

# Amplify Science

## Unit Internalization / Guided Planning

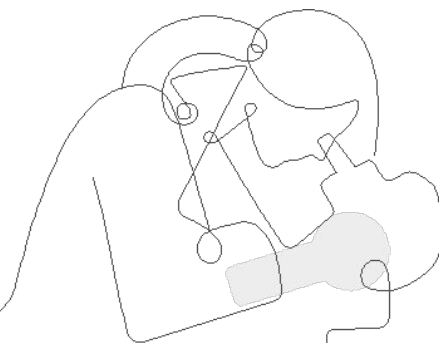
### Grade 3, Unit 1: Balancing Forces

#### Part 1

School/District Name: LAUSD

Date: October, 2022

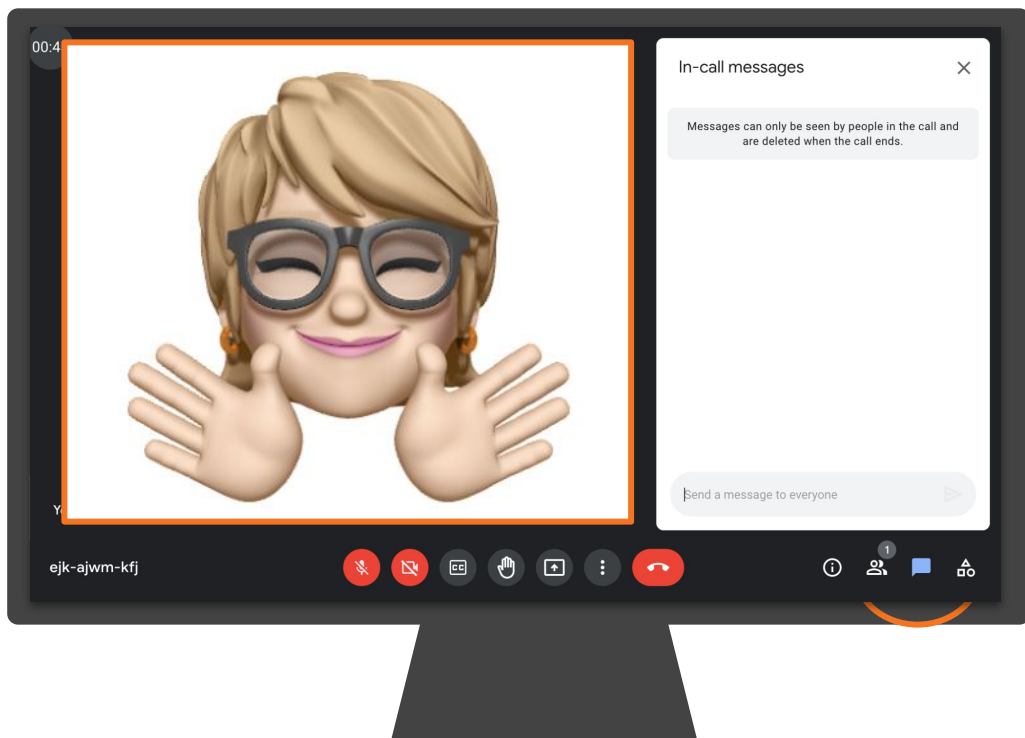
Presented by:



# Ice Breaker!

## Who do we have in the room today?

- **Question 1:** Which aspects of implementing the Amplify Science standard curriculum has been the most successful?
- **Question 2:** Which aspects have been the most challenging?



# Amplify's Purpose Statement

Dear teachers,

You do a job that is nearly impossible and **utterly essential**.

**We are in your corner** – extending your reach, saving you time, and enhancing your understanding of each student.

**Thank you for working with us** to craft rigorous and riveting learning experiences for your classroom.

We share your goal of **inspiring all students to think deeply, creatively, and for themselves**.

Sincerely,  
Amplify

# Norms: Establishing a culture of learners

- **Take risks:** Ask any questions, provide any answers.
- **Participate:** Share your thinking, participate in discussion and reflection.
- **Be fully present:** Unplug and immerse yourself in the moment.
- **Physical needs:** Stand up, get water, take breaks.



# Schoolology



[← Back to Schoology Home Page](#)

## LMS App Center

The LMS App Center provides a catalog of District-approved digital content and learning tools (including digital components of adopted textbooks) that are available for classroom teachers and students to access within the learning management system, Schoolology.

For information on District-approval policies and procedures, please visit: [udipplausd.net](#).

- To search the full list of digital learning tools, click "Submit".
- To search by Publisher Name or Textbook Title, type in a word associated to your adopted publisher, then click "Submit".
- To narrow your search with filters such as Content Area, Grade Level, or Content Type, select from the dropdown menu, then click "Submit".

To learn more about using the LMS App Center, please refer to the following [video overview](#).

**Publisher Name** Starts With

**Content Area** All

**Grade Level** All

**Content Type** All

**Textbook Title** Starts With

**Submit**

All Amplify Products



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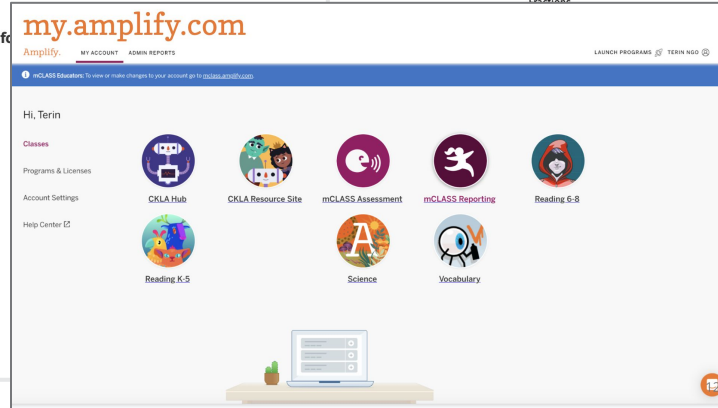
To learn more about using the LMS App Center, please refer to the following [video overview](#).

[← Search Again](#)

### Amplify

**Content Area:** ELA  
**Grade Level:** ES  
**Content Type:** Supplemental  
**Integration Type:** App (Left Navigation)  
**Purchase Type:** District and School  
**Getting Started Guide**  
**Other Info:** School licenses required  
mCLASS  
CKLA  
Amplify Reading  
Amplify Science  
Creative

**Vendor Support Desk:**  
P: 800.823.9969  
E: [help@amplify.com](mailto:help@amplify.com)  
S: [amplify.com/support/](https://amplify.com/support/)  
**Textbook Title(s):**  
NA



**Vendor Support Desk:**  
P: 800.823.9969  
E: [help@amplify.com](mailto:help@amplify.com)  
S: [amplify.com/support/](https://amplify.com/support/)  
**Textbook Title(s):**  
NA

op is for  
only)

# Join Amplify Science Schoology Group

To join Amplify Science Schoology  
ES Group: W4PK-W466-63F5B

# Navigation Temperature Check

Rate yourself on your comfort level accessing Amplify Science materials and navigating a digital curriculum.

1 = Extremely Uncomfortable

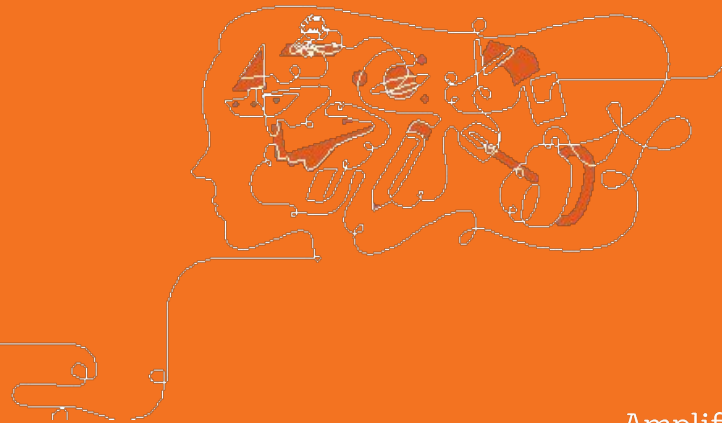
2 = Uncomfortable

3 = Mild

4 = Comfortable

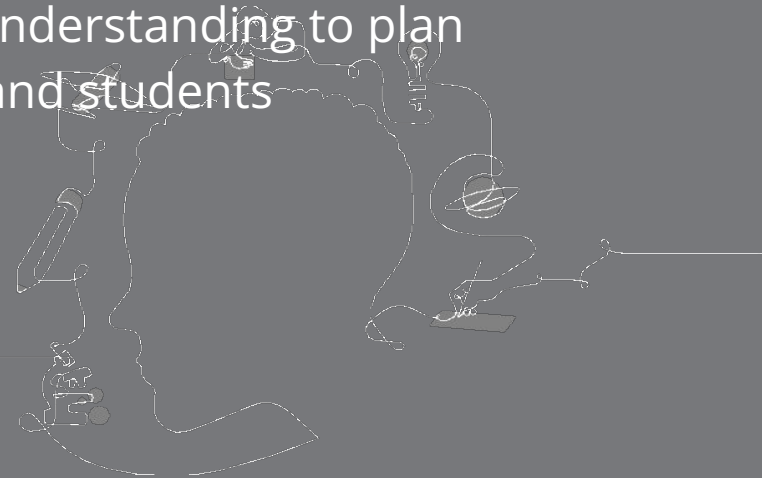
5 = Extremely Comfortable

# Part 1



# Overarching goals

- ❑ Explain how students engage in phenomenon based and 3D learning to construct an understanding of the science concepts introduced in the unit
- ❑ Internalize the unit and apply your new understanding to plan for the diverse needs of your classroom and students





# Plan for the day: Part 1

- Introduction and Framing
- Phenomenon-based Instruction
- Unit Internalization
- Additional Resources
- Closing



# Plan for the day: Part 1

- **Introduction and Framing**
- Phenomenon-based Instruction
- Unit Internalization
- Additional Resources
- Closing



THE LAWRENCE  
HALL OF SCIENCE  
UNIVERSITY OF CALIFORNIA, BERKELEY

+

Amplify.

