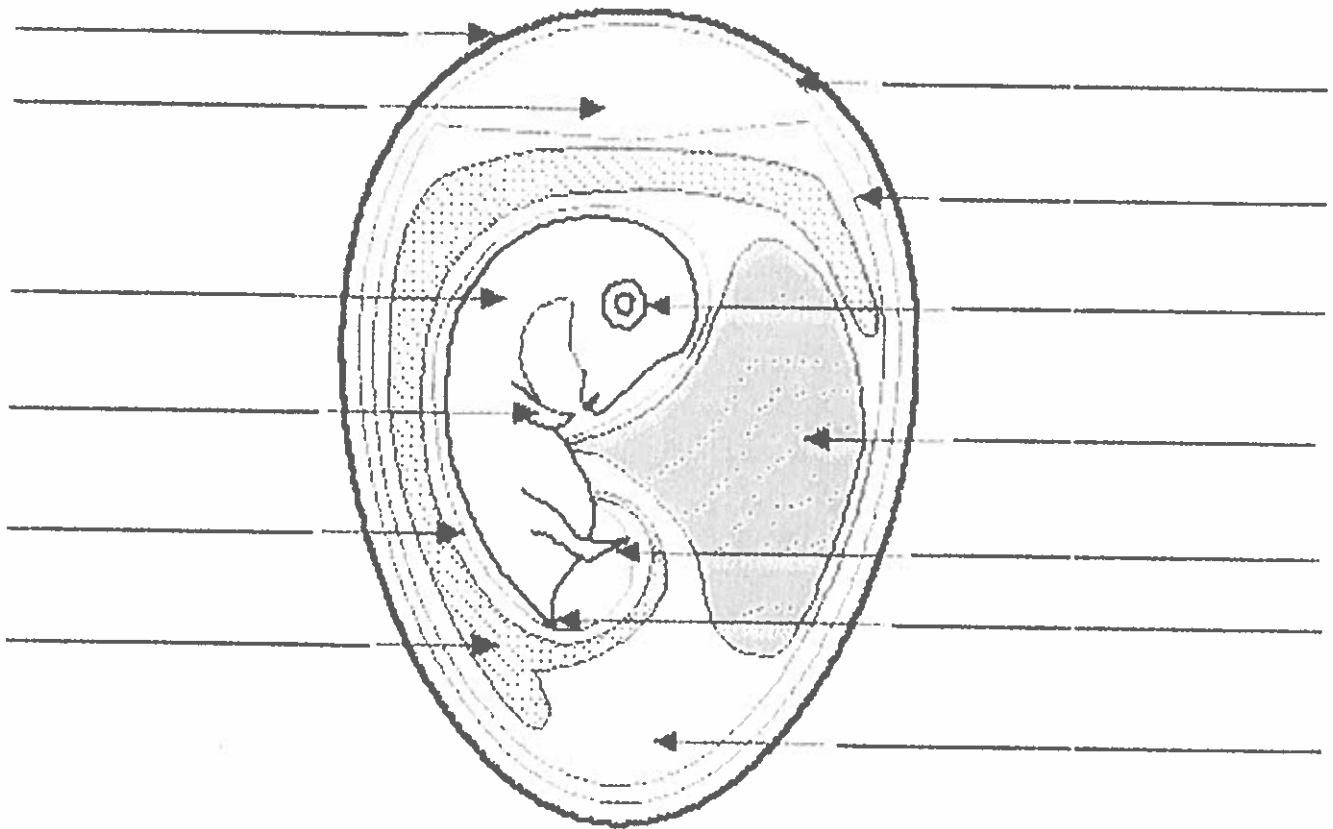


Label the parts of a 10-day old chicken embryo

8th Grade

Name: _____



air cell - a space at the large end of the egg, between the inner and outer shell membranes.

albumin - the egg white. It provides protein and water for the embryo and protects it from microorganisms.

allantois - a sack that holds some of the embryo's waste. It is attached to the embryo near the legs.

amnion - a membrane that surrounds the embryo, protecting it from dehydration (losing water) and shock.

eggshell - the hard, protective coating of the egg. It is semi-permeable; it lets gas exchange occur, but keeps other substances from entering the egg. It is made of calcium carbonate.

embryo - the developing chick inside the egg.

eye - large and prominent on the head.

inner shell membrane - the thin membrane located between the outer shell membrane and the albumin.

leg - one of the lower limbs of the chick.

outer shell membrane - the thin membrane located just inside the shell.

tail - located at the far end (the posterior) of the embryo.

wing - one of the upper limbs of the chick.

yolk - the yellow part of the egg; it contains nourishment (food) for the embryo.

Contributed by: Doris Robinson

Telling Layers from Liars

Life Skill:

Making decisions

Poultry Project Skill:

Selecting hens for egg production

Success Indicator:

Compares two hens and writes reasons for selecting one over the other.

