

Egg Bungee Jump

What You Need

- nylon stockings
- rubber bands
- balloons
- yarn
- plastic sandwich bag
- pennies
- an egg
- newspaper
- ruler

Design a bungee jump so that the egg stops within 2 inches of the floor when dropped from 5 feet!



1 Gather the nylon stockings, rubber bands, balloons, and yarn. **Pull** each to test how **elastic**, or stretchy, they are. Then use these materials to make a **bungee cord**.

2 Make a test egg: fill a plastic bag with pennies until it weighs **about the same** as a **real egg**.

3 Test your bungee design with the test egg. **Measure** how close the test egg comes to the ground.

4 Evaluate your design. What **changes** can you make to improve your bungee design?

5 When you're ready, **try** your bungee design with a **real egg**. What happens?



Did the egg stop within **2 inches** of the floor? If not, what could you change so that it does? What happens if you change the **length** of the bungee cord? What happens if you change how you **arrange** the materials? Or, what happens if you add more **weight** to the egg? Choose one thing to change (that's the **variable**) and make a **prediction**. Then **test** it and **send** your results to ZOOM.

Sent in by Rachel K. of Champaign, IL

Engineering Scoop

When you **drop** the egg, the falling egg **stretches** the bungee cord. As the cord stretches, it **slows** the egg until it stops falling. Then the bungee cord **springs back**, pulling the egg up and away from the ground. The bungee cord stretches because it's made from materials that are **elastic**. Things that are elastic return **almost to their original shape** after they've been stretched or squashed by a force. The amount the bungee cord stretches depends on how **elastic** the materials are and how much the egg **weighs**. What **materials** did you use to make a stretchy bungee cord?

