and reflectively to explore ideas within, between, and beyond texts • Recognize an increasing range of text structures and how they contribute to meaning • Assess and refine texts to improve their clarity, effectiveness, and impact according to purpose, audience, and message 	<ul style="list-style-type: none"> • Reading strategies
Career Education 8	<ul style="list-style-type: none"> • Demonstrate respect, collaboration, and inclusivity in working with others to solve problems • Apply a variety of research skills to expand their knowledge of diverse career possibilities and understand career clusters 	<ul style="list-style-type: none"> • Local and global needs and opportunities
Social Studies 8	<ul style="list-style-type: none"> • Use Social Studies inquiry processes and skills to ask questions; gather, interpret, and analyze ideas; and communicate findings and decisions • Determine which causes most influenced particular decisions, actions, or events, and assess their short-and long-term consequences (cause and consequence) 	<ul style="list-style-type: none"> • Changes in population and living standards • Scientific and technological innovations
Science 8	<ul style="list-style-type: none"> • Seek patterns and connections in data from their own investigations and secondary sources • Use scientific understandings to identify relationships and draw conclusions • Demonstrate an understanding and appreciation of evidence (qualitative and quantitative) • Exercise a healthy, informed skepticism and use scientific knowledge and findings from their own investigations to evaluate claims in secondary sources 	<ul style="list-style-type: none"> • Major geological events of local significance
ADST 8 (Foods Studies)	<ul style="list-style-type: none"> • Screen ideas against criteria and constraints • Evaluate personal, social, and environmental impacts and ethical considerations • Select, and as needed learn about, appropriate tools and technologies to extend their capability to complete a task 	<ul style="list-style-type: none"> • Social factors that affect food choices, including eating practices • Local food systems

Grade and Subject	Curricular Competencies	Content Connections
English Language Arts 9	<ul style="list-style-type: none"> • Apply appropriate strategies to comprehend written, oral, and visual texts, guide inquiry, and extend thinking • Think critically, creatively, and reflectively to explore ideas within, between, and beyond texts • Transform ideas and information to create original texts 	<ul style="list-style-type: none"> • Reading strategies • Writing processes
Career Education 9	<ul style="list-style-type: none"> • Demonstrate respect, collaboration, and inclusivity in working with others to solve problems • Apply a variety of research skills to expand their knowledge of diverse career possibilities and understand career clusters 	<ul style="list-style-type: none"> • Local and global needs and opportunities
Social Studies 9	<ul style="list-style-type: none"> • Use Social Studies inquiry processes and skills to ask questions; gather, interpret, and analyze ideas; and communicate findings and decisions 	<ul style="list-style-type: none"> • Physiographic features of Canada and geological processes
Science 9	<ul style="list-style-type: none"> • Demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal interest • Make observations aimed at identifying their own questions, including increasingly complex ones, about the natural world • Demonstrate an awareness of assumptions, question information given, and identify bias in their own work and secondary sources • Consider the changes in knowledge over time as tools and technologies have developed • Demonstrate an awareness of assumptions, question information given, and identify bias in their own work and secondary sources • Consider the changes in knowledge over time as tools and technologies have developed 	<ul style="list-style-type: none"> • Sustainability of systems • First People’s knowledge of interconnectedness and sustainability
ADST 9 (Food Studies)	<ul style="list-style-type: none"> • Screen ideas against criteria and constraints • Critically analyze and prioritize competing factors, including social, ethical, and sustainability considerations, to meet community needs for preferred futures 	<ul style="list-style-type: none"> • Health, economic, and environmental factors that influence availability and choice of food in personal, local, and global contexts • Ethical issues related to food systems

Teacher Background

The teacher should follow the link (<https://www.bcaitc.ca/grow-bc-commodities>) before beginning the lesson to familiarize themselves with the commodities grown in BC (in case a group chooses a commodity not grown in BC).

The teacher should also have some background using online survey platforms such as *Menti*, *Jamboard* or *Padlet*. The teacher should practice setting up a page before the lesson. The teacher also needs to warn students to be responsible using the site. They should understand that the task is meant for learning and not writing inappropriate or non-relevant information.

Materials

- Devices with access to the internet
- Internet access, Projector
- Paper
- Pencil
- Student handouts:
 - *Discovering BC Commodities*
 - *Investigating BC Commodities*

