Field Trip #6

Kentucky, the Poultry State?

MAIN IDEAS

- Poultry and egg farming bring more money to Kentucky than any other crop or animal.
- Kentucky farmers choose different ways to raise their animals depending on the number of animals they have and their available markets (who buys the product).
- Both farmers provide excellent care for their animals in order to provide safe food to consumers.
- Both farmers utilize a natural resource from the chickens, manure, to fertilize their crops and pasture.

BEFORE WATCHING THE VIDEO

What Came First, the Chicken or the Egg?

Have students think about this question. Also ask them what they know about chickens and other poultry (turkeys, ducks, geese, etc.) and write the words on the board. Then share these fun facts (Sources: Smithsonian.com and BackyardChickens.com):

- The turkey is an all-American bird and was an important food animal to the Native Americans and the first settlers.
- Chickens are from Southeast Asia and can be traced to the Red Jungle Fowl and Gray Jungle Fowl. (Google pictures if you wish).
- Poultry are omnivores. They'll eat plants and insects but also larger prey like small mice and lizards.
- With 25 billion chickens in the world, there are more of them than any other bird species.
- Baby chickens are chicks. Female chickens are pullets until they're old enough to lay eggs and become hens. Male chickens are called roosters, cocks or cockerels, depending on the country you are in.
- A rooster announces to a flock of chickens that he's found food with a "took, took, took." But the hens don't pay attention if they already know that there is food around. Each chicken sound means something specific.
- Chickens have a great memory. They can distinguish between over 100 different faces of people or animals.
- Chickens have full-color vision.
- The rooster's wattle is used to bring attention to himself when dancing for the hens.
- A hen can lay more than 300 eggs a year, but the average is about 275.
- A mother hen turns her eggs about 50 times a day.

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Kentucky Academic Standards

SCIENCE

Inheritance and Variation of Traits: Life Cycles and Traits

Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment

ELA

Speaking and Listening

Comprehension and Collaboration

PRACTICAL LIVING AND VOCATIONAL STUDIES

Consumer Decisions

Evaluate Services

Critical Thinking

- The waste made by a chicken in its lifetime can make enough electricity to run a 100 watt bulb for five hours!
- The fear of chickens is called Alektorophobia.
- Chickens will live for 8 to 10 years, but the oldest chicken recorded was 22 years old.
- Chickens have more bones in their necks than giraffes!
- If a chicken has red ear lobes, it will lay brown eggs; if white, white eggs. Blue and green eggs come from less popular chicken breeds.
- A chicken heart beats more than 300 times a minute.

WHILE WATCHING THE VIDEO

Have the students watch how the farmers care for their chickens on the different farms.

AFTER WATCHING THE VIDEO

OPTION 1: COMPARING POULTRY FARMS

Grade Level(s): K-5

Estimated Time: 10 - 20 minutes

Purpose

- Students use a graphic organizer to compare the two poultry farms in the video.
  2.30 Students evaluate consumer products and services and make effective consumer decisions.
  2.33 Students demonstrate the skills to evaluate and use services and resources available in their community.
  5.1 Students use critical thinking skills such as analyzing, prioritizing, categorizing, evaluating and comparing to solve a variety of problems in real-life situations.
  2. Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
  3. Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.
- Students will learn what farmers provide for their animals to keep them safe and healthy.
  K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive.
  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.

