

Measuring Acceleration as You Walk

Name: _____

Materials: accelerometer, you

1. Hold the accelerometer in your hand. Observe the accelerometer when you are standing still. What does it do?
2. If you walk at a steady speed, what does the accelerometer do? Is the string straight up and down?... it should look the same as when you were stationary. Describe how you must walk in order to maintain the accelerometer as if you were standing.
3. When you speed up, which way does the ball move?
4. When you speed up, a force pushes you forward. This force comes from the floor. Is the direction the ball moves the same as the force that makes you speed up? (If you have trouble figuring out which way this force points, think of which way someone would have to push you to make you go faster.)
5. If you speed up more quickly, accelerate faster, does the ball move more or less? Does it move in the same direction? Try to speed up at a steady rate and describe the motion.

Measuring Acceleration as You Walk

Name: _____

6. When you slow down, which way does the ball move? Is that in the same direction as the force that makes you slow down?
(Which way would someone have to push you to slow you down?)

7. If you turn left, which way does the ball move? Which direction does this say the force must be acting?

