Food and Nutrition 8

Curriculum Guide

NOVA SCOTIA
NOUVELLE-ÉCOSSE

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Prepared by the Department of Education and Early Childhood Development

This is the most recent version of the current curriculum materials as used by teachers in Nova Scotia.

Table of Contents

Learning through the lens of Competencies and Skills

In 2015 the Council of Atlantic Ministers of Education and Training (CAMET) released their findings to a review of the Atlantic Canada Essential Graduation Learnings which had been developed in 1995 as a framework for curriculum development. The review questioned whether the existing model responded to the changing demands of work and life in the 21st century. This review resulted in an updated document, the Essential Graduation Competencies, placed emphasis on the importance of articulating clear statements of what learners are expected to know, be able to do, and reflect on by the time they graduate from high school. These competencies describe expectations, not in terms of individual curricular areas but in terms of attitudes, skills, and knowledge developed throughout the curricula.

What are competencies?

Competencies are an interrelated set of attitudes, skills and knowledge that is drawn upon and applied in a particular context for learning and living. Competencies are developed over time through engagement in learning experiences and a supportive learning environment.

Citizenship (CZ)

Learners are expected to contribute to the quality and sustainability of their environment, communities, and society. They analyse cultural, economic, environmental, and social issues, make decisions, judgment, solve problems, and act as stewards in a local, national, and global context.

Personal-Career Development (PCD)

Learners are expected to become self-aware and self-directed individuals who set and pursue goals. They understand and appreciate how culture contributes to work and personal life roles. They make thoughtful decisions regarding health and wellness, and career pathways.

Communication (COM)

Learners are expected to interpret and express themselves effectively through a variety of media. They participate in critical dialogue, listen, read, view, and create for information, enrichment, and enjoyment.

Creativity and Innovation (CI)
Learners are expected to demonstrate openness to new experiences, engage in creative processes, to make unexpected connections, and to generate new and dynamic ideas, techniques, and products. They value aesthetic expression and appreciate the creative and innovative work of others.

Critical Thinking (CT)
Learners are expected to analyse and evaluate evidence, arguments, and ideas using various types of reasoning and systems thinking to inquire, make decisions, and solve problems. They reflect critically on thinking processes.

Technological Fluency (TF)
Learners are expected to use and apply technology to collaborate, communicate, create, innovate, and solve problems. They use technology in a legal, safe, and ethically responsible manner to support and enhance learning.

The renewed curriculum outcomes are comprised of skills, concepts, and opportunities for engagement with the competencies. Each outcome has suggested indicators to assist in developing those concepts and skills to demonstrate achievement. The design reflects an opportunity for a natural cross curricular approach.

- Indicators have been identified for each outcome; the indicators are aligned with competencies and are suggested ways to scaffold skill development through conceptual exploration in order to provide a depth of understanding in relation to the outcome.
- Concepts are the key ideas, information, and theories that learners come to know through the aligned skill. Guiding questions are offered as possible ways to approach learning associated with the skill and concept.

Competencies are listed at the end of each indicator. These are closely aligned with the combination of skill and concept that are found in the indicator. The competencies can be used by teachers to frame learning experiences. This framing provides opportunities for learners to engage with and develop the related competency.

Course Delivery
Learning will be enhanced through an inquiry-based approach. Inquiry-based learning requires learners to meaningfully engage in the experience/activity while reflecting upon the learning and the competencies and skills they are developing.

By delivering the curriculum through an integrated approach, higher level thinking and active participation are encouraged. This approach supports learners in a deeper understanding of content and offers expanded opportunities for achievement of outcomes in a meaningful way.

Inquiry Based Learning

Inquiry-based learning is an approach that promotes inquiry, the creation of ideas, and observation. The process typically involves investigations, aimed at answering a big question or solving a problem. These investigations require that students learn how to develop questions, look for information, and to identify possible solutions or conclusions.

Project Based Learning

Using "big ideas" as a starting point, students learn through practical projects that require them to acquire a thorough understanding of the subject that they can apply in the real world. This approach engages students in formulating questions, investigating for answers, building new understandings, communicating their learning to others, while developing critical thinking skills, collaboration, communication, reasoning, synthesis skills, and resilience. Project Based Learning typically is concluded with a final product that is presented to a school and/or a community-based audience.

How inquiry based learning benefits learners:

- Makes learning relatable and relevant for learners
- Provides motivation through contextual learning
- Helps learners integrate and practice concepts and theories learned in the classroom
- Creates opportunities for development of skills and success in learning

What could it look like in the classroom?

Learners will:

