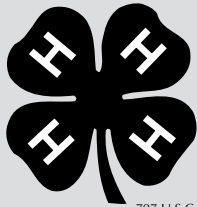
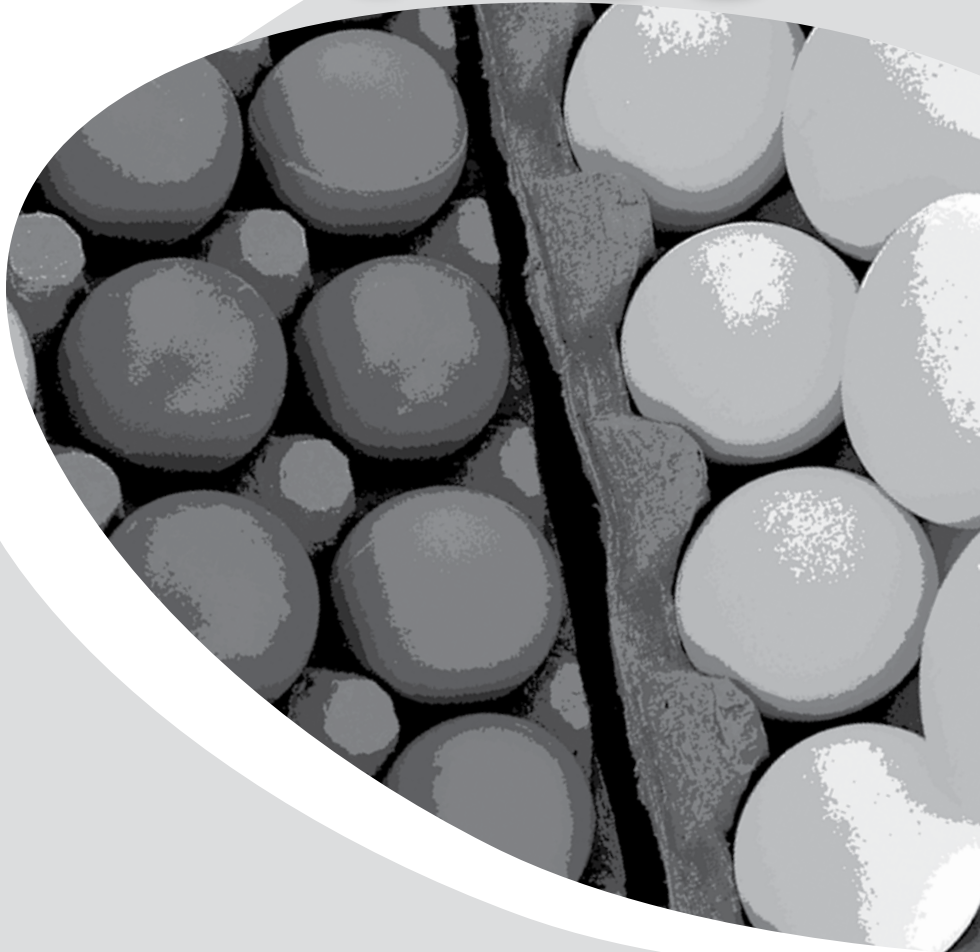


THE Egg-citing Egg



707 U.S.C. 18

Name _____ Age ____ Club Year ____

Address _____

County or City _____

Name of club _____

Name of leader _____

Years in 4-H _____

THE Egg-citing Egg Teacher/Leader Guide

Curtis Novak, Extension Specialist, Poultry Science, Virginia Tech

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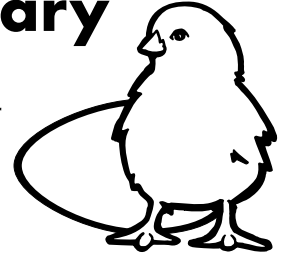
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Eggs and Chickens in Our Vocabulary



Learning Outcomes:

- Identify the meaning of common sayings.
- Explain how these sayings relate to poultry.

