

Egg-speriments

Breathing Eggs

Supplies:

1 raw fresh egg
1 jar
hot water

Steps:

1. Place the fresh egg in the jar and fill the jar with hot water.
2. Watch carefully for several minutes until you see tiny streams of bubbles rising up out of the egg. (This also happens when you start to hard-cook eggs.) You may also hear a chirping noise, but don't worry, there's not a baby chicken in the egg. The bubbles and the noise all comes from the air inside the egg. An egg shell has about 7,000 tiny openings called pores. The hot water causes the air within the egg to expand and escape out the tiny pores. That's what makes the bubbles and occasionally the chirping sound.
3. The pores are what allows for air exchange to enable the chick to breath before it hatches out.

“EGGS”aminations

Supplies:

raw eggs
flashlight
hard-cooked eggs
cardboard

Steps:

1. Cut the cardboard to fit over the face of the flashlight. Make a round hole, about 1 ½ inches in diameter, in the center of the cardboard. Tape the cardboard to the flashlight.
2. Hold the raw egg over the hole on the flashlight. You should be able to see the yolk, white and air cell. This is called candling. Eggs are held up to a bright light to check the size of the air cell, if the yolk is centered and if the white is clear. The light also shows if there are any cracks or checks (very tiny cracks) in the egg shell. If any imperfections appear, the eggs are not sent on for packaging to consumers. This is how eggs get their grades—AA, A or B. Grade AA has the best exterior and interior qualities.
3. Now view the hard-cooked egg. Can you see anything? Why not? When the egg was cooked, the heat caused the egg protein to coagulate (turn from liquid to solid). This particularly happens in the egg white, so you can no longer see through it.
4. Mix up the raw and hard-cooked eggs, so you can't tell which one is which.
5. On a smooth surface, spin the eggs. Notice that some eggs spin while others wobble. The hard-cooked eggs spin, because they are solid. Because of the liquid in the raw eggs, they tend to wobble.