

AgBadging Field Guide

Explore What You Eat, Wear,
and Use Every Day



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This Field Guide Belongs To:



My Code Name:

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Do you want to change the world? Work in agriculture. It will be an entomologist who cures malaria. It will be a hydrologist who creates clean water for the world. It will be a plant breeder that will solve world hunger.

Keegan Kautzky, World Food Prize Foundation

Welcome to the AgBadging Field Guide

The AgBadging Field Guide will lead you through an exciting exploration of **agriculture**—what you eat, wear, and use every day. Throughout your journey, you will have the opportunity to earn five different badges. Each badge has a theme—Agriculture & the Environment, Plants & Animals, Food & Health, Technology & Engineering, and Geography & Culture.

Each theme has milestones that track your agricultural journey. The best part is that you get to choose your own milestones! This field guide has spaces for writing and drawing your observations and ideas as you explore the milestones. This is a great way to record your discoveries and share your journey with family and friends.

After you finish a milestone, record the completion date and get it signed off by an adult (a parent, grandparent, guardian, teacher, youth leader, etc.). The first page for each theme has a spot for you to write the date and the adult to sign their initials.

When you complete **three** milestones in a theme, you earn a special badge to recognize your accomplishment! While three are required to earn your badge, feel free to explore more milestones. Badges can be found at the back of this field guide. Place your earned badge on the first page of the theme.

After you collect badges for all five themes, you earn a completion badge and a Field Scout Code Name. Visit agbadging.agclassroom.org to receive your code name. **Please note:** You will not be asked to provide any personal information to receive your code name. Attach your badge to the title page of your field guide and write your code name below.

You can find more information about the milestones in this field guide, including videos, games, and activity tutorials by visiting agbadging.agclassroom.org.

Agriculture & the Environment Badge



Place
Completion
Badge Here

Agriculture is the science, art, or practice of **cultivating** the soil, producing crops, and raising livestock, and, in varying degrees, the preparation and marketing of the resulting products. **Ecosystems** include the plants, animals, and other organisms living in an area. Agriculture works with natural ecosystems. These living things interact with each other and with elements of the environment (the sun, soil, weather, and **climate**). Major types of ecosystems include forest, grassland, desert, tundra, freshwater, and marine.

Choose and complete at least **three** of the milestones below to earn the Agriculture & the Environment Badge.

It is impossible to have a healthy and sound society without a proper respect for the soil.

Peter Maurin, Philosopher and Social Critic



Seed Sprout (page 2)

Date Completed: _____ Adult Initials: _____



Weather Watch (page 5)

Date Completed: _____ Adult Initials: _____



Soil Investigation (page 8)

Date Completed: _____ Adult Initials: _____



Compost Bottle (page 11)

Date Completed: _____ Adult Initials: _____



Light Investigation (page 14)

Date Completed: _____ Adult Initials: _____

Seed Sprout

The **germination** process can be somewhat mysterious because it typically occurs underground where it cannot be observed. In order for a seed to germinate (sprout), it needs warmth, moisture, and air. Seeds remain **dormant** and will not germinate until the proper conditions are present. Moisture softens the seed's outer protective covering called the **seed coat**. The **embryo** pushes through the softened seed coat, and the new plant begins to grow. The roots push farther down and a shoot, which contains the plant's new stems and leaves, pushes up towards the surface.

Materials:

- ☐ Sandwich-sized resealable plastic bag
- ☐ 3 cotton balls
- ☐ 6 seeds (most bean seeds or popcorn kernels/seeds will work)

Instructions:

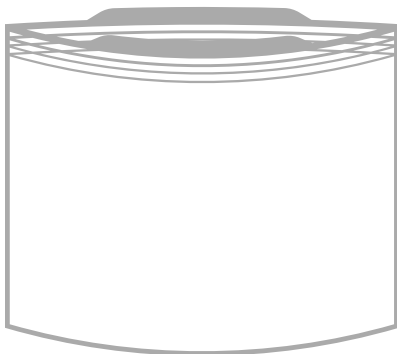
1. Read the paragraph above and circle what a seed needs to germinate.
2. Gather the materials to germinate seeds in a plastic bag.
3. Dip the cotton balls into water. Squeeze excess water out of the cotton balls so that they are wet but not dripping.
4. Add two seeds to each cotton ball, one on each side.
5. Place the seeded cotton balls into the plastic bag and seal the bag.
6. Record daily observations for 10 days by drawing pictures with descriptions on pages 3 & 4.
7. After observing the seeds and seedlings for 10 days, write at least one paragraph explaining why farmers need to understand the germination process.

