

Animal Characteristics

**Farm animals live in herds to
help them survive.**

Animal Characteristics

**Farm animals do not live in
herds like wild animals.**

Animal Characteristics

**Wild animals and
domesticated animals are not
the same.**

Animal Health

**Cows raised for beef and
cows raised to be milked are
different breeds.**

Animal Health

**Animals raised on farms in the
United States are the same
as animals raised on farms
around the world.**

Animal Health

**Veterinarians give antibiotics
and vaccines to farm
animals when they are sick or
susceptible to disease.**

Animal Housing

Modern barns are designed specifically for the type of animals, equipment, or farm products they house.

Animal Housing

**Many farmers raise chickens
inside barns to prevent
predators from harming their
birds.**

Animal Housing

**Robots are not used by farmers
for raising animals.**

Plant Growth

Farmers do not care for their plants by using computers to monitor amounts of rain, sunlight, and nutrients the plants are receiving.

Plant Growth

If the environment is not providing enough nutrients, a farmer calculates the specific amounts of nutrients needed for best growth before giving plants fertilizer.

Plant Growth

If an insect pest is found in a farmer's crop, sometimes beneficial bugs like lady bugs can be used in place of an insect spray. If a spray has to be used, farmers must follow specific rules and measurements to use only enough chemical to kill or deter the pest.

Energy and Renewable Resources

Wool is a renewable resource.

Energy and Renewable Resources

Petroleum and coal are renewable resources.

Energy and Renewable Resources

Ethanol is a fuel made from corn and is a renewable resource.

Economy

Most of the United States' agricultural exports are sold to businesses in China, Mexico, and Canada.

Economy

The top three processed agricultural items exported from the United States are grains, meat (including beef, pork, and poultry), and fruits.

Economy

The top three agricultural items imported into the United States are fresh or processed fruits, fresh or processed vegetables, and meat.

Nutrition

Farmers do not raise foods to fit in every food group of the MyPlate diagram.

Nutrition

**Foods labeled as organic are just as nutritious
as the same food without an organic label.**

Nutrition

Washing fruits and vegetables before you eat them is one way to be safe and healthy.

Weather

For farmers, a drought is as bad as a flood.

Weather

The climate of a region does not affect the types of plants and animals that can grow and live there.

Weather

Farmers can make plans to till the soil, plant seeds, or harvest a crop but a change in the weather can change these plans.

Careers

Through 2020, 39% of agricultural job openings will be filled by people who did not grow up on a farm or have a degree in agriculture, food, or natural resources related areas.

Careers

**Being a farmer is the only job opportunity in
agriculture.**

Careers

To work in agriculture, food, and natural resources after high school, you have many options for additional education or training. Some jobs require a certificate or apprenticeship. Some jobs require an associate's, bachelor's or graduate degree.

History

Farms are old fashioned and use the same equipment used 50 years ago to work with plants and animals.

History

Presidents George Washington and Thomas Jefferson were agricultural inventors.

History

Many plants and animals raised on farms in North America today were originally brought here by settlers from other continents.

Two Truths and a Lie Activity Answer Key and Resources

Animal Characteristics

- Farm animals live in herds to help them survive. (truth)
- Farm animals do not live in herds like wild animals. (lie)
- Wild animals and domesticated animals are not the same. (truth).

Resources for research projects

[Breeds of Livestock](#), Oklahoma State University—this resource has some page dates that seem old, however the history of these breeds has not changed. Great for research projects on breeds of animals.

[National Geographic Animals Database](#)—mostly for wild animals, a few resources for domestic animals.

[U.S. Fish and Wildlife Services for Kids](#)—information about native wildlife. Check your state's Department of Natural Resources for additional local resources.

Animal Health

- Cows raised for beef and cows raised to be milked are different breeds. (truth)
- Animals raised on farms in the United States are the same as animals raised on farms around the world. (lie)
- Veterinarians give antibiotics and vaccines to farm animals when they are sick or susceptible to disease. (truth)

Resources for research projects

[National Cattlemen's Beef Association](#)—provides virtual tours of ranches, blogs by beef farmers across the U.S., and nutritional information.

