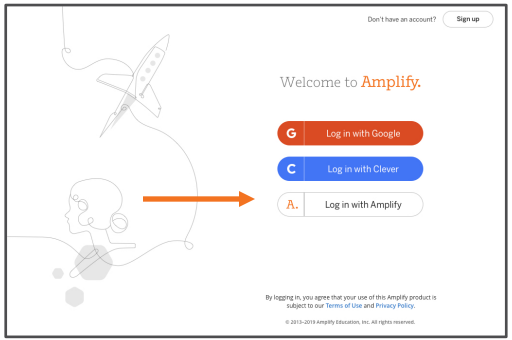
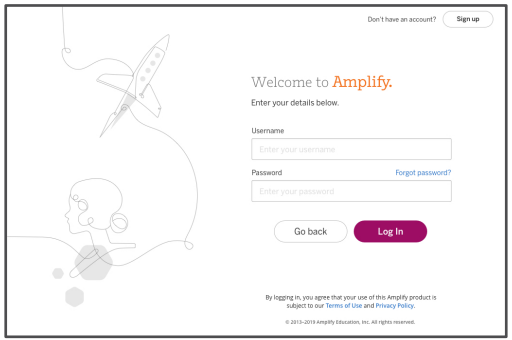
# Welcome to Amplify Science!

## Do now: Name tent and login




1. Make a name tent
2. Go to learning.amplify.com
3. Select Log in with Amplify
4. Enter teacher demo account credentials
   - XXXX@tryamplify.net
   - Password: AmplifyNumber1
5. Explore as we wait to begin

Amplify Science

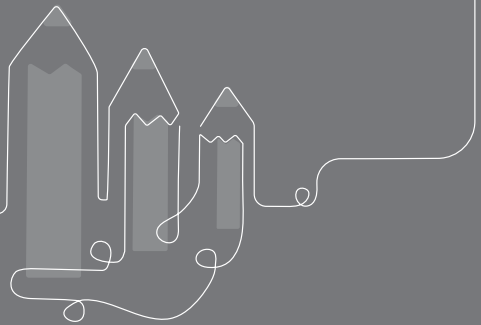
# Pushes and Pulls Implementation workshop

A professional learning experience designed by the Lawrence Hall of Science

School/District Name
November 5, 2019
Presented by Your Name

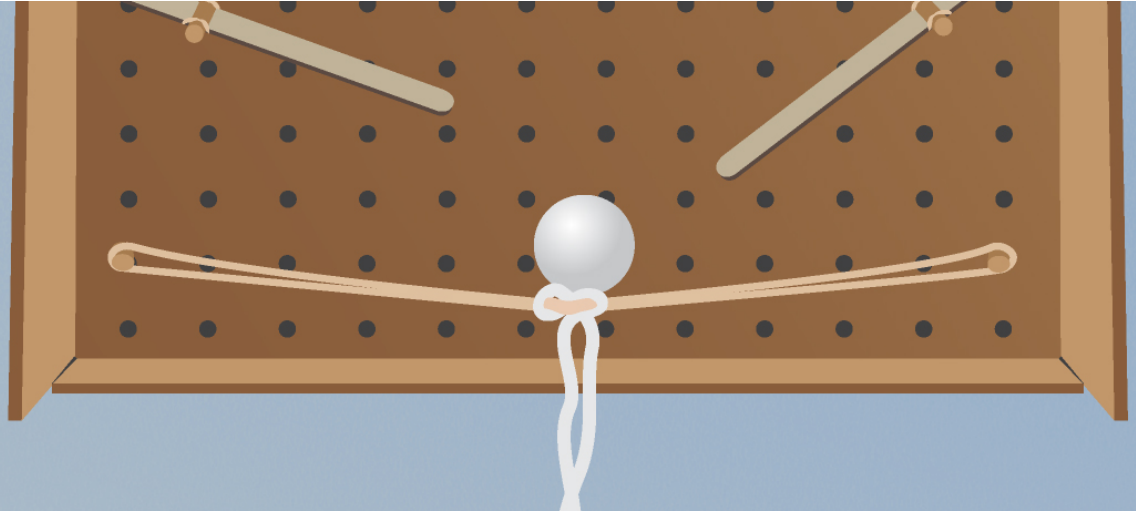
# Workshop goal

- Prepare teachers to implement Pushes and Pulls in their classrooms



Pushes and Pulls

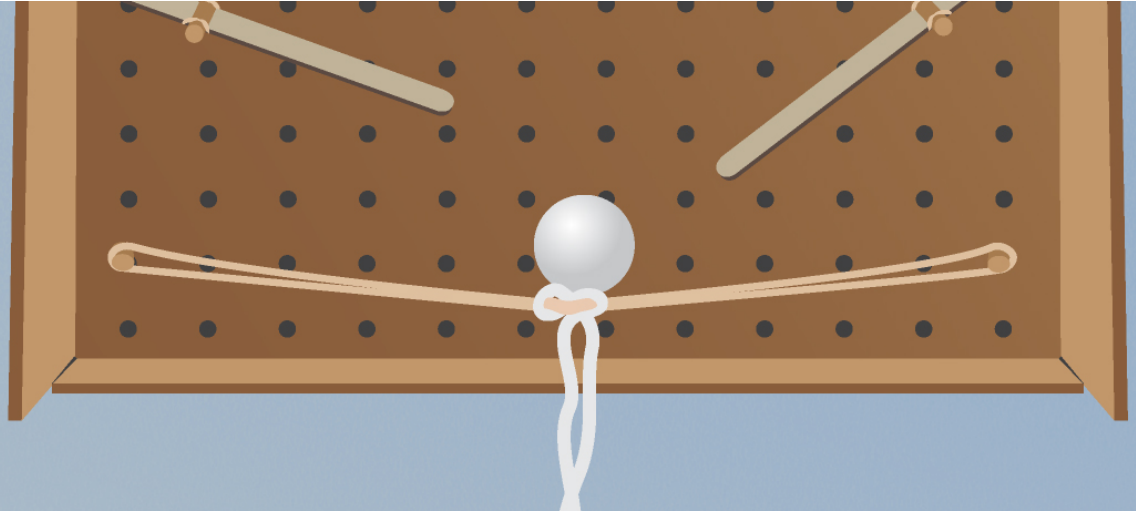
# Plan for the day



- Framing and reflection
- Experiencing the unit
- The story of the unit
- Planning to teach
- Closing

Pushes and Pulls

# Plan for the day



- Framing and reflection
- Experiencing the unit
- The story of the unit
- Planning to teach
- Closing

# Framing and reflection

## The purpose of this part of the day is for you to:

- Share your experience implementing Amplify Science.
- Refresh your understanding of key program resources and Amplify's approach.
- Identify successes and areas of need in your classroom, which will frame your work throughout the day.

# Reflection roles

Pg. xx

- Facilitator: Asks questions to ensure that there is equity of voice
- Timekeeper: Keeps team on time/task
- Recorder: Captures the information on paper as each person is presenting
- Summarizer: Shares highlights and summaries to the larger group

# Scenario 1

Ms. Lambertsen needs to refresh her content knowledge of her next unit. She has a few questions about the science content in the unit, and wants to be ready when her students ask questions, too.

To deepen her understanding of the science ideas in the unit, what resources would you recommend she use?

# Scenario 2

Mr. Garcia wants to plan what data he can collect on his students during an upcoming lesson and how he can then use the data to inform instruction to best support his students. He's also looking for some strategies to support students in his classroom that need more challenge.

What can he look at in the Teacher's Guide to support his planning?

# Scenario 3

To prepare to administer the End-of-Unit Assessment, Ms. Lucey wants to familiarize herself with how students with different levels of understanding might respond to the assessment. She's also looking for some insight into how to evaluate their responses.

Where can she look for information to support her preparation to administer the assessment?

# Scenario 4

Mr. Moore needs to identify the standards in his upcoming unit for his principal. Specifically, his principal wants to know how students engage with the three dimensions of NGSS to figure out the unit phenomenon/problem.

Where would Mr. Moore find out the answer to his principal's question? How do students engage in three-dimensional learning in this unit?

# Scenario 5

At back to school night, Mr. Patel is going to tell his students' families about the next unit his class will work with. He wants to describe how students develop ideas through Chapter 1.

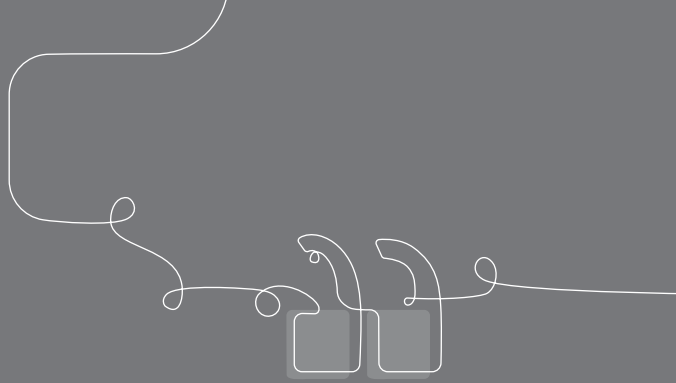
How do you think he could explain this to his students' families? Where might he look to find information that will help him plan what to say?

# Scenario 6

Mrs. Doolittle is starting a new unit next week (the same one you are diving into today!). She's familiar with what students learn throughout the unit, but she's not sure where to start preparing to teach the first lesson.

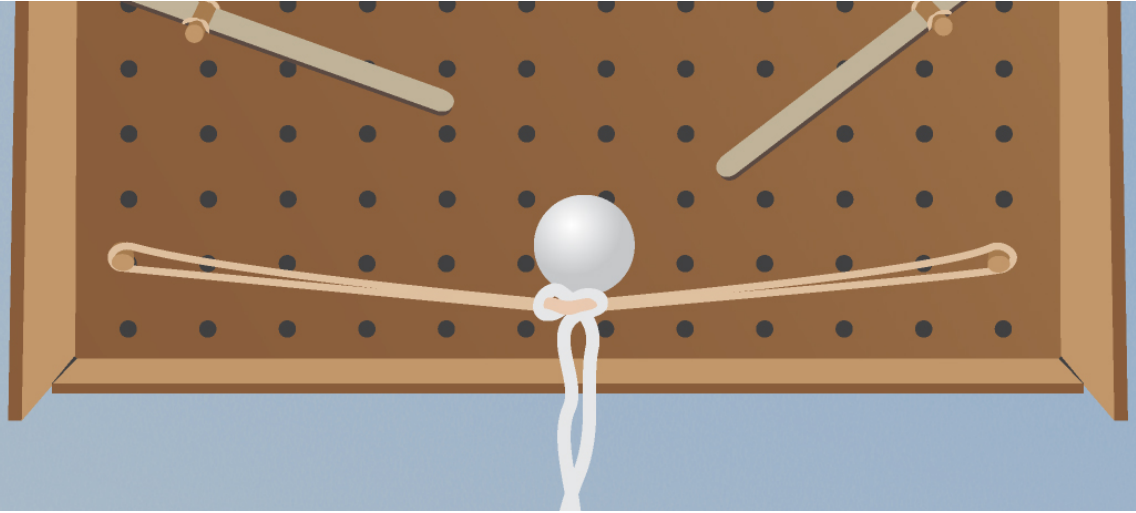
What do you suggest she refer to as she prepares for her first lesson? What should she do or read first, and what should she do after that?

# Questions?



Pushes and Pulls

# Plan for the day



- Framing and reflection
- Experiencing the unit
- The story of the unit
- Planning to teach
- Closing

# Experiencing the unit

## The purpose of this part of the day is for you to:

- Understand how a phenomenon motivates student learning.
- Understand what students learn in a chapter of Pushes and Pulls, and how they learn it.
- Reflect on the instructional design in the Amplify Science program.
- Describe the content focus and coherence of the unit.

