

AUTHORS & AITC

*Pair a new ag-accurate book with some
Illinois Ag in the Classroom resources*

VIRTUAL EVENT

OCTOBER 1, 2026

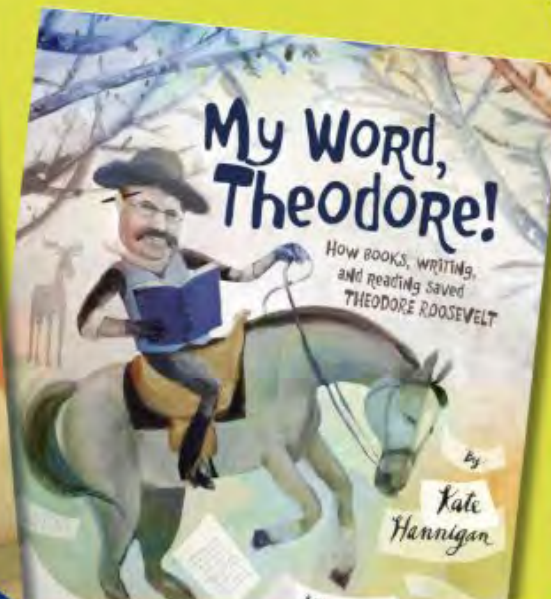
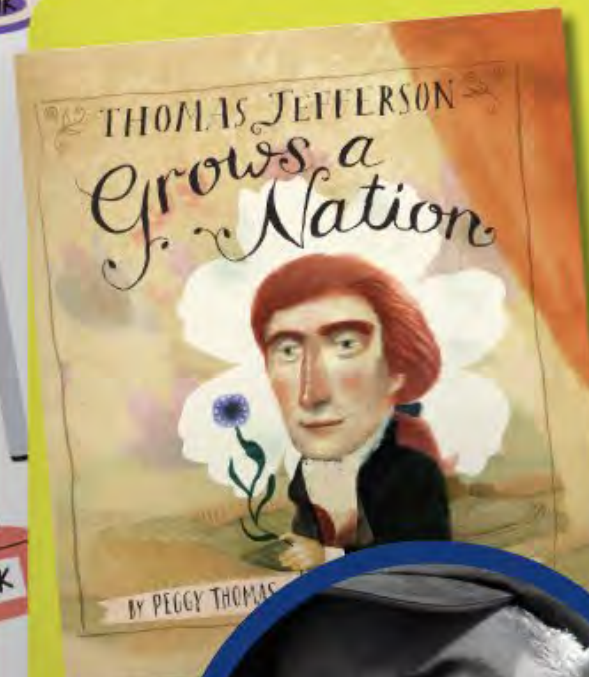
4:00 p.m.

