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## What Kind of Heat?

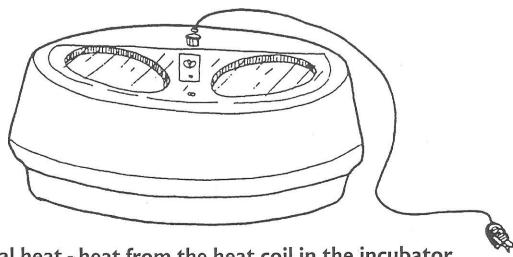
What kind of heat is keeping the eggs warm in the "incubators?"

1.



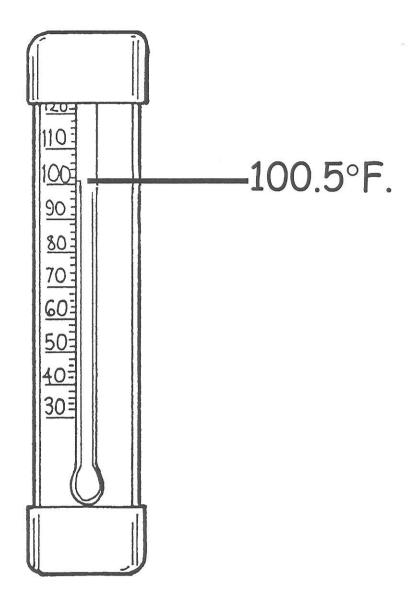
Natural heat - heat from the setting hen

2.



Artificial heat - heat from the heat coil in the incubator

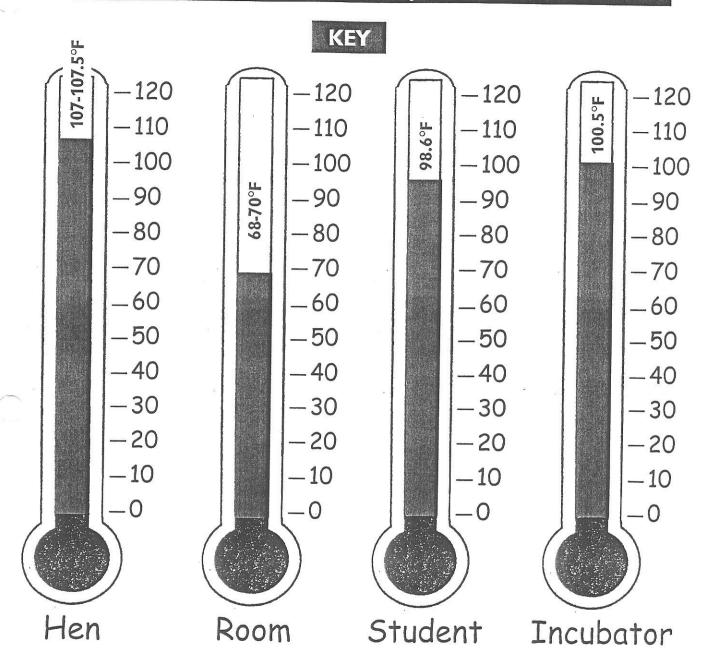
## The Thermometer



An instrument that measures temperature is a <u>thermometer</u>. We tried to keep the temperature at  $100.5^{\circ}F$ . The temperature would <u>drop</u> when the incubator was opened.

Color the mercury red.

## Temperature Comparison Chart

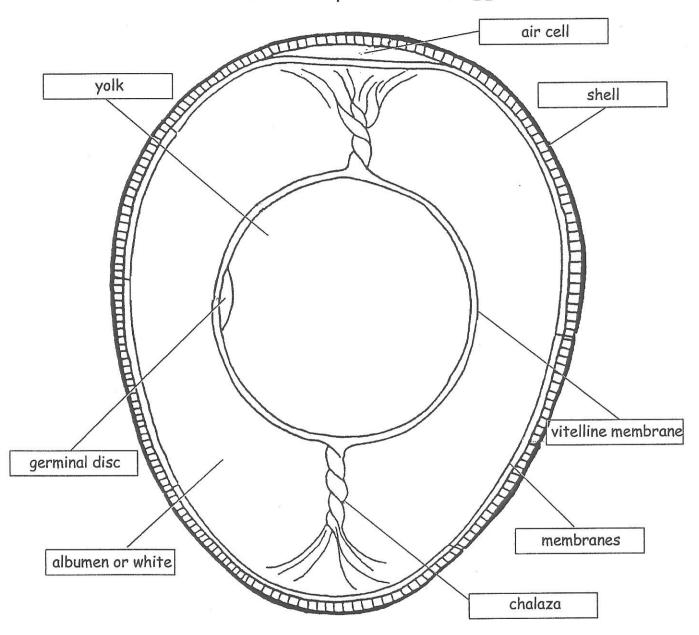


Use your red crayon, marker or pencil to show the normal temperature of a healthy hen or student, the temperature in your classroom, and the correct temperature for the incubator.