# Elementary school course curriculum structure

## Grade K

- Needs of Plants and Animals
- Pushes and Pulls
- Sunlight and Weather

## Grade 1

- Animal and Plant Defenses
- Light and Sound
- Spinning Earth

## Grade 2

- Plant and Animal Relationships
- Properties of Materials
- Changing Landforms

## Grade 3

- Balancing Forces
- Inheritance and Traits
- Environments and Survival
- Weather and Climate

## Grade 4

- Energy Conversions
- Vision and Light
- Earth's Features
- Waves, Energy, and Information

## Grade 5

- Patterns of Earth and Sky
- Modeling Matter
- The Earth System
- Ecosystem Restoration

AmplifyScience

authored by THE LAWRENCE HALL OF SCIENCE UNIVERSITY OF CALIFORNIA, BERKELEY

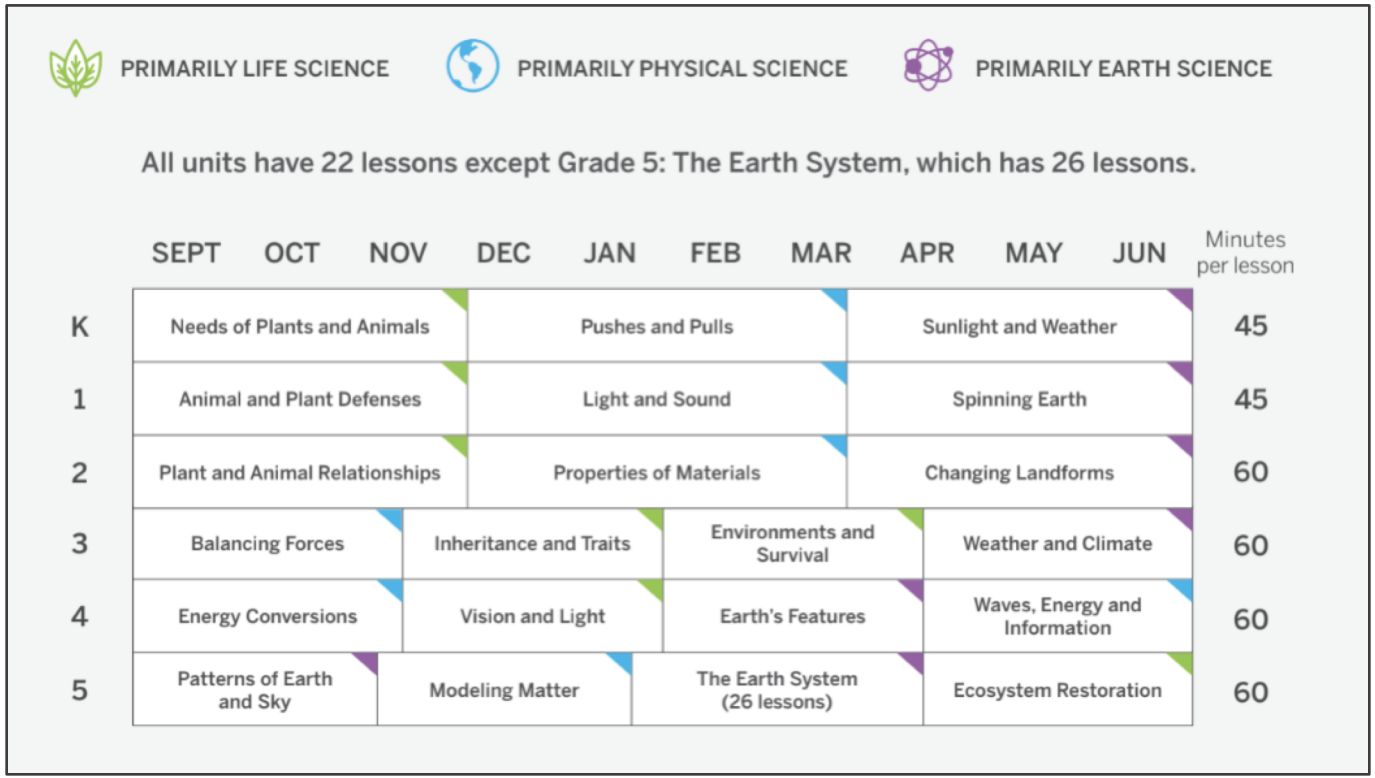




Amplify.

# Planning your year

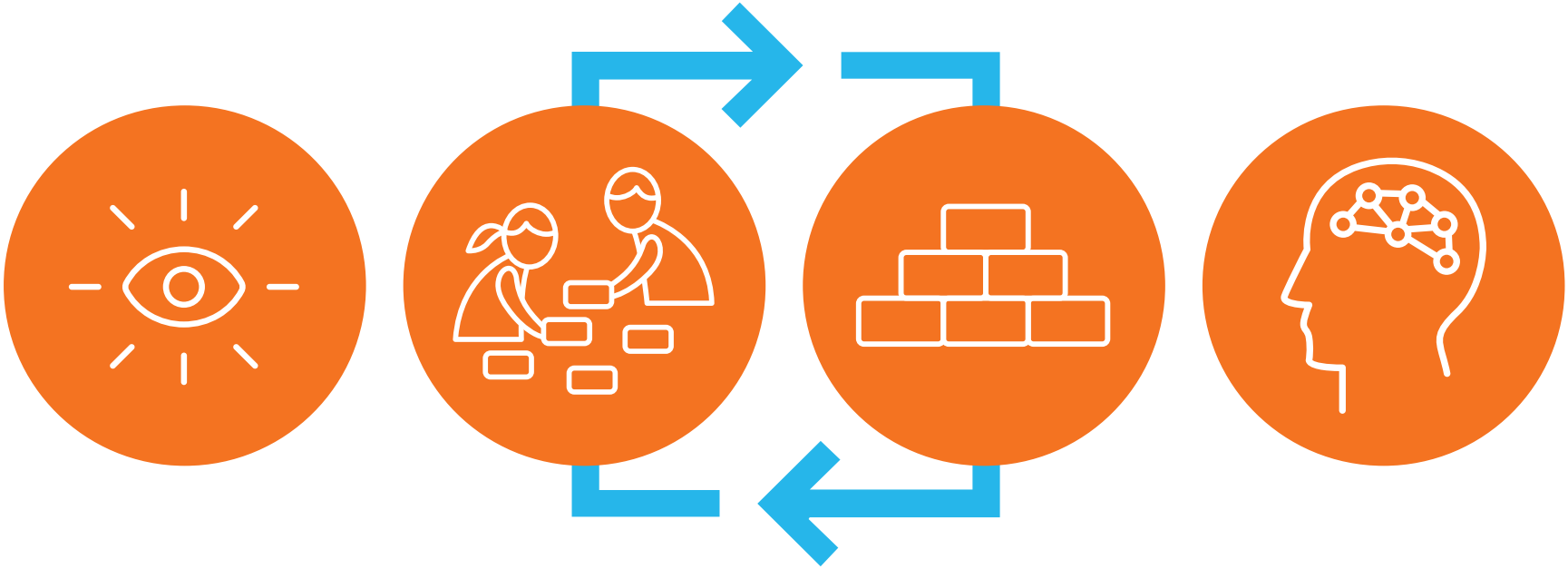
## Overview: Amplify Science K-5 course structure



# Problem-based deep dives

Students inhabit the role of scientists and engineers to explain or predict phenomena. They use what they figure out to solve real-world problems.

# Amplify Science approach



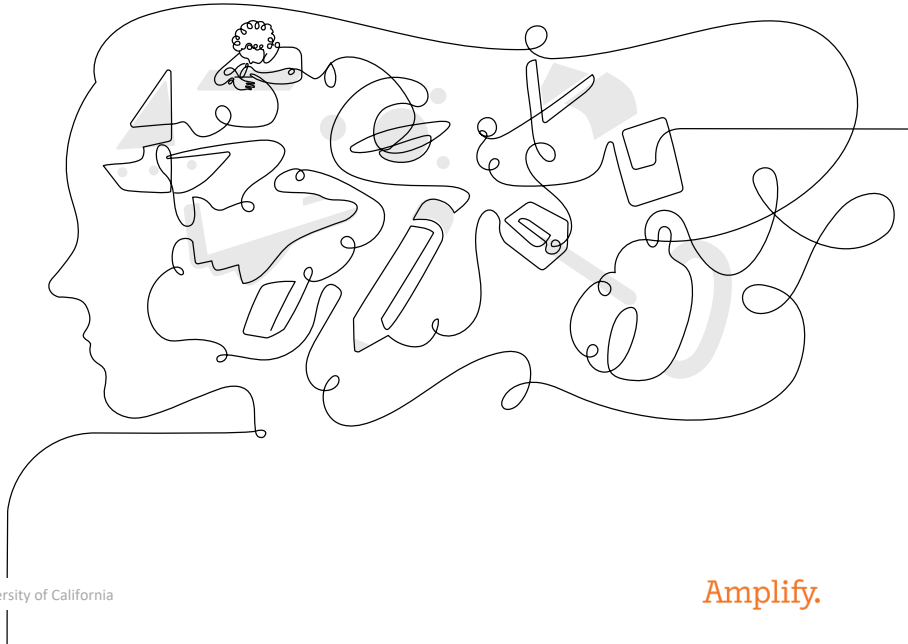
Introduce a phenomenon and a related problem

Collect evidence from multiple sources

Build increasingly complex explanations

Apply knowledge to a different context

# Figure out, not learn about



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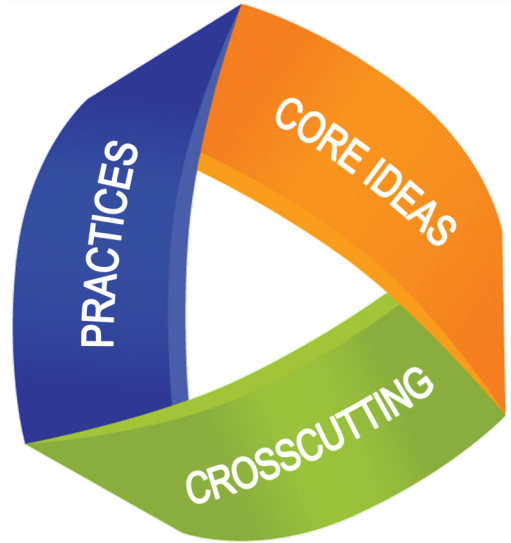



Standards as three-dimensional performance expectations that integrate disciplinary core ideas, science and engineering practices, and crosscutting concepts

# Unit Level 3-D Statement

Key

**Practices** **Disciplinary Core Ideas** **Crosscutting Concepts**

## Unit Level

Students plan and carry out investigations to determine how force affects the movement of an object, its direction, and its distance (cause and effect; scale, proportion, and quantity; structure and function). They assume the role of engineer as they engage in the design process to develop models that test ideas and construct solutions with the goal of designing a Class Pinball Machine.