Life Skills:

- Learning to learn
- Communication

SOLs:

English 3.10, 5.8, 6.6

Many common phrases in our language relate to eggs and chickens. This is because not long ago most families had their own flock of chickens which provided fresh eggs and meat. Eggs could even be used as “money” to make purchases at the local store.

Below are some phrases you have probably heard. Explain how each of these phrases might have begun. Write below each sentence what you think the phrase means. Can you list some examples of your own?

Don't put all your eggs in one basket.

That man is really hen-pecked.

He is a really good egg.

Don't count your chickens before they hatch.

That package is as light as a feather.

Birds of a feather flock together.

That's a good way to get egg on your face.

Two dollars, why that's chicken feed.

Who is the egghead in the class?

You are really walking on egg shells if you try that!

The A*MAZE*ING Egg: from Hen to Home

Below are the steps that an egg follows on the journey from the hen to the home. Number the pictures to show the same order. Then trace the steps through the maze until the egg reaches your refrigerator. Don't get lost along the way!

Word Bank

- | | | |
|---------------------------|-------------|--------------|
| 1. Laying | 5. Candling | 10. Shipping |
| 2. Collecting | 6. Grading | 11. Selling |
| 3. Washing/
Broken out | 7. Sorting | 12. Storing |
| 4. Treating | 8. Packing | |
| | 9. Cooling | |

Learning Outcomes:

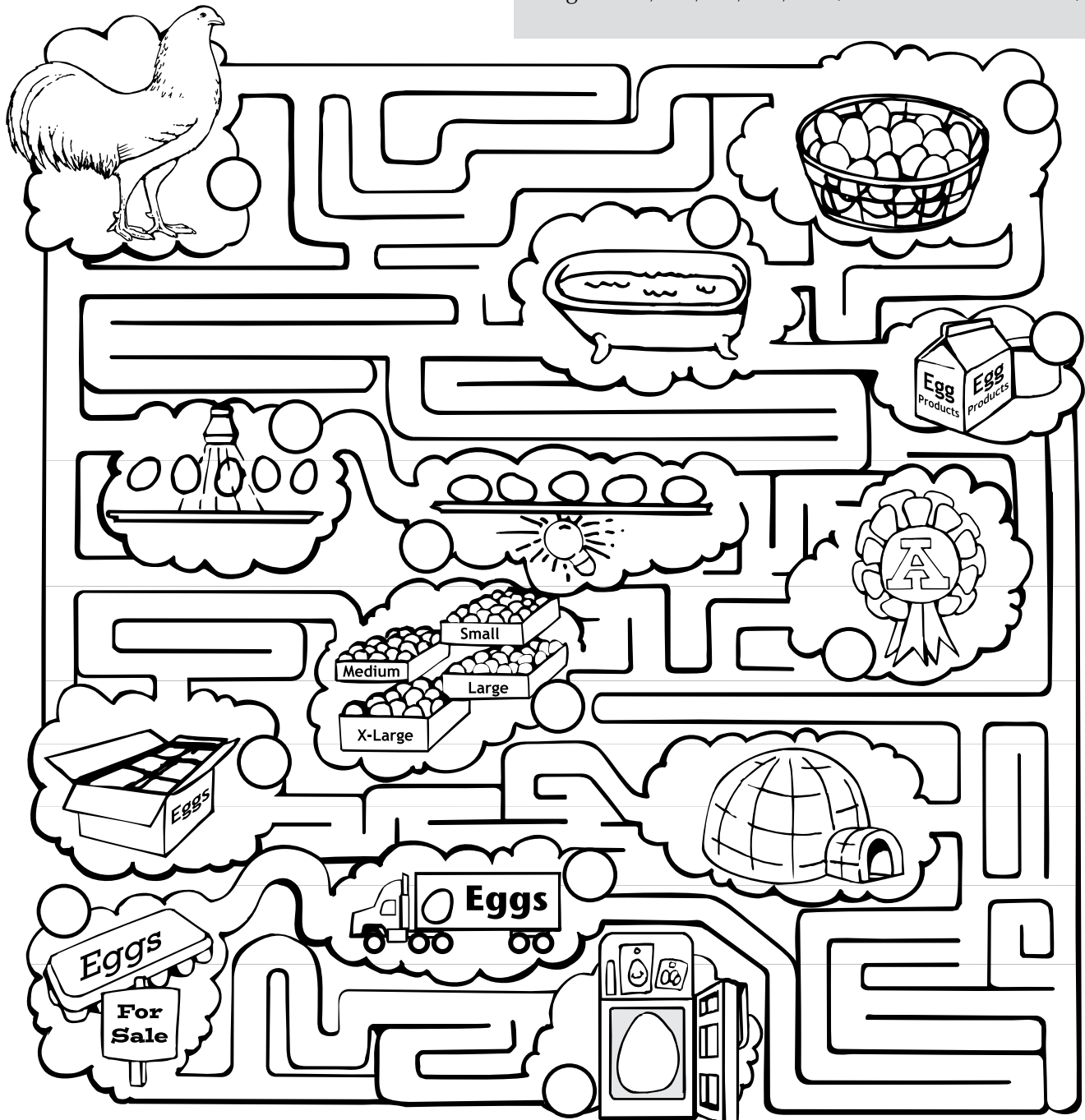
- Connect a store-bought product to how that product is delivered to the market.