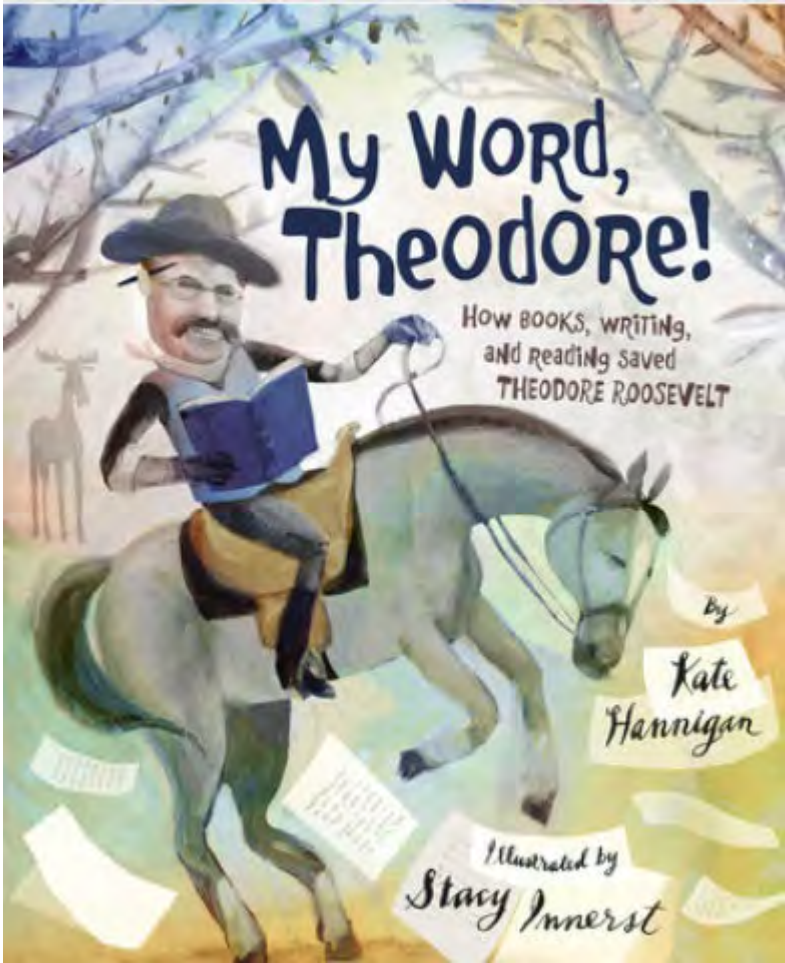
**SPECIAL GUEST:
STACY INNERST**

Illustrator of "Lincoln Clears a Path" and
"Thomas Jefferson Grows a Nation"

Illinois
AGRICULTURE
in the ClassroomSM

Sign up today!
iaitc.co/illustratorsI







Classes of Wheat



There are five classes of wheat planted in the United States.

Hard Red Winter wheat is used to make bread flour and located in the Great Plains.

Hard Red Spring wheat is used for high-protein blending and located in the Northern Plains.

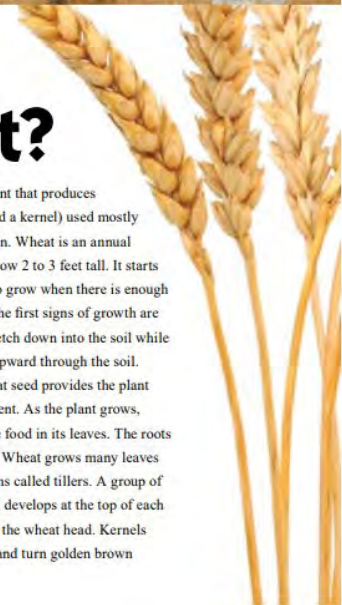
Soft Red Winter wheat is used to make cakes, cookies and crackers and is located in the Eastern States.

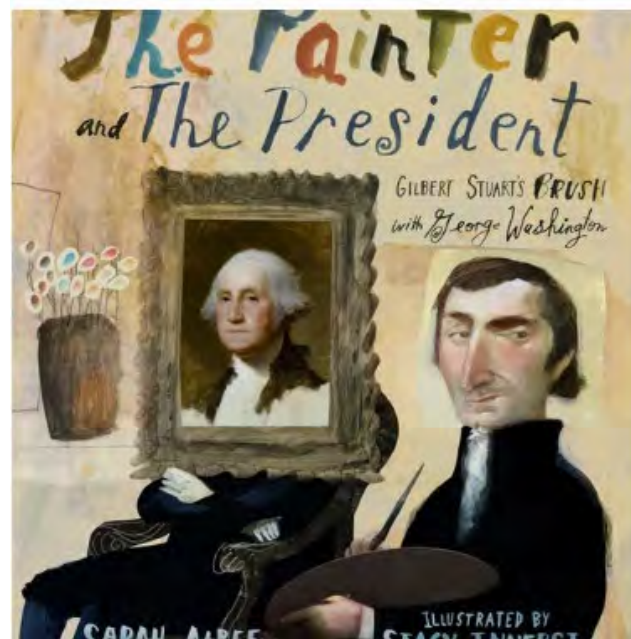
White wheat is used for the flour to make noodles, crackers and cereals. It is located in Washington, Oregon, Idaho, Michigan and New York.

Durum wheat is used to make pastas and located in North Dakota and Montana.

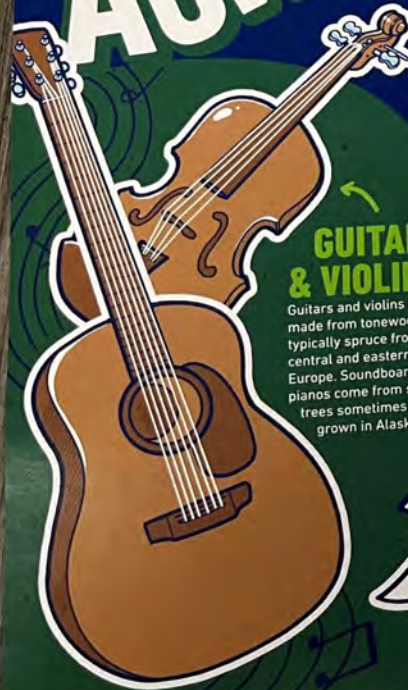
What Is Wheat?