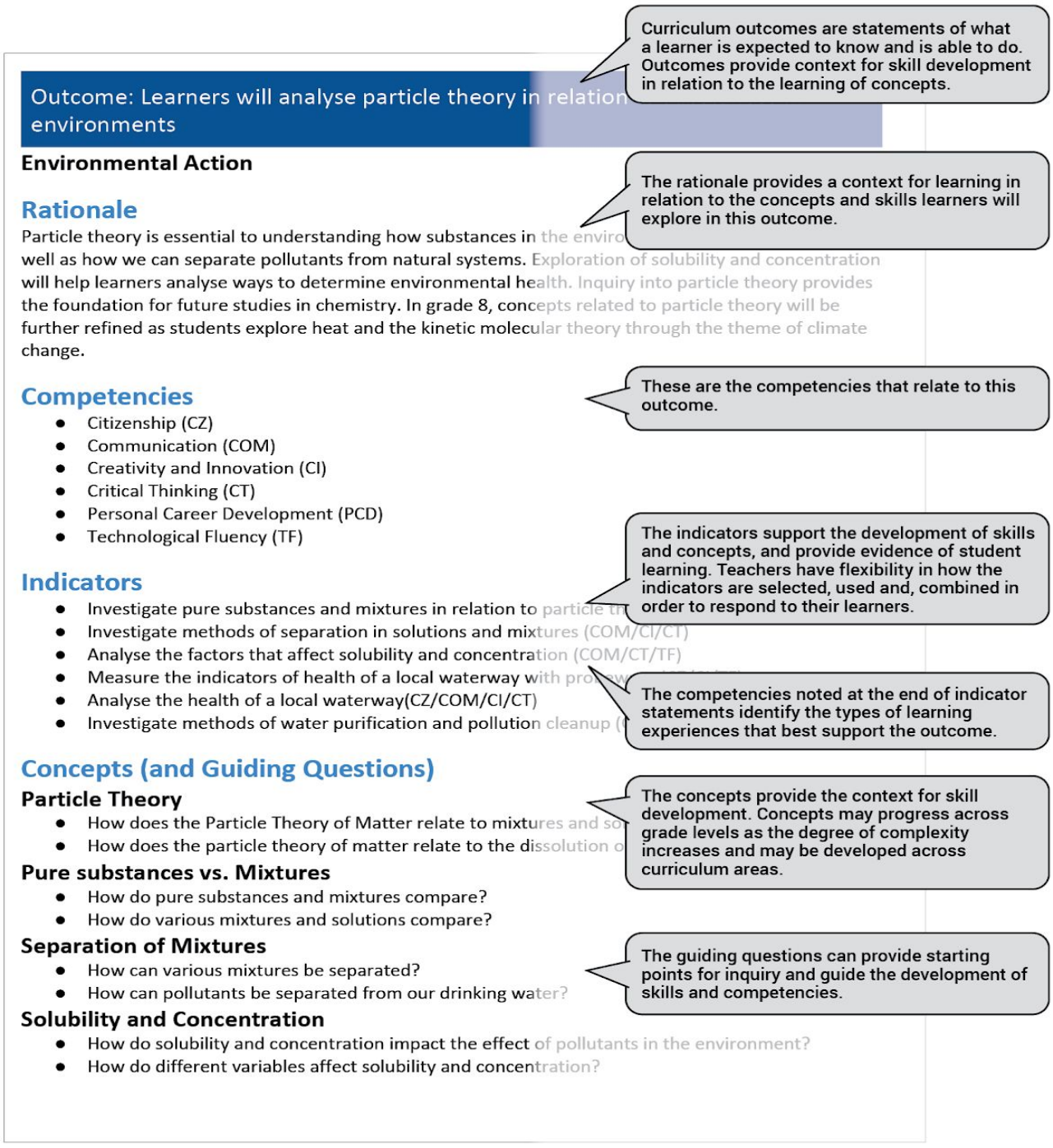
- Seek and pursue opportunities for innovation
- Introduce and test ideas
- Assess opportunities
- Set goals and action plans
- Demonstrate self-awareness
- Engage in ongoing reflection
- Take risks

How do I know it's working?

Learners are developing as:

- Flexible collaborators
- Reflective leaders
- Calculated risk takers
- Adaptive and resilient problem solvers
- Effective communicators
- Self-aware learner

How to Use This Guide



Outcome: Learners will analyse particle theory in relation
environments

Environmental Action

Rationale

Particle theory is essential to understanding how substances in the enviro
well as how we can separate pollutants from natural systems. Exploration of solubility and concentration will help learners analyse ways to determine environmental health. Inquiry into particle theory provides the foundation for future studies in chemistry. In grade 8, concepts related to particle theory will be further refined as students explore heat and the kinetic molecular theory through the theme of climate change.

Competencies

- Citizenship (CZ)
- Communication (COM)
- Creativity and Innovation (CI)
- Critical Thinking (CT)
- Personal Career Development (PCD)
- Technological Fluency (TF)

Indicators

- Investigate pure substances and mixtures in relation to particle th
- Investigate methods of separation in solutions and mixtures (COM/CI/CT)
- Analyse the factors that affect solubility and concentration (COM/CT/TF)
- Measure the indicators of health of a local waterway with pro
- Analyse the health of a local waterway(CZ/COM/CI/CT)
- Investigate methods of water purification and pollution cleanup (

Concepts (and Guiding Questions)

Particle Theory

- How does the Particle Theory of Matter relate to mixtures and so
- How does the particle theory of matter relate to the dissolution o

Pure substances vs. Mixtures

- How do pure substances and mixtures compare?
- How do various mixtures and solutions compare?

Separation of Mixtures

- How can various mixtures be separated?
- How can pollutants be separated from our drinking water?

Solubility and Concentration

- How do solubility and concentration impact the effect of pollutants in the environment?
- How do different variables affect solubility and concentration?

Curriculum outcomes are statements of what a learner is expected to know and is able to do. Outcomes provide context for skill development in relation to the learning of concepts.

The rationale provides a context for learning in relation to the concepts and skills learners will explore in this outcome.

These are the competencies that relate to this outcome.

The indicators support the development of skills and concepts, and provide evidence of student learning. Teachers have flexibility in how the indicators are selected, used and, combined in order to respond to their learners.

The competencies noted at the end of indicator statements identify the types of learning experiences that best support the outcome.

The concepts provide the context for skill development. Concepts may progress across grade levels as the degree of complexity increases and may be developed across curriculum areas.

The guiding questions can provide starting points for inquiry and guide the development of skills and competencies.

Determining Environmental Health

- How can the health of an environment be determined?
- How can water be kept clean for drinking and as a habitat?
- How does pollution enter the environment?

Skills

The first skill defined is the outcome skill and the others are the skills found in the indicators.

Analyse

Gather and select appropriate information; determine accuracy, validity, and relevance of the information; identify perspectives; communicate findings.

Investigate

Ask and revise questions; locate several relevant and dependable details to support an answer; organize and compare details; identify relationships, recognize represented perspectives, and communicate findings.

Measure

Background Knowledge

The following chart provides an alignment of related concepts between grade levels:

Some courses include a table that describes the scope and sequence of the skills and concepts for this outcome.

Grade 4	Grade 5	Grade 7
Learners will have investigated a variety of local natural habitats. Concepts included habitat components and characteristics, survival needs of organisms, how habitats can change over seasons and with time.	Learners will have tested how physical and chemical changes affect the properties of matter. Concepts included physical and chemical properties of matter, physical and chemical changes as well as conservation of mass.	Learners will analyse particle theory in relation to substances in environments. Learners will explore the following concepts: particle theory, pure substances vs. mixtures, separation of mixtures, solubility and concentration, determining environmental health.

The background knowledge provides an overview of the learners' experiences in relation to the skills and concepts of the outcome.

