

# **force** **course**<sup>®</sup>

## ***Lesson Directions Overview***

### **Equipment List**

- 1 ForceCourse<sup>®</sup> Frame
- 4 Buckets
- 4 Ropes
- 8 Pulleys
- 4 Sets of 6 Weighted Bags

### **Learning Objectives**

1. Identify that a pulley is a simple machine designed to make work easier.
2. Understand three types of pulley systems and their effects on the force needed to lift a load.

### **Grade Levels: 2-12**

### **Vocabulary Covered**

- Force
- Work
- Simple Machine
- Pulley
- Mechanical Advantage
- Load

### **NGSS Topics Addressed**

- Forces and Interactions
- Engineering Design

### **CCMS Topics Addressed**

- Measurement and Data