Grade 3
Classroom Slides sampler

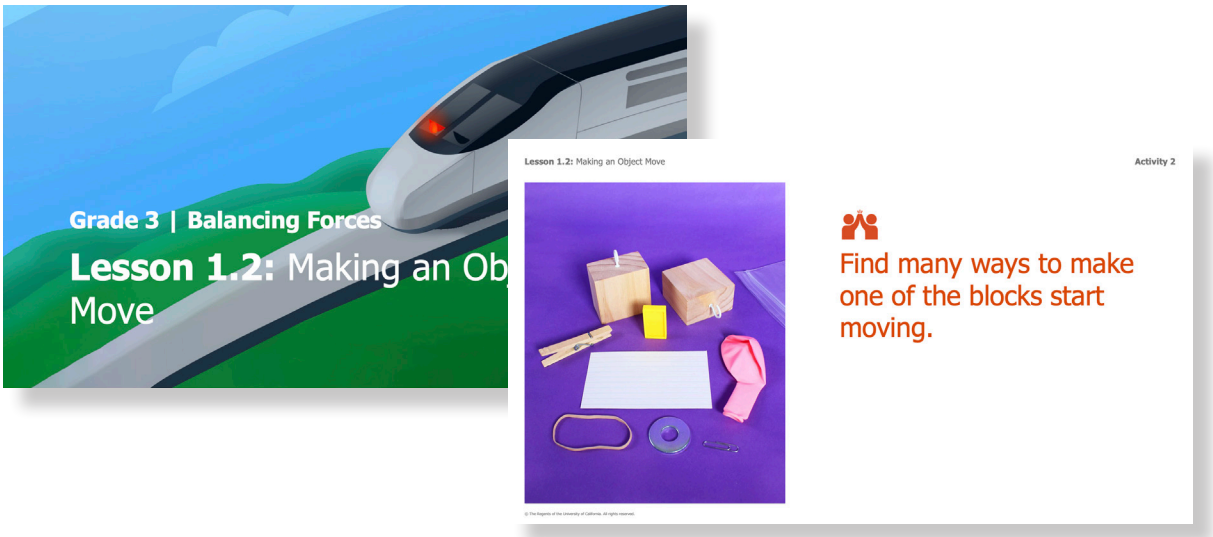
Meet your new hands-free TG!

Science time just got a whole lot easier. With our new Classroom Slides, you can put down the Teacher's Guide and focus on what matters most—your students. Plus, with Classroom Slides, lesson prep is as quick as a click!

Classroom Slides are:

- **Available offline**, which means no more sweating unreliable internet connections.
- **Streamlined for easy lesson delivery**, including lesson visuals, activity instructions and transitions, animations, investigation setup videos, technology support, and more.
- **Fully editable**, allowing you to incorporate your own flavor, flair, and favorite resources, such as Mystery Science.

This sampler includes slides from one lesson from the Balancing Forces unit.



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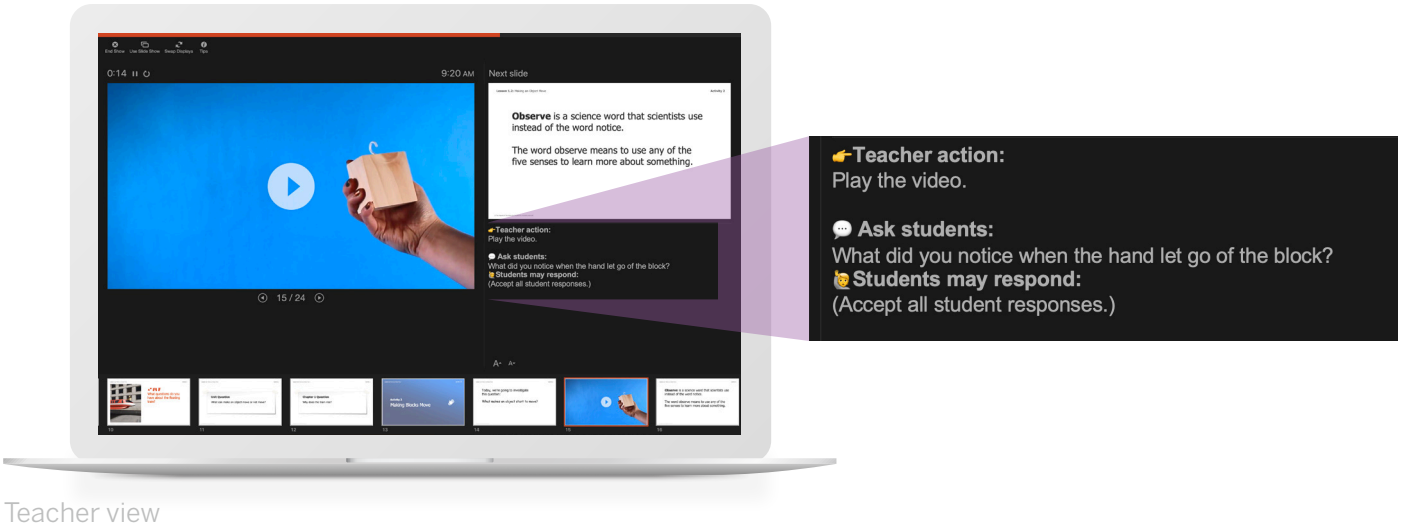
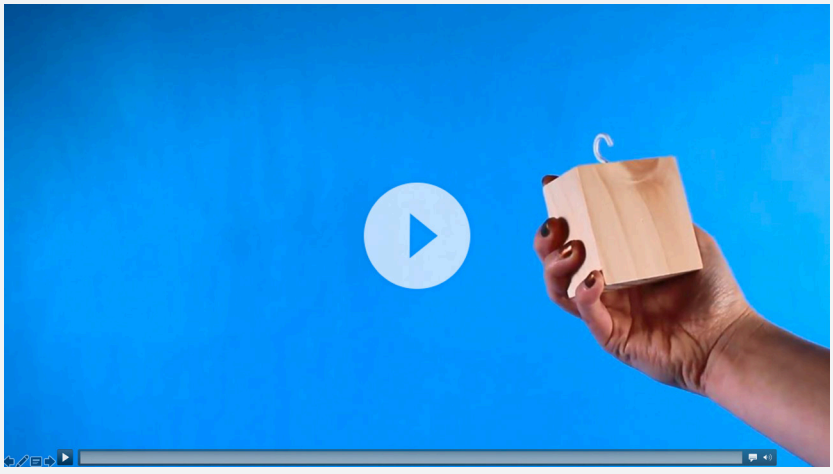
Presenter view

When using presenter view you can:

- **Project the student-facing content** and
- **View your teacher notes**, including teacher talk, teacher actions, and potential student responses and
- **Preview the next slide**.



Teacher view



Student view

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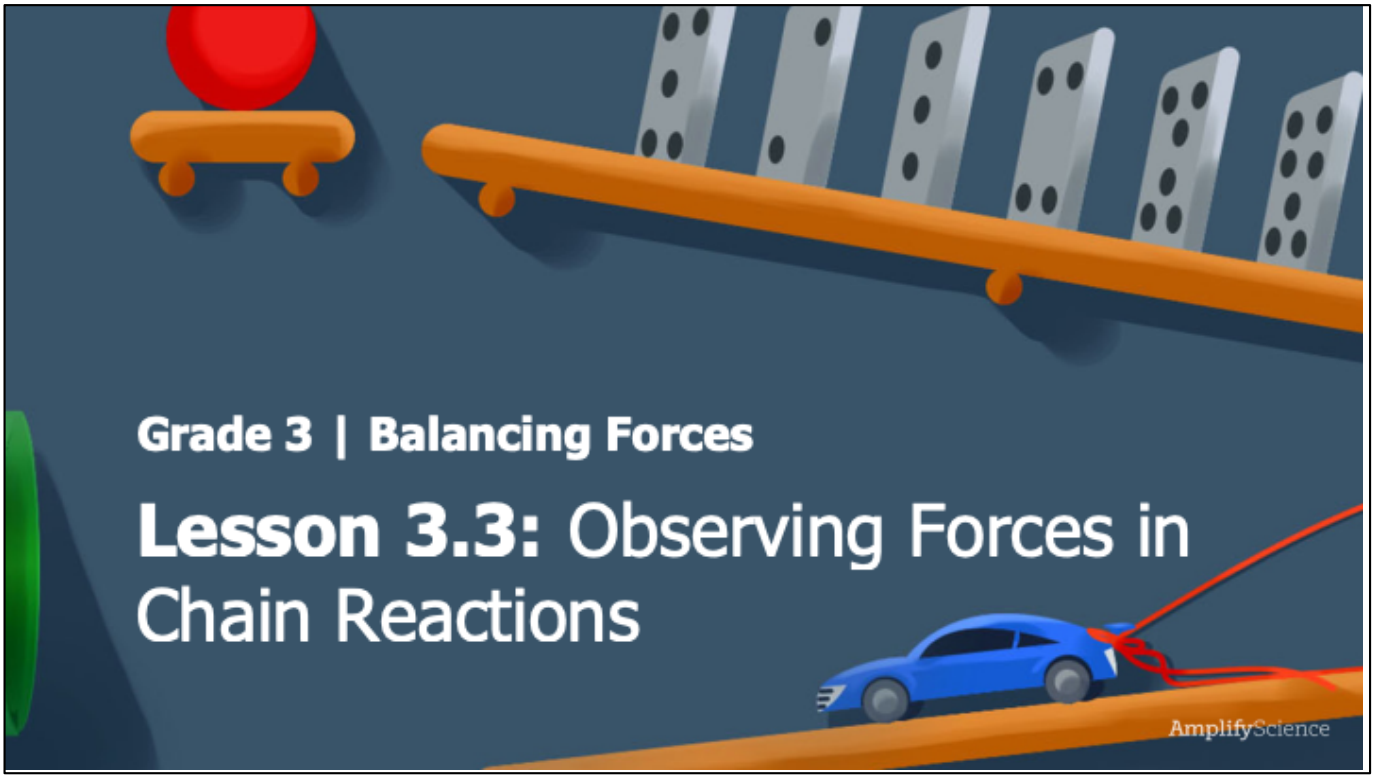


Lesson purpose: For students to apply and reflect on what they have learned about touching forces, magnetic forces, and gravity

Please refer to this lesson's Materials & Preparation section in the digital Teacher's Guide or the Print Teacher's Guide for information about preparing to teach this lesson, including any applicable safety notes.