Wheat is a grain (a plant that produces a dry edible seed called a kernel) used mostly for human consumption. Wheat is an annual grass plant that will grow 2 to 3 feet tall. It starts as a seed and begins to grow when there is enough moisture in the soil. The first signs of growth are tiny root hairs that stretch down into the soil while a small shoot pushes upward through the soil. Tissue within the wheat seed provides the plant with its first nourishment. As the plant grows, it uses the sun to make food in its leaves. The roots get food from the soil. Wheat grows many leaves and sends up 3-12 stems called tillers. A group of flowers, called a spike, develops at the top of each tiller and matures into the wheat head. Kernels within the head grow and turn golden brown before harvest.



[illegible]

THE ARTS & AGRICULTURE



GUITARS & VIOLINS

Guitars and violins are made from tonewood, typically spruce from central and eastern Europe. Soundboards in pianos come from spruce trees sometimes grown in Alaska!

PAINT BRUSHES

Animal bristles (specifically pork, goat and cattle) are used in paintbrushes. Many paint brushes use wooden handles made from trees.



PAINTING CANVAS

Soybean oil is a major component of oil-based paints and can be used in solvents used in paints. Additionally, many plants are used for pigments and dyes and coloring.

Most painting canvases are made from cotton or linen (made from flax). Both are known for being lightweight and highly durable.

SHEET MUSIC AND SCRIPTS

Sheet music and scripts on paper are made from the wood of pine, spruce and birch trees and printed with soy ink from soybeans.

MUSIC REEDS

Most high-quality music reeds for woodwind instruments come from cane primarily grown in France, Spain and Argentina.



MAKEUP



Theater makeup typically contains cornstarch, used for oil absorption; lanolin, from sheep's wool, for moisturizing; and beeswax for helping makeup stick through heavy stage lighting.

CLARINETS & OBOES

Clarinets and oboes are made from the wood of the Grenadilla tree grown in eastern Africa. Beginner bassoons are generally made from the wood of the maple tree.



CONCESSIONS

Popcorn, the IL State Snack, is grown on farms and typically popped in soybean oil. You'll also find corn in many snacks and soft drinks.



COSTUMES

Cotton, burlap (typically made from the jute plant) and leather (animal hides) are used in most costumes.



STAGE FLOORS

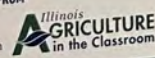
Most theater stage floors are made of softwood pine or fir, tempered with hardboard for durability, non-reflectiveness and ability to have sets screwed into the surface.



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National Agriculture in the Classroom Organization





Ice Cream in a Bag Experiments

Grade Level: 4-8

Lesson Overview

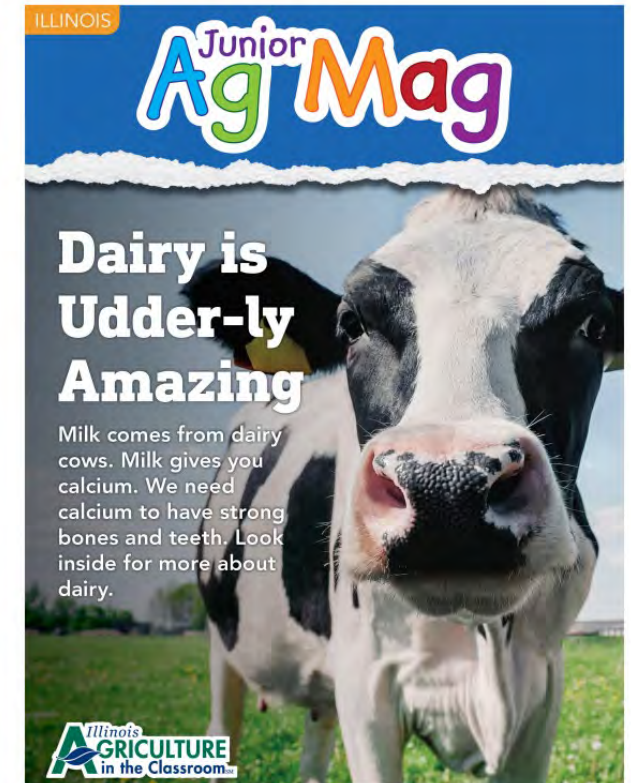
I scream, you scream, we all scream for ice cream, but did you know that the fat content of the dairy ingredients can change the flavor? Use this favorite treat to engage students in science inquiry.

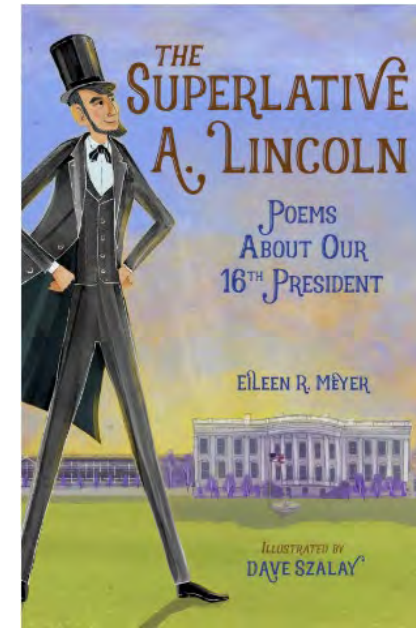
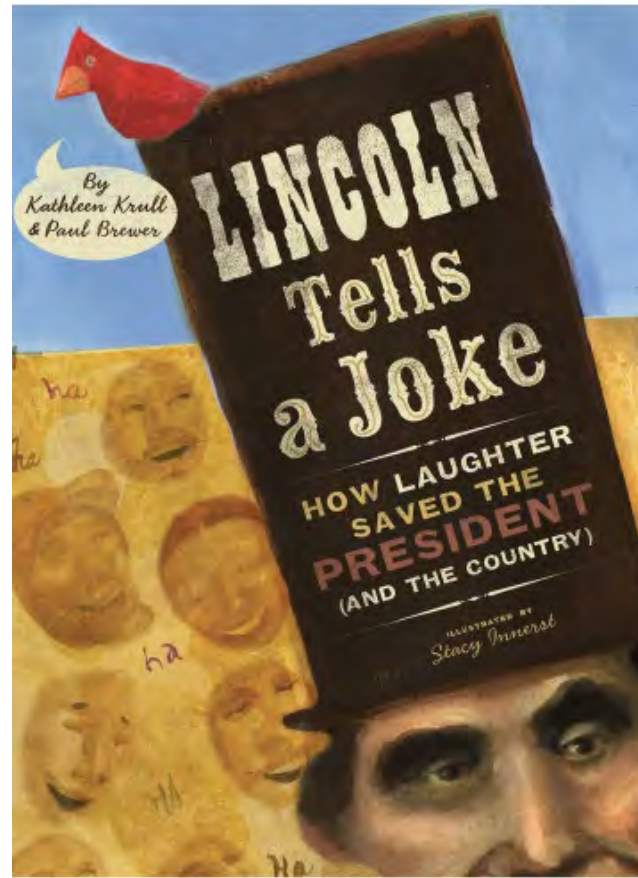
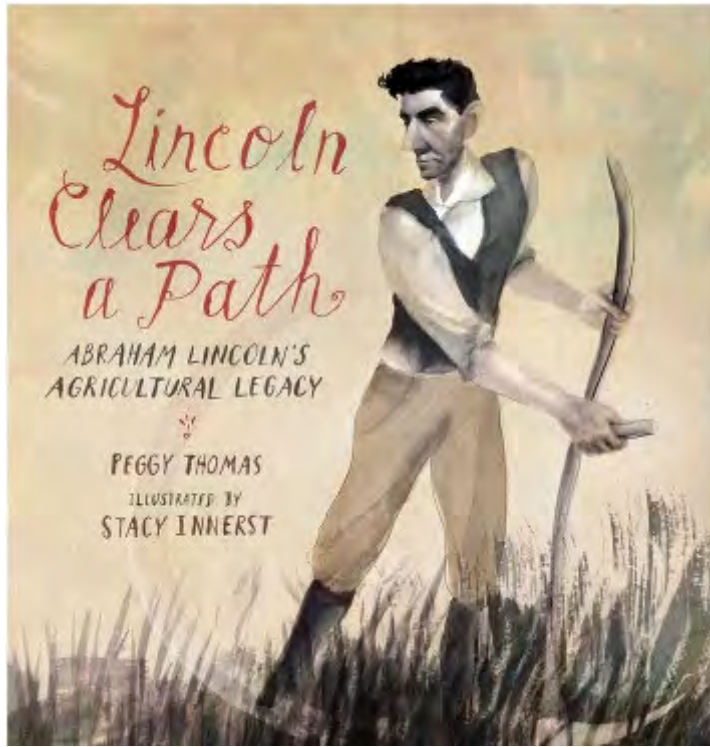
Student Objectives