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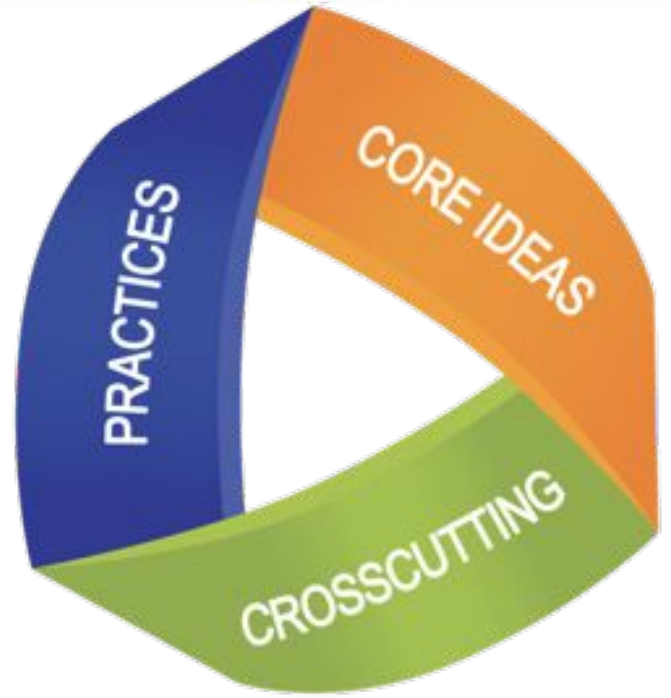
Amplify Science



# Three dimensional learning

## Evaluate your knowledge

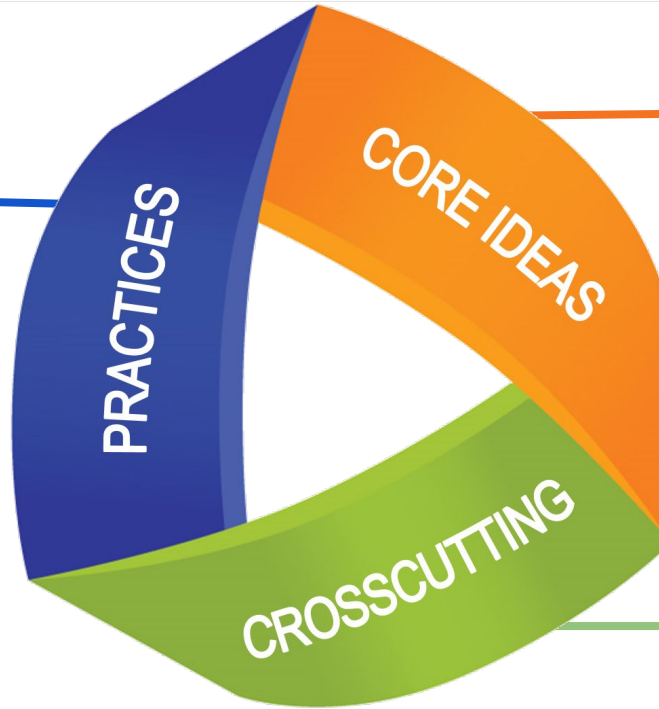
- On a scale of 0-5, how would you rate your familiarity with 3-D learning?



# Figuring out Phenomena

## Using 3-D teaching and learning

What scientists do  
Science and  
Engineering Practices



What scientists  
want to know  
Disciplinary Core  
Ideas

How scientists  
think  
Crosscutting Concepts



# Three-dimensional learning

## Reflection

In the video, how did students engage in three-dimensional learning to think like scientists?

### Lesson 3.2

Students use a model to figure out the relationship between different parts of a habitat system in order to construct their understanding about how animals can help move seeds around a habitat (systems and system models).



# 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

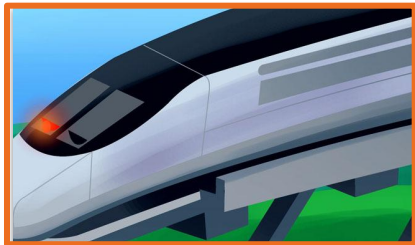
- Patterns of Earth and Sky
- Modeling Matter
- The Earth System
- Ecosystem Restoration

## Key takeaways:

- There are 22 lessons per unit
- Lessons at grades K-1 are 45 minutes long

# Year at a Glance: Grade 3

Pg. 2



Balancing Forces

**Domain:** Physical Science

**Unit type:** Modeling

**Student role:**  
Engineers

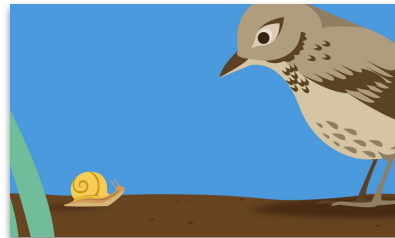


Inheritance and Traits

**Domain:** Life Science

**Unit type:** Investigation

**Student role:** Wildlife biologists

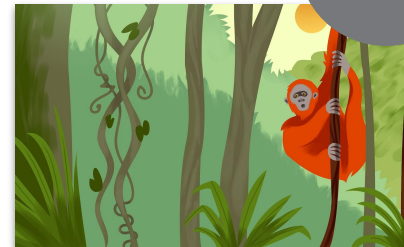


Environments and Survival

**Domain:** Life Science

**Unit type:** Engineering Design

**Student role:**  
Biomimicry engineers



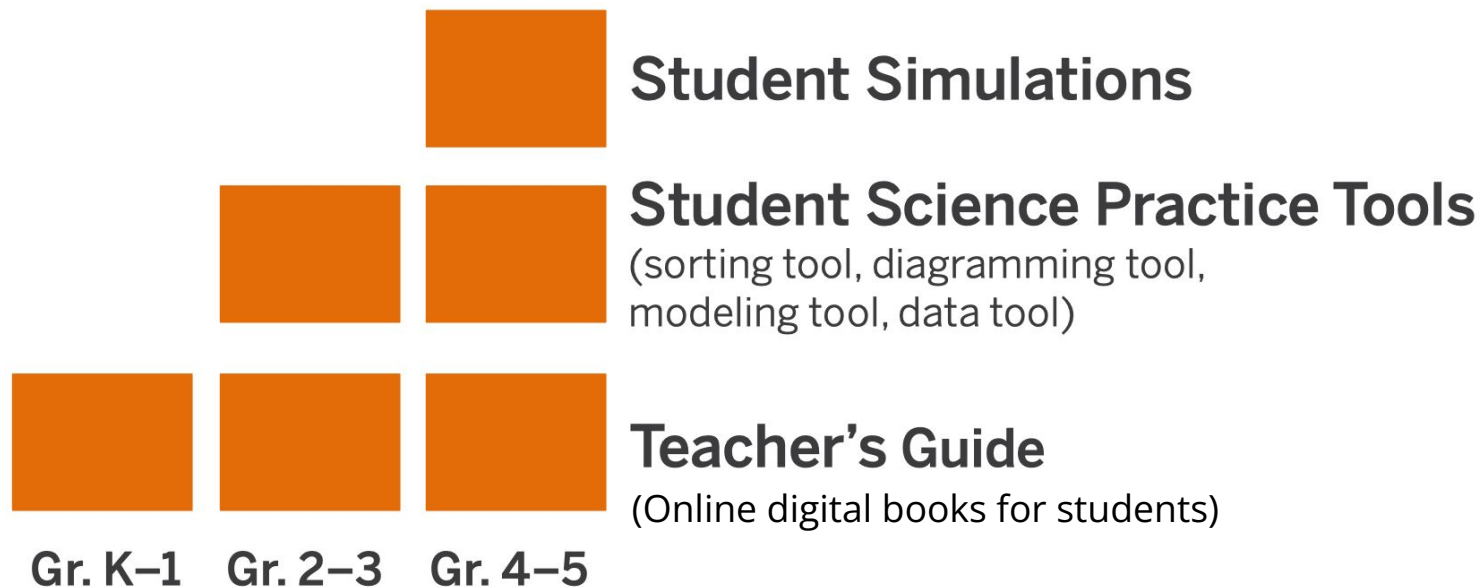
Weather and Climate

**Domain:** Earth and Space Science

**Unit type:**  
Argumentation

**Student role:**  
Meteorologists

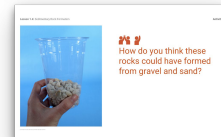
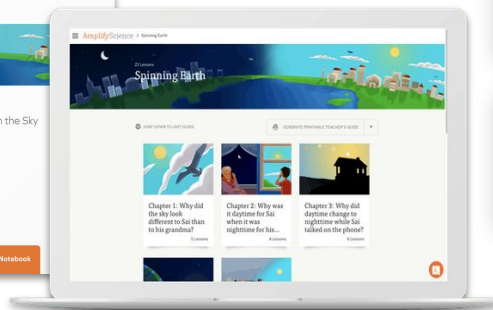
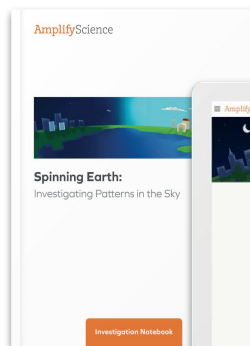
# What are the digital components of Amplify Science Elementary?



# K-5 Program components

## Teacher materials

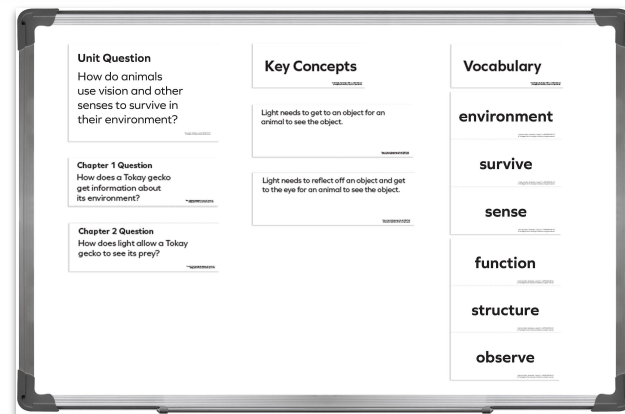
- Teacher's Guide (print and digital)
- Classroom Slides
- Classroom wall materials
- Embedded assessments
- Program Guide
- Program Hub
- Amplify Help Site



Program Hub



Science Program Guide

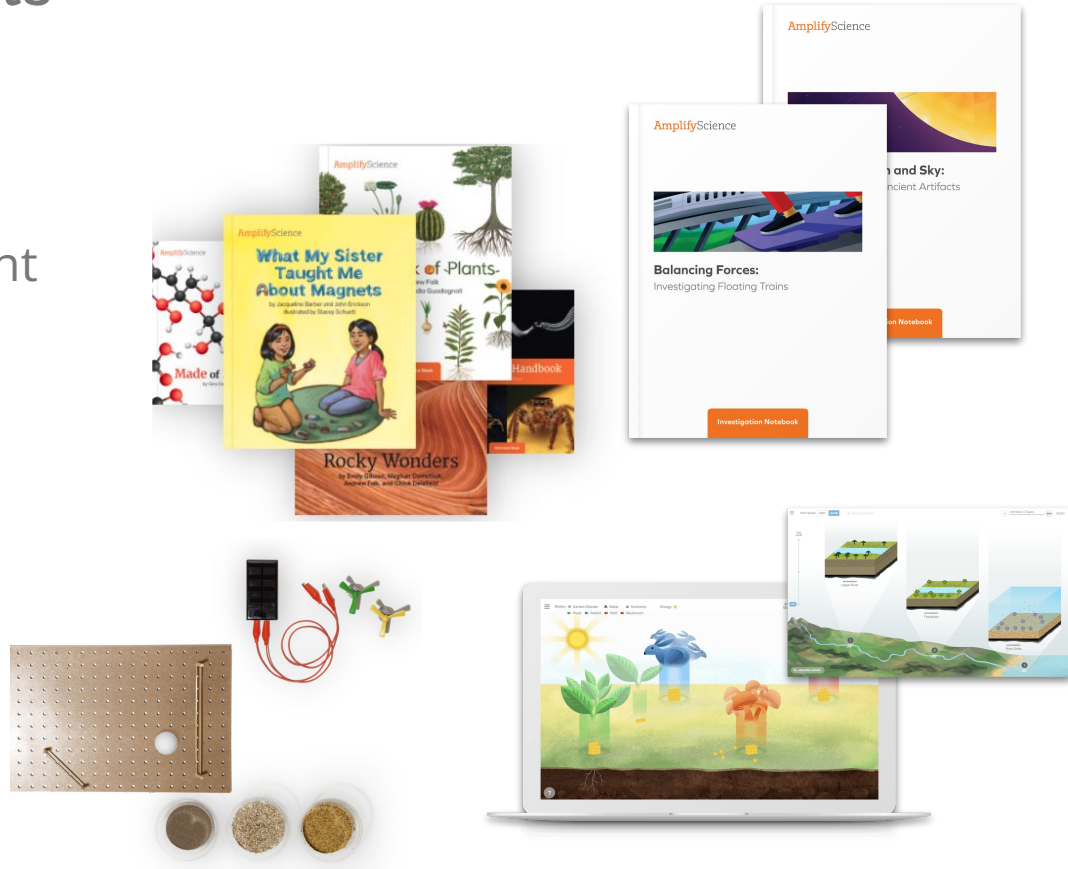




# K-5 Program components

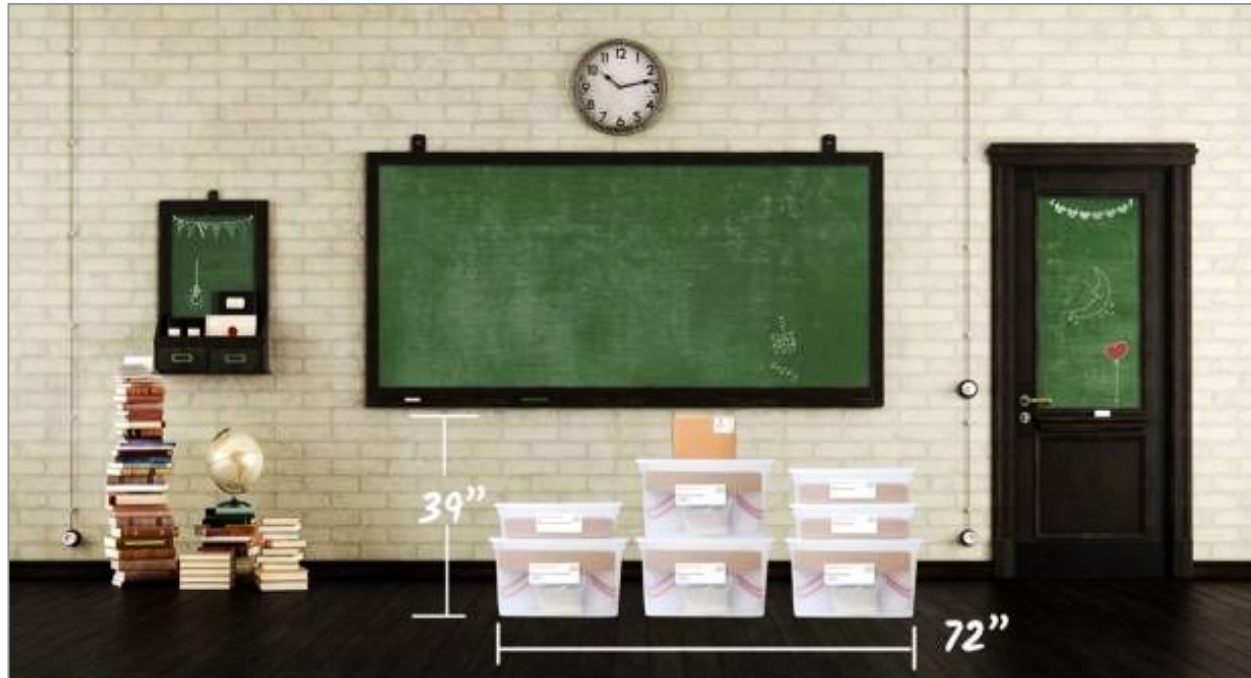
## Student materials

- Hands-on materials
- Investigation Notebooks (print and digital)
- Student books
- Digital Applications



# Prepping Hands-On Materials for the Unit

## Microsite: Unit 1, K-2 Lesson Prep Videos

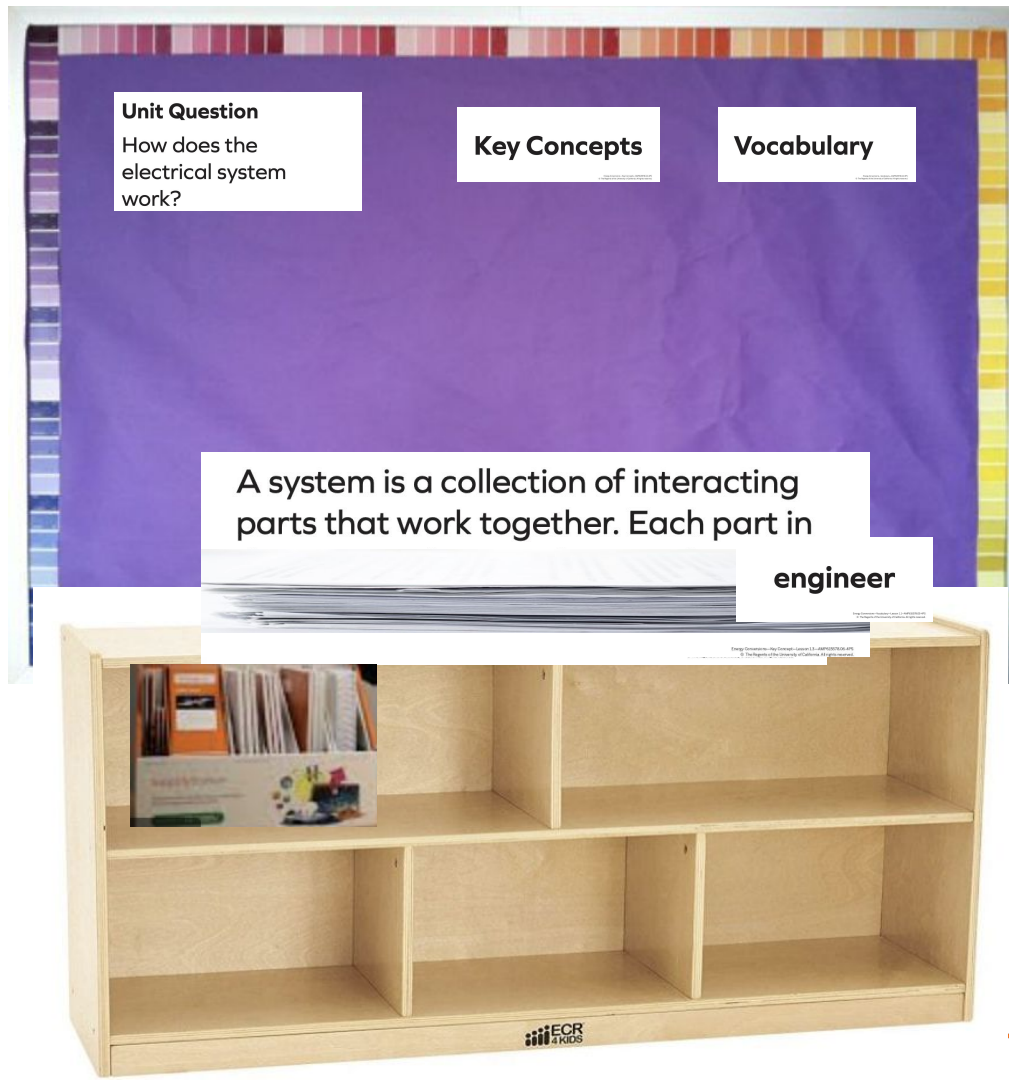


### Classroom Kits

Built for a class of 36 students, with consumables for two years

# Unpacking the Kit

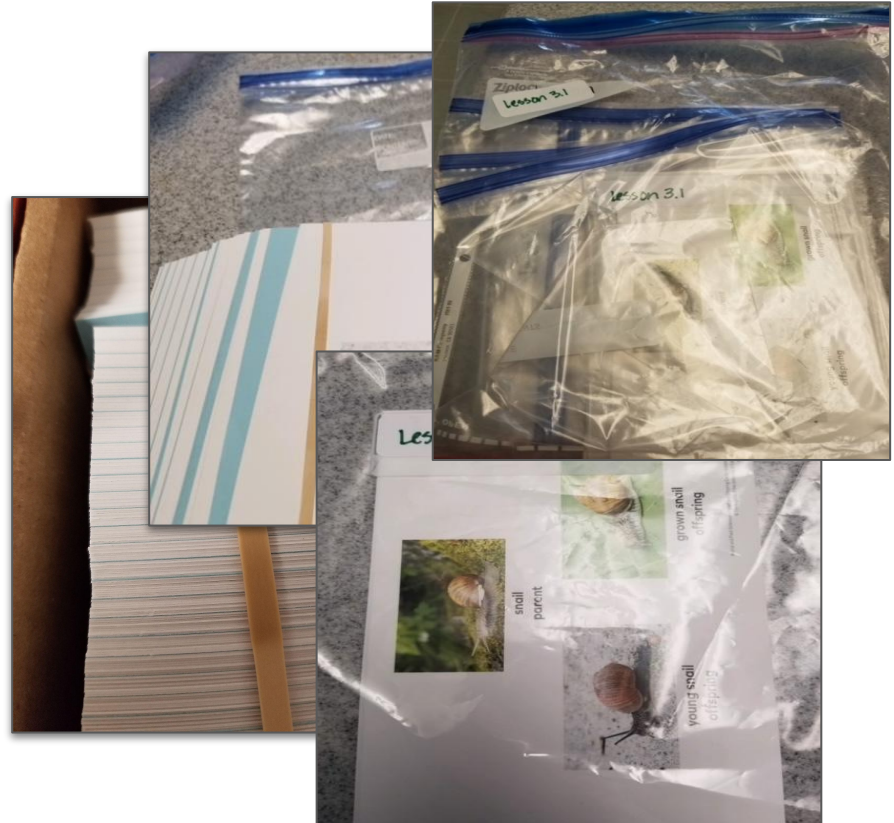
- Pull out the unit question, key concepts and vocabulary materials.
- Place them on the top of the table or bookcase below your science board
- Take books out of kit and place in the bookcase or on the table. (Always collect books after each lesson use. Return to bookcase so they are easily accessible.)



# Cards for games, sorting or matching activities

## Organization tips:

- Separate and place in envelopes or bags (or clip together)
- Label the envelopes or bags with the name and lesson # and activity # (ex. Lesson 2.4, Act. 1)
- Put each envelope or bag (1 set) into a bigger bag and label



# LAUSD Schoology: Unit 1, 3-5 Lesson Prep Videos

The screenshot shows the LAUSD Schoology interface. The top navigation bar is dark blue with the LAUSD logo on the left and icons for search, grid, calendar, and email on the right. The main navigation menu on the left includes 'Home', 'COURSES', 'GROUPS', 'RESOURCES' (circled in orange), and 'TOOLS'. Under 'RESOURCES', there are two sections: 'Group Resources' and 'School Resources'. The 'Group Resources' section is expanded, showing 'Amplify Science- Elementary' (circled in orange) and 'LAUSD Middle School Science - Di...'. The 'School Resources' section shows 'LOS ANGELES USD - 9999' and 'Los Angeles Unified School District'. The 'Group' link in the left sidebar is also circled in orange. The main content area is titled 'Amplify Science- Elementary' and lists several resources. The first resource is 'NGSS Resources' (purple folder icon), added by MARIA ARTEAGA on Jun 1, 2021. The second resource is 'Google Drive link for K-6 Phenomenal Notebooking Resources' (pink folder icon), added by INYOUNG LEE on Feb 1, 2021. The third resource is 'Amplify\_Science\_Shared\_Logins.pdf' (PDF icon), added by Señor Fernando REYES on Aug 9, 2021. The fourth resource is 'Lesson Prep Videos' (green folder icon, circled in orange), added by Terin Ngo on Oct 11, 2021.

LOS ANGELES USD

Home

COURSES GROUPS **RESOURCES** TOOLS

Search

Personal

Public

Group

Group Resources

Amplify Science- Elementary

LAUSD Middle School Science - Di...

School Resources

LOS ANGELES USD - 9999

Los Angeles Unified School District

Amplify Science- Elementary

Title

NGSS Resources

Added by MARIA ARTEAGA · Jun 1, 2021

Google Drive link for K-6 Phenomenal Notebooking Resources

<https://drive.google.com/drive/folders/168S5PDaAsmg6mOg7LUOIhwO8J7GnYn2G?usp=sharing>

Here are digital resources to support the teaching and learning of the anchor phenomena for Amplify Science and FOSS.

Subfolders for Unit 1 and Unit 2.

Note: In the Unit 1 folder for grades 3-6, please find digital phenomenal notebooks which can be assigned to students in Schoology. For K-2, please find a suite of Seesaw activities. Teachers may add the Seesaw activities into their Seesaw accounts and assign them to students.

Added by INYOUNG LEE · Feb 1, 2021

Amplify\_Science\_Shared\_Logins.pdf

Added by Señor Fernando REYES · Aug 9, 2021

Lesson Prep Videos

Added by Terin Ngo · Oct 11, 2021



LAUSD Microsite-  
<https://amplify.com/lausd-science>



# Welcome to Amplify Science!

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This site contains supporting resources designed for the LAUSD Amplify Science adoption for grades TK–8.

- Access the [Amplify Science Program Hub](#) (To help orient you to the new design, watch this [video](#) and view this [reference guide](#).)
- Find out more about [Amplify Science@Home](#)
- Share the [Caregiver Hub](#) (Eng/Span) with your families
- For LAUSD ES Teachers- [Amplify Science & Benchmark Advance Crosswalk](#)
- Instructional guidance for a [Responsive Relaunch of Amplify Science in 21-22](#)

Click the button below to preview the digital Teacher's Guide, and check back for exciting updates to this site!

# Microsite: Unit 1, K-2 Lesson Prep Videos

## Classroom kits

Program Introduction	New! Lesson Prep Videos
Learn more about Amplify Science	Unit 1
LAUSD Training Sessions- Reference Materials	Grade K- Needs of Plants and Animals >
<b>New! Lesson Prep Videos</b>	Grade 1- Animals and Plant Defenses >
Remote Learning Resources	Grade 2- Plant and Animal Relationships >
Onboarding: What to expect	Grade 3- Balancing Forces >
Onboarding videos	Grade 4- Energy Conversions >
Unpacking your first hands-on materials kit	Grade 5- Patterns of Earth and Sky >
Looking for help?	

## Classroom Kits


Built for a class of 36 students, with consumables for two years

[illegible]



# Hands On Material Organization

## Completed for Balancing Forces

Directions				
1. Open the Digital Lesson Guides Only page 7 from the Unit Landing page or go the Print TE to page 31. (Chapter 1 Activities)				
2. Look for the lessons with Hands On.				
HANDS ON 				
3. Note in the table below.				
4. Review the materials and preparation to determine if it can be prepared prior to the lesson or on the day of the lesson.				
5. Use this same procedure for each Chapter. (Go to the Chapter Activities Contents)				
Chapter/Lesson	Activity	Prep Prior	Prep Day of	What to do
1.2	2	X		First, you will need to screw one hook into the short end of each block. You will also need to provide rubber bands. Assemble one gallon-size self-sealing plastic bag of investigation materials for each pair of students, plus one bag for demonstration purposes. Each bag should contain the following items: • 2 blocks, with hooks • 1 balloon • 1 rubber band • 1 paper clip • 1 domino • 1 clothespin • 1 index card
1.4	2	X		Make sure you have a bag of materials from Lesson 1.2 for each pair. Add a rubber ball to each bag.
2.1	1	X		For each group of four students prepare a bag with the following materials: You will pass each group two ring magnets as well. • 1 small paper clip • 1 steel spoon • 1 plastic spoon* • 1 washer • 1 piece of wood (craft stick) • 1 balloon • 1 penny* Create Magnet Anticipatory Chart <a href="https://learning.amplify.com/m4c4c0409cedec1c/original/ELSCI_3-PS_CU_126.pdf">https://learning.amplify.com/m4c4c0409cedec1c/original/ELSCI_3-PS_CU_126.pdf</a>
2.2	1	X		Add to bag from lesson 2.1 • 1 brass-plated paper fastener (brad) • 1 solid-brass paper fastener (brad) • 1 twist tie with iron core • 1 piece of steel wool • 1 scrap of aluminum foil
2.3	1	X		For each pair of students: • 1 copy of Handbook of Forces • 2 ring magnets • 1 small paper clip • 2 sticky notes*
3.1	2	X		Assemble sets of investigation materials. Each pair of students will need one set of the following investigation materials. • 1 paper clip • 1 domino • 1 heavy book
3.3	1	X		For each pair of students: • 1 domino • 1 rubber ball • 1 ring magnet • 1 ball magnet • 1 ramp (cardboard half-pipe) • 1 folded index card • 1 paper clip • 1 piece of wood (craft stick) • 1 steel spoon • 1 washer • 2 wooden blocks with hooks • 1 cardboard half-pipe • 1 rubber band*
4.1	2	X		Each pair of students will receive one set of investigation materials: • 2 ring magnets • 1 pencil • 1 piece of string (8 inches long) • 4 pieces of masking tape (1 inch each)
4.2	1	X		For Each Pair of Students: • 2 ring magnets • 1 large pieces of cardboard (7" x 3.5") • 1 small pieces of cardboard (3.5" x 2") • 1 plastic cup • 1 paper clip with a piece of string (about 8" long) tied to it • several pieces of masking tape • 4 sticky notes • 1 copy of Handbook of Forces

- Open Your **Lesson Guides Only**
- Start with **Chapter 1** and look for the **hands icon**
- Go into the lesson **materials and prep**



JUMP DOWN TO UNIT GUIDE

GENERATE PRINTABLE TEACHER'S GUIDE

Full Teacher's Guide  
(Includes Unit Guide & all 22 Lesson Guides)

Lesson Guides Only  
(Includes Unit Guide & all 22 Lesson Guides)

OPEN IN NEW TAB

RESET LESSON

Overview  
Materials & Preparation  
Differentiation  
Standards  
Vocabulary  
Unplugged?

