

Food Preservation: Turnips



Overview

This lesson will challenge students to determine the most appealing way to preserve turnips by evaluating different preservation methods.

Time Needed

- 2-3 class periods with option to do additional work outside of class.

Standards

- HUM-FS-14 Compare and contrast different food preservation methods and the resultant quality of preserved food.
 - 14.1 Describe and provide examples of the continuum of processed foods.
 - 14.6 Examine the factors to be considered in the selection and use of successful thermal processing techniques (canning, freezing and pasteurization) and describe commercial thermal-processing methods.
- HUM-FS-3 Investigate how and why scientific evaluation of foods is conducted.
 - 3.1 Identify physical, physicochemical, and chemical techniques used for assessing food quality.
 - 3.2 Define sensory evaluation, identify the qualities that make-up the sensory characteristics of food, and explain how taste, aroma and the mouth feel sensations combined to give food their flavor.
 - 3.3 Explain what sensory evaluation panels do and conduct a sensory panel using appropriate controls and quantify and analyze the data.
 - 3.4 Describe the role of science in the development of new food products and the use of the scientific method.
 - 3.5 Identify equipment found in the food science laboratory and how to properly and safely use it.

Objectives

- Students will understand the continuum of processed foods and the advantages of each.
- Students will evaluate turnips and the taste of them to determine which preservation method they think would be best suited for them.
- Students will find safe preservation recipes to try as a group.
- Students will taste final products and vote on which they prefer using food descriptors as evidence.

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Materials

- [Food Preservation Powerpoint](#)
- ["Let's Preserve" Resource](#)
- Pressure Canner
- Mason jars and new lids
- Ziploc freezer bags
- Turnips

Outline

- Engage: Students will be taught the food preservation methods currently used and their historical significance.
- Explore: Students will explore turnips and different recipes used for preservation.
- Explain: Teacher will explain which recipe their group wants to try and why they think it's the best option.
- Extend: Students can examine all the final products and use sensory evaluation methods.

Lesson Plan

- Engage: Using the food preservation powerpoint, students will learn the history and uses of food preservation.
- Explore: Students will be given a bunch of turnips to explore the taste, texture, and issues with preserving them. They will research recipes and ideas for preserving them in the tastiest way.
- Explain: Teacher will explain that students will preserve the turnips using a recipe that is proven to be safe for preservation.
- Extend: Students can set up a taste test area and identify which form of sensory evaluation is the most helpful in determining which turnip tastes the best. They will let peers try and vote on their favorite. The recipes and results will be shared with the class.
- Evaluate: Students' recipes will be evaluated using the food preservation guidelines and input from the students in the class. This can be added to a larger project grade or graded independently. This can also be shared with cafeteria manager to possibly do a larger schoolwide taste test.

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