- · Who or what has the highest temperature? Hen
- Who or what has the the lowest temperature? Room

# Egg Parts

Color each part of the egg a different color and label each part of the egg.



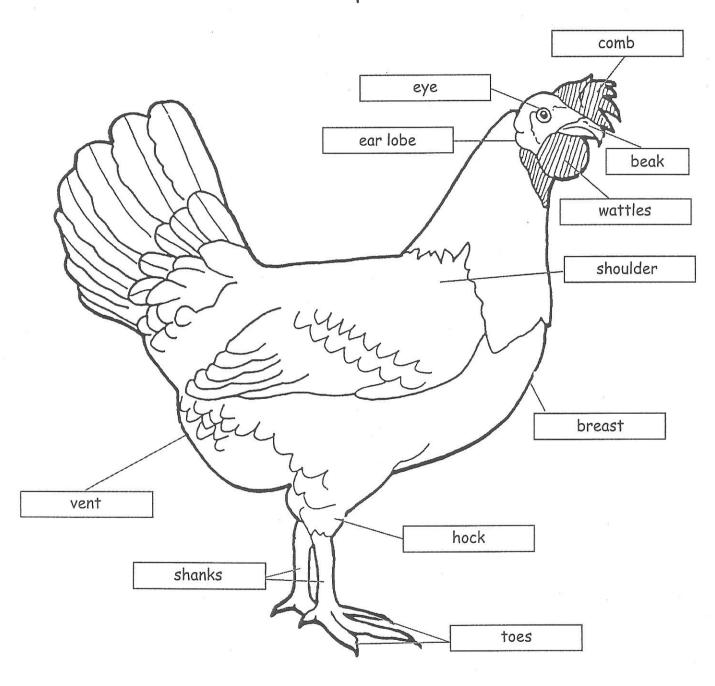
Use each word only once:

air cell germinal disc vitelline membrane albumen or white membranes yolk chalaza shell

This worksheet is a part of the Incubation and Embryology Project (http://www.urbanext.uiuc.edu/eggs). University of Illinois Extension, 1999.

# Parts of a Chicken

Color and label the parts of a chicken.



Use each word only once:

beak

breast

comb

ear lobe

eye toes hock vent shanks wattles shoulder

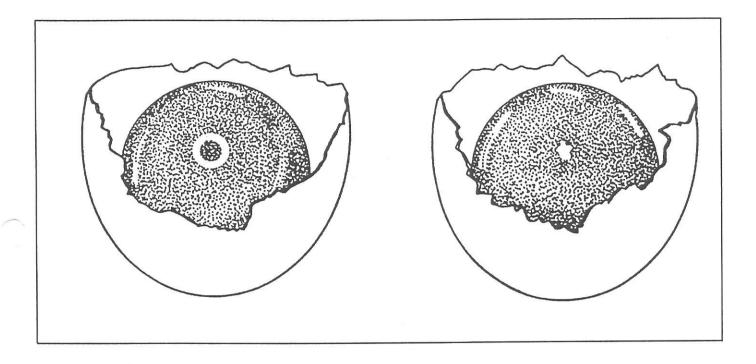


## Which Egg Is Fertile?

When fertile eggs are incubated by either a hen or in an incubator, they grow.

What is needed to make an egg fertile?

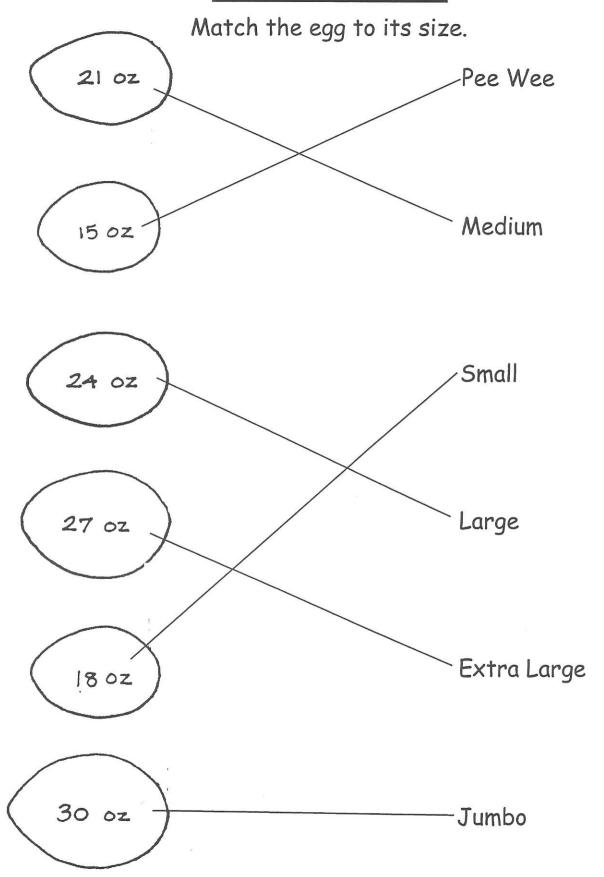
Look at the picture below and mark the fertile egg.



How do you know that the egg you have marked is fertile? Explain.

The egg on the left. The germinal disc is larger in the fertile egg as compared to the infertile egg. Cell division has occurred in the fertile egg. The fertile egg has an enlarged circle or donut. Ther germinal disc is small in the infertile egg.

# Egg Sizing



This worksheet is a part of the Incubation and Embryology Project (http://www.urbanext.uiuc.edu/eggs). University of Illinois Extension, 1999.

# Egg Grading

### Match the egg to its grade.

Eggs are graded for quality. Read the description of each grade of egg carefully and then grade each egg in the box with AA, A, or B.

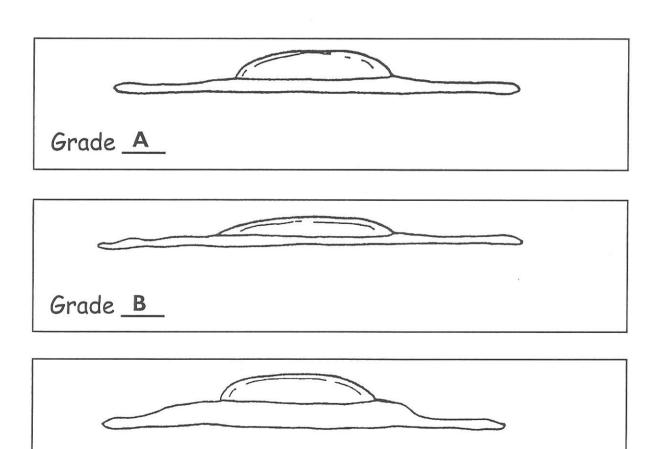
A grade AA egg stands up tall. The yolk is firm and the area covered by white is small.

A grade A egg has a yolk that is round and tall. The white is a little flatter than a grade AA egg.

A grade B egg spreads out more. The yolk is flattened.

Grade AA

The grade of eggs can change if eggs are not stored correctly or if eggs are kept for a long time in the refrigerator.



This worksheet is a part of the Incubation and Embryology Project (http://www.urbanext.uiuc.edu/eggs). University of Illinois Extension, 1999.

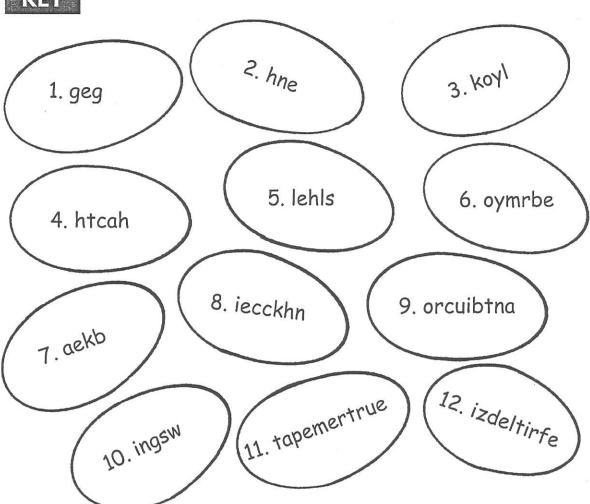
# Needs Comparison Chart

Needs	Baby	Chick
Food	X	X
Water	X	X
Protection	X	X
Warmth	X	X
Cleanliness	X	X
Safety and Air	X	X
Other	X	X

Babies and chicks have the same needs. The parent or care giver is responsible for the baby's care. The mother hen or the chick caregiver is responsible for the chick's care.