## Overview

Through reading an informational text, students continue to explore how organisms can be similar and different. Students read the book *Blue Whales and Buttercups*, which provides many examples of the great diversity of organisms on Earth and the many ways in which they can be similar and different. Students are introduced to the sense-making strategy of asking questions and use this strategy to help them understand and engage with the book. The purpose of this lesson is to introduce students to the concept that even though organisms can be quite different, they are all related.

Chapter 3: Why isn't  
lf 44 like the  
on Valley Pack in  
ting style and...

6 Lessons

## Inheritance and Traits Lesson Guides

Chapter 1  
Activities



### Chapter 1 Activities

#### Lesson 1.1: Pre-Unit Assessment

- 1 Introducing the Unit
- 2 Writing Initial Explanations
- 3 Introducing the Investigation Notebook
- 4 Previewing the Reference Book

TEACHER-LED DISCUSSION  
WRITING  
TEACHER-LED DISCUSSION  
STUDENT-TO-STUDENT DISCUSSION

#### Lesson 1.2: Blue Whales and Buttercups

- 1 Introducing Asking Questions
- 2 Partner Reading
- 3 Reflecting on Relatedness

TEACHER-LED DISCUSSION  
READING  
TEACHER-LED DISCUSSION

#### Lesson 1.3: Observing Similarities and Differences

- 1 Observing Similarities and Differences in Animals
- 2 Observing Bird Traits
- 3 Thought Swap

STUDENT-TO-STUDENT DISCUSSION  
STUDENT-TO-STUDENT DISCUSSION



HANDS-ON

#### Lesson 1.4: Introducing Species

- 1 Observing Bird Sounds
- 1 Identifying Songbirds
- 2 Sorting Bear Species
- 3 Introducing the Problem Students Will Investigate

TEACHER  
TEACHER-LED DISCUSSION  
HANDS-ON  
TEACHER-LED DISCUSSION

# Questions?





# Plan for the day: Part 1

- Introduction and Framing
- Phenomenon-based Instruction
- Unit Internalization
- Additional Resources
- Closing

# Next Generation Science Standards

## Phenomenon-based learning and teaching

A scientific phenomenon is an **observable event** that occurs in the universe that we can use science ideas to explain or predict.

# Comparing topics and phenomena

Topic-based	Phenomenon-based
Chemical reactions	There's a reddish-brown substance in a town's tap water.

# Next Generation Science Standards

## How might learning be different?

Topic-based	Phenomenon-based
Chemical reactions	There's a reddish-brown substance in a town's tap water.
Electric circuits	A flashlight won't turn on, even though it used to work.
Natural selection	A population of newts has become more poisonous over time.

# Comparing topics and phenomena

## A shift in science instruction

from learning about  
(like a student)



to figuring out  
(like a scientist)



# Amplify Science Approach

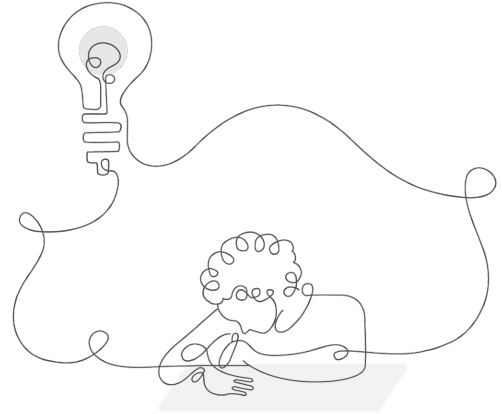


# Previewing the unit

## Introducing the phenomenon

Amplify Science units are designed around complex phenomena that drive student learning through the unit.

Pay attention to the phenomenon, or observable event, students will figure out in your unit.







The train floated up without anything touching it. Later, it fell back down to the track.



We are going to figure out how floating trains work.

# Amplify Science

## Anchoring phenomenon

- Complex and rich
- Drives learning through a whole unit
- Specific and observable
- Relatable at students' developmental level





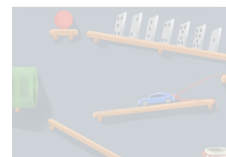
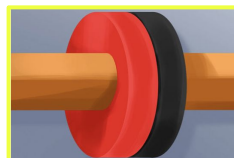
# Plan for the day: Part 1

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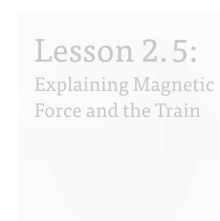
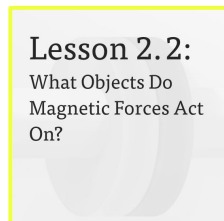
Unit



Chapters



Lessons



Activities

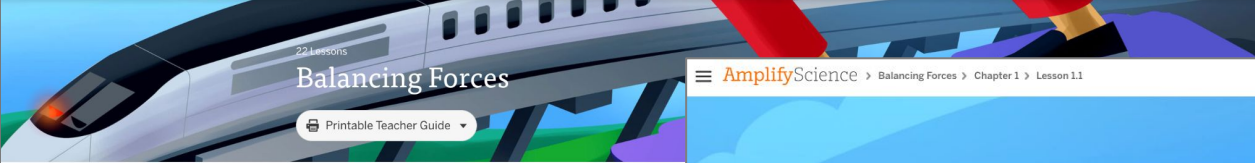


# Let's Go Live!

**Amplify.** CURRICULUM CLASSWORK REPORTING

PROGRAMS & APPS CALIFORNIASCI26 TEACHER

Science California > **Balancing Forces**



## Balancing Forces

22 Lessons

Printable Teacher Guide

Unit Overview

Chapters

Printable Resources

Planning for the Unit

Teacher References

Offline Preparation

### Unit Overview


#### What's in This Unit?

Scientists and engineers have figured out a way to build a train that can travel faster than rolling along the ground. In the *Balancing Forces* unit, students will learn how to design a train that seems to defy logic. Over the course of the unit, through first-hand experience and reading text, students will come to understand how forces can cause motion.


[Read more >](#)

### Chapters

#### Chapter 1: Why does the train rise?

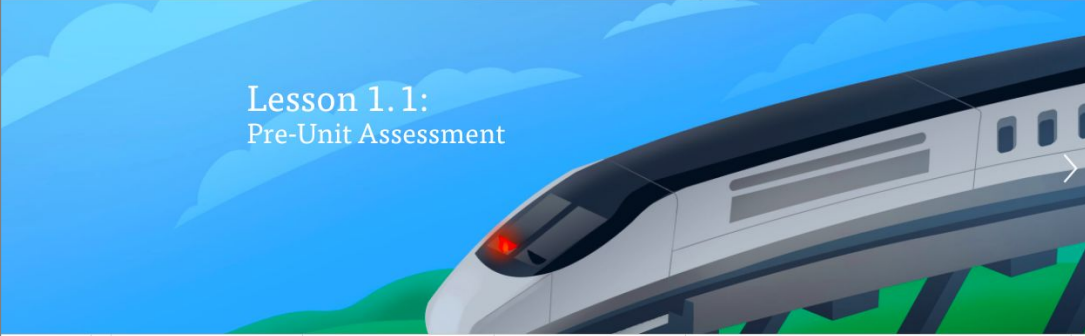


LESSON 1.1  
Pre-Unit Assessment



LESSON 1.2  
Making an Object Move

English Español



## Lesson 1.1: Pre-Unit Assessment

Lesson Brief  
(2 Activities)

TEACHER  
The Floating Train Video

1  
WRITING  
Students Write Initial  
Explanations

2  
TEACHER-LED DISCUSSION  
Introducing Investigation  
Notebooks

RESET LESSON

GENERATE PRINTABLE LESSON GUIDE

Overview

Materials & Preparation

Differentiation

Standards

Unplugged?

### Overview

Students watch a short video about a floating train and write their initial explanations about what they think makes the train rise, float, and then fall. Figuring out how the floating train works is the problem students will solve in this unit. The explanations they provide today serve as a Pre-Unit Assessment for formative purposes, designed to assess students' initial understanding of the unit's concepts.

### Digital Resources

- Classroom Slides 1.1 | PowerPoint
- Classroom Slides 1.1 | Google Slides
- Classroom Videos 1.1 | Zip

English Español



# Navigation summary

1. CLICK the caret to select your grade-level.
2. Select your first unit.
  - a. You are now on the Unit Landing Page.
3. Expand the **Planning for the unit** menu.
  - a. Or scroll down below the lesson buttons.



# Unit Level resources

Collection of resources to support planning and day-to-day instruction in the unit:

- Printable Resources
- “Planning for the Unit” documents
- Teacher References

The screenshot displays the Amplify website interface for the 'Energy Conversions' unit. The top navigation bar includes 'Amplify', 'CURRICULUM', 'CLASSWORK', 'REPORTING', 'PROGRAMS & APPS', and 'NATIONALSCIENCE TEACHER'. The left sidebar lists navigation options: 'Unit Overview' (selected), 'Chapters', 'Printable Resources', 'Planning for the Unit', 'Teacher References', and 'Offline Preparation'. The main content area is titled 'Unit Overview' and includes a section 'What's in This Unit?' with a paragraph about the electrical system and a 'Read more' link. Below this is a 'Chapters' section for 'Chapter 1: What happened to the electrical system the night of the blackout?'. It features six lesson cards: Lesson 1.1 Pre-Unit Assessment, Lesson 1.2 Introducing Systems, Lesson 1.3 Exploring Systems, Lesson 1.4 Electrical Energy, Lesson 1.5 Forms of Energy, and Lesson 1.6 Writing an Argument About the Blackout. The bottom left shows language options for English and Español, and the bottom right has a chat icon.