Procedure

1. Teacher will upload a link to the projector for an online survey (Menti, Jamboard, Padlet) and students will copy the link on their device to access the virtual board.
2. The teacher will ask students to “write down all the BC commodity products that they can think of” on their devices.
3. The teacher will go over the answers that the students provided.
(*Suggested alternative: use a whiteboard/chalkboard*)
4. Teacher will then provide the BC commodity link (<https://www.bcaitc.ca/grow-bc-commodities>)
5. The teacher will place students into groups of 4.
6. The grouped students will go to the link provided and look into the various commodities grown in BC. They will be asked to select two that interest them.
7. The class will come together and the students will share the two commodities that spark their interest.
8. Teacher is to hand out *Discovering BC Commodities* handout and to go over the unit project details.
9. Teacher will provide students with the *Investigating BC Commodities* handout. Teacher will assign each group with one of the two named commodities. The teacher will ensure no groups are doing the same commodity.
10. The students will dive deeper into the content provided on the BCAITC website and research more about their assigned commodity. Students will then take notes.
11. **Groups must ensure they write three takeaways and three fun facts about their commodity. Notes will be handed to the teacher for a completion grade and returned back to students to be submitted with their final report.**

Extension Activities

- Students can go home and do more research on 1-2 items on the [BC Commodity List](#).
- Watch any of the [Spotlight Series Farm Tour videos](#) which feature BC Commodities.
- Students can also go home and look through their fridge or pantry and find any BC grown commodities that they have, and bring the list back to class.

Assessment

- Assess if students were able to write down some notes and interesting facts about their commodity.

Credit

BC Commodity List- <https://www.bcaitc.ca/grow-bc-commodities>

Spotlight Series- <https://www.bcaitc.ca/resources>

Discovering BC Commodities

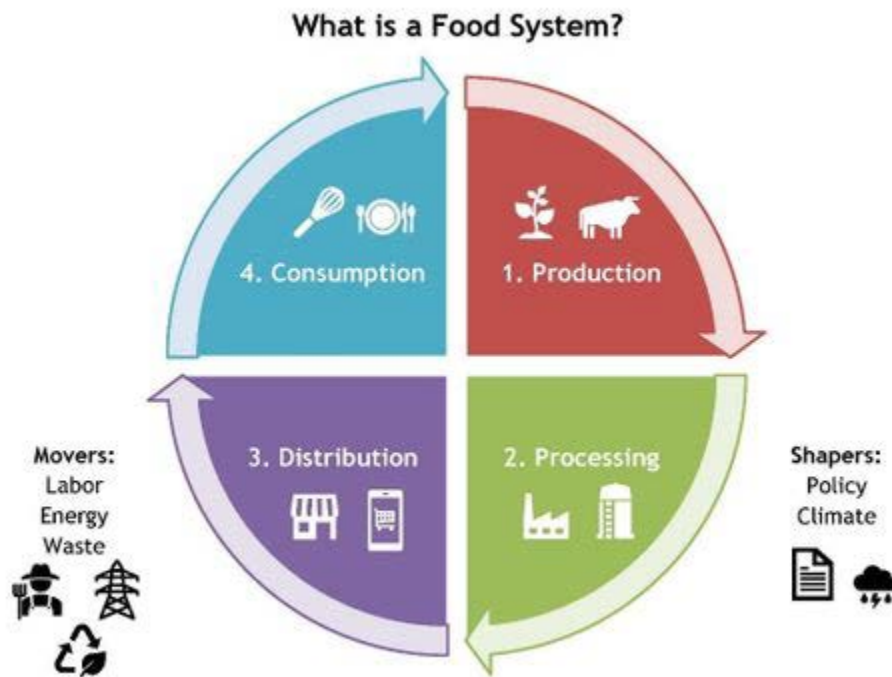
Name: _____

Date: _____

Partners: _____

Why are we doing this?

Have you ever taken the time to know where your food comes from? This project is designed for you to learn about our local food system here in British Columbia. A food system is “a complex web of activities involving the production, processing, transport/distribution, and consumption” (University of Oxford). This project only touches on our vast food system that extends locally and globally. This project is for you to understand that there is more behind the packaging of your food.



Project Outline:

- Research on a local food commodity
- Speak with a local farm or two
- Share your findings
- Use a local food commodity in a food dish

Core Competencies:

CTPS

1. Communication - You will be speaking with a local farm and with your peers.
2. Collaboration - This is a group project, therefore, you will be required to work effectively with your group members.
3. Critical Thinking - Research requires you to examine and take good notes on what you are observing.
4. Creative Thinking - Thinking of the best questions to ask the local farm.
5. Personal Awareness & Responsibility - You will practice on getting tasks done for your group and know what you need to do for success.
6. Social Awareness & Responsibility - Be mindful of those you are working with and how you are in relation to others.
7. Positive Personal & Cultural Identity - This project is focusing on the world close to you which is associated with your culture and life!

Presentation Criteria:

- Provide at least 3 takeaways or fun facts learned about your BC commodity
- Provide details about your interview with the farm
- Share the name of the recipe provided by farmer

Final Report Contents:

- *Investigating BC Commodities* handout (from each person in group)
- *Contacting the Farmer* handout (1 final copy)
- *Interview the Farm Questions & Answers* handout (1 final copy)
- Farm Favourite Recipe (1 final copy)
 - Name of Recipe
 - Yield (how much does it make?)
 - Ingredients & measurements
 - Directions
- BC Commodity Project Self-Reflection

Investigating BC Commodities

Name: _____

Date: _____

Our BC commodity is: _____

List general notes about your commodity (Where is it produced, how is it grown, quantity, challenges facing the industry, etc.)

