

Other Kits (Grades 4—12)

Animals in Agriculture—Their Growth & Development— 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 part and functions of the human arm. Scale animals models are used to help learn about livestock weight estimates and weight gain.

Biotechnology Application in Agriculture— This kit provides teachers and students and opportunity to get hands-on learning experiences with one of today's hottest topics—biotechnology. Students will learn about genetic engineering, selective breeding, build DNA models, conduct an electrophoresis lab as well as get a glimpse of careers in the field of biotechnology.

Horticulture Science— This kit covers the major aspects of science. Students will become familiar with plant taxonomy, and they'll learn how to grow plants in soil and soil-less media. They'll get introduced to plant pests and how to control them. Lab exercises help students understand plant breeding and genetics. A section is devoted to the impact of biotechnology on ornamental horticulture, and students will learn how to conduct DNA analysis to match offspring to parents.

Horticulture Careers— This kit introduces students to the different areas of the horticulture field. Through hands-on exercises and activities, students learn about a variety of careers in horticulture, including landscape design, turf management, retail industry, marketing, and new product development. Activities and lessons are designed to help students understand how they can apply skills and interests they already have in today's horticulture industry. They will become familiar with the culture, terms, and responsibilities in each employment area.



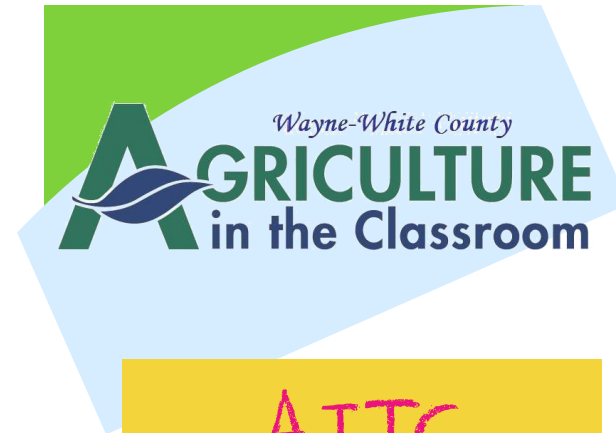
Agriculture Measure Up— Students compute the areas and calculate the perimeters of enclosures as they study the most economical use of fencing. A small jar of shelled corn is used to simulate a grain bin as students learn to estimate weights, numbers, and volumes. Students determine the amount of fertilizer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

Rain or Shine—Weather's Effect on Agriculture— Students build a terrarium to observe the water cycle and compare 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.

Protein Providers— 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.

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

Hydroponics— Includes all the materials needed to set up a temporary hydroponics system. Students will grow plants with a nutrient water solution and determine pH levels of nutrients solution.



In addition to the kits listed in this brochure, the Wayne and White County Agricultural Literacy Program has a wide variety of books, videos, DVDs, and resource materials available for loan to teachers. Please contact the Ag Literacy Coordinator at agliteracy@waynecfb.com or 618.842.3342 for more information or to borrow an item.



Wayne/White County Agricultural Literacy Program

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mAGic Kits (Grades 4—8)

mAGic kits are designed to teach students about agriculture through hands-on activities and exercises. The kits meet learning standards for grades 4 to 8 in English, math, science, and social studies.

Insect mAGic—Students will learn about the impact of insects on crop production through a variety of lessons and activities. Mapping exercises let students follow butterflies on 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. The kit includes 3 math, 4 English language arts, 3 social studies, and 4 science lessons focused on the insects.

Plant mAGic—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. The kit includes 5 math, 3 English language arts, 4 social studies, and 3 science lessons focused on the plants.

Machine mAGic—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. The kit includes 5 math, 6 English language arts, 5 social studies, and 4 science lessons focused on the state of Illinois.

Dairy mAGic—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 a lifetime. They'll also dive into history, and they'll learn about issues of supply and demand in the dairy industry. The kit includes 3 math, 2 English language arts, 4 social studies, and 4 science lessons focused on dairy.

Soil mAGic—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. The kit includes 5 math, 2 English language arts, 4 social studies, and 4 science lessons focused on soil.

Poultry mAGic—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. The kit includes 3 math, 4 English language arts, 2 social studies, and 3 science lessons focused on poultry.

Illinois mAGic—This kit is a multidisciplinary, all-inclusive curriculum that is designed to teach students about agriculture through active discovery. Students learn about a variety of topics ranging from the prairie landscape to the Chicago stockyards, the Lincoln-Douglas debates, and the forests of Southern Illinois. The kit includes 8 math, 10 English language arts, 11 social studies, and 7 science lessons focused on the state of Illinois.



On the Farm Kits

Note: The following kits are designed for Pre-K—3rd grade students. Some activities may be adaptable for older students as well.

By using these kits, 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 careers in this chain of events. Through these kits, students will discover that they all depend on agriculture every day of their lives.

Adventures Around the Farm—Whether living in the country, a small town, or a big city, people depend on farms for food, clothing, and many other things used every day. Farmers produce crops such as fruits, vegetables, nuts, and grains. They also raise livestock such as cattle, pigs, chickens, and sheep. Without the crops and livestock that come from farms, we would all go hungry. The lessons and materials in this kit will help students 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.

Seasons on the Farm—In Illinois we have a climate that is made up of four very different seasons. The earth moving around the sun makes the seasons. The lessons and materials in this kit will help students understand how agriculture revolves around the season and how the farm brings us many lessons about winter, spring, summer and fall.

The Wheat We Eat—Wheat has been grown for thousands of years as a food source for humans. Today's farmers use modern machinery to plant and harvest these valuable seeds. The main steps for doing so are the same today as they were for our early ancestors. Teach your students how wheat is grown, milled, and then made into foods worldwide. Using the resources and lessons in this kit, teach about the people who make bread, the places where bread is made, and the different ways to make bread, pasta, and many other foods!

Pigs on the Farm—Hog production in the United States has changed dramatically over the years. Farmers used to feed their pigs slop, a mixture of leftovers from the farmhouse. Pigs were known for being dirty animals because they wallowed in the mud. Today, farmers feed their animals a balanced diet, many times in a temperature controlled building. The lessons and materials in this kit will help students understand what pigs are, what farmers do to take care of pigs, and how people benefit from pigs.

AgriLearning Kits

Dairy Cow Capers: Exploring Dairy Farming and Nutrition—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.

Dairy Delights-Good Nutrition from Milk—This kit provides hands-on experiences for students as they become involved in demonstrating the process of using milk and acids, enzymes, bacteria, heat, and cold to make glue, cottage cheese, yogurt, and ice cream.

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



Pondering Pizza: A Slice of Agriculture—Take a look at a slice of agriculture...a pizza slice. Learn how all the ingredients on your pizza begin on farms, are processed, distributed and made in to 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, poster, and curriculum, ponder the wonders of pizza.

Pumpkin Patch: A Vine Through Time—Discover the wonders of pumpkins. Watch 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.

Unraveling Fibers: More Than Just Clothes—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 fibers such as cotton, wool, and silk. Try your hand at spinning an weaving and learn how fibers are woven into our daily lives. Use the magnifying lenses to take a closer look at the textile industry.