



UNBREAKABLE EGGS

SCIENCE SAFETY

PLEASE follow these safety precautions when doing any science experiment.

- **ALWAYS** have an adult present.
- **ALWAYS** wear the correct safety gear while doing any experiment.
- **NEVER** eat or drink anything while doing any experiment.
- **REMEMBER** experiments may require marbles, small balls, balloons, and other small parts. Those objects could become a CHOKING HAZARD. Adults are to perform those experiments using these objects. Any child can choke or suffocate on uninflated or broken balloons. Keep uninflated or broken balloons away from children.

INGREDIENTS

- 3 Eggs
- 6 Plastic Bottle Caps
- Several Heavy Books

INSTRUCTIONS

STEP 1: Place three of the plastic bottle caps, open end up, on a flat surface.

STEP 2: Place an egg into each bottle cap.

STEP 3: Place the rest of the bottle caps, closed end up, on top of each egg

STEP 4: Place several heavy books on top of the eggs and observe. Provide evidence of the effects of balanced and unbalanced forces on the eggs.

EXPLANATION

The books exert multiple forces on the eggs. The bottle caps help distribute the forces, creating zero net force on the eggs, which keeps the eggs from cracking.



SCIENCE BACKGROUND

A force is a push or pull, which can cause an object to be in motion. Each force acts on one particular object and has both strength and a direction. An object at rest typically has multiple forces acting on it, but they add to give zero net force on the object. Forces that do not sum to zero can cause changes in the object's speed or direction of motion. Objects in contact exert forces on each other.

I CAN STATEMENT

- ✓ I can plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on an object.

NEXT GENERATION SCIENCE STANDARDS CONNECTION

3 – Forces and Interactions | Cause and Effect