Look & Listen & Live
Operation Lifesaver®

Name:

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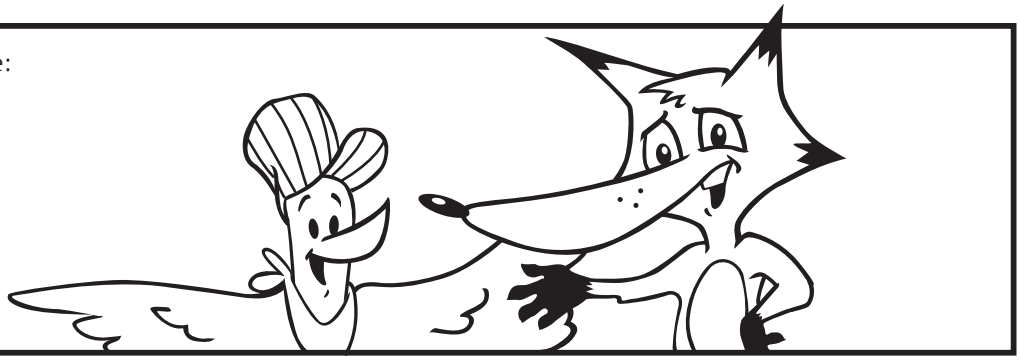

Inclined Plane Experiment

MATERIALS NEEDED (PER GROUP):

Inclined Plane, scale, 3 balls of different masses, meter stick, styrofoam cups and graph paper.

PURPOSE:

To observe and graph the effect of mass of an object on the distance it travels and the effect of the height of the plane on the distance traveled.

PROCEDURE:

1. Find the mass of each ball and record it on your data sheet.
2. Place the inclined plane so that one end is raised 4 cm. Measure from top of board where channel starts.
3. Place the meter stick at the other end of the plane, with the meter stick at the outside edge and zero end next to plane.
4. Make a barrier opposite the meter stick at the other edge of the plane to keep the cup in a straight line. Use books, etc.
5. Place closed end of the styrofoam cup at the end of the plane.
6. Be sure the styrofoam cup is at zero on the meter stick.
7. Place a ball at the top of the inclined plane, let it roll down the plane and hit the styrofoam cup.
8. Measure the distance the cup moved. Record in your data sheet.
9. Repeat steps 4 - 8 for each ball. You should run 3 trials with each ball.
10. Raise the plane to 5 cm and repeat steps 4-8 and then repeat again with the plane at 7 cm.

PLOTTING DATA ON A GRAPH:

1. Using graph paper, you will make 2 graphs.
2. Graph 1 will be distance vs mass.
3. Graph 2 will be distance vs height of plane.

CONCLUSION:

1. How does the mass of the ball affect the distance the cup moved?
2. What effect does height of the plane have on the distance?
3. Did the balls travel down the plane at the same speed or different speeds? Explain your answer.
4. From your observations, why would a train do considerable damage to a car in a collision?