

# Eyes to Fries

## *Life Science & Reading; Sequencing*

### **Overview:**

The lesson will give the students a view of where their french fries come from. They will plant a seed potato, measure, and record its growth for several weeks.

### **Objectives:**

1. Students will understand how plants grow from tubers.
2. Students will list products made from potatoes based on research and background information in required reading.
3. Students will understand the process from seed potato (tuber) to french fry.
4. Students will record the growth of their potato plant.

### **Materials:**

Book: *What's for Lunch? Potatoes* Author: Claire Llewellyn  
Potato  
Sharp knife (Have an adult help you.)  
Cutting board  
Small pots  
Soil  
Water  
A warm, sunny place

### **Ahead of Time:**

1. Purchase or check out the book, "What's for Lunch", from the local public library or school library.
2. Read the lesson plan, the book, "What's for Lunch", and the background information.
3. Create a Sequencing Chart Template for students to fill in after they read the book.
4. When available Summer of 2012 read Exploring KS Plants, Specialty Crops Chapter 5 Potatoes
5. Purchase seed potatoes and gather material for the experiment.
6. For safety you can precut the potato, make sure each piece has a bud or eye.
7. Make a Potato Growth chart for the students or use the generic chart provided.

### **Grade Level: 4**

**Time:** 45 minutes + 5 minutes a day for 10 days

**Standards:** The student employs appropriate equipment, tools, and safety procedures to gather data. The student begins developing the abilities to communicate, critique, analyze his/her own investigations and interprets the work of other students. The student observes properties and measures those properties using appropriate tools. The student describes and classifies objects by more than one property.

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

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# Eyes to Fries

## **Background Information**

White potatoes are grown underground. It is not a root but a stem. Potatoes are tubers, or swollen underground stems. Tubers are often dug up to eat. They also can be cut into pieces and planted. Each piece of potato that has a bud, or “eye” can make a new plant. Bring a potato with visible buds to class to illustrate tubers. Emphasize that tubers are swollen underground stems and not roots.

The book, *What’s for Lunch?* By Claire Llewellyn presents facts about the potato, including where and how it is grown, harvested, and marketed and what other products are made from potatoes. The book depicts planting seed potatoes, potato growth, fields of potatoes (growing and harvested), harvesting, storage, packing and processing of potatoes. It also includes photos below the soil, which shows tuber information and growth. The book concludes with familiar and non-familiar foods made from potatoes. It is available on Amazon.com.

## **Instructional format**

1. Share the background information with the students.
2. Read *What’s for Lunch* to the class.
3. Have students read the experiment.
4. Do the experiment.
5. Answer the question and discuss the activity.

## **Resources**

*What’s for Lunch? Potato’s* by Clair Llewellyn  
Eyes to Fries video; [www.ksagclassroom.org](http://www.ksagclassroom.org) home page has link.



# Eyes to Fries

## Activity

Have Students read the “What’s for Lunch” book and work in small groups to provide a sequencing worksheet for potato growth and development.

1. Cut the seed potato into small pieces. Make sure there is at least one eye on each piece.
2. Fill the pots with soil.
3. Plant one chunk of potato in each pot, 2”-3” deep.
4. Water the pots well and set them in a warm, sunny place.
5. Dampen the soil one to two times each week, but be careful not to over water.
6. Wait for your potato plants to grow.
7. Record the plant’s growth.

## Want More? Extensions

Extension: Bring a potato with visible buds to class to illustrate tubers. Emphasize that tubers are swollen underground stems and not roots.

View the PowerPoint “Sack of Potatoes” by Evelyn Neier, showing how to grow potatoes in a plastic garbage bag. Try this activity at your school. Grow several sacks of potatoes and open one at mid growth and blooming to see what is going on with growth and development of the plant and new potatoes.

View the video: on KFAC Website: “From Eyes to Fries” [www.ksagclassroom.org](http://www.ksagclassroom.org). The link will be on the homepage.



## Eyes to Fries

Conclusion Questions (Assessments):

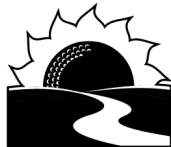
1. Did the new plant grow from a seed?
2. Where does a potato grow?
3. Is the new potato a root, stem, or flower?
4. Name three products made from potatoes.



# Eyes to Fries- Potato Growth Chart

Potato Growth after plant emerges from the ground  
Observations

Day 1		
Day 2		
Day 3		
Day 4		
Day 5		
Day 6		
Day 7		
Day 8		
Day 9		
Day 10		



## Eyes to Fries - Vocabulary Words

Chitting - the hardening off or sealing over of the cut skin of a seed potato. A practice necessary to ensure the potato does not rot in the soil.

Emergence - when the stem and leaves can be seen as they come out of the soil or emerge from the soil.

Eye of potato - the bud or growing part of a new potato plant.

Seed potatoes - small whole potatoes or potato pieces cut from a harvested potato containing at least one eye.

Stem Tuber - what is a potato. Potatoes are a tuber crop. A tuber is a swollen underground plant part that stores food (the potato). Tubers form an oblong rounded shape that grows vertically with vegetative buds on the top and fibrous roots on the underside.

Sun scald - when the skin on growing potatoes is exposed to sunlight; the skin turns a greenish color and is slightly poisonous with an alkaloid called solanine.

*Lesson Plan brought to you by Denise Montzer from USD 257, Iola; June 2011*

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