# Animal and Plant Defenses

22 Lessons

[illegible]

# Key Unit Documents for Unit Planning

22 Lessons

## Animal and Plant Defenses

Printable Teacher Guide

- Unit Overview
- Chapters
- Printable Resources
- Planning for the Unit
- Teacher References
- Offline Preparation

### Unit Overview

What's in This Unit

Earth is inhospitable to most life forms. Each of these kinds of organisms has evolved different ways of getting food, water, and shelter. Read more >

### Chapters

Chapter 1: Pre-Unit Assessment

Chapter 2: Tortoise Parts

Chapter 3: Animal and Plant Structures

### Unit Overview

What's in This Unit?

Earth is inhospitable to most life forms. Each of these kinds of organisms has evolved different ways of getting food, water, and shelter. Read more

### Printable Resources

- 3-D Assessment Objectives
- Copymaster Compilation
- Eliciting and Leveraging Students' Prior Knowledge, Personal Experiences, and Cultural Backgrounds
- Multi-Language Glossary
- Print Materials (8.5" x 11")
- Coherence Flowcharts
- Crosscutting Concept Tracker
- Investigation Notebook
- NGSS Information for Parents and Guardians
- Print Materials (11" x 17")

LESSON 1.1 Pre-Unit Assessment

LESSON 1.2 Tortoise Parts

LESSON 1.3 Animal and Plant Structures

## Core Unit Planning & Internalization

Unit Title:		1
<b>Overview</b> [Resources: Unit Overview, Teacher's Guide, Coherence Flowchart, Unit Map, 3-D Statements]		
What is the phenomenon/real-world problem students are investigating in your unit?	Student Role:	2 3
Unit Question:	Relationship between the Unit Phenomenon and Unit Question:	4 5
By the end of the unit, students figure out...		6
How do students engage with three-dimensional learning to figure out the phenomenon/real-world problem in your unit?		7

### Unit Guide resources:

- Unit Overview
- Unit Map
- Coherence Flowchart

### Unit Guide resources:

- Lesson Overview Compilation
- Unit Overview

### Unit Guide resources:

- Unit Map

### Unit Guide resources:

- 3D Statements at the Unit Level

## Core Unit Planning & Internalization

Unit Title:

### Balancing Forces

#### Overview

[Resources: Unit Overview, Teacher's Guide, Coherence Flowchart, Unit Map, 3-D Statements]

What is the phenomenon/real-world problem students are investigating in your unit?

How is it possible for a train to float?

Student Role:

Engineer

Unit Question:

What can make an object move or not move?

Relationship between the Unit Phenomenon and Unit Question:

In coming to understand how a floating train works, students grasp of an array of foundational concepts in the area of force and motion.

By the end of the unit, students figure out...

More than one force can be exerted on the train at a time. The force of gravity is pulling the train toward Earth, and magnetic force is pushing the train up away from the tracks. Those forces work in opposite directions so when the forces are balanced, the train floats and stays in the air.

How do students engage with three-dimensional learning to figure out the phenomenon/real-world problem in your unit?

Students plan and conduct investigations, analyze patterns in data (patterns), and obtain information about magnetic force, gravity, and balanced and unbalanced forces. Students write explanations and create physical models and diagram models to show why the train's vertical motion is stable at times and changes at times.



# Questions?



# Plan for the day: Part 1

- Introduction and Framing
- Phenomenon-based Instruction
- Unit Internalization
- Additional Resources
- Closing



# Additional resources

## Welcome, caregivers!

---

We hope you enjoy learning more about Amplify Science and what students are learning in science this year.

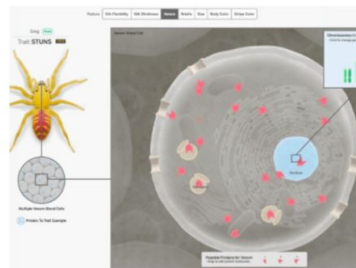
[Para acceder a este sitio en español haga clic aquí.](#)

Amplify welcomes you and your learner to the Science program for the new school year. We are very excited to provide you with exceptional learning opportunities through Science. Below are resources and helpful guides for enabling your student to have the most productive experience with our platform throughout the year.

 [Contact Us](#)



Grades 6-8



# LAUSD Microsite-

## <https://amplify.com/laUSD-science>

### Welcome to Amplify Science!

---

This site contains supporting resources designed for the LAUSD Amplify Science adoption for grades TK–8.

- Access the [Amplify Science Program Hub](#) (To help orient you to the new design, watch this [video](#) and view this [reference guide](#).)
- Find out more about [Amplify Science@Home](#)
- Share the [Caregiver Hub](#) (Eng/Span) with your families
- For LAUSD ES Teachers- [Amplify Science & Benchmark Advance Crosswalk](#)
- Instructional guidance for a [Responsive Relaunch of Amplify Science in 21-22](#)

Click the button below to preview the digital Teacher's Guide, and check back for exciting updates to this site!



# Program Hub

Use the Amplify Science Program Hub to find useful resources for implementing Amplify Science, including unit overview videos and planning tools.

The screenshot shows the Amplify Science Program Hub interface. At the top, there's a navigation bar with 'Amplify', 'CURRICULUM', 'CLASSWORK', and 'REPORTING'. Below this, a dark banner displays 'Science California' and 'Balancing Forces'. The main content area features a large illustration of a train on a track with a person's legs and feet standing on it. The text 'Balancing Forces' is prominently displayed, along with '22 Lessons' and a 'Printable Teacher Guide' button. On the left, a sidebar lists 'Unit Overview', 'Chapters', 'Printable Resources', 'Planning for the Unit', 'Teacher References', and 'Offline Preparation'. The 'Unit Overview' section is expanded, showing 'What's in This Unit?' with a paragraph of text and a 'Read more' link. Below this, the 'Chapters' section is visible, starting with 'Chapter 1: Why does the train rise?'. Three lesson thumbnails are shown: 'LESSON 1.1 Pre-Unit Assessment', 'LESSON 1.2 Making an Object Move', and 'LESSON 1.3 Force All Around'. An orange circle highlights the 'PROGRAMS & APPS' button in the top navigation bar.

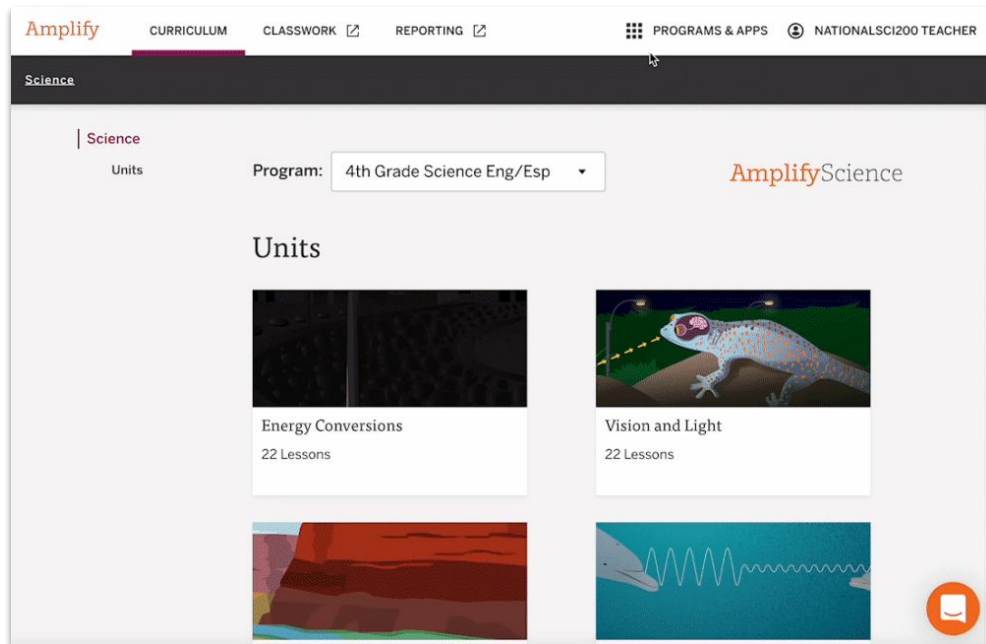
This screenshot shows the Amplify Science Program Hub interface for the 'Energy Conversions' unit. The top navigation bar includes 'Amplify', 'CURRICULUM', 'CLASSWORK', and 'REPORTING'. Below the navigation bar, a dark banner displays 'Science' and 'Units'. The main content area features a large illustration of a train on a track with a person's legs and feet standing on it. The text 'Energy Conversions' is prominently displayed, along with '22 Lessons' and a 'Printable Teacher Guide' button. On the left, a sidebar lists 'Unit Overview', 'Chapters', 'Printable Resources', 'Planning for the Unit', 'Teacher References', and 'Offline Preparation'. The 'Unit Overview' section is expanded, showing 'What's in This Unit?' with a paragraph of text and a 'Read more' link. Below this, the 'Chapters' section is visible, starting with 'Chapter 1: Why does the train rise?'. Three lesson thumbnails are shown: 'LESSON 1.1 Pre-Unit Assessment', 'LESSON 1.2 Making an Object Move', and 'LESSON 1.3 Force All Around'. An orange circle highlights the 'PROGRAMS & APPS' button in the top navigation bar.

