



SECTION 1: MOTION IN REVIEW

LAB

INTRODUCTION

When students push a ball, they are exerting a force, which is a push or a pull. In this activity, students observe behaviors that confirm Newton's first law of motion. That law states that an object will remain at rest or in uniform motion unless acted on by an unbalanced external force. In other words, a force is required to cause an object to begin moving or to alter the motion of a moving object. In this activity, students push a stationary ball to start rolling and then push a rolling ball to change the direction of its motion.

It is important for students to be able to describe what they observe as an application of Newton's first law of motion. Often students memorize laws without applying them to everyday events. All of the activities in this unit will require student to explain their observations in terms of the laws of motion.

ASSESSMENT ANCHORS ADDRESSED

- S4.A.2.1** Apply skills necessary to conduct an experiment or design a solution to solve a problem.
- S4.C.1.1** Describe observable physical properties of matter.
- S4.C.2.1** Recognize basic energy types and sources, or describe how energy can be changed from one form to another.
- S4.C.3.1** Identify and describe different types of force and motion, or the effect of the interaction between force and motion.

PURPOSE

In this activity, students are introduced to Newton's first law of motion. Students apply the law of motion of a ball after it experiences force. The students observe that an object at rest remains at rest until a force acts on it and describe the motion of an object when it experiences a force.

MATERIALS

For Each Pair of Students	For Each Student
1 wooden ball	Activity Sheet 1

*Teacher provides items marked with **