Wayne & White County

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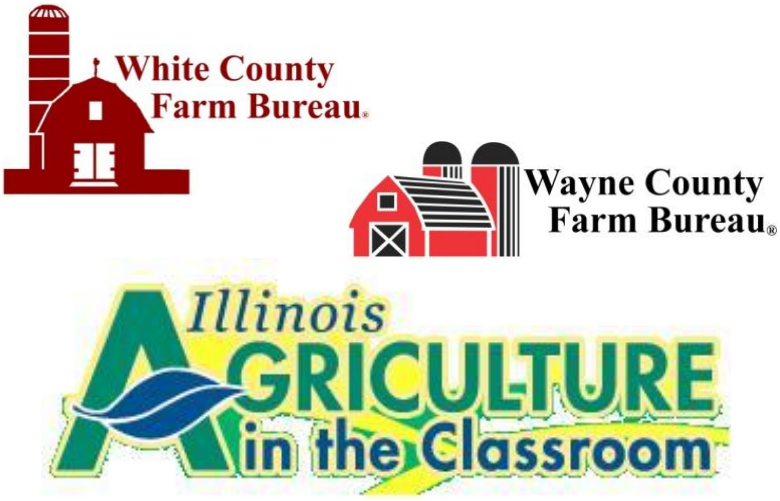

Teacher Resource Guide

Wayne County Farm Bureau
301 E. Court Street Box 526
Fairfield, IL 62837
(Phone) 618-842-3342 (Fax) 618-842-3636

The following list highlights some of the resources available on a free loan basis from this office. Please note that this is only a partial listing. If you are interested in a particular topic or subject area, please give your county Ag in the Classroom coordinator a call. Coordinators are available to assist you in planning and presenting various agricultural topics to your students and other teachers. The Ag in the Classroom program was created to educate people of all ages about the importance of agriculture, the world's most vital industry. The coordinator is ready and willing to assist you in making agriculture a part of your classroom. For more information or to borrow any materials listed in this guide, please contact:

Brianne Foster, Wayne and White County AITC Coordinator
Wayne County Farm Bureau
301 E. Court Street Box 526
Fairfield, IL 62837
(Phone) 618-842-3342 (Fax) 618-842-3636
Email: agliteracy@waynecfb.com

Checkout/Return Instructions:

- Call or email your county Ag in the Classroom Literacy Coordinator.
- Request the materials and the dates desired.
- Schedule a pick-up or a delivery time for your materials.
- When you are finished with the materials, re-pack the non-consumable items and fill out the kit evaluation.
- Drop off the kit at the Wayne or White County Farm Bureau office or leave in your school's office. Your county coordinator will check your kit back in and re-stock the materials used.

Note:

- All materials will be available for pick-up or delivery.
- It is the teacher's responsibility to have the kit returned or picked up by the date they have indicated because most of the kits are not duplicated and other educators are waiting to use them.
- These kits are very popular and are frequently reserved months in advance. Generally, teachers reserve kits when they are planning their year and the units they will be teaching.
- All supplies you will need for each activity are in the kit free of charge. Teachers are not obligated to re-stock the consumable items used before returning them.

AGRISCIENCE LEARNING KITS

These kits are self-contained PreK-12th grade teaching units that provide students with hands-on, applied agricultural activities. They are full of teacher information, instructions, student worksheets, books, videos, posters, etc. The kits come in a plastic tub containing a teacher's guide and all materials necessary to complete the activities in the unit. Units are written to address Illinois learning standards which are cited in the teacher's manual. Lessons are easily adapted to different age groups.

Note: Magic kits are similar to the other kits except they have added lesson areas such as social studies, language arts and English.

Adventures Around the Farm (Pre-K – 4th)

This kit is packed with fun activities and lessons all about the farm. The materials and lessons in this kit will help students to understand what a farm is, what farmers do, and what comes from farms. They will also learn that there are many different kinds of farms. Students will learn that while we purchase our food from the store, it begins with plants or animals raised on farms, which are the heart of the agriculture industry. From the farm, products are transported, processed, marketed and distributed, involving a multitude of agricultural students will discover that they all depend on agriculture every day of their lives.

Agriculture Renews Our Planet-Growing Energy for the Future (3rd-8th)

Students compare soyink with petroleum based ink, make biodegradable plastics from corn. Students also have the opportunity to compare renewable, nonrenewable and natural resources.

