Which came 1st?
The Chicken? or The Egg?
Poultry Science & Poultry Youth Programs

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www.poultry4h.info
• Poultry Poster Contest
• Summer Institute (PSSI) — Aug. 2 – 6, 2009
• Heritage Youth Market Turkey Show – Mountain State Fair – Sept. 2009
• N.C. State Fair Youth Market Turkey Show – Oct. 2009
• Presentations — Outdoor Cookery (Chicken and Turkey BBQ), Egg Cookery, Poultry Presentations — Annual Congress
• Poultry Judging — Annual Congress
• Embryology — in the classroom, 4-H, one on one
• Various Poultry Shows or Pullet Chains
Poultry in North Carolina

Eggs - NC ranked 10th nationally
1.52 billion eggs produced
$2.0 million in farm income

Turkeys - NC ranked 2nd nationally
behind Minnesota, producing 15.5%
of the nation’s turkeys
40 million turkeys produced
$500 million in farm income

North Carolina
ranked 3rd nationally
with more than 10% of the nation’s
poultry production.
Poultry sales made up
almost 37% of the total
2005 farm income.

Broilers (Chickens) - NC ranked
4th nationally, producing nearly 9%
of the nation’s broilers.
735,000,000 broilers produced
$2.2 billion in farm income

Statistics are for 2005 and are provided by
The North Carolina Poultry Federation
Summer Institute (PSSI) – Aug. 2 – 6, 2009
N.C. State Fair
Youth Market
Turkey Show
Outdoor Cookery – Nat. 4H Contest

1st Place Winner Turkey BBQ
2008 4-H State Winners
Presentation / Outdoor Cookery
4H - Poultry Judging
4H - Poultry Judging
Embryology Program
Embryology — the 21 day growth of a chick
FOUR Main Factors to Control

Temperature – HEAT
Humidity – MOISTURE
Turning – ROLLING
Ventilation - AIR
Egg Basics

- Germinal Disc
- Air Cell
- Albumen or White
- Chalaza
- Vitelline membrane
- Inner Membrane
- Shell
- Outer Membrane
Now for more basic principles of Poultry Science and Embryology
Virtual Chicken DVD
Which Egg is Fertile?
1 Day Embryo
Day 4
9 Day Embryo — pipping tooth

Pipping tooth 9d embryo
16 Day Embryo with yolk sac still attached
18 Day
Embryo with malposition

head between the legs
will NOT hatch
19 Day Embryo with head under right wing

(correct hatching position)
Imagine the shell is gone!

20 Day internal pip
Inner and outer shell membranes
Artificial incubation – egg turning
Cool U-Tube Links

• Chicken Embryo Heart Beating
  http://www.youtube.com/watch?v=pLkW7RuI5LU

• Development of a chicken embryo
  http://www.youtube.com/watch?v=G05ILxj-iPA
Figure 38. The pictures on this chart demonstrate the interior quality of broken-out eggs for each of the designated grades as specified in the U.S. standards with respect to white and yolk quality. Pictures 1, 2, and 3 represent the appearance of broken-out eggs of high, average, and low AA quality; 4, 5, and 6 represent high, average, and low A quality; and 7, 8, and 9 represent high, average, and low B quality. (ROCNO055)
Grade AA egg

Grade B egg
Albumen Height

Fresh Egg

Stored Egg
Thank you for your time.

Any Questions?