Example

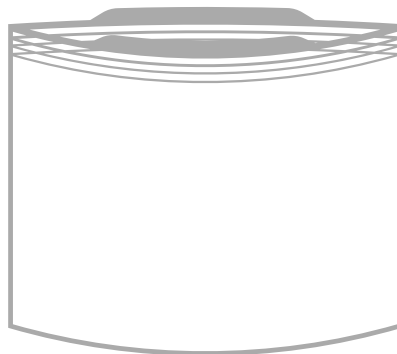


Seed Sprout Observations

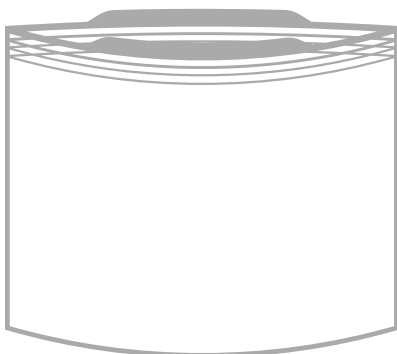
Day 1



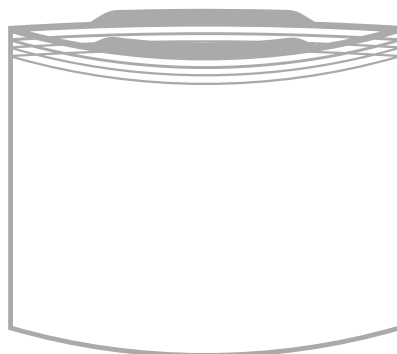
Day 2



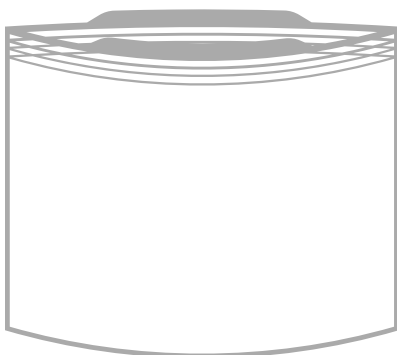
Day 3



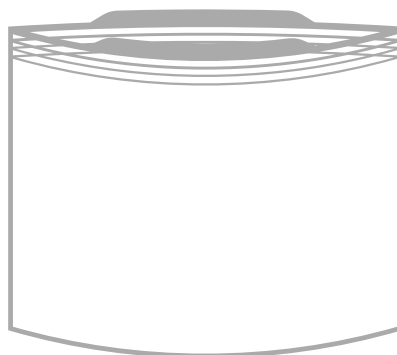
Day 4



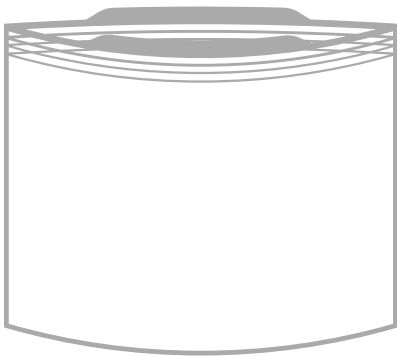
Day 5



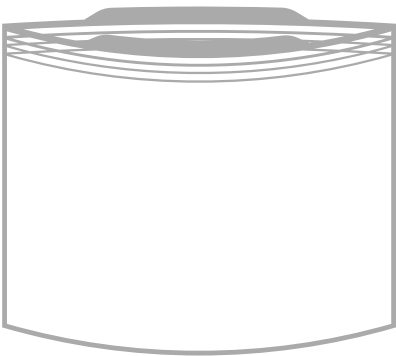
Day 6



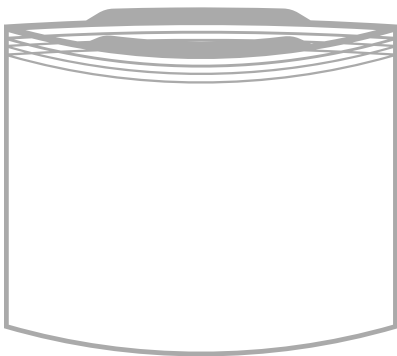
Day 7



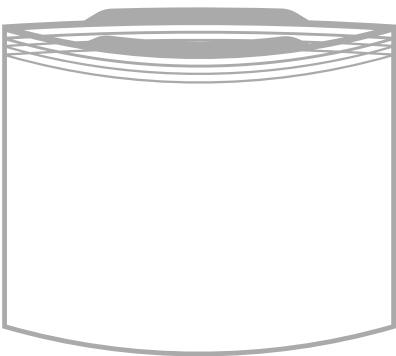
Day 8



Day 9



Day 10



Weather Watch

Weather describes the state of the **atmosphere**—the thick blanket of air surrounding the Earth—at a certain time and place. Weather is caused by heat, water, and air. Temperature, the amount and type of moisture in the air, and the strength of the wind are different components of weather. Severe weather events such as floods, extreme cold or heat, intense winds, hail, or tornadoes can negatively impact farms and ranches—the places where our food is grown or raised. Weather forecasters use science to predict what the weather will be on a particular day and can help farmers and ranchers make decisions on the farm. Severe weather warnings can help farmers and ranchers minimize damage to crops, animals, and property.

Instructions:

1. Observe the weather for one week. Make observations about what you see and feel, and watch your local weather reports on the news or a weather app. Record your observations on page 6.
2. On page 7, record the date, time, wind speed, wind direction, atmospheric pressure, air temperature, humidity, and precipitation on a daily basis.
3. After observing the weather for one week, make a video of yourself reporting the weather you documented. In your weather report, explain how the weather could affect farms and ranches.



[illegible]

Weather Observations

Date	Time	Wind Speed	Wind Direction	Atmospheric Pressure	Air Temperature	Humidity	Precipitation

Soil Investigation

Soil is the foundation for **agriculture**. We need healthy soil to grow the plants we use for food, fiber/fabric, and shelter. Soil is composed of four elements—air, water, **organic matter** (decomposed material from once-living organisms), and non-living mineral particles (tiny pieces of weathered rock). There are many different types of soil and each is made up of different components. Soil is composed of three different types of particles that are classified as sand, silt, or clay.

