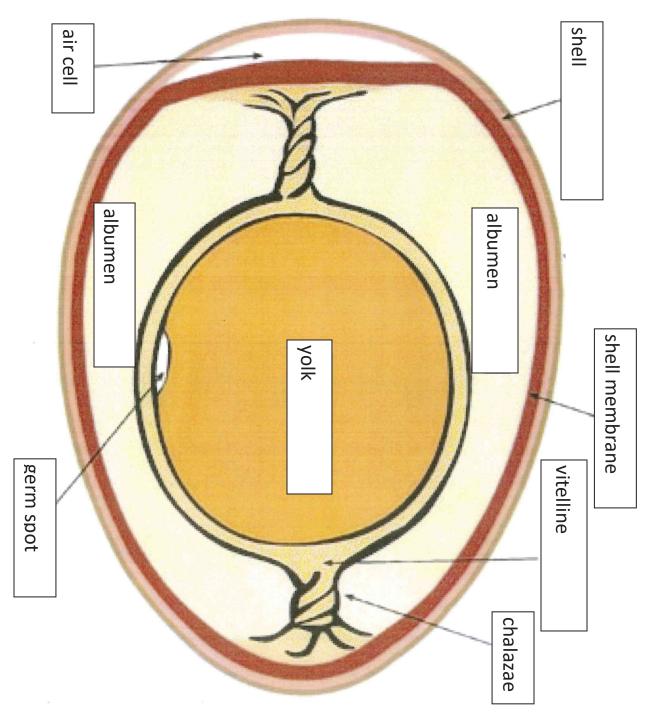


Parts of an Egg: Key





air cell albumen (used twice) chalazae germ spot shell shell membrane vitelline membrane yolk





Venn Diagram (Possible Answers)

Conventional

Benefits

- Smaller groups of birds reduce aggression
- Comfort and security
- Eggs don't come in contact with manure
- Lower carbon footprint system
- Most economical egg

Drawbacks

 Smallest space per bird

Free Range

Benefits

- Hens can exhibit natural behaviors.
- Hens lay eggs in a nest.
- Hens can dust bathe and perch.
- Hens can an forage outside.

Drawbacks

- More exposure to disease and predators
- Costs more to produce eggs

What is the same for all systems?

- Continuous access to fresh water
- · Continuous access to feed
- Fresh air through automated ventilation
- Temperature-controlled buildings

Cage Free

Benefits

- Birds can move freely throughout the barn.
- Birds can lay eggs in a nest.
- Birds can take a dust bath.

Drawbacks

- More problems with pecking and aggression
- Hens can pile in one area if they get scared.
- High carbon footprint
- Cost of production is higher than with cagesystem eggs.

Enriched Colony Cages

Benefits

- All benefits of conventional style cages
- Hens can exhibit all natural behaviors.
- Hens have their own nesting area and perches

Drawbacks

 More expensive to produce eggs than with conventional cages







Farm to Table Model

Egg Production

1. Laying the egg

3. Packaging



5. Unloading



2. Sorting the Eggs

6. Stocking Shelves



7. Consumer Buys



4. Transporting

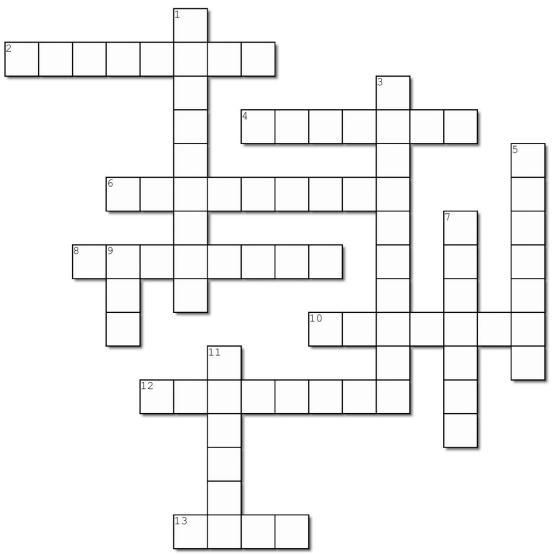
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Lesson 1: Egg Discovery

Directions: Use the clues below to fill in the crossword puzzle. Hint: When the answer is two words, use one box as a space between the two words.



Word Bank rooster hen poultry embryo embryology incubator humidity albumen chalazae fertile germ cell

air cell volk

Across

- 2. air pocket at the bottom of an egg
- 4. the white of an egg; it supplies water to embryo
- **6.** a device used to hatch eggs in a controlled environment
- **8.** two spiral bands that extend from the yolk and attach to the shell membrane in order to protect the yolk
- 10. an adult male chicken
- **12.** water vapor found in the air
- **13.** the yellow part inside an egg; it is a food source for developing embryos

Down

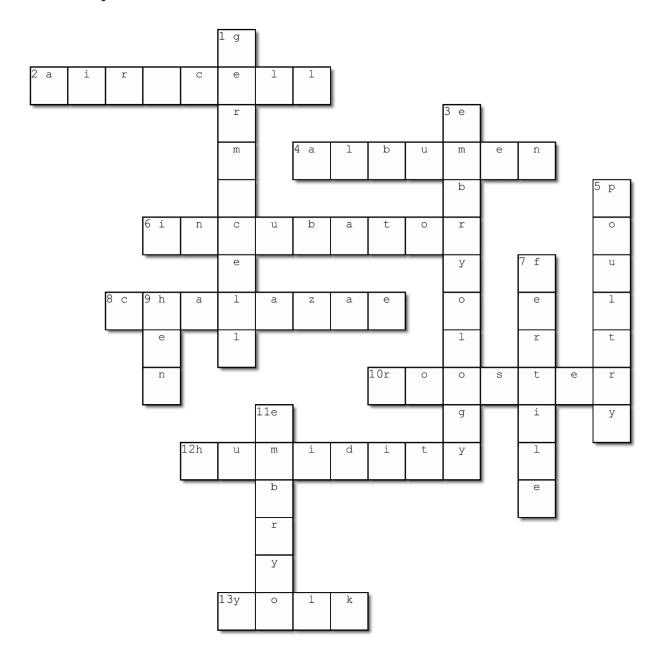
- **1.** cell within the yolk that has the potential of developing into an embryo
- 3. the study of the beginning of life
- **5.** birds raised for eggs or meat
- 7. capable of producing new life
- 9. a female chicken over a year old
- **11.** unborn or unhatched offspring that is in the process of developing

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Lesson 1: Egg Discovery

Answer Key



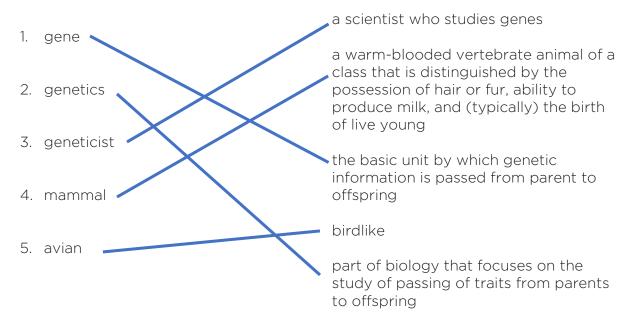




Lesson 2: Build-A-Chick

Answer Key

<u>Directions:</u> Draw a line to connect the "Eggs" tra Special Word to its correct definition.



<u>Directions</u>: Use the word bank below to complete the sentences correctly.

offspring	cockerel	physical traits
pullet	DNA	

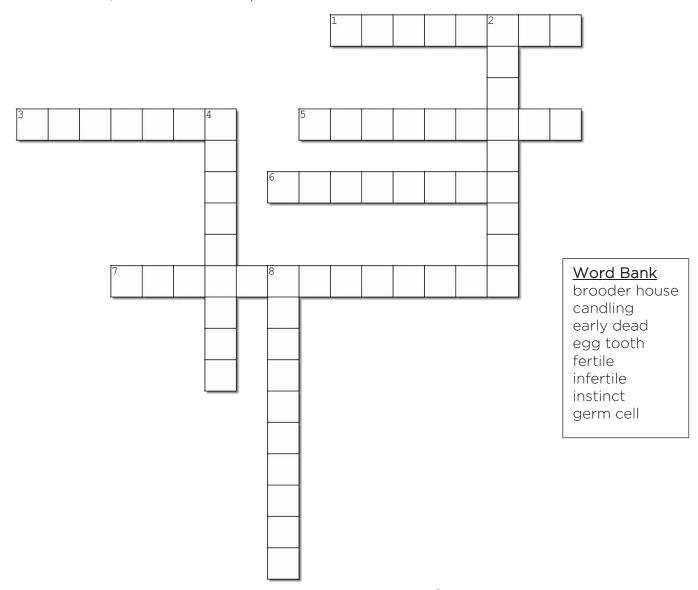
- 6. Beak shape, feet color, and feather colors are all examples of physical traits of a chicken.
- 7. Sometimes shown in pictures as a twisted ladder, _____ is the molecule that carries genetic information.
- 8. When a chick hatches, it is called the <u>offspring</u> of the parents.
- 9. A female chicken that is less than one year old is called a <u>pullet</u>.
- **10.** A young male chicken is called a <u>cockerel</u> before it becomes a rooster at the age of one.





Lesson 3: Inside the Shell

<u>Directions:</u> Use the clues below to fill in the crossword puzzle. Hint: When the answer is two words, use one box as a space between the two words.



Across

- **1.** process of shining a light inside of the egg to see the developing embryo
- 3. capable of producing new life
- **5.** cell within the yolk that has the potential of developing into an embryo
- **6.** behavior that is natural and does not need to be learned
- **7.** a heated enclosure that provides shelter for young livestock, including chicks

Down

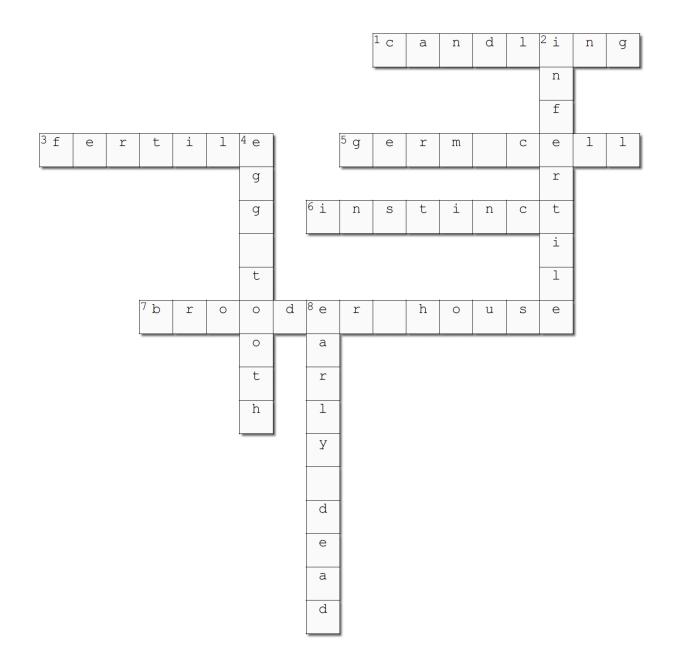
- 2. not fertile or productive
- **4.** temporary tooth used for breaking the shell; it is later lost
- 8. embryos that started to develop and died for some reason

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Lesson 3: Inside the Shell

Answer Key



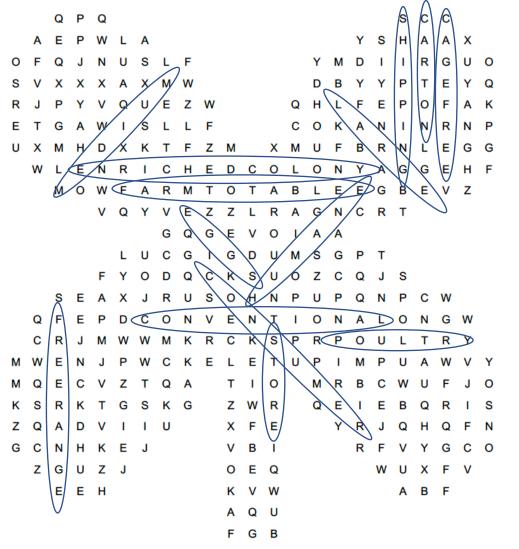




Lesson 4: The Traveling Egg

Answer Key

<u>Directions:</u> Find the words provided in the word bank in the word scramble. Then use some of the words to complete the sentences at the bottom.



Word Bank

cage free carton consumer conventional eggs enriched colony farm to table free range humane large medium poultry shipping store

- Hens that are found in a barn but can move around freely are in a <u>cage-free</u> facility.
- 2. <u>Free-range</u> hens can roam outside within a pen with a barn for nesting areas.
- 3. Cage-laid eggs, or sometimes called <u>conventional</u> hen housing, are eggs from hens that are inside a small pen within an enclosed building.
- 4. The newest form of housing is called <u>enriched colony</u> and allows hens to be in large pens with perching and nesting areas within a building.