Life Skills:

- Learning to learn
- Decision making
- Communication (see additional activities)
- Critical thinking (see additional activities)









SOLs:

English 3.2, 4.2, 5.1, 5.3, 6.1 (see additional activities)

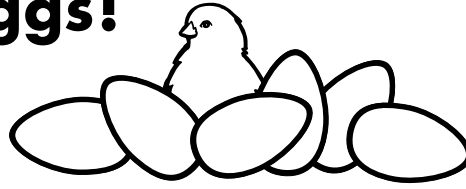


Question Board: Best Guesses Based On Fact!

Cut out each of the cards below. Separate the Question Board from the questions. Read each question and choose your answer. Then line up the question card on one of the sides of the Question Board so that the arrow points towards the Question Board. Make sure that the edges of the cards are even; then follow the arrow to find the letter of the correct answer.

<p>1. Eggs contain all necessary vitamins except</p> <ul style="list-style-type: none"> A. vitamin A B. vitamin B C. vitamin C D. vitamin D 	<p>2. An egg's ____ is so nearly perfect that the ____ of all other foods is compared to it.</p> <ul style="list-style-type: none"> A. Protein B. Fat C. Vitamin C D. Iron 	<p>3. Eggs are part of which food group?</p> <ul style="list-style-type: none"> A. Milk group B. Vegetable-fruit group C. Bread-cereal group D. Meat group 																									
<p>4. Most of an egg's calcium is found in the</p> <ul style="list-style-type: none"> A. yolk B. albumen C. chalaza D. shell 	<p>5. An egg's ____ is so nearly perfect that the ____ of all other foods is compared to it.</p> <ul style="list-style-type: none"> A. Protein B. Fat C. Vitamin C D. Iron 	<p>6. Dieters like eggs because</p> <ul style="list-style-type: none"> A. they don't have any calories B. they have only 80 calories C. they provide all the necessary vitamins D. all the fat is in the shell layer 																									
<p>7. The ____ of an egg has the most calories and Vitamin A in the egg.</p> <ul style="list-style-type: none"> A. Yolk B. Albumen C. Chalaza D. Shell 	<p>8. How long can an egg be stored before it loses its nutritional value?</p> <ul style="list-style-type: none"> A. One day B. One week C. Four weeks D. Nutritional value isn't lost 	<p style="text-align: center;">Question Board</p> <table border="1" style="width: 100%; height: 100%; text-align: center;"> <tbody> <tr> <td></td> <td>B</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>D</td> </tr> <tr> <td></td> <td></td> <td>C</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>A</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		B								D			C						A						
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Scrambled Eggs!



Word Bank

- | | | | |
|-------------|------------|-------------|--------------------|
| 1. Air cell | 5. Chalaza | 9. Grading | 13. Shell |
| 2. Albumen | 6. Chicken | 10. Hen | 14. Shell membrane |
| 3. Calcium | 7. Egg | 11. Omelet | 15. Vitamin |
| 4. Candling | 8. Feather | 12. Poultry | 16. Yolk |

Learning Outcomes:

- Identify vocabulary related to the study of eggs.

Life Skills:

- Learning to learn
- Communication

SOLs:

English 4.1, 5.1, 5.2, 6.1

How many of the vocabulary words listed above can you find in the letter square? The words run in all directions – forwards, backwards, up, down, and diagonal.

A	D	T	Y	X	A	I	R	C	E	L	L	T	B	S	C	M	P	K
C	B	E	D	M	D	X	C	F	G	B	W	X	Y	H	R	S	H	L
W	F	L	D	C	S	Z	J	T	L	R	M	S	N	E	H	T	W	N
T	G	E	Y	P	R	O	T	E	I	N	C	D	C	L	P	K	U	I
A	X	M	J	O	Q	W	M	S	K	H	B	H	R	L	J	F	S	M
L	R	O	T	U	U	F	U	R	Q	F	U	M	G	Z	U	G	Q	A
B	C	H	A	L	A	Z	A	T	U	S	F	D	V	S	N	P	V	T
U	W	J	C	T	S	H	W	M	A	E	L	A	T	I	Y	R	H	I
M	F	Q	B	R	T	D	S	B	A	C	K	C	D	X	O	B	W	V
E	J	N	K	Y	R	K	O	T	R	D	C	A	N	D	L	I	N	G
N	G	E	H	F	C	A	H	X	D	Y	R	L	S	G	K	F	S	G
T	Z	K	Y	M	B	E	C	N	F	G	S	C	U	M	R	H	K	H
B	Q	C	G	H	R	S	U	S	G	J	A	I	F	P	A	B	M	D
S	V	I	D	S	V	F	C	E	J	T	Q	U	O	G	K	F	I	W
J	N	H	B	U	M	U	Q	K	S	R	D	M	I	W	H	S	O	P
M	X	C	S	C	E	N	A	R	B	M	E	M	L	L	E	H	S	M



Idea Hatch

Now it's time to think about what you have learned and hatch some new ideas! Thoughtfully answer the questions below and then discuss with another person.

List 5 new things you learned about eggs.

1. _____
2. _____
3. _____
4. _____
5. _____

Complete the following sentences.

A creative way to use eggs would be _____

To me, the most important part of an egg is _____

This is why _____

A hen lays a little egg and a big egg. If both of those eggs hatch into chicks which chick would be stronger? _____

This is why _____

It is important for an egg to be smooth with no thin or rough spots because _____

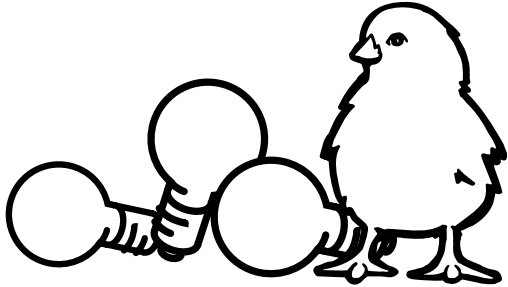
Learning Outcomes:

- Demonstrate “egg knowledge” through open-ended questioning.

Life Skills:

- Problem solving
- Critical Thinking

SOLs:
 English 4.1, 5.1, 5.2, 6.1, 6.6
 Science 5.1, 6.1



The Insides Story

Learning Outcomes:

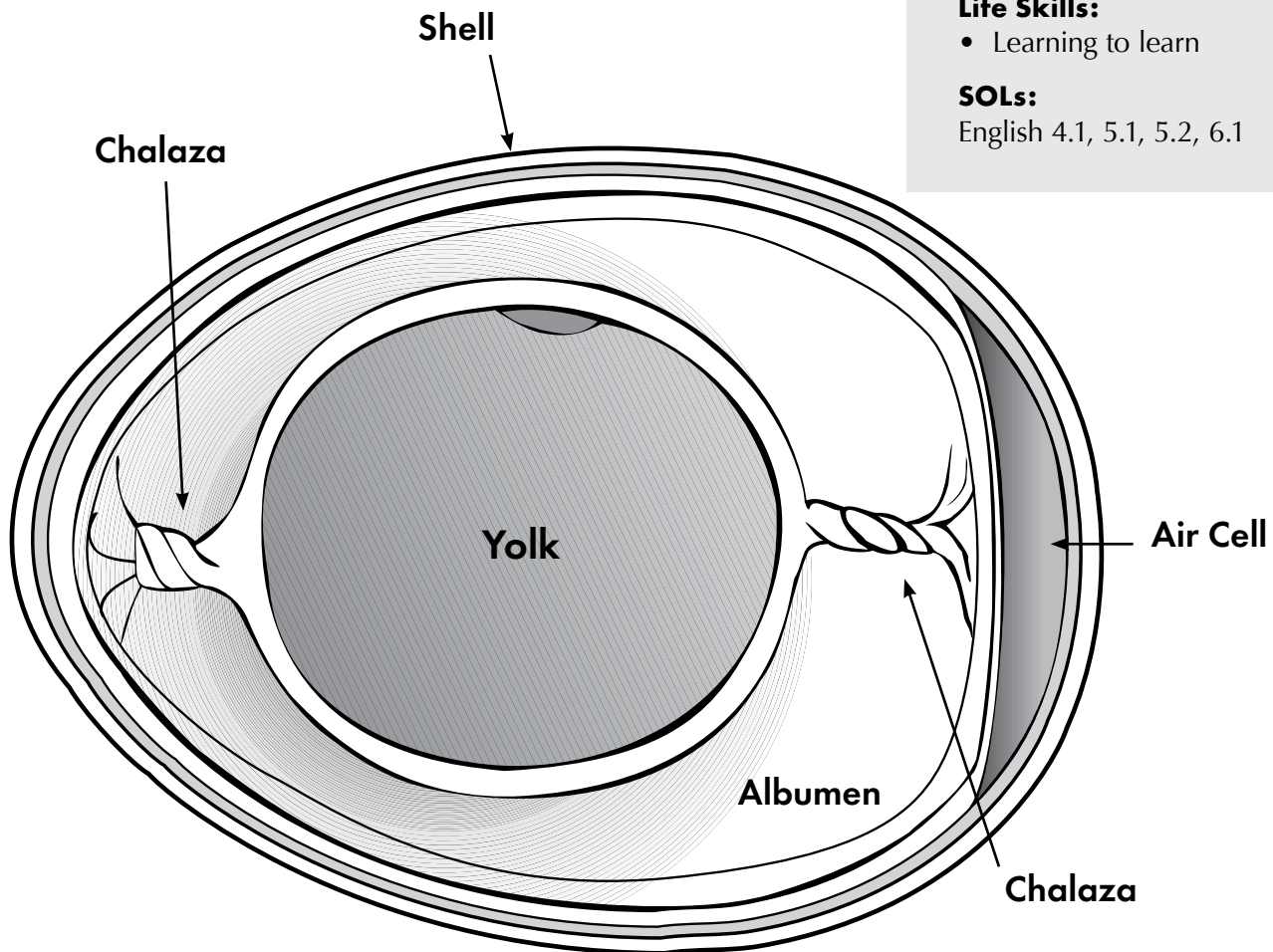
- Connect the concept of form and function.