The screenshot shows the Amplify Science Program Hub welcome page. The top navigation bar includes 'Amplify', 'CURRICULUM', 'CLASSWORK', and 'REPORTING'. Below the navigation bar, a dark banner displays 'Science' and 'Units'. The main content area features a large illustration of a train on a track with a person's legs and feet standing on it. The text 'Energy Conversions' is prominently displayed, along with '22 Lessons' and a 'Printable Teacher Guide' button. On the left, a sidebar lists 'Unit Overview', 'Chapters', 'Printable Resources', 'Planning for the Unit', 'Teacher References', and 'Offline Preparation'. The 'Unit Overview' section is expanded, showing 'What's in This Unit?' with a paragraph of text and a 'Read more' link. Below this, the 'Chapters' section is visible, starting with 'Chapter 1: Why does the train rise?'. Three lesson thumbnails are shown: 'LESSON 1.1 Pre-Unit Assessment', 'LESSON 1.2 Making an Object Move', and 'LESSON 1.3 Force All Around'. An orange circle highlights the 'PROGRAMS & APPS' button in the top navigation bar.

# Explore the Program Hub

Familiarize yourself with the Program Hub.

Be ready to share one resource you've found that you'll use while planning and teaching.





# Plan for the day: Part 1

- Introduction and Framing
- Phenomenon-based Instruction
- Unit Internalization
- Additional Resources
- Closing

# Overarching goals

- ✓ Explain how students engage in phenomenon based and 3D learning to construct an understanding of the science concepts introduced in the unit
- ✓ Internalize the unit and apply your new understanding to plan for the diverse needs of your classroom and students



# Closing reflection

Based on our work in Part 1, share:

**Head:** something you'll keep in mind

**Heart:** something you're feeling

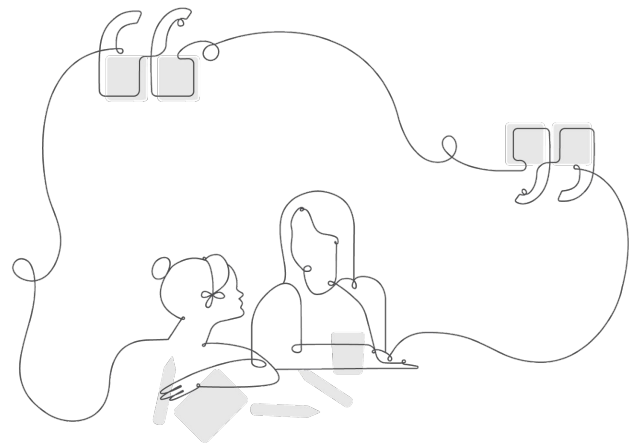
**Feet:** something you're planning to do

# Onsite Upcoming Professional Development!

## Part 3: Unit 1 - Supporting English Learners

- October 15th (Alta California ES, NW)
- October 29th (Ochoa Learning Center, East)

In this session, participants explore strategies to support English learners' ability to do, talk, read, write, visualize, and construct arguments like scientists. Participants will identify the supports and strategies embedded in Unit 1 by engaging in model activities followed by independent planning.





# Additional resources and ongoing support

## Customer Care

Seek information specific to enrollment and rosters, technical support, materials and kits, and teaching support, weekdays 7AM-10PM EST and weekends 10AM-6PM EST.



[help@amplify.com](mailto:help@amplify.com)



800-823-1969



Amplify Chat



# Please provide feedback!

**Type:**

Strengthen

**Session title:**

Unit Internalization / Guided Planning

(Part 1)

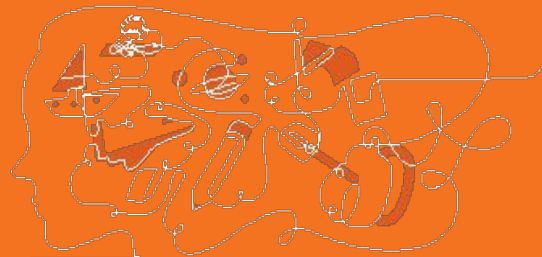
**Professional Learning Specialist name:**

Insert name

(insert email, if you would like)

# Part 2:

## Guided Lesson Planning



# Welcome to Amplify Science!

or use Demo Account

1. Go to **learning.amplify.com**
2. Select **Log in with Amplify**
3. If you're already logged in with other Google accounts, click **Use another account**
4. Enter teacher demo account credentials
  - UN: californiasci60@pd.tryamplify.net
  - PW: AmplifyNumber1
5. Explore as we wait to begin

**Do Now:** Log in through your Schoology account

Welcome to **Amplify**

G

Log In with Google

C

Log In with Clever

A.

Log In with Amplify



SSO login

# Amplify Science

## Unit Internalization / Guided Planning

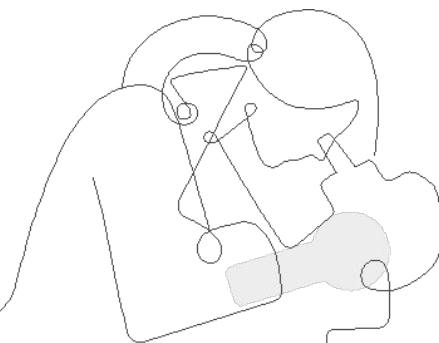
Grade 3, Unit 1: Balancing Forces

### Part 2

School/District Name: LAUSD

Date: September, 2022

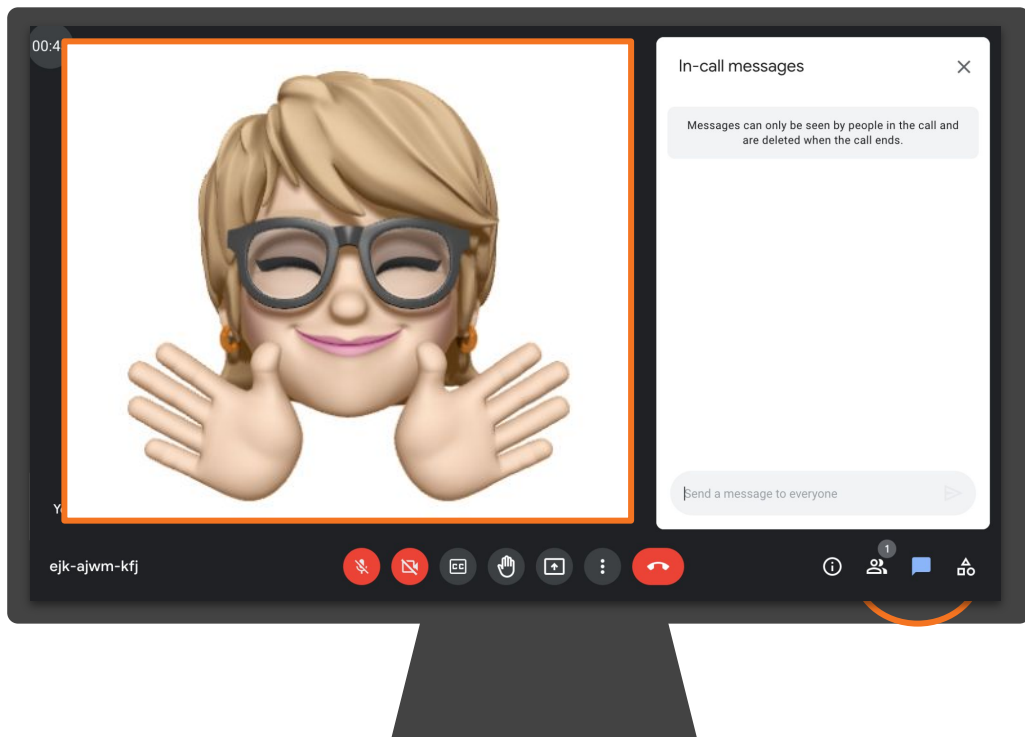
Presented by:



# Ice Breaker!

## Who do we have in the room today?

- **Question 1:** Which aspects of implementing the Amplify Science standard curriculum has been the most successful?
- **Question 2:** Which aspects have been the most challenging?



# Amplify's Purpose Statement

Dear teachers,

You do a job that is nearly impossible and **utterly essential**.

**We are in your corner** – extending your reach, saving you time, and enhancing your understanding of each student.

**Thank you for working with us** to craft rigorous and riveting learning experiences for your classroom.

We share your goal of **inspiring all students to think deeply, creatively, and for themselves**.


Sincerely,  
Amplify

# Norms: Establishing a culture of learners

- **Take risks:** Ask any questions, provide any answers.
- **Participate:** Share your thinking, participate in discussion and reflection.
- **Be fully present:** Unplug and immerse yourself in the moment.
- **Physical needs:** Stand up, get water, take breaks.



# Schoolology



LOS ANGELES UNIFIED SCHOOL DISTRICT

About Los Angeles Unified Find a School Offices Classic View Families Employees

COURSES GROUPS RESOURCES TOOLS

Back to Schoolology Home Page

## LMS App Center

The LMS App Center provides a catalog of District-approved digital content and learning tools (including digital components of adopted textbooks) that are available for classroom teachers and students to access within the learning management system, Schoolology.

For information on District-approval policies and procedures, please visit: [udipplausd.net](https://udipplausd.net).

- To search the full list of digital learning tools, click "Submit".
- To search by Publisher Name or Textbook Title, type in a word associated to your adopted publisher, then click "Submit".
- To narrow your search with filters such as Content Area, Grade Level, or Content Type, select from the dropdown menu, then click "Submit".

To learn more about using the LMS App Center, please refer to the following video overview.

Publisher Name Starts With

Content Area All

Grade Level All

Content Type All

Textbook Title Starts With

Submit

All Amplify Products



## LMS App Center

The LMS App Center provides a catalog of District-approved digital content and learning tools (including digital components of adopted textbooks) that are available for classroom teachers and students to access within the learning management system, Schoolology.

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- To search the full list of digital learning tools, click "Submit".
- To search by Publisher Name or Textbook Title, type in a word associated to your adopted publisher, then click "Submit".
- To narrow your search with filters such as Content Area, Grade Level, or Content Type, select from the dropdown menu, then click "Submit".

To learn more about using the LMS App Center, please refer to the following video overview.

