

OCTOBER 2026

Sprouting Change:

CULTIVATING ENVIRONMENTAL CHAMPIONS

Illinois AGRICULTURE in the Classroom℠

Sprouting Change

The reasoning behind the mandate:

Environmental education is becoming a part of the world students experience every day.







If we want students to understand climate change, we have to teach them about the environment around them. An easy way to do that is with agriculture.

Sprouting Change

Agriculture & Environmental Education are Partners

Agriculture is more than where our food comes from...



When we teach a student how to plant a seed, we are teaching them about soil health.
When we teach them about soil, we are teaching students about erosion and nutrients.
When we teach about pollution, we are helping them understand pollutants move through air, water and soil... which directly impacts THEM.

SOIL

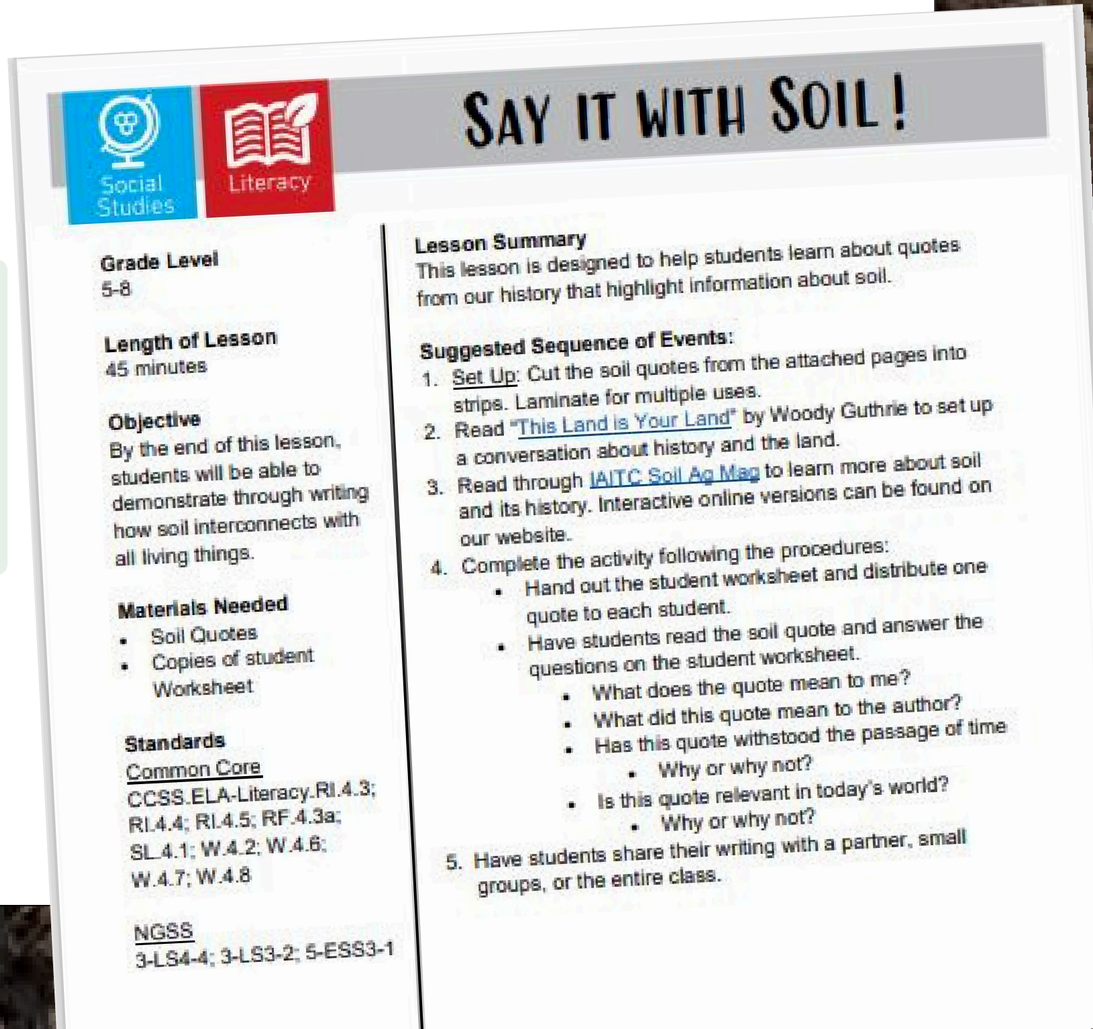
SAY IT WITH SOIL

All you need:

- Soil Quotes
- Student Worksheets

"Essentially, all life depends on the soil... There can be no life without soils and no soil without life: they have evolved together."
-Charles E. Kellogg, 1938





Social Studies | Literacy

SAY IT WITH SOIL!

Grade Level
5-8

Length of Lesson
45 minutes

Objective
By the end of this lesson, students will be able to demonstrate through writing how soil interconnects with all living things.

Materials Needed
- Soil Quotes
- Copies of student Worksheet

Standards
Common Core
CCSS.ELA-Literacy.RI.4.3; RI.4.4; RI.4.5; RF.4.3a; SL.4.1; W.4.2; W.4.6; W.4.7; W.4.8

NGSS
3-LS4-4; 3-LS3-2; 5-ESS3-1

Lesson Summary
This lesson is designed to help students learn about quotes from our history that highlight information about soil.

Suggested Sequence of Events:
1. Set Up: Cut the soil quotes from the attached pages into strips. Laminate for multiple uses.
2. Read "This Land is Your Land" by Woody Guthrie to set up a conversation about history and the land.
3. Read through IAITC Soil Ag Mag to learn more about soil and its history. Interactive online versions can be found on our website.
4. Complete the activity following the procedures:
   - Hand out the student worksheet and distribute one quote to each student.
   - Have students read the soil quote and answer the questions on the student worksheet.
     - What does the quote mean to me?
     - What did this quote mean to the author?
     - Has this quote withstood the passage of time
       - Why or why not?
     - Is this quote relevant in today's world?
       - Why or why not?
5. Have students share their writing with a partner, small groups, or the entire class.

