



# Which Came First, the Chicken or the Egg?

6<sub>A</sub>

**Note:** Introducing the Read-Aloud may have activity options which exceed the time allocated for this part of the lesson. To remain within the time periods allocated for this portion of the lesson, you will need to make conscious choices about which activities to include based on the needs of your students.

## ***Introducing the Read-Aloud***

**10** minutes

### **What Have We Already Learned?**

**10** minutes

Review with students that a cycle is a sequence of events that repeats itself again and again. In the previous lesson, students learned that the stages in the life cycles of flowering plants and trees are both from seed to seed. The life cycles begin with seeds and end with the plants and trees producing new seeds.

Show students Image Cards 5–9, and have them identify and sequence the stages of a flowering plant’s life cycle. You may wish to ask the following questions:

- Which Image Card shows the first stage of the life cycle? (seeds in Image Card 5)
- Which stage of the life cycle do Image Cards 6 and 7 show? (germination/seedling)
- Image Card 8 shows a mature flowering plant. When a plant reaches maturity, it flowers and produces fruit. This will start the life cycle over again, once seeds are dispersed as in Image Card 9.

You may also wish to reference Cycles Poster 2 (Flowering Plant Life Cycle) and Poster 3 (Life Cycle of a Tree).

Review with students how the seasonal cycle affects the life cycle of deciduous trees. Tell students that they have now learned about the seasonal cycle, the life cycle of a flowering plant, and

the life cycle of a tree. Ask students what all of these things have in common. Remind them that all living things—plants, animals, and even people—journey through differing stages from birth to adult called a *life cycle*. Explain to students that they are going to continue learning about the life cycle as experienced by a very familiar bird.

## Making Predictions About the Read-Aloud

5 minutes

Ask students to think about the title of the read-aloud to predict whether the chicken or the egg comes first.

## Vocabulary Preview

5 minutes

### Embryo



#### ← Show image 6A-4: Diagram of developing chicken embryo

1. In today's read-aloud you will see a tiny chicken *embryo* growing inside of an egg.
2. Say *embryo* with me three times.
3. An embryo is an unborn animal or person.
4. This is an embryo of a chicken. The embryo is inside the chicken egg; the chick has not hatched yet. [Show additional images of animal embryos, and see if students can tell which animal the embryo will become.]
5. Is an embryo at the beginning, middle, or end of an animal's life cycle?

### Fertilize

1. Today we will learn that a rooster, or a male chicken, must *fertilize* a hen's, or female chicken's, eggs before the hen lays the eggs.
2. Say *fertilize* with me three times.
3. To fertilize an egg means to make an egg able to grow into a baby animal. Eggs that are not fertilized do not become baby animals.
4. The roosters on a farm help to fertilize the hen's eggs.
5. If an egg is not fertilized, can it become a baby chick? (no)

## **Purpose for Listening**

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Tell students to listen carefully to find out whether or not their predictions are correct and to learn all about the main topic of today's read-aloud: the life cycle of a chicken.



## Which Came First, the Chicken or the Egg?

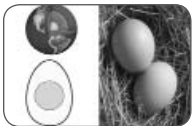
### ← Show image 6A-1: Chicken and Tyrannosaurus Rex

A chicken is a type of bird. Did you know that there are more chickens in our world than any other type of bird? In fact there are more chickens on Earth than people. Scientists believe that chickens are the closest living relative of the Tyrannosaurus Rex, one of the largest dinosaurs that ever lived. Can you see why? <sup>1</sup>

Like all birds, chickens have feathers and wings, and they lay eggs. Chickens can fly, but not very far. Have you ever heard the question, “Which came first, the chicken or the egg?” Listen carefully to this lesson on the life cycle of a chicken, and you’ll see why that question is so difficult to answer!

All living things go through a sequence of stages from birth to adult called a life cycle. The life cycles of plants and trees begin with seeds; the life cycles of chickens begin with eggs!

1 [Have students compare and contrast the images in 6A-1.]