List 3 fun facts about your commodity

List 3 takeaways after researching your commodity

Lesson 2- Unlocking Agriculture: BC Farmer interview

Students will conduct an interview with a BC farmer that produces the chosen BC commodity from the previous lesson. Students will gain a better perspective on the industry and the daily operations of a farmer.

Grade and Subject	Curricular Competencies	Content Connections
English Language Arts 8	<ul style="list-style-type: none"> • Think critically, creatively, and reflectively to explore ideas within, between, and beyond texts • Exchange ideas and viewpoints to build shared understanding and extend thinking • Construct meaningful personal connections between self, text, and world • Synthesize ideas from a variety of sources to build understanding • Apply appropriate strategies to comprehend written, oral, and visual texts, guide inquiry, and extend thinking 	<ul style="list-style-type: none"> • Oral language strategies
Career Education 8	<ul style="list-style-type: none"> • Appreciate the value of a network of resources and mentors to assist with career exploration • Recognize and explore diverse perspectives on how work contributes to our community and society • Apply a variety of research skills to expand their knowledge of diverse career possibilities and understand career clusters 	<ul style="list-style-type: none"> • Factors affecting types of jobs in the community • Influence of technology in learning and working
Social Studies 8	<ul style="list-style-type: none"> • Use Social Studies inquiry processes and skills to ask questions; gather, interpret, and analyze ideas; and communicate findings and decisions • Assess the significance of people, places, events, or developments at particular times and places (significance) • Assess the credibility of multiple sources and the adequacy of evidence used to justify conclusions (evidence) 	<ul style="list-style-type: none"> • Interactions and exchanges of resources, ideas, arts, and culture between and among different civilizations
Science 8	<ul style="list-style-type: none"> • Demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal interest 	<ul style="list-style-type: none"> • The relationship of micro-organisms with living things:
ADST 8 (Foods Studies)	<ul style="list-style-type: none"> • Evaluate personal, social, and environmental impacts and ethical considerations • Select, and as needed learn about, appropriate tools and technologies to extend their capability to complete a task • Make a plan for production that includes key stages, and carry it out, making changes as needed • Generate potential ideas and add to others' ideas 	<ul style="list-style-type: none"> • Social factors that affect food choices, including eating practices • Local food systems

Grade and Subject	Curricular Competencies	Content Connections
English Language Arts 9	<ul style="list-style-type: none"> Apply appropriate strategies to comprehend written, oral, and visual texts, guide inquiry, and extend thinking Recognize and identify the role of personal, social, and cultural contexts, values, and perspectives in texts Construct meaningful personal connections between self, text, and world 	<ul style="list-style-type: none"> Oral language strategies Writing processes Reading strategies
Career Education 9	<ul style="list-style-type: none"> Appreciate the value of a network of resources and mentors to assist with career exploration Recognize and explore diverse perspectives on how work contributes to our community and society Apply a variety of research skills to expand their knowledge of diverse career possibilities and understand career clusters 	<ul style="list-style-type: none"> Factors affecting types of jobs in the community Influence of technology in learning and working
Social Studies 9	<ul style="list-style-type: none"> Use Social Studies inquiry processes and skills to ask questions; gather, interpret, and analyze ideas; and communicate findings and decisions Assess the significance of people, places, events, or developments, and compare varying perspectives on their historical significance at particular times and places, and from group to group (significance) Assess how prevailing conditions and the actions of individuals or groups affect events, decisions, or developments (cause and consequence) 	<ul style="list-style-type: none"> Local, regional, and global conflicts
Science 9	<ul style="list-style-type: none"> Demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal interest Consider social, ethical, and environmental implications of the findings from their own and others' investigations 	<ul style="list-style-type: none"> Sustainability of systems First Peoples knowledge of interconnectedness and sustainability
ADST 9 (Food Studies)	<ul style="list-style-type: none"> Evaluate personal, social, and environmental impacts and ethical considerations Evaluate how the land, natural resources, and culture influence the development and use of tools and technologies 	<ul style="list-style-type: none"> Health, economic, and environmental factors that influence availability and choice of food in personal, local, and global contexts Ethical issues related to food systems First Peoples traditional food use, including ingredients, harvesting/gathering, storage, preparation, and preservation

Teacher Background

The teacher should ensure that students are writing professional letters/emails to contact local farms. Based on assigned commodities, teacher should prepare a 1-2 contacts for students in case students are unable to find one themselves.