Animals in Agriculture- Their Growth and Development (4th-8th)

Students compare common food products with a complete livestock feed, checking for protein, sugar, starch, fat, and vitamin C. They dissect a chicken wing, comparing it with the parts and functions of the human arm. Scale animal models are used to help learn about livestock weight estimates and weight gain.

Animal Technology (7th-8th)

Not available at this time.

Animal Welfare (7th-8th)

Not available at this time.

Agriculture Measures Up- Using Mathematics in Agriculture (5th-8th)

Students compute the areas and calculate the perimeters of enclosures as they study the most economical use of fencing. A small jar of shelled corn is used to simulate a grain bin as students learn to estimate weights, numbers, and volumes. Students determine the amount of fertilizer needed for the lawn of a problem home after they have calculated the areas of lot, house, garage, and driveway.

Biological Plants (7th-10th)

The Biological-Plants Kit contains a five-day lesson plan including: Plant Identification, Asexual Plant Reproduction, Sexual Plant Reproduction, Photosynthesis, Plant Conductive Tissues and Soil pH Analysis.

Biotechnology Applications (7th-12th)

This kit provides teachers and students an opportunity to get "hands-on" learning experiences with one of today's hottest topics—biotechnology. The kit contains all the materials needed to conduct each activity of the kit. A teacher's guide outlines each lesson and activity, and correlates the lessons with Illinois Learning Standards in Science, Social Studies, English and Language Arts, and Mathematics. This kit contains a CD-ROM (can be purchased separately) with multiple PowerPoint presentations.

Careers in Horticulture (7th-12th)

The curriculum in the Careers in Horticulture kit is multidisciplinary, all inclusive, and is designed to help students learn about the wide variety of opportunities in the Horticulture industry. Students will become familiar with the diverse career opportunities, have a better understanding of the sales process associated with landscaping, be able to calculate the amount of materials needed for landscaping and understand the importance of color when drawing a landscaping plan. This kit offers engaging lessons addressing Illinois learning standards in English, Math, Science, and Social Studies.

Crop Technology (7th-10th)

This kit teaches students to understand the careers and the route involved in raising a bushel of corn to food and corn products sold to consumers. Students will also have the opportunity to practice marketing skills in buying/selling food products.

Dairy Cow Capers- Exploring Dairy Farming and Nutrition (Pre-K-12th)

Explore dairy farming in action. Through videos and books, experience the life of dairy cows on the farm and see a veterinarian at work. Follow the path milk takes as it travels from cow to you. Learn about the nutritional value of dairy products; and, try your hand at making butter. This kit may be used alone or as a perfect supplement to the Dairy Delights kit.

Dairy Delights-Good Nutrition from Milk (K-8th)

This kit provides hands-on experiences for students as they become involved in demonstrating the processes of using milk and acids, enzymes, bacteria, heat, and cold to make glue, cottage cheese, yogurt, and ice cream.

Dairy Magic (3rd-8th)

Hands-on exercises let students explore the processes of using milk, acids, 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 they'll learn about issues of supply and demand in the dairy industry. Kits include a printed activity guide in a 3-ring binder.

Eggsploring Poultry-Cracking the Egg (K-6th)

Crack the mystery of eggs and see a miracle in 21 days! Eggsploring Poultry is filled with books on embryology, videos, poultry facts, games and other hands-on activities.

Feedstuff Education (K-6th)

Feedstuff Education Kit is designed to assist in the instruction of feeds and animal nutrition. This instructional material includes 27 commonly used feed ingredients and 6 processed feeds packaged in protective plastic jars. The kit includes an instructor's CD-ROM. Term quizzes, keys, and student handouts also are included.

Genetics-Growing Better Everyday (6th-8th)

Colored paper clips are used to illustrate genes and chromosome chains as students learn how traits are inherited. A germination study of seeds which produce albino or normal green corn plants helps students understand genotypes and phenotypes.

Getting to the Core-Apples and Orchards (Pre-K-8th)

How do apples grow? Where do all the varieties of apples come from? Learn the answers to these questions and more. Take an inside look at apples and their history. *Getting to the Core: Apples and Orchards* includes hands-on activities and games, things to make and things to eat, videos, posters, and books.

Hydroponics (7th-10th)

Kits include all the materials needed to set up a temporary hydroponics system. Like the other kits, a teacher's manual, student worksheets and learning standards are included. Students will grow plants with a nutrient water solution and determine pH levels of a nutrients solution and learn more about this type of horticulture.

