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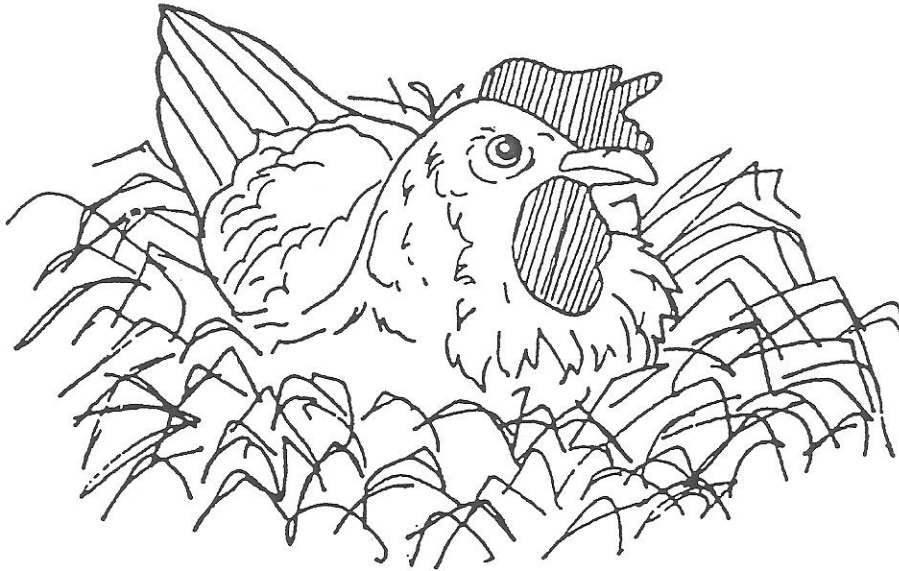


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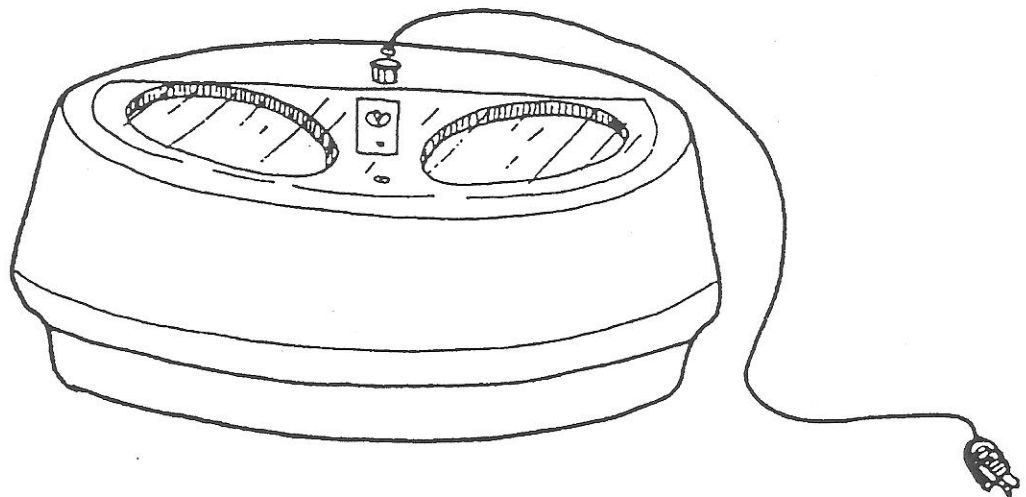
What Kind of Heat?

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

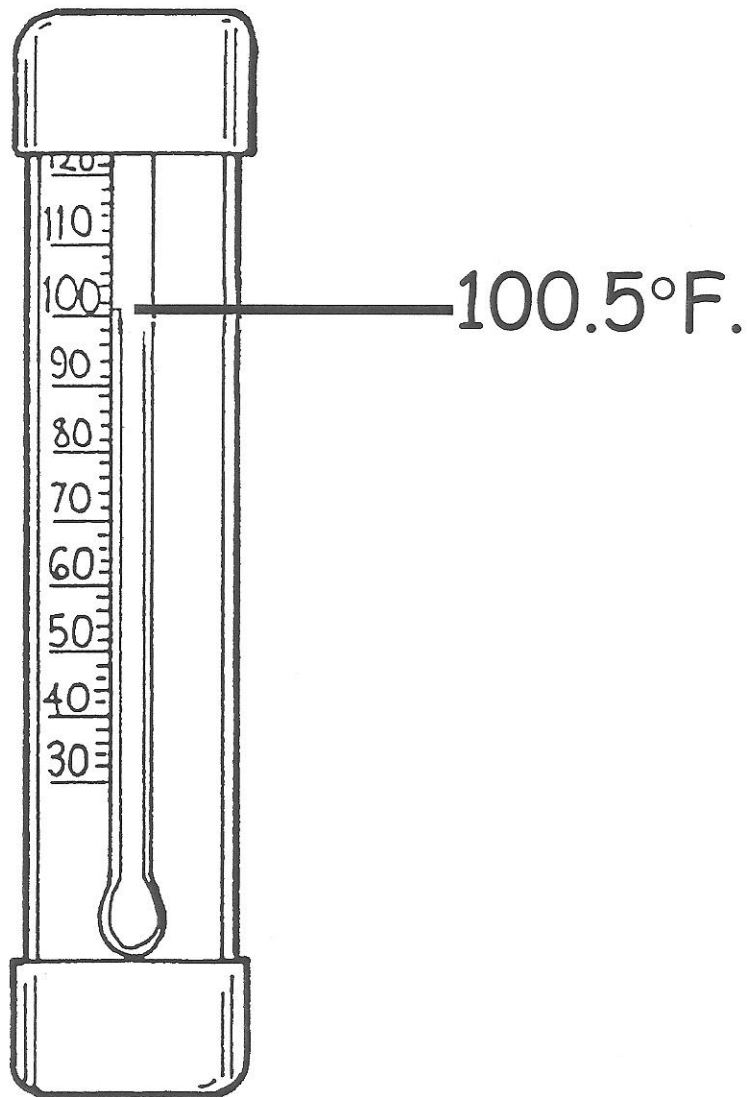
1.