Activity 1

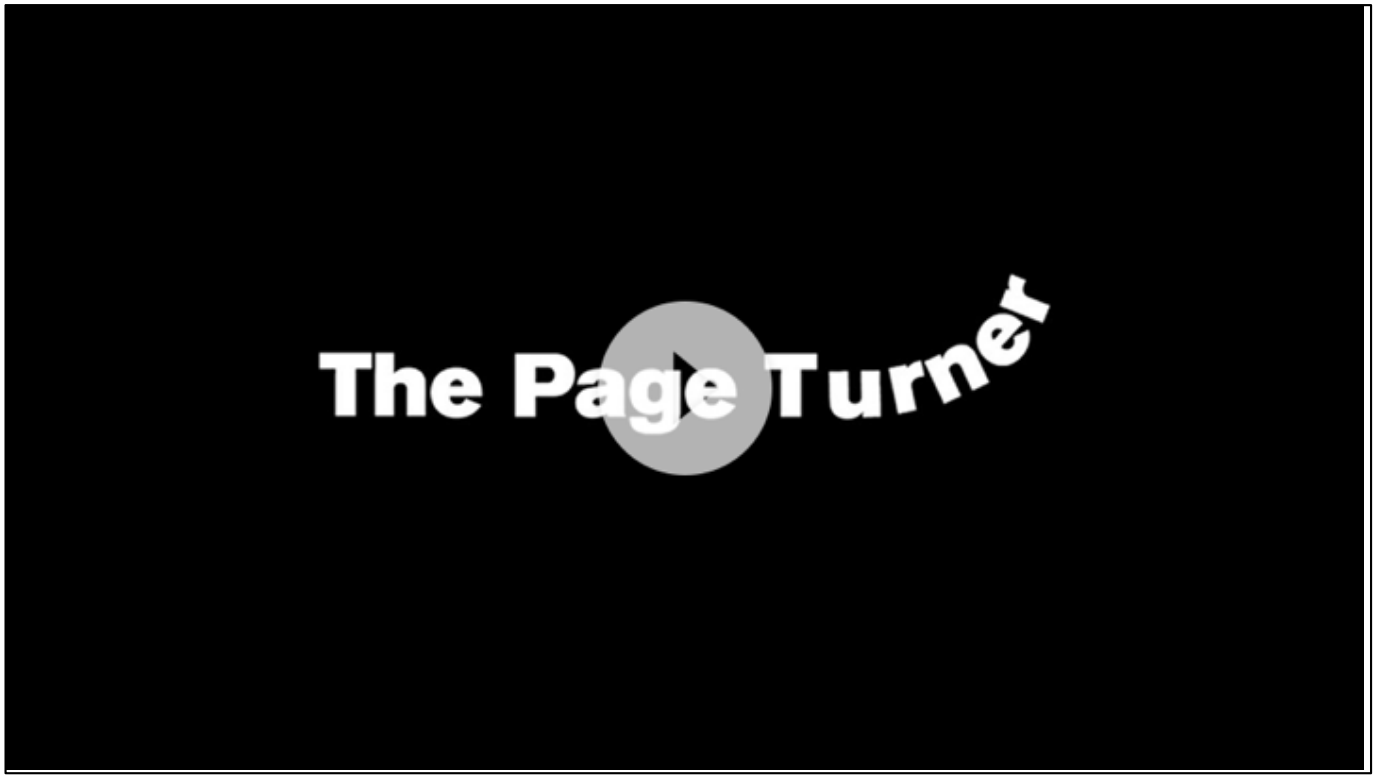
Exploring Forces in a Chain Reaction

Today, we will continue learning about gravity and reflect on what we have learned about touching forces and magnetic force. We will do this by investigating new **chain reactions**.

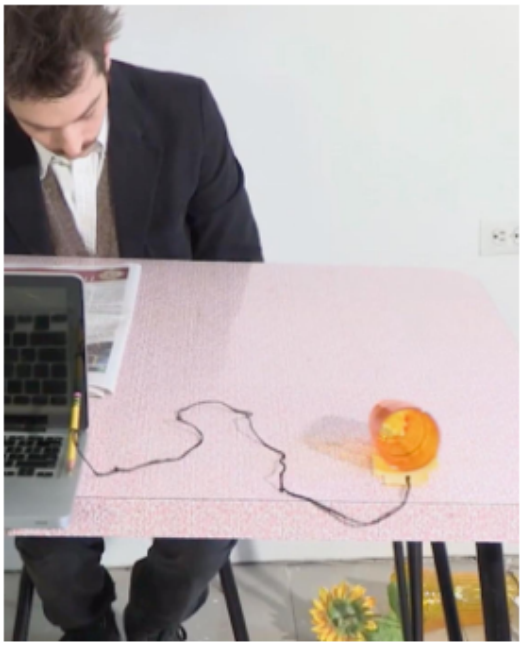
We are going to watch a video of a complex chain reaction.

As you watch, pick one example of a force.

- What are the objects involved?
- What is the evidence of a force?
- Did an object start or stop moving?



👉**Teacher action:**
Play the video.

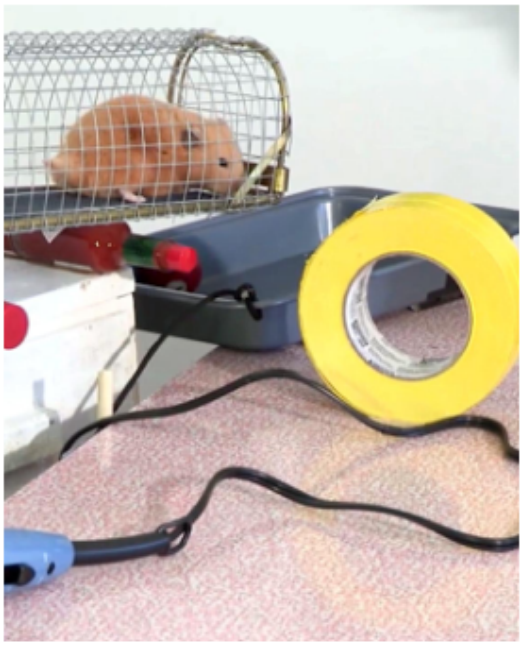


What were two objects involved in a **force** in the video?

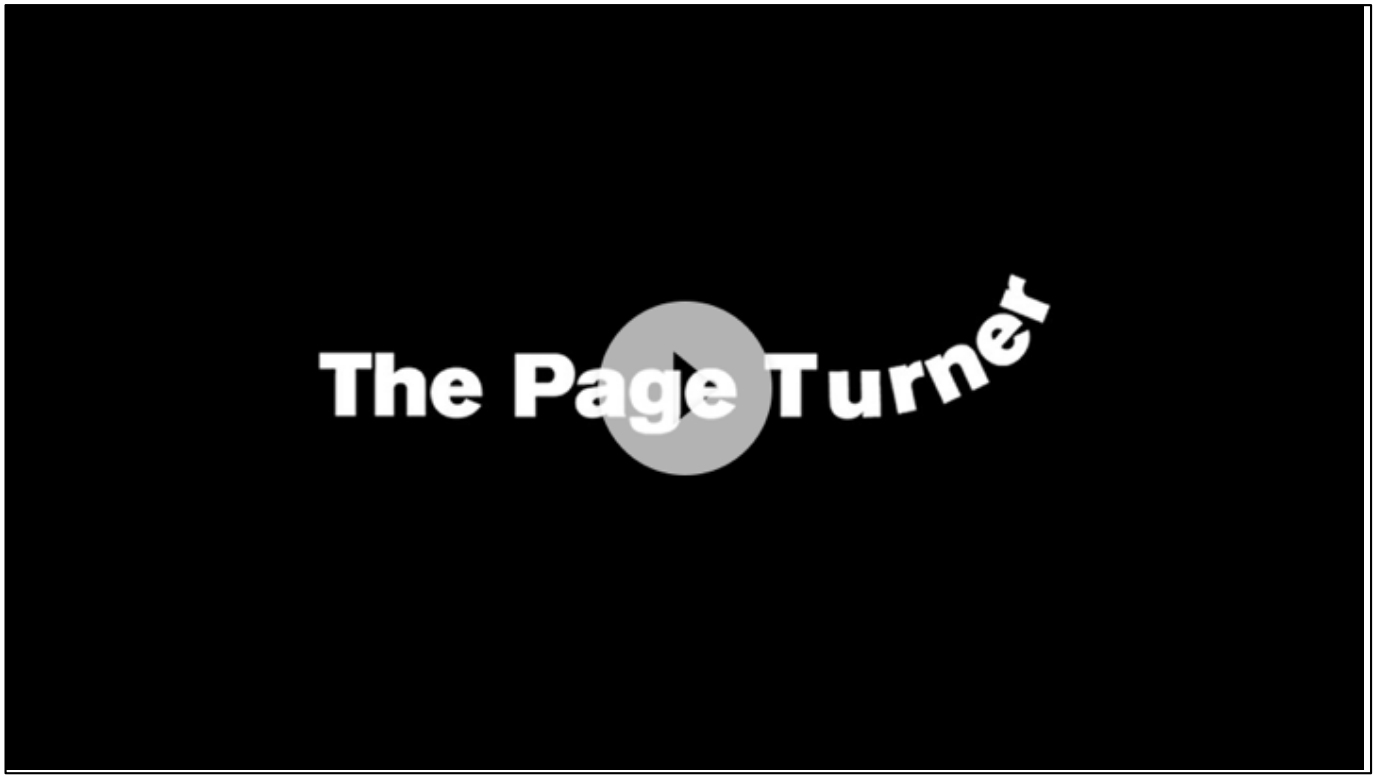
What is your **evidence of a force**?

Students may respond:

- A small white ball and a pencil were involved in a force.
- My evidence of a force is that the pencil started moving—it swung down—when the ball hit it.



As you watch the video again, look for evidence of the force of gravity.



👉**Teacher action:**
Play the video.

What **evidence** did you see of the **force of gravity**?

What are the two objects involved in this **force**?

There were a few times in the video that a ball rolled down a ramp.

What is the **force** that makes the ball roll downhill?

You will build a chain reaction, including at least one touching force, one magnetic force, and one example of the force of gravity.

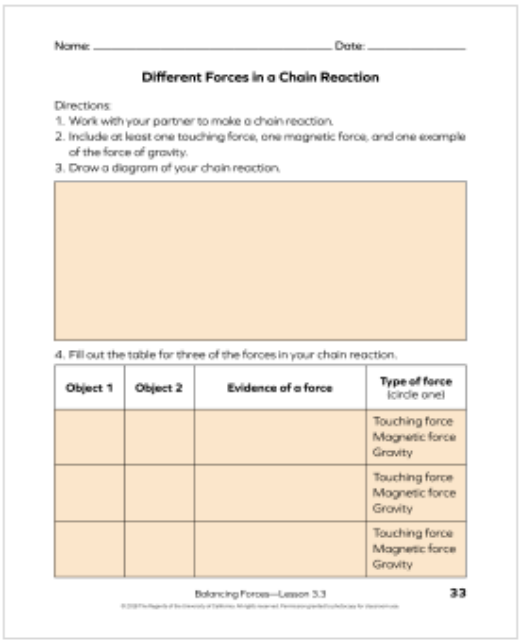
💬 **Suggested teacher talk:**

You will use some of these materials, but you do not need to use all the materials.

💬 **Suggested teacher talk:**

Start by making a chain reaction with just three or four forces. Each force should lead to the next force. You can add more reactions and more forces to the beginning or end once you get a simple chain reaction to work.

You can prop one end of the cardboard ramp on the folded index card to make a sloped ramp.



Name: _____ Date: _____

Different Forces in a Chain Reaction

Directions:
1. Work with your partner to make a chain reaction.
2. Include at least one touching force, one magnetic force, and one example of the force of gravity.
3. Draw a diagram of your chain reaction.

4. Fill out the table for three of the forces in your chain reaction.

Object 1	Object 2	Evidence of a force	**Type of force** (circle one)
			Touching force Magnetic force Gravity
			Touching force Magnetic force Gravity
			Touching force Magnetic force Gravity

Balancing Forces—Lesson 3.3 **33**

Turn to page 33, Different Forces in a Chain Reaction, in your notebooks.

You will record the details of the **chain reaction** you build on this page.

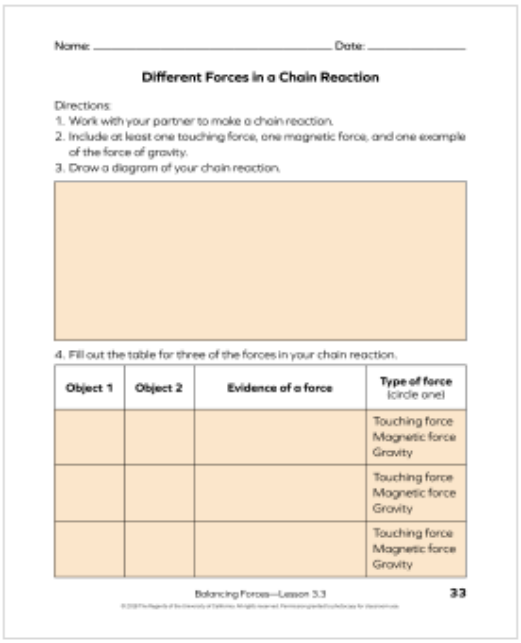
Set up and run a **chain reaction.**

💬 **Suggested teacher talk:**

Partners should decide together how to set up the chain reaction and both partners should get to help set up the materials and take turns starting the reaction. Keep all materials on your desks or in your work areas.