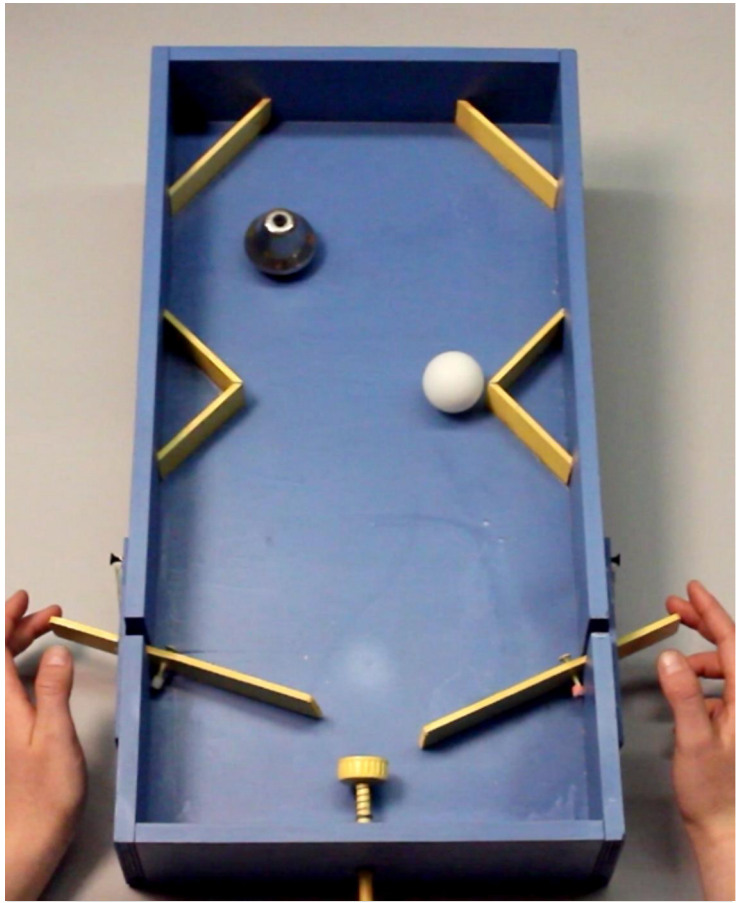
Grade K | Pushes and Pulls

# Instructional Sequence

AmplifyScience

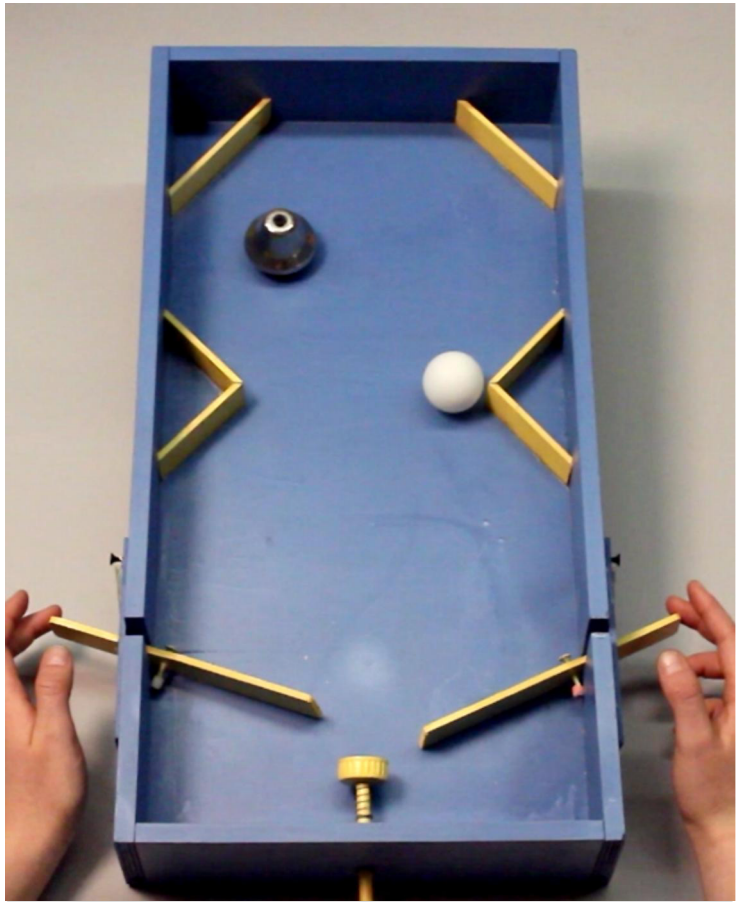
We have a chance to take on an interesting new challenge!

I have been thinking that our class could create our own pinball machine that we could play.



We will watch a video that shows **what pinball machines do.**

This will help us start thinking about how to make our pinball machine.



**Let's talk about what we noticed.**

What made the pinball **move in different ways** in the video?

# Unit Question

Why do things move in different ways?

To figure out how to make a pinball machine, we need to think and work like **engineers.**

Engineers make things to solve problems. This is what we will do when we work as engineers.

# Unit Map

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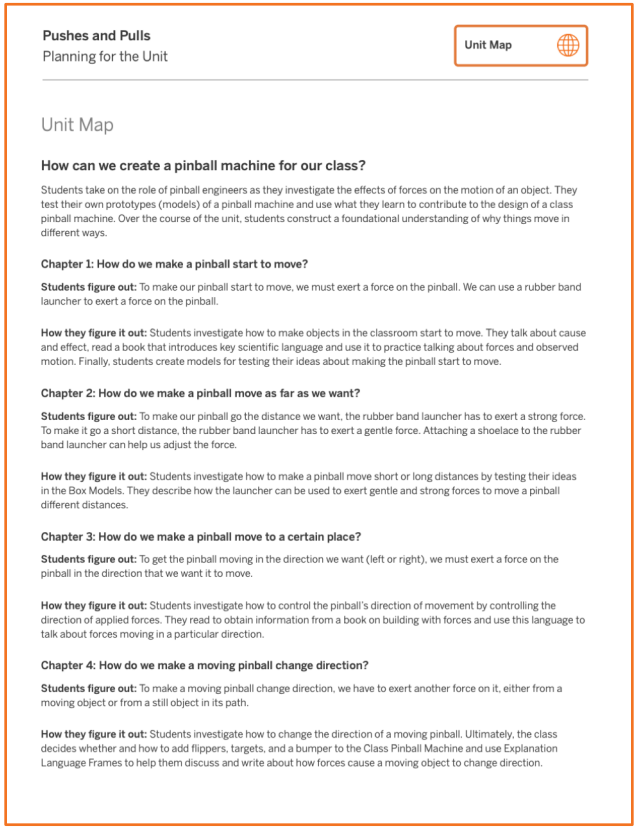


**Pushes and Pulls**
Planning for the Unit

Unit Map

## Unit Map

### How can we create a pinball machine for our class?

Students take on the role of pinball engineers as they investigate the effects of forces on the motion of an object. They test their own prototypes (models) of a pinball machine and use what they learn to contribute to the design of a class pinball machine. Over the course of the unit, students construct a foundational understanding of why things move in different ways.

**Chapter 1: How do we make a pinball start to move?**

**Students figure out:** To make our pinball start to move, we must exert a force on the pinball. We can use a rubber band launcher to exert a force on the pinball.

**How they figure it out:** Students investigate how to make objects in the classroom start to move. They talk about cause and effect, read a book that introduces key scientific language and use it to practice talking about forces and observed motion. Finally, students create models for testing their ideas about making the pinball start to move.

**Chapter 2: How do we make a pinball move as far as we want?**

**Students figure out:** To make our pinball go the distance we want, the rubber band launcher has to exert a strong force. To make it go a short distance, the rubber band launcher has to exert a gentle force. Attaching a shoelace to the rubber band launcher can help us adjust the force.

**How they figure it out:** Students investigate how to make a pinball move short or long distances by testing their ideas in the Box Models. They describe how the launcher can be used to exert gentle and strong forces to move a pinball different distances.

**Chapter 3: How do we make a pinball move to a certain place?**

**Students figure out:** To get the pinball moving in the direction we want (left or right), we must exert a force on the pinball in the direction that we want it to move.

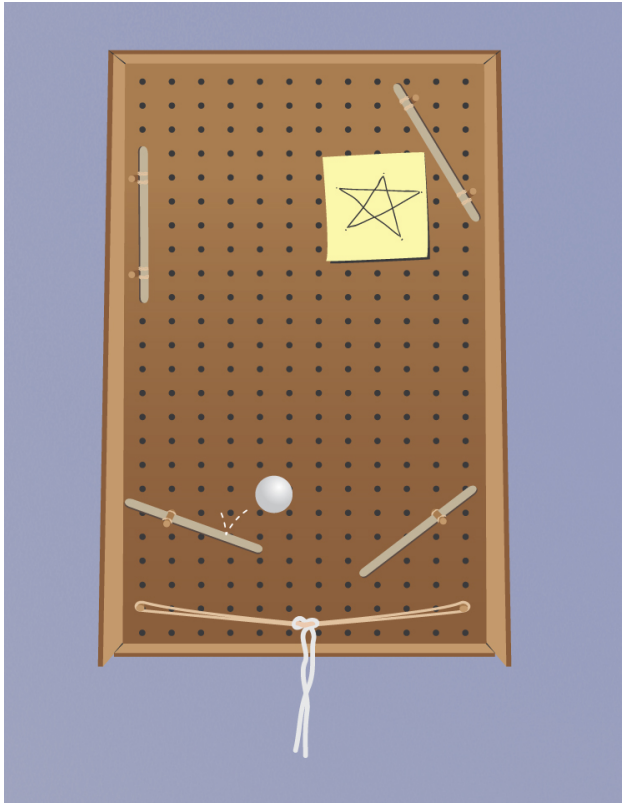
**How they figure it out:** Students investigate how to control the pinball's direction of movement by controlling the direction of applied forces. They read to obtain information from a book on building with forces and use this language to talk about forces moving in a particular direction.

**Chapter 4: How do we make a moving pinball change direction?**

**Students figure out:** To make a moving pinball change direction, we have to exert another force on it, either from a moving object or from a still object in its path.

**How they figure it out:** Students investigate how to change the direction of a moving pinball. Ultimately, the class decides whether and how to add flippers, targets, and a bumper to the Class Pinball Machine and use Explanation Language Frames to help them discuss and write about how forces cause a moving object to change direction.

# End-of-unit explanation

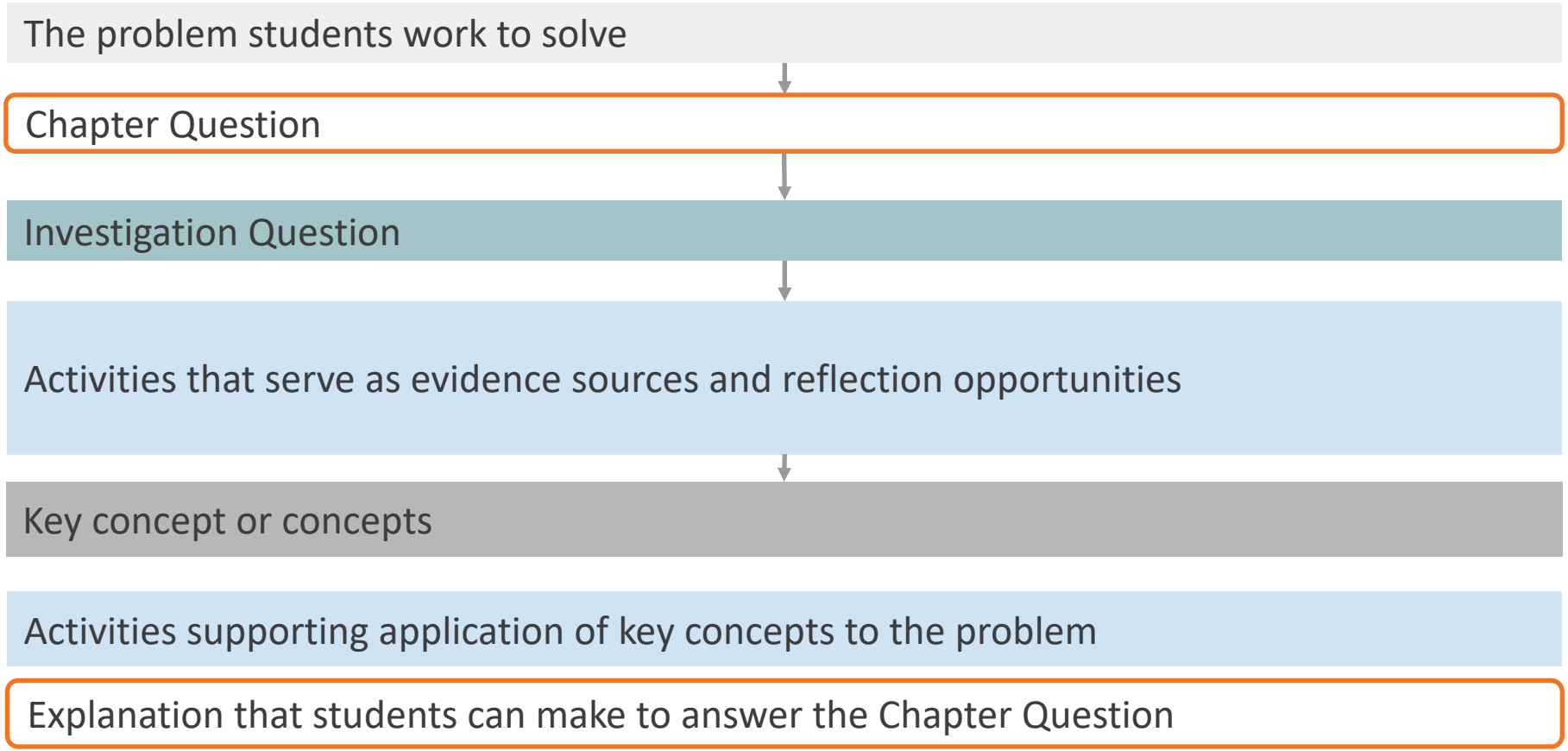


- A pinball starts to move when a launcher exerts a force on it.
- A pinball moves a short (or long) distance when a launcher exerts a gentle (or strong) force.
- A pinball moves to the left (or right) when a launcher exerts a force to the left (or right).
- A pinball changes direction because a still object or a moving object exerts a force on it.