2.



The Thermometer

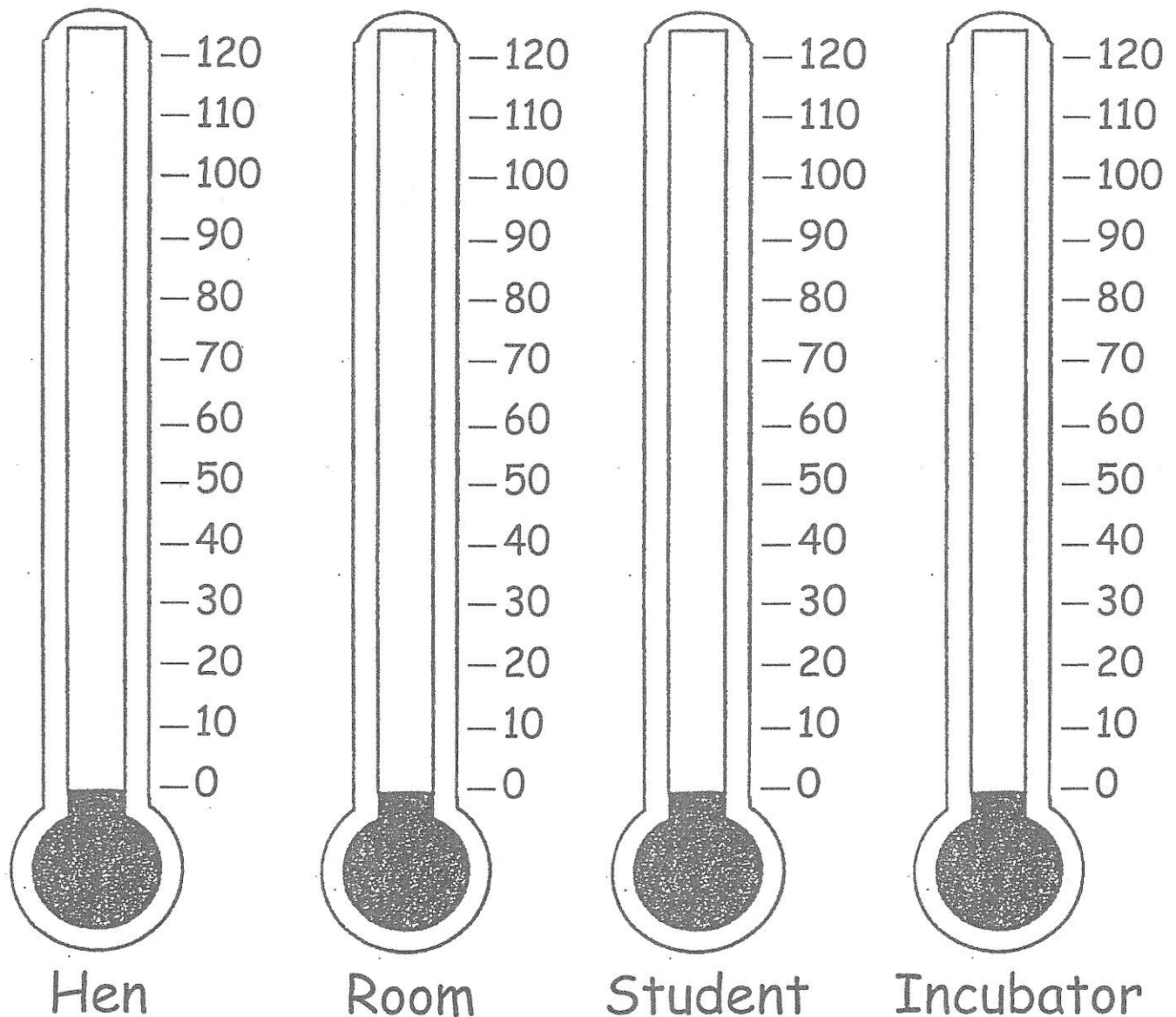


An instrument that measures temperature is a _____.

We tried to keep the temperature at _____. The temperature would _____ 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?
- Who or what has the **lowest** temperature?