Pollution provides the context for learning about particle theory in this outcome. Learners will explore the impact of various concentrations of substances in the environment. A concept of pollution and an understanding of particle theory will support scientific knowledge that underpins the concept of pollution. An understanding learners make decisions about what is safe or harmful for the environment.
Data logging sensors (probeware) can be used to collect data from local environments. This provides opportunities to connect with the mathematics curriculum as well as careers in environmental management. Using probeware allows for the collection of a lot of data in a short period of time so the effort can be placed in designing controlled experiments and analyzing the data for real-life implications. Learners have had probeware available to them as early as grade 4.

Learning Experiences

The suggested indicators are organized in a way to scaffold learning in... exploration of skills and concepts for this outcome can be done in any or... based on the progression of learning. The experience described below is... the other indicators that support the outcome, however, in practice multiple indicators can be addressed simultaneously. For example, learners may *analyse the factors...* *concentration* when *measuring the indicators of health of a local wate...*

For each outcome you will find one sample learning experience relating to the skills, concepts, and competencies for a specific indicator.

Guiding questions and learning experiences can be used to launch inquiry into the concept.

Indicators

- Investigate pure substances and mixtures in relation to particle theory (COM/PCD/CI/TF)
- Investigate methods of separation in solutions and mixtures (COM/CI/CT)
- **Analyse the factors that affect solubility and concentration (COM/CT/TF)**
- Measure the indicators of health of a local waterway with probeware (CZ/CI/TF)
- Analyse the health of a local waterway(CZ/COM/CI/CT)
- Investigate methods of water purification and pollution cleanup (CZ/COM/PCD/CI/CT)

Overview

The teacher presents learners with the task of designing an experiment t... solubility and/or concentration. Depending on where learners are in th... may provide questions in the form of a design challenge: How do you dissolve the most sugar in 100ml of water? What is the fastest method to dissolve a sugar cube?

This provides a quick description of the learning experience outlined in detail below.

Evidence of Learning for the indicator:

Analyse the factors that affect solubility and concentration

Evidence of learning can be gathered as learners design and conduct an e... information about factors that affect solubility and concentration. Furth... through conversations about the validity and reliability of the data learn...

This section provides an overview of how assessment is embedded within the learning experience. The evidence of learning corresponds to the acquisition of skills and the understanding of concepts related to the outcome.

The evidence found through the learning experience for this indicator are suggestions of what teachers can look for in relation to skills and concepts. Regardless of the methods used, it is necessary for teachers to be intentional about collecting evidence of student learning to inform next steps for teaching.

Description of learning experience for the indica...

Analyse the factors that affect solubility and concentration

This section details the steps for the sample learning experience and identifies the indicator in focus.

Potential Guiding Questions

- How do different variables affect solubility and concentration...

Guiding questions that relate to the concepts of the sample learning experience are listed here to help launch student inquiry.

*The learning experience below is **one possibility** to engage learners with **this indicator**. It will be necessary to modify this experience to engage learners in a culturally and linguistically responsive way.*

Gather and select appropriate information

Learners can carry out their experiments and gather data. This may be done in small groups or pairs. Alternatively, learners may be placed into groups to discuss the various experimental designs and one design can be chosen to be conducted. Another option is to refine the experimental designs as a group to include elements from several members of the group into one design. This refined design can then be carried out. A discussion or mini lesson on how to effectively record data might help learners organize the experimental information that they will be gathering.

Along with the steps for the learning experience, competencies have been identified that best align with the steps as described.

Essential Graduation Competencies

Technological Fluency
This provides learners the opportunity to use technology in a re... and...

A description of the competency that could be developed through this learning experience.

The teacher should provide feedback with respect to lab safety, throughout the experiment.

Evidence of Learning (Observations)

While students are collecting experimental data, the teacher can p... **gathering information** for analysis.

Evidence of learning is gathered throughout the learning experience. Suggested opportunities are found in these boxes.

Determining importance of information and Communicate Findings

Learners can share their findings by exploring the following questions:

- How do the results of different experiments compare?
- What do the results mean in relation to pollutants in the environment?
- How is the factor that you inquired about important for pollution management?

Essential Graduation Competencies

Communication
This provides learners the opportunity to listen and interact purposefully and respectfully in formal and informal contexts.

Evidence of Learning (Conversations)

Learners **communicate** and discuss the **importance of the findings**.

Evidence of Learning (Products)

Learners **communicate their findings** on the factors that affect solubility and concentration.

Moving Forward

How are the variables you investigated relevant to substances in the...

The next steps are scaffolded towards learner independence and application of the skill as it relates to the outcome

Outcome: Learners will implement food production processes

Rationale

Giving learners opportunities to learn skills to prepare food from scratch will help them develop a healthy and nutritious diet. Learners will work in collaborative teams to develop and demonstrate a planning process when creating food products and meals. They will need to learn safe preparation techniques in order to keep themselves and others safe. These skills are transferable to everyday life.

Competencies

- Communication (COM)
- Critical Thinking (CT)
- Personal Career Development (PCD)
- Technological Fluency (TF)

Indicators

- Apply proper food handling techniques (PCD/TF)
- Apply food lab safety procedures (PCD/TF)
- Evaluate food preparation skills during food labs (PCD/CT/TF)
- Plan kitchen management duties (COM/CT/TF)

Concepts (and Guiding Questions)

Food handling

- What is foodborne illness?
- How does food contamination occur?
- How is food borne illness prevented?

Food lab safety

- How do you work safely in a kitchen?
- How is safety equipment used in the foods lab?

Food preparation

- What are “methods” in food preparation?
- How are different foods prepared?
- Which food preparation skills are required to prepare which types of foods?

Kitchen management

- How do we plan a meal?
- How do you work efficiently to prepare meals?

Skills

Implement

Select - Locate several relevant and dependable details to support an answer
Plan – Formulate: Identify a topic of interest; brainstorm ideas; choose, prioritize, and refine ideas; evaluate choices.
Devise a process to solve the problem. Execute the steps, modifying as necessary.
Evaluate - Review processes and results from an inquiry; consider and communicate varying perspectives and alternative solutions; identify potential new problems and/or issues; justify decisions and/or findings.
Apply - Carry out, use or complete a procedure/ technique.

Apply

Carry out, use or complete a procedure/ technique

Evaluate

Review processes and results from an inquiry; consider and communicate varying perspectives and alternative solutions; identify potential new problems and/or issues; justify decisions and/or findings.

