

# Potato Fun

## *Reading, Science, Math and Language Arts*

### **Overview:**

How long a sweet potato vs. white potato takes to start to root and how long the actual roots get over an extended amount of time.

### **Objectives:**

- The learner will observe and compare root systems from a white potato vs. a sweet potato.
- The learner will document the time it takes for a potato to begin it's root system.
- The learner will document the length of root systems of potatoes.

### **Materials:**

2 Wide-Mouth glass quart jars  
1 sweet potato  
1 white potato  
water  
8 toothpicks  
chart paper for documentation

### **Ahead of Time:**

Set out materials so they are ready.

**Grade Level:** 4-5

**Time:** 30 minutes for set up and a month or more for observations

**Standards:**

**Reading** - Compare and Contrast

**Science** - Observation skill

**Math** - Measurement

*For Kansas standards, visit [www.ksde.org](http://www.ksde.org)*



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## **Background Information:**

### **Compare and contrast White Potatoes and Sweet Potatoes**

The edible part of the sweet potato is a swollen storage root. It contrasts with the Irish potato, which produces a fleshy underground stem known as a tuber.

sweet potato information from Purdue Extension <http://www.hort.purdue.edu/ext/HO-136.pdf>

white potato information from Kansas State Research and Extension:

<http://www.ksre.ksu.edu/library/hort2/mf488.pdf>

**Read about white potatoes in the Exploring Kansas Plants Educator Guide, Unit 5 Specialty Crops.**

Sweet potatoes are often soaked to develop a substantial root system before planting them in the ground. Soaking sweet potatoes can really help these roots grow. These valuable roots, called slips, are harvested and planted in the ground to grow new sweet potatoes. There are different techniques to soaking sweet potatoes before planting; this technique is to help the plant grow roots and also looks beautiful on a windowsill as the potato sprouts.

## **Instructional Format:**

Demonstration in front of student; Have them complete the same procedure

## **Procedures:**

- Slice one-fourth inch of the bottom of each kind of potato. (white potato and sweet potato)
- Insert 4 toothpicks into each potato at its mid-section at 90 degree angles.
- Pour water into both jars
- Place potatoes into jars making sure the bottom of the potatoes touch the water making sure the slice end is in the water.
- Place jars on a window sill so they received adequate sunlight.
- Predict the time roots will emerge and which type of potato has will have the longest roots.
- Observe and document the time the roots start to emerge from each plant.
- Measure and document the length of each root after one month.

## **Conclusions:**

Which potato started to emerge its root first?

Which potato had the longest root after a month?



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## Want More? Extensions

- Decorate potato heads-hats, etc - Art
- Give them names- Personification

## Resources

Exploring Kansas Plants Educator Guide, Unit 5 Specialty Crops Chapter ( coming soon!)

- National Potato Council (NPC)
- Idaho Potato Council

sweet potato information from Purdue  
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*Lesson Plan brought to you by Chuck Loganbill; Bonner Springs Elementary, June 2011*

*Another great resource from*



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