



# Chickens In Chaps



Oklahoma State University, as an equal opportunity employer, complies with all applicable federal and state laws regarding non-discrimination and affirmative action. Oklahoma State University is committed to a policy of equal opportunity for all individuals and does not discriminate based on race, religion, age, sex, color, national origin, marital status, sexual orientation, gender identity/expression, disability, or veteran status with regard to employment, educational programs and activities, and/or admissions.

For more information, visit <https://eeo.okstate.edu>.

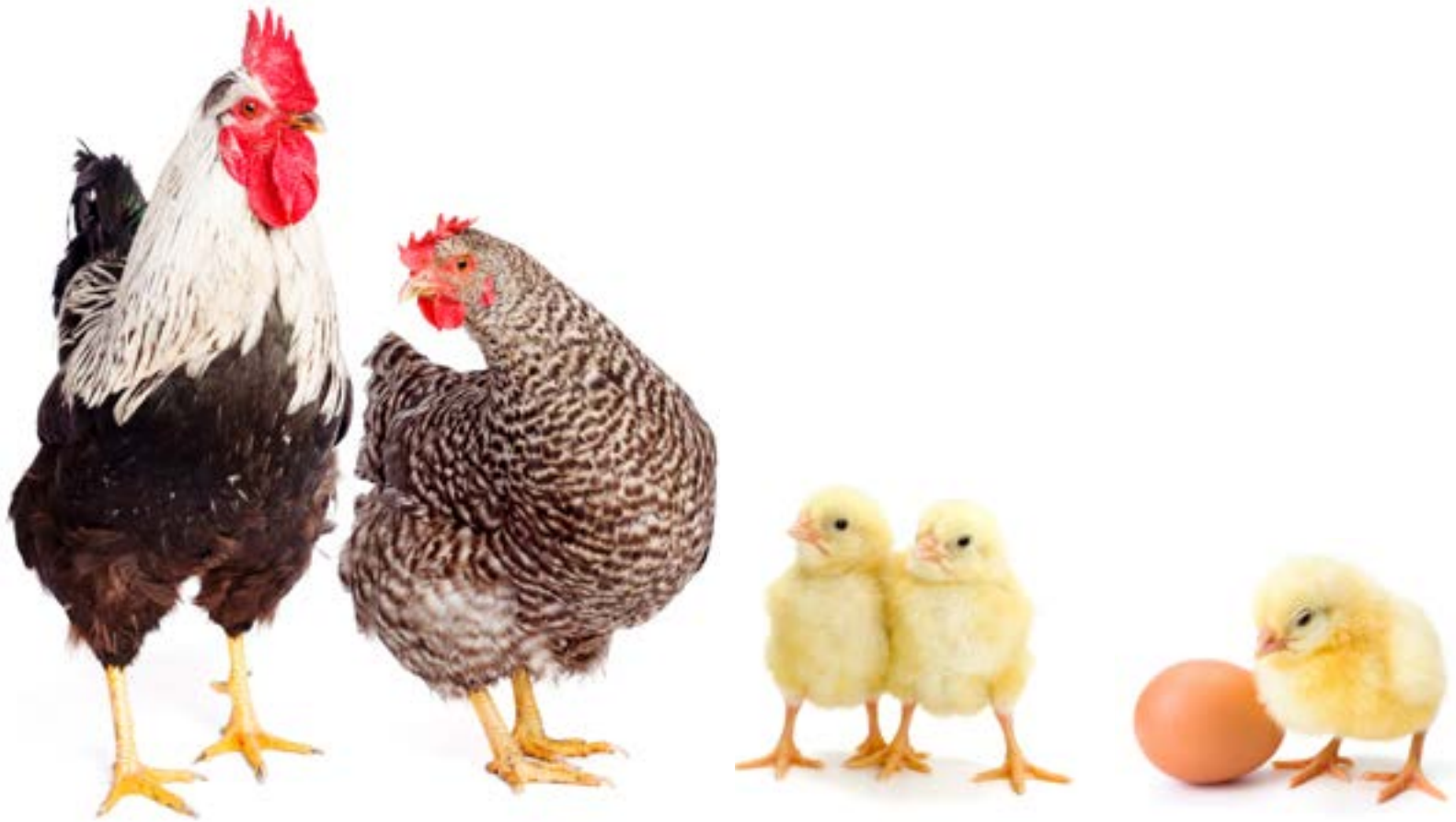


4-H STEM

# Chickens in Chaps

## OVERVIEW

What did you eat for breakfast? Maybe it was toast and jelly, sausage and bacon, or even eggs. Chances are that whatever you had for breakfast is a product of agriculture. Now let's say you had eggs for breakfast, were they scrambled, fried, or boiled? Eggs can be used in a variety of dishes, but do you know how these eggs reach your plate? Maybe your eggs came from the grocery store, but these little guys traveled a lot farther than that before reaching your table! Let's take a closer look at their journey to you.