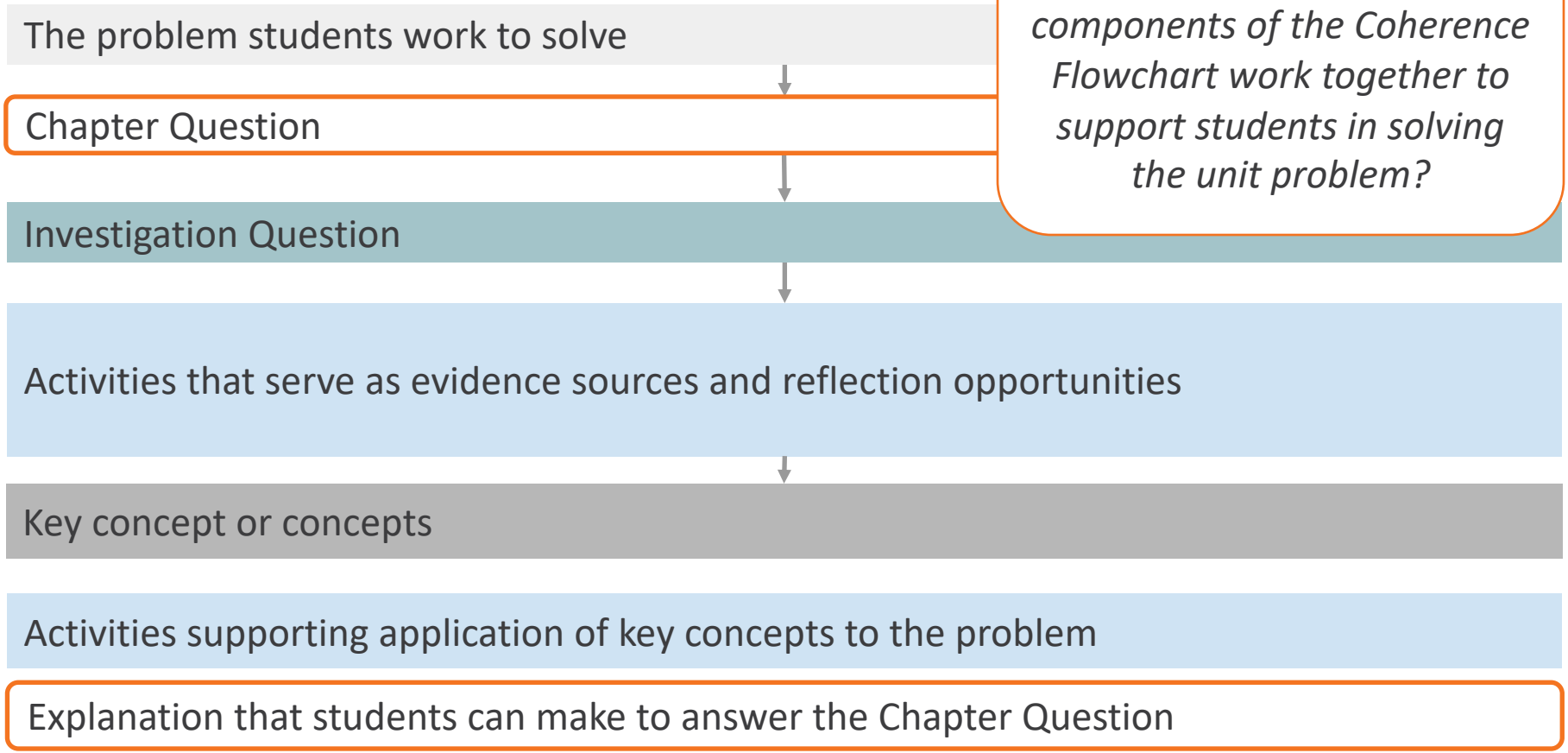
# Coherence as a design principle

- Supports students in building a rich network of concepts
- Allows for increasingly complex explanations
- Supports students in integrating ideas
- Provides motivation to look more deeply at the phenomenon

# Coherence Flowchart structure



# Coherence Flowchart structure




*How do the specific components of the Coherence Flowchart work together to support students in solving the unit problem?*

## Chapter 1: How do we make a pinball start to move?

JUMP DOWN TO CHAPTER OVERVIEW

### Lesson 1.1:
Pre-Unit Assessment

### Lesson 1.2:
Talking About Forces

### Lesson 1.3:
Forces Happen Between Two Objects

### Lesson 1.4:
We Are Engineers

### Lesson 1.5:
Writing About Forces

## Chapter 1: How do we make a pinball start to move?

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We saw in the video that a pinball machine has to **launch the ball,** which means that the pinball machine has to **start the ball moving.**

An engineer who is starting to **design** a pinball machine needs to **learn** how to make the pinball start to move.

# Chapter 1 Question

How do we make a pinball start to move?

# Investigation Question:

## What makes an object start to move?

We will try to get **objects,** or things, in the classroom to **start to move.** This will help us start to answer our Investigation Question.

# Vocabulary

## object

a thing that can be seen or touched

**Let's think about the Movement Hunt.**

What was one object you made **start to move?**

What did you **do** to make it move?

We made **objects,** like books, chairs, and pencils, **start to move.** We **pushed** and **pulled** them with our hands.

We will learn a little more in the next lesson about how scientists and engineers talk about getting an object moving!

## Chapter 1: How do we make a pinball start to move?

JUMP DOWN TO CHAPTER OVERVIEW

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Today, we will play a game called **Rugball.**

This is a game we will play many times as we learn about **movement** and work as **engineers** to design a pinball machine.

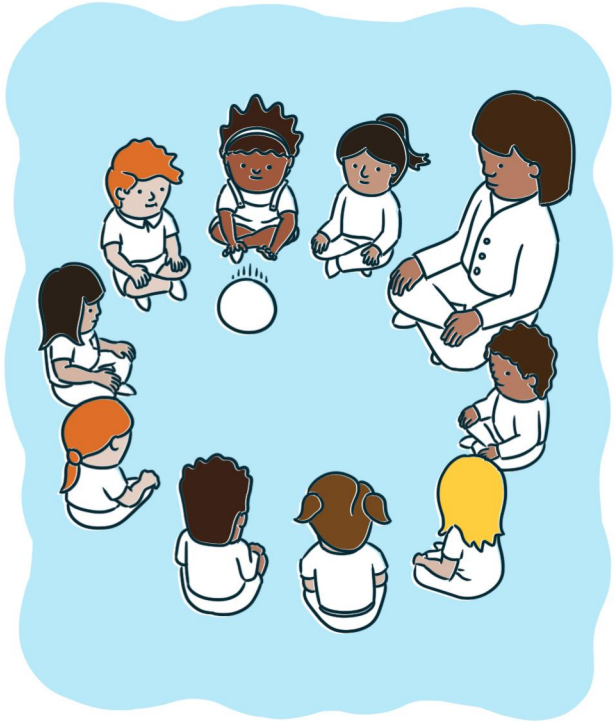
# Playing Rugball: Introduction

**We are trying to start moving the ball.**

1.
**Sit in a circle** so everyone can see.

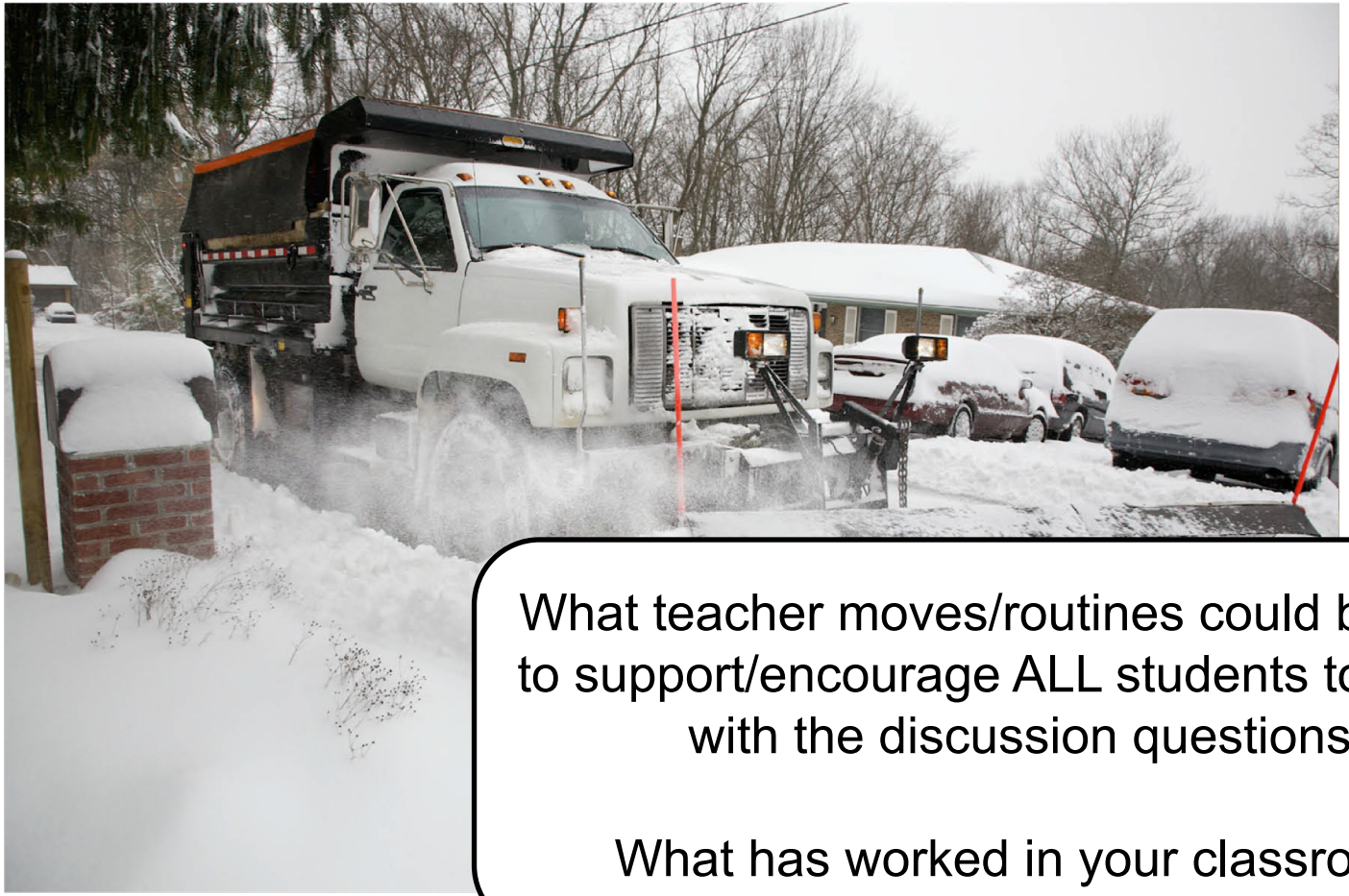
2.
**Start the ball moving** with a push—not a throw or a kick.

3.
**Keep the ball in the circle.** If the ball goes outside the circle, wait for the teacher to ask a student to get it.




This is a picture. I cannot see anything moving.

I'll share how I **imagine the movement** to better understand what is happening.



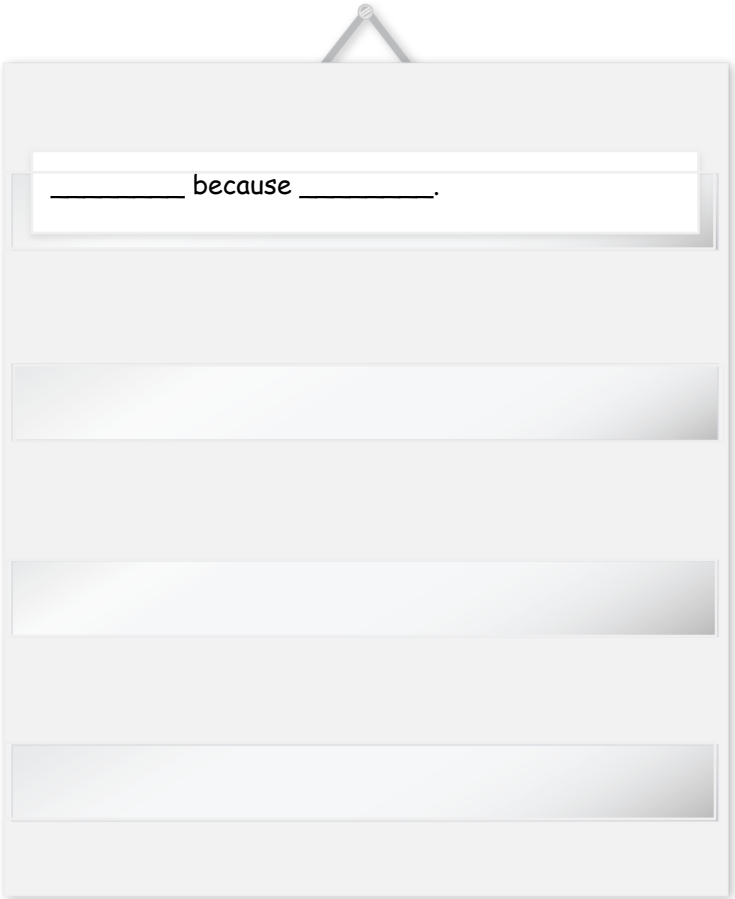
What teacher moves/routines could be added to support/encourage ALL students to engage with the discussion questions?

What has worked in your classroom?

We explored making the rugball move and visualized how different objects were moving in pictures. Now, we are going to try some movements of our own to practice talking about them like scientists and engineers.

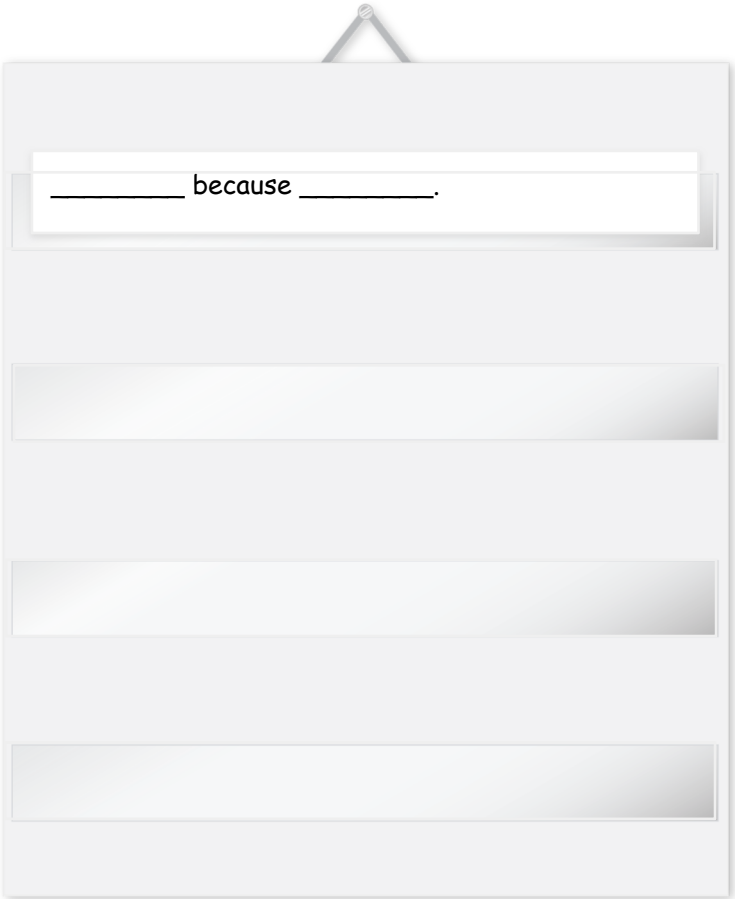
Scientists and engineers use the word **because** to explain why something happened.

I am going to **stand on one foot.** Watch my movements carefully.



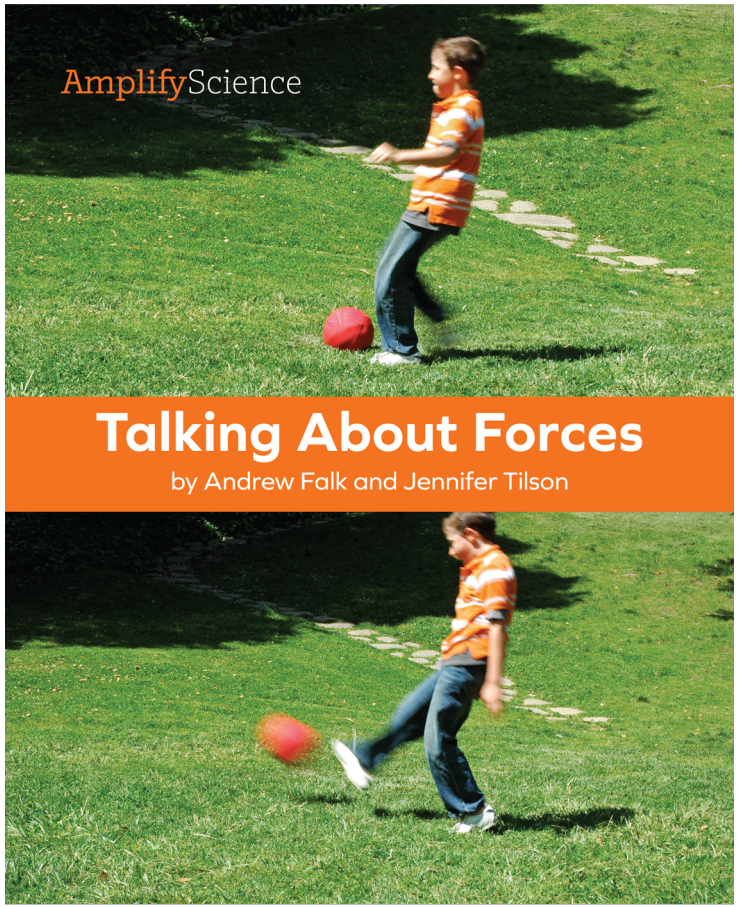

I tipped over **because** I stood on one foot.

The word **because** means that the first part of what I said made the second part happen.




**Let's try a different movement together.**

**Run in place.**




This book is called *Talking About Forces.* We will read to find out more about **forces.**

We will **visualize** what is happening in the pictures and words.

It was a beautiful day at the park! Everywhere you looked, there were kids making things move.

We have many ways of talking about what happens when one thing makes another thing move.

**Scientists** and **engineers** have their own way of **explaining** what is happening. They talk about **forces**. They say that when one thing makes another thing move, it **exerts** a force on it.

Let's see some examples!



Scott pushed Francis on the swing, and Francis moved. She sailed forward in the swing, high into the air.

What would a scientist or engineer say happened here?

Here is what a scientist or engineer would say:

Francis moved because Scott exerted a force on her.

6

Faheem jumped into the wagon and asked for a ride. Francis pulled on the handle of the wagon, and the wagon rolled up the hill with Faheem in it!

What would a scientist or engineer say happened here?

7

Here is what a scientist or engineer would say:

The wagon and Faheem moved because Francis exerted a force on the wagon.

8

Mia and Scott played catch in the field. When it was her turn to throw, Mia threw the ball and it flew away from her.

What would a scientist or engineer say happened here?

9

Here is what a scientist or engineer would say:

The ball moved because Mia exerted a force on the ball.

10

Another ball was sitting on the grass. Jess ran up and kicked the ball. Wham! The ball bounced away over the grass. Jess scored a goal!

What would a scientist or engineer say happened here?

11

Here is what a scientist or engineer would say:

The ball moved because Jess exerted a force on the ball.



The kids had fun playing in the park and making things move. A scientist or engineer would agree that they had fun playing in the park. A scientist or engineer might also say they exerted forces on lots of **objects** in the park!

Scientists and engineers know that any time you see an object start to move, it is because another object exerted a force on it. When you see one object start to move, look for the other object that made it move. Forces always happen between two objects.

# Pushes and Pulls: Designing a Pinball Machine

The problem students work to solve

How can we create a pinball machine for our class?

Chapter 1 Question

How do we make a pinball start to move?

Investigation Question

What makes an object start to move? (1.1-1.4)

Evidence sources and reflection opportunities

- Investigate how to make objects start to move in a classroom Movement Hunt (1.1)
- Investigate making an object start to move in full-class Rugball routine (1.2)
- Use recognizable images of objects moving to visu
- Practice using cause and effect to explain everyday
- Read *Talking About Forces* (1.2)
- Investigate how to make an object move by exertin ation materials (1.3)
- Use Explanation Language Frame to explain forces on (1.3)

What are students figuring out?

Key concepts

- An object starts to move when another object exer
- Forces happen between two objects. (1.3)

Application of key concepts to the problem

- Design launchers to make a pinball start to move in individual student Box Models (1.4)
- Diagram Box Model launcher design (1.4)
- Add a launcher to make the pinball start to move in Class Pinball Machine (1.5)
- Shared Writing to explain the Chapter 1 Question (1.5)
- Revisit *Talking About Forces* to use Explanation Language Frame to explain how objects move in the text (1.5)

Explanation that students can make to answer the Chapter 1 Question

To make our pinball start to move, we must exert a force on the pinball. We can use a rubber band launcher to exert a force on the pinball.

## Chapter 1: How do we make a pinball start to move?

JUMP DOWN TO CHAPTER OVERVIEW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# Vocabulary

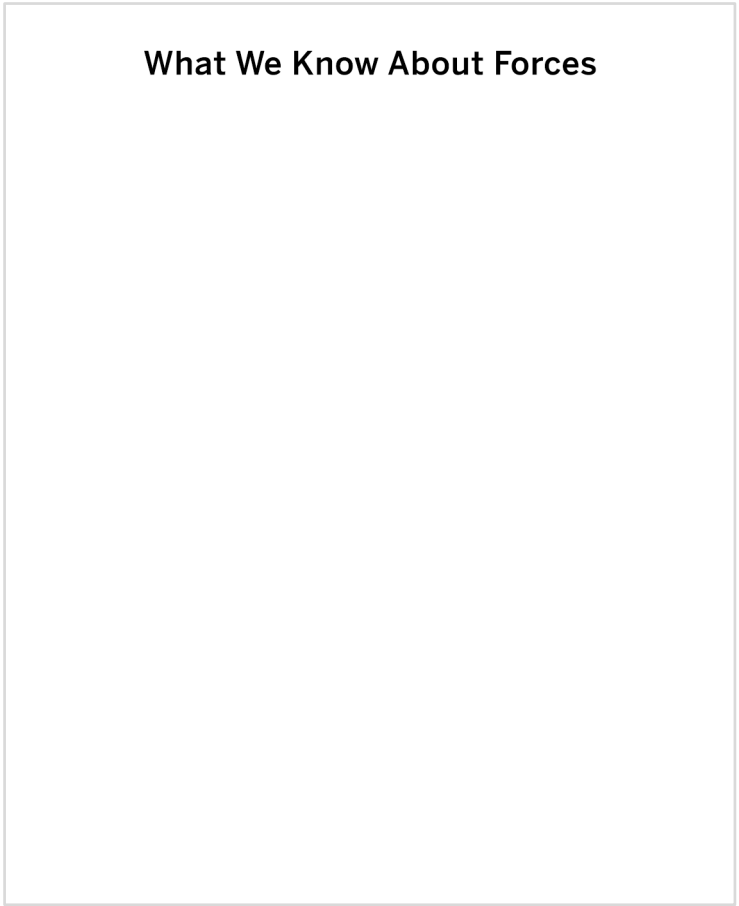
## force

a push or a pull

# Vocabulary

## exert

to cause a force to act on an object




We will use the What We Know About Forces chart to keep track of our ideas about forces.

Let’s add our new ideas about **what makes objects start to move.**

# Key Concept

An object starts to move when another object exerts a force on it.

We now know an **object** starts to move when another object **exerts** a **force** on it.

We have already found many ways to exert a force with our bodies and hands.

Now we are going to see if we can create forces in other ways.

We will **investigate** with these objects. We will try to use one object to **create forces.**

I will show you how.

What did you **observe** about how to make objects move?

What kinds of **forces** did you exert?

# Key Concept

Forces happen between two objects.

_____ because _____.

The _____ started to move because the _____

exerted a force on it.


