



Action Schools! BC



Instructional Example

## Vegetables & Fruits a Part of a Healthy Lifestyle

### Subject: Physical and Health Education (PHE) Grade 5

#### OVERVIEW

Each vegetable and fruit has its own unique story about where and how it is grown, and how it arrives in our homes. Schools play a role in helping students understand the connection between healthy eating and mental well-being (Pan-Canadian Joint Consortium for School Health, 2013; Pritchard, 2016). Dietitians of Canada (2012) remind us that the food we eat is connected to our brain development such as memory, problem-solving, thinking, and behaviour. This instructional example is designed to engage Grade 5 students to learn more about BC grown vegetables and fruits, and to discover how to develop a healthy mind through healthy eating. This instructional example aligns with the Canadian Mental Health Association – British Columbia Division (2016): "evidence suggests that healthy eating can help boost [our] mental health."

#### BIG IDEAS

- Understanding ourselves and the various aspects of health helps us develop a balanced lifestyle (e.g., helping students to recognize the importance of eating vegetables and fruits, which are an essential nutritional fuel for developing a healthy brain).
- Personal choices and social and environmental factors influence our health and well-being (e.g., encouraging students to eat more B.C. grown vegetables and fruits and document them in "My Vegetables and Fruit Journal").

#### CORE COMPETENCIES

##### Communication (C)

- Acquire, interpret, and present information (includes inquiries)
  - Students inquire into topics that interest them, and topics related to their school studies (e.g., helping students to acquire knowledge about B.C. grown vegetables and fruits; Wenk (2011) has noted that eating fruits and vegetables have significant beneficial effects on developing a healthy brain).

## Thinking (CT)

- Question and investigate
  - Students learn to engage in an inquiry and investigation where they identify and explore questions or challenges related to key issues or problematic situations in their studies, their lives, their communities, and the media (e.g., providing instructional opportunities for students to learn about vegetables and fruits).

## Personal and Social (PS)

- Self-regulation
  - Students who are personally aware and responsible take responsibility for their own choices and actions. They set goals, monitor progress, and understand and regulate their emotions (e.g., inviting students to research a vegetable or fruit grown in B.C. and write a creative story about how a vegetable or fruit grows, why it is important to support B.C. grown vegetables and fruits, and how they can take action to eat different vegetables and fruits).

## LEARNING STANDARDS

### PHE Curricular Competencies (What Students Will Do)

#### ***Healthy and Active Living***

- Identify, apply, and reflect on strategies used to pursue personal healthy-living goals (e.g., asking students to take action to eat different vegetables and fruits as they complete "My Vegetables and Fruits Journal").

#### ***Mental Well-Being***

- Describe and assess strategies for promoting mental well-being, for self and others (e.g., encouraging students to try different vegetables and fruits can help develop a healthy brain. For example, Wenk (2011) noted that fruits or diets with vitamins-C & E rich fruits and vegetables benefited verbal memory).

### PHE Content (What Students Will Know)

- Food choices to support active lifestyles and overall health (e.g., increasing students' awareness of vegetables and fruits grown in B.C. as well as the benefits of eating them in relation to a healthy brain).
- Sources of health information and support services

## COMPREHENSIVE SCHOOL HEALTH PILLARS

### Relationships and Environments:

- Students are encouraged to express their views and perspectives on what they learn (e.g., engaging students in learning more about vegetables and fruits and how their families can consume more for healthy minds).

## Teaching and Learning:

- Activities promote students to share their learning with their peers (e.g., inviting students to explore how vegetables and fruits grow, why it is important to support B.C. grown vegetables and fruits, and how they and their families can take action to eat vegetables and fruits in relation to healthy eating and healthy brains).

## Community Partnerships:

- Feature students' creative stories about the importance of eating B.C. grown vegetables and fruits around school bulletin boards as a way to promote healthy eating. Posting students' stories can help school visitors (e.g., families and community members) to become aware of school activities that students are presently engaged in.

## School Policies:

- Adopt healthy eating as a school-wide practice that engages students in learning more about what vegetables and fruits are in season or are grown in their community and region.

## CROSS-CURRICULAR CONNECTIONS

### English Language Arts

- Comprehend and connect (reading, listening, viewing)
  - Access information and ideas from a variety of sources and from prior knowledge to build understanding by enriching students' knowledge about B.C. grown vegetables and fruits, optionally through a field trip to a local farm, which would enable them to generate creative stories about the topic through their lived experiences.

### Science

- Processing and analyzing data and information
  - Demonstrate a sustained curiosity about a scientific topic or problem of personal interest by having students use the scientific inquiry to design a seasonal taste test and investigate what produce is grown nearby seasonally, if locally grown foods tastes better, and what other factors might play a role in flavor. Groups can graph and summarize results and the class has the opportunity to discuss benefits of seasonal meal planning and eating locally grown products

## FIRST PEOPLES PRINCIPLES OF LEARNING FOR ALL STUDENTS

- Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place) (e.g., encouraging students to remain open to respectful discussion about traditional foods that are valued among First Peoples communities, and helping students to learn more about BC grown vegetables and fruits as well as indigenous food systems, as agriculture has a strong historic root embedded in First Peoples cultures).