👉 **Teacher action:**

Distribute one set of investigation materials to each pair of students. Have students set up and run chain reactions. Circulate and assist as needed.



Name: _____ Date: _____

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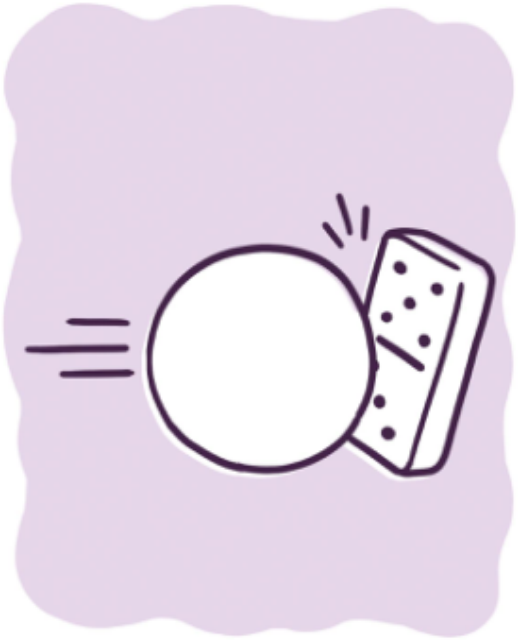
			Touching force Magnetic force Gravity

Balancing Forces—Lesson 3.3 33

Draw your chain reaction, and **record each force** you have evidence of in the chain reaction.

👉**Teacher action:**
If time allows, invite pairs to demonstrate their chain reactions to the class. After each demonstration, invite observers to describe a force they observed evidence of.

👉**Teacher action:**
Collect all materials.



As you designed and made sense of your chain reaction devices, you were thinking about **cause and effect**.

Activity 2

Word Relationships

Use the word cards to make sentences.

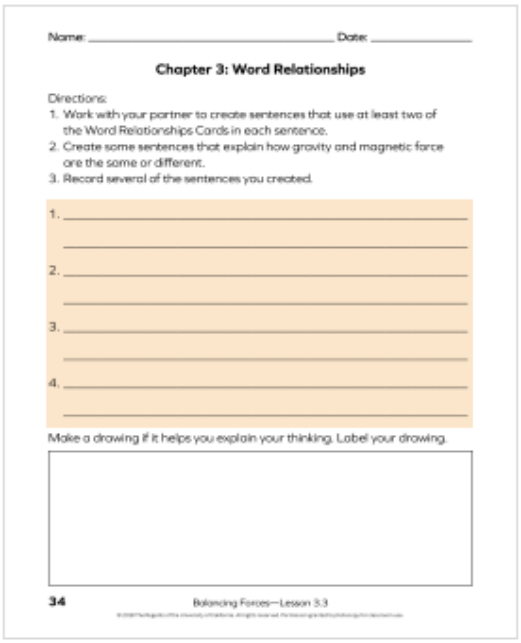
There are three new word cards: ***gravity,*** ***same,*** **and** ***different.***

👉**Teacher action:**

Distribute one set of 11 Word Relationships Cards to each pair of students.

Make sentences that **compare gravity and magnetic force.**

Explain how gravity and magnetic force are the **same and different.**



Name: _____ Date: _____

Chapter 3: Word Relationships

Directions:

1. Work with your partner to create sentences that use at least two of the Word Relationships Cards in each sentence.
2. Create some sentences that explain how gravity and magnetic force are the same or different.
3. Record several of the sentences you created.

1. _____
2. _____
3. _____
4. _____

Make a drawing if it helps you explain your thinking. Label your drawing.

34 Balancing Forces—Lesson 3.3

Turn to page 34, Chapter 3: Word Relationships, in your notebooks.

Record several sentences you created **comparing magnetic force and gravity.**

End of Lesson

THE LAWRENCE HALL OF SCIENCE
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