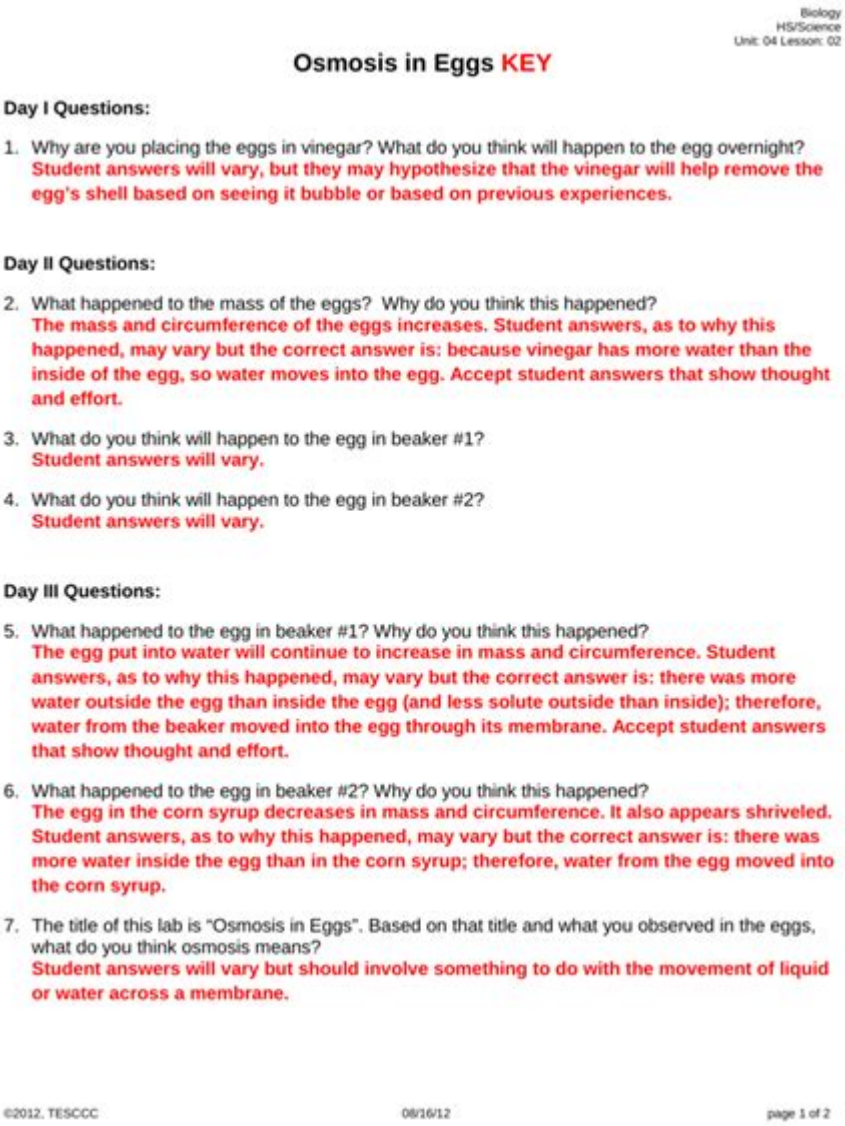
Egg Osmosis Lab Answer Key



Biology
HS/Science
Unit: 04 Lesson: 02

Osmosis in Eggs KEY

Day I Questions:

1. Why are you placing the eggs in vinegar? What do you think will happen to the egg overnight?
   Student answers will vary, but they may hypothesize that the vinegar will help remove the egg's shell based on seeing it bubble or based on previous experiences.

Day II Questions:

2. What happened to the mass of the eggs? Why do you think this happened?
   The mass and circumference of the eggs increases. Student answers, as to why this happened, may vary but the correct answer is: because vinegar has more water than the inside of the egg, so water moves into the egg. Accept student answers that show thought and effort.
3. What do you think will happen to the egg in beaker #1?
   Student answers will vary.
4. What do you think will happen to the egg in beaker #2?
   Student answers will vary.

Day III Questions:

5. What happened to the egg in beaker #1? Why do you think this happened?
   The egg put into water will continue to increase in mass and circumference. Student answers, as to why this happened, may vary but the correct answer is: there was more water outside the egg than inside the egg (and less solute outside than inside); therefore, water from the beaker moved into the egg through its membrane. Accept student answers that show thought and effort.
6. What happened to the egg in beaker #2? Why do you think this happened?
   The egg in the corn syrup decreases in mass and circumference. It also appears shriveled. Student answers, as to why this happened, may vary but the correct answer is: there was more water inside the egg than in the corn syrup; therefore, water from the egg moved into the corn syrup.
7. The title of this lab is "Osmosis in Eggs". Based on that title and what you observed in the eggs, what do you think osmosis means?
   Student answers will vary but should involve something to do with the movement of liquid or water across a membrane.

 08/16/12

Egg osmosis lab answer key refers to the results and explanations derived from a well-known biology experiment that demonstrates the principles of osmosis using eggs. This lab activity is a favorite among educators and students alike because it visually showcases the effects of osmotic pressure in a simple and engaging manner. In this article, we will explore the concept of osmosis, the materials needed for the egg osmosis experiment, the procedure to follow, and the expected results, along with an answer key that addresses common questions and findings.

Understanding Osmosis

Osmosis is a type of passive transport that involves the movement of water molecules through a selectively permeable membrane, from an area of lower solute concentration to an area of higher solute concentration. This process is crucial for maintaining cellular homeostasis and is a fundamental concept in biology.

The Importance of Osmosis in Biological Systems

Osmosis plays a vital role in various biological processes, including:

- Regulating water balance in cells
- Facilitating nutrient uptake
- Maintaining turgor pressure in plant cells
- Influencing the overall health of organisms

The Egg Osmosis Experiment

The egg osmosis experiment serves as a practical demonstration of osmosis, utilizing a simple raw egg, which has a semi-permeable membrane that simulates cell membranes. This experiment allows students to observe the effects of different solutions on the egg and understand the principles of osmosis.

Materials Needed

To conduct the egg osmosis experiment, gather the following materials:

1. Raw eggs (1-3, depending on the number of trials)
2. Vinegar (white or apple cider)
3. Distilled water
4. Corn syrup
5. Measuring cups
6. Clear plastic cups or beakers
7. Scale (optional, for measuring egg mass)
8. Paper towels