- Learning involves recognizing the consequences of one’s actions (e.g., First Peoples cultures emphasize a strong commitment to learner-centredness, supporting students in developing their own personal learning, while encouraging a sense of personal responsibility for learning. This lesson encourages students to learn more about BC grown vegetables and fruits, and support them in developing a healthy self through healthy eating).

## TIMEFRAME

- 50 minutes

## MATERIALS AND TECHNOLOGY

- A computer lab or computers
- A board and markers
- Creative Story Rubric (Appendix A)
- Hardcopy of "My Vegetables and Fruit Journal", available at [www.actionschoolsbc.ca/resources](http://www.actionschoolsbc.ca/resources)

## TEACHER TIPS

- A review of the “Why You Should Buy Local” guide (available from: <https://bcdairy.ca/milk/articles/why-should-you-buy-local>) and/or “Why Shop Local?” (available from: <http://www.bcfarmersmarket.org/fresh-market/why-shop-local>) is encouraged.
- Show sensitivity when addressing the topic of healthy eating. There are many reasons why families eat the foods that they do, including access, affordability and preference. The old saying “you are what you eat” is not true – we are much more than what we eat, and what we eat is not who we are.

## STRATEGY

- Begin the inquiry by inviting an Elder to speak about the importance of tended root vegetables and berries through the First Peoples perspective (First Nations Health Authority, 2014, pp. 24-6), followed by having the class complete the following "3-Q&A" activity:

<b>Ask the class why it is important to:</b>	
Q: Why is it important to eat a variety of vegetables and fruit?	A: Different vegetables and fruit offer different nutrients for health. By enjoying vegetables and fruit of all colours and tastes, we get the maximum health benefit. Fresh, frozen or canned can all be healthy choices. In general, the darker the colour of a vegetable or fruit, the higher its nutrient value. Remember, variety is the spice of life! By eating a wide range of different vegetables and fruit, prepared in different ways, we get to explore different textures, tastes, and cultures, as well as support health and well-being.
Q: Why should you fill half your plate with fruits and	A: Vegetables and fruit should play the leading role in our diets – we need to eat more servings of them than any other food group!

veggies?	By making half our plate's vegetables and fruit at every meal, we can get the different nutrients we need, in the amounts we need, for health and well-being.
Q: Why would it be better to choose whole vegetables and fruit more often than juice?	A: Eating whole vegetables and fruit is more nutritious than drinking juice. While 100% unsweetened juice is a healthier choice than other sugary drinks (because it contains nutrients such as Vitamin C), it still contains a lot of natural sugar. For this reason, children should have no more than ½ cup of 100% fruit juice a day It's better to eat your calories than to drink them. If you're thirsty, drink water, milk, or unsweetened fortified soy beverage – these are all great choices! Eating vegetables and fruit provides more fibre than juice. Fibre supports our gut health.

- Ask the class to brainstorm about "What is a vegetable?"
  - Answers can include:
    - ✓ Vegetables usually refer to any edible part of a plant that is not regarded as a fruit, nut, herb, spice, or grain.
    - ✓ Vegetables can include leaves (e.g., lettuce), stems (e.g., asparagus), roots (e.g., carrots), tubers (e.g., potatoes), flowers (e.g., broccoli), bulbs (e.g., garlic), and seeds (e.g., peas and beans).
    - ✓ Did you know that some botanical fruit such as cucumbers, squash, pumpkins, tomatoes, and sweet peppers are usually referred to as vegetables?
- Ask the class to brainstorm about "What is a fruit?"
  - Answers can include:
    - ✓ Fruits usually refer to plant fruits that are sweet and fleshy (e.g. plums, apples, and oranges).
- Explain to students that the way we classify foods as either fruits or vegetables doesn't mean that's the way we eat them or know them. Ask the students "what fruits do we eat as vegetables, and what vegetables do we eat as fruits?"
  - Answers can include:
    - ✓ Fruits: Many foods are botanically fruit but are treated as vegetables in cooking. These include cucurbits (e.g., squash, pumpkins, and cucumbers), tomatoes, peas, beans, corn, eggplants, and peppers.
    - ✓ Vegetables: Rhubarb (there are many more fruits that we know as vegetables, than vegetables we know as fruit!)
- Connect the lesson to locally grown vegetables and fruits.
  - Break students into groups of 4 to brainstorm the advantages of buying locally grown vegetables and fruits on:

Advantages	Description
<b>1. Nutrition</b>	Examples include: Fresh produce can lose its nutrients quickly. Food that is frozen or canned soon after harvest is actually more nutritious than some “fresh” produce that has been on the truck or supermarket shelf for a week. An advantage of locally grown vegetables and fruits is that they get to you faster – meaning they have more of their nutrients!  Many BC grown products are available in any local grocery store.
<b>2. The economy</b>	Examples include: Dollars spent on locally grown vegetables and fruits are reinvested back into the community, which contributes to the growth of small businesses, generates jobs, etc.
<b>3. The environment</b>	Examples include: Vegetables and fruits produced and consumed locally have a smaller carbon footprint. It uses less fossil fuel for transportation and requires less material for packaging compared to transported produce.

