# Additional Lessons from the Agriculture Literacy Curriculum Matrix

The Agricultural Literacy Curriculum Matrix is an online, searchable, and standards-based database for K-12 teachers. The Matrix contextualizes national education standards in science, social studies, and nutritional education with relevant instructional resources linked to Common Core Standards. Below are a few lesson plans that could be used in conjunction with the Literacy Project. Find these lessons and more by searching the **lesson name** on the Curriculum Matrix at CoAgClassroom.org.

## Grades K-2

**Animals on the Farm:** Students discover that farm animals produce different types of products.

**Milk or Meat? Beef or Dairy?:** Students identify the differences between beef and dairy cattle and determine the commodities produced by each type of cattle.

**Agriculture Pays:** Students discover that agricultural careers are interconnected and that agriculture influences many parts of their daily lives.

## Grades 3-5

**Beef Basics:** Students explain the value of the beef cattle industry, including the products cattle produce, the production process from farm to plate, and how cattle can utilize and obtain energy from grass and other forage.

**Corn an A-maizing Plant: Food, Fuel, and Plastic:** Students examine the growth, composition, history, and uses of corn through a close reading activity, discussion of renewable and non-renewable resources, and hands-on exploration of bioplastics made from corn.

**Find Your Future Career:** Students discover the variety of agricultural careers available and consider their career paths in terms of economics, interests, and suitability to their personal talents and characteristics.

## Grades 6-8

**The Remarkable Ruminant:** In this lesson, students will follow the farm to fork process of producing beef, learn how cattle and other ruminants convert grass into nutrient-rich foods such as milk and meat, discover ways cattle recycle food waste, and identify careers in the beef cattle industry.

**Energy and Biofuels:** Students explore the process of fermentation in the creation of ethanol and observe the role enzymes play in the fermentation of starch.

**Growing America:** Students determine corn anatomy and function of plant parts, identify stages of plant development in corn, and research how temperature plays a role in corn growth as they calculate growing degree units (GDUs) for a region.

**Career Trek: From Farm-to-Fork:** Explore the farm-to-fork process of food through the lens of careers. Students will make a career web to see the variety of careers and skill sets necessary to our food system. They will check their understanding by playing Career Trek—a board game that requires students to identify careers in agriculture and natural resources.

## Grades 9-12

**A Tale of Two Burgers:** Beef and Plant-based Protein: Students compare the components of beef and plant-based burgers by determining the production and processing methods of each product; evaluate the ingredients and nutritional differences between beef and plant-based products; and discuss different points of view in the agricultural industry concerning plant-based proteins and traditional beef. This lesson covers a socioscientific issue and aims to provide students with tools to evaluate science within the context of social and economic points of view.

**Carbon Hoofprints: Cows and Climate Change:** Students explore the carbon cycle and evaluate the carbon footprint of cattle. Using critical thinking skills, students will use the Claim, Evidence, and Reasoning model to determine the effect of cows' methane production on the environment and investigate the extent cattle contribute to climate change.

**Energy and Biofuels:** Through a series of activities, students explore fermentation and ethanol production, observe the role of enzymes in fermentation, analyze nutrient values of dent corn, and discover how biofuels are made from plant oils.

## Grades 6-12 Kit

**Discover Agriculture Careers Bundle:** Explore the wide world of agricultural careers with this comprehensive kit designed for grades 6-12. From farming and ranching to cutting-edge research in biotechnology and sustainability, this kit highlights a range of exciting career paths in agronomy, animal science, agricultural engineering, food science, agribusiness management, environmental conservation, and more. The kit includes a folded poster, 48 career cards, and 100 Discover Agriculture stickers. Bulk pricing is available, and individual resources can also be purchased. These materials complement the Discover Agriculture Careers website and are perfect for enhancing classroom lessons, which can be found on the Agricultural Literacy Curriculum Matrix.