Materials

- Devices with access to the internet
- [Grow BC GIS Map](#)
- Paper
- Pencil
- Student handouts:
 - *Farm Contact Sheet*
 - *Farmer Interview*

Procedure

1. Groups will continue to build off the previous lesson on their assigned commodity.
2. Students will contact a local farm that grows their chosen commodity and write a personal email/letter to set up a virtual farm meeting. Meeting day can be outside of class or during the next lesson day. Teacher is to review the first contact message (*Farm Contact Sheet*) before sending it to the contact. Use [Farm Explore BC Map](#) to help find local farms.
3. Students will work on adding to the interview questions to *Famer Interview* handout. Teacher should encourage the students to think of at least 2-3 additional questions aside from the ones provided. Students can ask the farmer questions regarding the challenges they face, what they enjoy about the job, procedures, etc.
4. Students will also need to find out what the farmer's favourite recipe is (containing the group's chosen commodity). This information will be used for a later lesson.

Extension Activities

- Students can do research on other local farms and find out the challenges that farmers face, as well as answers to other questions they have.
- Check out lessons in the [Real Dirt on Farming- Teachers' Guide](#) for lessons about issues in agriculture.

Assessment

- Students will be assessed on the questions and answers from the interview they conducted.

Credit

Grow BC Map- <https://www.bcaitc.ca/resources/grow-bc-guide-bcs-agriculture-resources>

Farm Explorer BC Map- <https://farm-explorer-bc-bcaitc.hub.arcgis.com/>

Real Dirt on Farming- Teacher's Guide- <https://www.bcaitc.ca/resources/real-dirt-farming-teachers-guide>

Farm Contact Sheet

Name: _____

Date: _____

Write out below what you would like to say to the farmer. Have your teacher read it before you send it out to the farm.

Be sure to include the following in your introduction:

- *Your names*
- *Why are you contacting them?*
- *Are they able to meet with you via video call or telephone call (suggest dates and times, and see if your group members can meet during the same time).*

Farmer Interview

Name: _____ Interview Date and Time: _____

Farmer's name and the farm they work at: _____

Location: _____

Write down your questions and answers below. Think of interesting questions that will help you get a sense of the industry and what it is like to be a farmer. Listed below are a few questions you may ask. **Include an additional 2-3 more questions you'd like to ask.**

1. What are the challenges that you face as a _____ (commodity) farmer?
2. What do you enjoy most about your job?
3. What are the job duties?
4. How did you become a _____ (commodity) farmer?
5. What is your favourite recipe using _____ (commodity)?

Lesson 3- Unlocking Agriculture: GIS (Graphic Information Systems) Scavenger Hunt

Students will work through an online scavenger hunt based on BC commodities. Students will gain a better understanding of where commodities are grown as well as more about each industry. This will be done by working through leading questions in groups.

Grade and Subject	Curricular Competencies	Content Connections
English Language Arts 8	<ul style="list-style-type: none"> • Apply appropriate strategies to comprehend written, oral, and visual texts, guide inquiry, and extend thinking • Think critically, creatively, and reflectively to explore ideas within, between, and beyond texts 	<ul style="list-style-type: none"> • Reading strategies
Career Education 8	<ul style="list-style-type: none"> • Appreciate the value of a network of resources and mentors to assist with career exploration • Recognize and explore diverse perspectives on how work contributes to our community and society • Apply a variety of research skills to expand their knowledge of diverse career possibilities and understand career clusters 	<ul style="list-style-type: none"> • Factors affecting types of jobs in the community • Influence of technology in learning and working
Social Studies 8	<ul style="list-style-type: none"> • Use Social Studies inquiry processes and skills to ask questions; gather, interpret, and analyze ideas; and communicate findings and decisions • Identify what the creators of accounts, narratives, maps, or texts have determined is significant (significance) 	<ul style="list-style-type: none"> • Interactions and exchanges of resources, ideas, arts, and culture between and among different civilizations • Scientific and technological innovations
Science 8	<ul style="list-style-type: none"> • Observe, measure, and record data using equipment • Make predictions about the findings of their inquiry 	<ul style="list-style-type: none"> • Characteristics of life – living things respire, grow, take in nutrients, produce waste, respond to environmental stimuli and reproduce
ADST 8 (Foods Studies)	<ul style="list-style-type: none"> • Screen ideas against criteria and constraints • Evaluate personal, social, and environmental impacts and ethical considerations • Select, and as needed learn about, appropriate tools and technologies to extend their capability to complete a task 	<ul style="list-style-type: none"> • Social factors that affect food choices, including eating practices • Local food systems