Plan

Formulate: Identify a topic of interest; brainstorm ideas; choose, prioritize, and refine ideas; evaluate choices.
Devise a process to solve the problem. Execute the steps, modifying as necessary.

Background Knowledge

Providing learners the opportunities to develop skills to prepare food from scratch will help them develop a healthy and nutritious diet. Learners will need to develop and demonstrate a team planning process when creating food products and meals. Many learners come to this course with kitchen experience. It is important to use those experiences and recognize their uniqueness when designing learning experiences. It is important to dispel any gender stereotype surrounding food preparation and kitchen management. Developing skills in this area will benefit learners for their lifetime. There are many career choices associated with food preparation, kitchens and the food service industry. Not to be overlooked is the world of quality control which is new to many learners.

Learning Experiences

The suggested indicators are organized in a way to scaffold learning in support of the outcome. The exploration of skills and concepts for this outcome can be done in any order, concurrently, or selectively based on the progression of learning. The experience described below is presented independently from the other indicators that support the outcome, however, in practice multiple indicators can be addressed simultaneously. For example, learners will apply proper food handling techniques, while they plan kitchen management duties

Indicators

- **Apply proper food handling techniques (PCD/TF)**
- Apply food lab safety procedures (PCD/TF)
- Evaluate food preparation skills during food labs (PCD/CT/TF)
- Plan kitchen management duties (COM/CT/TF)

Overview

The purpose of this experience is to introduce learners to the world of food borne illness.

Evidence of Learning for the indicator:

Apply proper food handling techniques

Evidence of learning can be gathered as learners carry out techniques in response to laboratory requirements and situations.

The evidence found through the learning experience for this indicator are suggestions of what teachers can look for in relation to skills and concepts. Regardless of the methods used, it is necessary for teachers to be intentional about collecting evidence of student learning to inform next steps for instruction.

Description of learning experience for the indicator

Apply proper food handling techniques

Potential Guiding Questions

- What is foodborne illness?
- How does food contamination occur?
- How is food borne illness prevented?

*The learning experience below is **one possibility** to engage learners with **this indicator**. It will be necessary to modify this experience to engage learners in a culturally and linguistically responsive way.*

Introduction

Learning the proper ways to prepare, handle and store food is ongoing in the foods lab. Learners may have basic experience with concepts such as refrigeration of foods to prevent spoilage, and not to consume foods which show spoilage. Learners need to know more about the 'why' of food handling, as they learn how to apply the proper techniques to ensure food is safe for human consumption.

To begin, teachers can inquire about prior knowledge on the topic of food borne illness (often referred to as food poisoning). Learners can brainstorm what they know and record responses and questions to be shared with the class.

Based on learner responses, the teacher will ask follow-up questions in order aid learners in organizing their responses:

- How do you know you had food poisoning?
- What causes a food borne illness?
- How do you think food borne illness can be prevented?

Learners can discuss these questions in small groups compiling their answers. The teacher can discuss responses with the groups as they are working.

Essential Graduation Competencies

Communication
This provides learners an opportunity to listen and interact purposefully and respectfully in formal and informal contexts and engage in constructive and critical dialogue

Evidence of Learning (Conversations)

Evidence of learning can be gathered as learners describe causes and prevention methods relating to food borne illness.

Learners may now be ready to be introduced to the bacteria, viruses, toxins and parasites which cause food borne illnesses. They can use their questions to explore a variety of causes, resulting illnesses or impacts, and proper kitchen techniques.

In pairs or groups learners can pick one food borne illness cause to explore. They will want to consider:

- What it looks like
- Where it grows
- What the result is on foods
- How it is spread
- The effect on humans

And specifically

- The techniques are used to prevent the spread of the specific food borne illness.

This information can be used by the learners in a variety of ways. They can design an infographic, poster, guideline page, instructional video, kitchen tour etc. in order to share their findings with the class.

Essential Graduation Competencies

Creativity and Innovation
This provides learners an opportunity to develop curiosity, inquisitiveness and creativity, flexibility, and persistence, open and fair mindedness.

Evidence of Learning (Observations/Products)

Evidence of learning can be gathered as learners share their findings of the techniques used to prevent the spread of their chosen food borne illness.

Learners will have opportunities to apply the techniques they have explored while engaging in food labs. This can be done in relation to specific techniques based on the recipe they are learning to prepare, outlining responsibilities and expectations for Kitchen Lab duties, etc.,

Essential Graduation Competencies

Critical Thinking
This provides learners an opportunity to work individually, cooperatively, and collaboratively in problem solving

Evidence of Learning (Observations)

Evidence of learning can be gathered as learners **apply** proper food handling techniques.

Moving Forward

A career extension of this learning activity can be to look at the opportunities, education and careers which involve public health and disease control.

Learners will have engaged with the rationale supporting proper food handling. The next steps will be to learn about how to prevent food spoilage, cross contamination and environmental contamination while preparing, cooking, and serving food.

Outcome: Learners will create food products for various audiences and purposes

Rationale

Learners need to develop practical skills in planning and preparing food which they can apply to a variety of real-world situations. In real world settings, employees and families work together to create food products.

Competencies

- Communication (COM)
- Creativity and Innovation (CI)
- Critical Thinking (CT)
- Personal Career Development (PCD)

Indicators

- Analyse the factors that impact audience needs (CT/COM)
- Investigate recipes for various audiences and purposes (CI/CT)
- Plan a meal or food product in response to audience and purpose (PCD/CI/CT)

Concepts (and Guiding Questions)

Meal planning

- What is meal planning?
- Why is it important to practice meal planning?
- What is involved in meal planning?

Audience

- How do you plan and prepare food for people who have allergies?
- How do you plan and prepare food for people with certain diet related health conditions?

Food production

- How is food made from scratch?
- What is a recipe?
- How do you follow a recipe?

Skills

Create

Develop an idea; communicate a representation for a process and/or a product; produce a product; modify as necessary; evaluate results and/or modifications.

Analyse

Gather and select appropriate information; determine accuracy, validity, and relevance of the information; identify perspectives; communicate findings.

Investigate

Ask and revise questions; locate several relevant and dependable details to support an answer; organize and compare details; identify relationships, recognize represented perspectives, and communicate findings.

