Lesson Overview

In this final lesson of the unit, students apply and reflect on what they have learned about the Unit Question: *Why do things move in different ways?* Students discuss how objects they observed in the School Forces Tour provide evidence of different kinds of forces being exerted. Then, they participate in a Shared Reading of *A Busy Day in Pushville*, which provides opportunities for them to describe the forces shown in the book in terms of strength and direction. Students go on a gallery walk to review artifacts and learning activities from each chapter, and partners discuss what they learned. The purpose of this lesson is for students to extend what they learned about different forces in the classroom to all the forces around them and reflect on the cumulative understanding they built throughout the unit. This lesson includes activities that might benefit from additional time to allow the teacher to guide a comprehensive review of the unit (e.g., teaching the lesson over two days or extending the time frame for Activity 3).

**Everyday Phenomenon:** Objects move in the town of Pushville and in school.

**Students learn:**

- You cannot see forces, but you can see evidence that they have been exerted.
Shared Reading: A Busy Day in Pushville

Partners engage in a Shared Reading of A Busy Day in Pushville, pantomiming and talking about the forces in the book.

Instructional Guide

1. **Show the cover of A Busy Day in Pushville.** Remind students they used the book in the last lesson to find evidence of forces being exerted.

2. **Set the purpose for the Shared Reading.** Let students know they will discuss the different kinds of forces in the book—strong and gentle forces, and forces in different directions—as you all read it together. Use the What We Know About Forces chart as reference during the discussion, as needed.

   I will read the words as you visualize the different movements and forces. Visualize if the forces exerted might be strong or gentle, and what direction they are being exerted in. Then you will explain it to a partner.

3. **Read page 3 aloud.** Model how you would visualize and explain the forces exerted using a language frame.

   I can see that the girl is pulling on her dad’s hand this way, and I can visualize that he will start to move forward. So I could say, the man’s hand moved because the girl exerted a force on it.

   Point to the posted language frame *The ___ moved because ___ exerted a force on it.* and have students repeat the explanation after you.

   The man’s hand moved because the girl exerted a force on it.

   Next, point to the ___ because ___ language frame.

   I can also talk about the direction of the forces like this: The man moved forward because the girl is exerting a force on his hand in this direction.
Have students repeat the explanation as you point to the language frame.

4. **Review the Shared Listening routine.** Let students know they will take turns speaking and listening to talk about evidence of forces after you read each page together.

5. **Read pages 4 and 5.** Ask all students to visualize and pantomime each of the baker’s movements.

   - Pick one thing the baker did. What evidence do you see of forces?
   - Remember to talk about the direction or strength of the forces being exerted.
   - Partner A will share while Partner B listens. Partner B will show they were listening carefully by telling Partner A what they heard them say.
     [The pan moved toward the baker because the baker exerted a force toward her on the pan.]

Call on one or two students to share what they or their partner noticed as evidence of forces. As needed, rephrase student contributions using explanation language, or remind students to use the posted language frame. Highlight instances where students discussed direction or strength of forces.

6. **Read pages 6 and 7 as students pantomime.**

   - What evidence do you see of forces?
   - Partner B will share while Partner A listens. Partner A will show they were listening carefully by telling Partner B what they heard them say.
     [The hose went to the right because the fireman exerted a force to the right.]

Have students share, highlighting examples of contributions that include different directions and strength of forces. Encourage use of the language frame to explain.

7. **Continue reading through the end of the book.** As you read, have students pantomime based on the movement in the text and illustrations. Pause as appropriate to have students explain the evidence of forces they found. You may decide to continue to use the Shared Listening routine, a partner share, or whole-class share to discuss ideas.

**Teacher Support**

**Instructional Suggestion**

**Student Thinking: “Seeing” Forces**

After revisiting *A Busy Day in Pushville*, you can invite students to discuss their visualizations of movement as evidence of forces. You can ask “Can we see a force?” Then, engage in a discussion about how we know there is a force, even when we cannot see one. We know this because we can observe the evidence that something moved—started to moved, stopped moving, changed direction.
Shared Reading: A Busy Day in Pushville

Partners engage in a Shared Reading of *A Busy Day in Pushville*, pantomiming and talking about the forces in the book.

Instructional Guide

1. **Show the cover of *A Busy Day in Pushville***. Remind students they used the book in the last lesson to find evidence of forces being exerted.

2. **Set the purpose for the Shared Reading**. Let students know they will discuss the different kinds of forces in the book—strong and gentle forces, and forces in different directions—as you all read it together. Use the What We Know About Forces chart as reference during the discussion, as needed.

   Leeré las palabras mientras ustedes visualizan los diferentes movimientos y fuerzas. Visualicen si las fuerzas ejercidas podrían ser firmes o livianas, y en qué dirección se están ejerciendo. Luego lo explicarán en parejas.

3. **Read page 3 aloud**. Model how you would visualize and explain the forces exerted using a language frame.

   Veo que la niña está jalando la mano de su papá hacia acá, y puedo visualizar que él comenzará a moverse hacia adelante. Así que podríamos decir que la mano del hombre se movió porque la niña ejerció una fuerza sobre ella.

   Point to the posted language frame *The ___ moved because ___ exerted a force on it.* and have students repeat the explanation after you.

   La mano del hombre se movió porque la niña ejerció una fuerza sobre ella.

   Next, point to the ___ because ___ language frame.

   También puedo hablar sobre la dirección de la fuerza así: El hombre se movió hacia adelante porque la niña ejerció una fuerza sobre su mano en esta dirección.
Have students repeat the explanation as you point to the language frame.

4. **Review the Shared Listening routine.** Let students know they will take turns speaking and listening to talk about evidence of forces after you read each page together.

5. **Read pages 4 and 5.** Ask all students to visualize and pantomime each of the baker’s movements.

   - Elijan una cosa que hizo la pastelera. ¿Qué evidencia de fuerzas ven?
   - Recuerden hablar sobre la dirección o la intensidad de las fuerzas que se están ejerciendo.
   - El Compañero A compartirá mientras que el Compañero B escucha. El Compañero B demostrará que estuvo escuchando atentamente diciéndole al Compañero A lo que le escuchó decir.
     [El molde se movió hacia la pastelera porque la pastelera ejerció una fuerza hacia ella sobre el molde].

Call on one or two students to share what they or their partner noticed as evidence of forces. As needed, rephrase student contributions using explanation language, or remind students to use the posted language frame. Highlight instances where students discussed direction or strength of forces.

6. **Read pages 6 and 7 as students pantomime.**

   - ¿Qué evidencia de fuerzas ven?
   - El Compañero B compartirá mientras el Compañero A escucha. El Compañero A demostrará que estuvo escuchando atentamente diciéndole al Compañero B lo que le escuchó decir.
     [La manguera avanzó hacia la derecha porque el bombero ejerció una fuerza hacia la derecha].

Have students share, highlighting examples of contributions that include different directions and strength of forces. Encourage use of the language frame to explain.

7. **Continue reading through the end of the book.** As you read, have students pantomime based on the movement in the text and illustrations. Pause as appropriate to have students explain the evidence of forces they found. You may decide to continue to use the Shared Listening routine, a partner share, or whole-class share to discuss ideas.

**Teacher Support**

**Instructional Suggestion**

**Student Thinking: “Seeing” Forces**

After revisiting *A Busy Day in Pushville*, you can invite students to discuss their visualizations of movement as evidence of forces. You can ask “Can we see a force?” Then, engage in a discussion about how we know there is a force, even when we cannot see one. We know this because we can observe the evidence that something moved—started to moved, stopped moving, changed direction.