Maker Way Project Template "Zero Food Waste" Challenge

Overview

In Canada, $31 billion worth of food ends up in landfills or composters each year, according to a 2014 report from Value Chain Management International. It's part of a global problem where 1.3 billion tonnes of food gets thrown out each year, according to the Food and Agriculture Organization of the United Nations. – CBC News

Design Rationale

It is important to raise awareness of the issues surrounding food waste. Multiple contributors, such supermarkets, restaurants and consumers, need to make changes to lower this global problem. Creating a meal with no waste is a good approach as to how an individual can make a difference.

Problem Scenario

Your task is to design a nutritional and sustainable* three-course meal, creating zero food waste.

Parameters

- Definition of "sustainable" can vary. Set a clear definition for classroom:
    - Set a maximum number of food miles
    - No creation of food waste
    - Define produce integrity. Discuss: labels and standards, organic, BC Hothouse, BC Grown, International Standards, US Standards
- Meet Canada's Food Guide requirements (currently being revised)
- Feeds a certain number of students (eg groups of 3 students)
- Decide if you pre-select a recipe where students make substitutions and adaptations or if the students develop their own recipe from scratch

Example of Lesson Breakdown

Introduction - 2 hours

- Overview of project (outline cultural aspect and meal theme)
- Separate into class groups to brainstorm and assign tasks
- Discuss integrity/food waste

Group work – 2 hours

- Plan meal recipes
- Determine how far ingredients are coming from
- Adjust recipes to fit max food miles and food waste requirements

Half Day

- Lecture on food safety and cooking skills
- Plan cooking and assign tasks

Teacher Preparation

- Review budgets and shopping day to buy ingredients

Half Day

- Cook – Each educator will organize this differently to suit their classroom and available tools. Does each group take a turn while other groups work on different projects?

Success Determinants

- Does it meet a pre-set budget?
- Is there a comprehensive shopping list?
- Does it use local products?
- Does it create any food waste?
- Does it meet the required portions to feed the class or group?

Costs

- Food Cost – is there a maximum ingredient cost per group?
- Equipment Cost – do you have access to a Foods Lab? Grant can be used for tools and portable burners. (Mobile kit: Growing Chefs! has a kit that costs $3400 for 30 kids but can be simplified)
- Transportation for shopping field trip (may be able to walk depending on region)
- Considerations: Do you need a food professional assist with project and someone with FOODSAFE to supervise?

Curricular Connections – Grade 5 cross-curricular example

(project can be adapted for other grades)

ADST 5

Competency: Follow design cycle (Understanding Context, Defining, Ideating etc…)
Content: Identify the skills required for a task and develop those skills as needed

Physical and Health Education 5

Competency: Analyze and describe the connections between eating, physical activity, and mental well-being
Content: Food choices to support active lifestyles and overall health

Career Education 5

Content: Problem-solving and decision-making strategies

Social Studies 5

Competency: Develop a plan of action to address a selected problem or issue
Differentiate between intended and unintended consequences of events, decisions, and developments, and speculate about alternative outcomes (cause and consequence)

Content: Resources and economic development in different regions of Canada

Mathematics 5

Competency: Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving
Content: Financial literacy — monetary calculations, including making change with amounts to 1000 dollars and developing simple financial plans