Plan

Formulate: Identify a topic of interest; brainstorm ideas; choose, prioritize, and refine ideas; evaluate choices. Devise a process to solve the problem. Execute the steps, modifying as necessary.

Background Knowledge

There are many steps involved in preparing food which occur long before people enter a kitchen to actually cook and create. Learners may or may not have some experience in meal planning, or knowledge of food allergies, cultural and religious food practices, and basic cooking skills. Meal planning is a good way to bring awareness to the importance of being able to prepare meals for an individual or others. It allows for improved nutrition, healthier choices, saves money and time among other benefits. When planning this learning experience, it is important to be sensitive to food security issues. This can be a learning opportunity to be built into the meal planning process.

Learning Experiences

The suggested indicators are organized in a way to scaffold learning in support of the outcome. The exploration of skills and concepts for this outcome can be done in any order, concurrently, or selectively based on the progression of learning. The experience described below is presented independently from the other indicators that support the outcome, however, in practice multiple indicators can be addressed simultaneously. For example, as learners investigate recipes for various audiences and purposes they can plan a meal or food product in response to audience and purpose.

Indicators

- Analyse the factors that impact audience needs (CT/COM)
- **Investigate recipes for various audiences and purposes (CI/CT)**
- Plan a meal or food product in response to audience and purpose (PCD/CI/CT)

Overview

Learners have an opportunity to share their experiences with meals and meal planning in order to identify recipes that could be used to respond to different audience scenarios.

Evidence of Learning for the indicator:

Investigate recipes for various audiences and purposes

Evidence of learning can be gathered as learners locate details about dietary considerations and identify the relationships between recipe choices and meeting the needs of an audience.

The evidence found through the learning experience for this indicator are suggestions of what teachers can look for in relation to skills and concepts. Regardless of the methods used, it is necessary for teachers to be intentional about collecting evidence of student learning to inform next steps for instruction.

Description of learning experience for the indicator

Investigate recipes for various audiences and purposes

Potential Guiding Questions

-

*The learning experience below is **one possibility** to engage learners with **this indicator**. It will be necessary to modify this experience to engage learners in a culturally and linguistically responsive way.*

The teacher can invite learners to consider how recipes are selected in response to the following questions:

- Where do you find a menu?
- How are menus created?
- How are recipes selected?

Learners can discuss questions that they have and answers to these questions, and the teacher can facilitate the recording of learner answers.

Essential Graduation Competencies

Critical Thinking: This provides learners an opportunity to develop curiosity, inquisitiveness and creativity, flexibility and persistence, open and fair mindedness.

Evidence of Learning (Conversations)

Evidence of learning can be gathered as learners **ask and revise questions** relating to recipe selection.

Learners now have an opportunity to discuss selections of recipes that they experience in their lives. They will want to consider the relationship between recipe selection and the creation of menus as ways to respond to the needs of an audience. Learners can work in small groups or pairs in order to locate details that they would identify as being of importance if they were to prepare a meal or menu for a gathering of family, friends, or other members of the community.

Essential Graduation Competencies

Creativity and Innovation: This provides learners an opportunity to gather information through all senses to imagine, create and innovate, and use constructive feedback, reflect and learn from trial and error.

They will want to consider:

- How can I select a recipe that meets the needs of the group?
- What information will I need in order to help me plan?
- How do recipes pair together?
- How can we modify a recipe to meet the needs of a group?

The learners can then share their responses, questions and ideas with other groups in a format which is suitable to classroom structure. This may be sharing with one other group and then presenting their common and unique ideas to the class. They will want to share recipe ideas that can be paired with audience requirements.

Creativity and Innovation: This provides learners an opportunity to gather information through all senses to imagine, create and innovate: use constructive feedback, reflect and learn from trial and error.

Evidence of Learning (Observations/Conversations)

Evidence of learning can be gathered as learners **locate details** from their experiences of factors to take into account when selecting possible recipe options, and **comparing** those **details** with others.

Now the teacher can offer possible dietary considerations in scenarios for learners to consider as they gather recipes to use in preparation for a dinner menu. The learners can contribute possible considerations to be used based on their experiences. These considerations can include:

- Allergies to food items such as eggs, dairy, peanut butter, shellfish, gluten
- Medical considerations such as diabetes, or those requiring cholesterol or sodium reduced diets
- Plant based diets
- Cultural considerations
- Food preferences
- etc.,

When learners have selected possible combinations of considerations, they can identify recipes that could be used to accommodate all of the requirements as well as follow the guidelines as laid out in Canada's Food Guide. This can be done through online search, recipe books, food apps, etc.,

Essential Graduation Competencies

Technological Fluency: This provides learners an opportunity to use technology in a responsible manner to create and represent new knowledge.

Evidence of Learning (Observations/Conversations)

Evidence of learning can be gathered as learners **identify relationships** between dietary considerations and recipes that can be used to accommodate the intended audience.

Learners now have an opportunity to share the menu they have produced. They can communicate their findings through a menu in a style which best suits their learning styles and preferences. For example, some may like to create a Menu similar to ones seen in a restaurant. Others may share their menu using google slides, through videos, verbally, etc.,

Essential Graduation Competencies

Technological Fluency:
This provides learners an opportunity to use technology in a responsible manner to create and represent new knowledge.

Evidence of Learning (Observations/Products)

Evidence of learning can be gathered as learners communicate their findings in relation to recipes that can respond to various audience needs.

Moving Forward

Learners can use the menus they have generated to learn how to create food products in the food lab.

Outcome: Learners will analyse the impact of nutrients on personal health and well-being

Rationale

Poor eating habits negatively impact the health of youth in Nova Scotia. Providing learners with information on the sources and role of nutrients, and how they affect health, will provide learners with the skills to improve their personal well being.

Competencies

- Communication (COM)
- Creativity and Innovation (CI)
- Critical Thinking (CT)
- Personal Career Development (PCD)

Indicators

- Compare the nutritional value of foods using the nutrition label (CT/PCD)
- Investigate the role of nutrients in the body (COM/CT)
- Classify sources of nutrients in relation to impact on health and well-being. (CT/COM/CI)
- Analyse the components of a healthy diet (COM/PCD/CT)

Concepts (and Guiding Questions)

Essential nutrients

- What are essential nutrients?
- Why is it important to consume food rich in essential nutrients?

Nutrition label

- What information is contained on a food label?
- Does every food have a label?