[International Agriculture](#), National Geographic—provides a simplistic description of world-wide agricultural practices.

[International Agriculture](#), World Bank—provides a simplistic description of world-wide agricultural practices.

[Center for Veterinary Medicine's Kid's Page](#), U.S. Food and Drug Administration—provides age-appropriate facts about animal care and veterinary practices.

[American Veterinary Medical Association](#)—provides tools for teachers and students about animal health and human health.

Consider having a student interview a local veterinarian, consider finding one who works with both small and large/farm animals.

Animal Housing

- Modern barns are designed specifically for the type of animals, equipment, or farm products they house. (truth)
- Many farmers raise chickens inside barns to prevent predators from harming their birds. (truth)
- Robots are not used by farmers for raising animals. (lie)

Resources for research projects

[Housing and Space Guidelines for Livestock](#), University of New Hampshire Extension—gives descriptions on barn types and amount of space required by different animal species.

[American Egg Board \(Incredible Egg\)](#)—defines different types of chicken housing and labels on egg cartons.

[Robotics in Agriculture](#), Robotics Industries Association—provides examples of robots used in agriculture.

[Robotic Milking Systems](#), Dairy Herd Magazine—explains the use of robots to milk cows.

[How Robotic Milking Works](#)—quick and simple video showing how a robot milks a cow.

Plant Growth

- Farmers do not care for their plants by using computers to monitor amounts of rain, sunlight, and nutrients plants are receiving. (lie)
- If the environment is not providing enough nutrients, a farmer calculates the specific amounts of nutrients needed for best growth before giving plants fertilizer. (truth)
- If an insect pest is found in a farmer's crop, sometimes beneficial bugs like ladybugs can be used in place of an insect spray. If a spray has to be used, farmers must follow specific rules and measurements to use only enough chemicals to kill or deter the pest. (truth)

Resources for research projects

[Use of Insecticides and Pesticides in Agriculture](#), Food Dialogues—explains the use of chemicals on agricultural crops.

[Poison Prevention Lesson](#), Penn State University—provides a lesson about the dangers of chemicals.

[Plant and Soil Science for Kids](#), Nutrients for Life Foundation—provides kid-friendly lessons and activities to demonstrate soil nutrient needs.

[Soil Nutrient Use](#), Nutrients for Life Foundation—provides an explanation of how farmers decide to use fertilizer using the four “R’s”: right place, right time, right rate, right source.

Energy/Renewable Resources

- (Wool is a renewable resource. (truth))
- Petroleum and coal are renewable resources. (lie)
- Ethanol is a fuel made from corn and is a renewable resource. (truth)

Resources for research projects

[Alliant Energy Kids](#), Biomass Energy—provides kid-friendly explanations of using biomass to create energy.

[Biofuels for Kids](#)—defines use of biofuels in a simple way.

[National Corn Growers Association](#)—provides educational resources about the use of corn, including as a source to make biofuels.

[International Wool Textile Organization](#)—provides resources about the many uses of wool.

[Wool Clothing Facts](#), Smartwool Clothing—provides a good description of the benefits wool clothing can provide in comparison to similar synthetic materials.

Economy

- Most of the United States’ agricultural exports are sold to businesses in China, Mexico, and Canada. (truth)
- The top three processed agricultural items exported from the United States are grains, meat (including beef, pork, and poultry), and fruit. (truth)
- The top three agricultural items imported into the United States are fresh or processed fruits, fresh or processed vegetables, and meat. (lie, sugar/confections, not meat, is the third)

Resources for research projects

[International Agricultural Trade](#), U.S. Department of Agriculture—resource provides an overview of international agricultural trade.

[National Geographic Trading Game](#)—this learning game provides a fun way to demonstrate the concept of trade.