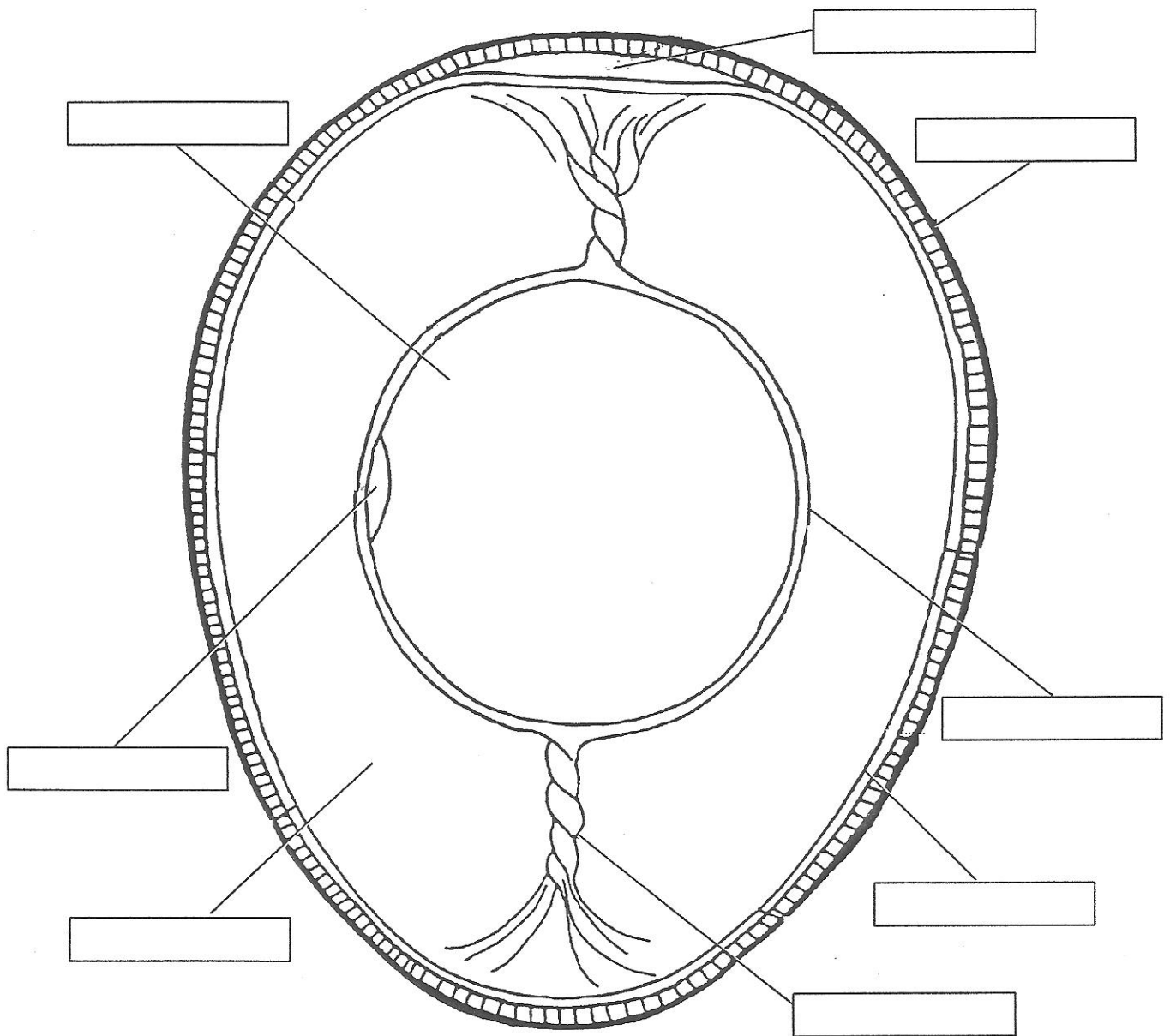
Operating the Incubator

[illegible]

*Include any unusual events or observations.

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

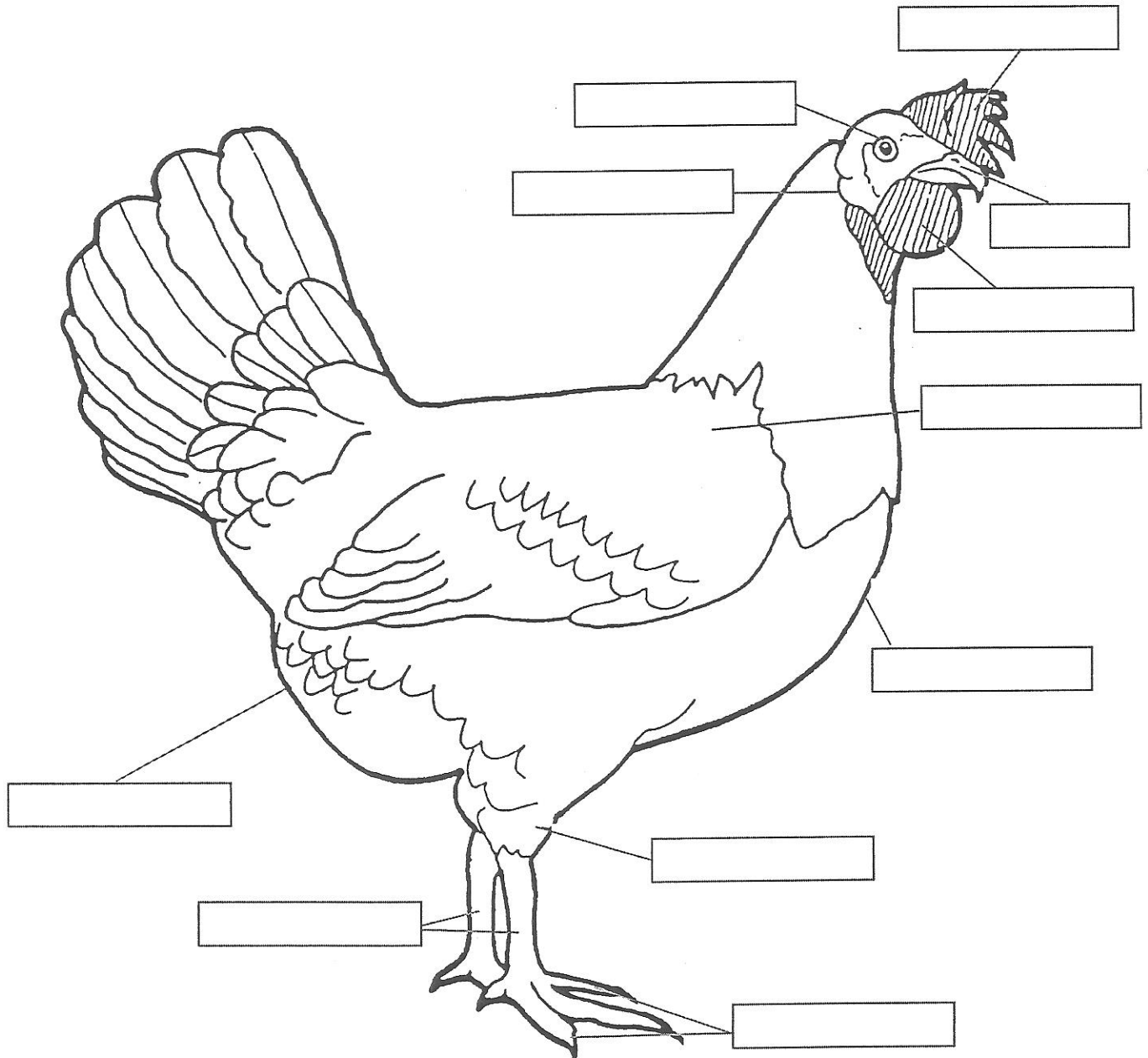
albumen or white
membranes
yolk

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
eye
toes

breast
hock
vent

comb
shanks
wattles

ear lobe
shoulder

Chick Hatch Prediction Chart

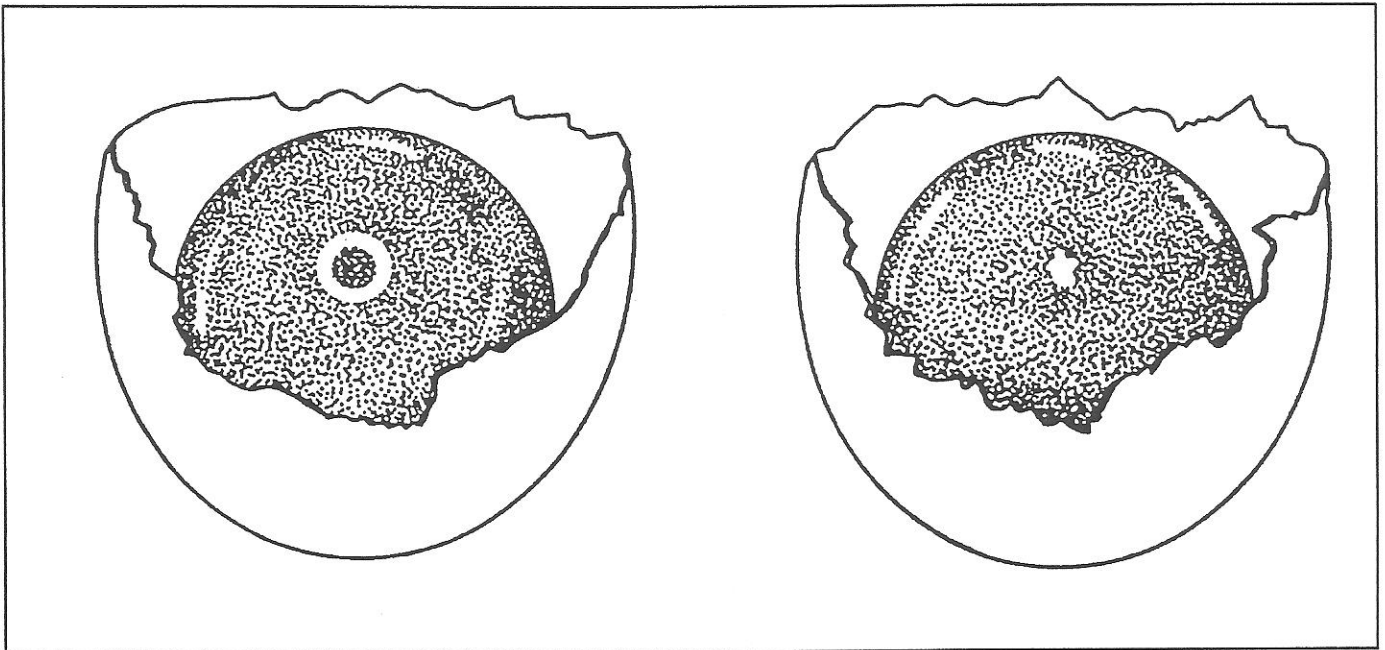
Egg #	1 st Day	7 th Day	14 th Day	17 th Day	Did the Egg Hatch
1					
2					
3					
4					
5					
6					
7					
8					
9					

10					
11					
12					
13					
14					
15					
16					
17					
18					

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.

Egg Sizing

Match the egg to its size.

21 oz

Pee Wee

15 oz

Medium

24 oz

Small

27 oz

Large

18 oz

Extra Large

30 oz

Jumbo

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.

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



Grade ____



Grade ____



Grade ____

Needs Comparison Chart

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

Who provides for the needs that you have checked for the baby? Who provides the needs for the chick? Why are the needs important? How can you provide for the needs of either a baby or a chick?

The Egg Game Instructions

OBJECTIVE

- Students will understand things in the environment that affect eggs hatching.

MATERIALS NEEDED

- game board
- 1 coin
- 24 paper eggs per student
- envelopes for each game board

PROCEDURE

1. Read the questions at the bottom of the game page. What would happen if all the eggs hatched?
2. Have students identify the things that can keep eggs from hatching.
3. Have students play the game individually or in small groups. Each student starts with 24 eggs.
4. The students flip a coin to move one or two spaces. (See game board.)
5. The student keeps track of the 24 eggs throughout the game
6. Lost eggs are placed in an envelope.
7. The one with the most eggs at the end of the game is the winner.
8. At the end of the game, ask students which of the hazards in the game are caused by people? (too high or too low of temperature, too little or too much humidity)
9. What can you do to protect the eggs?

START

The Egg Game

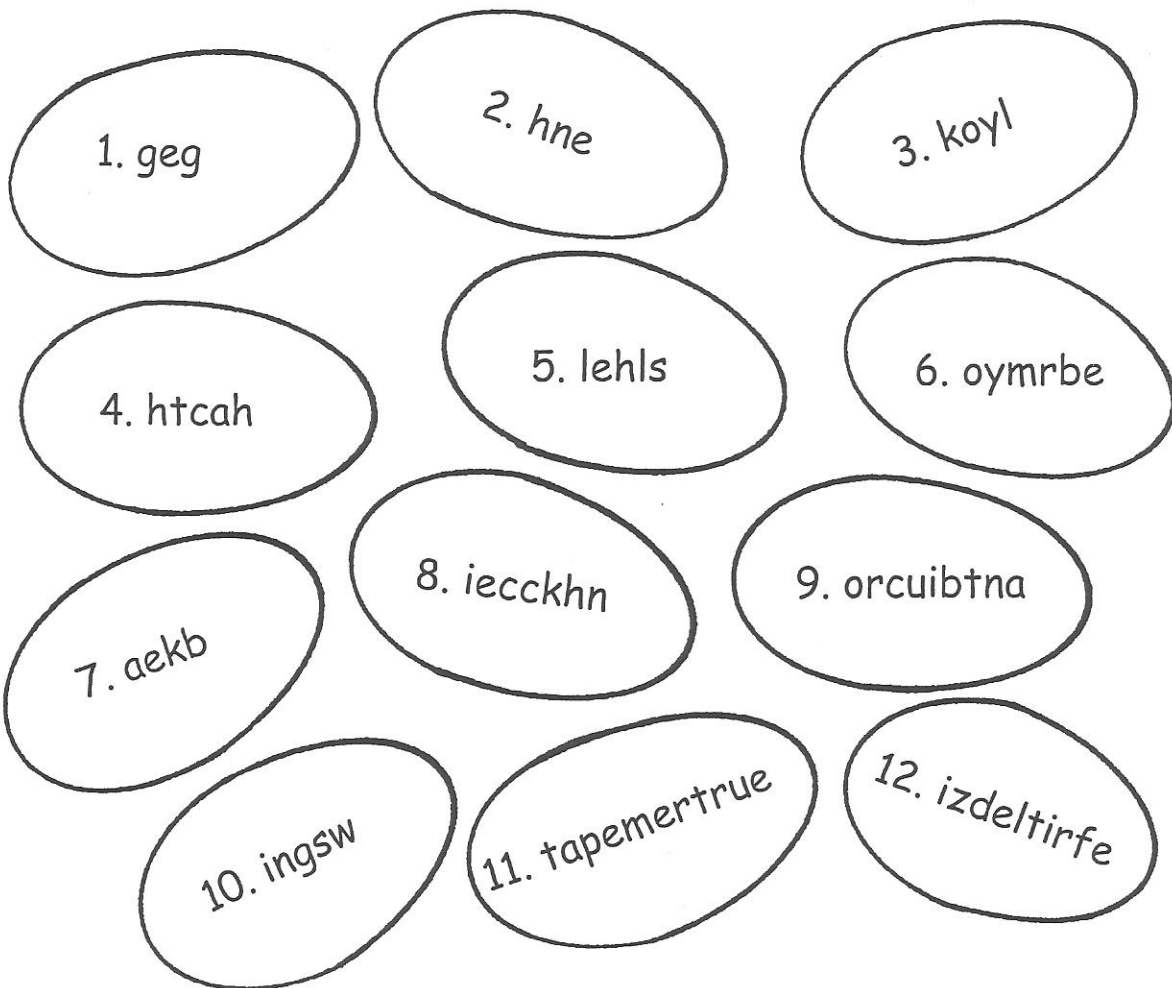


QUESTIONS TO ANSWER

1. What happens if you do not turn the eggs?
2. What does a clear egg mean?
3. What is the correct temperature for the incubator?
4. How many times a day should the eggs be turned?
5. How do you turn the eggs?
6. How do you keep humidity in the incubator?
7. Should eggs be rotated in the incubator?
8. What is candling?
9. When should you stop turning the eggs?

Heads moves 2 spaces.
Tails moves 1 space.

Unscramble the Scrambled Eggs



1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

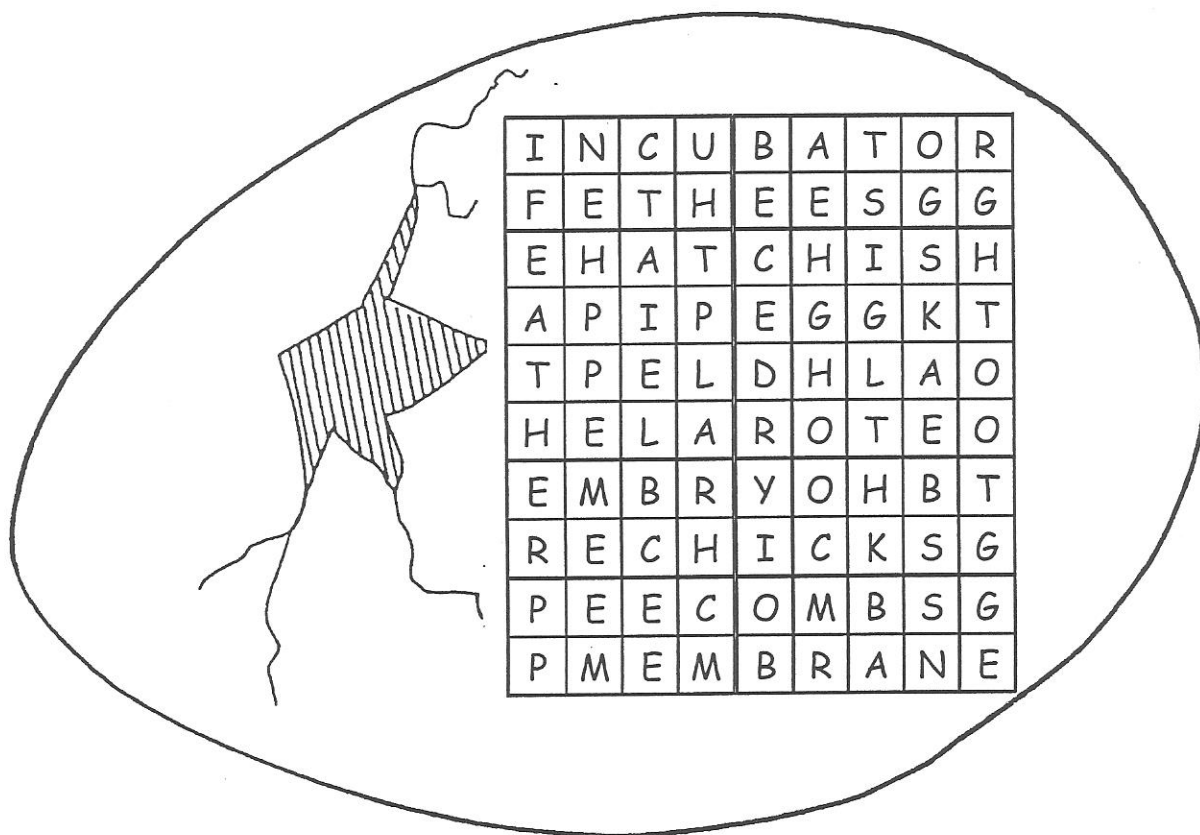
9. _____

10. _____

11. _____

12. _____

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 _____

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

Science Vocabulary

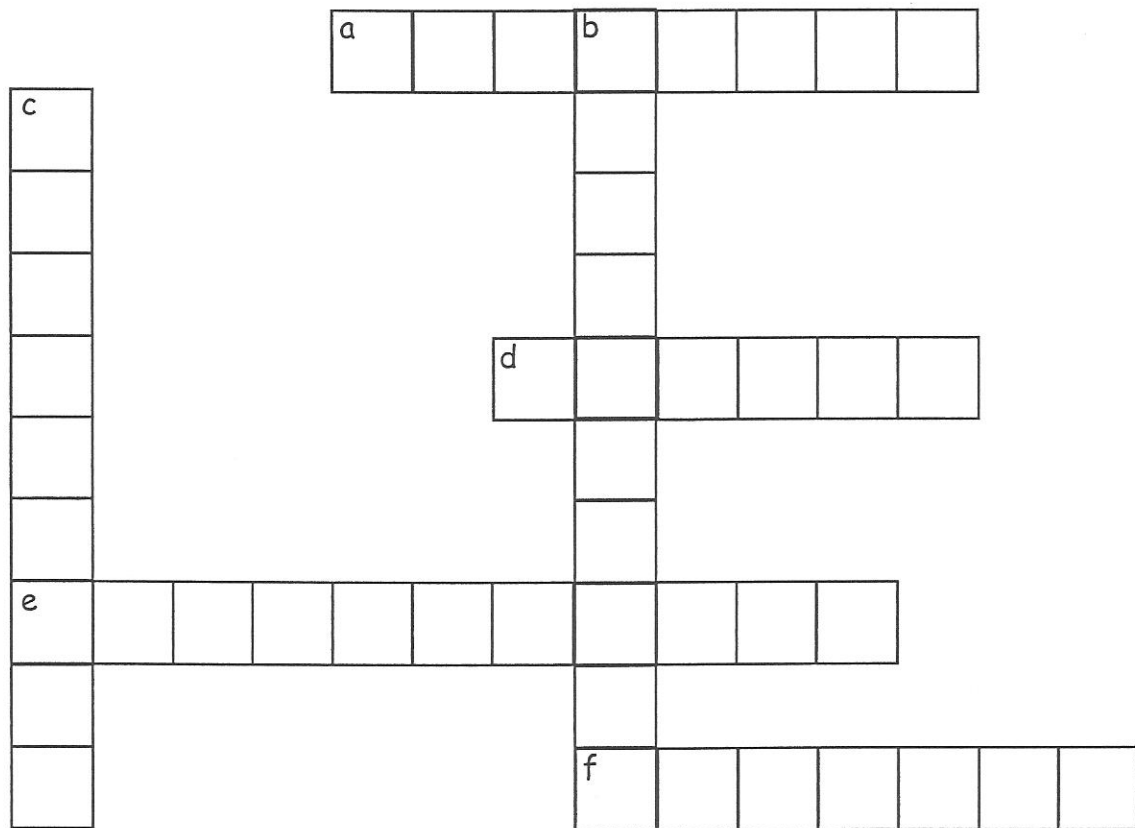
Put these words in alphabetical order.

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. _____ | 13. _____ |
| 2. _____ | 14. _____ |
| 3. _____ | 15. _____ |
| 4. _____ | 16. _____ |
| 5. _____ | 17. _____ |
| 6. _____ | 18. _____ |
| 7. _____ | 19. _____ |
| 8. _____ | 20. _____ |
| 9. _____ | 21. _____ |
| 10. _____ | 22. _____ |
| 11. _____ | 23. _____ |
| 12. _____ | 24. _____ |

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

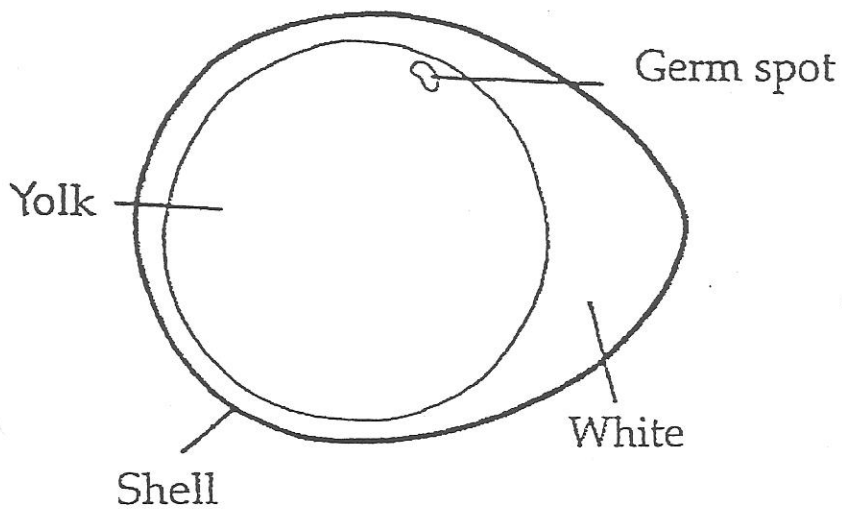
Crossword Puzzle



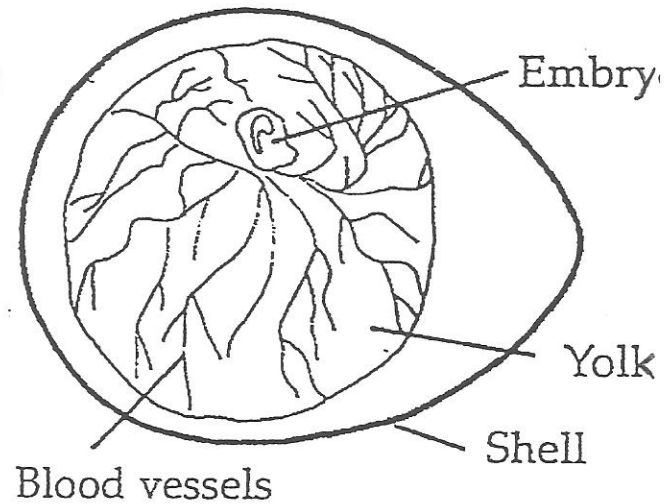
- a. (across) What heats the incubator? (two words)
- b. (down) What controls the light bulb and the heat in the incubator?
- c. (down) What do you use to incubate eggs?
- d. (across) What do you call an unborn chick?
- e. (across) What does a thermometer measure?
- f. (across) What job must be done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