Scientists and engineers describe **what happened,** but they also want to explain **why it happened.**

These words will help us explain why something **started to move.**

# Pushes and Pulls: Designing a Pinball Machine

The problem students work to solve

How can we create a pinball machine for our class?

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Chapter 1 Question

How do we make a pinball start to move?

Investigation Question

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Evidence sources and reflection opportunities

- Investigate how to make objects start to move in a classroom Movement Hunt (1.1)
- Investigate making an object start to move in full-class Rugball routine (1.2)
- Use recognizable images of objects moving to visualize movement (1.2)
- Practice using cause and effect to explain everyday scenarios (1.2)
- Read *Talking About Forces* (1.2)
- Investigate how to make an object move by exerting a force on it using Forces Investigation materials (1.3)
- Use Explanation Language Frame to explain forces and movement in Forces Investigation (1

Key concepts

- An object starts to move when another object exerts a force on it. (1.3)
- Forces happen between two objects. (1.3)

Why post these key concepts now?

Application of key concepts to the problem

- Design launchers to make a pinball start to move in individual student Box Models (1.4)
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- Revisit *Talking About Forces* to use Explanation Language Frame to explain how objects move in the text (1.5)

Explanation that students can make to answer the Chapter 1 Question

To make our pinball start to move, we must exert a force on the pinball. We can use a rubber band launcher to exert a force on the pinball.

# Turn and talk:

- Why do you think the key concepts were posted at this point in the chapter?

# Engaging with ideas over multiple activities

- Supports all learners
- Supports making connections
- Provides different, related pieces of evidence
- Models what scientists do
- Situates concepts in a variety of contexts

## Chapter 1: How do we make a pinball start to move?

JUMP DOWN TO CHAPTER OVERVIEW

### Lesson 1.1:
Pre-Unit Assessment

### Lesson 1.2:
Talking About Forces

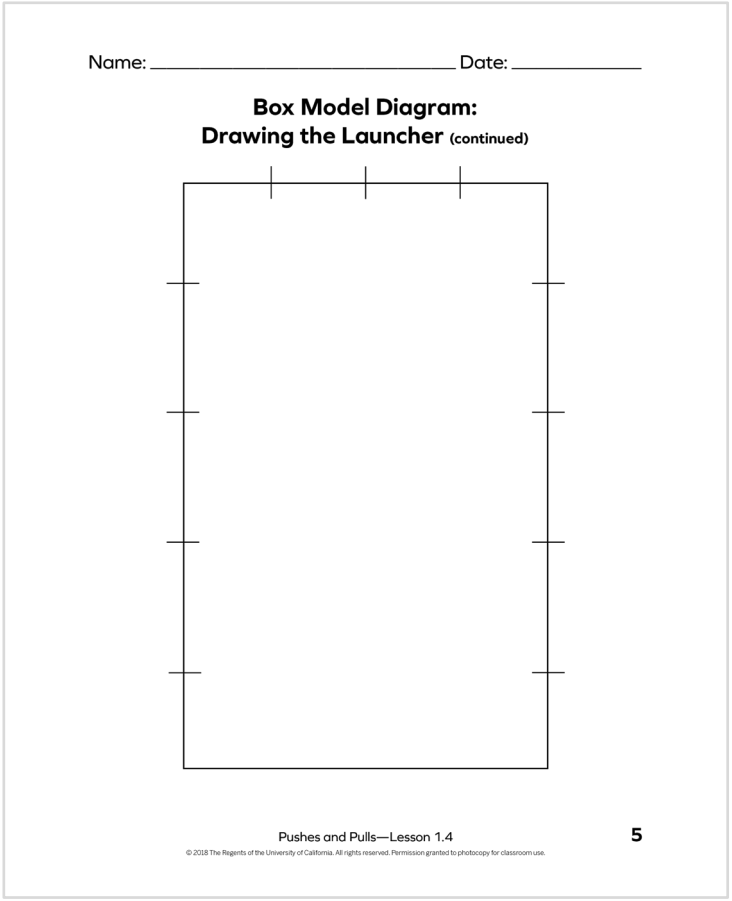
### Lesson 1.3:
Forces Happen Between Two Objects

### Lesson 1.4:
We Are Engineers

### Lesson 1.5:
Writing About Forces

# Pinball Machine Design Goals

- [ ] Make the pinball start to move.



Name: _____ Date: _____

**Box Model Diagram:**
**Drawing the Launcher (continued)**

Pushes and Pulls—Lesson 1.4 5

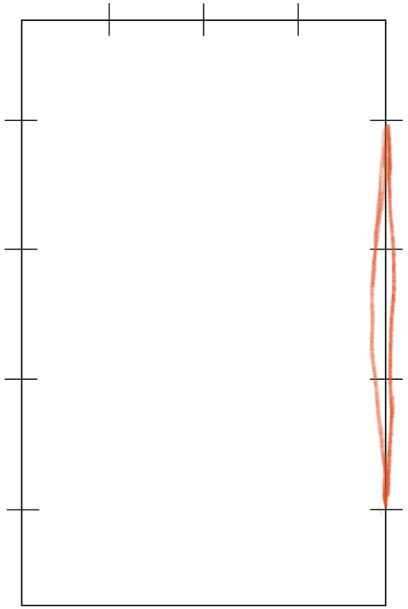


You will use this frame to create a **diagram.**

A diagram is an illustration or picture that shows how something works or what its parts are.

Name: _____ Date: _____

**Box Model Diagram:**
**Drawing the Launcher (continued)**



Pushes and Pulls—Lesson 1.4 5



You will use an orange crayon to draw your launcher.

It is important your **diagram** shows where you placed objects in your **Box Model.**

# Pushes and Pulls: Designing a Pinball Machine

The problem students work to solve

How can we create a pinball machine for our class?

Pg. xx

Chapter 1 Question

How do we make a pinball start to move?

Investigation Question

What makes an object start to move? (1.1-1.4)

Evidence sources and reflection opportunities

- Investigate how to make objects start to move in a classroom Movement Hunt (1.1)
- Investigate making an object start to move in full-class Rugball routine (1.2)
- Use recognizable images of objects moving to visualize movement (1.2)
- Practice using cause and effect to explain everyday scenarios (1.2)
- Read *Talking About Forces* (1.2)
- Investigate how to make an object move by exerting a force on it using Forces Investigation materials (1.2)
- Use Explanation Language Frame to explain forces and movement in Forces Investigation (1.3)

Key concepts

- An object starts to move when another object exerts a force on it. (1.3)
- Forces happen between two objects. (1.3)

Application of key concepts to the problem

- Design launchers to make a pinball start to move in individual student Box Models (1.4)
- Diagram Box Model launcher design (1.4)
- Add a launcher to make the pinball start to move in Class Pinball Machine (1.5)
- Shared Writing to explain the Chapter 1 Question (1.5)
- Revisit *Talking About Forces* to use Explanation Language Frame to explain how objects move in the t

What can we explain with

What's the purpose of this activity?

Explanation that students can make to answer the Chapter 1 Question

To make our pinball start to move, we must exert a force on the pinball. We can use a rubber band launcher to exert a force on the pinball.

## Chapter 1: How do we make a pinball start to move?

JUMP DOWN TO CHAPTER OVERVIEW

### Lesson 1.1:
Pre-Unit Assessment

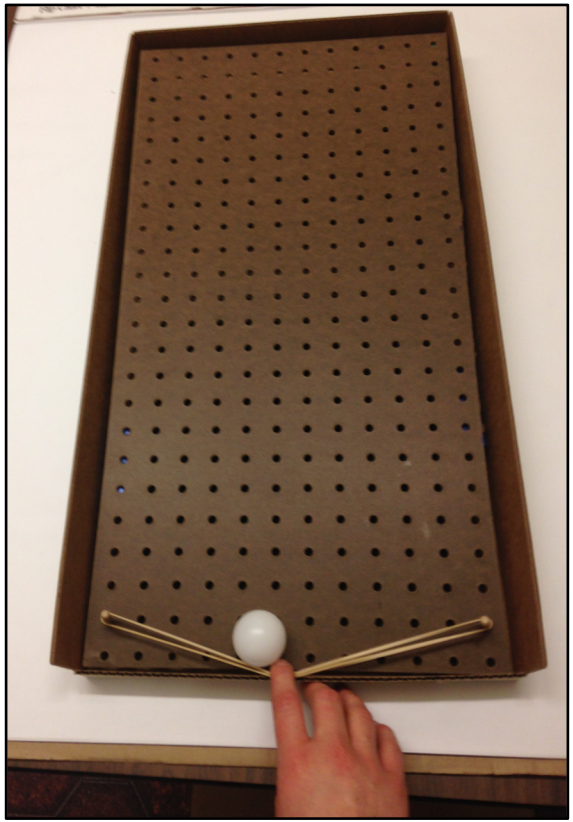
### Lesson 1.2:
Talking About Forces

### Lesson 1.3:
Forces Happen Between Two Objects

### Lesson 1.4:
We Are Engineers

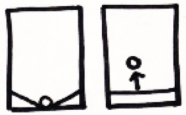
### Lesson 1.5:
Writing About Forces

# Class pinball machine

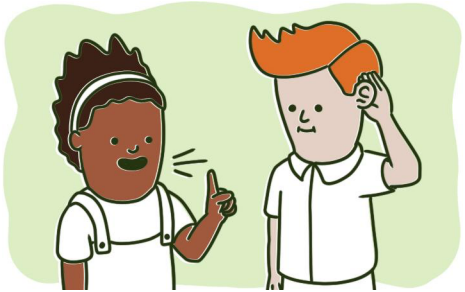


# Pinball Machine Design Goals

☒ Make the pinball start to move.

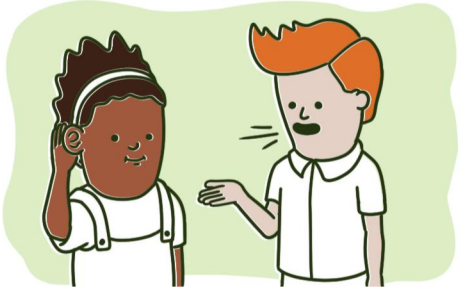


# Shared Listening



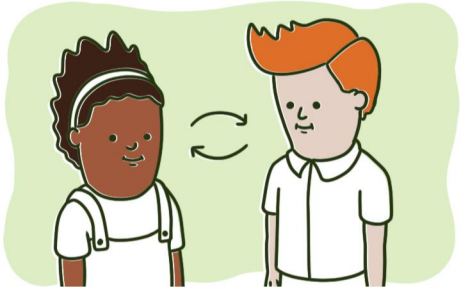
**Partner A shares.**

*I think . . .*



**Partner B repeats.**

*I heard you say . . .*



**Partners switch.**

**Shared Listening Question 1:**

What did we do to make the pinball start to move?

Before you share, **visualize** what we did.

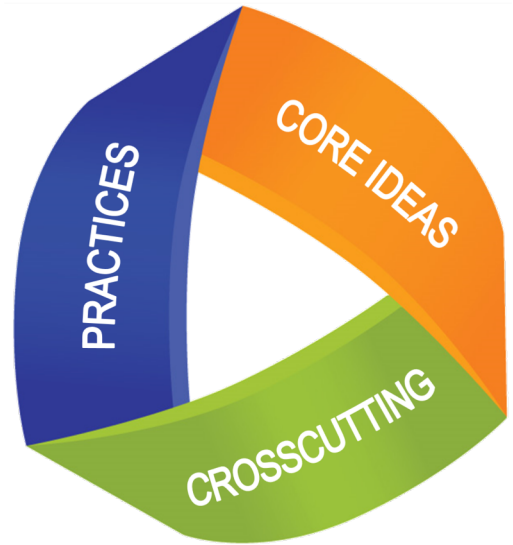
The _____ started to move because the _____

exerted a force on it.

