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Reading

# Weekly Test Lesson 11

Read the passage. Then answer the questions.

## The Great Egg Experiment

If you look at or touch an egg, it is difficult to tell if it has been hard boiled or if it is raw. However, there is an experiment that will show you whether an egg is raw or hard boiled.



Hard-Boiled Egg



Raw Egg

### Egg Experiment #1: Raw or Hard-Boiled

You will need six eggs to conduct this experiment. Three of the eggs should be uncooked. The other three should be hard boiled. Have an adult help you boil the eggs ahead of time so they are cool when you handle them for the experiment. You should also have a chart to record the results of your experiment and a bowl to crack the eggs into.

Place an egg on the table and spin it. Touch the egg with your finger to stop it from spinning. Then immediately let go of the egg. Does the egg continue to spin or does it stay still?

Record the result on the chart. Then crack the egg over the bowl. Is the egg raw or cooked? Record the result on your chart.

Repeat the experiment with the other five eggs.

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The result of this experiment should be that the three raw eggs continue to spin, while the three hard-boiled eggs do not. Why does this happen? The reason is that the uncooked yolk inside the raw eggs is in liquid form. The liquid keeps moving even after you stop the egg from spinning. In the hard-boiled eggs, the yolk has been cooked and is now in the form of a solid. Solids do not continue to move, so that means that the hard-boiled egg will not continue to spin.

**Egg Experiment #2: Fresh or Bad**

You can also conduct an experiment to tell whether an egg is fresh and safe to eat or whether it has gone bad. Once again, you will need six eggs for this experiment. Have an adult help you prepare ahead of time by obtaining three eggs that have not passed their freshness date. Use a black marker to draw a small line on the fresh eggs. You will also need three eggs that are several weeks old and have passed the freshness date, as well as a bowl of tap water and a chart to record your observations.

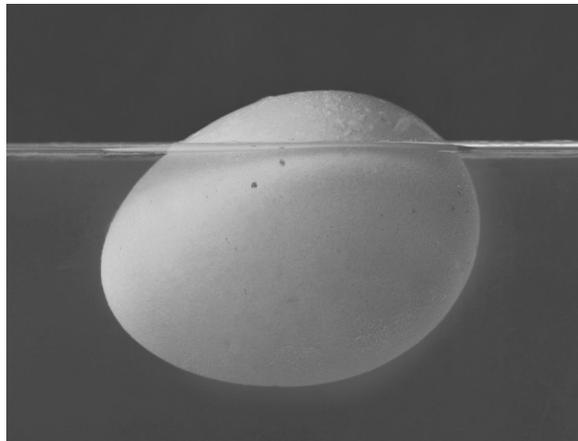
Place an egg into the water and observe whether it floats or sinks. Record your observation on the chart and then check the egg. Is it marked as a fresh egg, or is it unmarked and out of date? Record the result on your chart. Repeat the process with the other eggs.

Let's look at the results of this experiment. The fresh eggs will sink to the bottom of the bowl, while the out-of-date eggs will float. The reason for the difference lies in the eggshell. Eggshells protect the egg, but they do let in a little bit of air. If an egg is fresh, air will not have had a chance to enter through the eggshell and build up inside the egg. That means the egg is denser than tap water, so the egg will sink. However, an older egg has taken in enough air to create an air pocket inside the egg. That air pocket makes the egg lighter than the water. That means it will float.

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**Reading****Egg Experiment #3: Heavy or Light**

You can also perform a different water experiment that will compare the density of an egg to the density of two types of water. For this experiment, use a fresh egg. It can be raw or hard boiled because both will react the same. You will also need two bowls of water. One should be filled with tap water, and the other should be filled with salt water. Place the egg into the bowl of tap water. It will sink because the egg is heavier than the water. Then place the egg into the bowl of salt water. This time, it will float because the salt makes the water denser, so the egg is no longer heavier than the water.

**Floating Egg**

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## Reading

- 1 Read the sentence from the text.

Have an adult help you prepare ahead of time by obtaining three eggs that have not passed their freshness date.

What does the word freshness mean?

- (A) without fresh
- (B) the most fresh
- (C) used to be fresh
- (D) a state of being fresh

- 2 This question has two parts. First, answer part A. Then, answer part B.

**Part A**

What causes a raw egg to continue spinning after it is touched?

- (A) the liquid yolk
- (B) the salty water
- (C) the cool eggshell
- (D) the air within the eggshell

**Part B**

Which detail from the passage **best** supports the answer to part A?

- (A) The liquid keeps moving.
- (B) The eggs should be cool.
- (C) Eggshells protect the egg.
- (D) An older egg has air pockets.

- 3 Why are the fresh eggs marked?

- (A) to show which eggs will float
- (B) to show which eggs are cooked
- (C) to check the experiment results
- (D) to check the density of the water

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- 4 Mark the boxes to match each effect to its cause from Experiment #2.

	<b>The egg is fresh.</b>	<b>The egg has gone bad.</b>
The egg sinks.		
The egg floats.		

- 5 Read about experiment 3. What can you determine by looking at the last image?

- Ⓐ The egg is raw.
- Ⓑ The egg is hard boiled.
- Ⓒ The egg is in tap water.
- Ⓓ The egg is in salt water.

- 6 How do the headers help readers better understand the topic? Support your answer with details from the passage.

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**Writing**

- 7 Which sentence contains an error in grammar usage?
- (A) I need to study for two tests tomorrow.
  - (B) There are too many people to fit in one car.
  - (C) We are going two the city for a school field trip.
  - (D) Apples are his favorite fruit, and I like them, too.
- 8 Which sentence contains an error in grammar usage?
- (A) It was raining when we got their.
  - (B) Don't forget to meet me there after school.
  - (C) My friends like to bring their dog to the park.
  - (D) I like to keep my books over there for safe keeping.
- 9 Which sentence contains an error in grammar usage?
- (A) The animal loves to chase its tail.
  - (B) It looks like it's going to rain today.
  - (C) The tulip is my favorite flower because of it's many colors.
  - (D) When the cat jumped on the table, my glass fell over on its side.

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**Writing**

- 10 Read the paragraph. Underline the **two** sentences that contain spelling errors.

My class mate and I were working on a science experiment. We wanted to see what things helped plants grow best. We planted four plants and used the same soil for each plant, except for one. For one plant, we added crushed eggshells to the soil. We wanted to see if it was true that the extra calcium added by the shells would help the plant grow. No body in our class had done an experiment like this.