Spinning Eggs
Discrepant Event Activity
Teacher Resource

Grade Level **K-12**

Objectives

1. The student will investigate the concept of inertia.
2. The student will employ simple equipment and tools to gather data.
3. The student will demonstrate the use of 21st century technology with a document camera.

National Standards

NS.K-4.1; NS.5-8.1; NS.9-12.1	Science as Inquiry
NS.K-4.2; NS.5-8.2; NS.9-12.2	Physical Science
NS.K-4.5; NS.5-8.5; NS.9-12.5	Science & Technology
NT.K-12.1	Basic Operations and Concepts
NT.K-12.3	Technology Productivity Tools
NT.K-12.6	Technology Problem-Solving & Decision-Making Tools

Teacher Background Information

The spinning eggs demonstration is an activity for teachers to introduce the concept of inertia. Isaac Newton's First Law of Motion describes inertia as the tendency for any object to resist any change in its motion. The raw egg will not spin in a constant pattern because of the yolk and egg white inside the shell. The raw egg will start to spin again once you release your finger from it because the liquid inside is still spinning. This is referred to as inertia. The hard-boiled egg will not spin once you stop the egg spinning with your finger because the inside contents are solid. Before the activity, have students state a hypothesis which egg, raw or hard-boiled, will stop spinning.

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MATERIALS

Document Camera

Personal Computer

Interactive White Board/Projector

Raw Egg

Hard-boiled Egg

PROCEDURE

1. Place the raw egg on the demonstration table and spin the egg.

   Note—do not tell the students which egg is raw and which is hard-boiled.
2. Have students make observations of the raw egg.
3. After 30 seconds, touch the egg with your fingertip to stop the egg from spinning.
4. Once the egg stops spinning, remove your finger and have students make predictions.
5. Place the hard-boiled egg on the demonstration table and spin the egg.
6. Have students make observations of the hard-boiled egg.
7. After 30 seconds, touch the egg with your fingertip to stop the egg from spinning.
8. Once the egg stops spinning, remove your finger and have students make predictions.

QUESTIONS

1. Have the students state the:
   a. Independent variable
   b. Dependent variable
   c. constants
2. What happens to each egg during the spinning?
3. Why do they spin differently?

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