Grade and Subject	Curricular Competencies	Content Connections
English Language Arts 9	<ul style="list-style-type: none"> • Access information and ideas for diverse purposes and from a variety of sources and evaluate their relevance, accuracy, and reliability • Apply appropriate strategies to comprehend written, oral, and visual texts, guide inquiry, and extend thinking • Synthesize ideas from a variety of sources to build understanding • Recognize and appreciate how different features, forms, and genres of texts reflect different purposes, audiences, and messages • Think critically, creatively, and reflectively to explore ideas within, between, and beyond texts • Recognize and identify the role of personal, social, and cultural contexts, values, and perspectives in texts • Respond to text in personal, creative, and critical ways • Transform ideas and information to create original texts 	<ul style="list-style-type: none"> • Language features, structures, and conventions <ul style="list-style-type: none"> ○ multi-paragraphing ○ language change ○ elements of style ○ usage ○ syntax and sentence fluency ○ conventions ○ connotation and denotation
Career Education 9	<ul style="list-style-type: none"> • Demonstrate respect, collaboration, and inclusivity in working with others to solve problems 	<ul style="list-style-type: none"> • Connections to Community <ul style="list-style-type: none"> ○ Cultural and social awareness ○ Factors affecting types of jobs in the community
Social Studies 9	<ul style="list-style-type: none"> • Use Social Studies inquiry processes and skills to ask questions; gather, interpret, and analyze ideas; and communicate findings and decisions 	<ul style="list-style-type: none"> • Physiographic features of Canada and geological processes • Local, regional, and global conflicts
Science 9	<ul style="list-style-type: none"> • Analyze cause-and-effect relationships • Consider social, ethical, and environmental implications of the findings from their own and others' investigations • Express and reflect on a variety of experiences, perspectives, and worldviews through place 	<ul style="list-style-type: none"> • Sustainability of systems • First Peoples knowledge of interconnectedness and sustainability

Teacher Background

Teacher will visit the [Grow BC Map](#) and familiarize themselves with the locations of where the answers to the scavenger hunt activity are found. This interactive map is used to allow students an overview of information outside of a physical drawn paper map. The GIS map provides information via text, videos and information about commodities found in BC.

This lesson is a modified version of [A Scavenger Hunt Through BC Commodities](#).

Materials

- Devices with access to the internet
- [Grow BC Map](#)
- Paper
- Pencil
- Student handouts:
 - *Grow BC Interactive Map Scavenger Hunt Worksheet*
 - *Grow BC Scavenger Hunt Key*

Procedure

1. Teacher will check in with each group and see where the groups stand on their farm interview process.
Teacher will display the following link on a projector (<https://www.bcaitc.ca/resources/grow-bc-guide-bcs-agriculture-resources>).
2. Students follow the link on their device.
3. Teacher will review the map with students and answer any questions that they may have before starting the scavenger hunt.
4. Provide students with the *Grow BC Interactive Scavenger Hunt Worksheet*, and have them work in their groups.
5. Teacher can monitor groups by walking around the classroom and helping those in need.
6. **(15 mins before the end of class)** Upon completion of the scavenger hunt, the teacher will ask questions to students regarding the process. Questions may include “What was the most challenging part?” “What is one thing that you learned” and “What did you find interesting about the scavenger hunt?”

Extension Activities

- Groups can make a scavenger hunt based upon their group’s commodity.
- Groups work collaboratively to complete and put their report together.

Assessment:

- Students will be assessed based on their scavenger hunt answers

Credit

A Scavenger Hunt Through BC Commodities -

<https://www.bcaitc.ca/index.php/resources/scavenger-hunt-through-bcs-agriculture-commodities>

Grow BC Map - <https://www.bcaitc.ca/index.php/resources/grow-bc-guide-bcs-agriculture-resource>

Grow BC Interactive Map Scavenger Hunt

PART A: General Grow BC Interactive Map questions

1. Where can you access the Grow BC GIS Map? _____
2. Approximately how many commodities are included on the map? _____
3. What happens when you click on the map icons? _____
4. What are some of the top agricultural commodities in BC? _____

5. What are two factors that make some of the land in BC not entirely suitable for farming? _____

PART B: Click the link to the BC Commodities, then click on Aquaculture – Fish Farming. Use the information to answer the following questions

6. What does the term “mariculture” mean? _____

7. What is one of the major benefits of mariculture? _____

8. When did B.C. license the first rainbow trout farms? _____
9. In 2017, what was the percentage of salmon produced in BC that was from farming? _____
10. List at least five major challenges faced by BC salmon farmers?

PART C: Choose a fruit or vegetable commodity on the map in your region of the province and use it to answer the following questions

11. What is the name of your commodity? Where is it located throughout BC?

12. Briefly describe the production of the commodity from “seed to sale”

13. List three career options that are created from your commodity, not including farmer/field hand.

14. Who can you contact to learn more about this commodity?

PART D: The ALR

15. What is the ALR? _____

a. Is there ALR land in your region? _____

b. What are some challenges of the ALR? Do you know of any specific challenges faced in a community like yours?