Horticulture Science (7th-10th)

Horticulture is a growing industry, especially in urban areas. This kit will give students the opportunity to learn more about Horticulture science. Students will learn about plant taxonomy. They will be able to learn about growing media in horticulture while experimenting with different growing medias. Students will also learn more about plant breeding, genetics and how biotechnology is used in horticulture.

Illinois Magic (3rd-12th)

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 more about different businesses that were started in Illinois.

Insect Magic (4th-8th)

The curriculum in Insect Magic will bring the life cycle of insects into your classroom! This kit provides hands-on experiences for students as they become involved in conducting experiments on how integrated pest management is applied in agricultural and non-agricultural settings. They will learn about Boll Weevil beetles that destroyed many crops, the impact of insects on crop production, mapping exercises, butterfly migration patterns. Students track a day in the life of an insect and learn about wingspan, life cycles, anatomy, and social hierarchy patterns of common insects. Insect specimens are included with this kit.

Insects-Agriculture's Friends or Foes (K-8th)
Students study the parts of a grasshopper and compare it to close relatives, study and compare honeybee queens, drones and workers; and study the role of the honeybee in plant pollination.

Machine Magic (4th-8th)
Students will learn about the history of farm machinery and the impact of modern farming techniques on families and communities. They'll also learn how inventors John Deere and Cyrus McCormick helped shape modern agriculture. Hands-on exercises let students identify machinery parts and estimate farm machinery costs.

Physical Agriscience (7th-10th)
The Physical Agriscience Kit contains a five day lesson plan including: Heat Energy, Electromagnetic Spectrum, Solar Energy, Mechanical Advantage, Electrical Energy and Energy Conservation. This kit also contains the Teaching Manual, 10 Student Manuals, Student Self Guided Computer Disk and all materials and supplies.

Plant Magic (4th-8th)
This kit offers problem-solving activities in plant propagation, production, and processing. Students will conduct experiments to learn about plant differences and plant ecosystems. They'll also sequence plant products, research the discoveries of George Washington Carver, and look at the impact of crops on the national economy.

Poultry Magic (4th-8th)
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.

Pondering Pizza- A Slice of Agriculture (K-6th)
Pondering Pizza provides a unique way to learn about food, plants, and animals. By looking at a slice of pizza, users will learn how all the ingredients begin on farms, are processed, distributed, and made into a tasty meal. Students will explore Planet Pizza via video and visit a real "pizza farm." This kit includes a pizza fractions game and many other resources.

Protein Providers- The Suberb Soybean (K-8th)
Students examine the effect of water on seeds, learn the parts of seeds, and compare monocot with dicot seeds and plants. This kit also includes activities to study the effects of temperature variations on seed germination and plant growth and investigate the many uses of soybean products in our lives.

Pumpkin Patch- A Vine Through Time (K-6th)
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 year's crop. The Pumpkin Patch contains posters, books, hands-on activities, recipes, and fascinating pumpkin facts.

Rain or Shine- Weather's Effect on Agriculture (K-8th)
Students build a terrarium to observe the water cycle and compare the growth rates of three types of plants. Students build growth chambers to observe how various light colors influence plant growth. They use varying fertilizer rates in an attempt to grow larger, healthier plants.

Seasons On the Farm (Pre-K-3rd)
The lessons in this kit will help students understand how agriculture revolves around the seasons and how the farm brings us many lessons about winter, spring, summer and fall. Students will learn that while we go to the store to purchase our food, it begins with plants or animals raised on farms. Different seasons provide us with a variety of foods and other products. Through this kit, students will discover that they all depend on agriculture every day of their lives.

Secret Agent Worms- Stormwater (K-6)
This colorful, exciting science kit gives students a chance to create their own rainstorm on a miniature city, the City of Ooze. The kit also includes pretend contaminants that students sprinkle on the city—powdered fruit drink mix ("pesticide"), cake crystals ("fertilizer"), cocoa mix ("dinosaur manure"), and soil (eroding soil). Students create a rainstorm on the city and observe how storm water run-off picks up the pretend contaminants and carries them into the storm sewer and directly to a lake. This demonstration is fun but dramatic in showing how storm sewers carry water and pollutants directly to lakes and rivers without going through a treatment process to clean the water.