AGRICULTURE AND ENVIRONMENTAL EDUCATION

Connections:

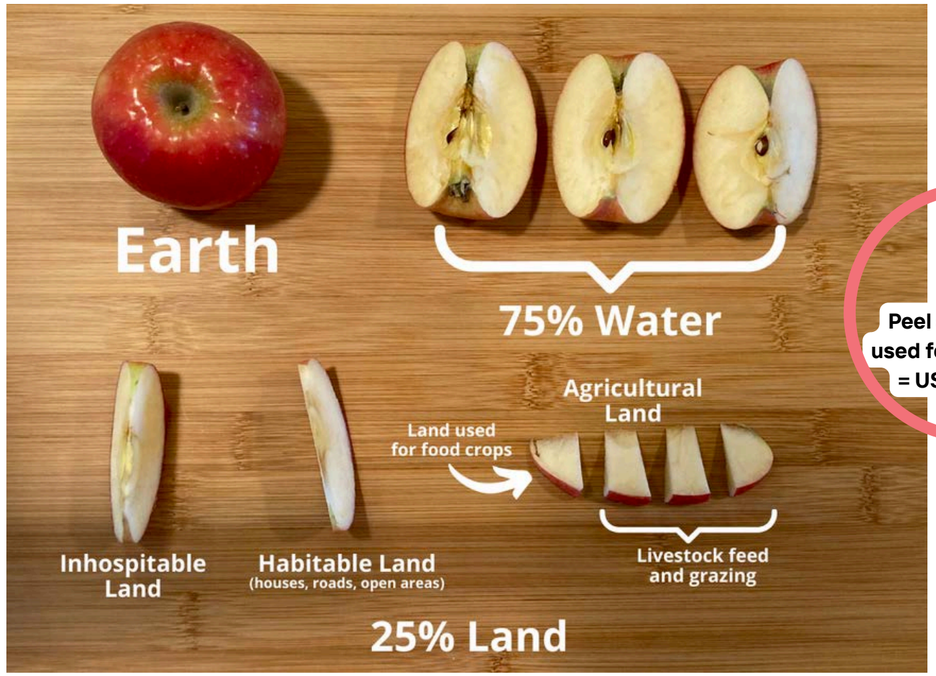
- Shows students that soil is interconnected with all living things
- Inspires them to view soil with respect and a deeper understanding of its importance
- Introduces famous quotes from historical figures