Materials:

- | | |
|--|--|
| <input type="checkbox"/> 3 planting pots | <input type="checkbox"/> Lettuce seeds |
| <input type="checkbox"/> Potting soil | <input type="checkbox"/> Local soil |
| <input type="checkbox"/> Sand | |

Instructions:

1. Investigate the importance of the type of soil for plant growth by planting seeds in different types of soil.
2. Fill each of the three planting pots with a different type of soil—potting soil, local soil, and sand.
3. Plant three seeds in each pot about 1/2-inch deep and cover with soil.
4. Place the pots in a sunny place and water according to the instructions on the seed packet.
5. Over a three-week period, record observations on page 9.
6. After observing the plants for three weeks, write at least one paragraph on page 10 explaining why farmers need to understand the types of soil they are working with on their farms.





This image shows a full page of handwriting practice paper. It features multiple sets of horizontal dashed lines spaced evenly down the page, providing a guide for letter height and placement. The background is white, and there are no other markings or text present.

Compost Bottle

Decomposition is a fundamental process on which all life depends. Bacteria, fungi, and other microscopic organisms that live in the soil, air, and water are responsible for turning once-living plants and animals into **nutrients**. **Composting** takes advantage of microbial decomposition to turn farm, garden, and kitchen wastes into a nutrient-rich **soil amendment** (a material added to soil to improve it). Adding compost to the soil provides nutrients to plants, improves soil structure, and increases the water-holding capacity of the soil.

Materials:

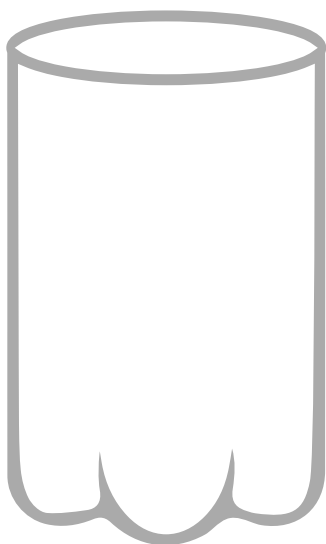
- ☐ 2-liter bottle with lid (cleaned and dried)
- ☐ Soil
- ☐ Dried leaves or grass clippings, and food scraps (egg shells; banana, potato, or apple peels; fruit/vegetable scraps; CAUTION: no meat or dairy)
- ☐ Water spray bottle
- ☐ Scissors or utility knife

Instructions:

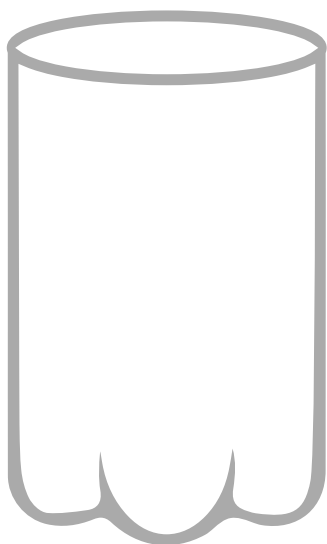
1. Have an adult help cut the top 4.5 inches off of the bottle with scissors or a utility knife.
2. Add layers of soil, dried leaves or grass clippings, and food scraps to the bottle until it is half full. Spray each layer with water to moisten before adding the next.
3. Put the top of the bottle upside down into the container.
4. Place the compost bottle in a warm location.
5. Keep the contents moistened and mix 1-2 times a week.
6. After observing and recording the changes to the materials in the bottle for four weeks on page 12, write at least one paragraph on page 13 explaining why farmers may add compost and other organic materials to their fields.

Example

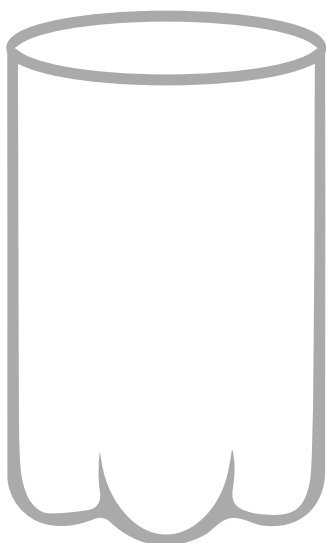




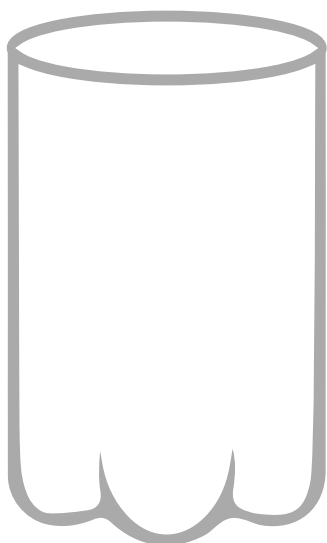
Week 1



Week 2



Week 3



Week 4

This image shows a full page of primary-ruled paper. It features multiple sets of horizontal dashed lines for writing, each set consisting of a solid top line, a dashed middle line, and a solid bottom line. A wide yellow margin runs along the right edge of the page. The paper is otherwise blank, with no text or markings.

Light Investigation

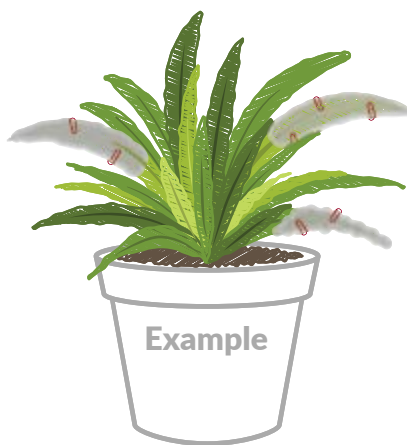
Green plants need light to perform **photosynthesis**. Photosynthesis is the process by which green plants transform light energy into chemical energy. Plants use the energy of light to convert carbon dioxide and water into sugar (glucose) and oxygen. Plants make their own food using photosynthesis. Plant leaves are the main site for photosynthesis to take place.

Materials:

- ☐ House plant
- ☐ Aluminum foil
- ☐ Paper clips

Instructions:

1. Investigate the importance of light to plants by comparing leaves that are exposed to light and leaves that are not.
2. Observe your plant on Day 1 and draw a picture of it on page 15.
3. Cut aluminum foil into small pieces that will cover the plant's leaves.
4. Use paper clips to secure the foil pieces to several leaves. Allow some leaves to stay uncovered.
5. Place the plant in a location with indirect light for five days.
6. After five days, remove the paper clips and foil.
7. On Day 5, draw a picture of your plant on page 15. Observe the differences between the leaves exposed to the light and the leaves that were covered.
8. Write at least one paragraph explaining why it is important for farmers to understand the process of photosynthesis.





Leaf Observations

Plants & Animals Badge

Place
Completion
Badge Here

Early humans developed **agriculture** as an alternative to hunting and gathering. Since the **domestication** of plants and animals, humans have been experimenting with genetics, types of soil, **climate**, production practices, and harvesting to meet the needs of a growing population. Agriculture provides the food supply needed for the survival, growth, and health of humans and animals.

Choose and complete at least **three** of the milestones below to earn the Plants & Animals Badge.

Do what you love to do, and be around things that make you happy. The cows make me smile every day.

David Jackson, Bentwood Dairy, Texas



Agriculture and Me (page 17)

Date Completed: _____ Adult Initials: _____



Farm Tour (page 19)

Date Completed: _____ Adult Initials: _____



Life Cycles (page 20)

Date Completed: _____ Adult Initials: _____



Eating Plants (page 23)

Date Completed: _____ Adult Initials: _____



Pollinator Hotel (page 25)

Date Completed: _____ Adult Initials: _____

Handwriting practice lines consisting of 20 sets of three horizontal dashed lines.

Life Cycles

Farmers must understand the needs of the animals and plants they raise and grow at each stage of the animals' and plants' life cycle. All plants and animals have a beginning and ending to their life cycles. Baby animals grow into adult animals and can become parents. Animals are fed and cared for by farmers and ranchers according to the animals' needs and their stages of life. There are six stages in a plant life cycle—seed, **germination**, growth, reproduction, **pollination**, and seed spreading. A plant grown for food and fiber can be classified by how long it takes the plant to complete its life cycle. An annual plant has a life cycle of one year, the life cycle of a biennial is two years, and a perennial lives for many seasons.

Instructions:

1. Choose a crop or farm animal to research.
2. Draw a diagram of the plant's or animal's life cycle.
3. Explain the plant's or animal's life cycle to a family member or friend. Include reasons why it's important for farmers and ranchers to understand the needs of the animals and plants they raise and grow at each stage of the plants' or animals' life cycle.

Crop/Animal Research Notes

Handwriting practice lines consisting of 20 sets of three horizontal dashed lines.

Life Cycle of a

Eating Plants

The fruits and vegetables we eat come from parts of plants. Flowering plants have six main parts: roots, stems, leaves, flowers, fruits, and seeds. Beets, carrots, radishes, and turnips are examples of **edible** roots. Asparagus and potatoes are stems that can be eaten. Arugula, cabbage, lettuce, mint, spinach, celery, and rhubarb are edible leaves. Broccoli and cauliflower are flowers that can be eaten. Cucumbers, green peppers, apples, oranges, bananas, and strawberries are fruits because they are the part of the plant that contain seeds. Corn, wheat, peanuts, black beans, and sunflower seeds are examples of edible seeds.

Note: Not all roots, stems, leaves, flowers, fruits, and seeds are edible and some may even be harmful to humans if eaten. It is important to avoid eating parts of wild plants unless a trusted adult is confident that the plant parts are safe to eat.

Instructions:

1. Make a list of edible examples of the six main parts of a plant—roots, stems, leaves, flowers, fruits, and seeds.
2. Prepare a plant parts salad or other healthy snack to include each of the six main parts of a plant and share with a friend or family member.

Roots:

Stems:

Leaves:

Flowers:

Fruits:

Seeds:

Pollinator Hotel

A **pollinator** is an agent that moves pollen, whether it be wind, water, bees, bats, moths, or birds. Insects are among the most common pollinators. Many flowers grow flashy petals and produce unique smells to attract insect pollinators. These flowers trade sweet nectar and protein-rich pollen in return for the **pollination** service insects perform as they move from flower to flower. Insects don't just pollinate for fun; most are collecting food. A pollinator hotel provides nesting cavities for insect pollinators such as **solitary bees** and lady bugs. It is important to clean or replace nesting material every year to avoid diseases and parasites. If invasive bees are present in a pollinator hotel, the structure should be removed. Invasive bees may transmit diseases or become aggressive towards native bees. To learn more about invasive bees in your area, contact your local County Extension Office.

