



Ag in the Classroom

Programs for 4th through 8th grades

The following programs are offered throughout the school year. You can register for the programs at: <https://go.illinois.edu/AITCRegistration>. If you have questions, contact Melinda at (815) 732-2191 or charbm@illinois.edu.

GEOGRAPHY/SOCIAL STUDIES

Navigating Illinois

Students will gain a better understanding of reading maps as we learn about specialty crops in Illinois. They will be drawing in the rivers that transport products, locating the Pumpkin Capital of the World, and much more. Time: 60 minutes



The Great Fence Crisis

The invention of barbed wire facilitated the expansion of farming on the Great Plains. By calculating two household budgets; one for a homesteading family using wood fencing and the other for a family using barbed-wire fencing. Students will learn how barbed wire helped solve the fence crisis. Time: 50 minutes.

Moving Illinois by Rail, Road, and River

Students will learn why Illinois is an ideal center of agriculture and how the history of Illinois is tied to its waterways. Time: 30 minutes.

Barges Deliver

After learning about the importance of barges students will engineer a barge that is able to float while holding soybeans. Time: 30 minutes



Prairie Passages

This program will introduce students to prairies. After learning about prairies, students will read a collection of journal entries from pioneers and travelers of early Illinois to learn more about the relationship between the prairie and pioneers. Time: 30 minutes.

Supply and Demand

Students will determine how changes in supply and demand affect prices. They will discover how this relates to agriculture. Time: 30 minutes.

The Shape of Illinois

Students will look at glaciers and how they affected Illinois. Students will discover how topography affects farming. As part of the program students will create their own three-dimensional relief map of Illinois. Time: 60 minutes.

Futures Trading

Through this simulation, students will find out how well they do at marketing a crop. Time: 45 minutes.

Inspiring Minds to Grow in Ag Careers

There are careers available in agriculture for students of varying interest. Students will discover the many opportunities through bingo. Time: 30 minutes

SCIENCE

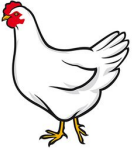
Build a Calf



Students will explore genes and heredity using beef cattle as an example. Will the calf they create have more Angus or Hereford features? They will extend their thinking to traits farmers want in their crops and animals. Time: 45 minutes.

Chicken Wings

Students will dissect a chicken wing in a systematic manner in order to compare and contrast a chicken wing and a human arm. Time: 30 minutes.



Evaluating GMO's

After gaining a basic knowledge of genetically modified crops, students will learn what crops in the U.S. have been genetically modified; why a farmer might choose to grow GM crops; and evaluate the impact on our food supply. Time: 45 minutes.

Exploring Types of Seeds: Monocots & Dicots

Students will identify the parts of a seed as well as compare the growth and development of two types of seeds-monocots & dicots. Time: 45 minutes.

Grow it Now, Drive it Later?



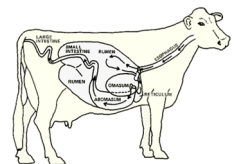
By now most students know corn can be used to make ethanol but how does that happen and where does the “leftovers” go. We will take closer look at the ethanol making process. Time: 30 minutes.

Nutrient Loss Reduction Strategy. WHAT???

First students will gain an understanding of watersheds and where water flows. This leads to a discussion of what flows in the water and the problems that are created. Students will conduct experiments to see how to prevent chemical run off. Time: 45 minutes

Rumination Navigation

Students will understand the process of rumination and how digestive systems break down food for energy. Time: 30 minutes.



Pig Power: Creating Biogas and Renewable Energy

After exploring the science of energy and energy conversion, students will evaluate some environmental impacts of hog farms and explore technologies that minimize negative human impact by creating biogas energy from animal waste. Time: 30 minutes

FOOD PRODUCTION

Great Milk Experiment

Through this experiment students will take a closer look at different kinds of milk. Using food coloring and soap students will discover the differences in fat and protein in different milks. Time: 30 minutes



Hungry Planet

This program will be based on the book Hungry Planet: What the World Eats. Students will work in groups to see how people in other parts of the world eat. They will share what they found. Time: 45 minutes.

Where Does It Come From?