## Shared Listening Question 2:

# **Why** did the launcher make the pinball start to move?

# Thinking three dimensionally




## Disciplinary Core Ideas

- Refer to the key concepts

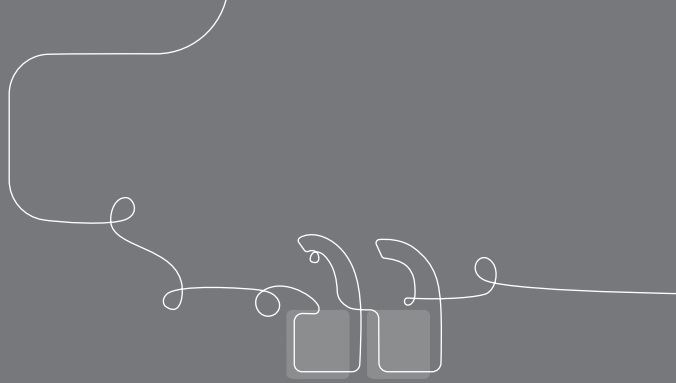
## Science and Engineering Practices

- Which practices did you use to figure out these ideas?

## Crosscutting Concepts

- Which crosscutting concepts were useful to make sense of what you figured out?

# Questions?



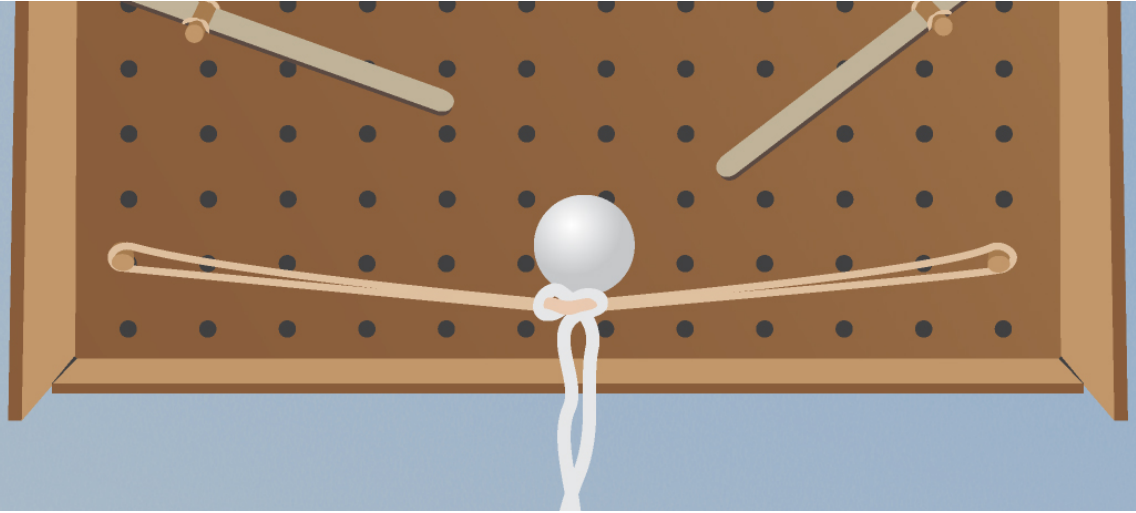
# Stop and Jot on your way to lunch

**Rate your comfort with the following statement from 1-4 (4 being very comfortable):**
I understand how activities within a lesson support students with building complex explanations.


Please also note any needs or wonderings for the afternoon!

Pushes and Pulls

# Plan for the day

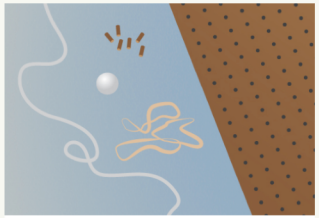


- Framing and reflection
- Experiencing the unit
- The story of the unit
- Planning to teach
- Closing

# The story of the unit

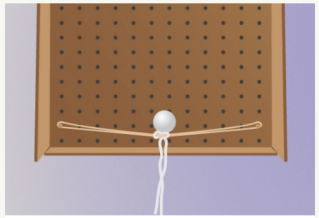
## The purpose of this part of the day is for you to:

- Understand how students build and apply science knowledge throughout Pushes and Pulls.
- Apply this understanding to the End-of-Unit Assessment.



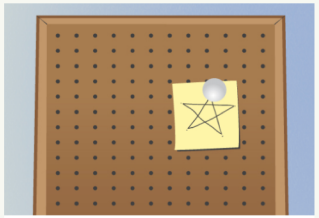
Chapter 1: How do we make a pinball start to move?

5 Lessons



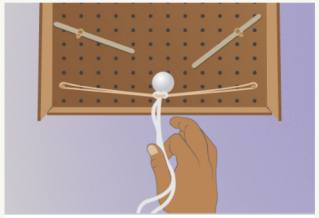
Chapter 2: How do we make a pinball move as far as we want?

3 Lessons



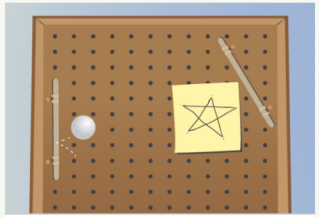
Chapter 3: How do we make a pinball move to a certain place?

5 Lessons



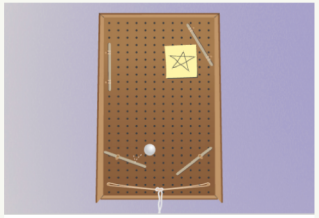
Chapter 4: How do we make a moving pinball change direction?

3 Lessons



Chapter 5: How can we make the pinball machine do all the things we want it t...

3 Lessons



Chapter 6: Where are forces around us?

3 Lessons

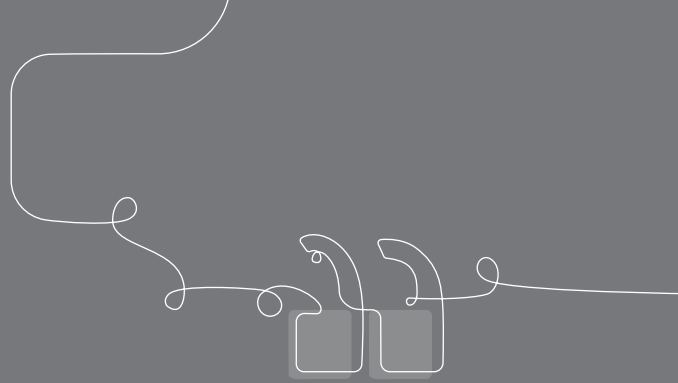
# Chapter 1 key concepts and explanation

## How do we make a pinball start to move?

Pg. xx

| Ch | Key concepts | Explanation |
|---|---|---|
| 1 | An object starts to move when another object exerts a force on it. (1.3)<br><br>Forces happen between two objects. (1.3) | To make our pinball start to move, we must exert a force on the pinball. We can use a rubber band launcher to exert a force on the pinball. |

The launcher is the object that exerts a force on the pinball

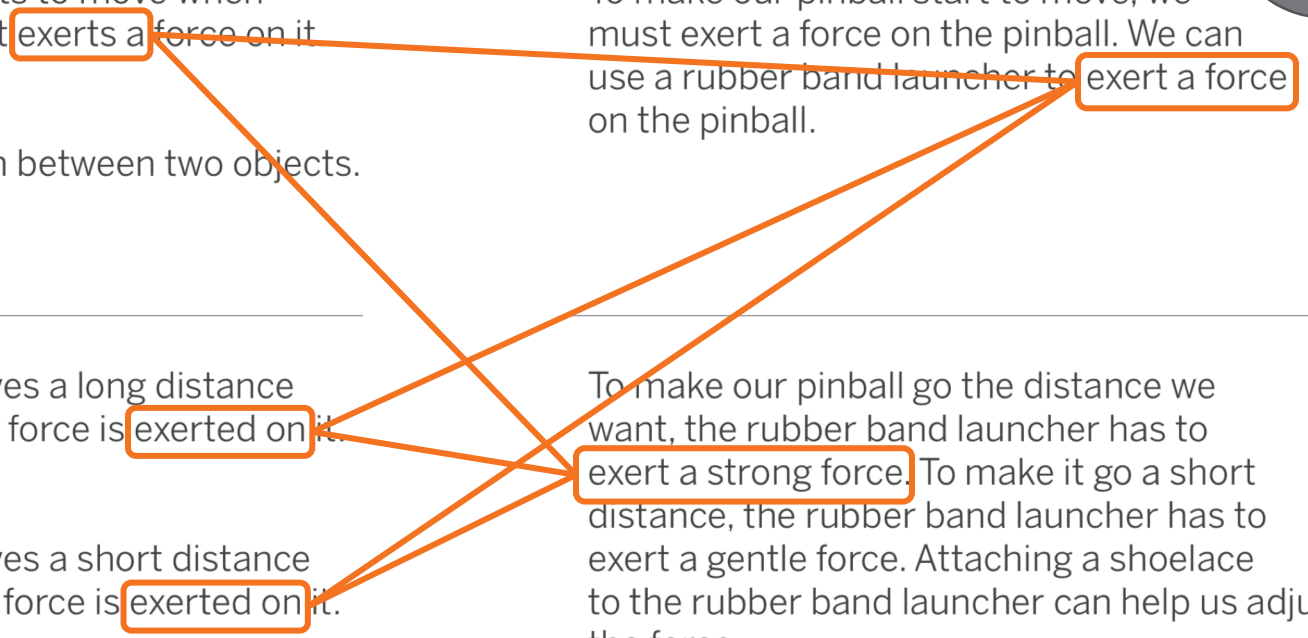


# Turn and talk:

- How does formalizing conceptual understanding by posting key concepts support students in solving the unit problem?

| Ch | Key concepts | Explanation |
| --- | --- | --- |
| 1 | An object starts to move when another object exerts a force on it. (1.3)<br><br>Forces happen between two objects. (1.3) | To make our pinball start to move, we must exert a force on the pinball. We can use a rubber band launcher to exert a force on the pinball. |
| 2 | An object moves a long distance when a strong force is exerted on it. (2.2)<br><br>An object moves a short distance when a gentle force is exerted on it. (2.2) | To make our pinball go the distance we want, the rubber band launcher has to exert a strong force. To make it go a short distance, the rubber band launcher has to exert a gentle force. Attaching a shoelace to the rubber band launcher can help us adjust the force. |

Pg. xx



# Progress Build: A unit-specific learning progression

Pg. xx

# In your group take turns sharing…

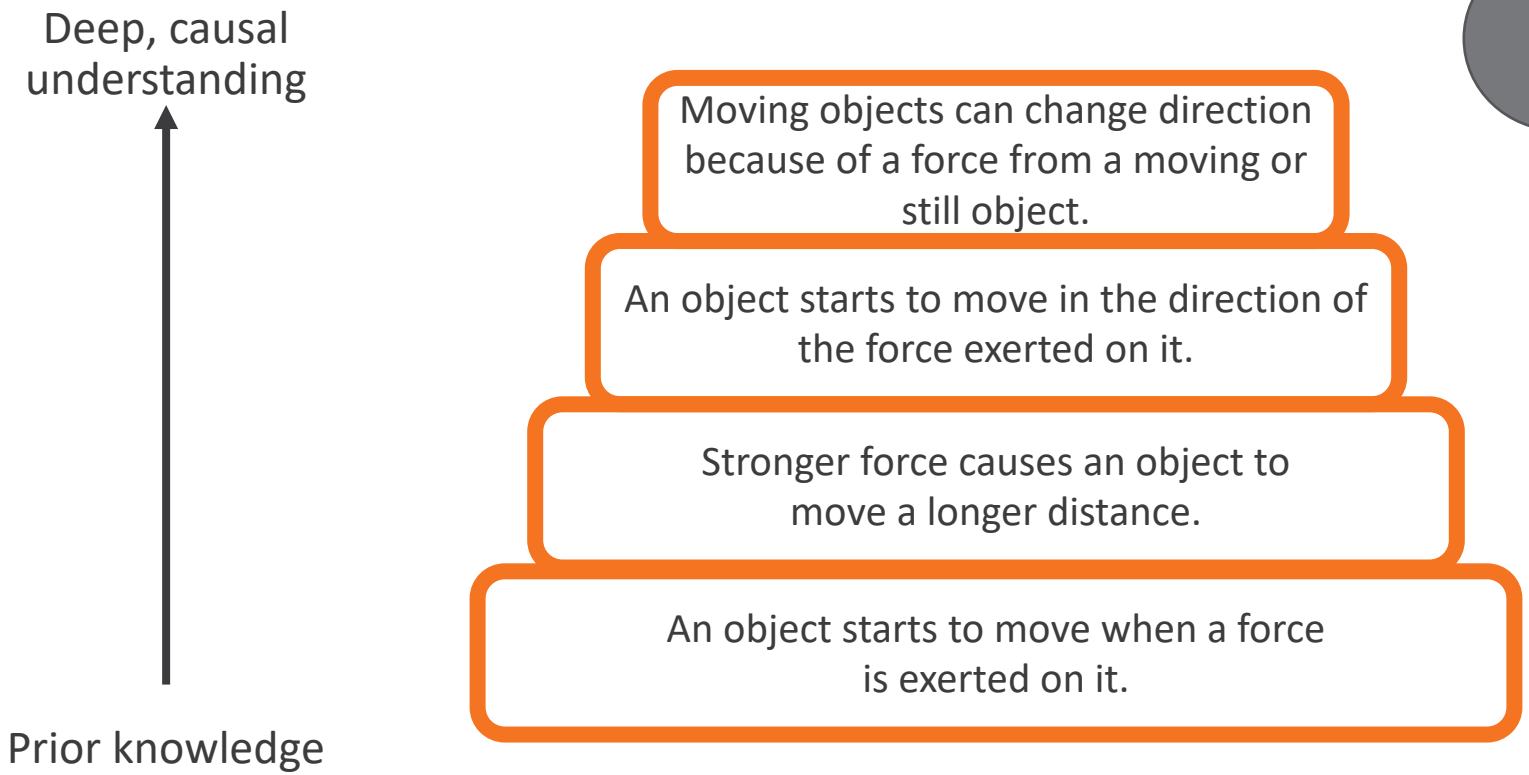
- Which ideas are revisited over multiple chapters? (started as foundational but built upon throughout your model?)
- What new ideas are added in each level of your build? (how did you represent new ideas in your model?)

