

NEBRASKA
AGRICULTURE
IN THE CLASSROOM
NEBRASKA FARM BUREAU FOUNDATION

Out-of-School

Program Catalog



Program Overview

This resource is intended to provide a framework that showcases what the Nebraska Agriculture in the Classroom (AITC) program offers for out-of-school programs. In this catalog, you will find lessons categorized into themes. The themes are to help breakdown lesson ideas for your camp or club. Each lesson features a hands-on activity to engage students.

To participate with Nebraska Agriculture in the Classroom in an out-of-school setting, program directors can:

1. Pick one theme and participate in each activity in the order listed in this resource.
2. Pick and choose a lesson across each of the themes.

This resource gives program directors the flexibility to hand-pick the lessons and activities for their own program.

How long does a visit take?

For out-of-school programming opportunities, there are three options:

1. Drop-in Visits
 - Best for after-school programs with 30 minutes to 1 hour available.
2. Half Day
 - Best for summer programs with the option to do multiple activities during a 3–4 hour time slot.
3. Full Day
 - Best for summer-programs with the option for an Nebraska Agriculture in the Classroom team-member to spend the entire day at one location and bring multiple activities.

If you do not see what you are looking for, contact an AITC team-member directly to discuss other options.

Email: foundationforag@nefb.org

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Program Themes



S.T.E.M.

This collection of lessons explores the connections between science, technology, engineering, math, and agriculture. Students will have the opportunity to work with solar power and drones.



The World Around Us

This collection of lessons encourages students to explore the connection between Nebraska agriculture and the products used at school and at home each day. Students will explore different byproducts that come from the plants and animals that are grown in Nebraska.



Culinary Connections

This collection of lessons investigates what food plants and animals provide people. Students will have the opportunity to make some of their own food like butter, ice cream, and cheese!



Explore the Environment

This collection of lessons encourages students to explore the environment and ways that farmers and ranchers protect and conserve Nebraska's valuable resources. Topics such as water, soil, and air will be explored!



The Power of Plants

This collection of lessons explores the crops grown in Nebraska. Students will taste test different crops, plant seeds, and design a greenhouse!



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S.T.E.M.

Build-A-Barn

Students will learn about the basic needs of farm animals and then construct a barn that fits the needs of livestock. This lesson explores the topic of basic animal care in agriculture.

Farming for Energy: Solar Power

Students will design and construct a solar panel that produces electricity to power a fan. This lesson explores the topic of renewable energy such as solar power used in modern agriculture practices.

Farming for Energy: Wind Power

Students will construct a wind turbine that produces electricity to power a fan. This lesson explores the topic of renewable energy such as wind power used in modern agriculture practices.

Build it Better

Students will design a cattle corral system. This lesson explores how farmers and ranchers move their animals, specifically cattle, and provides students with the ability to gain insight and practice the skills to become an agricultural engineer.

Drones in High-Tech Farming

Students discover the science behind how a drone works and explore how drones are used in agriculture. Students will use a hairdryer and ping pong ball to mimic the technology behind how a drone flies.



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The World Around Us

Corn Plastic

Students examine the growth, composition, history, and uses of corn through a discussion of renewable and non-renewable resources. Students will create their own bioplastic out of corn products.

Farm Charm

Students will create a farm charm bracelet that will represent all the crops and livestock raised in Nebraska.

A Day Without Agriculture

Students explore the wide scope of agriculture creating a poster that identifies the variety of agricultural products and by-products they use in their daily lives.

Full of Beans

Students identify the variety of soybean uses for human consumption, livestock feed, and industrial products, explain how key historical events affected soybean production in the United States, and create a bioplastic made from soybeans.

Corn Bubbles

Students will explore different by-products that come from corn and use a few corn products to create a bubble solution to blow bubbles.



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Culinary Connection

Better Butter

Students will explore products that people receive from dairy cattle and learn how to make their own butter in a small container.

Ice Cream in a Bag

Students will discover the vast variety of products we receive from dairy cattle and learn how to make their own ice cream in a bag.

Cheesemaking: From Liquid to Solid

Students make fresh mozzarella cheese and discover the science (changing a liquid to a solid), art and craft involved in the development of specialty cheese.

Eggs: From Hen to Home

Students trace the production path of eggs, beginning on the farm and ending in their home and identify the culinary uses and nutritional benefits of eggs.

Enzymes and Bacteria are Whey Cool!

Students will study the science of amino acids, proteins, enzymes, and beneficial bacteria to explore the phenomena, “Why does each variety of cheese taste different when the ingredients are the same?”



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Exploring the Environment

Conservation, Preservation, Consumption

Students will use candy to explore the difference between conservation, preservation, and consumption and discover which word represents our farmers and ranchers

Cover Crop Monster

Students will discover uses for cover crops in Nebraska and practice planting cover crops in a nylon sock to create their own cover crop monster.

Exploring Textures in the Garden Part 1: Mosaics

Students explore living and nonliving things, determine how nonliving resources help sustain plant life, and experiment with visual art techniques through an examination of texture in the natural world. In this part of the lesson, students will create seed and soil mosaics.

Exploring Textures in the Garden Part 2: Garden Imprinting

Students explore living and nonliving things, determine how nonliving resources help sustain plant life, and experiment with visual art techniques through an examination of texture in the natural world. In this part of the lesson, students will be making clay imprints.

Exploring Textures in the Garden Part 3: Garden Colors

Students explore living and nonliving things, determine how nonliving resources help sustain plant life, and experiment with visual art techniques through an examination of texture in the natural world. In this part of the lesson, students will be coloring cloth with plant materials.



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The Power of Plants

Animal or Plant

Students investigate the sources of different foods by taking turns drawing pictures on a whiteboard to find the difference between foods originating from plants and foods originating from animals.

Desktop Greenhouse

Students investigate the importance of light to plants by creating a desktop greenhouse investigation and exploring the process of photosynthesis.

Plant Tops and Bottoms

Students identify where fruits and vegetables belong on the MyPlate diagram and describe the major parts of plants—roots, stems, leaves, flowers, and fruits—according to if they are produced on the top or bottom of a plant.

The Seed Match

Students investigate where food comes from, the parts of plants that we eat, and the difference between fruits and vegetables.

Corn Castles

Students identify what seeds need to germinate by planting their own corn seeds in a bag to watch them grow over time.