Sources of nutrients

- How do people get the sources of nutrients they need?
- How can you create a healthy diet?

Healthy diet

- What is a healthy diet?
- How do I know if my diet is healthy?

Skills

Analyse

Gather and select appropriate information; determine accuracy, validity, and relevance of the information; identify perspectives; communicate findings.

Compare
Make observations; identify similarities and differences; identify relationships and offer an interpretation; communicate the findings.

Investigate
Ask and revise questions; locate several relevant and dependable details to support an answer; organize and compare details; identify relationships, recognize represented perspectives, and communicate findings.

Classify
Identify attributes and select criteria for groupings and subgroupings; sort based on selected criteria and consider the grouping(s); incorporate a new item in a group, offering a rationale for the choice based on relationships.

Background Knowledge
Learners will have some prior knowledge on healthy eating and Canada's Food Guide as they have been introduced to both topics in their health curriculums throughout the elementary years. They may or may not have been introduced to the latest version of Canada's Food Guide, so a review or introduction at this point would be a useful lesson. There is much information on healthy eating available to people today via social media, and media in general. Learners need to learn the basics of healthy eating and nutrition, so they are able to make sense of the information they are presented with on a daily basis. It is important to clarify the meaning of the word diet. The general meaning learners think of when they hear or see the word is as a restrictive means of eating in order to lose weight. The meaning for the word in this course is generally the kinds of food that a person, animal, or community habitually eats. This can lead to confusion if it isn't clarified early on in learning.

Learning Experiences
The suggested indicators are organized in a way to scaffold learning in support of the outcome. The exploration of skills and concepts for this outcome can be done in any order, concurrently, or selectively based on the progression of learning. The experience described below is presented independently from the other indicators that support the outcome, however, in practice multiple indicators can be addressed simultaneously. For example, while learning about the information contained on a food label, learners will be discussing nutrient claims which are printed on the labels. This is a nice lead in for analyzing nutrition messages. Understanding food labels also helps with the selection of foods for special diets, which goes hand in hand with meal planning.

Indicators
- **Compare the nutritional value of foods using the nutrition label (CT/PCD)**
- Investigate the role of nutrients in the body (COM/CT)
- Classify sources of nutrients in relation to impact on health and well-being. (CT/COM/CI)
- Analyse the components of a healthy diet (COM/PCD/CT)

Overview

Nutrition labelling became mandatory in Canada in 2007 on all prepackaged foods. Since then, nutrition and ingredient information has been listed on the food label. They have been designed to be easy to find, simple to read and to allow Canadians to make informed food choices. Learners will gain a better sense of which product is a healthier choice by learning to compare labels.
Possible cross curricular link: This learning experience provides opportunities to link to skills, concepts and guiding questions from English Language Arts and Science.

Evidence of Learning for the indicator:

Compare the nutritional value of foods using the nutrition label

Evidence of learning can be gathered as learners make observations, identify similarities and differences, and identify relationships of the nutritional value of foods using the nutrition label.

The evidence found through the learning experience for this indicator are suggestions of what teachers can look for in relation to skills and concepts. Regardless of the methods used, it is necessary for teachers to be intentional about collecting evidence of student learning to inform next steps for instruction.

Description of learning experience for the indicator

Compare the nutritional value of foods using the nutrition label

Potential Guiding Questions

- What information is contained on a food label?
- Does every food have a label?

*The learning experience below is **one possibility** to engage learners with **this indicator**. It will be necessary to modify this experience to engage learners in a culturally and linguistically responsive way.*

Introduction

The purpose of this learning experience is for learners to become familiar with the information on food labels so they may make healthier choices. To begin, the teacher can facilitate a discussion that helps learners to share their prior knowledge (home experience, life experiences) with reading food labels. The following questions may be used:

- What information is contained on a food label?
- Does every food have a label?
- Have you ever read a food label? If so, what is on it?
- What do you know about food labels?

The teacher can hand out a food item with a label, label examples from actual products, labels from the same product type but different manufacturers, or learners can find a label of their own. This can be done individually or in pairs as best meets the needs of the class.

Learners can discuss or record what nutrition information and claims are on the food label. They will want to consider:

- What information is included?
- How is the information displayed?
- What can you learn from the information provided?

Essential Graduation Competencies

Critical Thinking:
This provides learners an opportunity to develop curiosity, inquisitiveness and creativity, flexibility and persistence, open and fair mindedness.

Evidence of Learning (Observations/Conversations)

Evidence of learning can be gathered as learns **make observation**s about the content found on food labels

The individuals or pairs will then combine with other groups having a similar food item to identify similarities and differences between the labels. They will want to consider:

- What information is the same?
- How do the information or claims differ?

Essential Graduation Competencies

Critical Thinking:
This provides learners an opportunity to formulate decisions based on evidence

Evidence of Learning (Observations/Conversations)

Evidence of learning can be gathered as learners identify **similarities and differences** with their food labels.

The learners will have an opportunity to identify relationships and offer interpretations as they engage with the following questions:

- What option is a healthier choice?
- How are the nutrition claims supported or not by the information on the label?
- How can the information on the label help you to make a choice?
- Why would you choose one option versus another?

Learners can work in groups to engage with the questions and share their findings with the whole class.

Essential Graduation Competencies

Critical Thinking:
This provides learners an opportunity to analyse information and evidence, suspending judgement and accepting ambiguity

Cross-curricular opportunity: This is an opportunity to link to concepts and guiding questions from Science relating to cell and system health.

Evidence of Learning (Conversations)

Evidence of learning can be gathered as learners i**dentify relationships** on food labels and nutrition claims and offer an interpretation on their findings.

Learners can make a nutrition claim and generate a fictional label that could be used to support the claim. Learners will have the opportunity to generate a variety of labels for the same product, varying the nutritional information amounts to support the claim in alternate ways. This can be done in pairs or groups, and then shared with the class.

Essential Graduation Competencies

Personal Career Development:
This provides learners an opportunity to connect learning with personal and career development

Cross-curricular opportunity: This is an opportunity to link to concepts and guiding questions from English Language Arts relating to Bias.

Evidence of Learning (Observations/Conversations/Products)

Evidence of learning can be gathered as learners **communicate their findings** about the nutritional value of foods using nutrition labels.

