

# Eggs

Information compiled by the California Egg Industry Association

**How Produced** – Table eggs are produced commercially in 46 of the 48 contiguous states – all but Nevada and Wyoming. California is the fifth largest egg production state, behind Iowa, Ohio, Pennsylvania and Indiana. Annual egg production in California is about five billion eggs per year with approximately 20 million laying hens. Hens start laying eggs at 19 weeks of age. To produce one egg it takes a hen 24-26 hours. Each laying hen produces approximately 250 eggs each year. The majority of eggs are laid between the hours of 7:00 - 11:00 a.m. Eggs move quickly from the farm to the egg handler who washes, grades, and sizes the eggs, then packages and ships them to the retail store.

Most of the eggs produced today will be in the supermarket within 72 hours. In 1976, there were 16,000 egg farmers in the United States and in 2010 there were approximately 192 (flocks of 75,000 or more). In total the United States produces 75 billion eggs per year which represents about 10 percent of the world's production.

**Breeds** – The Single Comb White Leghorn is the principle breed used for production of white shell table eggs. There are various breeds that lay brown eggs. The only difference between brown and white shelled eggs is the color of the shell, there is no nutritional difference.

**Commodity Value** – Farm gate value of California egg production is estimated at \$340 million. Total sales generated are approximately \$1 billion annually. Of the 215.7 million cases of shell eggs produced in 2009: 66.4 million cases were further processed for foodservice, manufacturing, retail and export. 124.6 million cases went to retail, 18.3 million cases went for foodservice use and 6.4 million cases were exported.

**Top Producing Counties** – One half of California's egg production is in the southern part of the state including San Bernardino, Riverside, and San Diego counties. One half of the state's production is in northern California. The majority of egg farms in northern California are in the San Joaquin Valley with considerable egg production in San Joaquin, Stanislaus, Merced, and Kern counties. Petaluma in Sonoma county was once known as the "egg basket of the world."

**History** – Europe has had domesticated hens since 600 B.C. Egyptian and Chinese records show that fowl have been laying eggs for man since 1400 B.C. Chickens came to the New World with Columbus on his second trip in 1493. While it is customary to throw rice at weddings in many countries, French brides break an egg on the threshold of their new home before stepping in, for luck and healthy babies. At the time of the French Revolution, the French already knew 685 different ways of preparing eggs.

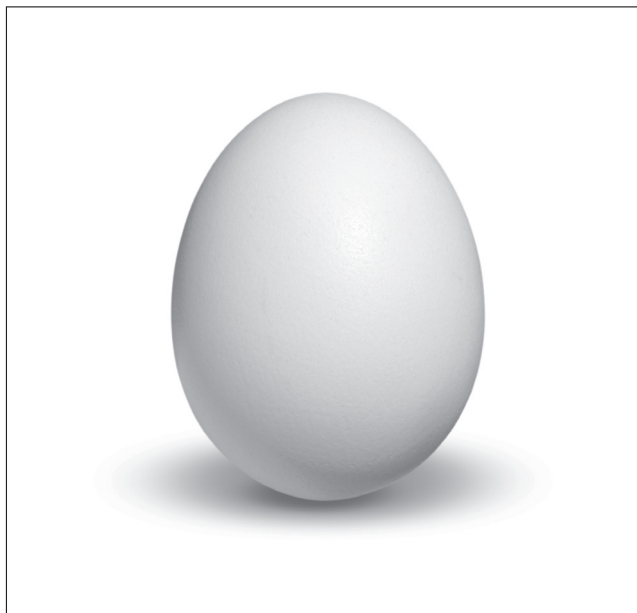
**Nutritional Value** – Table eggs are nutrient dense and one of nature's most perfect foods. Foods that supply significant amounts of one or more nutrients compared to the number of calories they supply are called nutrient dense. Nutrient dense foods help you get needed nutrients without excess calories. Each egg contains

13 nutrients. A large egg contains 70 calories and 185 milligrams of cholesterol. Eggs contain the highest quality protein of any food. Studies show that students perform better in school after eating a high protein breakfast. Eggs are also a source of Choline an essential nutrient that contributes to fetal brain development and helps prevent birth defects.