Materials

- "Comparing Poultry Farms" Activity Sheet

Background Information

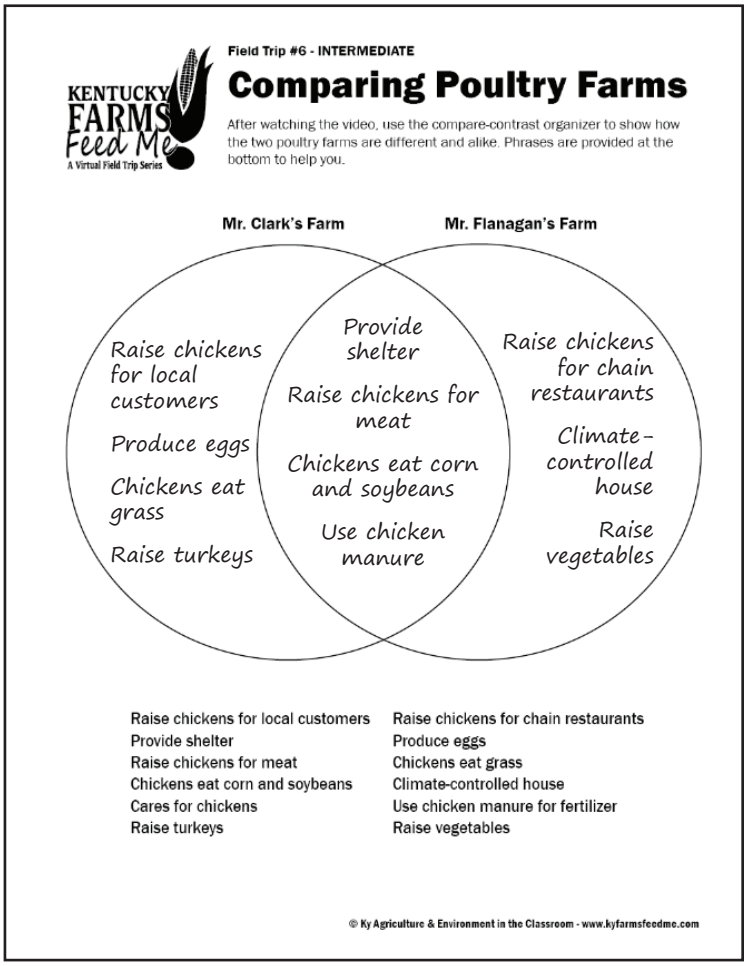
Farmers choose their production systems based on a number of different factors: location to markets, customer needs and desires, availability of resources (land, water, labor, feed, capital/money).

Since Mr. Clark is located near a larger city in Lexington, he is taking advantage of customers wanting to buy directly from local farms. Some customers like being able to speak to the farmers about how they raise their animals. Mr. Clark has fewer chickens in his method. He provides the chickens open shelters that can be moved around the pastures. Moving the houses, feeding and watering the chickens, and collecting the eggs requires regular labor. Since Mr. Clark provides customers a finished product, he also needs to find a local processor and packager, as well as take time to market his meat and eggs. An advantage of this method is that it does

not require electricity to maintain the operation. A disadvantage could be the weather. Major changes in the temperature or storms could affect the health and well-being of the birds.

Mr. Flanagan already had a large farm, room to build several chicken houses, and cropland where he can spread the chicken waste. He raises many chickens for restaurants, and the processing plant is near his farm. The buildings are temperature controlled and ventilated to allow fresh air through at all times. Feed and water are provided to the chickens through an automatic system. This production method does not require as many workers to care for the chickens, but the system is dependent upon the equipment working properly and a constant supply of energy. Mr. Flanagan is only in charge of raising and caring for the chickens. The food company he provides this service for supplies the feed and collects the chickens for processing.

ACTIVITY SHEET ANSWER KEY



Procedures

1. Primary students: Draw a diagram on the board and complete the chart together. Ask the students if the farmers are meeting the chicken's needs: food, water, and shelter.
2. Intermediate students: Have students complete the activity sheet on their own or in groups. The key is provided to the right. Discuss how the two farms are similar and different. Ask students if they prefer one system over the other. Are there reasons why both systems work?

OPTION 2: LIFE CYCLE OF A CHICKEN

Grade Level(s): K-5

Estimated Time: 30 minutes

Purpose

- Younger students will create a graphic model of a chicken's life cycle.
  3-LS1-1 Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.
- Older students will describe each stage of a chicken's life cycle.
  3-LS1-1 Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.

Materials

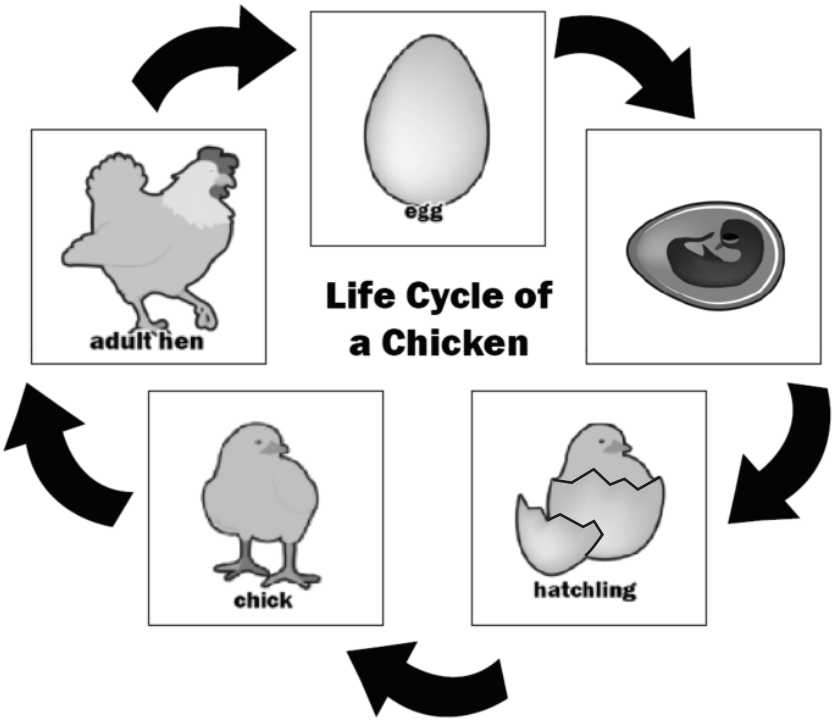
- "Life Cycle of a Chicken" Activity Sheets (2 versions, depending on grade level).
- Access to the internet or library to research the life cycle of a chicken. You may also read the background information to the students.

Optional Materials

- VIDEO: *Chicken Embryo Development* https://youtu.be/PedajVADLGw
- BOOK: *Chicks and Chickens* by Gail Gibbons
- BOOK: *From Egg to Chicken* by Anita Ganeri

Background Information

Chickens have unique life cycles. A hen (female chicken) will lay about one egg every one day or so. Once she has several eggs, she will begin to sit on them to keep them a constant temperature. When the eggs are warm enough (99-102 degrees), fertilized eggs will begin to develop. Note: a rooster must fertilize eggs in order for a chick to develop; the eggs at the grocery store will never contain an embryo or chick.



After 20 to 21 days, the chick will begin to break the shell from inside with its egg tooth. This process, known as "pipping," can take up to 24 hours. Once the chicks hatch, the mother hen will continue to keep the chicks warm.

Chicks can survive without their mothers as long as they have warmth, food, and water. Chickens grow very quickly with the right diet.

Most hens will begin to lay eggs when they are between 5 and 7 months old, and the cycle continues.

HUNGRY FOR MORE?

Interested in hatching eggs in your classroom? Visit http://www.teachkyag.org/news--views/thankful-for-kentucky-poultry for the best resources.

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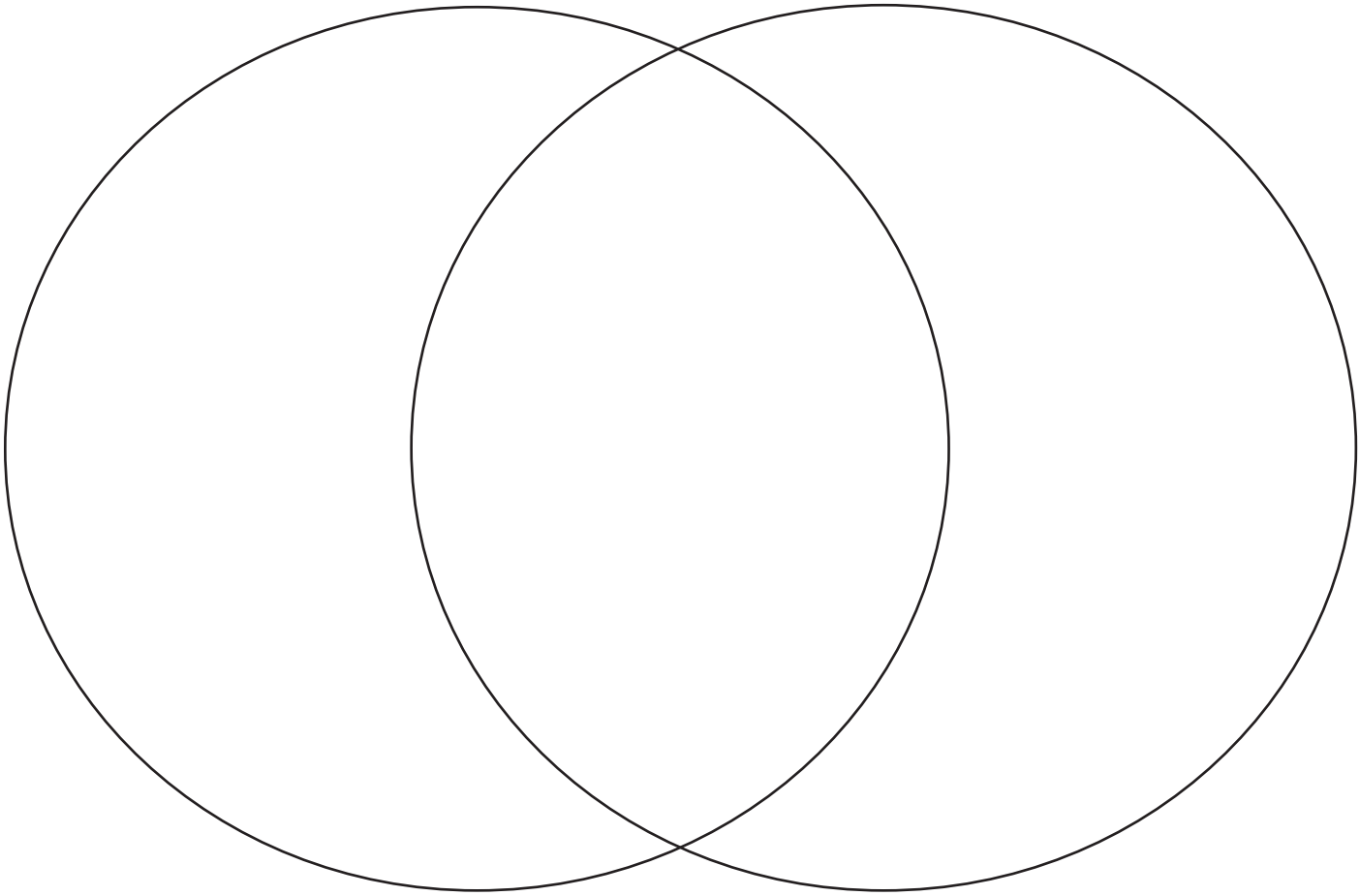
Field Trip #6 - INTERMEDIATE