Moving Forward

Learners can move on to becoming more familiar with the information contained on a food label, looking at the reasons behind government regulations on food labelling in Canada. This can include a look at rationales behind:

- Serving size
- Calories
- % Daily Value
- Nutrients you may want more of
- Nutrients you may want less of.
- Ingredients list
- Nutrition claims
- Health claims

Outcome: Learners will analyse nutrition messages for reliability, accuracy, validity, and bias

Rationale

Nova Scotia youth are inundated with messages related to food and nutrition; many of these messages are inaccurate. By giving learners the tools they need to properly analyse food and nutrition messages, they will be able to navigate the complex food environment that exists today, and make healthier choices to support physical and mental health.

Competencies

- Citizenship (CZ)
- Communication (COM)
- Critical Thinking (CT)
- Technological Fluency (TF)

Indicators

- Investigate ways to access nutritional information (CT/COM/TF)
- Question the validity of nutrition messages (COM/CT)
- Compare reliability of information from a variety of nutrition sources (CZ/COM/CT/TF)
- Investigate factors that influence nutrition messages (CT/COM)

Concepts (and Guiding Questions)

Food labels

- What information is contained on a food label?
- What foods have a food label?
- How do I use the information on a food label?

Sources of nutrition information

- Where do you find reliable nutrition information?
- How do I know if the information is credible?

Reliability, accuracy, validity and bias

- How are nutritional messages crafted?
- Why are nutritional claims being made?

Skills

Analyse

Gather and select appropriate information; determine accuracy, validity, and relevance of the information; identify perspectives; communicate findings.

Investigate
Ask and revise questions; locate several relevant and dependable details to support an answer; organize and compare details; identify relationships, recognize represented perspectives, and communicate findings.

Question
Independently and collaboratively generate questions in response to increasingly complex problems and/or issues; Choose and develop a specific inquiry question to investigate.

Compare
Make observations; identify similarities and differences; identify relationships and offer an interpretation; communicate the findings.

Background Knowledge
Learners receive a variety of nutrition information daily through the media. Celebrities and sports personalities often endorse foods and diets which can influence choices teenagers may make. In order to help learners learn about nutrition messaging, teachers need to help learners ask important questions about the information or claims being made. These questions will equip learners with skills they can use when shopping, viewing ads and in general making sound nutrition and food choices. This learning experience gives learners the opportunity to choose their own advertisement of food with a claim and develop questions which will help them learn if the claims are valid and accurate. There are opportunities in this experience to discuss any biases which may be present in the messaging or claim.

Learning Experiences
The suggested indicators are organized in a way to scaffold learning in support of the outcome. The exploration of skills and concepts for this outcome can be done in any order, concurrently, or selectively based on the progression of learning. The experience described below is presented independently from the other indicators that support the outcome, however, in practice multiple indicators can be addressed simultaneously. For example, learners may question the validity of nutrition messages as they investigate factors that influence nutrition messages.

Indicators
- Investigate ways to access nutritional information (CT/COM/TF)
- **Question the validity of nutrition messages (COM/CT)**
- Compare reliability of information from a variety of nutrition sources (CZ/COM/CT/TF)
- Investigate factors that influence nutrition messages (CT/COM)

Overview
The purpose of this learning experience is to help learners understand how to approach issues of validity of nutrition information.

Evidence of Learning for the indicator:

Question the validity of nutrition messages

Evidence of learning can be gathered as learners generate questions in response to increasingly complex problems and/or issues relating to nutrition messages and developing a specific inquiry question.

The evidence found through the learning experience for this indicator are suggestions of what teachers can look for in relation to skills and concepts. Regardless of the methods used, it is necessary for teachers to be intentional about collecting evidence of student learning to inform next steps for instruction.

Description of learning experience for the indicator

Question the validity of nutrition messages

Potential Guiding Questions

- How are nutritional messages crafted?
- Why are nutritional claims being made?

*The learning experience below is **one possibility** to engage learners with **this indicator**. It will be necessary to modify this experience to engage learners in a culturally and linguistically responsive way.*

Introduction

To begin the learning experience, the teacher can ask learners if they can recall an advertisement for a dietary supplement, a 'diet', or a food which promises to improve their health or an aspect of their body. Depending on learner answers, this may be a good time to gather questions as a class such as:

- What is a dietary supplement?
- What claims are being made?
- What is a diet?
- Is a diet and a "fad" diet the same thing?
-

Learners can be offered an opportunity to engage in a 'food detective' style learning experience. In small groups, or in groups which work given classroom structure and dynamics, learners will search for advertisements which are promoting nutrition, diets, supplements or food advice. Examples may include:

- Weight loss supplements
- Diet strategies
- Nutrition supplements
- Fad diets.

When an advertisement or claim has been chosen by the learners, they will then generate a series of questions that may

Essential Graduation Competencies

Critical Thinking:
This provides learners an opportunity to develop curiosity, inquisitiveness and creativity, flexibility and persistence, open and fair mindedness.

help them uncover the validity of the claim. These may fall into a variety of groups such as:

- Purpose of advertisement
- Information/Data provided or withheld
- Target audience
- Person making claim
- Testimonials
- Promotion of specific habits
- Relationship of expert supporting claim to company
- Location/timing of advertisement
- etc.,

Learners will want to compile all of the possible questions from general to specific that they could ask in order to help ascertain the validity of the nutritional claims.

Critical Thinking:
This provides learners an opportunity to develop curiosity, inquisitiveness and creativity, flexibility and persistence, open and fair mindedness.

Cross-curricular opportunity: This is an opportunity to link to concepts and guiding questions from English Language Arts relating to validity of information.

Evidence of Learning (Observations/Conversations)

Evidence of learning can be gathered as learners independently or collaboratively **generate questions** in response to increasingly complex problems and/or issues.

Using the list of generated inquiry questions that apply to their specific article, learners will pair up with another group in order to select questions that may apply in relation to both advertisements and claims. They may want to select a variety of possible questions from each group and change the wording or intentions of selected questions so that they apply in both settings.

When ready, learners will identify (a) specific inquiry question(s) and describe how it can be used in relation to the validity of nutritional messages.

Essential Graduation Competencies

Communication:
This provides learners an opportunity to listen and interact purposefully and respectfully in formal and informal contexts; engage in constructive and critical dialogue.