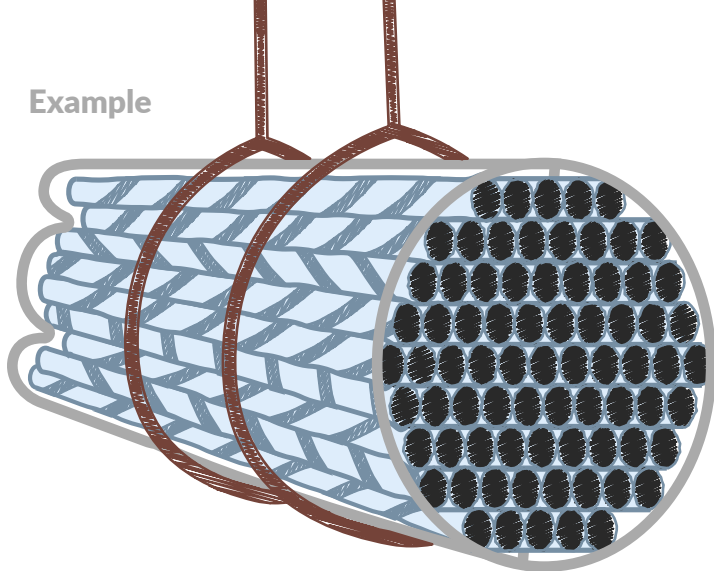
Materials:

- ☐ Paper straws or rolled up paper
- ☐ 16.9 oz plastic bottle (cleaned and dried)
- ☐ String
- ☐ Scissors or utility knife

Instructions:

1. Build a pollinator hotel to provide nesting cavities for insect pollinators such as solitary bees and ladybugs.
2. Have an adult help cut off the top of a plastic bottle using scissors or a utility knife so that the cut bottle measures about 5.5 inches long.
3. Cut paper straws so that they measure 5 inches long or roll paper around a pencil into a straw shape, remove the pencil, secure the paper with tape, and cut the rolled paper to be 5 inches long.
4. Insert the straws or rolled paper into the plastic bottle until the space is completely filled.
5. Tie two pieces of string around the outside of the bottle, one at each end of the bottle. Attach the ends of a third piece of string to each of the other strings to make a large loop.
6. Hang the pollinator hotel in a sunny spot in your garden and observe the different types of pollinator guests that visit.

Example



Pollinator Observations

Food & Health Badge



Healthful eating means eating a variety of nutritious foods. **MyPlate** makes recommendations about what people should eat. It features a dinner plate divided into four sections—fruits, grains, vegetables, and protein—with dairy pictured as a glass alongside the plate. Farmers and ranchers provide a variety of year-round food choices.

Choose and complete at least **three** of the milestones below to earn the Food & Health Badge.

Agriculture is the most healthful, most useful, and most noble employment of man.

George Washington, 1st President of the United States



MyPlate Menu (page 28)

Date Completed: _____ Adult Initials: _____



Farmers Market Finds (page 29)

Date Completed: _____ Adult Initials: _____



Crop Commercial (page 30)

Date Completed: _____ Adult Initials: _____



Produce Poster (page 31)

Date Completed: _____ Adult Initials: _____



My Energy Cycle (page 32)

Date Completed: _____ Adult Initials: _____

MyPlate Menu

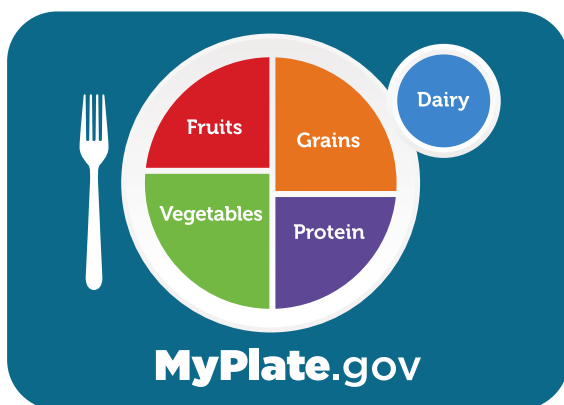
The five dietary food groups—fruits, vegetables, grains, protein, and dairy—are the building blocks for a healthy diet. MyPlate is a nutrition guide from the **USDA**. Nutrition guidelines recommend daily servings from each group for a healthy diet. Each day, we should eat from the five food groups. Farmers and ranchers in your state grow many different food crops that help you maintain a balanced and healthy diet.

Materials:

- ☐ Paper dinner plate
- ☐ Paper dessert plate
- ☐ Ruler

Instructions:

1. Use a ruler to draw a horizontal line and a vertical line through the center of the paper dinner plate to divide it into four sections.
2. Label the top left section “Fruits,” the top right section “Grains,” the bottom left section “Vegetables,” and the bottom right section “Protein.” Label the dessert plate “Dairy.”
3. Create a menu for breakfast, lunch, or dinner that includes food from all of the food groups.
4. Draw the food in the appropriate sections of MyPlate.



Farmers Market Finds

Food sold close to where it was grown or produced is considered “locally grown.” Buying food from local farmers is believed to be good for communities, the local **economy**, and the environment. Locally sold produce can be harvested at its peak ripeness and reaches the **consumer** faster and at a fresher stage. When consumers buy local, more of their money stays in their community. Buying locally-grown food also reduces **food miles** (the distance food is transported), which is good for the environment. Local food can be found at farmers markets, restaurants, **community supported agricultural programs** (CSAs), food co-ops, food hubs, food stores, and online.

