

School to Home

LESSON 3

Newton's Second Law

Did you know?

Just a year after Isaac Newton was awarded a scholarship to Cambridge University, the plague forced the school to close. Newton returned home, but made many of his discoveries related to gravity, optics, and mathematics during this period.

For this activity, you will need a piece of chalk, a golf ball and a table tennis ball (or two other balls that are similar in size but different in mass), a straightedge, and a measuring tape.

1. Set up the activity outside on a level sidewalk or driveway. Mark a line on the driveway or sidewalk. During the activity, you will move balls from the line.

2. Start with the lighter ball. Set it on the line and strike the ball with the flat side of the straightedge. You will strike the second, heavier ball with the same force, so practice a few times to be sure you strike the ball from the same distance and with the same force. Measure the distance the ball traveled. Record it here.

3. Repeat Step 2 with the heavier ball. Record the distance the ball moved here.

4. **Recall** Newton's second law of motion. What does it state?

5. Does the activity demonstrate Newton's second law? Explain.