- Invite students to brainstorm fruits and vegetables that are grown in their community or region, and when they are in season (the B.C. Association of Farmers’ Markets (available from: [www.bcfarmersmarket.org/fresh-market/whatsinseason](http://www.bcfarmersmarket.org/fresh-market/whatsinseason)) provides information on what foods are available seasonally in different regions of B.C.).
- Ask students the question: “How would eating healthy affect our brains?”
  - Have students discuss this question with a partner and then list a variety of answers. Come together as a class to share and discuss answers.
  - Use the following information to give the students to help build on the question:
    - Healthy eating improves attention, memory of words, and memory length (Mental Health America, 2016; Wenk, 2011).
    - Vegetables and fruits (e.g., minerals and vitamins) are the intelligent nutrients that keep the brain healthy (Gómez-Pinilla, 2008).
  - Break students into groups of 4 and ask them to list 5 specific fruits and vegetables that they think boost their “brainpower”, and their favourite healthy way to eat them. Examples can include any fruits or vegetables prepared with little or no added fat, sugar or salt – they all support our brain power!
- Assign *My Vegetables and Fruit Journal* to the class.
  - Ask students to track their vegetable and fruit consumption for one week.
- Have students research a specific vegetable or fruit grown in BC and write a creative 2-page story about: 1) where and how it grows in BC; 2) why it is important to support BC grown vegetables and fruits; and 3) why they and their families should incorporate them in their diet to promote healthy minds. Students can assign their vegetable or fruit a name such as “Brain berries”. Refer to Appendix A (Creative Story Rubric) for criteria to share with students.
  - Invite a couple of students to volunteer and share their story with the class.
  - Display students' stories on school bulletin boards.

## ASSESSMENT

- *My Vegetables and Fruit Journal* submission

- Demonstrate a willingness to consume different vegetables and fruits
- Creative Story submission
  - Use stories to inform others about BC grown vegetables and fruits and the connection between healthy eating and healthy brain.

## ADAPTIONS/MODIFICATIONS

- Field trip to a local vegetable or fruit farm. Potential contacts include:
  - AgriService BC: <http://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-regions>
  - BC Association of Farmers' Markets: <http://www.bcfarmersmarket.org/fresh-market/whatsinseason>

## RESOURCES/REFERENCES

Action Schools! BC, *My Vegetables and Fruit Journal*, available at [www.actionschoolsbc.ca/resources](http://www.actionschoolsbc.ca/resources)

BC Association of Farmers Markets (2014). *What's in Season*. Retrieved from <http://www.bcfarmersmarket.org/fresh-market/whatsinseason>

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Wenk, G. L. (2011). Fruits and vegetables can directly influence brain function. *Psychology Today*. Retrieved from <https://www.psychologytoday.com/blog/your-brain-food/201110/fruits-and-vegetables-can-directly-influence-brain-function>

## APPENDIX A: CREATIVE STORY RUBRIC

Criteria	4	3	2	1
<b>Content</b>	At least 5 diverse messages about the support for the BC grown vegetable or fruit, along with all the other information (e.g., the connection between healthy eating and healthy mind) is presented in a logical manner.	At least 4 messages about the support for BC grown vegetable or fruit are presented, but some information (e.g., the connection between healthy eating and healthy mind) is missing and/or not presented in a logical manner.	At least 3 messages about the support for a BC grown vegetable or fruits are presented, but some essential information is missing (e.g., the connection between healthy eating and healthy mind), making it difficult to understand.	Messages are inaccurate. Information is not presented in a logical manner (e.g., the connection between healthy eating and healthy mind).
<b>Presentation</b>	Presentation flows very well and shows extensive use of resources (>5) and images/pictures in a creative way.	Presentation flows well. Resources (>4) are used correctly. Overall presentation is informative.	Presentation is unorganized. Resources are not fully used to convey the assigned theme, making it difficult to follow.	Insufficient information/ support, making it difficult to follow.
<b>Mechanics</b>	No spelling and grammatical errors. Evidence of paraphrasing as opposed to quoting authors' ideas throughout the work.	A few spelling and grammatical errors. Some efforts are made to paraphrase student's ideas.	Several spelling and grammatical errors. Tendency to quote student's ideas rather than paraphrasing.	Frequent spelling and grammatical errors, making it difficult to understand.