

# Rock Island County Agriculture in the Classroom

## Teacher Resource Listing

2017-2018



UNIVERSITY OF ILLINOIS  
EXTENSION



Illinois  
**AGRICULTURE**  
in the Classroom

Rock Island County Agriculture in the Classroom



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**Rock Island Agriculture in the Classroom (AITC) is sponsored by the Rock Island County Farm Bureau Foundation, University of Illinois Extension-Rock Island County and other local business. In addition to offering these resource materials free for loan, Rock Island AITC also provides teacher workshops, and classroom presentations.**

Note: Kits are a wonderful way to bring agriculture into your classroom. Rock Island AITC requests the following guidelines when using the kits.

- Teachers are responsible for pick up and return of kits to the Rock Island County Farm Bureau in Moline. Office hours are from 10:00 a.m. to 2:00 p.m. **PLEASE notify the Farm Bureau Office when you plan to return the kits. We can make accommodations to stay open late if we know you are coming.**
- Please return the kit on the date indicated. Most kits are not duplicated and other educators may be waiting to use them.
- The kits can be checked out for a two week period of time. If additional time is needed, the kit can be checked out again if available.
- If you have requested a kit, but decide not to use it please advise Rock Island AITC as early as possible. Some supplies are purchased on a need basis only, this will help save money.
- Some kits are very popular and are frequently reserved months in advance. Generally educators plan out their year and gauge which kits they would like for a particular unit.
- Supplies needed for activities will be provided, except perishable items, such as milk, ice, etc.

## Agri-Science & mAGic Kits

Hands-on, applied agricultural laboratory exercises. Kits include all of the necessary materials to perform several activities. A teacher's guide, student worksheets and handouts, books and instructional video are included.

### Adventures Around the Farm

**Pre-K-3<sup>rd</sup>**

- Helps students understand what a farm is, what farmers do, and what comes from farms. Students will learn that farm grown products are transported, processed, marketed and distributed which involves many agricultural careers. Through these activities students will discover that they depend on agriculture every day.

### Dairy Magic

**3<sup>rd</sup>-8<sup>th</sup>**

- Hands-on exercises let students explore the processes of using milk, acid, enzymes, and bacteria to make cottage cheese, yogurt, and ice cream. Students will find out how much milk one cow produces in its lifetime. They'll also dive into history and learn about issues of supply and demand in the dairy industry.

### Getting to the Core

**Pre-K-3<sup>rd</sup>**

- How do apples grow? Where do all those varieties of apples come from? Learn the answers to these questions and so much more! Take an inside look at apples and their history, lots of hands-on activities and games, thing to make and things to eat, videos, posters, and books.

### Illinois Magic Kit

**3<sup>rd</sup>-12<sup>th</sup>**

- The curriculum in the Illinois Magic kit is multidisciplinary, all inclusive, and is designed to help students learn about Illinois. This kit gives students the opportunity to learn more about the Northern, Western, Eastern and Southern parts of the state. Students will learn more about how prairie grass and glaciers affected the state soil. They will also learn about different businesses that were started in Illinois.

### Machine Magic Kit

**3<sup>rd</sup> 8<sup>th</sup>**

- Students will learn about the history of farm machinery and the impact of modern farming techniques on families and communities. They'll also lean how inventors John Deere and Cyrus McCormick helped shape modern agriculture. Hands-on exercise let students identify machinery parts and estimate farm machinery costs.



**Pigs on the Farm****Pre-K-3<sup>rd</sup>**

- Gain a better understanding of what pigs are, what farmers do to take care of pigs and how people benefit from pigs. Pigs provide us with a variety of meat and non-food by-products.

**Pondering Pizza****Pre-K-5<sup>th</sup>**

- Take a look at a slice of agriculture...a pizza slice. Learn how all ingredients on your pizza begin on farms, are processed, distributed and made into a delicious meal. Explore Planet Pizza via video and visit a real “pizza farm.” Take part in a slice of the action through the Pizza Party fractions game. Through hands-on activities, books, posters, and curriculum, ponder the wonders of pizza.

**Poultry Magic (Incubators)****Pre-K-8<sup>th</sup>**

- Crack the mystery of eggs and see a miracle in 21 days! Students will uncover interesting facts about U.S. poultry production through exercises and hands-on experiments. They’ll learn about the anatomy and nutritional value of an egg. They’ll also learn about the history of egg production and find out how poultry dishes are prepared around the world.

**Pumpkin Patch****Pre-K-3<sup>rd</sup>**

- Discover the wonders of pumpkins. Watch tiny seeds grow into several varieties of pumpkins in a time-lapse video and learn how to prepare the soil for next years’ crop. The Pumpkin Patch contains posters, books, hands-on activities, recipes, and great pumpkin facts.

**Seasons on the Farm****Pre-K-3<sup>rd</sup>**

- This interactive kit contains many lessons on how agriculture revolves around the seasons and how farmers do different types of work during each season. Spring, summer, winter and fall are all included in the many hands-on as well as core curriculum activities.

**Soybeans: Oil & Polymers****3<sup>rd</sup>-8<sup>th</sup>**

- The activities in this kit were designed to teach students to observe, measure and describe how renewable resources such as soybeans can be used to make industrial products. The lessons are focused on 2 important components of soybeans– oil and polymers. Students will make adhesives from soybean protein and candles, crayons, ink, and hand cream from soybean oil.

**Wheat We Eat****Pre-K-3<sup>rd</sup>**

- Learn how wheat is grown, milled and then made into food worldwide using the science, math, reading and social studies lessons included in this curriculum. Along with the core subject, you will also find lessons to expand curriculum with arts and crafts projects, songs, poetry, and books.

**Activity & 4-H National Science Day Kits**

Each of these kits contains the instructions and supplies needed to conduct a popular hands-on, minds-on Ag in the Classroom activity. Kit provides items such as beads and cord for the Nutrition or Water Cycle Bracelets or soybean seed, bags, and watering crystals for Beanie Babies.

**4-H2O****3<sup>rd</sup>-HS**

- Why is water quality important and why is it important to understand it now? In this experiment, youth will participate in a live demonstration of how carbon dioxide builds up in the atmosphere.

**Ag Career Bingo****K-5<sup>th</sup>**

- There are many areas for employment opportunities in agriculture. These areas are production; social service professionals; education and communication; managers and financial specialists; scientists, engineers and related specialists; and marketing, merchandising, and representatives. All of these jobs are important to the economy of our state, country, and world. There are over 250 career areas available and 22 million people working in agriculture, and this is just in the United States. In Illinois, one out of every five to six people are employed in an agricultural career.

**Baseball/Football in Agriculture Charm****K-8<sup>th</sup>**

- Most people would never connect agriculture to one of America’s favorite activities—baseball! But, the game of baseball could not exist without agriculture. The Baseball Charm will remind you of how many different ways agriculture is present when you attend a baseball game.



**Beanie Baby****K-3<sup>rd</sup>**

- Soybeans are sometimes called the “magic bean” because they can be used to make many things. Soy products are found in hundreds of items we buy at the grocery store. Students will make their own “beanie baby” necklace so that they are able to watch their soybeans germinate and grow.

**Biofuel Blast****3<sup>rd</sup>-8<sup>th</sup>**

- Renewable energy sources like biofuels are constantly making headlines in the news today. This experiment explores the production of the biofuel ethanol. It is typically made in the US by converting the starches from corn kernels into the sugars in corn syrup, and then adding yeast to break down the sugars, which releases carbon dioxide and ethanol as byproducts. The ethanol is blended with gasoline and then sold at some gas stations. There you might see a sign at the pump that says “E10,” which means 10 percent ethanol and 90 percent gasoline.

**Circles of the Earth Bracelet****3<sup>rd</sup> -8<sup>th</sup>**

- The cycles of agriculture are powered by abundant natural resources—soil, water, and energy from the sun. People are a resource, too. Because people have learned to use their resources wisely, America’s farmers and ranchers produce 16 percent of the world’s food on just 7 percent of the world’s land.

**Corn Putty****2<sup>nd</sup>-8<sup>th</sup>**

- Is it a solid? Is it a liquid? Let your students make corn starch putty and determine for themselves.

**Drone Discovery****3<sup>rd</sup>-HS**

- Drone Discovery is a hands-on engineering design challenge that explores the science behind drones and how they are being used to solve real world problems. Youth will learn everything from flight dynamics and aircraft types, to safety and regulations, to remote sensing and flight control.

**Eco-Bot Challenge****3<sup>rd</sup>-HS**

- Youth enhance their engineering skills by learning to think like a robotics engineer, assembling their own robots, also known as Eco-bots, and control surfaces in order to manage an environmental clean-up. Youth then test the interaction between the Eco-Bot’s environmental engineering design features and various control surface configurations to determine the most effective environmental clean-up solution for a simulated toxic spill.

**Helpful Hydrogels****3<sup>rd</sup>-8<sup>th</sup>**

- Water is everywhere - in the sky, in the ground, and in our homes. However, caring for this vital resource is often a challenge for each of us. Conservation means using water wisely. Youth explore a new superabsorbent polymer - called hydrogels - that can help with water conservation...right in our own backyards.

**Hungry Illinois Caterpillar****Pre-K-4<sup>th</sup>**

- This lesson has been adapted from the book *The Very Hungry Caterpillar* by Eric Carle. The students will create their own touch and feel copy of a revised version where an Illinois caterpillar eats his way through the farm and becomes very fat, only to metamorphoses into a beautiful butterfly.

**Ice Cream in a Bag****Pre-K-12<sup>th</sup>**

- Students learn many skills by making home-made ice cream in a plastic bag and then sharing the treat. A video takes you on a trip to the farm where you learn more about agriculture.

**Illinois Agriculture Charm****K-8<sup>th</sup>**

- Agriculture is an essential part of the history of Illinois. Throughout the years, many innovations have made farming easier and much more productive. Many of these discoveries and innovations were made right here in Illinois. Another important aspect of Illinois history is the selection of the symbols. Many of our state symbols were suggested by school children and represent the richness and vitality of Illinois.

**Pumpkin Patch Pie****Pre-K-4<sup>th</sup>**

- Students will get to experience making a pumpkin pie in a bag. Students put pumpkin pie filling, pumpkin spices and pudding in a bag and place it on graham-cracker crust. This is a fun way for students to make pumpkin pie. All the necessary supplies are in the kit except for the milk that is used to make the pudding.



**Soil Sam****K-6<sup>th</sup>**

- Students get to make their own plant person. The grass that students plant and watch grows into Sam's hair. This fun activities helps students learn about plants. All necessary materials are in the tub.

**Soy Candles and Crayons****2<sup>nd</sup>-8<sup>th</sup>**

- Students can make their own soy candles and crayons using soy flakes. This is a fun activity for students. Teacher assistance is need for the melting of the soy flakes and pouring them into molds.

**Soy Lip Balm & Lotion****4<sup>th</sup>-12<sup>th</sup>**

- Students can make their own soy lip balm and hand cream using soybean oil and beeswax. This is a fun activity for students. Teacher assistance may be needed for melting beeswax and pouring mixtures.

**Tassel to Table****3<sup>rd</sup>-8<sup>th</sup>**

- Students will learn the process from tassel until table. They will also create a tassel to table chain.

**Water Cycle in a Bag****K-6<sup>th</sup>**

- Use this hands-on approach to show students of all ages how the water cycle works. Using a ziploc bag, permanent markers water and aquarium rocks, your students can "make" the water cycle! A song with motions for the younger students, and very detailed diagrams for the older ones, make this a sure hit with all ages. Without water, we would not have agriculture!

**Water Cycle Bracelet****K-3<sup>rd</sup>**

- Learn about the water cycle while making a bracelet to remind them of the process every day.

**Wired for Wind****3<sup>rd</sup>-8<sup>th</sup>**

- Explore how to engineer renewable energy technologies, and the positive impact that they can have in communities across the country and the world. Developed by the University of Nebraska-Lincoln and the University of Nebraska Cooperative Extension program, this experiment engages young people in design, build out and testing of two different wind turbine models.

**Other Materials****ABC's Illinois Agriculture****K-2<sup>nd</sup>**

- Awesome coloring/activity book. Comes in package of 25 and must be ordered. Please indicate the quantity needed.

**Ag Mags & Terra Novas****Illinois Agriculture Magazines:—"Ag Mags"****4<sup>th</sup> -6<sup>th</sup>**

Ag Mags are 4 pages, full-colored "news magazines." Each issue covers a specific agricultural topic along with math, science, social studies, and language arts activities. Ag Mags can be viewed at:

<http://www.agintheclassroom.org>

- **Apples:** Explore apple production, history, growth and varieties.
- **Beef:** This issue features articles such as "Breeds of Beef Cattle" and "Beef Brief" along with information about beef cattle and their diets and animal identification.
- **Careers:** The Career Ag Mag offers readers a sample of jobs in agricultural business, environmental services, natural resources, ag mechanics and plant, animal and food sciences. The information includes the training and education required.
- **Corn:** Check out the new baseball theme. This issue features "Ethanol Hits a Homerun" and "This Food is a Grand Slam" along with many interesting articles and updated corn facts. *\*Limited quantities available*
- **Dairy:** Follow the route of dairy from the farm to the store to your home to your body
- **Horse:** Explore horses in the past and the present day *\*Limited quantities available*
- **Livestock:** Livestock production is an important part of Illinois agriculture. Farmers supply us with products we depend on. Our lives revolve around having access to affordable, high quality food, clothing and supplies. Farmers must have knowledge, skill, compassion and patience to make sure we have these products. *\*Limited quantities available*



