#### OHIO STATE UNIVERSITY EXTENSION

4-H 167R

# Chick UEST

Name



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES



| Date  |
|---|
| Dear<br>I like science! For 21 days our class observed eggs in an incubator. While<br>we were waiting for the chicks to hatch, we learned about habitats, life<br>cycles, structure and function, classification, and a lot of careers.<br>We learned to use scientific measuring tools. Some of the tools I used |
| were  |
| We recorded data for science investigations. My question was  |
| We practiced the engineering design process. I designed a   |
| My favorite thing about this science project is   |
|   |
| Be sure to ask me questions about all of the interesting things that<br>I learned in science!<br>From,  |
|   |

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## Welcome to ChickQuest

This 21-day classroom adventure starts with eggs and ends with chicks. You are the scientist who helps make it happen! Use your personal ChickQuest Logbook to record your data and observations.



| Name           |  |
|----------------|--|
| School         |  |
| Teacher's name |  |
| Date           |  |
|                |  |



# **Scientists ASK QUESTIONS**

What is a habitat? A habitat is a home for a living thing. The incubator will be the home for the egg before it hatches.

Use data from the measurement tools to fill in the chart. Compare the incubator habitat to your own habitat. List other things in the habitat that help meet the needs of those who live there.

|                                    | Habitat #1:<br>Incubator | Habitat #2:<br>Classroom | Habitat #3: | Habitat #4: |  |
|------------------------------------|--------------------------|--------------------------|-------------|-------------|--|
| Air<br>Temperature                 |                          |                          |             |             |  |
| Humidity                           |                          |                          |             |             |  |
| Other<br>Things That<br>Meet Needs |                          |                          |             |             |  |
|                                    |                          |                          |             |             |  |

#### Habitat Data Collection

Did you know?



In the wild, a bird sits on the egg in a nest to keep it warm. Moisture from the bird's body provides humidity and keeps the egg from drying out.



What kind of habitat is best for the egg? How do we prepare a habitat for chick eggs?

Draw a picture of the incubator habitat here. Include the thermometer and hygrometer and label them.

You are a ChickQuest Scientist! What questions do you have about incubating eggs? Habitats? Chicks? Can you fill this page with questions?

Initial

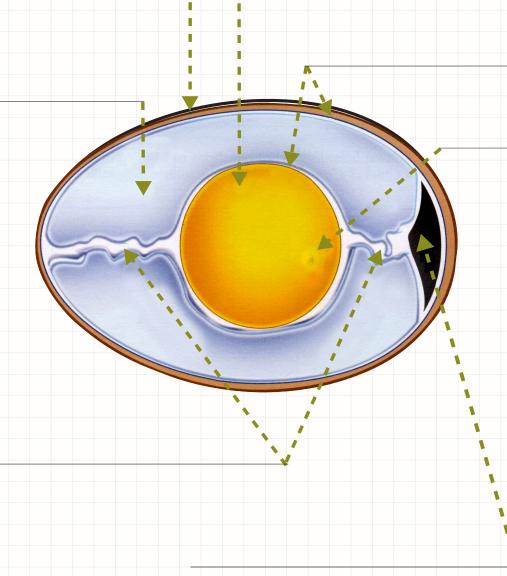


# 2

### Scientists OBSERVE

t.

The diagram shows the anatomy (parts) of an egg. Every part has an important job. Use the word box and definitions to label the diagram.



| Word | Box A | Air Cell | Albumen | Chalazae | Membranes | Shell | Yolk |
|------|-------|----------|---------|----------|-----------|-------|------|
|------|-------|----------|---------|----------|-----------|-------|------|

1

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Air Cell—Small pocket of air that forms between the membranes at the egg's wider end. A source of air for the chick when it starts to breathe soon before it hatches.

Albumen—Commonly known as the egg white. Surrounds the yolk. Composed of water and dissolved protein (albumin). Provides food for the growing embryo. Keeps embryo moist and cushioned when the hen sits on the egg and turns it.

**Chalazae**—Two ropes of egg white that hold the yolk in the center of the egg.

**Germ Spot**—The white spot on the yolk that shows if an egg is fertile or not.

Membranes—Two thin, transparent layers of protein. One holds the yolk. One holds the albumen. Membranes keep bacteria from getting inside.

**Shell**—Hard outer covering, made of calcium carbonate. Protects the growing chick.

Yolk—Stored food to feed the embryo while it grows. Contains vitamins and minerals, some fat, and more protein than the white. Almost used up by hatching time.





Date\_

Initial\_\_\_

Scientists COLLECT DATA

|   | Day        | Month/Day/Year | <b>Turr</b><br>X or O | n <b>ing</b><br>Time | Temperature<br>(Incubator) | Humidity<br>(Incubator) | Life Cycle<br>Photo |  |
|---|------------|----------------|-----------------------|----------------------|----------------------------|-------------------------|---------------------|--|
|   |            |                | x                     | 8:30                 |                            |                         |                     |  |
|   | May 28, 20 | May 28, 2015   | 0                     | 11:30                | 99.5° F                    | 60%                     |                     |  |
|   |            |                | x                     | 2:30                 |                            |                         |                     |  |
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|   | 7          |                |                       |                      |                            |                         |                     |  |
|   |            |                |                       |                      |                            |                         |                     |  |
| 6 |            |                |                       |                      |                            |                         |                     |  |



# DAILY DATA

#### **Questions, Observations, Predictions**

Initial\_\_\_

Will all the chicks be the same size? Egg 7 appears to be a little bigger. I predict it will be the biggest chick.

Chick **QUEST** 2

Date\_\_\_\_