



## **Egg-stra Strength**

**Primary Audience: 2<sup>nd</sup>-5<sup>th</sup> Grade**

### **Description:**

How fragile is an egg shell? Let's Investigate. You may be surprised!

### **Materials:**

- 4 egg shell halves (as nearly the same size as possible)
- Books of varying size and weight (hardcover books work best)
- A kitchen table or countertop

### **Instructions:**

- Arrange the egg shell halves, rounded side up, in a medium-sized square on the table or counter.
- Predict how many books you will be able to place on top of the egg shells before they crack.
- Carefully place one book on top of the egg shells. What happens?
- How many books *can* you place on top of the egg shells before they crack?

### **What's Going On?**

When pressure is applied to the top part of the egg shell, the force travels down the sides of the egg to the base. The base is wider than the point of the egg shell and is able to support more weight. At some point, the pressure will become too great and the shells will crack.

### **Further Exploration:**

1. Will different sizes or kinds of eggs support more weight?
2. What happens if you turn the egg shells and place the pointed end onto the table?
3. Does the color of the egg affect how much weight it can hold?