**For additional information:**  
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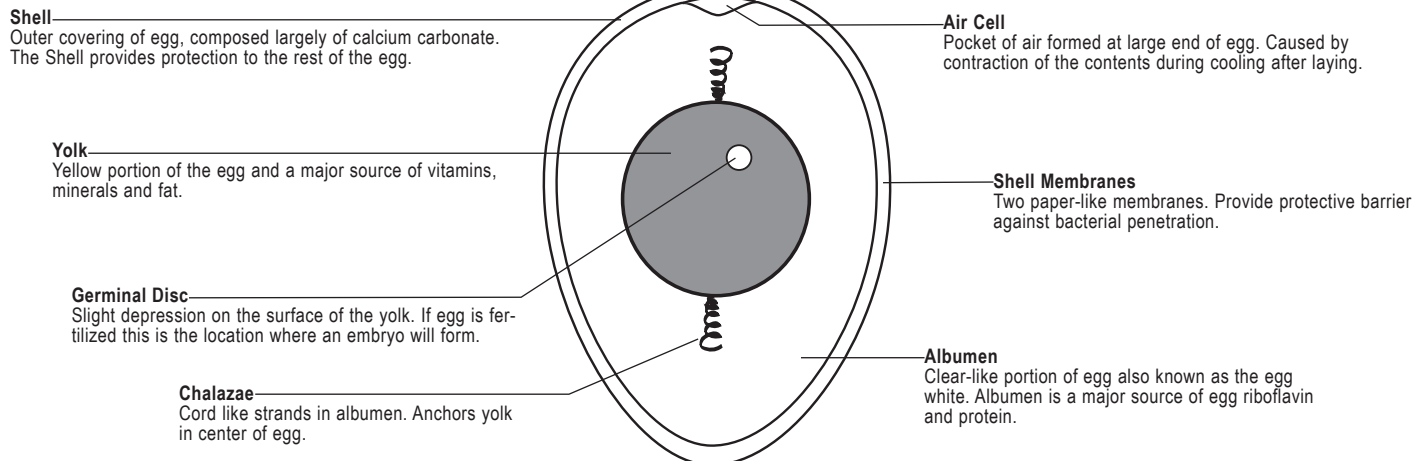
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# Egg Activity Sheet

## What's Inside an Egg?



### Lesson Ideas

- Create an "Egg Yolk Joke Book."
- Calculate the number of eggs produced by commercial laying hens each year. Convert this number to dozens.
- Study the science of egg development in birds.
- Research how eggs were used in the development of vaccines.
- Learn how various chicken feeds affect the color of the egg yolk.
- Research how technology has improved egg production.
- Make Ukrainian eggs and study their history.
- Make a variety of egg dishes such as quiches, omelets and frittatas and research their history.
- Create the perfect egg package, which prevents egg shells from cracking.
- Dissect a hard-cooked egg and label its parts.

### Fantastic Facts

1. On the average, how many eggs does one laying hen produce in one year?
  2. An average person today eats about how many eggs each year?
  3. What chicken breed is the most common egg layer in California?
  4. What substance in eggs is used by nutritionists as a standard for all other nutrients?
  5. How many egg farmers are there in the United States who combined have over 280,000,000 laying hens?
  6. What California city was once known as the "egg basket of the world?"
  7. Are most eggs stored for long periods of time before shipping?
  8. Approximately how many laying hens are there in California?
- 1) 250 eggs 2) 247 eggs 3) Single Comb White Leghorn 4) egg proteins – they are used to grade all other proteins 5) 192 farmers 6) Petaluma 7) No! Most arrive at supermarkets within 72 hours after laying 8) 20 million

### Lesson Plan: The Bouncing Egg

**Introduction:** Eggs have a variety of unique characteristics and can be used for a variety of scientific experiments.

**Materials:** One hard-cooked egg per team, white vinegar, plastic container with lid.

**Procedure:**

1. Without breaking the shell, examine the hard-cooked egg carefully. Record visual observations.
2. Place egg in plastic container. Cover completely with white vinegar and seal with lid. Predict what will happen in one hour, one day, and one week. Record predictions.

3. Observe the egg at the indicated times and record observations. The egg shell should have dissolved and the egg white and yolk should have become rubbery. After rinsing and drying the egg, record what happens when it is dropped. It should bounce.

**Note:** After each observation, have your students wash their hands. Also, do not eat the eggs.