# Unscramble the Scrambled Eggs

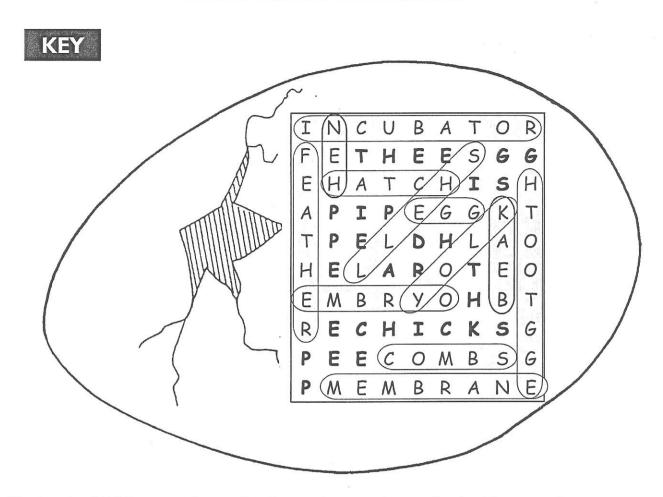




- 1. egg
- 2. hen
- 3. <u>yolk</u>
- 4. hatch
- 5. shell
- 6. embryo

- 7. beak
- 8. chicken
- 9. incubator
- 10. wings
- 11. temperature
- 12. fertilized

## Hidden Words



Circle the hidden words on the list. The words can be hidden up, down or diagonally. When you have finished, use the left over letters to find a message. What is the message?

#### The message is THE EGG IS PIPPED HEAR THE CHICKS PEEP

V	Vords to find	
egg embryo	hatch feather	egg tooth hen
membrane	shell	beak
incubator	yolk	combs



# Science Vocabulary

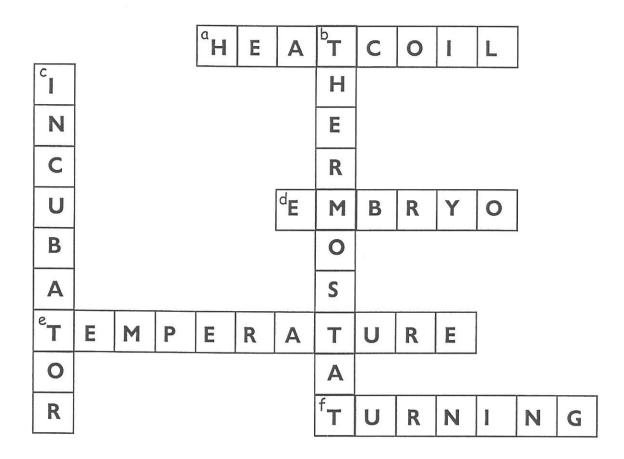
Put these words in alphabetical order.

hatch	chicken	temperature
peeps	egg tooth	membrane
heart	rooster	blood vessels
egg	hen	incubator
beak	chick	fertilized
yolk	embryo	development
white	sac	thermometer
shell	wings	feathers

1. beak	13. hen
2. blood vessels	14_ incubator
3. chick	15. membrane
4chicken	16. peeps
5. development	17. rooster
6. egg	18. sac
7. egg tooth	19. shell
8. embryo	20. temperature
9. feathers	21. thermometer
10. fertilized	22. white
11. hatch	23. wings
12. heart	24. yolk

Choose 12 vocabulary words. Use each word in a complete sentence.

### Crossword Puzzle



- a. (across) What heats the incubator? (two words)
- b. (down) What controls the light bulb and the heat in the incubator?
- c. (down) What do you use to incubate eggs?
- d. (across) What do you call an unborn chick?
- e. (across) What does a thermometer measure?
- f. (across) What job must be done with the eggs three or more times a day?