

The Poultry Express

FROM NESTING CRATE TO DINNER PLATE

2020
EDITION



INTERACTIVE LESSONS ON GEORGIA'S #1 INDUSTRY



Department of Poultry Science
College of Agricultural & Environmental Sciences
UNIVERSITY OF GEORGIA

**FARM
BUREAU**
GEORGIA



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POULTRY EXPRESS CHECKLIST

The following materials remain in the bag.

- Lesson Binder
- Coloring Sheets
- Book: *Where Do Chicks Come From?* by Amy E. Sklansky
- Book: *Chicks and Chickens* by Gail Gibbons
- Book: *My Chickens Lay Eggs* by Sherry Crelin
- Down feather pillow
- Fishing lures
- Neutrogena Hydro-Boost Hydrating Gel Cleanser

Please ensure you have all materials before leaving.





A BACKGROUND OF

POULTRY

The definition of poultry is any type of domestic fowl, such as chickens, ducks, geese, turkeys, and quail. The poultry industry in the United States is one of the most successful sectors in agriculture. In a little over 50 years, the U.S. broiler industry has evolved from fragmented, locally oriented businesses into a highly efficient, vertically integrated, progressive success story increasingly supplying customers nationwide and around the globe. The modern chicken industry produces nutritious, wholesome, high quality products that became more affordable year after year. Much of the success of the industry can be attributed to a more efficient structural organization, improved production and processing technologies, and a continuing responsiveness to consumer demands.



Poultry originated from southeastern Asia and were originally domesticated for entertainment purposes. Egyptians were mass-producing chicken for consumption thousands of years before the rest of the world as a means to provide protein and energy during the construction of the pyramids. In the 1920's, Cecile Steele of Delaware mistakenly ordered 500 chicks instead of 50 and became the first in the U.S. to commercially produce chicken. By 1928 there were 200 growers in the area!

When the Boll Weevil decimated cotton production in Georgia, the southern part of the state turned to other various row crops while north Georgia turned to poultry. Jesse Jewell of Gainesville, GA took advantage of this opportunity by selling feed and seed to producers on credit, thus creating vertical integration - a single company involved in every stage of production, processing and marketing allowing them to ensure quality and humane handling of their birds and final product. This allowed the state of Georgia to claim the crown as the #1 poultry producing state in the nation - a title that has remained in place to this very day. By 1954 the National Broiler Council (now National Chicken Council) was organized to stimulate consumer demand. Jesse Jewell was the first president (chairman) and is known as the "Father of the Poultry Industry".



Fowl Fact or Fiction

Are brown eggs (organic, free-range, or conventional) healthier than white eggs? *No. All eggs are nutritionally identical, no matter how they were raised. The color of the egg is determined by the breed of the bird.*

Are chickens given additional hormones that allows them to grow so much bigger and faster now? *No. It has been illegal since the 1950's to give chickens hormones. They are much more efficient now due to advances in genetics, nutrition, and technology alone.*

Why are laying hens put in cages? *Layers are in cages to protect them not only from predators, but from each other. If left out, they would be a danger to each other specifically because chickens have a natural "pecking order" where they pluck out other hen's feathers, etc. and can cause bleeding and injury.*

Why are there so many chickens in a house? *Broilers and chickens in general naturally flock together, meaning they like to stay close together in a group. If you look in a house, sometimes they all crowd together at one end or corner just out of instinct and habit. The number of broilers in a house are based on the size of the house, etc. to keep them comfortable and healthy. There are multiple fans in each house to help with airflow as well.*

Are poultry farms bad for the environment? *Not at all if they are managed properly. Environmental regulations are strictly enforced to keep farms as safe and efficient as possible.*

Can there be chicks in my eggs from the grocery store? *No. Hens lay eggs almost every day, but the only way it can develop into a chick is if it is fertilized by a rooster. If not, then it is physically impossible for there to be a chick growing. Blood or meat spots are commonly mistaken for an embryo, when in fact it is just bit of extra protein or iron from the hen and is perfectly safe to eat!*

- Basic Poultry Terminology -

Rooster - a male domestic fowl

Hen - a female bird, especially of a domestic fowl

Broiler - a young chicken suitable for roasting, grilling, or barbecuing (raised for meat)

Layer - female chicken whose purpose is to lay commercial eggs

Pullet - a young hen less than one year old

Hatching Egg - an egg that has been fertilized and will develop a chick

Table Egg - an egg that has not been fertilized and is used for human consumption

Fun Fowl Facts & Figures



If **Georgia** were its own country, it'd be **#7 in the world** in poultry production

The state of Georgia produces **31 million pounds of chicken** in one day!

Annual contribution to Georgia's economy is **\$41.8 BILLION!**

104,000 Georgians are employed through the poultry industry either directly or indirectly.

101 counties in Georgia produce **\$1 million+ of poultry** at the farm level.

Georgia produces **7.6 million table eggs** and **6.3 million hatching eggs** in **one day!**

The annual production from an **average poultry farm** could feed **7 million people** a delicious chicken dinner.

**These numbers are 2019 Georgia Poultry Federation & US Poultry & Egg Association statistics*

Poultry By-Products

Have you seen any of these around your own home?

Fishing Lures & Flies

Feathers from various breeds of poultry and game birds are used in fishing for their color and flashiness in water - making them look like a tasty snack to certain species of fish!

Hyaluronic Acid

This ingredient is very popular in moisturizers! It comes from a rooster's comb, and is known for its anti-aging properties, treating burns, and even as a treatment for osteoarthritis when injected!

Down-Filled Duvets, Pillows, etc.

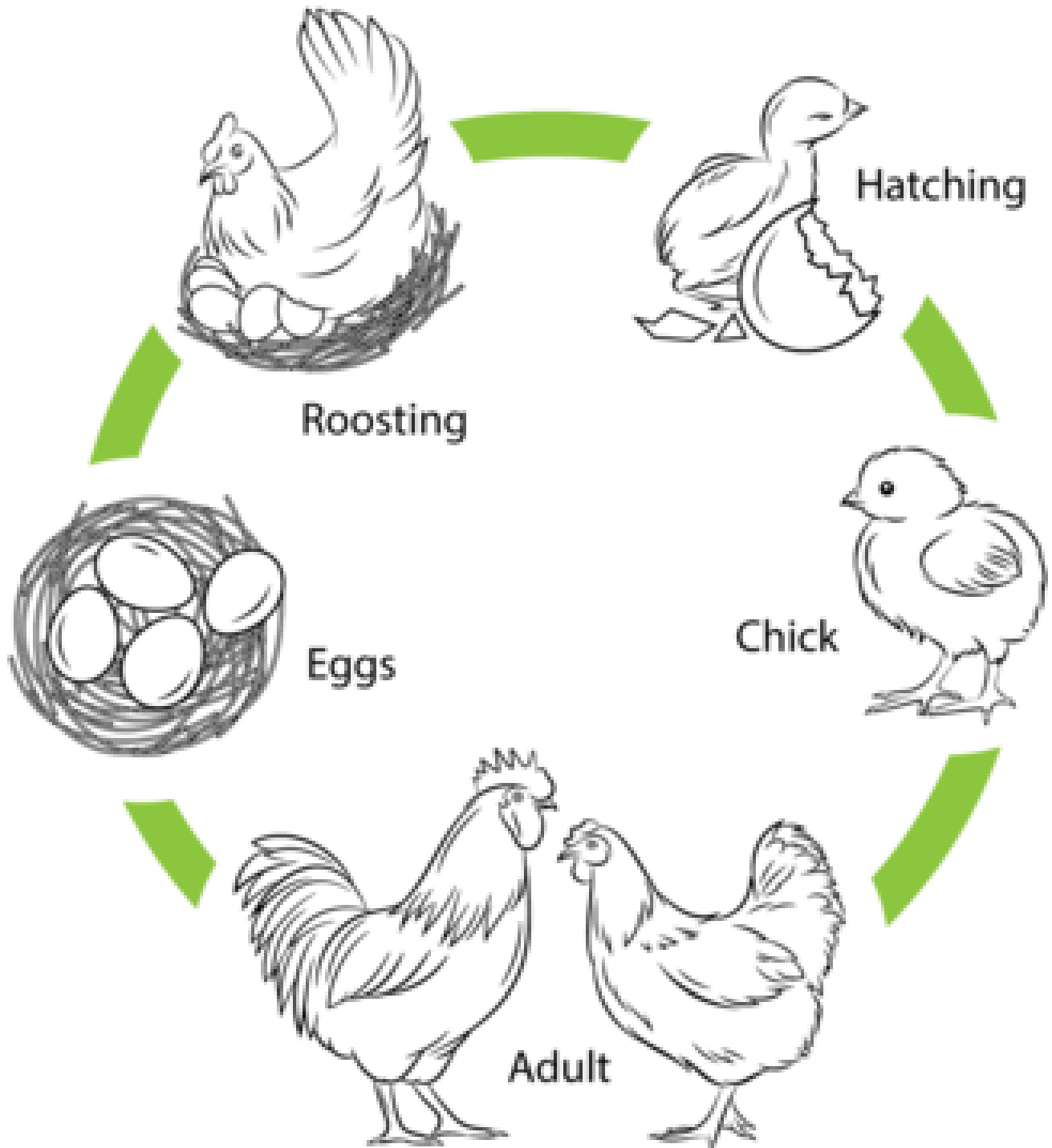
Some of the most plush home items have down feathers to thank! Duvets, pillows, comforters, and even some jackets and vests are filled with down feathers, the small soft feathers that are beneath the large, water-resistant feathers that you see on their body. Down keeps them warm and protects their delicate skin.

**These are just a few popular household items. Poultry by-products are used for many things world-wide, leaving nothing to waste!*



Avian Life Cycle

What came first...the chicken or the egg?



Common Poultry Breeds

See Laminated Parent Offspring Cards!



Araucana



Frizzle



Australorp



Cochin



Brahma



Orpington

Common Poultry Breeds

continued...



Plymouth Rock



Sussex



Rhode Island Red



White Leghorn



Silkie



Wyandotte

Eggcellent Strength

Gather the following:

One dozen eggs per 15 kids

Disinfectant wipes, paper towels

Clear sandwich bags

When you think of your typical egg, usually the first descriptors that come up aren't "sturdy", "strong", and definitely not the word "unbreakable". Amazingly enough, egg shells are impressively sturdy. Arches are the strongest shape in existence (think about bridges, other strong structures), and eggs have not one, but TWO! Below is a super exciting activity that everyone is sure to love and left in awe at the incredible egg!

STEP 1 - Gather your materials together. Go ahead and put two eggs in a sandwich bag each, making sure to expel all of the air before zipping them completely shut.

STEP 2 - Engage the students - ask who the strongest person in the class is and have them come up to the front. Ask if they think they can break an egg? As if performing a magic trick, prove to them by breaking the first egg (drop it on the ground, a desk, etc.) that these are not fake eggs.

STEP 3 - The magic part. Have the student place each end of the egg (the arch ends) into the center of their palms, keeping their hands and fingers straight and stiff. Then have them try to crush the egg - if done right, a normal human can't exhibit the force needed to damage it. It is vital for the success of this activity for the student to keep their hands parallel and stiff. Locking of the fingers, slippery palms, etc. will cause the egg to bust and may make a tiny mess...luckily it just makes it more fun!

STEP 4 - Make sure all students use hand sanitizer after touching any eggs.

Egg Breakouts

Gather the following:

One dozen eggs per 15 kids

Paper plates with rims

Disinfectant wipes, paper towels

Many people use eggs daily whether it be on their own as part of a meal or when they cook, like baking, but never take a moment to explore and appreciate the intricate structure of the egg and what it can produce. This activity takes a crack at breaking it all down!

STEP 1 - Gather your materials together. If you want more student involvement, have the classroom group up in pairs and give them each a paper plate, paper towel, and an egg. You can also have them gather around you as you go through the rest of the steps if you are short on time, space, or supplies.

STEP 2 - Have the students crack their egg onto the plate. Proceed by going through the parts of the egg and the various functions. Ask if any groups see anything unusual like meat spots, a double yolk, etc. and talk about those.

STEP 3 - Make sure you have covered the myths and fun facts that revolve particularly around eggs.

STEP 4 - Clean up using disinfectant wipes to get any spills or messes. Make sure all students use hand sanitizer after completing the activity.

NOTE: See next page for "Parts of the Egg" worksheet to go with this activity.

Make Your Own Chick

Gather the following:

Two large cotton balls

Egg carton cup

Orange construction paper scrap

Two small wiggly eyes

Glue

Damp paper towel / water cup

Yellow washable marker

STEP 1 - The night before making your chicks, use a damp paper towel to lightly moisten the cotton balls.

STEP 2 - Dab the cotton balls with the yellow washable marker. Re-dampen the cotton balls as needed to allow the color to bleed together on the outside of the balls. Be careful not to get it too wet. You can also dip the end of the marker in the water and apply. Let dry.

STEP 3 - Cut the egg carton cup out of the egg carton.

STEP 4 - Trim small rectangles out around the egg carton cup to look like a cracked egg shell.

STEP 5 - Dab a bit of glue into the bottom of the egg carton cup and insert one of the cotton balls for the chick's body.

STEP 6 - Dab a bit of glue on top of the chick's body and place another cotton ball on top for the head.

STEP 7 - Fold the construction paper in half and cut a triangle along the fold (so it looks like a diamond when unfolded). Glue this beak onto the chick.

STEP 8 - Glue the wiggly eyes on as well.

STEP 9 - We made ours so it looked like the chick was facing up to the sky (like a hungry chick does). This had the added benefit of keeping the eyes from sliding off as they dried.

NOTE: You can also use one jumbo cotton ball instead of two standard size.



Careers

What can I do with a degree in Poultry Science or Avian Biology at the University of Georgia?

Poultry Science:

- Veterinarian
- Poultry Technician
- Poultry Nutritionist
- Agriculture Education
- Marketing and Sales
- Processing Manager
- USDA/GDA Inspector
- Human Resources
- Quality Assurance
- Plant Supervisor
- Communications
- Extension Agent
- Genetics
- Engineering
- Poultry Production
- Immunology
- Research/Education
- Hatching/Embryology

Avian Biology:

- Veterinarian
- Human Medicine (Doctor, Dentist, etc.)
- Pet Bird Industry
- Agriculture Education
- Wildlife Conservation
- Avian Ecology
- USDA/GDA Inspector
- Poultry Industry
- Extension Agent
- Research/Education
- Avian Rehabilitation
- Bird Curator
- Immunology
- Marketing/Sales
- Genetics
- Hatching/Embryology
- Zoo
- Toxicology

...and so much more!



Photo Credit:
Elizabeth Davis
Poultry Science '18 Graduate
Savannah Shaw Photography



Additional Resources

The following sites can serve as useful resources for additional lessons regarding poultry and other agricultural industries.

UGA Dept. of Poultry Science - poultry.uga.edu

Georgia Farm Bureau - Ag. in the Classroom - gfb.ag/aitc

Georgia Farm Bureau - Education & Outreach - <http://www.gfb.org/education-and-outreach/about-ga-agriculture.cms>

Ag in the Classroom - <https://www.agclassroom.org/index.cfm>

Georgia Agricultural Education - gaaged.org

Agriculture Education Magazine - <https://www.naae.org/profdevelopment/magazine/>

U.S. Poultry & Egg Association - www.uspoultry.org

GA Grown - Feed my School - <http://feedmyschool.org/FMS/home>

Georgia Poultry Federation - <http://www.gapf.org/>

Georgia Farm Bureau Foundation for Ag - www.GFBFoundationforAg.org/aitc.html



Teacher Survey

Please take a few moments to complete this survey. We appreciate your help in providing the best program possible for your students!

COUNTY: _____ **SCHOOL:** _____ **GRADE:** _____

- 1.) Was the process of scheduling and coordinating this program with us easy for you?
- 2.) Did the lessons meet the specific state standard requirements for your students?
- 3.) Do you feel your students made further connections to the importance of poultry in their daily lives?
- 4.) Please rate the lessons/projects accordingly.

<i>Well Organized?</i>	FAIR	GOOD	EXCELLENT
<i>Fun and engaging for the students?</i>	FAIR	GOOD	EXCELLENT
- 5.) How would you rate the overall program? FAIR GOOD EXCELLENT
- 6.) Would you recommend this program to others? YES NO, WHY?
- 7.) Please provide any other comments or suggestions.



Volunteer Report

Please take a few moments to complete this report and return it to the Farm Bureau county office. We appreciate your help in providing the best program possible for Georgia students!

COUNTY: _____

SCHOOL: _____

GRADE: _____

VOLUNTEER/COUNTY COORDINATOR: _____

1.) Date of Presentation: _____

2.) Number of Classrooms Visited: _____ Number of Students Seen: _____

3.) Before the presentation, did you check to ensure all materials were present? YES

4.) Were all materials present? YES NO, WHAT WAS MISSING?

5.) Did you check the trunk to ensure all materials are accounted for after the program? YES

Contact Information



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