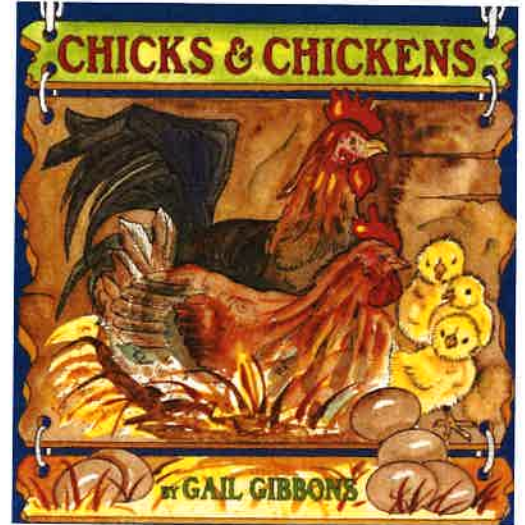


July 2018 Book of the Month

Chicks & Chickens

By: Gail Gibbons

In this colorful book, students will learn many aspects of a well known farm animal—the chicken! Gibbons starts with an overview of how eggs are produced for human consumption, and also how fertilized eggs become small, fuzzy chicks and eventually chickens. We learn the behaviors of chicks, hens and roosters, and the differences between them. Gibbons illustrates the digestive and reproductive systems of chickens, and explores eggs in the different stages of development. Finally, Gibbons describes several different breeds of chickens, from the sleek and shiny to the big and fluffy! *Chicks & Chickens* is an informative exploration of an important part of food production in North Carolina and the United States.



Fun Facts

- Poultry is the top agricultural commodity for North Carolina, contributing a total economic impact of \$34.4 billion to North Carolina annually.¹
- More than 5,700 farm families produce poultry and eggs in North Carolina, and the industry creates more than 115,000 jobs for North Carolinians.¹
- Poultry makes up 40 percent of North Carolina's total farm income.¹
- North Carolina ranks number four in the nation for broiler production.¹
- The average American consumes 90 pounds of chicken, 17 pounds of turkey, and 20 dozen eggs per year. Americans also eat chicken more than any other meat.²

Vocabulary^{3,4}

Commodity: an agricultural product that can be bought and sold

Broiler: young chickens that are raised for meat

Layer: a chicken used for laying eggs

Breed: group of animals that share many of the same physical features.

Incubation: process of warming the eggs before they hatch for about 3 weeks

Brood: a group of newly hatched chicks

Chick: a young chicken, newly hatched

Hen: an adult female chicken of breeding age

Rooster: an adult male chicken of breeding age

Poultry: domesticated fowl such as chickens, turkeys, ducks and geese

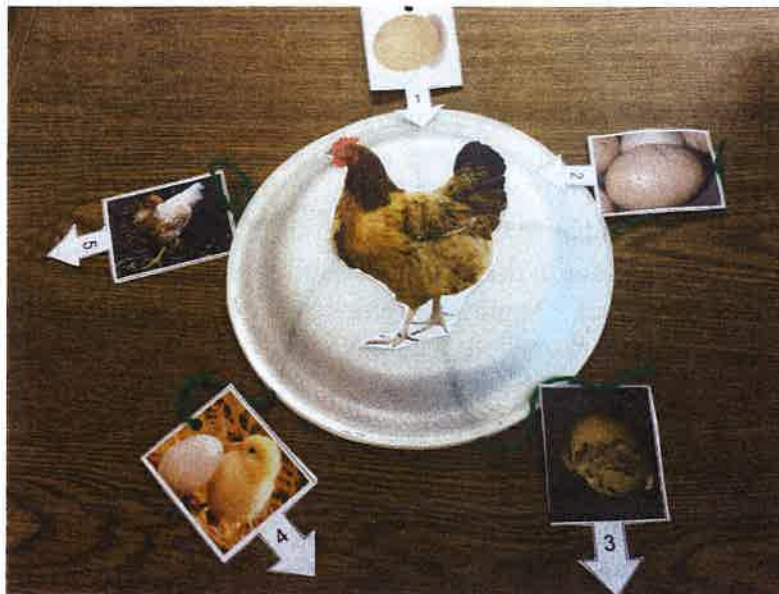
Discussion Questions/Student Engagement^{3,4}

1. What do you know about chickens?
2. Have you ever seen a chicken in real life?

3. Do you like to eat chicken? Do you like to eat eggs?
4. What is a broiler?
5. What is a layer?
6. What are some of the characteristics of broilers?
7. Would you like to visit a hatchery?
8. Where can you find information about broilers/layers?
9. Who can I ask about broilers/layers?
10. Where do chickens live?
11. How are baby chicks born?
12. How long does it take for an egg to hatch?
13. Would you like to watch a baby chick being hatched?

Chicken Life Cycle⁵

Each student will need two paper plates, one brass fastener, yarn, scissors, glue, hole punch, a pen, and a copy of *Hen Picture and Life Stages Cards* and *Life Cycle Wheel Text* (see below).



1. After reading *Chicks & Chickens*. The last half of the book talks about the chicken life cycle. Ask the students if they can name or describe other living things that experience a cycle of life. Ask, “Do humans experience life cycles? If so, what are the stages? If a chick takes 4-6 months to become an adult, how long does it take a child to become an adult?”
2. Using *Hen Picture and Life Stages Cards* (in **Links** below and attached) and the following instructions, assist students in assembling individual life cycle wheels.
 - a. Using one plate facing down, punch the brad (brass fastener) through the center of the plate. Cut out the Hen Picture and glue onto the center front of the plate over the brad.

- b. Cut out each Life Stage Card and punch a hole on the opposite end from the numbered tab approximately ½ inch from the edge of the card.
- c. Tie each length of yarn to the brad, knotting securely. Each yarn piece will attach to the brad in the center of the plate, pull outward and attach to an individual Life Stage Card.
- d. Have students write the correct text on the back of each Life Stage Card. Use the attached document, Life Cycle Wheel Text.
- e. Using the previously punched holes, tie one Life Stage Card to the end of each length of yarn.
- f. Stretch each length of yarn with card attached out past the edge of the paper plate. Space these equally apart around the circle of the plate. Make sure that the cards are numerically sequenced.
- g. Place the second plate on top of the first plate, face down. The plates should “nest” one inside the other.
- h. Using five staples, secure the plates together. Ensure the staples are evenly spaced around the plate, making sure there is room between the staples for one card to be pulled through each space in the sequence.

Egg Sizing: A Case Study⁶

Medium. Large. Extra Large. Jumbo. Everyone knows that eggs come in difference sizes. There are even specialty egg sizes—pee wee and small! But just how do eggs measure up anyway? (Hint: Science!) Gather medium, large and extra-large eggs for the class to use for this activity.

1. Egg sizing guidelines are set by the U.S. Department of Agriculture (USDA) based on weight per dozen eggs. Use the math conversion chart below to calculate the average weight for each egg size.
2. Now weigh your eggs individually and record the weight in the second chart.
3. How did your results compare to those of a typical egg?

Egg Size	Weight Per Dozen	Weight Per Egg (convert)
Medium	21 ounces	
Large	24 ounces	
Extra-Large	27 ounces	

	Egg Size	Weight
Egg #1		
Egg #2		

How do you think the following factors affect the size of the eggs? Write your ideas below.

1. Age of the hen: (*As the hen ages, her eggs increase in size.*⁷)
2. Weight of the hen: (*Underweight young hens will produce smaller eggs.*⁷)

3. The environment in which the hen is living: (*Heat, stress, overcrowding, and poor nutrition can affect egg size, and cause low egg weights.*⁷)

An Eggs-ceptional Meal⁸

Ask students to list as many ways they can think of to prepare eggs for the different mealtimes: Breakfast, Lunch and Dinner.

A Family L-egg-acy⁹

Ask students to interview a family member about a family favorite recipe that includes eggs. Tell students that it can be anything that calls for eggs in the recipe (casseroles, French toast, etc.), not just recipes where eggs are the main ingredient (deviled eggs, egg salad, etc.). Ask the students to use the following interview questions. They may receive more information during the interview and encourage them to record the information. Once the students have completed their interviews, ask them to share their interviews and recipes with the class.

1. Name of the dish.
2. What are the ingredients?
3. When do you first remember eating this dish?
4. What is your favorite memory associated with this food tradition?
5. Have you ever tried to change the recipe? Why or why not?
6. Why do you think it's important that your family keeps this food tradition alive?

Links

- From Chicken Little to Chicken Big (full lesson plan for 2nd grade)
<https://www.ncagintheclassroom.com/Portals/1/pdf/curriculum/FromChickenLittletoChickenBig.pdf?ver=2015-11-03-113829-097>
- Poultry and the Hormone Myth (video)
<https://www.youtube.com/watch?v=Ey84oOEa04E>
- Baby chicks being hatched (video)
<https://www.msichicago.org/experiment/videos/the-hatchery/>
- Hen Picture and Life Stages Cards (used in Chicken Life Cycle Activity)
https://naitc-api.usu.edu/media/uploads/2017/02/22/Hen_Picture_Life_Stages_Cards.pdf
- Life Cycle Wheel Text (used in Chicken Life Cycle Activity)
https://naitc-api.usu.edu/media/uploads/2017/02/22/Life_Cycle_Wheel_Text.pdf

Sources

1. <https://www.ncfieldfamily.org/farm/farm-facts-chickens/>
2. <http://www.ncpoultry.org/facts/facts.cfm>
3. <https://www.ncagintheclassroom.com/Portals/1/pdf/curriculum/FromChickenLittletoChickenBig.pdf?ver=2015-11-03-113829-097>

4. <https://www.ncagintheclassroom.com/Portals/1/pdf/curriculum/LessonPlanBroilers.pdf?ver=2015-11-03-113833-747>
5. https://www.agclassroom.org/teacher/matrix/lessonplan.cfm?lpid=560&search_term_lp=chickens
6. https://naite-api.usu.edu/media/uploads/2017/08/02/Egg_Sizing.pdf
7. <https://www.incredibleegg.org/eggyclopedia/s/size>
8. https://naite-api.usu.edu/media/uploads/2017/06/29/An_Eggs-ceptional_Meal.pdf
9. https://naite-api.usu.edu/media/uploads/2017/06/29/A_Family_L-egg-acy_.pdf

Life Cycle Wheel Text

Card #1

A hen lays a fertilized egg.

Card #2

After 3 weeks of incubation, the chick begins to peck through the shell.

Card #3

When it hatches, the chick is wet and can walk immediately.

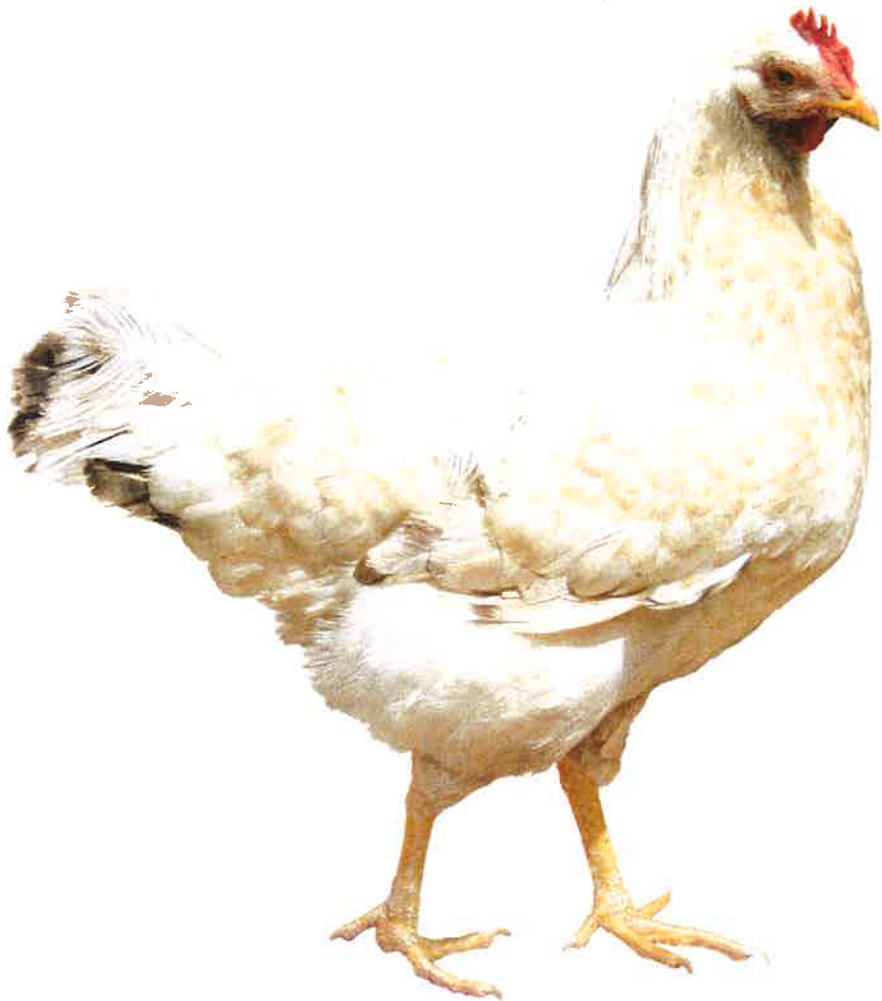
Card #4

The chick has soft feathers called down. These feathers are replaced with more feathers in 4 weeks.

Card #5

A female chick, until one year of age is called a pullet. After that she is called a hen and can lay eggs.

Hen Picture



Life Stages Cards

