

## Activity 2.1 Everyday Pushes and Pulls Teacher Notes

### Introduction

Do you enjoy the swings on a playground? Can you describe how you get the swing to move you through the air?

Have you ever played tug-o-war with a rope? What kind of movements do you use to get the rope to move?

To swing or to play tug-o-war, you use forces. A force is a push or a pull. Would you use push or pull to describe swinging or playing with the rope? These are examples of some of the many forces around you.

In this activity you will think about how you use pushes and pulls every day.

### Equipment

- Launch Log
- iPad tablet
- Tablet application
  - Canvas by Instructure
  - Educreations™
- *Give It a Push! Give It a Pull!* By Jennifer Boothroyd

### Procedure

1. Guide students to access the introduction to Activity 2.1 using the Canvas by Instructure app on a tablet. Alternatively, you may choose to pose the questions in the introduction to your students. Use the questions to help students begin to consider the idea of forces. As they describe swinging or playing tug-o-war, take note of how they describe the forces at work. Record their ideas using the Educreations app and projecting it for the class to view. You may also record ideas on the board or on chart paper.
2. Use the book *Give It a Push! Give It a Pull!* to help students define the concept of force. Read pages 4-7 orally to students and discuss the idea of pushes and pulls. Allow students to offer other examples of when they use pushes and pulls in their everyday life. Use the following definitions as you work with students on pushes and pulls:
  - A **force** is a push or pull that can make an object move, stop moving, or change directions.
  - A **pull** is a force that moves an object closer to the object applying the force.

- A **push** is a force that moves an object away from the object applying the force.
3. In the Launch Log, have students complete the definitions for Activity 2.1. They will fill in the blanks with the words *push* and *pull*. As students review, reinforce the term *force* as a push or a pull.
  4. Students will demonstrate their understanding of forces by drawing a picture to show a push and a picture to show a pull.
  5. Continue to expand students' understanding of force by reading the remainder of the book orally. Discuss how forces affect our daily lives. (Option: you may decide to read the sections on friction and changing shape at later time to allow students to explore the basic ideas of pushes and pulls.)
  6. Lead students on a scavenger hunt in the classroom, on the playground, or around the school to allow them to identify pushes and pulls. Guide students to identify whether objects require a push or pull, more or less force than other pushes/pulls, and also the direction and speed of forces.
  7. Guide students to share their answers to the conclusion questions.

### **Conclusion Questions for Discussion**

1. What is a force? How do you use forces?
2. Give an example of how you used a push or pull today. Did you need to use a lot of force or a little force?