

# HARVEST of the MONTH in the CLASSROOM



## POTATOES

### HISTORY

The first potatoes originated in the Andes mountains of South America near modern day Peru and Bolivia between 8000-5000 BCE, and were widely grown by the indigenous people, including the Inca as a staple food crop. Around 1536, Spanish Conquistadors brought potatoes to Europe in what historians call the Great Columbian Exchange. The potato spread across Europe, but they didn't grow as well in the European climate. Ireland proved to have a better climate and soil for potatoes, and by the end of the 17th century they became a large part of the economy and a staple food for the Irish people. A blight on potatoes led to the Great Famine of 1845-1849 in Ireland which caused the death of more than a million people and the departure of millions more to find opportunity elsewhere. In 1621, potatoes first arrived in colonial Jamestown. They were not widely grown for almost a century until 1719, when they were planted in Londonderry, New Hampshire, by Scotch-Irish immigrants, and from there slowly spread across the country.

### FUN FACTS

During the 18th century, potatoes were served as a dessert, hot and salted, in a napkin.

Sweet potatoes and white potatoes are from different plant families.

Potatoes were the first vegetable to be grown in space in 1995.

The average American eats 124 pounds of potatoes per year. German people eat 248 pounds of potatoes a year.

### FARMER BIO



Margaret Gichuki is an alumna of New Entry Sustainable Farming Project who farms 2 acres in Dracut, Massachusetts at Margaret's Farm. She grows swiss chard, eggplant, kale, collard greens, white sweet potato for the tuber and leaves, amaranth, African nightshade, jute mallow, water spinach, and squash. She sells to the New Entry Food Hub and to members of the African community in Lowell and Dracut.

New Entry Sustainable Farming Project was created in 1998 by Tufts University to integrate recent immigrants and refugees with farming backgrounds into Massachusetts agriculture, which has since expanded to beginning farmers of all backgrounds.

# POTATOES & LIGHT

Grades K-2 • 45 minutes



## POTATOES

### OBJECTIVES

Students will understand the role of sunlight in the change of seasons. Students will recognize the effects of light on plants.

### ESSENTIAL QUESTIONS

What are seasons? How do seasons affect us? How do seasons affect plants? What kinds of tools can we use to help plants grow?

### MA STATE FRAMEWORK(S)

K-2 Life Science Standards

- K-LS1-1
- 1-LS1-1
- 2-LS2-3

### MATERIALS NEEDED

Organic potatoes from the store OR seed potatoes (non-organic potatoes are treated with a chemical to prevent them from sprouting)  
Potting soil  
Growing pots  
Watering cans  
Possible potato covers: clear greenhouse plastic, harvest blanket, cardboard box with holes

### PROCEDURE

Introduction:

Ask students the following questions:

1. Can you identify the four seasons?
2. What season has the brightest sunlight?
3. What season has the most cloudy days?
4. What do seeds need in order to grow?

Explain that sun is an important element needed to grow plants. This experiment will demonstrate how different types of sunlight affects plants' growth.

# POTATOES & LIGHT

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## PROCEDURE

### Activity

Break students up into four groups: Spring, Summer, Fall, Winter.

Explain that each group will be planting potatoes with a different kind of light, depending on their season, to help them grow.

Different materials will be used to mimic the type of light: cardboard box, harvest blanket, or nothing! In the winter there is a minimal amount of sunlight, so the Winter group will have a box covering their growing pot. In the Spring & Fall there is a medium amount of sunlight, so the Spring & Fall groups will have a blanket covering their pot. This blanket lets in some light, but not all light. In the Summer, there is full sunlight, so the Summer group will have nothing covering their pot.

Before the experiment begins, tell the students that it is important to have a hypothesis, or a guess of what they think will happen. List the student hypotheses on a large piece of paper.

When all students have shared a hypothesis, begin the experiment.

In each group:

One student fills the pot with soil.

The next makes holes for the potatoes.

The next student plants the potato.

The next student waters the seeds.

Finally, they put their designated material over their tray.

Review the hypotheses before the end of class.

### Wrap-Up

Class completes an experiment log together. (See attached pages)

# POTATOES & LIGHT

## GROWTH LOG



Name:

Date:

My season is:

The amount of sunlight during this season is:



Write out the steps to your experiment:

# POTATOES & LIGHT

## GROWTH LOG



Name:

After one week, I think our plants will look like this:

# POTATOES & LIGHT

## GROWTH LOG



Name:

It has been \_\_\_\_\_ days since we planted our potatoes.

Now our plants look like this:

I wonder: