



Lesson Plan for the Humble Potato

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Objective: The student will recognize the skin color, pulp color, eyes, and size of different varieties of potatoes.

Science Extended Grade Level Expectations for Intensive Resource Students:

[3/4] SA1.1: Attending to a task in order to make an observation

[3/4]SA2.1 Asking questions about what can be observed

Estimated Time: 50 minutes

Purpose: Students will learn the nutritional value of potatoes, examine, and taste several different potato variety.

Vocabulary/ Parts of a Potato: flowers, stems, leaves, tuber, seed piece

Materials: data sheet: "A Closer Look at Potato Variety" (Include name of variety, size, skin color, number of eyes, and pulp color), microwave, ruler, kettle for boiling water, serving fork, knife, serving spoon, paper towels, potato plant from the garden with a seed tuber, flower, roots, attached tubers, stems, potatoes: Russet, red, white, yellow, blue, Swedish Peanut, Fingerlings.

Supplemental Story: "Inca Empire, Andean Highlands of South America, 1300"

Cultivated potatoes were grown thousands of years ago with Native Americans in the highlands of the Andes Mountains in South America. The Andean people developed a special method for storing potatoes during the winter. A special method to preserve potatoes resulted in a food called chuno (CHOON - yo). Small and bitter potatoes called "luki" were used to make chuno. During the night, the potatoes were left outside to freeze. During the day, they were warmed by the sun and walked upon to press out the moisture. The process was repeated many times: freezing, thawing, and treading. As the days passed, the potatoes would wither and dry to become chunos. Since the water was removed, the dried potatoes did not rot and spoil during the winter. People used the chunos in food such as a stew during the winter months. The chunos became one of the first freeze-dry foods.



Procedure:

Before the lesson begins, boil one half of different varieties of potatoes in water for 15 minutes until tender. Bake the other half of potatoes in a microwave for six minutes. Use thin slices of potatoes. Remove the potatoes from the microwave and wrap in paper towels to finish cooking for 5-10 minutes.

Introduction: Many people grow potatoes in Alaska to eat. Where do potatoes grow?

Identify the parts of the plant and nutrition value. Medium size potato has 110 calories. It contains potassium (develops part of cells and regulates blood pressure), vitamin C (protects cell damage), fiber (makes a person feel full longer), vitamin B6 (provides energy), and iron (helps nerves).

Teacher will name the variety of potato. Call on students to measure the length of the potato, skin color, number of eyes, and pulp color. Teacher records data. Distribute a boiled and baked sample of potato to each student, so it can be tasted. Repeat the process with each variety of potato and record the findings with all varieties of potatoes in accordance with time available for the class.

Supplemental Story: "Inca Empire, Andean Highlands of South America, 1300"

Summary:

What method of cooking did you like best: baked or boiled?

Which potatoes did you like best?

What difference did you notice in taste and texture?

Who can label the different parts of the potato?

What potato names do you remember?

Reference: National Agriculture in the Classroom – www.agclassroom.com – "The Humble Potato, Underground Gold" by Marcia Eames-Sheavly and Tracy Farrell. A Cornell Cooperative Extension Publication 4-H Leader's/Member's Guide 142LM17.