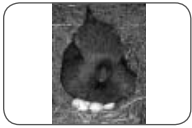
### ← Show image 6A-2: Egg

Have you ever cracked an egg open? The outer layer that you crack is called the eggshell. Eggshells can be many different colors, including white, light brown, speckled, pale blue, or even green. Inside the shell, the egg consists of a yellow **yolk**, which is made mostly of fat, and a white part, called the **albumen**. <sup>2</sup>

Do you know what a female chicken is called? A female chicken is called a hen. Do you know what a male chicken is called? A male chicken is called a rooster. Hens lay eggs. Not all eggs become baby chickens, or chicks. In order to produce chicks, a rooster must **fertilize** the eggs before the hen lays them. <sup>3</sup> Eggs that are not fertilized do not become baby chickens. They are sent to stores so that people can buy them and eat them.

2 [Point to image 6A-2.] Many people compare the layers of the earth to the layers of an egg. How are they similar? How are they different?

3 Fertilization is similar to pollination: just like flowers need pollen from another flower in order to make seeds, hens need roosters in order for their eggs to become baby chickens, or chicks.



← **Show image 6A-3: Hen sitting on eggs**

As soon as a hen lays her fertilized eggs, she will begin to care for them. The hen will sit on the eggs and even turn the eggs to make sure that the eggs stay warm. The eggs need to stay warm for twenty-one days in order to develop into chicks.<sup>4</sup> Let's find out what happens inside the egg during this time!

4 Twenty-one days is three weeks.



← **Show image 6A-4: Diagram of developing chicken embryo**

Inside the fertilized egg, great changes are happening. A tiny **embryo** is developing inside the egg.<sup>5</sup> The embryo needs food, water, and oxygen to grow and develop. Within forty-eight hours of fertilization, tiny, red blood vessels spread out from the embryo to the yolk and to the inside of the shell. Directly under the shell are two membranes, or air sacs, containing oxygen. As the embryo develops and grows into a chick, it uses this oxygen. This supply of oxygen is **replenished**, or replaced, as oxygen passes through the shell of the egg. How does oxygen pass through the shell of an egg? If you look at an eggshell under a magnifying glass, you will see that it has tiny holes called pores that allow oxygen in, and carbon dioxide out.<sup>6</sup>

5 An *embryo* is an animal in the early stages of life before it is born or has hatched.

6 Humans have millions of pores. Pores are the openings on our skin out of which hair grows.

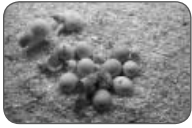
The parts of the egg inside the shell contain all the food the growing embryo needs to develop into a fully formed chick. The yellow yolk provides the food necessary for the embryo to grow big and strong. The white of the egg, or albumen, surrounds the yolk and provides the growing embryo with more food and water.

The first part to develop is the chick's nervous system. Then the brain starts to form, and then the heart starts to beat. After five days, the wings and the legs begin to develop. After seven days, the embryo is fully formed but is quite tiny. Around the tenth day, feathers begin to develop and the growth of the fully formed embryo into a chick accelerates, or speeds up.<sup>7</sup>

7 Look at the image. What is the difference between Day 8 and Day 20 in terms of the chick's development?

As the chick grows, it uses up its food supply. After twenty days inside the egg, the chick pierces, or makes a hole in, the air sac and begins to breathe air with its own lungs for the first time. This means that the chick is ready to hatch out of the egg. The chick begins to chirp to let its mother know that it will soon be in the

outside world. On the twenty-first day, the chick uses its egg tooth to chip a circle around the inside of the shell. It pushes against the sides of the egg with its body to break open the shell.



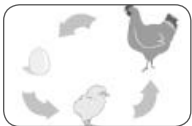
← **Show image 6A-5: Newly hatched chicks**

When the chick first emerges, it is tired from the effort of breaking out of its shell. It is also wet. Before long, however, the feathers dry out and become lovely and fluffy.<sup>8</sup>

8 Have you ever seen newborn chicks? Where did you see them?

The mother hen, having cared for her eggs, continues to care for her chicks. She will shelter them under her wings to keep them warm and dry. Chicks know instinctively how to scratch around in the dirt for food.<sup>9</sup> For the first two weeks, the chicks stay close to their mother.

9 Chicks know how to scratch around for food without being taught to do so.



← **Show image 6A-6: Chicken life cycle diagram**

Chicks grow quickly in the first months of their lives. When a female is about six months old, she will start to lay eggs. These first eggs will be quite small, though. Interestingly, females are called pullets, not hens, until they are one year old. Roosters are able to fertilize eggs at a similar age.

And so the life cycle begins all over again. A rooster fertilizes eggs before a hen lays them. The hen will care for the fertilized eggs and keep them warm. After twenty-one days, the eggs will hatch and new chicks will emerge.

Now that you know more about the life cycle of a chicken, which do you think came first—the chicken or the egg?

## ***Discussing the Read-Aloud***

**15** minutes

### **Comprehension Questions**

**10** minutes

1. *Evaluative* Were your predictions correct about which comes first, the chicken or the egg? Why or why not? (Answers may vary. Both answers are correct.)
2. *Literal* What is the main topic of the read-aloud? (The main topic of the read-aloud is the life cycle of a chicken.)

3. *Literal* How does the life cycle of a chicken begin? (The life cycle of a chicken begins as an egg.)
4. *Literal* What three parts make up an egg? (The three parts that make up an egg are the shell, the albumen, and the yolk.)
5. *Inferential* Do all eggs develop into baby chicks or go through a complete life cycle? (No, an egg must be fertilized by a rooster to produce baby chicks.)
6. *Inferential* How does the mother hen help her chicks grow inside the eggs? (The mother hen covers the eggs with her body to keep them warm; she turns the eggs over so that they are warm on all sides.)
7. *Literal* What does a growing chick use for food before it hatches? (A growing chick uses the yolk and the albumen as a source of food before it hatches.)
8. *Literal* What does a baby chick do to break out of its shell when it hatches? (A baby chick uses its egg tooth to chip a circle around the inside of the shell; it pushes against the sides of the egg with its body to break open the shell.)
9. *Literal* What are the three stages of the life cycle of a chicken? (The three stages of the life cycle of a chicken are the egg, the chick, and the adult.)

[Please continue to model the *Think Pair Share* process for students, as necessary, and scaffold students in their use of the process.]

I am going to ask a couple of questions. I will give you a minute to think about the questions, and then I will ask you to turn to your neighbor and discuss the questions. Finally, I will call on several of you to share what you discussed with your partner.

10. *Evaluative Think Pair Share:* How is the life cycle of a chick similar to the life cycle of a flowering plant? How is it different? (Answers may vary.)
11. After hearing today's read-aloud and questions and answers, do you have any remaining questions? [If time permits, you may wish to allow for individual, group, or class research of the text and/or other resources to answer these questions.]

## Word Work: Replenished

5 minutes

1. In the read-aloud you heard, “This supply of oxygen is *replenished*, or replaced, as oxygen passes through the shell of the egg.”
2. Say the word *replenished* with me.
3. The word *replenished* means to replace, restore, or refill.
4. The refrigerator was almost empty and the groceries needed to be replenished.
5. Can you think of items that need to be replenished? Try to use the word *replenished* when you tell about it. [Ask two or three students. If necessary, guide and/or rephrase the students’ responses: “. . . needs to be replenished. Suggestions: water bottle, scratch paper pile, pencil jar, pet’s food bowl, cereal box.]
6. What’s the word we’ve been talking about? What part of speech is the word *replenished*? How do you know that it is an action word?

Use a *Making Choices* activity for follow-up. Directions: I am going to read a list of several things to you. If what I read describes something that can be replenished, say, “That can be replenished.” If what I read describes something that cannot be replenished, say, “That cannot be replenished.” Remember to answer in complete sentences.

1. an almost empty glass of water (That can be replenished.)
2. an almost empty gas tank (That can be replenished.)
3. snacks for school (That can be replenished.)
4. a bubble when it has burst (That cannot be replenished.)
5. the flavor in a piece of gum after you have chewed it (That cannot be replenished.)