Instructions:

1. Visit a farmers market and make a list below of the fresh food available.
2. Put a star next to any items on your list that you have never eaten.
3. Research recipes for one of your starred items.
4. With the help of an adult, prepare a recipe with your chosen food.

Food List

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There is no handwriting or other markings on the paper.

My Energy Cycle

Food is fuel for our bodies. Our bodies need food for energy to grow, develop, and perform daily functions. Selecting foods from all five food groups—dairy, grains, protein, vegetables, and fruit—is essential to our health. They provide us with a balanced diet that keeps our bodies functioning properly. Physical activity is also an essential part of a healthy lifestyle. Exercise helps prevent health problems, builds strength, and helps maintain a healthy body weight.

Instructions:

1. For one week, keep track of how you receive and use energy on a daily basis by recording the food you eat and your physical activity.
2. For each day of the week, make a list of the food you eat and the ways in which you are physically active (exercise).

Energy Tracking

Sunday:

Monday:

Tuesday:

Wednesday:

Thursday:

Friday:

Saturday:

Technology & Engineering Badge

Place
Completion
Badge Here

Agriculture relies on scientific understandings and engineering processes to develop innovative technologies aimed at solving production and environmental problems. Our quality of life is dependent on the appropriate use of science and engineering to provide an abundance of safe, healthy, and nutritious food, fibers, and the fuels necessary to meet the needs of a growing world population.

Choose and complete at least **three** of the milestones below to earn the Technology & Engineering Badge.

The family farm is going high-tech. From robotic milking machines to data-gathering drones, technology is making agriculture more precise and efficient.

Ian Bickis, Journalist



Agricultural Inventors (page 35)

Date Completed: _____ Adult Initials: _____



Innovating Farm Equipment (page 37)

Date Completed: _____ Adult Initials: _____



Build a Barn (page 39)

Date Completed: _____ Adult Initials: _____



Farming the Future (page 40)

Date Completed: _____ Adult Initials: _____



Career Exploration (page 42)

Date Completed: _____ Adult Initials: _____

Agricultural Inventors

Agriculture began around 10,000 BC when humans started **domesticating** plants and animals to ensure a more reliable food source when compared to hunting and gathering. At that time, most work was accomplished by hand with few tools available. The introduction of powered machinery replaced work previously performed by people and animals (horses, mules, and oxen). Throughout history, scientific and technological advancements have impacted the agricultural industry by increasing food production and farm efficiency.

Instructions:

1. Choose an agricultural inventor from the list below:

Anna Baldwin (1832-1888)	Norman Borlaug (1914-2009)
Luther Burbank (1849-1926)	George Washington Carver (1864-1943)
Joseph Dart (1799-1879)	John Deere (1804-1886)
Jennifer Doudna (born 1964)	Robert Fraley (born 1953)
John Froelich (1849-1933)	Temple Grandin (born 1947)
Cyrus McCormick (1809-1884)	Mary Engle Pennington (1872-1952)
Jacob Perkins (1766-1849)	Jethro Tull (1674-1741)
Eli Whitney (1765-1825)	
2. Research your chosen inventor to identify their invention and its impact on agriculture.
3. Write at least one paragraph describing how their invention changed farming.

Agricultural Inventor

Handwriting practice lines consisting of 20 sets of three horizontal dashed lines.



Innovating Farm Equipment

Life on the farm 100 years ago looked vastly different than it does today, and it will continue to change to meet the needs of our population. Cutting-edge technology and **innovations** are being used in agriculture. These new technologies are being developed with a purpose to overcome the challenges we face in providing food, fuel, and fiber for a growing and changing population.

Instructions:

1. Propose an idea for a new **invention** or innovation that will make a farming or food processing task easier. It can be a new piece of farm equipment, an improvement to an existing piece of farm equipment, or a new technology to process a farm product into the foods we buy.
2. Create a **blueprint** by drawing your invention or innovation, labeling the different parts, and noting measurements.
3. Write at least one paragraph to describe what your invention or innovation will do and how it will make the farming task easier.

Description

Blueprint

Build a Barn

A barn is an agricultural building. There are many types of barns, and each type serves a specific purpose or function. Barns can be used to shelter livestock, to produce a specific farm product, to store farm products and equipment, or for a combination of purposes. The specific use of a barn determines its design. Access to feed, water, lighting, and fresh air, as well as waste management and sanitation must be taken into consideration when designing a barn for livestock. General purpose barns are constructed to be used for a combination of purposes.

Instructions:

1. Design a barn that meets the needs of a specific farm animal.
2. Consider the following in your design:
 - How will the animals access food?
 - How will the animals access fresh air?
 - How will the animals receive the appropriate amount of light?
 - How will a proper temperature be maintained within the barn?
 - How will the barn be kept clean and sanitary?
3. Using materials such as craft sticks, construction paper, cardboard, etc., construct a model of your barn design.

Farming the Future

Farms of the future may look very different than they do today. Innovative technologies will be part of the solution to meet the needs of a growing population. **Sustainably** increasing our food supply is a challenging problem that requires critical thinking and creative solutions. How do you think farms will operate in the future?

Instructions:

1. Make predictions about how technology will change farming in the future.
2. Draw a picture to illustrate your vision of a farm of the future.