1. Compare and contrast homemade ice cream with various fat contents.
2. Explain the use of salt in ice cream making.

Materials

- ✓ 6 one gallon Ziplock freezer bags
- ✓ 6 one quart Ziplock freezer bags
- ✓ 1½ cups of sugar
- ✓ 3 teaspoons of vanilla extract
- ✓ 2 cups of skim milk
- ✓ 2 cups of 2% milk
- ✓ 2 cups of whole milk
- ✓ 3 cups of half and half
- ✓ 3 cups of heavy cream
- ✓ ice - enough to fill all 6 gallon bags half full
- ✓ 6 towels (to wrap around the bags)
- ✓ 6 cups of rock salt
- ✓ measuring cups
- ✓ measuring spoons
- ✓ duct tape
- ✓ scissors
- ✓ 180 3-ounce plastic cups
- ✓ 20 eggs







The Land of Lincoln

The State of Illinois is 55,565 square miles. The Mississippi River forms the state's western border and Lake Michigan is to the northwestern border. Chicago, a port on Lake Michigan, is the third largest city in the US. Over 12 million people live in the state, and over 75% of the population lives in the Chicago metropolitan area. While Illinois is the 16th most populous state (behind California, Texas, New York and Florida), nearly 75% of the state is covered with farmland.

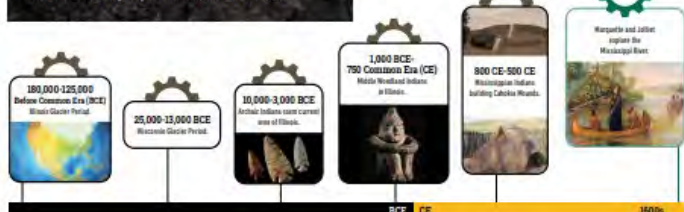
Illinois has over 70,000 farms covering over 27 million acres. Those farms account for over \$79 billion in revenue each year. Not only do we plant and harvest goods in Illinois, we also process and ship various agricultural products across the state, the nation and the world. Read on to see how Illinois became a 200-year-old agricultural powerhouse.



The landscape of Illinois that is favorable for farming is due mainly to the glacial periods from over the last 2 million years. Glaciers scraped the land leaving rock and sediment behind. This glacial movement formed our current lakes and rivers and as it retreated some of the most productive soil in the world was left behind. Over many eons, the official state soil, is found on more than 1.5 million acres of Illinois land.

The Fertile Soil

When Marquette and Joliet first visited Illinois, they noted the fertile soil and abundant plants. Much of Illinois was covered in swampland unsuitable to normal farming practices. Settlers drained the lands by creating drainage ditches and placing underground tiles to aid moving water off the land and into the local streams and rivers. Removing the water left Illinois with thick, rich black soil. The soil is dark because of the high amount of organic matter that comes from the decomposition of prairie plants that grew on the soil. Ditches were replaced by terra cotta (clay) tiles. These have now been replaced by plastic tiles underground. Draining the soil allows plants to grow better. Drainage is even important with house plants; make sure there is a hole in the bottom of your pot to allow extra water to exit.



FIRST people



The first people in Illinois were probably small groups of nomadic hunters. These hunters followed herds as they roamed. As the ice sheets melted and population grew, early Native Americans turned to woods, lakes and rivers for food and protection.

The Archaic Period

This period of Native American culture lasted from about 10,000 years ago to about 3,000 years ago. Archaic people lived in small camps along rivers and streams. The archaic people made advances in hunting techniques and started cultivating native plants to supplement their diet.

The Middle Woodland Period

This period of Native American culture lasted in the current Illinois area from about 3,000 years ago to 1,250 years ago. In addition to introducing pottery vessels for food storage, the Middle Woodland people began using the bow and arrow to hunt for food.

The Mississippian Period

Lasting from 1,200 years ago to about 500 years ago, the Mississippian people had a more stable cultivated food supply of corn, squash and some beans. Additionally, the Mississippian people are known for building ceremonial and burial mounds such as Cahokia Mound in southwestern Illinois.

The Illinois or Illiniwek People

As the United States was being settled by European immigrants, specifically on the eastern seaboard, many native tribes were moving west. In 1673 as Marquette and Joliet explored the land that is now Illinois, they encountered the Illinois or Illiniwek people.



LINCOLN'S PATENT

Grade Level

4-8

Length of Lesson

45-60 minutes

Objective

By the end of this lesson, students will learn more about how to use primary sources to research our past.

