

Let Them Fall

Post-field trip lesson for Engineer It!

Engagement

Ask students what they remember about what they learned about “forces” when they visited The Discovery.

Exploration

Show the students the golf ball and the ping pong ball. Let them weigh the two balls between their hands and ask which ball is heavier. Then ask if you let go of the two balls from an equal height, which will fall faster. Ask them why. Then tell them they’re going to conduct an experiment by dropping the two balls from the same height and see which one hits the floor first. Try it several times and ask the students which ball hit the floor first.

Explanation

The two balls are about the same size but will hit the floor at the same time even though the golf ball is heavier. Gravity pulls both balls down at the same speed.

Ask students if they know why it would be helpful to understand gravity when they are building something.

Extension

Take two identical pieces of paper and show them to the students. Tell them that the two pieces of paper weigh the same. Now crumple one of the sheets of paper into a ball. Ask the students which piece of paper will hit the ground first if you drop them from an equal height. Drop both pieces of paper. The one that is crumpled will fall faster. Explain that this is true because the piece of paper has been crumpled has less air resistance and will fall faster even though it weighs the same as the uncrumpled piece.

Other Resources

Physics for kids: Gravity and motion -
http://www.physics4kids.com/files/motion_gravity.html

Nevada Academic Content Standards in Science
(NGSS): K-PS2-2.

Common Core: W.K.2.2. 1.K.4 I/L

What You Will Need:

- A golf ball
- A ping pong ball
- Two identical pieces of paper

