

CHICK EMBRYOLOGY – LESSON 5

Time Needed

- Flexible depending on the age of the students and level of discussion: 10-60 minutes

Skill/Grade Level

- Can be adapted for K-12 students

Core Area

- Agriculture
- Animal production

Life Skills

- Participation in group discussion
- Sharing experiences and ideas

Educational Standards

- AA-2: Participate in conversation, discussion and group presentations
- OD-1: Describe the functions of the major reproductive organs
- OD-2: Contrast the processes of natural and artificial breeding methods



Objectives/Outcomes

- Give the students an overview of the chicken embryology

Introduction to Content

This lesson will review the development of the chick embryo.

Curriculum

The materials required for this lesson are included. There is a separate PowerPoint presentation. Internet access is required to view the YouTube videos in the presentation.

Background Information

The development of a chick starts with a single cell formed by the union of two parental cells - the egg and the sperm. This process is known as fertilization. In birds, fertilization occurs at the start of the female reproductive tract. Since it takes 24-26 hours for a hen to assemble and then lay an egg, fertilization occurs about 24 hours BEFORE the egg is laid. The newly formed single cell then begins to divide into 2, then 4, 8, 16, 32 cells and so on. So, when the egg is laid, hundreds of cells are grouped in a small, whitish spot seen on the upper surface of the yolk. The initial single cell has developed to 4,000 to 6,000 cells.

Once incubation starts, the chicken embryo will grow and develop over a 21-day period and then emerge from the egg as a fully developed chick. During incubation, embryo develops in a predictable manner with specific events occurring at specific times. While the incubation project does not include opening the incubating eggs to monitor embryo growth, the growth can be monitored early on by candling the eggs periodically. An understanding of the basics of embryology will allow the students to understand what they are seeing when candling the eggs in the next less.

Materials Needed

The primary thing needed is the PowerPoint presentation with the YouTube videos.

Learn more at www.kentucky4h.org or contact your county extension office.



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Apply

Share: What did you learn?

Process: What part of the activity taught you the most?

Generalize: What was the most important thing you learned?

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