**Listening group:**

-Listen for what is the same or different about the other group's visual to your own.

# Pushes and Pulls Progress Build

Pg. xx



# End-of-Unit Assessment

# Anticipatory turn and talk

## Reflect on the End-of-Unit Assessment in your last unit

- What kind of data did you gather from the End-of-Unit Assessment?
- What did you like about the End-of-Unit Assessment?
- What did you find challenging about the End-of-Unit Assessment?

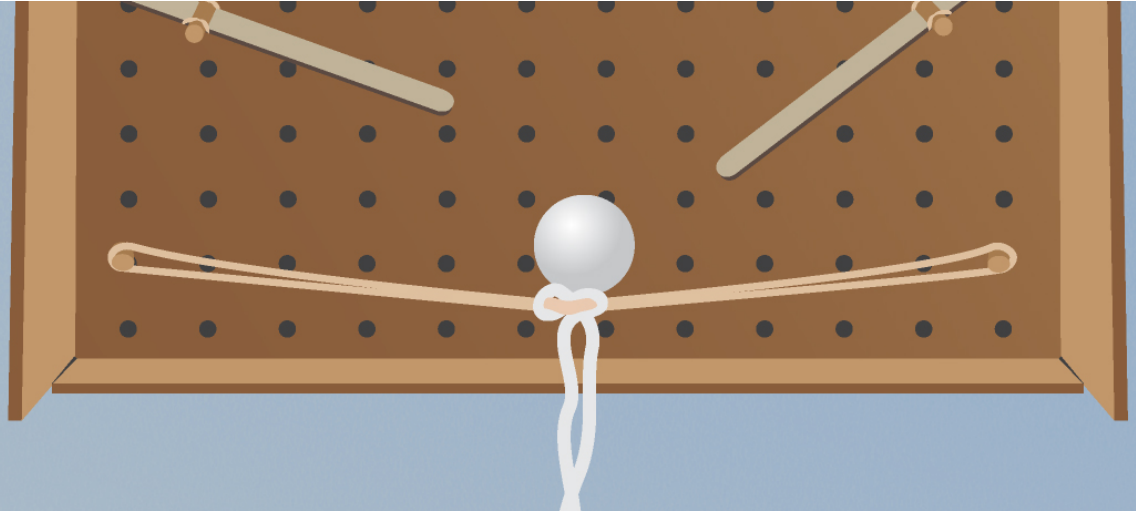
# Reflective turn and talk

## Revisit these ideas

- What kind of data can you gather from End-of-Unit Assessments?
- What do you like about the End-of-Unit Assessments?
- What do you find challenging about End-of-Unit Assessments?

Pushes and Pulls

# Plan for the day



- Framing and reflection
- Experiencing the unit
- The story of the unit
- Planning to teach
- Closing

# Planning to teach

## The purpose of this part of the day is for you to:

- Reflect on implementing Amplify Science in your classroom to select an area of growth.
- Engage in targeted small group practice in your area of growth.

# Targeted small group work focus areas

- Deepening content understanding and addressing preconceptions
- Coherent instruction
- Formative assessment and differentiation
- Preparing to teach

Pg. xx

# Choosing a focus area

Pg. xx

- While thinking about what to focus on, ask yourself:
  - For which category (1, 2, or 3) did I mark myself as “least comfortable”?
  - Did that change over the course of today’s workshop?
  - Is there a newly illuminated challenge area that I would rather focus on?
  - What would be most helpful to examine collaboratively in this space?

# Setting up your targeted group work

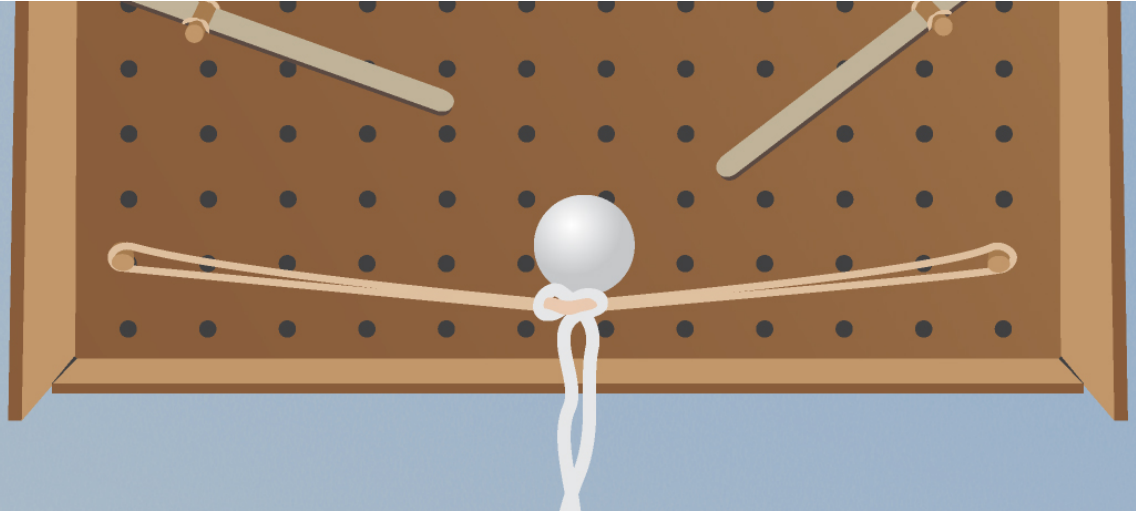
- With your group determine your focus or goal for the work time. Be prepared to share what you focused on, what you learned, and any remaining questions for the presenter.

# Focus area reflection

- Based on your work in your focus area, what will you keep in mind as you plan to teach your next unit?

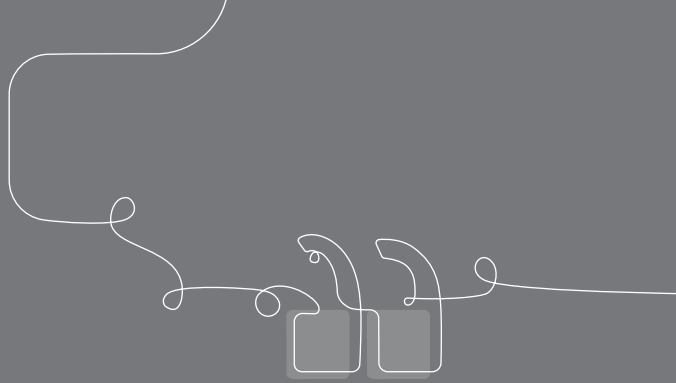
Pushes and Pulls

# Plan for the day



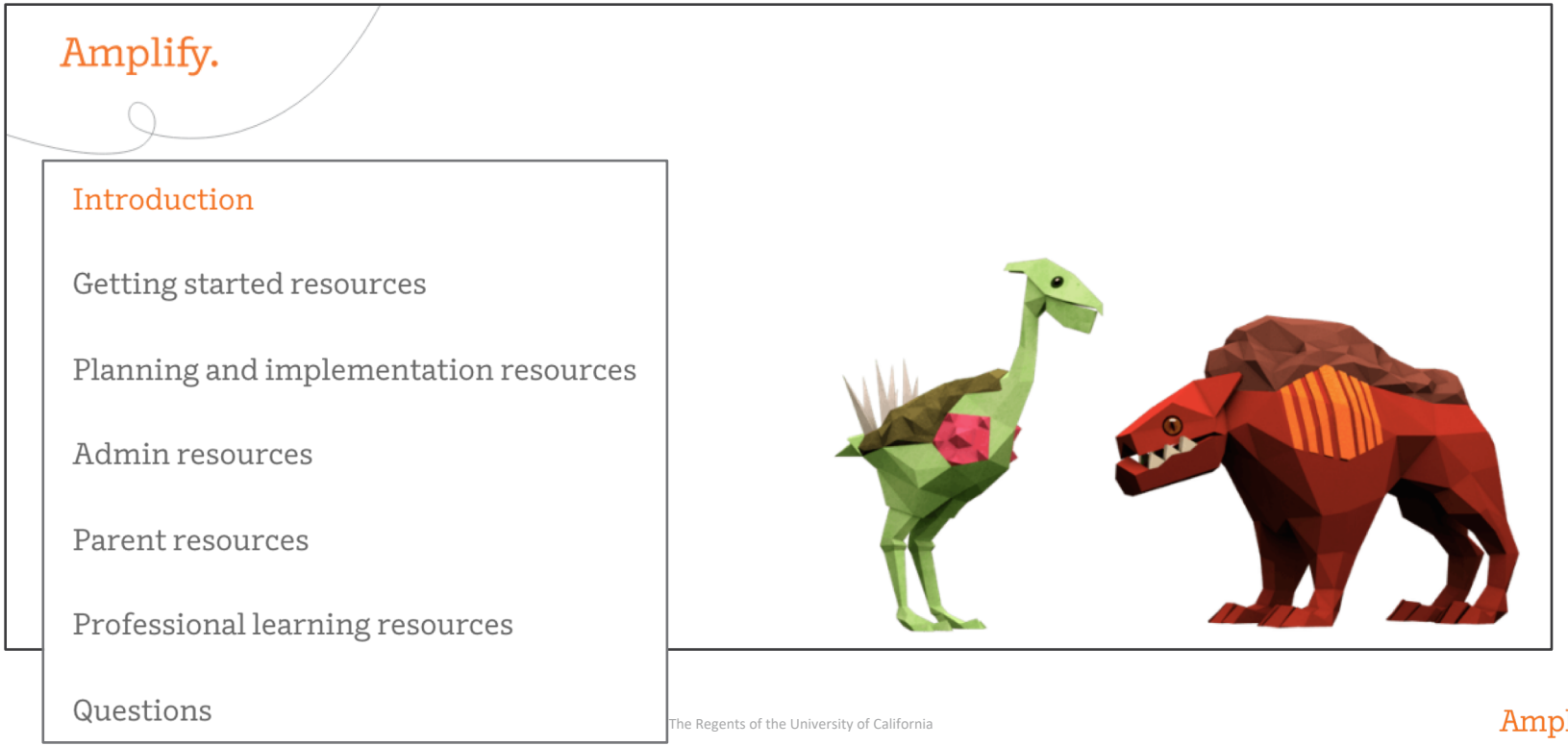
- Framing and reflection
- Experiencing the unit
- The story of the unit
- Planning to teach
- Closing

# Questions?



# NYC Resource Site

https://www.amplify.com/amplify-science-nyc-doe-resources/



# Missing Materials

- Contact the Core Curriculum Service Center Monday-Friday 8am-5pm

**Email:** curriculum@schools.nyc.gov

**Phone:** (718) 935-3334

# Thank you for your feedback!

https://www.surveymonkey.com/r/RH3CVPD

Presenter Name:
Workshop Title: