



An Egg-citing Matching Game:

Egg Types & Parts of the Egg

Students will have the opportunity to learn about the many fascinating features about eggs, which is one of BC's important agricultural commodities. Students will also have the opportunity to learn about the nutritional value of eggs as well as information on egg parts, egg sizes and grading.

Subject Levels/ Suggested Grade

ADST: Food Studies 8-9

Culinary Arts 10-12

Food Studies 10-12

Specialized Studies in Food 12

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Grade and Subject	Curricular Competencies	Content Connections
ADST: Food Studies 8	<ul style="list-style-type: none"> Identify and use sources of information including seeking knowledge from other people as experts Identify the personal, social, and environmental impacts, including unintended negative consequences, of the choices they make 	<ul style="list-style-type: none"> cross-contamination, including prevention and management social factors that affect food choices, including eating practices local food systems including: growing, harvesting, processing, packaging, transporting, marketing, consumption, and disposal of food and food-related items
ADST: Food Studies 9	<ul style="list-style-type: none"> Critically analyze and prioritize competing factors, including social, ethical, and sustainability considerations, to meet community needs Identify and use sources of inspiration and information 	<ul style="list-style-type: none"> pathogenic microbes associated with food-borne illnesses health, economic, and environmental factors that influence availability and choice of food in personal, local, and global contexts ethical issues related to food systems
Culinary Arts 10	<ul style="list-style-type: none"> Explore the impacts of culinary decisions on social, ethical, and sustainability considerations Identify and use sources of inspiration and information Evaluate ingredients and materials for effective use and potential for reuse, recycling, and biodegradability 	<ul style="list-style-type: none"> food products available locally via agriculture, fishing, and foraging, and their culinary properties
Food Studies 10	<ul style="list-style-type: none"> Analyze impacts of competing social, ethical, economic, and sustainability factors on food choices and preparation Evaluate a variety of materials for effective use and potential for reuse, recycling, and biodegradability 	<ul style="list-style-type: none"> causes and consequences of food contamination outbreaks food trends, including nutrition, marketing, and food systems simple and complex global food systems and how they affect food choices, including environmental, ethical, economic, and health impacts
Culinary Arts 11	<ul style="list-style-type: none"> Examine how culinary decisions impact social, ethical, and sustainability considerations Identify, critique, and use a variety of sources of inspiration and information Analyze ingredients and materials for effective use and potential for reuse, recycling, and biodegradability 	<ul style="list-style-type: none"> culinary best practices, (e.g. including fresh and seasonal produce when possible) anatomy and preparation of meat, poultry, and seafood safety in the teaching kitchen, including the nature of pathogens associated with foodborne illness and prevention strategies

	<ul style="list-style-type: none"> ● Evaluate impacts, including unintended, negative consequences of choices made about technology use ● Analyze and evaluate how land, natural resources, and culture influence the development and use of culinary ingredients, tools, and technologies 	<ul style="list-style-type: none"> ● B.C. agricultural practices
Food Studies 11	<ul style="list-style-type: none"> ● Identify criteria for success, constraints and limiting factors, (e.g. availability of technologies and resources, expense, space, materials, time, environmental impact, and possible unintended negative consequences ● Critically evaluate how competing social, ethical, economic, and sustainability considerations impact choices of food products, techniques, and equipment ● Identify appropriate tools, technologies, food sources, processes, cost implications, and time needed for production 	<ul style="list-style-type: none"> ● issues involved with food security (such as access to safe and nutritionally sound food), including causes and impacts of food recalls in the past and/or present, local and/or global ● food labelling, for example, regulations, nutrition facts, health claims, terminology, standards of composition, etc. ● roles and responsibilities of Canadian government agencies and food companies ● food promotion and marketing strategies including social media, print, television, product placement and their impact on specific groups of people
Culinary Arts 12	<ul style="list-style-type: none"> ● Examine and critically evaluate how culinary decisions impact social, ethical, and sustainability considerations ● Identify, critique, and use a variety of sources of inspiration and information ● Analyze ingredients and materials for effective use and potential for reuse, recycling, and biodegradability ● Identify and use appropriate tools, technologies, materials, processes, and time needed for production ● Analyze and evaluate how land, natural resources, and culture influence the development and use of culinary ingredients, tools, and technologies 	<ul style="list-style-type: none"> ● culinary best practices, for example: including fresh and seasonal produce when possible ● characteristics and properties of culinary ingredients ● social, economic, and environmental effects of food procurement decisions ● career opportunities in the culinary arts industry
Food Studies 12	<ul style="list-style-type: none"> ● Identify criteria for success and constraints such as limiting factors, such as available technologies and resources, expense, space, materials, time, environmental impact, and possible unintended negative consequences 	<ul style="list-style-type: none"> ● food justice, legislation, regulations, and agencies that influence food safety and food production (for example, packaging, farming regulations, retail operations, date labelling) ● factors involved in regional and/or national food policies (e.g.

	<ul style="list-style-type: none"> ● Critically evaluate how competing social, ethical, economic, and sustainability considerations impact choices of food products, techniques, and equipment ● Analyze the role technologies play in societal change ● Examine how cultural beliefs, values, and ethical positions affect the development and use of technologies on a national and global level 	<p>national/regional food guides, school lunch programs, corporate sponsorship, food taxes, Canadian Children’s Food and Beverage Advertising Initiative)</p> <ul style="list-style-type: none"> ● nutrition and health claims and how they change over time ● nature and development of food philosophies and approaches to the way food is used and consumed by individuals and groups ● future career options in food service and production
<p>Specialized Studies in Food 12</p>	<ul style="list-style-type: none"> ● Critically evaluate how competing social, ethical, economic, and sustainability considerations impact choices of food products, techniques, and equipment ● Identify, critique, and use a variety of sources of inspiration and information ● Identify appropriate tools, technologies, food sources, processes, cost implications, and time needed for production ● Examine how cultural beliefs, values, and ethical positions affect the development and use of technologies on a national and global level 	<ul style="list-style-type: none"> ● best practices, for example: including fresh and seasonal produce when possible ● food science, for example, pH involved in fermentation; molecular gastronomy; antibacterial qualities involved in smoking meat; gluten development; substitution for allergies, dietary restrictions, or health ● in recipe development, including characteristics, properties, and functions of ingredients and substitutions ● food trends and how they develop ● social, economic, ethical, and environmental effects, (for example, land and water use, food miles, workers’ rights, food security, health, affordability, food waste) of food production, purchasing, preparation, and disposal

Teacher Background

Eggs can be eaten cooked by frying, boiling, poaching, or scrambling them. They can also be used in baking and in drinks, such as eggnog. Eggs are an excellent source of protein, vitamins, iron, and minerals. This lesson will teach students about the parts of an egg from yolk to shell. Additionally, students will develop their language, literacy and observational skills as they explore how different types of eggs are produced in BC’s egg industry.

Materials

For the Virtual Environment:

- Laptop, computer and internet connection
- Grow BC GIS Map available at <https://www.bcaitc.ca/resources/grow-bc-guide-bcs-agriculture-resources> / BC’s Egg Story available at: <https://arcg.is/1qG8u1>

OR

For the Classroom Environment:

- A variety of egg types and sizes
- BC's Egg Story available at: <https://arcg.is/1qG8u1>
- Scissors
- Student handouts
 - 3 Egg-citing Matching Game: Egg Types
 - 3 Egg-citing Matching Game: Parts of an Egg

Procedure

For the Virtual Environment:

1. Before giving this activity to students, it is recommended that the teacher review the resource and determine the length of time needed to complete the activity.
2. It is also recommended to have students try opening Quizlet on their computers using various web browsers to ensure a smooth log-in with minimal trouble shooting during virtual class time. Phones are not advisable for this activity as the small screen is not optimized for the mapping technology.
3. Start by introducing eggs to students using any video conferencing platform you choose (for example, Zoom, MS Teams, Skype, etc.). Ask students to share what type of eggs their family typically buys and why they think this is so.
4. Have students go to the Grow BC GIS Map, finding eggs (through the commodity list) and review BC's Egg Story: <https://arcg.is/1qG8u1>
5. Tell students that they will be placed in groups of 2 to complete the following activity. This can be achieved by using a "Breakout Rooms" or other equivalent video conferencing tool that will allow participants to split into separate sessions for small group discussion, and then bring those sessions back together to resume the large group meeting. As the meeting host, you can group participants into these separate sessions automatically or manually, and can switch between sessions at any time. Alternatively, students may also complete the following activity independently, if you wish.
6. Have students go to the following Quizlet site:
https://quizlet.com/_8zmq3m?x=1jqt&i=39sbug
There are two Sets located in the folder titled, "Parts of the Egg" and "Egg Types." Have students open these Sets and use the Study and Play features. Play using the Learn, Match, Gravity and Live links to practice egg terminology.
7. Monitor the students as the activity progresses, assisting as needed. (If students are assigned to "Breakout Rooms", they can leave the room to come back to ask the teacher facilitator to ask questions, if required or the teacher may move from group to group.)
8. When the class has completed the activity, have the students return as a group to their virtual classroom. Ask student to think about some of the following questions:
 - a. Were you aware of the number of different types of eggs produced in BC?
 - b. What is the most common type of eggs eaten by students? Which is the least common? Why?
 - c. What is the most common size of eggs eaten by students? Which is the least common? Why?
 - d. Are there any types of eggs you didn't know existed?

- e. How can you substitute egg sizes? (e.g. if the recipe calls for 1 large egg)
9. Have student's print Quizlet flashcards that they can use as a study tool.

For the Classroom Environment:

1. Start by introducing the different types and egg to students. Show students the varieties that you have brought. Ask students to share what type of eggs their family typically buys and why they think this is so.
2. Have students go to the Grow BC GIS Map, finding eggs (through the commodity list) and review BC's Egg Story: <https://arcg.is/1qG8u1>
3. Provide students with a copy of each of the two worksheets: 3 Egg-citing Matching Game: Egg Types, and 3 Egg-citing Matching Game: Parts of an Egg.
4. Have students cut out the names of the various egg parts/types and their descriptions individually.
5. Tell students that they will be placed in groups of 2 to complete the following activity.
 - a. At the beginning of the game, all the cards are mixed up and laid in rows, face down on the table.
 - b. Player 1 starts and turns over two cards:
 - c. If the cards don't match (it's not a pair), the player turns them back over and it's then the turn of player 2 to turn over two new cards. However, if the two cards match, it's a pair! He keeps the cards and has the right to play again.
 - d. When the players have found all the pairs, the game is over. The player who has the most cards wins!
6. When the class has completed the activity, bring the students back together as a large group. Ask student to think about some of the following questions:
 - a. Were you aware of the number of different types of eggs produced in BC?
 - b. What is the most common type of eggs eaten by students? Which is the least common? Why?
 - c. What is the most common size of eggs eaten by students? Which is the least common? Why?
 - d. Are there any types of eggs you didn't know existed?
 - e. How can you substitute egg sizes? (e.g. if the recipe calls for 1 large egg)
7. Have student's take the correctly matched cards and glue them together so that on one side there is egg terminology and the other side has a description or definition.
8. Let students know that they can use the flashcards as a Study Tool.

Extension Activities

- Have students develop their own vocabulary words to add to their flashcards .
- Ask an egg producer to do a presentation on their product(s) in your live or virtual classroom.
- Connect this activity to one of our other resources available to order at www.bcaitc.ca



An Egg-citing Matching Game

Set-up Directions: Cut out the names of the various egg parts and their descriptions individually.

Game Directions:

1. At the beginning of the game, all the cards are mixed up and laid in rows, face down on the table.
2. Player 1 starts and turns over two cards:
 - a. If the cards don't match (it's not a pair), the player turns them back over and it's then the turn of player 2 to turn over two new cards.
 - b. If the two cards match, it's a pair! Player 1 keeps the cards and has the right to play again.
3. When the players have found all the pairs, the game is over. The player who has the most cards wins!

Grade A	Eggs that have a clean and uncracked shell, a round and centered yolk, a firm white, and a small air cell are sorted and packaged by weight.
Grade B	Eggs that have an uncracked shell that might have a rough texture, or a slightly flattened yolk, or a thinner white. These eggs are sold for commercial baking, or for future processing.
Grade C	Eggs that have a cracked and/or stained shell, or a flattened yolk, or a watery white. These eggs are only used in the production of processed egg products.

Peewee	Eggs that are less than 42 grams in weight.
Small	Eggs that are between 42g-48g in weight.
Medium	Eggs that are between 49g-55g in weight.
Large	Eggs that are between 56g-62g in weight.

Extra Large

Eggs that are between
63g-69g in weight.

Jumbo

Eggs that are more than
70g in weight.

Brown

Eggs that are typically laid by
a hen with brown feathers.

White

Eggs that are typically laid by
a hen with white feathers.



An Egg-citing Matching Game: Parts of an Egg

Set-up Directions: Cut out the names of the various egg parts and their descriptions individually.

Game Directions:

1. At the beginning of the game, all the cards are mixed up and laid in rows, face down on the table.
2. Player 1 starts and turns over two cards:
 - a. If the cards don't match (it's not a pair), the player turns them back over and it's then the turn of player 2 to turn over two new cards.
 - b. If the two cards match, it's a pair! Player 1 keeps the cards and has the right to play again.
3. When the players have found all the pairs, the game is over. The player who has the most cards wins!

Shell



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The egg's first line of defense against the entry of bacteria with approximately 10,000 tiny pores allow moisture and gases in and out.

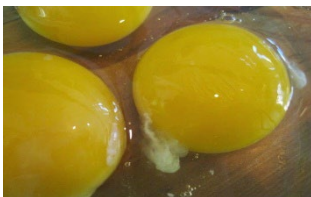
Shell Membrane



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The egg's second line of defense against bacteria. There are two membranes on the inside of the shell: one sticks to the shell and the other surrounds the albumen.

Chalazae



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A pair of spiral bands that anchor the yolk in the centre of the thick albumen. The fresher the egg, the more prominent the chalazae.

Yolk



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Yellow portion of egg that is a major source of egg vitamins, minerals, and fat.

Yolk Membrane

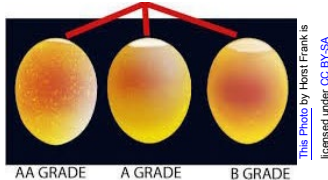
(vitelline membrane)



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A thin tissue that surrounds and holds the yolk.

Air Cell



This Photo by Heist Franks is licensed under [CC BY-SA](#)

This is formed at the wide end of the egg as it cools after being laid; it is smaller in fresher eggs.

Albumen



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This is the egg white made up mostly made of water, high-quality protein and minerals.