Comparing Poultry Farms

After watching the video, use the compare-contrast organizer to show how the two poultry farms are different and alike. Phrases are provided at the bottom to help you.

Mr. Clark's Farm **Mr. Flanagan's Farm**



Raise chickens for local customers
Provide shelter
Raise chickens for meat
Chickens eat corn and soybeans
Cares for chickens
Raise turkeys

Raise chickens for chain restaurants
Produce eggs
Chickens eat grass
Climate-controlled house
Use chicken manure for fertilizer
Raise vegetables

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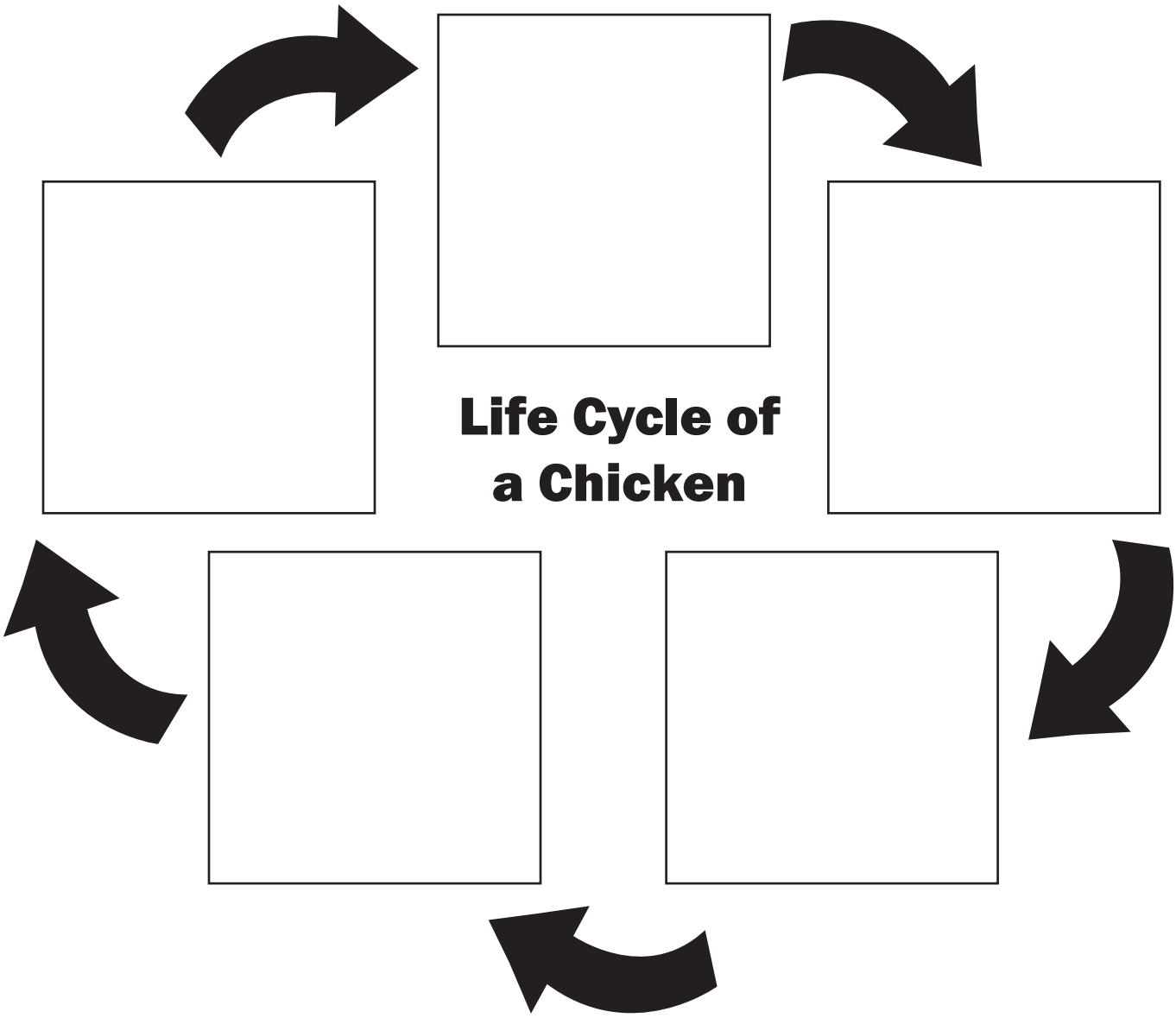
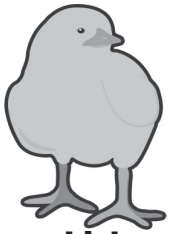
Field Trip #6 - PRIMARY

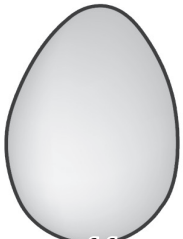
Life Cycle of a Chicken

After watching the video, place the different stages of a chicken's life cycle in the correct order.

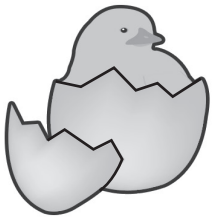



embryo


chick


egg


adult hen


hatchling

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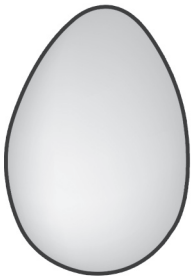
Field Trip #6 - INTERMEDIATE

Life Cycle of a Chicken

Research the life cycle of a chicken, then label and describe each stage of the life cycle.



1. _____

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2. _____

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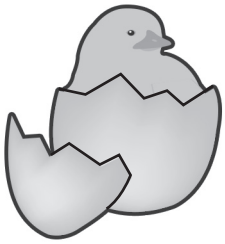

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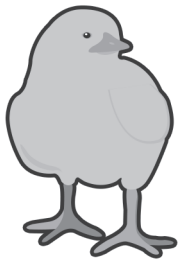

4. _____

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5. _____

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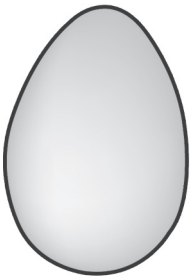
Field Trip #6 - INTERMEDIATE ANSWER KEY

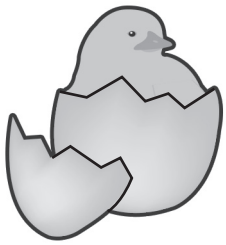
Life Cycle of a Chicken

Research the life cycle of a chicken, then label and describe each stage of the life cycle.

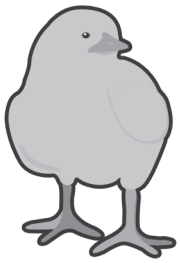


1. EGG – Adult, female chickens, or hens, produce and lay an egg every 24 hours or so. If the egg has been fertilized by a rooster, a chick will grow inside the egg. Eggs that have not been fertilized will not grow a chick.

2. EMBRYO – The embryo is a growing chick inside the egg. It takes 20 to 21 days for a chick to develop.



3. HATCHLING – A chick will hatch out of its egg after it is fully developed. It uses its egg tooth on the end of its beak to break the egg from the inside.



4. CHICK – A chick is a young chicken. They do not require a mother to take care of them. Chicks can begin eating the same food an adult chicken will eat.

5. CHICKEN – A chick becomes an adult chicken between 5 and 7 months of age. A male is called a rooster, and a female is called a hen. The hen will begin to produce and lay eggs when she becomes an adult.