**Complete Remainder of the Lesson Later in the Day**





# Which Came First, the Chicken or the Egg?

6<sub>B</sub>

**Note:** Extensions may have activity options that exceed the time allocated for this part of the lesson. To remain within the time periods allocated for this portion of the lesson, you will need to make conscious choices about which activities to include based on the needs of your students.

## Extensions

20 minutes

### ↔ Multiple Meaning Word Activity

5 minutes

#### *Associated Phrase: Stage*

**Note:** You may choose to have students hold up one or two fingers to indicate which image shows the meaning being described or have a student walk up to the poster and point to the image being described.

1. [Show Poster 1M (Stage).] In the read-aloud you learned that the first stage of the life cycle of a chicken is an egg. Which image shows this kind of *stage*?
2. *Stage* can also mean something else. *Stage* also means a raised platform on which people sing, dance, and act. Which picture shows this kind of *stage*?
3. [Point to the image of *stage* that shows a theater stage.] With your partner, talk about what you think of when you see this kind of *stage*. I will call on a few partners to share. (When I see this kind of *stage*, I think of going to see a play with my grandma, acting in the school play, musicals, etc.)
4. [Point to the image of *stage* that shows times in the growth or development of something.] With your partner, talk about what you think of when you see this kind of *stage*. I will call on a few partners to share. (When I see this kind of *stage*, I think of babies growing into adults, times in someone's life, etc.)

## 10 Sequencing the Life Cycle of a Chicken (Instructional Masters 6B-1 and 6B-2)

15 minutes

- Show students Image Cards 10–12, and have them explain and sequence the chicken’s life cycle. You may wish to show students Cycles Poster 4 (Life Cycle of a Chicken) and have them once again identify the three stages of the chicken’s life cycle. (egg, baby chick, adult chicken)
- Give students Instructional Masters 6B-1 and 6B-2. Tell them that they will create Response Card 5; it will show the life cycle of a chicken. [**Note:** This Response Card should be held and viewed using landscape orientation.]
  - First, have students cut out the images of the stages of the life cycle of a chicken on Instructional Master 6B-1.
  - Next, have them put the images in the correct order of the life cycle of a chicken.
  - Then, students should glue or tape the images in the correct blanks on Instructional Master 6B-2.
  - Finally, have students describe the life cycle of a chicken to their partner or home-language peers.

## Interactive Illustrations

15 minutes

Explain to students that they will all get to be authors and illustrators in the next activity. Give each student a sheet of paper folded in half. On one half of the paper, have each student write a sentence about the life cycle of a chicken from egg to egg. Pair them with a partner. Ask them to read their sentence aloud to their partner and then trade papers. Using the second section on their partner’s paper, have each student draw a picture that goes with his or her partner’s sentence. Then have students hand the paper back to the original author. Encourage the author to add descriptive words to his or her original sentence using carets, and hand the papers back to the illustrators to draw more details into the illustration.

Allow several students to share their drawings and sentences. Have them discuss how their partners’ illustrations differed from the pictures they had imagined in their heads when they wrote their sentences. As the students discuss the illustrations,

remember to repeat and expand upon each response using richer and more complex language, including, if possible, any domain-related vocabulary.

### **Domain-Related Trade Book**

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**20 minutes**

- Refer to the list of recommended trade books in the Introduction at the front of this *Supplemental Guide*, and choose one trade book about the life cycle of a chicken to read aloud to the class.
- Explain to students that the person who wrote the book is called the author. Tell students the name of the author. Explain to students that the person who makes the pictures for the book is called an illustrator. Tell students the name of the illustrator. Show students where they can find this information on the cover of the book or on the title page.
- As you read, use the same strategies that you have been using when reading the read-aloud selections—pause and ask occasional questions; rapidly clarify critical vocabulary within the context of the read-aloud; etc.
- After you finish reading the trade book aloud, lead students in a discussion as to how the story or information in this book relates to the read-alouds in this domain.

## ***Take-Home Material***

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### **Family Letter**

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Send home Instructional Masters 6B-3 and 6B-4.