Nutrition

- Farmers do not raise foods to fit in every food group of the MyPlate diagram. (lie)
- Food labeled “organic” are just as nutritious as the same food without an organic label. (truth)
- Washing fruits and vegetables before you eat them is one way to be safe and healthy. (truth)

Resources for research projects

[Washing Fruits and Vegetables](#), Center for Food Integrity—the dirty dozen debunked.

[The Difference Between Organic and Conventional](#), U.S. Farmers and Ranchers Alliance

[Organic vs. Conventional Foods](#), Mayo Clinic—provides a non-farm source of information about the health of foods raised via both methods.

Visit your state’s Agriculture in the Classroom website for products grown in your state!

Weather

- For farmers, a drought is as bad as a flood. (truth)
- The climate of a region does not affect the types of plants and animals that can grow and live there. (lie, plants and animals very much depend on local weather conditions, some prefer tropical climates whereas some prefer more temperate)
- Farmers can make plans to till the soil, plant seeds, or harvest a crop, but a change in the weather can change these plans. (truth)

Resources for research projects

[Ag Web Weather](#)—provides resources about current weather conditions across the United States.

[On-farm Weather Stations](#), Farm Progress—explains weather technology use in on-farm weather monitoring.

[Precipitation Outlook](#)—predicts the precipitation in 10, 30, and 90-day increments across North America.

[Climate by Region of the U.S.](#), NOAA—defines climate patterns by region of the United States.

[Weather Affects Planning in the Midwest](#)—article shares realities of how weather has affected agriculture in Spring 2019.

Careers

- Through 2020, 39% of agricultural job openings will be filled by people who did not grow up on a farm or have a degree in agriculture, food, or natural resources related areas. (truth)
- Being a farmer is the only job opportunity in agriculture. (lie, check out [Ag Career Explorer](#) for all the opportunities!)
- To work in agriculture, food, and natural resources after high school, you may have many options for additional education or training. Some jobs require a certificate or apprenticeship, some jobs require an associate’s degree, bachelor’s degree, or graduate school. (truth)

Resources for research projects

[Agriculture Careers](#)—recruiting website showing the variety and depth of agricultural careers available.

[Ag Career Explorer](#), National FFA Organization—provides information for various sectors of agricultural jobs, including types of training needed, examples of hiring companies, locations of possible jobs, working conditions, etc.

[USDA Careers in Agriculture Study](#)—statistical analysis of types of agricultural careers in demand.

History

- Farms are old fashioned and use the same equipment used 50 years ago to work with plants and animals. (lie)
- Presidents George Washington and Thomas Jefferson were agricultural inventors. (truth)
- Many plants and animals raised on farms in North America today were originally brought here by settlers from other continents. (truth)

Resources for research projects

[Growing a Nation](#)—resource from National Agriculture in the Classroom providing a step through time of agricultural practices in the United States.

[George Washington the Farmer](#), Mount Vernon—resources from George Washington’s estate providing information about his agricultural endeavors.

[Founding Father Inventors](#), Forbes—news article highlighting inventions of all Founding Fathers, including some agricultural items.

[Timeline of Crop and Livestock Imports](#), Growing a Nation—additional resources from National Agriculture in the Classroom about the transport of crops and livestock to the “new world.”

[Modern Farming Technologies](#), USDA—provides insight into technology use in agriculture.

[20 Technologies Changing Agriculture](#), Farm Progress Publication—a news story from agricultural industry media sharing technological advancements in agriculture.

Additional Resources

[Journey 2050: Agricultural Resources](#)

[Your Food, Farm to Table \(video\)](#)—Watch the video to learn how food production has developed over time to bring food from the farm to your fork at home.

[The Real Dirt on Farming](#)—You asked. We answered. This is how your food is grown.

Follow these Farmers on Social Media

Faces of Farming and Ranching

Jay Hill—Texas

[MN Millennial Farmer](#)—Minnesota

[Schweitzer Orchards](#)—Michigan

[Farmer Tim](#)—Ontario

[Farm Babe](#)—Iowa