- **Nutrition:** Focuses on consumption agriculture and uses the food plate and exercise to optimize nutrition and fitness.
- **Pizza:** From crust to ingredients to the final product – learn how agriculture is involved. *\*Limited quantities available*
- **Pollinator:** Features native Illinois plants that serve as pollinator hosts, discuss what farmers do, and what students can do to help protect and encourage pollinator habitats
- **Pork:** Care of livestock as well as a strong emphasis on the environmental aspect of pork production. *\*Limited quantities available*
- **Pumpkins:** Language, Science, and Social Science standards are address through genetics, blossom dissection, Thanksgiving, and Halloween.
- **Seasons:** Spring, Summer, Fall and Winter. Illinois produces many specialty crops all year long.
- **Soils and Fertilizer:** Erosion, soil profiles, and usable land for food production are examined through Science-based standards.
- **Soybeans:** The versatile soybean is examined with an emphasis on Nutrition, Economics and Geography. Math and Science standards are also addressed in this issue.
- **Urban:** This issue features articles such as “Where do you live?” and “Grow Your Mind” along with an article on the Chicago High School for Agricultural Sciences.
- **Water:** : The water cycle, water transportation, water pollution, and water conservation are addressed through Math and Science standards
- **Wheat:** Wheat can be found in many different products. Although Illinois isn’t a major player in wheat production, we can and do grow a fair amount.

### Terra Nova Readers

4th-6th

To examine agriculture as it relates to Math, Science, Social Studies, Language and Writing. These commodity readers and sample student questions have been developed and made available for teachers to implement. Designed to mirror the Terra Nova Test, these reads are a way to expose students to more non-fiction based texts. The questions can be answered using the text and are designed to take about 10 minutes per area.

- Apples
- Beef
- Corn
- Cotton
- Dairy
- Pizza
- Pollinators
- Pork
- Poultry
- Pumpkins
- Sheep
- Soil
- Soy
- Water
- Wheat



## Agriculture Resource Kit Request Form

Name: \_\_\_\_\_ Phone# \_\_\_\_\_  
 School: \_\_\_\_\_ Grade Level: \_\_\_\_\_  
 Email: \_\_\_\_\_ # of Students: \_\_\_\_\_

Please indicate the pickup date and return date: \_\_\_\_\_

Visit: <http://rockislandaitc.weebly.com/> to electronically submit your request.

Scan QR Code to access the request form:

Fax: Form to (309-736-1450) or Email information to: [aitc@ricofarmbureau.org](mailto:aitc@ricofarmbureau.org)



	Requested Date		Requested Date		Requested Date
<b>Agri-Science &amp; mAGic Kits</b>					
Adventures Around the Farm		Pigs on the Farm		Soybeans: Oil & Polymers	
Dairy mAGic		Pondering Pizza		Wheat We Eat	
Getting to the Core		Poultry (Incubators)		<b>Other</b>	
Illinois mAGic		Pumpkin Patch		Illinois Agriculture Coloring Book	
Machine mAGic		Seasons on the Farm			
<b>Activity &amp; 4-H Science Day Kits</b>					
4-H20		Drone Discovery		Soil Sam	
Ag Career Bingo		Eco-Bot Challenge		Soy Candles & Crayons	
Baseball/Football in Ag Charm		Helpful Hydrogels		Soy Lip Balm & Lotion	
Beanie Baby		Hungry Illinois Caterpillar		Tassel to Table	
Biofuel Blast		Ice Cream in a Bag		Water Cycle in a Bag	
Circles of the Earth Bracelet		Illinois Agriculture Charm		Water Cycle Bracelet	
Corn Putty		Pumpkin Patch Pie		Wired for Wind	

—Ag Mags/Terra Nova Requests on Back—



## Ag Mag/Terra Nova Request Form

**Name:** \_\_\_\_\_ **Phone#** \_\_\_\_\_  
**School:** \_\_\_\_\_ **Grade Level:** \_\_\_\_\_  
**Email** \_\_\_\_\_ **# of Students:** \_\_\_\_\_

Please indicate the pickup date and return date: \_\_\_\_\_

Visit: <http://rockislandaitc.weebly.com/> to electronically submit your request.

Scan QR Code to access the request form:



Fax: Form to (309-736-1450) or Email information to: [aitc@ricofarmbureau.org](mailto:aitc@ricofarmbureau.org)

### Ag Mag Requests

	Requested Date
Apples	
Beef	
Careers	
Corn	
Dairy	
Horse	
Livestock	
Nutrition	
Pizza	
Pollinators	
Pork	
Pumpkin	
Seasons	
Soils and Fertilizer	
Soybeans	
Urban	
Water	
Wheat	

### Terra Nova Requests

	Requested Date
Apples	
Beef	
Corn	
Cotton	
Dairy	
Pizza	
Pollinators	
Pork	
Poultry	
Pumpkins	
Sheep	
Soil	
Soy	
Water	
Wheat	