Predictions

Farm of the Future

Career Exploration

An agricultural career may involve working directly on a farm or may be linked to farm production through the processing and manufacturing of farmed goods and provided services. Farmers and ranchers work with scientists, technicians, business people, and educators to produce a safe and abundant food supply. Researchers and scientists help develop new seeds, safer methods to protect crops from pests, and more efficient machines that are part of a large, complex system that provides us with the things we use every day.

Instructions:

1. Choose a career opportunity in **agriculture** to explore.
Visit agexplorer.ffa.org for career ideas.
2. Research the education, training, and experience required as well as the responsibilities, salary, and job market outlook.
3. Write at least one paragraph describing the importance of the career to providing **consumers** with products they eat, wear, or use every day.

Career Exploration

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There is no handwriting or other markings on the paper.

Geography & Culture Badge



Geographic location (longitude, latitude, elevation, soil type, and precipitation) determines what plants and animals will grow and, therefore, historically determined what humans and animals would eat and what materials would be available for building shelters, making clothing, and providing fuel. As a result, people in different places in the world have distinct traditional diets. Today, transportation options make it possible for many people to eat food and use products from plants and animals grown and raised in a variety of different locations around the world.

Choose and complete at least **three** of the milestones below to earn the Geography & Culture Badge.

Growing food was the first activity that gave us enough prosperity to stay in one place, form complex social groups, tell our stories, and build our cities.

Barbara Kingsolver, Author



Cooking Video (page 44)

Date Completed: _____ Adult Initials: _____



Where in the World? (page 46)

Date Completed: _____ Adult Initials: _____



What's for Lunch? (page 48)

Date Completed: _____ Adult Initials: _____



Food Supply Chain (page 50)

Date Completed: _____ Adult Initials: _____



Holiday Traditions (page 52)

Date Completed: _____ Adult Initials: _____

Cooking Video

For much of human history, people were limited to the foods that could be produced in their region. Before we had refrigerators and freezers to **preserve** food and airplanes to transport food quickly around the world, people ate diets based on the plants and animals that could thrive locally. Food is an important part of culture. Traditional dishes are passed down from one generation to the next. For many families, cooking traditional food is a way to preserve their **culture**.

Instructions:

1. Identify a traditional recipe passed down from your family or a recipe from another country. Record the recipe below.
2. Research the traditions or holidays associated with the dish.
3. Gather the ingredients necessary to make the recipe.
4. Film a cooking demonstration video where you make the recipe and include the information about the traditions or holidays associated with the dish.
5. Share your video with family and friends.

Recipe

[illegible]

Handwriting practice lines consisting of 20 sets of three horizontal dashed lines.

What's for Lunch?

For some students, lunchtime is their favorite part of the school day. School lunches can look very different depending on where you live. Ingredients and food preparation vary among different **cultures**. How does your school lunch compare to the lunches of students in other countries?

Instructions:

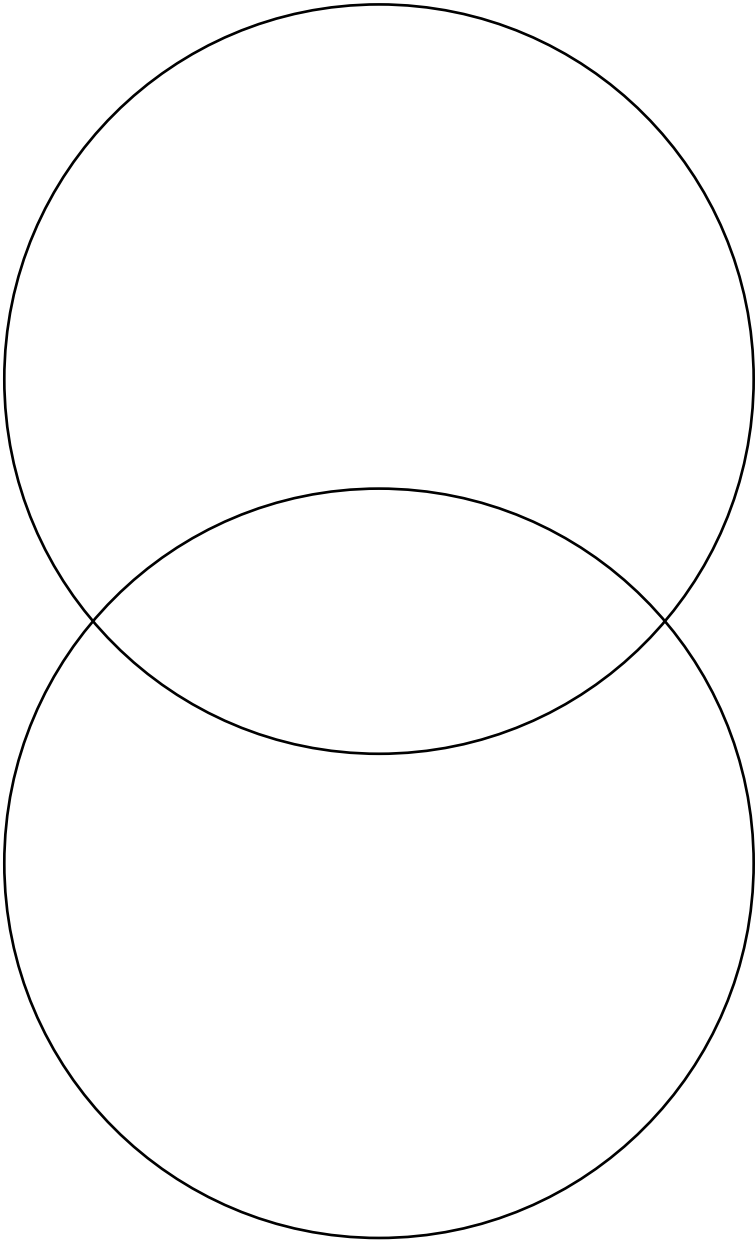
1. Research school lunches in other countries using information found online or in your local library.
2. Compare and contrast your school lunch with school lunch in another country.
3. Create a **Venn diagram** to show similarities and differences between the two school lunches.

School Lunch Research Notes

This image shows a full page of primary-ruled paper. It features ten sets of horizontal lines across the page. Each set consists of a solid top line, a dashed middle line, and a solid bottom line, providing a guide for letter height and placement. The paper is otherwise blank, with no text or other markings.

My School Lunch

School Lunch in



Food Supply Chain

How does food get to the grocery store? The term **supply chain** is used to describe the sequence of processes involved in the production, processing, and distribution of a **commodity** (a primary agricultural product that can be bought or sold). The chain begins with the equipment (seeds, fertilizer, machines, etc.) farmers need to produce food. Farmers plant, maintain, and harvest crops or raise animals. The food is cleaned, processed, and packaged before being shipped to grocery stores. Transportation is a critical part of the supply chain. Some regions cannot produce certain foods due to population density, seasons, and **climate** and soil conditions. In the United States, food is shipped an average of 1,500 miles before being sold.

Instructions:

1. Research a food that you like to eat that is not grown or raised locally.
2. Create supply chain cards to illustrate each task that is performed throughout the process of getting this product from the farmer to you.
3. Mix the cards up and ask a friend or family member to try to put the cards in the correct order.

Supply Chain Research Notes



Handwriting practice lines consisting of 20 sets of three horizontal dashed lines.

Holiday Traditions

People around the world have their own unique traditions, from daily household responsibilities and family holidays to religious and historical ethnic customs. Many of these traditions center around food and its preparation. Food is a central element of **culture** around the world. Does your family cook special meals for holidays?

Instructions:

1. Make a list of the special food your family cooks for holidays.
2. Create a "Holiday Traditions" recipe book and include at least five recipes that your family likes to prepare for holidays.
3. Make copies of your recipe book to share with family and friends.

Holiday Foods

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There is no handwriting or other markings on the paper.

The importance of agriculture is pretty simple. People have to eat and people like to eat.

Sam Turner, Agriculture Economics Student,
University of Missouri

Glossary

agriculture: the science, art, or practice of cultivating the soil, producing crops, and raising livestock, and, in varying degrees, the preparation and marketing of the resulting products

atmosphere: a layer of gas or layers of gases that surround the Earth or another planet

blueprint: a design plan or other technical drawing

climate: the prevailing weather conditions in a specific area over a long period of time

commodity: a primary agricultural product that can be bought and sold

communicable: able to be transmitted from one sufferer to another; contagious or infectious

compost: a mixture made of decaying organic material used to fertilize plants and amend soils

Community Supported Agriculture (CSA): a system in which a farm is supported by local consumers who purchase prepaid shares in the farm's output which they receive periodically throughout the growing season

consumer: a person who buys and uses goods and services

cultivate: to prepare (land or soil) for the growth of crops; to plant, tend, harvest or improve (plants) by labor or skill

culture: the customs, arts, and achievements of a particular nation, people, or other social group

decomposition: the process of breaking down or being broken down into simpler parts or substances especially by the action of living things such as bacteria or fungi

domesticate: to breed a population of animals or plants to serve the purposes of human beings and to need and accept human care

dormant: not active but able to become active

economy: the wealth and resources of a country or region, especially in terms of the production and consumption of goods and services

ecosystem: a biological community of living organisms interacting with the non-living parts of their environment

edible: suitable or safe to eat

embryo: a human, animal, or plant in the early stages of development before it is born, hatched, sprouted, etc.

food miles: the distance food is transported from the time of its production until it reaches the consumer

germinate: to begin to grow; sprout

innovation: a new method, idea, or product

invention: an original device or process

MyPlate: nutritional guide published by the United States Department of Agriculture (USDA); icon depicting a place setting with a plate and glass divided into five food groups

nutrient: a substance that provides nourishment essential for growth and the maintenance of life

organic matter: a soil component derived from the decay of once-living organisms like plants and animals

originate: begin or start

photosynthesis: the process by which plants convert carbon dioxide, water, and light energy into sugars and oxygen in order to store energy; the opposite of cell respiration

pollination: the transfer of pollen from the anther to the stigma of a plant; the spreading of pollen by insects, birds, bats, and the wind between flowering plants

pollinator: agent that moves pollen resulting in the pollination of flowers

preserve: to prepare (food) so that it can be kept for a long period of time

seed coat: the protective outer covering of a seed

soil amendment: a material added to the soil to improve its physical, chemical, and/or biological properties

solitary bee: any of various bees that do not live in a colony

supply chain: the sequence of processes involved in the production and distribution of a commodity

sustainable: meeting the economic, social, and environmental needs of the present without compromising the needs of the future

Venn diagram: a graphic organizer that uses circles to show the similarities and differences between two concepts

USDA: United States Department of Agriculture

Notes