Evidence of Learning (Observations/Conversations)

Evidence of learning can be gatherers as learners **choose and develop a specific inquiry question** to investigate.

Moving Forward

Learners can use the inquiry questions that have been developed in order to investigate factors that influence nutrition messages.

Outcome: Learners will evaluate the impact of local and global food practices on personal choice

Rationale

Food insecurity, both locally and globally, affects the personal well-being of many families. Understanding the causes of food insecurity will enable learners to suggest creative solutions to address this problem. When shopping for food, learners need to be aware of marketing practices and local food issues, in order to make informed consumer decisions that meet individual needs.

Competencies

- Citizenship (CZ)
- Communication (COM)
- Critical Thinking (CT)
- Personal Career Development (PCD)
- Technological Fluency (TF)

Indicators

- Compare the benefits and challenges of buying local food (CZ/COM/PCD/CT)
- Investigate strategies for food shopping (COM/CT)
- Analyse local and global issues of food security (CZ/COM/PCD/CT/TF)
- Investigate physical, social, and cultural influencers on food choices (CZ/COM/CT)

Concepts (and Guiding Questions)

Local food

- What is local food?
- Why should I shop local?
- What are some challenges to buying local food?
- What do we grow in Nova Scotia?
- How can I shop local in the winter in Nova Scotia?

Food shopping

- Why do I need to plan my shopping?
- What are strategies for food shopping
- How do grocery stores make me think I need to buy something?

Food security

- What is food security?
- Are food security and food insecurity the same thing?
- Why do people have food security issues?
- How can I help reduce food security issues in my community?

Food choice

- Are the foods I like available to me locally?
- How can I obtain foods which are supportive of my cultural choices?

Skills

Analyse

Gather and select appropriate information; determine accuracy, validity, and relevance of the information; identify perspectives; communicate findings.

Investigate

Ask and revise questions; locate several relevant and dependable details to support an answer; organize and compare details; identify relationships, recognize represented perspectives, and communicate findings.

Question

Independently and collaboratively generate questions in response to increasingly complex problems and/or issues; Choose and develop a specific inquiry question to investigate.

Compare

Make observations; identify similarities and differences; identify relationships and offer an interpretation; communicate the findings.

Background Knowledge

Learning how to shop for groceries is a life skill that many learners find fascinating. The choice of food products can be overwhelming and purchasing local food products requires an awareness on the part of the consumer. Local food is now a mainstream trend, with more and more people seeking out fresh, local options for produce and other foods. Food insecurity issues exist in our local communities as well as worldwide. Learners have some knowledge of this issue as a social determinant of health status and exciting their minds to help this cause can see real results. It is important to be sensitive to issues of food insecurity, establishing those respectful and caring relationships so difficult discussions are able to happen.

Learning Experiences

The suggested indicators are organized in a way to scaffold learning in support of the outcome. The exploration of skills and concepts for this outcome can be done in any order, concurrently, or selectively based on the progression of learning. The experience described below is presented independently from the other indicators that support the outcome, however, in practice multiple indicators can be addressed simultaneously. For example, learners may compare the benefits and challenges of buying local food while they analyze local and global issues of food security.

Indicators

- **Compare the benefits and challenges of buying local food (CZ/COM/PCD/CT)**
- Investigate strategies for food shopping (COM/CT)
- Analyse local and global issues of food security (CZ/COM/PCD/CT/TF)
- Investigate physical, social, and cultural influencers on food choices (CZ/COM/CT)

Overview

This learning experience provides opportunities for learners to discover the variety of locally produced and sourced foods in Nova Scotia by season.

Evidence of Learning for the indicator:

Compare the benefits and challenges of buying local food

Evidence of learning can be gathered as learners make observations, and identify similarities and differences relating to local food. Further evidence can be gatherers as they identify relationships, offer an interpretation, and communicate their findings

The evidence found through the learning experience for this indicator are suggestions of what teachers can look for in relation to skills and concepts. Regardless of the methods used, it is necessary for teachers to be intentional about collecting evidence of student learning to inform next steps for instruction.

Description of learning experience for the indicator

Compare the benefits and challenges of buying local food

Potential Guiding Questions

- Why should I shop local?
- What are some challenges to buying local food?
- What do we grow in Nova Scotia?
- How can I shop local in the winter in Nova Scotia?

*The learning experience below is **one possibility** to engage learners with **this indicator**. It will be necessary to modify this experience to engage learners in a culturally and linguistically responsive way.*

Introduction

The teacher can begin by inquiring about learners' familiarity with local foods. The class can generate a list of products or items that they think are grown or produced in the communities, regionally, or in Nova Scotia.

Learners can use the following guiding questions as they engage in the learning experience:

- What do we grow in Nova Scotia?
- How can I shop local in the winter in Nova Scotia?

Learners can add to or remove from their class list items grown in Nova Scotia, as they gather information about the types of foods grown in Nova Scotia. They can do this in multiple ways such as: online search, visit to a local market, contacting local farmers or distributors, mentor visit, etc.,

Essential Graduation Competencies

Communication
This provides learners an opportunity to engage in constructive and critical dialogue

In particular, learners will want to consider the following information:

- Growing time
- Harvest time
- Availability
- Food type

Evidence of Learning (Observations/Products)

Evidence of learning can be gathered as learners **make observations, and identify similarities and differences** of local food production.

Using the information they have collected, learners will have an opportunity to explore the availability of foods during the year in response to the following questions:

- How can I shop local in the winter in Nova Scotia?
- What would a sample meal look like in each season?
- How was produce incorporated into other local products?

Learners can engage in this exploration in pairs or small groups. They would benefit from an opportunity to share their information to the class.

Essential Graduation Competencies

Citizenship
This provides learners an opportunity to develop skills and practices that support environmental sustainability

Evidence of Learning (Observations/Conversations)

Evidence of learning can be gathered as learners **identify relationships** and **offer an interpretation** as to the benefits and challenges of buying local food.

Moving Forward

An extension activity for this learning experience may be to have learners plan a meal or food product in response to audience and purpose in order to showcase a recipe which can be made in the foods lab featuring Nova Scotian products. Learners could also investigate physical, social, and cultural influencers on food choices through a career lens. They can explore the expanding agricultural careers which involve farming, seed and crop specialists, ecologists, etc.,