Soil Magic (4th-8th)
Soils are alive, as students will discover through the lessons in this kit. Students will learn to conduct experiments in soil pH, create soil profiles, and understand the components of soils. They will also unveil the history of crop rotation and dig into the Dust Bowl.

Soybeans

The Soybean Agriscience Kit introduces students to the science of polymers and oils by providing science experiment materials which students can use to produce everyday products from soybeans. Students will make salad dressing, lip balm, hand cream, candles, crayons, and otner everyday items such as ink and glue from soybeans.

Unraveling Fibers- More than Just Clothes (K-8th)

Unravel the mysteries of the fibers that make up our clothing and a multitude of other items. Through hands-on activities, books, a video, and fiber samples, discover the origins of many natural fivers such as cotton, wool and silk. Try your hand at spinning and weaving and learn how fibers are woven into our daily lives.

Videos, CD's, Books, Misc. Resources

ABC's Illinois Agriculture (Coloring Book) (K-2nd)

This coloring/activity book comes in packages of 25. Please indicate the quantity desired and give 1 to 2 weeks delivery time.

All About Eggs From Magic to Market (Video)

17-minute video by California Egg Industry Association

The Amazing Soybean (Teachers Guide, Video, CD-Rom Set) (5th-8th)

This set teaches the importance of a soybean. A teacher's guide is included to provide more extensive information and new avenues for discussion in areas covered in The Lean Bean Soy Machine Video and the Operation Soybean CD-Rom. Topics covered include; history of the soybean, role of the soybean, production and economy of the soybean, environmental benefits, and products derived from soybeans.

The Art of Cheesmaking (Video)

A 17-minute video training tape. This video takes an in-depth look at the basic cheesemaking procedure and the variations that result in over 250 different types, varieties, and styles of Wisconsin cheese.

Bread Comes to Life (Video) (Pre-school-8th)

This 22-minute video tells about the sowing, growing, reaping, threshing, milling, mixing, kneading, shaping, rising, baking, and breaking of bread - loaf after loaf. Wheat, flour, yeast, and dough - they all play a part in the craft and the art of the bread-breaking show!

Chickens Aren't the Only Ones (Video) (K-4th)

What other animals hatch from eggs besides chickens? In Reading Rainbow: Chickens Aren't the Only Ones, young viewers will find there are many, including loggerhead turtles. The multi-award winning series features one picture book per episode, field trips and other activities related to the topic, and the review of several books with similar subject matter by a panel of youngsters.

Chosen Fields: Exploring Careers in Agriculture (CD Rom & Video) (4th-10th)

This video helps students get a taste of careers in agriculture. It highlights careers in agricultural engineering, animal behavior, animal nutrition and landscape design. It also includes a CD-Rom with 15 classroom lessons to explore careers in agriculture.

On the Farm Series (6 videos on 2 DVDs) (K-3rd)

Summer on the Farm 1, Summer on the Farm 2, Winter on the Farm, Fixen' on the Farm, Everyday is Earth Day on the Farm, and Do Pigs Scratch Their Backs.

Simple and Complex Machines on the Farm (DVD) (3rd-6th)

Includes a teacher's guide. 28 minutes.

From Tree to Table: Journey of a log. (DVD) (4th-12th)

Follow the harvest of maple oak and cherry to the sawmill and then to a furniture maker. 28 minutes.

Babies to Birth (DVD) (Pre-K-4th)

Award winning favorite for the elementary teacher. Includes mammals, birds, and insects.

Fields of Energy (DVD) (7th-10th)

Helps students and educators better understand the breadth and importance of the renewable energy industry. It has twelve unique content segments. An online Teacher Guide is also available. It is geared for the grades 7-10 science classroom, but certainly has relevant applications for social studies and agricultural education. Segments include: Ethanol: Fuel from Corn (8:47 minutes), Biodiesel: Fuel from Soybeans (8:36 minutes), Energy from Cellulose (8:15 minutes), Energy from Turkey Litter (8:18 minutes), Gasification: Energy from Biomass (2 minutes), Wind Energy: Terrific Turbines (3:24 minutes), King Corn (3:11 minutes), Super Soybeans (3:07 minutes), The Carbon Cycle (2:57 minutes)Careers in Agriculture (9:49 minutes)

Cows Need Doctors Too (Video) (3rd-8th)

This 13-minute video shows the dairy veterinarian in action on a farm. It illustrates the health needs of a cow from birth on. Highlighted throughout is the care and management of a dairy herd in relation to the production and processing of dairy products that ultimately reach the consumer.