Grow BC Scavenger Hunt Key

PART A

1. Where can you access the Grow BC GIS Map? **BCAITC Website under the Resources Tab**
2. Approximately how many commodities are included in the map? **~63**
3. What happens when you click on the map icons? **A short description of the commodity appears, with an image and link taking you to the commodity story map.**
4. Which is one of the top agricultural commodities in BC? **Examples include: dairy products, chickens, greenhouse vegetables, floriculture, beef, mushrooms, nursery products, eggs, blueberries, and sweet cherries.**
5. What are two factors that make BC's land not suitable in a few areas? **Not all of BC's land is suitable for farming due to topography and soil capability.**

PART B

6. What does the term "mariculture" mean? **Mariculture is the culturing or growing of animals or plants in saltwater.**
7. What is one of the major benefits of mariculture? **Mariculture is considered to be one of the most resource-efficient ways to produce protein and has helped improve nutrition and food security in many parts of the world - in some places, for thousands of years.**
8. When did BC license the first rainbow trout farms? **mid 1950's**
9. In 2017, what was the percentage of salmon produced in BC that was from farming? **86%**
10. List at least five major challenges faced by BC salmon farmers? **Major challenges faced by BC salmon farmers include issues regulations, accidents, pollution, predators, vandalism, toxic algal blooms, disease and fish escaping**

PART C

11. What is the name of your commodity? Where is it located throughout BC? **Answers will vary.**
12. Briefly describe the production of the commodity from "seed to sale" **Answers will vary.**
13. List some career options that are created from your commodity, not including farmer or field hand. **Answers will vary but may include processing, shipping, handling, and selling careers.**
14. Who can you contact to learn more about this commodity? **BC Ministry of Agriculture, BCAITC, commodity group associations or organizations.**

PART D

15. What is the ALR? **The Agriculture Land Reserve (ALR) is a policy put in place by the BC provincial government to protect prime agricultural farmland from being used up for other purposes.**
 - a. Is there ALR land in your region? **Answers will vary. Use website link on story to view map.**
 - b. What are some challenges of the ALR? Do you know of any specific challenges faced in a community like yours? **Answers will vary. Use website link on story to view map.**

Lesson 4- Unlocking Agriculture: Sharing the Findings

Students will present their research assignment with the class. Students will also reflect upon their group project and decide upon the recipe for the next class.

Grade and Subject	Curricular Competencies	Content Connections
English Language Arts 8	<ul style="list-style-type: none"> • Use writing and design processes to plan, develop, and create engaging and meaningful literary and informational texts for a variety of purposes and audiences • Think critically, creatively, and reflectively to explore ideas within, between, and beyond texts • Synthesize ideas from a variety of sources to build understanding • Respond to text in personal, creative, and critical ways • Transform ideas and information to create original texts 	<ul style="list-style-type: none"> • Presentation techniques • Features of oral language • Metacognitive strategies
Career Education 8	<ul style="list-style-type: none"> • Use self-assessment and reflection to develop awareness of their strengths, preferences, and skills • Apply a variety of research skills to expand their knowledge of diverse career possibilities and understand career clusters 	<ul style="list-style-type: none"> • Reflection <ul style="list-style-type: none"> ◦ Factors affecting types of jobs in the community
Social Studies 8	<ul style="list-style-type: none"> • Use Social Studies inquiry processes and skills to ask questions; gather, interpret, and analyze ideas; and communicate findings and decisions • Identify what the creators of accounts, narratives, maps, or texts have determined is significant (significance) 	<ul style="list-style-type: none"> • Interactions and exchanges of resources, ideas, arts, and culture between and among different civilizations • Scientific and technological innovations
Science 8	<ul style="list-style-type: none"> • Make predictions about the findings of their inquiry 	<ul style="list-style-type: none"> • Characteristics of life – living things respire, grow, take in nutrients, produce waste, respond to environmental stimuli and reproduce

Grade and Subject	Curricular Competencies	Content Connections
ADST 8 (Food Studies)	<ul style="list-style-type: none"> • Demonstrate their product and describe their process, using appropriate terminology and providing reasons for their selected solution and modifications • Evaluate their product against their criteria and explain how it contributes to the individual, family, community, and/or environment • Reflect on their design thinking and processes, and evaluate their ability to work effectively both as individuals and collaboratively in a group, including their ability to share and maintain an efficient co-operative work space • Identify and evaluate the skills and skill levels needed, individually or as a group, in relation to a specific task, and develop them as needed 	<ul style="list-style-type: none"> • Social factors that affect food choices, including eating practices • Variety of eating practices • Local food systems • First Peoples food use and how that use has changed over time
English Language Arts 9	<ul style="list-style-type: none"> • Transform ideas and information to create original texts • Use writing and design processes to plan, develop, and create engaging and meaningful literary and informational texts for a variety of purposes and audiences • Exchange ideas and viewpoints to build shared understanding and extend thinking • Think critically, creatively, and reflectively to explore ideas within, between, and beyond texts 	<ul style="list-style-type: none"> • Presentation techniques • Features of oral language • Metacognitive strategies
Career Education 9	<ul style="list-style-type: none"> • Use self-assessment and reflection to develop awareness of their strengths, preferences, and skills • Apply a variety of research skills to expand their knowledge of diverse career possibilities and understand career clusters 	<ul style="list-style-type: none"> • Reflection <ul style="list-style-type: none"> ◦ Factors affecting types of jobs in the community
Social Studies 9	<ul style="list-style-type: none"> • Use Social Studies inquiry processes and skills to ask questions; gather, interpret, and analyze ideas; and communicate findings and decisions 	<ul style="list-style-type: none"> • Local, regional, and global conflicts
Science 9	<ul style="list-style-type: none"> • Make observations aimed at identifying their own questions, including increasingly complex ones, about the natural world • Describe specific ways to improve their investigation methods and the quality of the data • Express and reflect on a variety of experiences, perspectives, and worldviews through place 	<ul style="list-style-type: none"> • Sustainability of systems • First Peoples knowledge of interconnectedness and sustainability

