



www.MaineAgintheClassroom.org



Common Core ELA:

W.3.2A Introduce a topic and group related information together; include illustrations when useful to aiding comprehension.

W.3.7 Conduct short research projects that build knowledge about a topic.

W.4.2 Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

W.4.7 Conduct short research projects that build knowledge through investigation of different aspects of a topic.

W.5.2 Write informative/explanatory tests to examine and convey ideas and information clearly.

W.5.7 Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.

Investigating Potatoes

Grades 3-5

Lesson Description: Students will work in small groups and with Maine maps, find the areas of the state where potatoes are grown on a large scale. They will research the nutritional and health benefits of potatoes as well as the economic importance of potatoes to Maine. Students will interview a local farmer about his potato crop, challenges faced by potato farmers and write a news article about potatoes.

Teacher Preparation:

1. Explore a possible partnership with a local farm/farmer. Find one who will be willing to visit your classroom to answer student generated questions about growing and harvesting potatoes.
2. Gather resources from library, including *Potatoes for ME*, for student research.
3. Provide US and state maps for each child and an assortment of colored pencils.
4. Using recipes from the Maine Potato Board, class will select a recipe and ask the food service department to prepare that dish for a school lunch component.

Supplies

- US and Maine line maps, Maine population density maps, Maine crop maps
- Colored pencils
- Research materials

Learning Objectives:

Students will be able to:

1. Explain why potatoes are such an important crop to Maine
2. Use research materials to find five potato facts
3. Identify and explain five nutritional components of potatoes (vitamins, minerals, fiber)
4. Generate interview questions for a potato farmer
5. Explain how planting and harvesting techniques have changed over the years



Procedure:

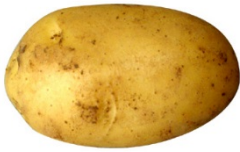
1. Gather potato research materials
2. Briefly share the history of the potato as it travelled to Maine. (See History Time Line chart)
3. Using research materials, students will work in groups and identify the top 10 potato producing states and color them in on the map, then answer the questions on the *Where Are They?* Worksheet.
4. Give students the *Potato Facts* worksheet and tell them to record information as it is discussed or researched.
5. Tell students that the class will concentrate on potatoes in Maine. They will work in small groups to answer
 - a. Where are potatoes grown on a large scale in Maine?
 - i. Provide a map of Maine with population density, and one with physical features for each group.
 - ii. Students will work in groups using these maps to help them make a prediction about where potatoes are grown. Have them share ideas and discuss how topography and population can affect farming.
 - iii. Provide a map of Maine with major crops shown. Discuss the location of the major potato growing area with regard to climate, soil, topography and population.
 - iv. Share *Potatoes for ME* with the class.
 - b. What types of potatoes grow in Maine? (*Potato Facts* worksheet)
 - c. What happens to the potatoes that are grown?
 - d. How does the potato crop affect the economy of Maine?
 - e. What is being done to improve the size of the potato crop?
6. Invite a local potato grower to the classroom. Prepare questions about planting and harvesting techniques for large potato farms, problems that they may have growing potatoes and what happens to the potato crop after harvest.
1. Discuss potato nutrition and the benefits of eating potatoes. (*Potato Facts* worksheet) Also, see *Potato for ME Activity Planning Book*, page 15.
7. Students will write a short news article about the importance of potatoes from either a health or economic view point.

Note:

- Crop maps for Maine can be found at www.maine.gov/labor/labor_laws/crop_map
- Physical maps for Maine can be found at: www.freeworldmaps.net/united-states/maine/map
- Population maps for Maine can be found at:
https://commons.wikimedia.org/wiki/File:Maine_population_map.png
- YouTube video: ***Potato Harvest 2014***, a large scale potato harvest in Illinois (similar to what is done in Maine).
- YouTube video: ***The Garden Harvest Time to Pick Potatoes***, harvesting potatoes in the home garden.