Life Skills:

- Learning to learn

SOLs:

English 4.1, 5.1, 5.2, 6.1



Shell – The outer covering of the egg is nature’s most nearly perfect package. Shells of eggs in the store are mostly white, but some breeds of hens lay brown or other-colored eggs. Shell color has nothing to do with taste, quality, or nutritional value of the egg. The shell accounts for 11 percent of the weight of the egg.

Air cell – The air cell gets larger as moisture evaporates out through the pores of the shell and air gets in. You can tell how fresh an egg is by the size of the air cell during candling, the smaller the cell, the fresher the egg.

Yolk – The yolk represents about 31 percent of the weight of an egg. It is covered with the vitelline membrane, which is easily broken. Yolk color is determined by the hen’s diet and ranges from pale yellow to almost orange or red.

Albumen – The white of the egg is the albumen. It is about 58 percent of the egg’s weight. In very fresh eggs, you will notice a thick part surrounding the yolk and a thinner part on the outside. These are called the thin and thick albumen.

Shell membranes – There are two thin membranes inside the shell. These are edible, but in most methods of preparation they are discarded along with the shell. In hard-cooked eggs, the membranes can help separate the egg from the shell to make peeling easier.

Chalaza (kuh-LAY-zuh) – Two of these strands of thick albumen anchor the yolk in the center of the egg. If you’re talking about both of them, say chalazae (kuh-LAY-zee). The chalazae look like small streaks of white material. They are not a sign of poor quality or lack of freshness. On the contrary, they are most noticeable in very fresh eggs.



Let's Eggs-periment

How well do you notice details? How well can you figure out why something happens? These experiments will give you a chance to be a scientist. Watch what happens in each experiment and then answer the questions for that part.

Experiment 1:

Raw or Hard-cooked?

1. Look at both eggs closely. Do you see anything that tells you which one is raw? _____
2. Shake each egg carefully. Can you feel a difference? _____ If you can, which one is raw? _____
3. Hold each egg in front of the flashlight. Does more light show through one of them?
_____ If so, which one? _____
4. Spin each egg on the floor away from tables and chairs. Do they both spin the same? _____ If not, which one was slower? _____ Do you think the slower egg is hard-cooked or raw? _____

Experiment 2:

Super Egg!

Official Results

As a scientist and honest reporter, I am officially recording the facts of my experiment. On _____, a test of strength was given to an egg with these characteristics:

Size _____

Grade _____

Shell color _____

This egg held up until _____ pounds were put on it. Therefore, this egg has been named "Super Egg of the Day"

Learning Outcomes:

- You will use observation and experimentation to study eggs.

Life Skills:

- Keeping records
- Problem solving
- Teamwork
- Critical Thinking

SOLs:

English 4.1, 5.1, 5.2, 6.1
Science 5.1, 6.1

Omelets

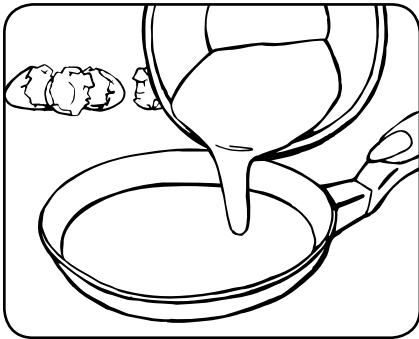
Amaze your friends, dazzle your guests, and wow your parents. You are about to master the art of omelet making. No dish we can think of has so much going for it. The delicate French egg creation is quick, inexpensive, low in calories, and offers the novice or experienced chef dozens of mouth-watering variations.

However, a lot of people think it is hard to do. Well, it's like learning to ride a bike or to ice skate.