Grade and Subject	Curricular Competencies	Content Connections
ADST 9 (Food Studies)	<ul style="list-style-type: none"> • Demonstrate their product to potential users, providing a rationale for the selected solution, modifications, and procedures, using appropriate terminology • Critically evaluate the success of their product, and explain how their design ideas contribute to the individual, family, community, and/or environment • Critically reflect on their design thinking and processes, and evaluate their ability to work effectively both as individuals and collaboratively in a group, including their ability to share and maintain an efficient co-operative work space 	<ul style="list-style-type: none"> • Health, economic, and environmental factors that influence availability and choice of food in personal, local, and global contexts • Ethical issues related to food systems

Materials

- Projector/speakers
- Laptop connected to projector and internet
- Paper
- Pencils
- Student handouts:
 - *BC Commodity Presentation Rubric*
 - *BC Commodity Project Rubric*
 - *BC Commodity Project Self-Reflection*

Procedure

1. Teacher will allow students a few minutes to meet with their group members to discuss their presentation
2. Groups will present their BC Commodity one at a time. Students are allowed to present through any medium of their choice, (PowerPoint, Poster Board, Prezi, etc.)
3. Audience members can ask students questions regarding their presentation.
4. Upon completion of each group's presentation, students will complete *The BC Commodity Project Self- Reflection* on the assignment.
5. The teacher will conduct a class vote to choose which recipe they will cook next lesson.

Assessment

- Students will be assessed on the project using the *BC Commodity Presentation Rubric*, *BC Commodity Project Rubric* and *BC Commodity Self- Reflection*.

BC Commodity Presentation Rubric

Presenters Name(s): _____

Presentation Topic: _____

Criteria	Mark	Teacher Comments
Knowledge & Content: <ul style="list-style-type: none"> - Introduction about the project - Information is memorized and not just read from product/project - Keeps focused - Presentation has a beginning, middle and end 	5 4 3 2 1 0	
Interesting to Audience: <ul style="list-style-type: none"> - Presenter looks and acts interested - Report kept to time limit - Able to answer questions 	5 4 3 2 1 0	
Speech & Manner: <ul style="list-style-type: none"> - Speaks slowly - Speaks clearly (no mumbling) - Grabs audience attention 	5 4 3 2 1 0	
Creativity & Additional Effort: <ul style="list-style-type: none"> - Visual aids relevant to content is neat, organized & completed - It is referred to when explaining 	5 4 3 2 1 0	
Total Mark	/20	

Presenters Name(s): _____

Presentation Topic: _____

Criteria	Mark	Teacher Comments
Knowledge & Content: <ul style="list-style-type: none"> - Introduction about the project - Information is memorized and not just read from product/project - Keeps focused - Presentation has a beginning, middle and end 	5 4 3 2 1 0	
Interesting to Audience: <ul style="list-style-type: none"> - Presenter looks and acts interested - Report kept to time limit - Able to answer questions 	5 4 3 2 1 0	
Speech & Manner: <ul style="list-style-type: none"> - Speaks slowly - Speaks clearly (no mumbling) - Grabs audience attention 	5 4 3 2 1 0	
Creativity & Additional Effort: <ul style="list-style-type: none"> - Visual aids relevant to content is neat, organized & completed - It is referred to when explaining 	5 4 3 2 1 0	
Total Mark	/20	

BC Commodity Project Rubric

Name: _____

Date: _____

Criteria	Exemplary (4)	Accomplished (3)	Developing (2)	Beginning (1)	Score
1. Investigating BC Commodities	Students independently identify at least 5 reasonable and insightful points of information	Students independently identify at least 3-4 reasonable and insightful points of information	Students independently identify at least 2 reasonable and insightful points of information	Students independently identify at least 1 reasonable and insightful points of information	
2. Contacting the Farm	Group has independently provided a polite and informative self-introduction to the farm.	Group has independently provided a self-introduction but requires more elaboration	Group, with some teacher help, has provided a self-introduction to the farm.	Group, with mainly teacher help, has provided a self-introduction to the farm.	
3. Conducting the Farm Interview	Group has provided at least 5 additional questions that are relevant to their research	Group has provided at least 3 additional questions that are relevant to their research	Group has provided at least 1 additional question that are relevant to their research	Group has provided questions that are irrelevant to their research	
4. Presentation	All members of the group contributed during presentation	3 members of the group contributed during the presentation	2 members of the group contributed during the presentation	One group member was the main contributor during the presentation.	
				Total	

BC Commodity Project Self-Reflection

Name: _____

Date: _____

What did you enjoy about the project?