Materials Needed

- Internet access
- Copies of student worksheets

Standards

IL Learning Standards for Social Science

SS.H.2.4-5

SS.H.3.6-8.LC

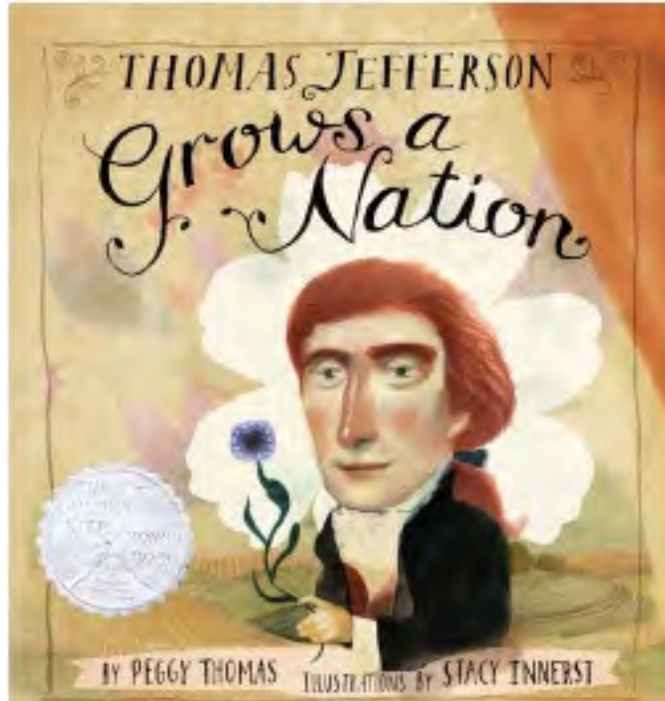
SS.H.3.6-8.MdC

Lesson Summary

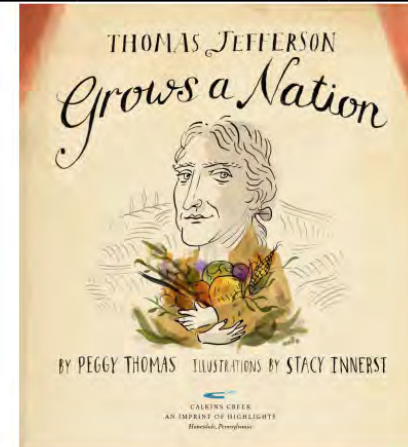
This lesson is designed to help students learn more about Lincoln and his patent for a device to lift boats higher in the water. Students will also learn about the importance of primary sources in researching our past.

Suggested Sequence of Events:

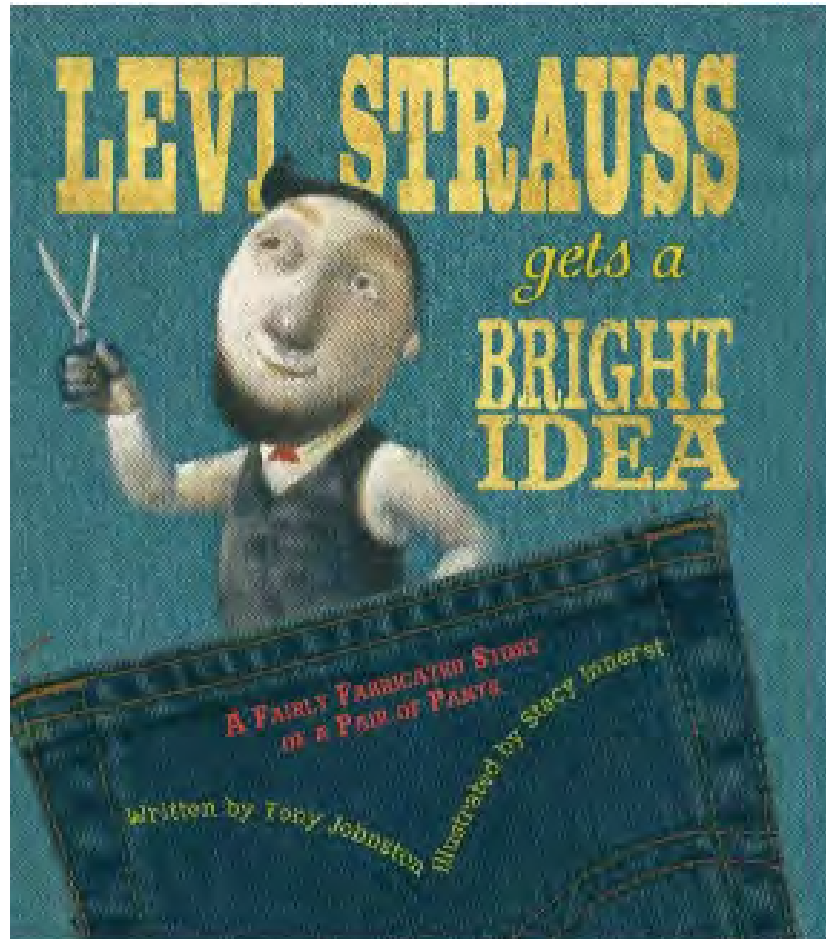
- Prior to the Lesson:** Students should know basic facts about Abraham Lincoln's life, and they should be familiar with what a patent is prior to starting this lesson. See the Teacher Resources page in this lesson for additional ideas and resources related to this background knowledge.
- Complete the activity following the procedures:
 - Read through the introduction on the Teacher Resources page and show the video.
 - Once students are familiar with Lincoln's patent, pass out the student worksheets to allow students to analyze the letter sent from the Patent Office to Lincoln regarding his patent.
 - Give students time to complete the analysis questions.
 - STEM Extension:** If time allows, ask students to re-think Lincoln's invention using technology we have available today. How could they rethink and repurpose inventions since Lincoln's time to come up with a new and improved version of his patented invention?
 - Pass out the "Rethinking Lincoln's Patent" worksheet and ask students to draw and explain their ideas on the page.
- Whole class discussion and reflection:** Ask students to share what they learned through closely reading this primary source. How are primary sources useful to those studying our history?