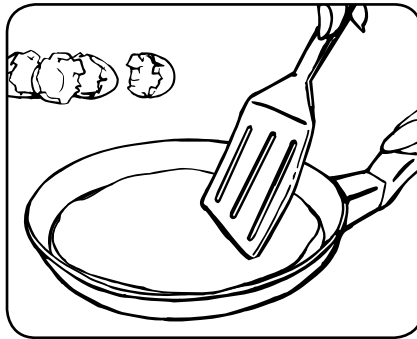
Once you learn it, it's a skill that lasts forever.

The Easy Way

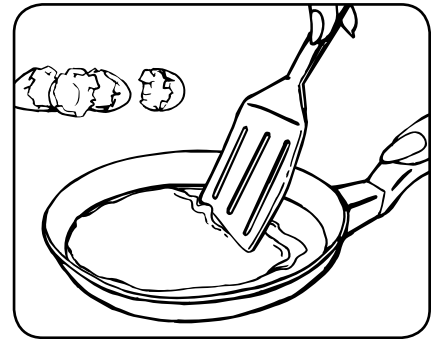
Start with 2 eggs, 2 tablespoons water, 1/4 teaspoon salt, dash pepper, 1 tablespoon butter or nonstick cooking spray. Heat the butter (or spray the nonstick spray) in an omelet pan or skillet until just hot enough to sizzle a drop of water. Mix the eggs, water, salt, and pepper with a fork.



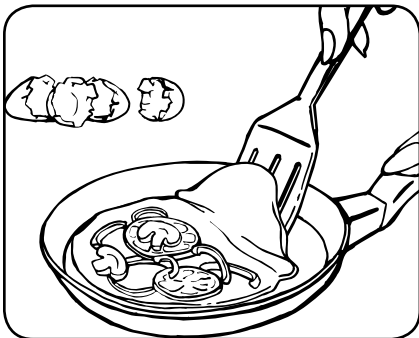
Pour the egg mixture into the hot pan. The edges should set immediately.



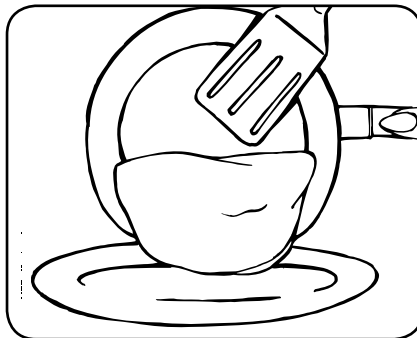
With a pancake turner, draw the cooked edges toward the center.



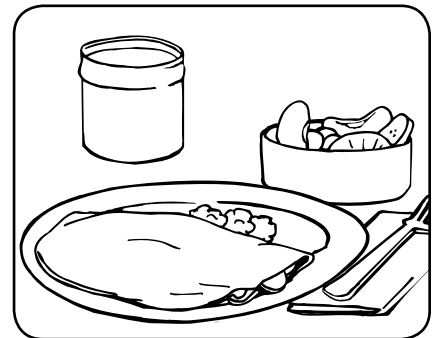
Tip the pan to allow the uncooked portion to run out into the hot pan.



While the top is still moist, put the filling on the left side of the omelet (right side if you're left handed.)



Fold one side over the filling with the turner. Tip the pan over the plate and turn the omelet out onto a heated pan.



Serve your omelet with a fruit or vegetable and some milk, add a piece of bread or a roll, and you've made a great meal.

Omelet Facts

A good rule to remember is that an omelet is the only egg dish which is cooked quickly. The pan is the right temperature when butter stops foaming and just before it begins to brown.

A good omelet cooks quickly (never more than a minute or two.) Because it's so quick to fix, you can feed several people by cooking one omelet right after another.

An option for people looking to reduce their

cholesterol intake would be to separate the yolk from the egg white. Use only the egg white to make the omelet.

On another sheet of paper, write some food items to use as fillings for omelets. You can be as far out as you want. Almost all foods and seasonings go well with eggs.

After you have a list, look in some cookbooks to see if any of your foods-for-fillings are actually recommended. You could be surprised.

