

ACTIVITY SNAPSHOT

SUPPORTING AREAS

Life Cycles, Needs of Living Things, Community and Economy, Human-Environment Interaction, Natural Resources, Nebraska Agriculture

PURPOSE

Students will learn that broiler and layer chickens have different purposes but share the same basic needs, and they will discover how farmers in Nebraska take care of chickens to keep them healthy and producing eggs.

STATE STANDARDS IT SUPPORTS

SC.2.3.2.B Students will develop a model to represent the needs of living things (air, water, food, space, and shelter) and how they meet those needs in their environment.

SS 2.3.2.b Identify how people interact with the environment to meet their needs (farming, ranching, etc.).

MATERIALS

- Photos of broilers, layers, backyard chickens, biosecure barns, feeder systems, water systems, corn and soybean feed
- Book: *Chicks and Chickens* by Gail Gibbons
- Matching and sorting cards
- Corn and soybeans and photo of chicken feed
- White paper, 1 per student

Battle of the Birds: Broilers vs. Layers (How Chickens Meet Different Needs)

Activity Summary

Students will learn that broiler and layer chickens have different purposes but share the same basic needs. Using photos, discussion, and a matching-and-sorting game, students will explore how Nebraska farmers give chickens food, water, air, shelter, and space to keep them healthy. The lesson ends with a drawing or labeling activity to show what students learned about a chicken's needs.

Vocabulary Words

Broiler Chicken – a chicken raised primarily for meat

Layer Chicken – a chicken raised primarily for eggs

Poultry – farm birds raised for eggs or meat

Shelter – a safe place where animals live and stay protected

Resources – things that people and animals use to meet their needs

Biosecure Barn – a special building on a farm designed to keep chickens safe from disease and outside contamination

Backyard Chicken – a chicken that is raised in a small flock at home, often in a backyard coop, for eggs, meat, or as pets.

Background Information

Chickens are one of the most common poultry animals raised on farms. Poultry includes chickens, turkeys, ducks, and other birds that provide resources like meat and eggs for people to eat. Farmers who raise chickens take care of their birds to make sure they are healthy, comfortable, and safe.

There are many different breeds of chickens, and each breed has special qualities that make them better suited for raising **meat** or **eggs**. For example, some breeds grow quickly and have more muscle, which makes them ideal as **broiler chickens**, while other breeds are good **egg layers** and can produce eggs consistently over time.

There are two main types of chickens raised on farms.

Broiler Chickens are raised for meat. They grow quickly and are usually ready for market in about six to eight weeks. Farmers give them high-protein feed to help them grow strong and healthy.

Layer Chickens are raised for eggs. They start laying eggs around 18 to 20 weeks old and can lay eggs for one to two years. They need resources like food, water, nesting boxes, and proper lighting to keep producing eggs regularly.

Most chickens today live in large **biosecure barns**, which protect them from diseases that could harm the chickens or contaminate the food supply. These barns have controlled air temperature, clean bedding, and safe feed and water systems.

Farmers meet chickens' basic needs by providing **food, water, air, shelter, and space**. Their feed often includes corn and soybeans grown by farmers right here in Nebraska. These crops give chickens the energy and protein they need to grow strong and stay healthy. Some families also raise **Backyard Chickens** in smaller shelters called coops. Backyard chickens may provide eggs for the family or even be kept as pets.

Did you know?

- Nebraska's farmers produced over 2 billion eggs in 2024
- It takes about 24-26 hours for a hen to produce and lay an egg
- Color of an eggshell (white, brown, blue, or green) is determined by the breed of the chicken
- Color of the eggshell has no effect on the egg's nutritional value or taste
- Eggs in the grocery store are unfertilized and will not hatch
- A healthy hen can lay around 250–300 eggs per year
- The "bloom" on an egg is a natural, protective layer that seals the pores to keep bacteria out
- Washed eggs should be refrigerated to maintain freshness, while unwashed eggs can be stored at room temperature
- Chicken is the most widely consumed meat in the United States

What's the Connection to Agriculture?

Chickens help people meet everyday needs by providing food such as meat and eggs. Farmers work hard to take care of their animals, which supports healthy communities and a safe food supply. Learning about chickens helps students understand where their food comes from and how agriculture connects to their lives.

Interest Approach

1. Read the book *Chicks and Chickens* by Gail Gibbons.
2. Ask students:
 - “What do you call a female chicken?” (**Hen**)
 - “What do you call a male chicken?” (**Rooster**)
 - “What do chickens give us?” (**Meat or eggs**)
 - “Will eggs that are not fertilized hatch into baby chicks?” (**No**)
 - “How do you think chicken farms look different today?” (Guide students to understand that most chickens are now raised indoors in barns.)
3. Show a photo of a modern poultry barn. Explain that farmers raise chickens for different reasons: for meat, eggs, or for hobby.
4. Show photos of **broiler chickens**, **layer chickens**, a **biosecure barn**, a **backyard chicken coop**, **chicken feed**, the **feeder and water systems**. Discuss these photos.
5. Ask:
 - “What do you notice about these chickens and their homes?”
 - “Why do you think some barns are built differently than backyard coops?”
 - “What do chickens eat?” (Show them the corn and soybeans seeds and explain that farmers crushed these up to make a meal and add vitamins and minerals to the food. High-protein diets are important for building muscle and calcium helps make strong egg shells.)
6. Discuss differences:
 - Broiler Chickens – raised for meat, grow quickly, need high-protein feed, clean water, proper space
 - Layer Chickens – raised for eggs, need balanced feed with calcium, nesting areas, and good lighting
 - Backyard Chickens – raised on a smaller scale, may provide both eggs and meat, often live outdoors in a small coop (shelter)
 - Biosecure Barns - a special building on a farm designed to keep chickens safe from disease and outside contamination

Explain that most chickens today live in large biosecure barns, which protect them from diseases that could harm the chickens or contaminate the food supply. These barns have controlled air temperature, clean bedding, and safe feed and water systems. These barns help farmers meet the chickens’ needs while producing a safe, quality food product for us to eat.
7. Ask: “What do all chickens need to survive?”
 - Food, water, air, shelter, and space.

Activity

Broilers vs. Layers Matching and Sorting Game

1. After discussing with the class the differences between broiler chickens and layer chickens.

- Pair up students or form small groups. Give each group a set of cards with features or facts about chickens. Have them sort the cards into two groups labeled “Broilers” and “Layers.”
- Use the chart below to guide the correct sorting:

FEATURE	BROILER	LAYER
Purpose	Raised for meat	Raised for eggs
Growth/Life Cycle	Grow quickly, ready in 6 to 8 weeks	Start laying at 18 to 20 weeks, lay for 1 to 2 years
Diet	High-protein feed made from corn and soybeans, vitamins and minerals	Feed with calcium for strong eggshells and balanced protein, vitamins and minerals
Housing and Space	Need more space as they grow fast; ventilation and bedding important	Nest boxes and perches for egg-laying
Health Focus	Healthy chickens and building muscle	Healthy chickens and consistent egg production

- Highlight that all chickens, no matter where they live, need the same basic resources: food, water, air, shelter, and space.
- Discuss how farmers use biosecure barns to protect chickens from disease. Explain that backyard chicken owners also keep their coops clean and take good care of their chickens. Point out that the way chickens are raised, for meat or for eggs, affects how farmers care for them.

Concept Elaboration and Evaluation

Use these questions to help students connect what they learned to agricultural practices and animal needs.

Review and Reflect

- What are the five basic needs of chickens? (Food, water, air, shelter, space)
- How do farmers meet those needs? (Raising them in a biosecure barn that is temperature controlled, have feed and watering systems, and is free of disease)
- What do you think chickens eat, and where does that food come from? (Primarily corn and soybean meal with added vitamins and minerals. Nebraska farmers grow corn and soybeans to help meet the basic needs of chickens)
- How are broiler chickens and layer chickens different? (Broilers give us meat and layers give us eggs)
- Why is it important for farmers to keep their barns clean and biosecure? (Protects the chickens from disease and illness and helps meet the basic needs of the bird)

Student Check for Understanding

Have students draw or label a picture showing a chicken and its needs: food, water, air, shelter, and space. Encourage them to label whether the chicken is a broiler or a layer.

Extension Activities

From Chicken Little to Chicken Big - Grades K-2 (<https://agclassroom.org/matrix/lessons/560/>)

Students identify different breeds of chickens, examine physical characteristics, and determine the stages of a chicken's life cycle.

Eggs: From Hen to Home - Grades K-2 (<https://agclassroom.org/matrix/lessons/270/>)

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.

Eggology (<https://agclassroom.org/matrix/lessons/541/>)

Students identify how the basic needs of a growing chick are met during egg incubation, diagram the parts of an egg, and hatch eggs in class.

Chicken Genetics Matching Cards (<https://agclassroom.org/matrix/companion-resources/883/>)

Each breed of chicken has specific genes which indicate what it will look like, how many eggs it will produce, how large its body will be, etc. Use the Chicken Genetics Matching Cards to discover the basic genetic characteristics found in various breeds of chickens. This kit includes 8 matching cards, 8 description cards, and an answer key.

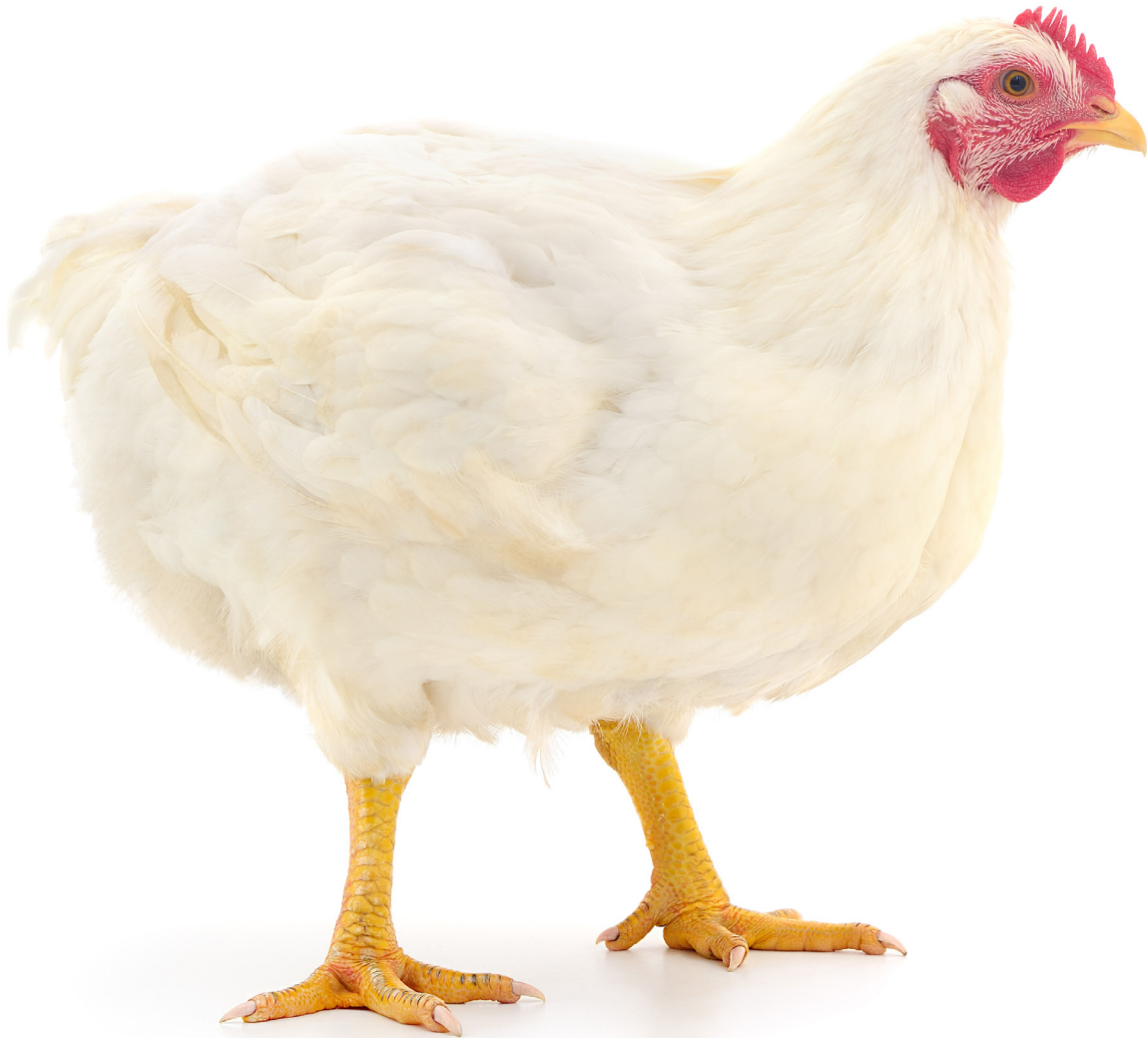
Classroom Visits (<https://nefbfoundation.org/classroomvisits/>)

Join a Nebraska Agriculture in the Classroom (AITC) Education Specialist for an in-person or virtual lesson to provide students an enhanced learning experience in your classroom. In an ever-changing world, AITC understands every classroom has unique needs. When signing up, please select whether you would like the lesson delivered in-person to your classroom or virtually.

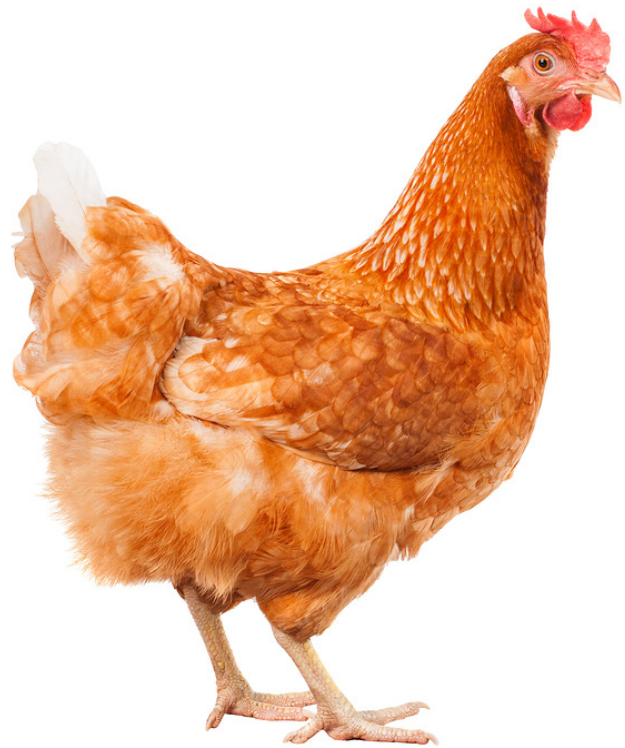
All About Chickens Reader (<https://nefbfoundation.org/all-about-chickens/>)

Poultry is the term used to describe birds that are domestic, not wild, that are raised for their products including meat, eggs, and feathers. The most common type of poultry in Nebraska is a chicken. Chickens are an important source of food throughout the world. They provide Nebraskans with meat and eggs. Let's find out more about chickens in Nebraska!

Broiler Chicken



Layer Chicken



Biosecure Barn



Backyard Chicken Coop



Barn Feeder System



Barn Water System



Layer Barn

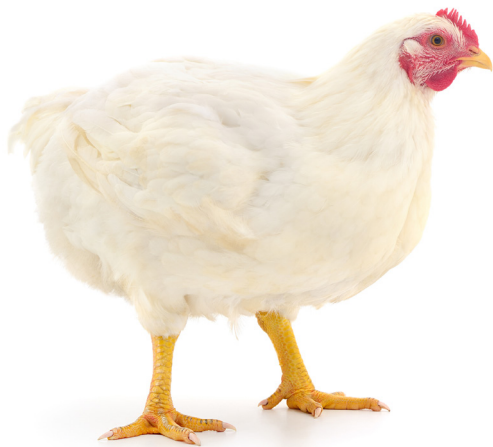


Corn and Soybean Feed for Chickens

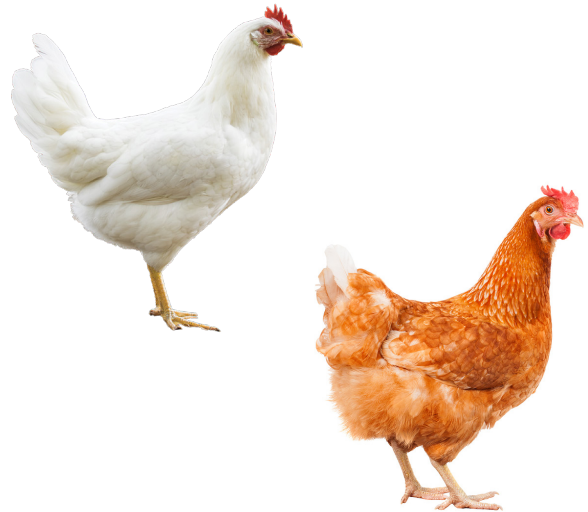


Activity Cards

BROILER



LAYER



PURPOSE

Raised for Meat



PURPOSE

Raised for Eggs



GROWTH / LIFECYCLE

Grow quickly, ready
in 6 to 8 weeks



GROWTH / LIFECYCLE

Start laying at 18 to
20 weeks, lay eggs
for 1 to 2 years



DIET

High-protein feed
made from corn and
soybeans, vitamins
and minerals



DIET

Feed with calcium for
strong eggshells and
balanced protein,
vitamins and minerals



HOUSING AND SPACE

Need more space as they grow fast; ventilation and bedding important



HOUSING AND SPACE

Nest boxes and perches for egg-laying



HEALTH FOCUS

Healthy chickens and building muscle



HEALTH FOCUS

Healthy chickens and consistent egg production