Thomas Jefferson Grows a Nation



A Complementary Lesson Booklet for
Thomas Jefferson Grows a Nation



Cotton

- Cotton grows on a plant.
- Cotton starts as a flower.
- Cotton grows inside fluffy bolls.

- Cotton grows best in warm weather.
- Cotton is grown around the world.
- Cotton is used in blue jeans, sheets, towels, and other clothes.

agintheclassroom.org

COTTON

USES: plastics, paper products, films, yarns, cosmetics, clothing, soaps, shoe strings, pillowcases, denim, dollar bills, cooking oil, salad dressing, livestock feed, natural fertilizer for lawns, cosmetics

WHAT IS COTTON?

Cotton is one of the most important crops grown in the United States. Cotton is a soft, fluffy staple fiber that grows in a boll around the seeds of cotton plants. There are three primary products derived from cotton production: cotton lint, bolls and cottonseed. Cotton lint is used in clothing, shoe strings, pillowcases, denim, towels and dollar bills. Linters are used in plastics, paper products, films, yarns and cosmetics. Cottonseed is crushed into three separate products—oil, meal and hulls. The oil is the cottonseed's most valuable by-product. It is obtained by crushing the cottonseed kernel. The oil is used in cooking oil, salad dressings, soaps, cosmetics and in preparation of snack foods like chips, crackers and cookies. The hulls are used in livestock feed, fertilizer, fuel and packing materials. The meal is the second most valuable by-product of cottonseed. Meal is made by grinding the cottonseed and is used in livestock and poultry feed, as well as natural fertilizer for lawns, gardens and flower beds.

VOCABULARY

BALE: a bundle of cotton fiber, tightly compressed and secured with twine.

BOLL: the seed-bearing part of the cotton plant in which the cotton fibers are formed.

DYE: a natural substance used to add a color to or change the color of something.

FIBER: a fine, threadlike piece, produced by the cotton plant.

FURROW: a narrow groove made in the ground, especially by a plow.

GIN: a machine that quickly and easily separates cotton fibers from their seeds.

HULLS: the outer covering of the cottonseed.

IRRIGATION: the artificial application of water to land to assist in the production of crops.

LINT: the raw fiber from the cotton plant which is pressed into bales at the cotton gin.

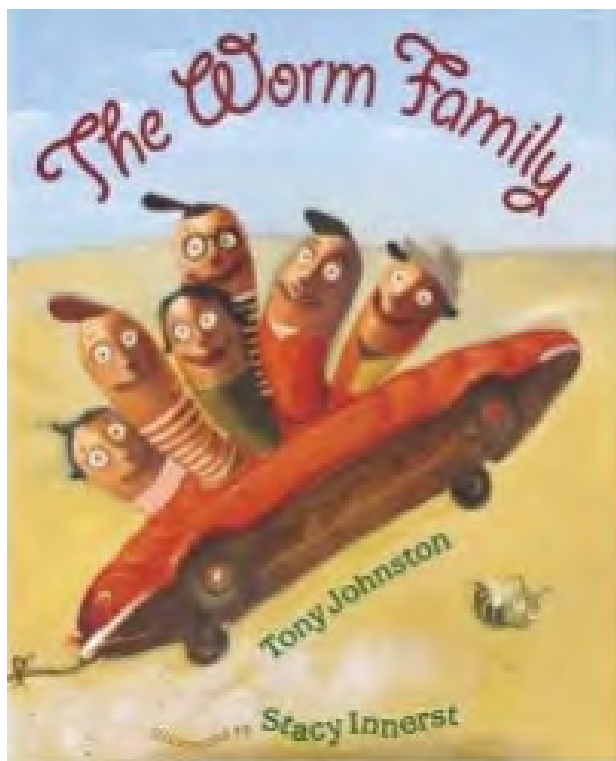
LINTERS: short fibers that cling to the seed after the lint is removed.

MEAL: the second most valuable by-product of cottonseed. Meal is made by grinding the cottonseed.

SPINNING: to make (yarn) by drawing out, twisting and winding fibers.

WEAVE: to interlace (threads, yarns, strips, fibrous material, etc.) so as to form a fabric or material.

YARN: a long continuous length of interlocked fibers.



CLASSROOM VERMICOMPOSTING

Grade Level
K-8

Length of Lesson
Ongoing

Objective
By the end of this lesson, students will have a better understanding of vermicomposting and soil health.

Materials Needed

- (2) large, opaque plastic containers
- Replacement drain for cooler
- Drill & drill bits
- Newspaper
- Small amount of compost or soil
- 1/4 lb red wiggler worms
- Copy of the Weekly Log Sheet (optional)

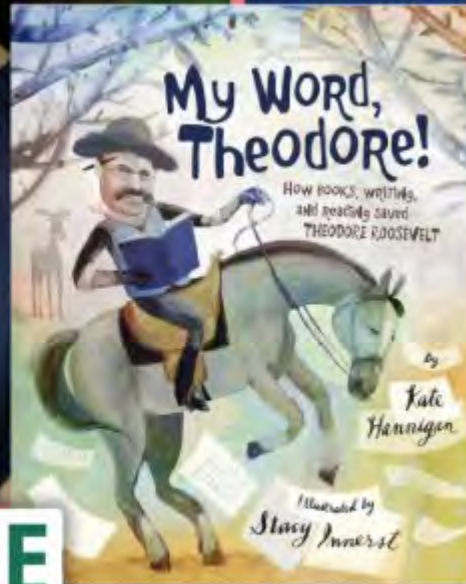
Standards
NGSS
K-2-ETS1-1; K-LS1-1; 4-LS1-1-2; 4-ESS3-1; 5-LS2-1; MS-LS2-3

Lesson Summary

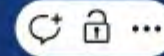
This lesson is a fun, hands-on activity designed to introduce students to the exciting world of vermicomposting—making compost with the help of worms! Students will help construct and maintain a classroom vermicomposter. As an alternative or supplemental lesson, students can make their own “desktop” composters as well.

Suggested Sequence of Events:

1. Set Up: Assemble all necessary materials. Teachers may want to mostly prepare the vermicomposting tubs beforehand and have students help with adding the worms.
2. Read through the IAITC Soil Ag Mag to learn more about soil health! Interactive online versions can be found on our website.
3. To prepare the composting bins, follow these steps (diagrams can be found on the Teacher Resources page:
 - Use the drill and a 1" drill bit to cut two holes near the top on each long side of one of the tubs. These holes will serve as ventilation for the worms.
 - Then, use the same 1" drill bit to drill a hole near the bottom on the short side of the other tub.
 - Attach the cooler drain through this hole. This will allow you to drain any liquid “worm tea” that collects in the bottom tub. Worm tea can be added to gardens and planting containers as fertilizer as well.
 - Return to the initial tub with the ventilation holes and flip the tub over. Switch to a 1/8" drill bit and drill a series of holes in the bottom of the tub. The holes should be large enough for liquid to drain, but not large enough to allow the worms to travel out of the tub.
 - Place this tub inside of the other tub to complete your vermicomposting bins!
4. To set-up your vermicomposting bins, follow these steps:
 - Have students tear the newspapers into small pieces.
 - Add the newspaper and compost/soil to the bin with the drain holes. Then, add a small amount of food waste. Avoid meat, dairy, and citrus products in your worm composter.
 - Finally, add the worms to your bin. Depending on how you received your worms, you may need to follow the directions included with them to “re-hydrate” the worms before adding them to your bin.
5. Your worm composter is now complete. Read the attached Teacher Resources page to learn more about maintaining your classroom composter.



AUTHORS & AITC



**OCTOBER 27,
2026**

**SPECIAL[®] GUEST:
KATE HANNIGAN**