# HEN TO HOME

## EXPLANATION

Eggs are produced by hens (female chickens) on egg farms. Hens begin laying eggs when they are 4-6 months old. A good laying hen will produce 6-7 eggs per week for the first 1-2 years of her life. Chickens are domestic fowl, as are turkeys, ducks, and geese. All species of poultry lay eggs. Chicken eggs are the most commonly consumed egg in the United States.

Eggs come in various shell colors although there is no nutritional difference between different colored eggs. The shell color depends upon the breed of chicken. Eggs can be white, tan, brown, or even a light shade of blue or green. Chickens can be raised on a large or small scale farm. A few chickens can easily be raised in a backyard to provide eggs for a family. Eggs that are purchased from a store likely came from a large scale farm. Chickens live in houses called a coop. They eat a special feed that includes grains, such as ground corn and wheat.

Eggs that are produced for the purpose of eating will never develop into a chick because the eggs are not fertilized by a rooster nor are they ever incubated (kept warm). On a large scale egg farm, eggs are collected each day. The eggs then go through a processing plant where they are washed, checked for abnormalities, and packaged. If an egg has an abnormal shape or appearance, it is discarded and the remaining eggs are packaged into cartons. The eggs leave the processing plant in refrigerated trucks which deliver the eggs to retail grocery stores to be sold to consumers.



**Hen** - female bird, especially of a domestic fowl

**Rooster**- male domestic chicken

**Coop** - a cage or pen for confining poultry

**Incubation**- keeping eggs at a suitable temperature to develop

**Poultry** - a domesticated bird kept for eggs or meat.

**Domestic** - tame (an animal) and keep it as a pet or for farm produce

**Eggs** - an oval or round object surrounded by a shell laid by a female bird, reptile, fish or invertebrate, usually containing a developing embryo



# ACTIVITY

## MATERIALS NEEDED

Eggs (6 or 12)  
Bowl or Bin (2)  
Access to water  
Egg carton  
Flashlight  
Strainer or basin  
Towel



## STEPS

**Preparation:** Take the eggs out of the carton or whatever container you have them in, and place them in a basket labeled nest

**Step 1:** Today we are going to start out being farmers. Farmers make sure that their chickens have access to clean water and feed daily. The wellbeing of their chickens is a top priority! Healthy chickens produce more eggs. The first thing we have to do is gather our eggs! Take your eggs from the nest, and place them carefully, one by one, into your basket. Farmers take extra care with their eggs not to break them.

**Step 2:** From there the farmer would give his or her eggs to a processing plant. Let's pretend we are the processing plant workers now! Once the eggs reach the processing plant, they have to be cleaned. To clean our eggs, we place them in a strainer or basin in the sink and wash them with water. They are then placed on a conveyor belt to dry. For today, let's place our eggs on a towel to represent the conveyor belt and pat to dry!

**Step 3:** The next step at the processing plant is for our eggs to go through inspection. Inspectors check the shell, the yolk, and the white of their eggs! During inspection, the plant worker will shine a bright light into the egg to check for abnormalities. This process is called candling. Some abnormalities could be that the yolk sack inside the egg is broken, not round, or there are two separate sacks! Today, we are going to inspect our eggs using a flashlight. Turn off the lights in whatever room you are in, aim the flashlight into the egg and write down your observations.



# ACTIVITY



## STEPS

Step 4: Lastly, the processor will put all the inspected eggs into a carton. Each egg will have a specific spot. Once all the eggs are placed, he or she assigns them a USDA letter grade. The grades are AA, A, and B. Eggs that are the freshest, with no abnormalities, with perfect shell condition receive an AA grade. While eggs that are almost perfect while still maintaining great quality are given a grade of A. Most eggs sold in the store are a grade A. Those eggs that are broken or have abnormalities receive a grade B. These eggs are often used for breaking stock or liquid eggs. Assign your carton of eggs a grade of AA, A or B and write it on the carton with a sharpie. (note, if you are using a store bought carton with a grade already present, you do not have to assign your eggs the same grade. This is based on your thoughts).

Step 5: Our eggs are finally ready to be put on the truck. Let's exchange our farmer hats for trucker hats as we transport our eggs to the grocery store. Eggs are transported in special refrigerated trucks to keep them cool and fresh. Sometimes our eggs travel hundreds of miles before they reach the grocery store. Take your container of eggs and travel throughout your home on your way to the "grocery store" or in this case, the fridge! Once you arrive at the fridge it is time for the last leg of our eggs' journey.

Step 6: Once the eggs arrive at the grocery store they are placed on a shelf in the refrigerated section until they are purchased by a consumer. Carefully place your eggs on a shelf in the fridge. If we were at a grocery store they would soon be purchased for use in a variety of tasty dishes!

**We have successfully taken our eggs from farm to fork. Who knew there were so many steps for our food to reach our plate!**

**Resources:** [Homestead Sheep Youtube Video](#), [National Agriculture in the Classroom](#), [Poultry Wranglers Youtube Video](#), [The Happy Chicken Coop](#), and [USDA Agricultural Marketing Service](#).