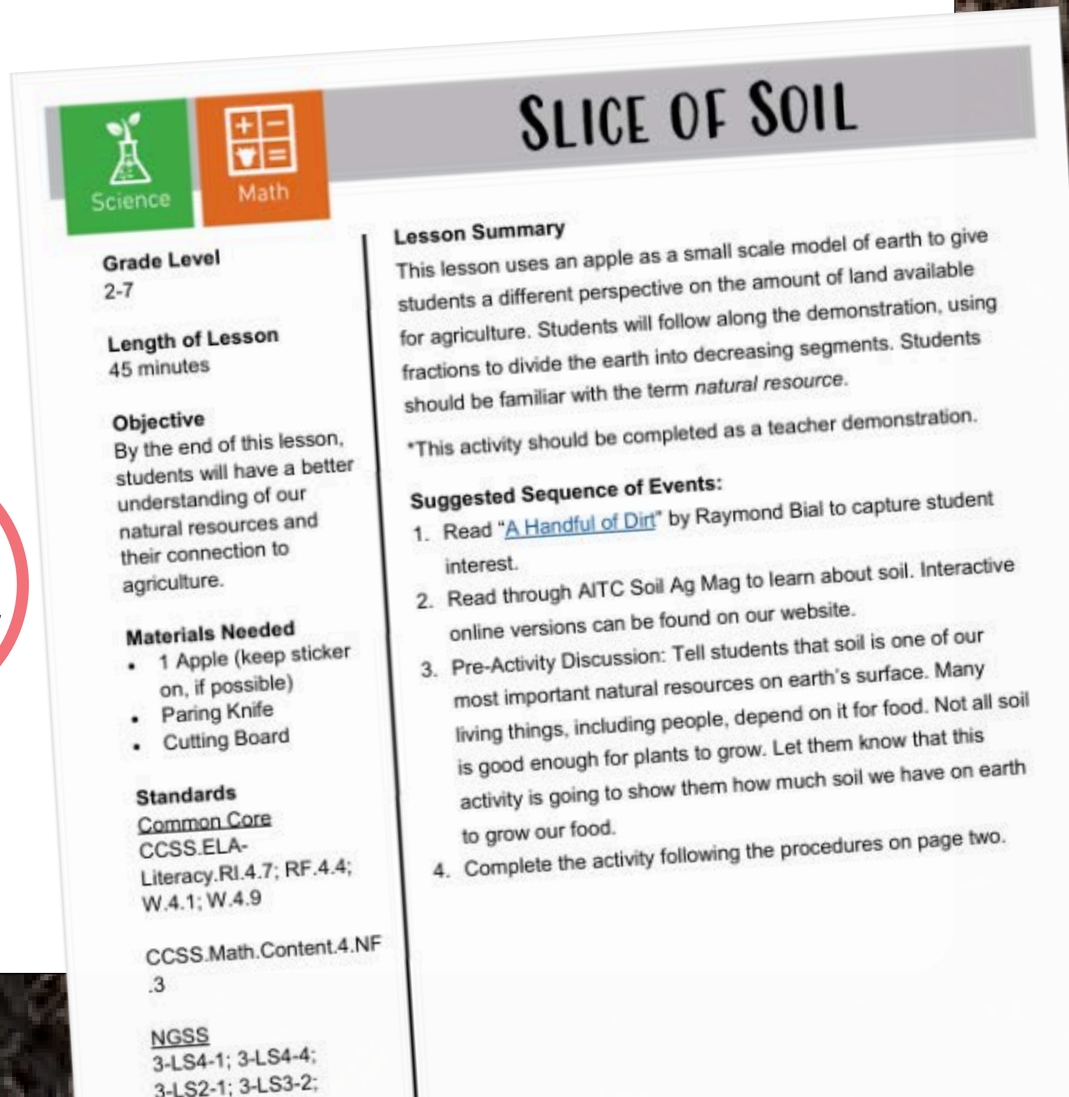
SOIL

A SLICE OF SOIL

All you need:

- Apple
- Pairing Knife
- Cutting Board





Science Math

SLICE OF SOIL

Grade Level
2-7

Length of Lesson
45 minutes

Objective
By the end of this lesson, students will have a better understanding of our natural resources and their connection to agriculture.

Materials Needed
- 1 Apple (keep sticker on, if possible)
- Paring Knife
- Cutting Board

Standards
Common Core
CCSS.ELA-Literacy.RI.4.7; RF.4.4; W.4.1; W.4.9

CCSS.Math.Content.4.NF.3

NGSS
3-LS4-1; 3-LS4-4; 3-LS2-1; 3-LS3-2;

Lesson Summary
This lesson uses an apple as a small scale model of earth to give students a different perspective on the amount of land available for agriculture. Students will follow along the demonstration, using fractions to divide the earth into decreasing segments. Students should be familiar with the term *natural resource*.

*This activity should be completed as a teacher demonstration.

Suggested Sequence of Events:
1. Read "A Handful of Dirt" by Raymond Bial to capture student interest.
2. Read through AITC Soil Ag Mag to learn about soil. Interactive online versions can be found on our website.
3. Pre-Activity Discussion: Tell students that soil is one of our most important natural resources on earth's surface. Many living things, including people, depend on it for food. Not all soil is good enough for plants to grow. Let them know that this activity is going to show them how much soil we have on earth to grow our food.
4. Complete the activity following the procedures on page two.

SOIL

AGRICULTURE AND ENVIRONMENTAL EDUCATION

Connections:

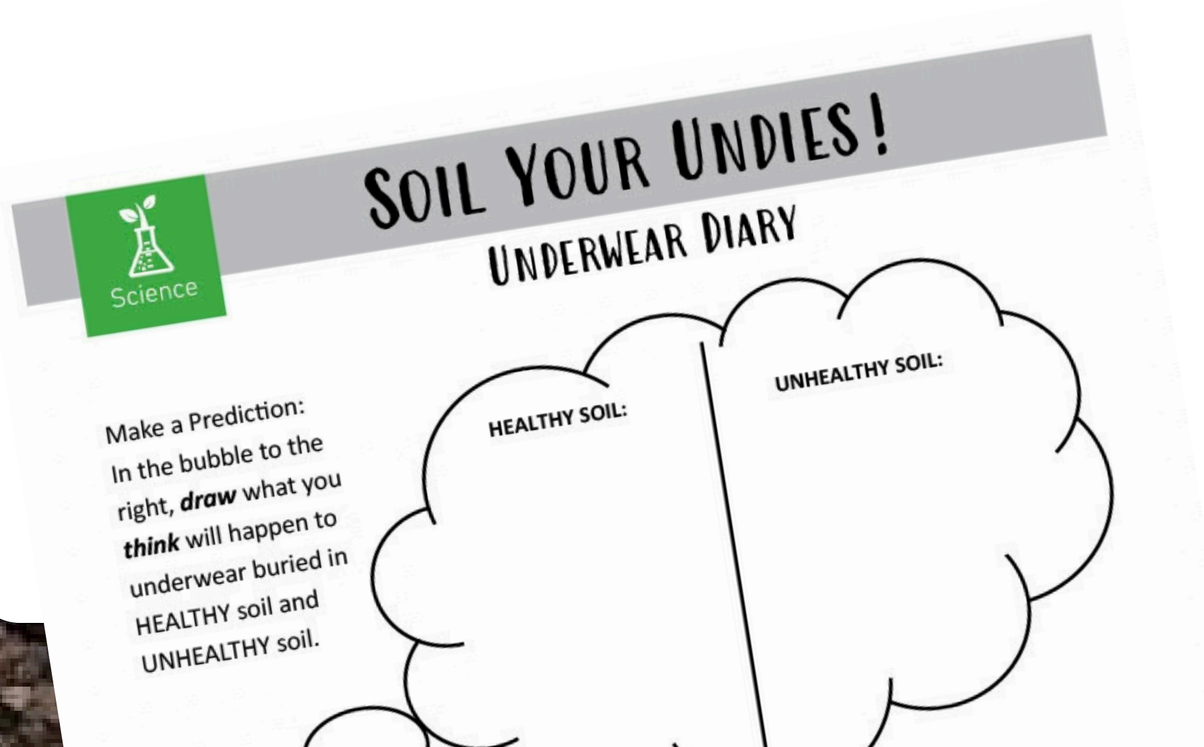
- Challenges students' perspective on available land for agriculture
- Helps develop deeper appreciation for the land
- Highlights importance of preserving soil

SOIL

SOIL YOUR UNDIES

All you need:

- Cotton Underwear
- Student Worksheets
- Sense of Humor





SOIL

AGRICULTURE AND ENVIRONMENTAL EDUCATION

Connections:

- Demonstrates the importance of healthy soil
- Introduces microorganisms and their role in decomposition
- Highlights how human activity can impact environments



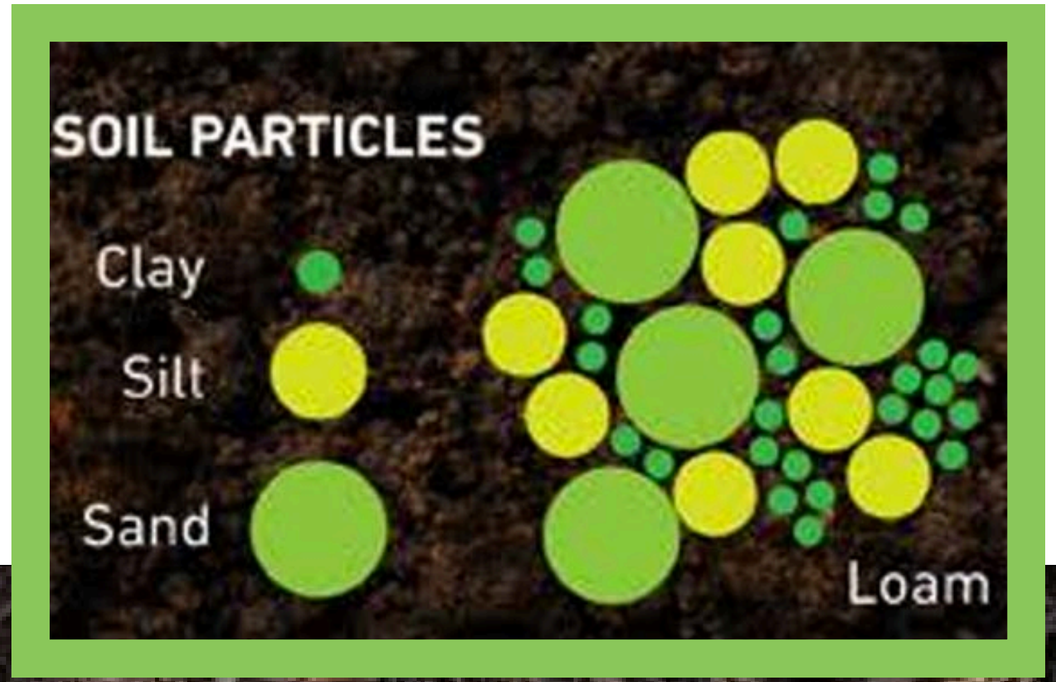
SOIL

WHAT IS SOIL?

All you need:

- Compeer Soil Kit
- Student Worksheets
- Microscope







SOIL

AGRICULTURE AND ENVIRONMENTAL EDUCATION

Connections:

- Soil makeup gives farmers clues about water retention and drainage
- Affects how nutrients pass through, which affects crop health
- Puts students in the mindframe of a farmer managing their crop