Developing Embryo

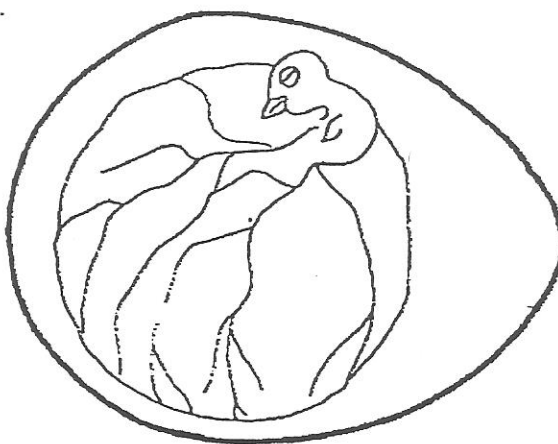
The First Day



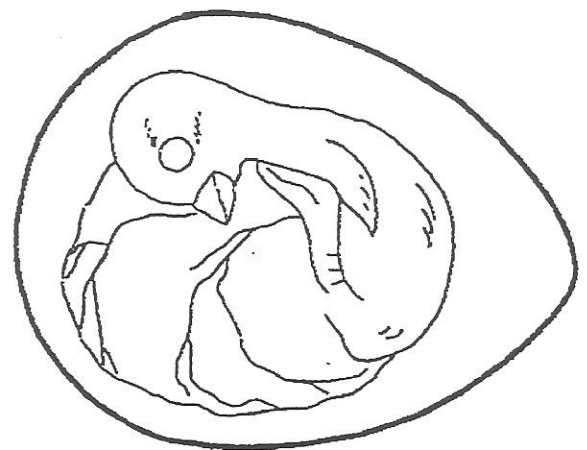
The Third Day



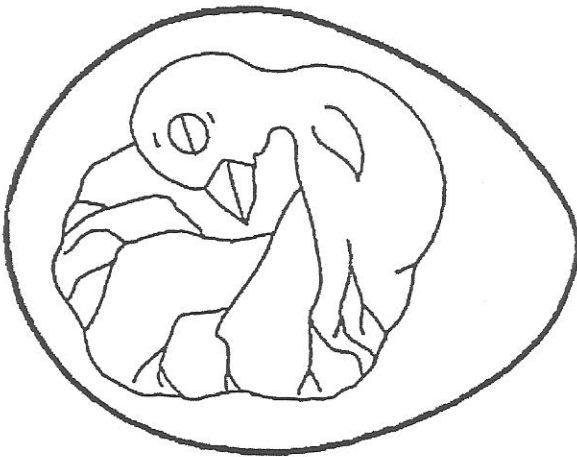
The Seventh Day



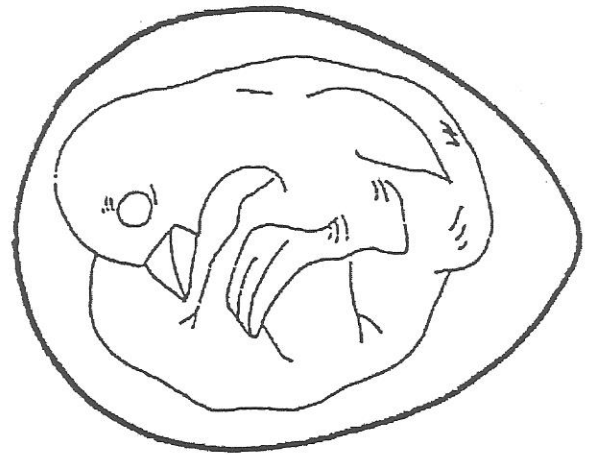
The Eleventh Day



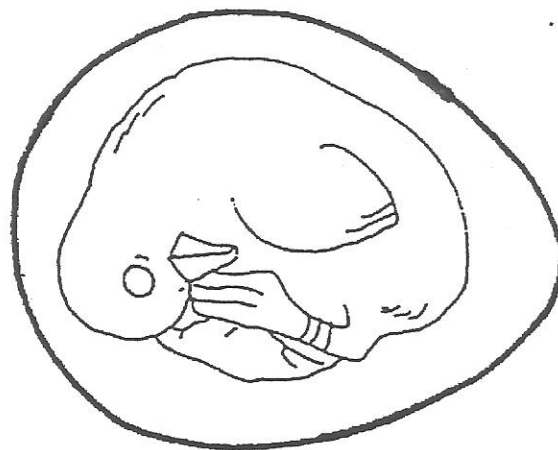
The Fourteenth Day



The Seventeenth Day



The Nineteenth Day



Developing Chicken

