The first two pages are for the instructor to review with the class and/or reproduce and distribute to students. The third page has a quiz on the material, and the final page is the answer key.

The Best Eggs Don't Just Get Good Grades – They Get USDA Grades!

The USDA Grade Shield means:

- The eggs are fresh.
- The egg shells are clean and smooth.
- The egg shells are not cracked or broken.
- The eggs have yolks and whites that stand high and are firm.
- The eggs are the size stated on the label.
- The eggs have not been returned from retail channels and repackaged.

Not all eggs are USDA graded eggs. Egg packers who do not use the USDA grading service may put terms such as "Grade AA" or "Grade A" on their cartons, but they may not use the USDA Grade Shield. The USDA Grade Shield means the eggs are officially graded and meet strict Government standards for quality.

KNOW YOUR U.S. GRADES FOR EGGS!

Egg grades are determined by the appearance and condition of the egg shell and the interior quality of the egg.

- U.S. Grade AA eggs have whites that are thick and firm; yolks that stand high and are firm; and clean, unbroken shells.
- U.S. Grade A eggs have whites that are reasonably firm; yolks that stand high and are reasonably firm; and clean, unbroken shells.
- **U.S. Grade B** eggs have whites that may be thinner and yolks that may be wider and flatter than AA and A eggs; and shells that may be slightly stained, but are unbroken. You will rarely see Grade B eggs in stores because they are usually used to make liquid, frozen, and dried egg products for commercial food manufacturers and institutional food service establishments.

KNOW YOUR EGG SIZE/WEIGHT!

Size tells you the minimum required weight per dozen eggs and applies to all three grade levels. If there is a USDA Grade Shield on the carton, that means the eggs meet the required minimum weight for that size.

SIZE	MINIMUM NET WEIGHT PER DOZEN	METRIC WEIGHT
Jumbo	30 ounces	851 grams
Extra Large	27 ounces	766 grams
Large	24 ounces	681 grams
Medium	21 ounces	596 grams
Small	18 ounces	511 grams
Peewee	15 ounces	426 grams

The Parts of an Egg

a - Shell

Outer covering of the egg is composed mainly of calcium carbonate. It may be white or brown, depending on the breed of chicken. Color does not affect quality, flavor, cooking characteristics, nutritional value, or shell thickness.

b - Shell Membranes

There are two membranes -- an outer and inner -- just inside the shell surrounding the albumen (white). They provide a protective barrier against bacteria. An air cell forms between membranes.

c - Air cell

A pocket of air found at the large end of the egg between shell membranes. It is caused by contraction of contents while egg cools after laying. It increases in size with age.

d - Outer Thin Albumen (White)

This is nearest to the shell. It surrounds the thick white of a high-quality egg.

e - Firm or Inner Thick Albumen (White)

This is an excellent source of riboflavin and protein. In high-quality eggs, it stands higher and spreads less than a thick white. In low-quality eggs, it appears like a thin white.

f - Chalazae

The twisted, cord-like strand of an egg white. It anchors the yolk in the center of the thick white. A prominent, thick chalazae indicates high quality and freshness.

g - Vitelline (Yolk) Membrane

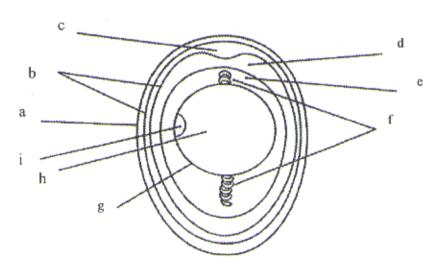
The colorless membrane surrounding the yolk.

h - Yolk

This is the yellow portion of the egg. Color varies with the diet of the hen, but it does not indicate nutritional content. It is a major source of vitamins, minerals, almost half of the protein, and all of the fat and cholesterol.

i - Germinal Disc

It is barely noticeable as a slight depression on the surface of the yolk. It is the entrance of a channel leading to the center of the yolk.



ARE YOU AN EXPERT AT BUYING EGGS?

Complete the following true/false questions to find out.

1.	Grocery stores sell eggs with Grades A, B, C and D; you can only buy Grade AA at the farms directly.		
2.	The largest egg size is "Extra Large."		
3.	The USDA Grade Shield assures Grade AA eggs have yolks and whites that stand high and are firm.		
4.	USDA grades can be applied to all egg sizes.		
5.	The smallest egg size available is "Small."		
6.	USDA Grade AA and A eggs will have clean shells.		
	DO YOU KNOW THE PARTS OF AN EGG?		
	Use the model below to label parts a through i.		
a_			
b _	c		
c _	b d		
<u>d</u> _	a de la companya de l		
e _			
f_	h		
g_	g		
h_			
i_			

Answer key for the true/false questions:

- FALSE: While there are three consumer grades for eggs, U.S. Grades AA and A are the two you will find in retail stores. U.S. Grade B eggs are rarely found in retail stores.
- 2. FALSE: The largest size is "Jumbo."
- 3. TRUE
- 4. TRUE
- 5. FALSE: The smallest egg size is "Peewee."
- 6. TRUE

Answer key for the labeling exercise:

- a Shell
- b Shell Membranes
- c Air Cell
- d Outer Thin Albumen (White)
- e Firm or mner Thick Albumen (White)
- f Chalazae
- g Vitelline (yolk) Membrane
- h Yolk
- i Germinal Disc