Students will interpret data to discover where the agricultural commodities used in some common snacks were grown. Time: 45 minutes.

SOILS

What is Soil?

Students will learn the specific components of soil, including mineral matter, water, air and organic matter. Then they will take a hands-on look at the mineral matter (sand, silt, and clay) to learn more about their properties. Time: 30 minutes.

Candy Core Sampling

This lesson is designed to teach students about soil horizons and how soil is typically formed into layers. Students will take core samples from candy bars to see how layers can differ in different geographical locations. Time: 30 minutes

Soil Nutrition

We will be looking at the three macronutrients needed in the soil for plant growth and the effects nutrient deficiency has on plant growth. Time: 45 minutes



The Nitrogen Cycle Game

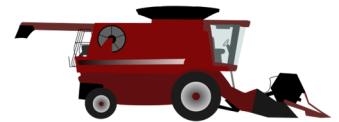
In this game students are a nitrogen atom. They will travel the nitrogen cycle stopping in many exciting locations-some of which they probably have never been. Time: 30 minutes

Soil Sleuth

Complete this fun and engaging escape room activity to help the Grieving Gardeners learn why their vegetable garden did not grow well!

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MACHINES/TECHNOLOGY



Simple & Complex Machines

Students will watch "Simple & Complex Machines on the Farm". The movie will lead into a discussion of simple machines. Then students will examine toy farm equipment to find the simple machines that make up the complex farm equipment. Time: 45 minutes

Lubricants, Viscosity, and Machines

Through experiments students will be able to define friction and explain its effects. They will also learn about viscosity and explore what affects it. Time: 50 minutes.

Drone Conundrum

With the help of drones farmers can see differences in the make up of plots of land. Students will see how technology is helping to identify address issues like soil health and water drainage. Time: 30 minutes

On the Technology Trail

After learning how GPS is used in agriculture, students will use GPS units to go on a scavenger hunt and track down letters to discover the mystery word. Time: 45 minutes



Sitting on Soybeans

Students will discover how biomaterials are used to create car parts. In a Ford you can find: soybeans, wheat straw, coconut hair, cellulose fiber from trees, and shredded currency. Find out where they are found in a car. Time: 45 minutes.

Unlock Ag Innovations

This program follows an escape room format to expose students to various ag innovations such as: selective breeding, GPS, and drones. Time: 60 minutes.



SEASONAL PROGRAMS

Lincoln's Birthday

Students will hear about Illinois history by listening to "L is for Lincoln". After reading the story students will make an Illinois charm representing our state symbols. Time: 30 minutes.

George Washington, Visionary Farmer

Students will participate in an activity that uses images of Mount Vernon and quotations from George Washington to emphasize ways he modified the natural environment to become a visionary farmer. They will enjoy a Cherry Pie snack at the conclusion of the program. Time: 45 minutes.

George Washington Carver

Through a timeline activity, students will discover the important contributions George Washington Carver made to agriculture. Time: 30 minutes



Earth Day: Renewable Energy

Students will increase their understanding of the eventual depletion of nonrenewable resources, the effect of changing rates of use on the future, the role of conservation, and the need to develop renewable resources. Time: 45 minutes.

INSECTS



Field of Potato Dreams

In this simulation students will inherit a 100-acre potato farm. They will need to make decisions regarding land preparation, fertilizer, planting, beetles, and harvesting. Each decision has a consequence. Students will see if their decisions were profitable. Time: 60 minutes.

Attack of the Invasive Species!

Through this exploration of invasive species students will learn what they are, the threats they pose, and damages they can cause. Time: 45 minutes.

Examination of the Body of a Grasshopper

Students will identify basic characteristics of a typical insect and then discuss how what they learned relates to agriculture. Students will get to look at real grasshoppers. (There will be no dissecting.) Time: 30 minutes.

A Bee's Life

Students will look at the various types of bees and their role in the colony, stages of growth, how honey is made and much more. Time: 30 minutes.



Beyond the Bug

Insects play an important role in our everyday lives—and not just as pollinators and producers of honey. Students will discover several other ways humans use insects. Time: 30 minutes.



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AGRICULTURE
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