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Teacher's Guide to Potato History & Facts

Below is a chart that summarizes the history of potatoes. Information provided by Maine Potato Board, www.potatogoodness.com, and <http://visitaroostook.com/story/the-maine-potato/vtm233988BCEA57578A7>

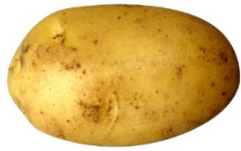
Time Period	Location	Who	Details
10,000 years ago	Peru	Incas	Began cultivating
In 1536	Spain	Spanish Conquistadors	Brought back from Peru
In 1589	Ireland	Sir Walter Raleigh	Introduced to southern Ireland near Cork
By 1629	Europe		Spread when farmers found potatoes easier to grow than wheat and oats
In 1621	Virginia	Nathaniel Butler,	Governor of Bermuda sent potatoes to Virginia
1719	New Hampshire	Scottish-Irish Immigrants	Permanent potato patches were established
1840s	Ireland		Major potato blight, a plant disease wiped out potato crop in Ireland. Almost 1,000,000 died from starvation
1801-1809	USA	President Jefferson	Served them in the Whitehouse
1853	Saratoga Springs, NY	Chef George Crum	Served the first potato chips
1930-1940	Aroostook County, ME		Called the potato capital of America
1995	Space	NASA and the University of Wisconsin	First vegetable grown in space. Goal to feed astronauts on long voyages.

Interesting Potato Facts from the Maine Potato Board and www.potatogoodness.com

1. Potatoes contain most of the vitamins needed for sustenance. A medium potato with skin provides vitamin C, potassium, riboflavin, folate, niacin, magnesium, phosphorus, iron, and zinc.
2. Potatoes are used
 - a. to brew alcoholic beverages like vodka or akvavit
 - b. for animal feed
 - c. for thickeners in soups and sauces
 - d. as adhesives
 - e. in the manufacture of paper
3. During the Alaskan gold rush, potatoes were almost worth their weight in gold.



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Potato Information Web-sites

www.maine potatoes.com

www.potatogoodness.com/nutrition/

www.sciencekids.co.nz/sciencefacts/food/potatoes.html

www.freshforkids.com.au/veg_pages/potato/potato.

www.kidcyber.com.au/tag/potato-facts-for-kids

www.farmflavor.com/fun-facts-about-potatoes/

www.nourishinteractive.com

www.kids-cooking-activities.com

www.encyclopedia.com/topic/potato.

www.whfoods.com/genpage.php?tname=foodspice&dbid=48

www.nutritiondata.self.com/facts/vegetables-and-vegetable-products/2770/2

www.nutrition-and-you.com/potato

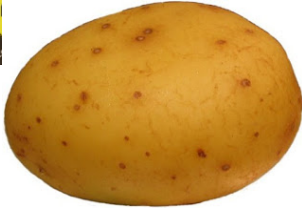
www.nationalpotatocouncil.org/potato-facts/

www.livescience.com/45838-potato-nutrition

www.greenharvest.com.au/Plants/Information/PotatoGrowing

*<https://snaped.fns.usda.gov/nutrition-through-seasons/seasonal-produce/potatoes>

(Potato Nutrition label)



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Where are they?

1. List the top 10 potato producing states

- 2. Locate those states on the outline map of the United States and color in those 10 states.
- 3. What do you notice about the location of those states? (Answer in a complete sentence.)

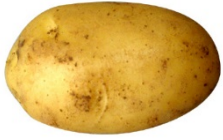
4. What do potatoes need for climate?

5. What do potatoes need for soil?

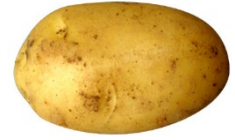
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6. What do you think the location of those states means for potato growing conditions?

7. Look at the maps of Maine. Where do you think the best place is for growing potatoes?



Potato Facts



Types of potatoes that are grown in Maine.

Potato Types	Color	Potato Types	Color

2. List 5 potato facts that you have found.











3. Explain why potatoes are such a healthy food to eat.
