

## AN EGG DROP CONTEST

**INTRODUCTION:** Have you ever tried to wrap a fragile object for mailing, knowing how it might be tossed about? The laws of physics can usually assist with everyday problems. In this case, knowledge of the laws of speed, distance, acceleration, and collision can be remarkably helpful.

### PURPOSE:

- What kind of packaging can protect two eggs from breaking if they are packed with a brick in a shoe box and dropped from a height of approximately 14 meters onto concrete?

### MATERIALS:

Shoe box  
Brick (about 20 cm x 10 cm x 5 cm)  
Two raw eggs  
Packing material  
Masking tape  
Stopwatch  
Meter stick

### PROCEDURE:

1. Obtain the contest rules, date, time and location from your teacher.
2. Research the qualities of packaging materials which you choose as possibilities. Record the qualities of each. Submit your choice(s) to your teacher on the date they are due.
3. Tape the brick securely to the center of the shoe box so that the 20 cm x 10 cm side is flat on the bottom of the box. Two raw eggs are to be placed at the ends of the brick, as shown in the illustration, with packing material cushioning them.
4. At the time of the contest, stand at a safe distance, observe your teacher drop the box and record the time it takes.
5. Examine and record the shoe box. A drop is successful if neither egg cracks. Clean any unsuccessful results.