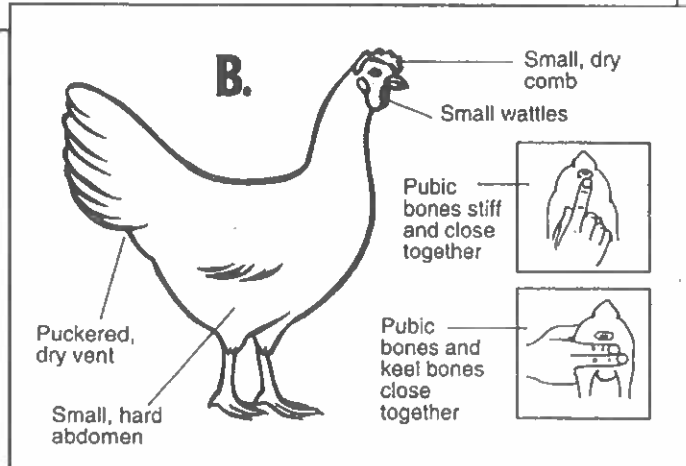
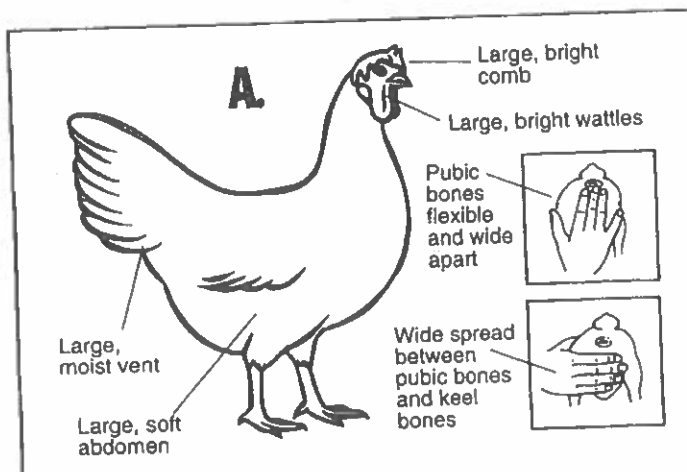
Identifying female chickens with superior egg production characteristics is critical to the success of an egg production enterprise. Some breeds are primarily raised for egg production qualities alone, while other breeds are raised for meat and egg production. These are known as dual purpose (meat and egg) hens.

In each flock, some hens work harder at laying eggs than others. If you cull the non-

producers at about 30 weeks of age and every few weeks thereafter you'll improve the overall laying average while lowering your feed costs. By checking certain body characteristics and handling qualities such as abdominal capacity, plumage, vigor, head and body parts you will be able to maintain a productive flock. In this activity, you'll learn how to tell layers from liars!

Take Off!

Select the hen that should be most productive from the two hens shown below. Write your reasons in the space provided. Be careful to use comparative rather than descriptive terms in your reasons. Then color the two hens to show differences in pigmentation.

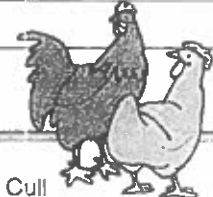


"Which one is the best?"

My Reasons

I placed _____ over _____ because

I placed _____ last because



Bird Words

Cull

Share with your helper

Open your beak

- How can you tell if a hen is a layer or non layer?

Talk turkey

- Why should you cull non-laying birds from your flock?

Feather your nest

- Why is it important to have your business as efficient as possible?

Take flight

- How will what you learned change how you manage your flock?



Selecting for Egg Production

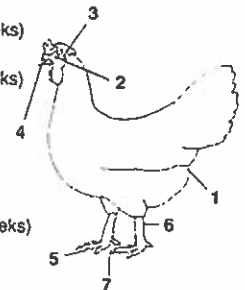
Breed characteristics are important when selecting hens. Leghorns are a popular breed for maximum egg production. They have small body size which means they will consume less feed. Plymouth Rocks and Rhode Island Reds are two breeds that are raised for meat as well as egg production. They have a larger body size, which means they will consume more feed in order to also put "some meat on their bones."

Physical characteristics of a hen reflect her state of productivity. As she prepares for egg production, levels of sex hormones increase in her body. Due to this, there will be enlargement and reddening of the comb and wattles. Your best layers will have large, bright red combs and wattles. The area around her vent will become enlarged and moist. There will be spreading of the pelvic bones and softening of the abdominal skin. The abdominal cavity will enlarge to allow for the enlargement of the digestive and reproductive system necessary for egg production.

Pigment. Most breeds of chickens used for egg production have yellow-pigmented skin and shanks (part of legs). When feed such as yellow corn and grass containing this pigment are eaten by chickens, the pigment is deposited in the skin, beak, shank, and feet of the growing bird. As the pullets start to lay eggs, the pigment is then deposited in the egg yolk instead of the pullet's skin and shanks. As each egg is laid, these areas lose pigment in a definite order from their body. This process is called "bleaching." This definite order is vent, eye ring, ear lobe, beak, bottom of the foot, shank, the hock and top of the toes. When a bird stops producing eggs, the pigment will once again return to the skin in the same order that it was bleached. Compared to the rest of your laying flock, your poorest producers will still have yellow skin and shanks after several months of production.

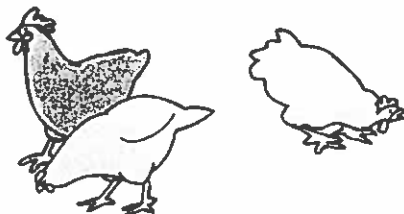
Order that Pigment Fades

- Vent
(0-10 eggs @ 1-2 weeks)
- Eye ring
(8-12 eggs @ 2-2 1/2 weeks)
- Ear lobe
(8-10 eggs @ 2 1/2-3 weeks)
- Beak
(35 eggs @ 5-8 weeks)
- Bottom of feet
(50-60 eggs @ 8 weeks)
- Shank (top to bottom)
(90-180 eggs @ 10-18 weeks)
- Top of toes



Eggstra Challenges

- Participate in a judging contest in which production hens are being judged.
- Find a photo of a producing hen and a non-producing hen. Share these with your group explaining what to observe to find the best egg producer.



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