What was one interesting discovery that you made while working on the project?

What did you find the most difficult part?

Briefly describe your contribution to the project?

Lesson 5- Unlocking Agriculture: Cooking in the Classroom

Students will cook the winning BC commodity recipe voted upon the class during the previous lesson. Students will use their practical skills as well as teamwork and cooperation to build a new dish. Students will also reflect upon the cooking activity by answering questions regarding the process and their thoughts on it.

Grade and Subject	Curricular Competencies	Content Connections
Career Education 8	<ul style="list-style-type: none"> • Demonstrate safety skills and appreciate the importance of workplace safety • Demonstrate respect, collaboration, and inclusivity in working with others to solve problems 	<ul style="list-style-type: none"> • Influence of technology in learning and working • Workplace safety • Hazard evaluation and control • Rights and responsibilities of the worker • Emergency procedures
ADST 8 (Food Studies)	<ul style="list-style-type: none"> • Identify and use appropriate tools, technologies, and materials for production 	<ul style="list-style-type: none"> • Food preparation practices, including elements of a recipe, techniques, and equipment
Career Education 9	<ul style="list-style-type: none"> • Demonstrate safety skills and appreciate the importance of workplace safety • Demonstrate respect, collaboration, and inclusivity in working with others to solve problems 	<ul style="list-style-type: none"> • Influence of technology in learning and working • Workplace safety • Hazard evaluation and control • Rights and responsibilities of the worker • Emergency procedures
ADST 9 (Food Studies)	<ul style="list-style-type: none"> • Identify and use appropriate tools, technologies, materials, and processes for production • Use materials in ways that minimize waste • Demonstrate an awareness of precautionary and emergency safety procedures in both physical and digital environments 	<ul style="list-style-type: none"> • Components of food preparation, including use and adaptations of ingredients, techniques, and equipment

Teacher Background

Teacher should familiarize themselves with the recipe, by doing a test recipe beforehand. Teacher will need to understand how to make the food product and be prepared to demonstrate the recipe to the students. Research on the nutritional content of the recipe's ingredient list will provide more instructional information for students. Teacher will need to consider the cook time of the recipe and the time length of class period.

Materials

- BC Farmer recipe
- Projector
- Ingredients
- Cooking equipment
- Student handouts:
 - o *BC Commodity Farmer's Choice Recipe*

Procedure

1. Teacher will share the winning recipe to students and provide a copy of the recipe to the students.
2. Teacher will demonstrate the recipe for the students to “see” then “do”. Teacher will also provide nutritional content found in each ingredient during demonstration.
3. Teacher will provide ingredients to create the dish.
4. Students will work through the recipe with teacher assistance, to complete the dish.
5. Students clean up the equipment
6. Class Reflection: “What did you find the most challenging part?” and “Did you like the dish?”

Extension Activities

- Students can create their own recipe using the winning BC commodity and share it next class.
- Have students choose recipes from BCAITC website to cook at home or during another class period- <https://www.bcaitc.ca/recipes>

Assessment

- Students are assessed based on participation and completion of the recipe activity.
- Students will be assessed based on their detailed responses to the recipe lab reflection questions.

BC Commodity Farmer's Choice Recipe

Page 1 of 2

Name: _____

Date: _____

Recipe Name:

Yield:

Ingredients:

Equipment Needed:

Directions:

Recipe Lab Reflection Questions:

1) What did you find the most challenging with this activity?

2) What did you like most about this activity?

3) What would you change to make this recipe better?

References:

- Anonymous. (2012) *The benefits of eating local foods*. Food and Dining Services. <https://www.mcgill.ca/foodservices/sustainability/green/local#:~:text=It's%20good%20for%20the%20environment,local%20farmers%20and%20other%20producers.>
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- Vågsholm, I., Arzoomand, N. S., & Boqvist, S. (2020). *Food security, safety, and sustainability-getting the Trade-Offs Right*. Frontiers. <https://www.frontiersin.org/articles/10.3389/fsufs.2020.00016/full>.
- Wallinga, D. (2010). *Agricultural policy and childhood obesity: A food systems and public health commentary*. Health affairs (Project Hope). <https://pubmed.ncbi.nlm.nih.gov/20194980/>.