Farm Facts Lesson Plans (Teacher Guide, Lessons) (4th-6th)

Lesson plan activities utilize the Farm Facts publication to teach students the scope of agriculture. Farm Facts contains pages of colorful graphics illustrating the American agriculture story with details on agriculture production, trade, and economics as well as today's consumer.

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Bringing Biotechnology to Life (DVD & Teacher's Guide) (7th-12th)

The 50-page teacher's guide includes three separate lessons intended to be used before, during, and after the DVD. Intended to be used as a total teaching package for introducing and understanding the basics of biotechnology. The lesson includes 6 hands-on, minds-on activities to engage middle school students. The activity titles include It Is Nothing New, Introduction to Biotechnology and Genetic Engineering, Timeline of Biotechnology, Find Your Own DNA!, Gel Electrophoresis, The Issue of Labeling and Food Safety.

Ag & the Environment (Teacher's Guide) (6th-9th)

This guidebook provides information and lesson activities that teachers can use to incorporate topics on agriculture and the environment into curricula for grades 6 through 9. The six chapters focus on issues, food safety, pesticides and pest management, water quality, wetlands, and endangered species. Each chapter has a classroom activity and resources for further exploration.

Illinois Agriculture: Innovation & Invention (CD-Rom) (4th-12th)

This CD-Rom will allow students to learn more about Illinois Agriculture over the years.

Producers, Pigs, and Pork (Curriculum) (3rd-6th)

This kit is a set of five comprehensive lessons and teaching tools that address our food supply system and highlights pork production. This set includes a teacher resource guide, storybook, lesson presentation DVD, and resource materials CD.

Pumpkins, Pumpkins, Pumpkins (Poster)

Illustrates the growth of a pumpkin and different uses for pumpkins.

Nutrition Expedition (Curriculum) (2nd-3rd)

Transport your students back to the time of castles and dragons where they learn the basics of healthy eating from Little D the Five-Food-Group Dragon and his Royal Food Family friends. Ten story-based activities that help students develop reading, writing, listening and speaking skills support MyPyramid and supplement your language arts program.

Nutrition Expedition (Curriculum) (4th-5th)

Hold on and get ready for a trip around the globe with expert sleuths Arianna Bones and Marcus Muscleman. Students solve nutrition mysteries to learn about healthy eating in Antarctica, on the Orient Express and at other exciting venues. During this eight-activity program that supports MyPyramid and supplements your language arts and health curricula, students record their global adventures in Nutrition Journals.

SLICE Student Lessons in Consumer Education (Curriculum) (K-6th)

Classroom and activities designed to help students understand the role of a farm/ranch in providing food and products for the consumer.

Careers in Agriculture (Resource Bag) (6th-12th)
Includes resources to use when teaching about careers in agriculture. Includes a set of 40 Career cards that describe jobs in the industry.

Soy Sleuth Education Kit (Curriculum) (3rd-8th)
This kit focuses on health, science and social studies. The lessons in the kit not only incorporate a soybean connection, but they encompass core educational values adapted from the national education standards.

Where Pork Comes From (Curriculum) (K-4th)
This series teaches students the "farm to table" story. The program includes a short video, teachers guide, activities and games for students. Four key areas are covered in this set: pork producers care about the animals they raise; pork is learner today and is part of a healthy, balanced diet; many other products we use every day come from pork; and many different industries rely on the pork production industry.

Ten Things Kids Want to Know About Farming (Video & Lesson Plans) (4th-6th)
The video and lesson plans in this set take students on a series of field trips to farm and ranch locations throughout the United States, offering a firsthand view of what happens to produce the food and clothing we use every day.

Illinois Agriculture Magazines (Ag Mags) (4th-6th)
Ag Mags are 4-page, full-colored news magazines and each issue covers a specific agricultural topic along with math, science, social studies, and language arts activities. The format is kid-friendly. Ag Mags come in packages of 30. Order any issue available, read them in class, send them home, or keep them from year to year. Ag Mags can be viewed online at www.agintheclassroom.org

Topics:

Apples	Corn	Horse	Pizza	Sheep	Technology
Beef	Dairy	Horticulture	Pork	Specialty Crops	Trees
Biotechnology	Earth Day	Illinois	Poultry	Soils	Water
Careers	Energy	Nutrition	Pumpkin	Soybeans	