4-H Embryology in the Classroom Project
Hand Out One: Day 1 – 4-H Agent Introduction

Introduction to Embryology

4-H Agent will introduce key topics and points of 4-H Embryology in the Classroom Project.

Discussion Points

Embryology is the study or science of the growth and development of a living thing. What kinds of things grow and develop from embryos? Just as a lima bean is the embryo of a lima bean plant, a fertilized chicken egg is an embryo of a chicken. You are learning how a chicken develops in an egg.

Discuss Incubator and Importance of location of incubator:

- Near electrical outlet.
- Not in direct sunlight.
- Not under direct air flow.
- Not in high traffic area.
- Area that can handle water if there are spills.
- Emphasize importance of NOT TOUCHING controls on incubator. Only the teacher is allowed to adjust controls. Sudden increases or decreases in temperature can destroy the embryos.

Important factors in hatching eggs:

- Temperature - Between 98-103˚ F
  - Forced air incubator Temp 100°F.
- Ventilation - Clean fresh air must flow through the incubator.
- Turning the eggs.
  - During incubation eggs must be turned carefully 3 times each day. Some incubators have an automatic egg turner.
  - Stop turning on day 18; remove from egg turner and place on screen.
- Length of incubation period.
  - Chicken / Bantam- Incubate 20-22 days.
- Humidity (water) - There must be moisture to keep the chick developing normally, to prevent dehydration and prevent the chick from becoming stuck inside the shell.
  - During incubation - Humidity 45%-55%
  - During hatching - Humidity 55%-65%

Introduce and Discuss Importance of Incubation Journal

- **Introduce Students to Blogging to Create an Online Journal**

Incubation Journal: [Jackson County 4-H Embryology Program Chick Journal]