WASTE & COMPOSTS

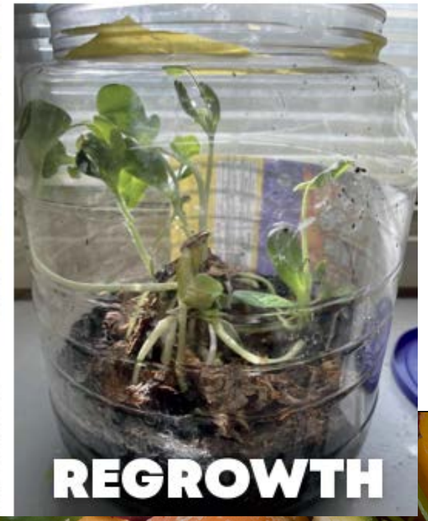
PUMPKIN JACK

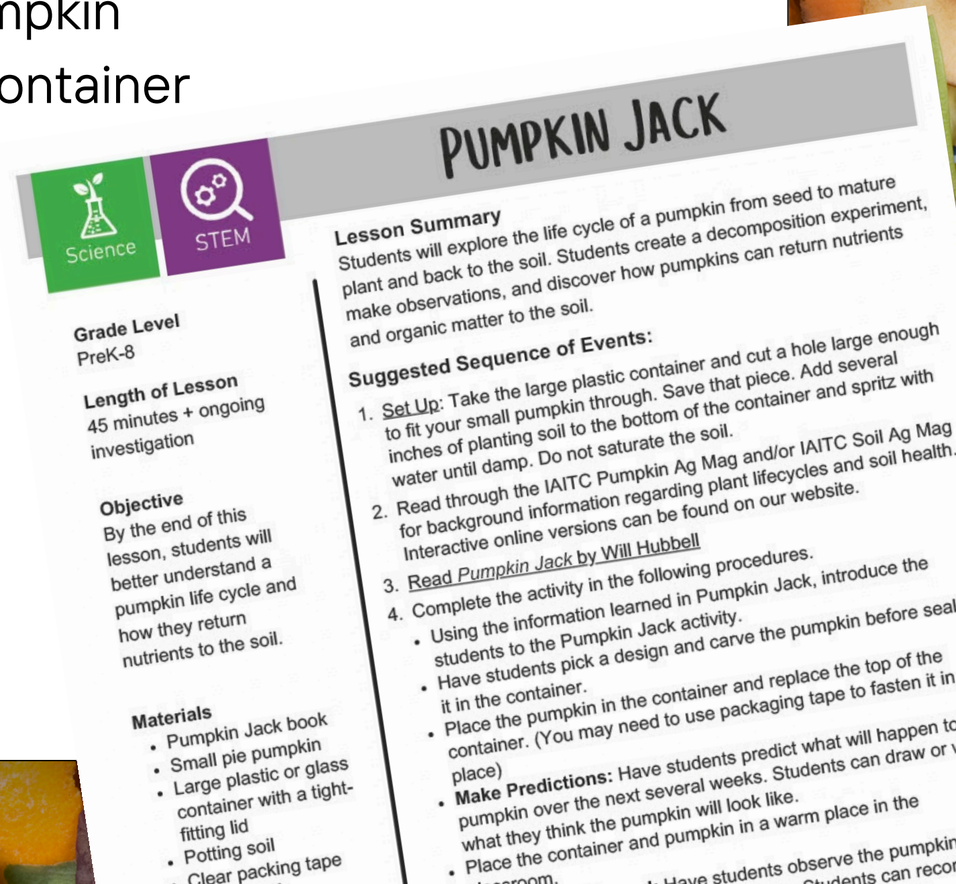


All you need:

- Small pie pumpkin
- Large clear container with tight lid
- Potting Soil







PUMPKIN JACK

Science STEM

Lesson Summary
Students will explore the life cycle of a pumpkin from seed to mature plant and back to the soil. Students create a decomposition experiment, make observations, and discover how pumpkins can return nutrients and organic matter to the soil.

Grade Level
PreK-8

Length of Lesson
45 minutes + ongoing investigation

Objective
By the end of this lesson, students will better understand a pumpkin life cycle and how they return nutrients to the soil.

Materials
- Pumpkin Jack book
- Small pie pumpkin
- Large plastic or glass container with a tight-fitting lid
- Potting soil
- Clear packing tape

Suggested Sequence of Events:
1. Set Up: Take the large plastic container and cut a hole large enough to fit your small pumpkin through. Save that piece. Add several inches of planting soil to the bottom of the container and spritz with water until damp. Do not saturate the soil.
2. Read through the IAITC Pumpkin Ag Mag and/or IAITC Soil Ag Mag for background information regarding plant lifecycles and soil health. Interactive online versions can be found on our website.
3. Read *Pumpkin Jack* by Will Hubbell
4. Complete the activity in the following procedures.
   - Using the information learned in Pumpkin Jack, introduce the students to the Pumpkin Jack activity.
   - Have students pick a design and carve the pumpkin before seal
   - Place the pumpkin in the container and replace the top of the it in the container.
   - Place the pumpkin in the container and replace the top of the container. (You may need to use packaging tape to fasten it in place)
   - **Make Predictions:** Have students predict what will happen to pumpkin over the next several weeks. Students can draw or what they think the pumpkin will look like.
   - Place the container and pumpkin in a warm place in the
   - Have students observe the pumpkin

WASTE & COMPOSTS

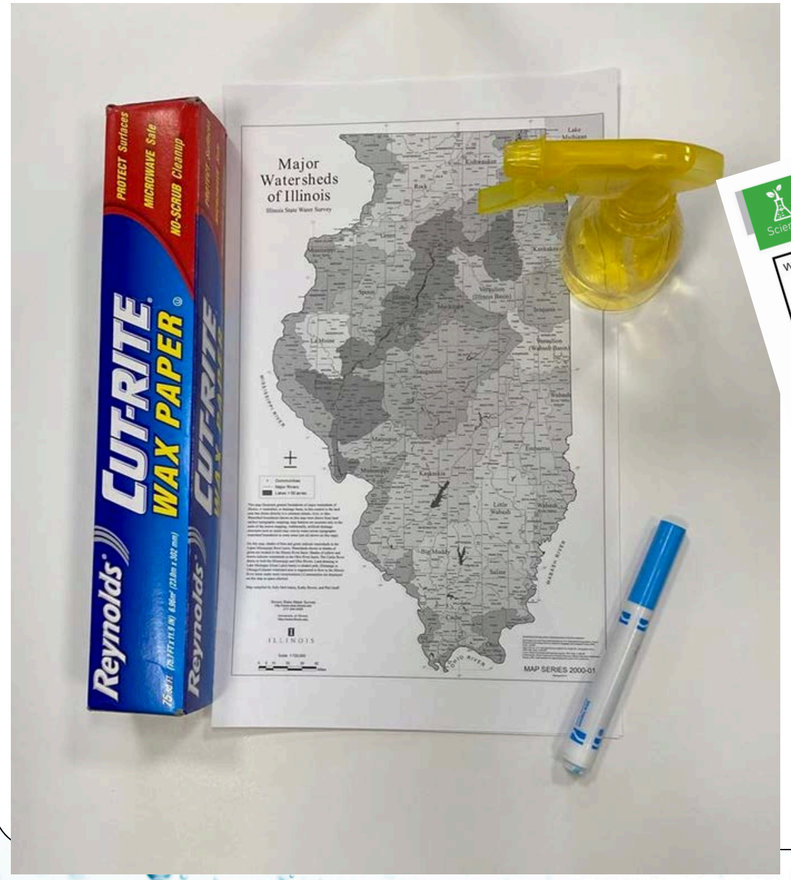
AGRICULTURE AND ENVIRONMENTAL EDUCATION

Connections:

- Demonstrates how decomposition returns nutrients to the soil and supports future plant growth
- Explores environmental benefits of composting
- Students discover ways to reduce waste by identifying compostable and non-compostable materials

WATER

WAD-O-WATERSHED





All you need:

- Large, Clear Plastic tub
- Waxed Paper (at least two feet per student)
- Spray bottle filled with colored water
- Copies of student Worksheet

WATER

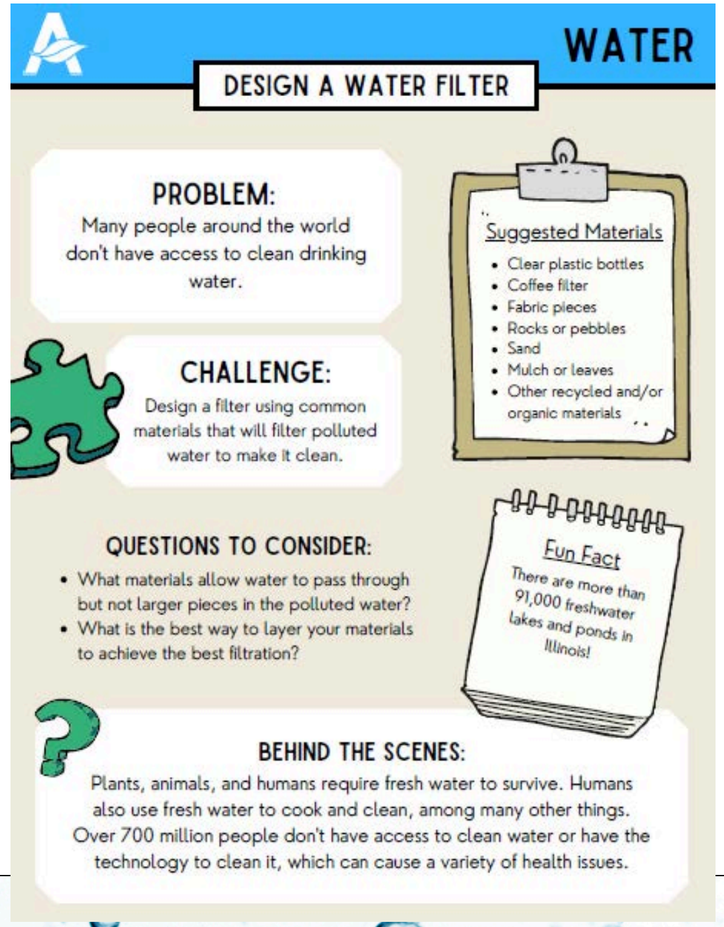
AGRICULTURE AND ENVIRONMENTAL EDUCATION

Connections:

- Introduces watersheds and their importance
- Demonstrates how easily sediment and pollution move through watersheds
- Uses local watershed connections to highlight the importance of preserving and protecting water in their own communities

WATER

WATER FILTER





All you need:

- Clear plastic bottles
- Coffee filter
- Fabric pieces
- Rocks or pebbles
- Sand
- Mulch or leaves
- Other recycled and/or organic materials

WATER

AGRICULTURE AND ENVIRONMENTAL EDUCATION

Connections:

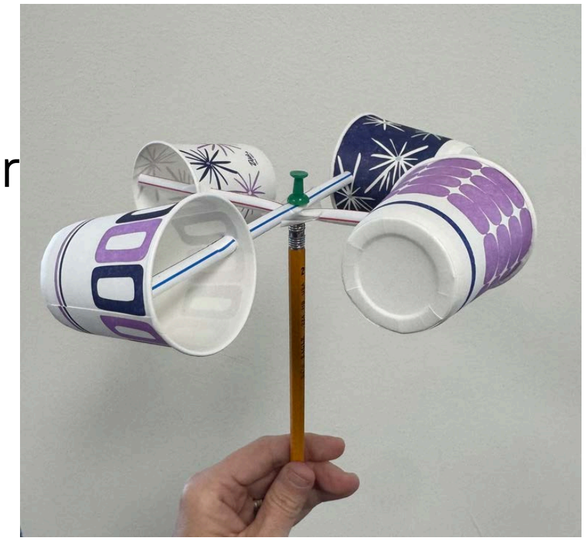
- Challenges students to design and build a water filtration system for a polluted water source
- Hands-on culminating activity for learning about water pollution
- Easily make connections to the important role of water in agricultural production and farm management

WEATHER

WIND AT WORK ON THE FARM

All you need:

- Pinwheel
- 1 pencil with eraser
- 4 Dixie cups
- 2 drinking straws
- 1 pushpin
- Markers
- Tape
- Hole punch or scissors
- Pictures of wind in ag (See resources)





WEATHER

AGRICULTURE AND ENVIRONMENTAL EDUCATION

Connections:

- Helps students make real-world connections to current extreme weather patterns
- Shows how wind can be helpful or harmful to farmers depending on how extreme

- Students identify when wind is helpful to farmers, such as for pollination and livestock cooling

ANIMALS

PIGS, PORK, & BIOSECURITY



AWESOME AGRICULTURE

ANIMALS

AGRICULTURE AND ENVIRONMENTAL EDUCATION

Connections:

- Explores how farmers care for the health, comfort, and well-being of livestock
- Demonstrates livestock manure repurposed as fertilizer for sustainable farming practices
- Reinforces mandates of environmental stewardship, recycling, and resource conservation

ANIMALS

PIGS, PORK, & BIOSECURITY

PIGS, PORK, & BIOSECURITY

Science

Grade Level
K-8

Length of Lesson
30 minutes

Objective
Students will be able to explain how easily germs can spread and what livestock biosecurity is.

Materials
- Plush pigs
- Dried corn kernels and soybeans for pig feed
- Bowls or small buckets
- Pig brushes
- Glo germ powder
- Black light flashlight

Lesson Summary
This lesson is designed to give students a visual representation of how quickly germs can be spread and in what ways, and why pig farmers practice important biosecurity measures on their farms to keep their livestock safe.

This lesson adapted from a lesson by Champaign County Ag in the Classroom.

Suggested Sequence of Events:
1. Set Up: Sprinkle Glo Germ on the stuffed pig before students enter the classroom. You can also sprinkle the Glo Germ on the floor or on any materials you and your students will be using/handling in this activity.
2. Read through the IAITC pork-themed nonfiction text resources to learn more about pigs and pork. Interactive online versions can be found on our website.
3. Complete the activity following the procedures:
   - Divide students into small groups and tell them they need to get their pig ready for a show.
   - Give each group a stuffed pig, a pig brush, corn kernels, soybeans, and an empty bowl/bucket.
   - Have each student brush their pig and mix together the corn kernels and soybeans in the bowl for the pig feed.

All you need:

- Plush pigs
- Dried corn kernels and soybeans for pig feed
- Bowls or small buckets
- Pig brushes
- Glo germ powder
- Black light flashlight
- Hand sanitizer
- Rubber gloves

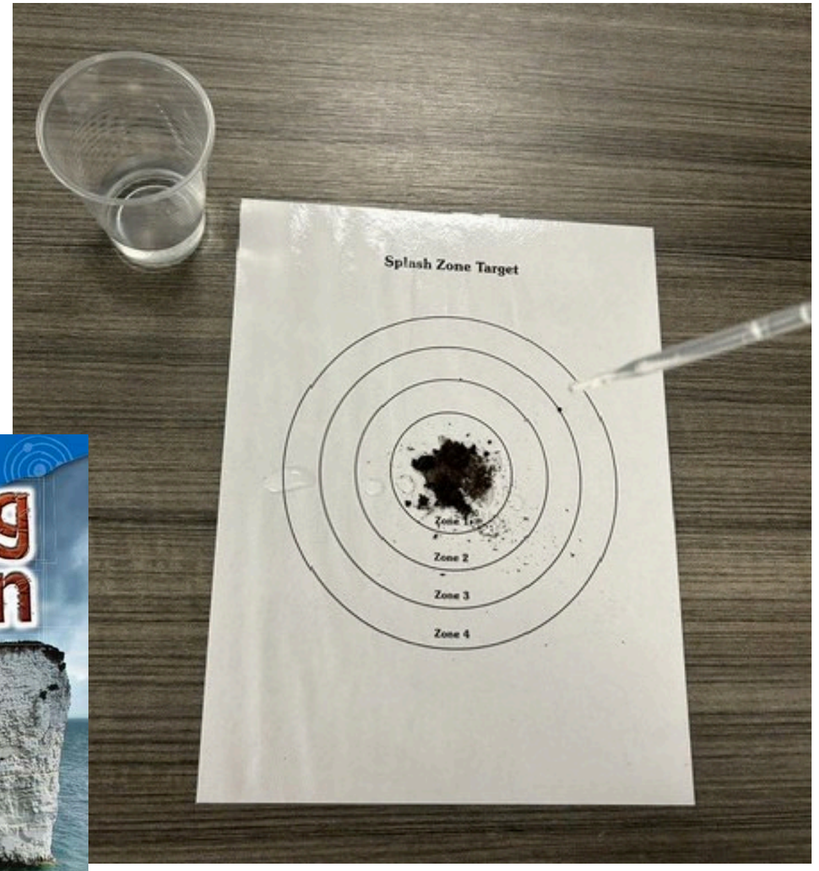


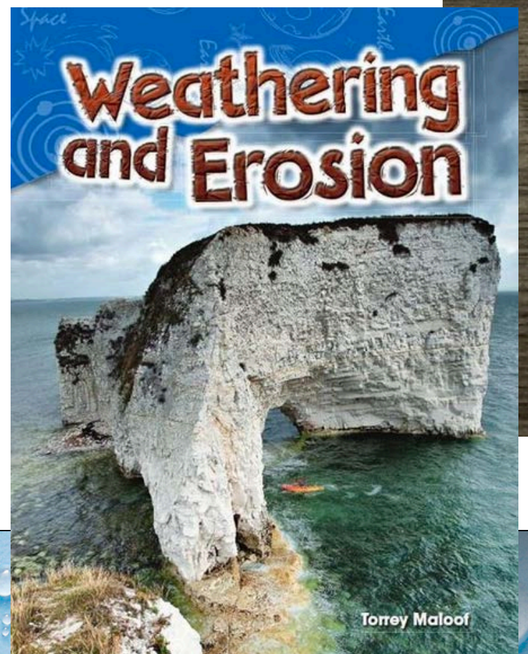
WEATHER

DRIP DROP ERODE

All you need:

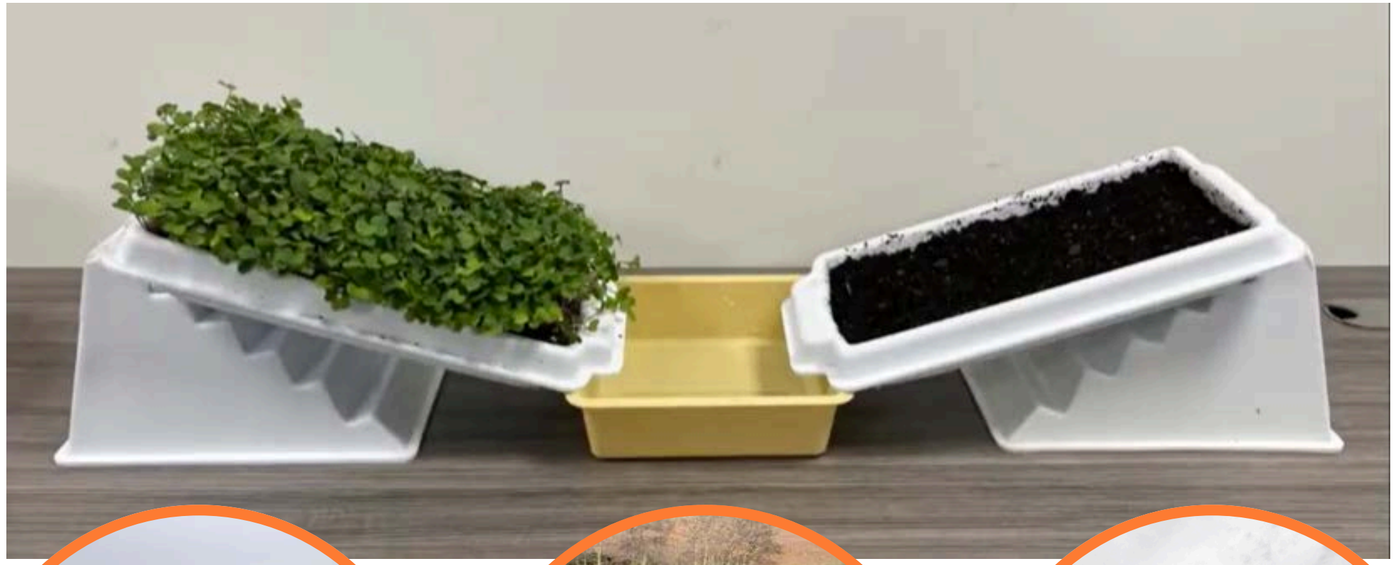
- Splash Zone Target
- Erosion example cards
- Erosion Prevention cards
- 5 teaspoons of dry soil
- Eyedroppers
- Water
- “Weathering and Erosion” by Torrey Maloof





SOIL

ROOTS TO THE RESCUE







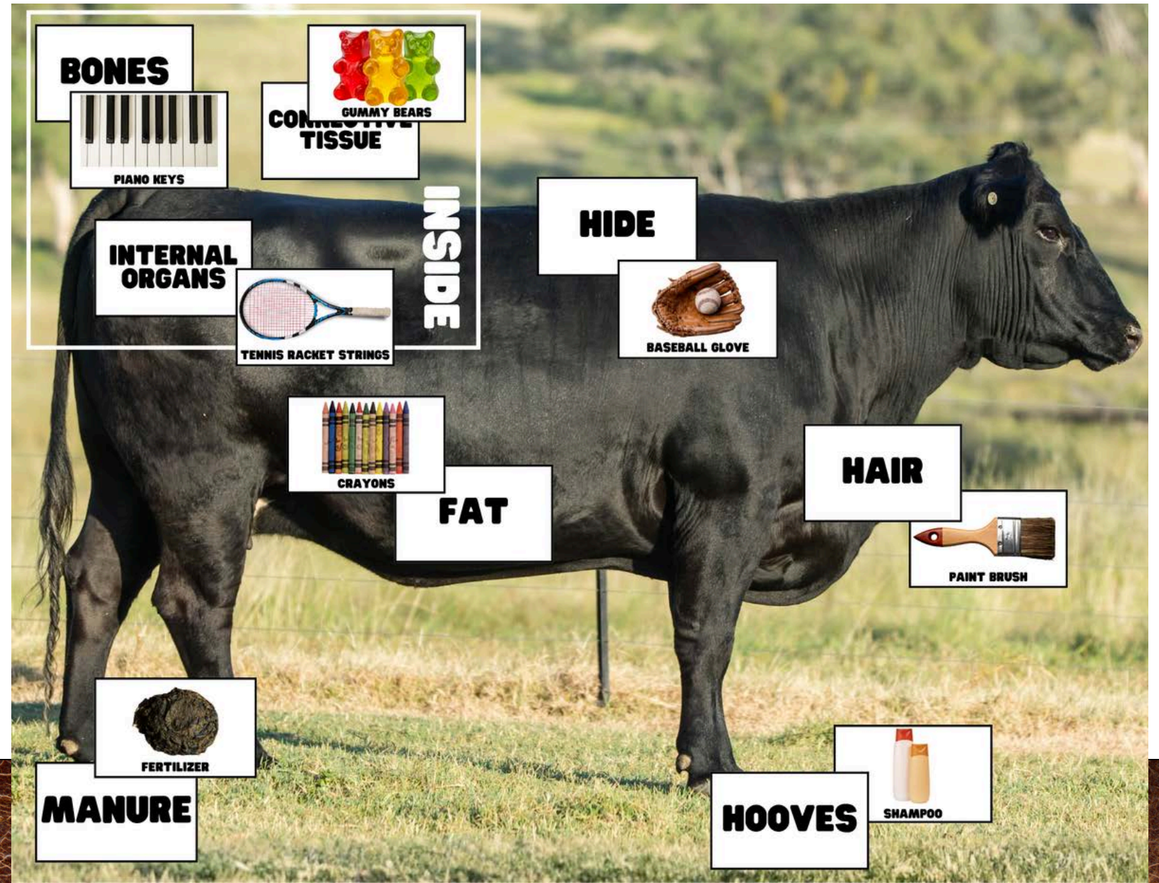


All you need:

- 2 paint trays
- potting soil
- microgreens growing in 1 tray
- Measuring cup
- water
- tray for runoff
- video of experiment (see resources)

ANIMALS

MORE THAN MEAT



All you need:

- Picture or poster of a beef cow
- Printed out labels
- Pictures or real examples of:
  - Baseball glove
  - Paintbrush
  - Crayons
  - Shampoo
  - Tennis racket
  - Fertilizer/manure
  - Gummy bears
  - Piano keys
- Tape or another way to attach labels

Thank you for being here!

TOGETHER WE WILL CONTINUE TO CULTIVATE ENVIRONMENTAL CHAMPIONS FOR THE FUTURE

Illinois AGRICULTURE in the Classroom℠

WEBSITE

agintheclassroom.org

SOIL

SOIL CEREAL STACK

OTHER WAYS TO TEACH SOIL HORIZONS







