

SCIENCE & AGRICULTURE

Lessons and resources for grades K-2



Iowa Agriculture
Literacy Foundation



Agriculture is a topic that students can easily connect to because they encounter it often. Nearly everything we eat, wear, use -- even the fuel that powers the cars and buses we ride in -- comes from plants and animals grown on farms. Agriculture provides perfect real-world connections and makes learning relevant to students.

Agriculture connections in science are abundant! Agriculture relates to **physical science** (How does the sun's energy affect the soil?), **life science** (What do plants and animals raised on farm need to grow?), and **earth science** (How does weather impact farming?) , and **engineering design** (How can science and technology improve food production?).

FEATURED K-2 LESSONS

Plants: Structures, Processes & Needs

- [Apples and Pumpkins: Compare and Contrast](#)
- [Seed Germination Necklaces](#) (seeds, plant needs, structures, & germination)
- [Soybean Germination and Growth](#)
- [Photosynthesis and You](#)

Animals: Structures, Processes & Needs

- [Animal Life Cycles](#)
- [Bees: Life Cycle and Pollination](#)
- [Farm Animals and their Babies](#)
- [Life Cycle of a Chicken](#)
- [Inside the Egg, Hatching Chicks](#)

Energy & Matter

- [Liquids & Solids](#)
- [Making Butter](#)
- [Soil Comparison](#)

Weather, Seasons, & Natural Resources

- [Farming through the Seasons](#)
- [Caring for the Land](#) (soil erosion and conservation practices)
- [The Soil We Grow In](#)
- [Weather Watchers](#)
- [Water Use](#)
- [Water Pollution](#)
- [Weather on the Farm](#)

FEATURED RESOURCE

My Family's Farm
book series



These books are great for reading aloud in a lower elementary classroom. Each book shows a real Iowa farm kid and their farm. Request copies by emailing info@iowaagliteracy.org.

WHERE DOES AGRICULTURE FIT INTO THE IOWA CORE STANDARDS?

Kindergarten:

- K-PS3-1. Make observations to determine the effect of sunlight on Earth's surface.
- K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.
- K-ESS2-1. Use and share observations of local weather conditions to describe patterns over time.
- K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.
- K-ESS3-1. Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.
- K-ESS3-3. Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.

1st Grade:

- 1-LS1-2. Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.
- 1-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.
- 1-ESS1-2. Make observations at different times of year to relate the amount of daylight to the time of year.

2nd Grade:

- 2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.
- 2-PS1-2. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.
- 2-LS2-1. Plan and conduct an investigation to determine if plants need sunlight and water to grow.
- 2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.
- 2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.
- 2-ESS2-1. Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.
- 2-ESS2-2. Develop a model to represent the shapes and kinds of land and bodies of water in an area.

The Iowa Agriculture Literacy Foundation serves as a central resource for educators and volunteers who want to teach Iowa's students about agriculture. Information about additional resources, including grants, professional development, and outreach opportunities is available at: www.iowaagliteracy.org.