Lesson 3.1
Observing Evidence of Gravity
Lesson Overview

Students review that the floating train falls back to the track at the end of its trip. Students then investigate and gather evidence of downward force on objects by using their sense of sight and sense of touch. The term gravity is introduced, and students consider what they think they know about gravity and the questions they have about gravity. Students revisit the book *Forces All Around* to find more evidence of gravity. The teacher models making a diagram showing the force of gravity by using the Force Diagramming Tool. The purpose of this lesson is to introduce gravity as a downward force and to provide opportunities—from firsthand experience and from text—to gather evidence of objects being pulled down to the ground.

Anchor phenomenon: The floating train rises, floats above the track, then later falls back to the track.

Everyday phenomenon: A domino or a paper clip falls if you drop it.

Students learn:

- Gravity is a force that causes objects to move downward toward Earth.
- Diagrams serve as models by making things simpler and easier to see.
- In diagrams of forces, an arrow represents a force. The non-pointy part of the arrow is on the object upon which the force is acting.
Revisiting Forces All Around

Students revisit *Forces All Around* and read with a new purpose: finding evidence of the force of gravity in the text and illustrations.

**Instructional Guide**

1. **Reintroduce the book *Forces All Around***. Remind students that they read this book in the beginning of the unit.

   Good readers often reread books. Rereading with a new purpose in mind can highlight new and important information.

2. **Set a purpose for reading**. Refer to the Setting a Purpose for Investigating and Reading chart.

   When we first read this book, our purpose for reading was to look for evidence of forces. Today we’re going to read it again, but with a different purpose in mind. Since our investigation today focused on gravity, let’s build on that idea. When you reread with your partner today, I’d like you to look for evidence that the force of gravity is acting.

   Add to the Setting a Purpose for Investigating and Reading chart. In the “Reading” column, write “Find evidence that the force of gravity is acting.”

3. **Model the process of rereading and marking evidence**. Read aloud page 15 and model marking evidence of gravity in the text by using a sticky note.

   - Example 1 (from the text): A force made that guy fall down to the ground after he jumped.
   - Example 2 (from the illustration): The kids’ backpacks probably feel heavy, just as the books felt when students held them in their hands.

4. **Review Partner Reading Guidelines**.

5. **Distribute books and sticky notes**. Distribute one book and a few sticky notes to each pair of students.

6. **Partners read and mark evidence**. Have partners begin to reread and mark evidence, using sticky notes.
7. **Early finishers.** Partners who finish reading and marking text can brainstorm some other kinds of evidence that the force of gravity is acting around them, in the classroom, on the playground, etc.

8. **After reading, facilitate a brief discussion.** Give students the opportunity to share the examples/evidence they marked in the text.

**Teacher Support**

**Rationale**

**Pedagogical Goals: Modeling Reading**

Teacher modeling is an important component of teaching students to read informational texts effectively. As an expert reader, you already understand how to read these texts effectively and can use your expertise to model and make explicit your expert thinking processes for students by modeling (thinking aloud as you read part of the text in front of students). The goal of modeling is to help engage all students in deep and curious reading, using the same strategies and attitudes you might expect when your students engage in inquiry. The more you model this yourself, the more successful it will be.
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Instructional Guide

1. **Reintroduce the book *Forces All Around***. Remind students that they read this book in the beginning of the unit.

   Los buenos lectores a menudo releen los libros. Releer con un nuevo propósito en mente puede resaltar información nueva e importante.

2. **Set a purpose for reading**. Refer to the Setting a Purpose for Investigating and Reading chart.

   Cuando leímos por primera vez este libro, nuestro propósito para leer era buscar evidencia de fuerzas. Hoy vamos a leerlo de nuevo, pero con un propósito diferente en mente. Como nuestra investigación de hoy se enfocó en la gravedad, desarrollamos esa idea. Cuando vuelvan a leer en parejas, me gustaría que buscaran evidencia de que la fuerza de gravedad está actuando.

   Add to the Setting a Purpose for Investigating and Reading chart. In the “Reading” column, write “Find evidence that the force of gravity is acting.”

3. **Model the process of rereading and marking evidence**. Read aloud page 15 and model marking evidence of gravity in the text by using a sticky note.

   - Example 1 (from the text): A force made that guy fall down to the ground after he jumped.
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