Search Again

### Amplify

Content Area: ELA  
Grade Level: ES  
Content Type: Supplemental  
Integration Type: App (Left Navigation)  
Purchase Type: District and School  
Getting Started Guide  
Other Info: School licenses required  
mCLASS  
CKLA  
Amplify Reading  
Amplify Science  
Creative

Vendor Support Desk:  
P: 800.823.9969  
E: [help@amplify.com](mailto:help@amplify.com)  
S: [amplify.com/support/](https://amplify.com/support/)  
Textbook Title(s):  
NA



my.amplify.com

Amplify MY ACCOUNT ADMIN REPORTS

LAUNCH PROGRAMS @ TERIN NGA

Hi, Terin

Classes

Programs & Licenses

Account Settings

Help Center C2

CKLA Hub CKLA Resource Site mCLASS Assessment mCLASS Reporting Reading 6-8

Reading K-5 Science Vocabulary

op is for only)

# Join Amplify Science Schoology Group

To join Amplify Science Schoology  
ES Group: W4PK-W466-63F5B

# Navigation Temperature Check

Rate yourself on your comfort level accessing Amplify Science materials and navigating a digital curriculum.

1 = Extremely Uncomfortable

2 = Uncomfortable

3 = Mild

4 = Comfortable

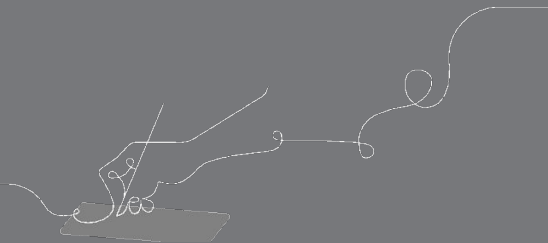
5 = Extremely Comfortable

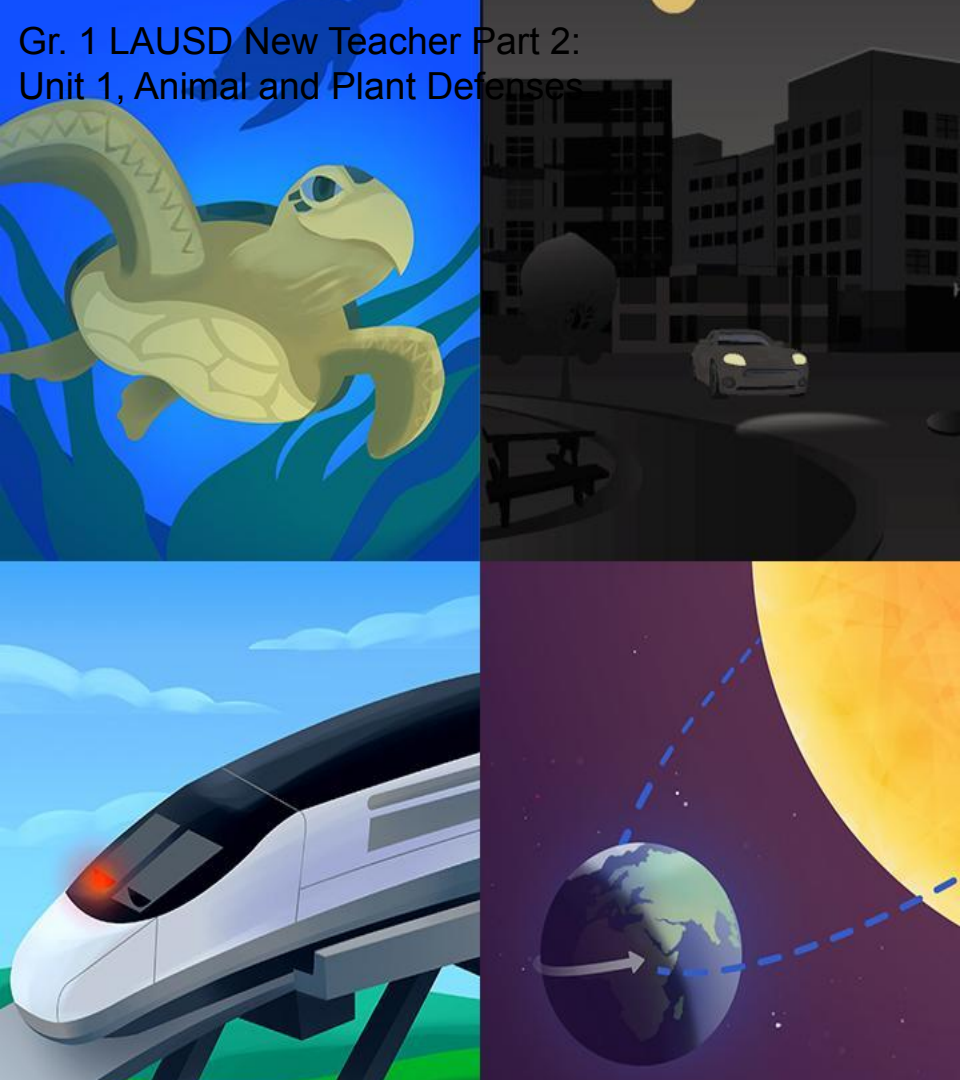
# Overarching goals

By the end of this workshop, you will be able to:

- ❑ Describe what teaching and learning look like in Amplify Science.
- ❑ Prepare to teach using Amplify Science resources.

e

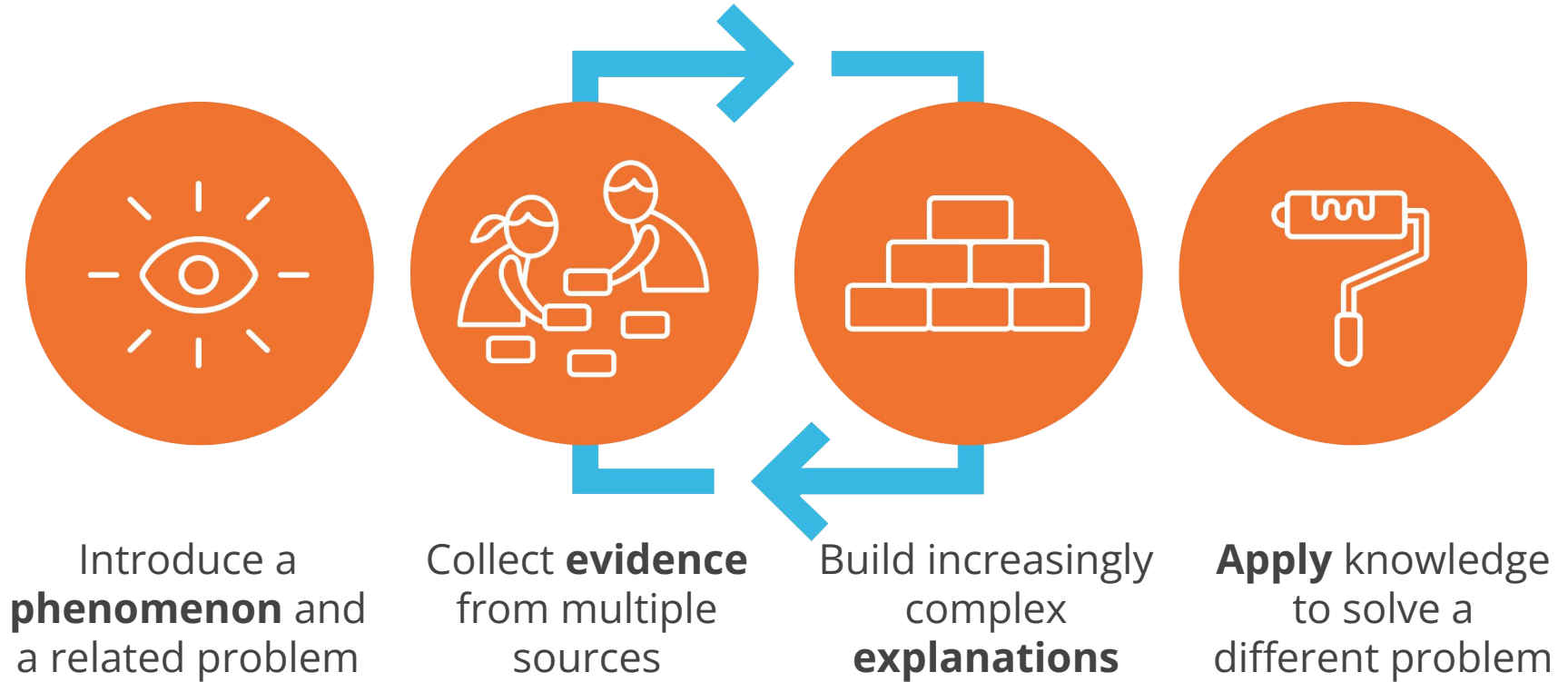




## Plan for the day: Part 2

- Teaching and Learning in an Amplify Science Lesson
- Instructional Approach Reflection
- Planning a Lesson
- Closing

# Amplify Science Approach



# Balancing Forces

What can make an object move or not move?

Students explore forces that are acting on and around them every day, often unseen and misunderstood. They will discover how magnetic force can be used to counterbalance the force of gravity.



# Balancing Forces

**Problem:** How is it possible for a train to float?

**Role:** Engineers

Students are challenged to figure out how the floating train works in order to explain it to the citizens of Faraday.



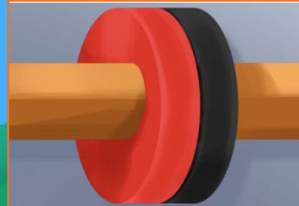


# Coherent Storylines



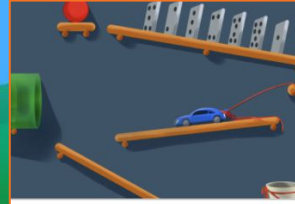
Chapter 1: Why does the train rise?

4 Lessons



Chapter 2: Why does the train rise without anything touching it?

5 Lessons



Chapter 3: Why does the train fall?

4 Lessons



Chapter 4: Why does the train float, even though gravity is acting on it?

4 Lessons



Chapter 5: Why does the train change from floating to falling?

5 Lessons

# Explaining the phenomenon: Science Concepts

What **science concepts** do you think students need to understand in order to **explain the phenomenon?**



# Progress Build

## Balancing Forces

**Assumed prior knowledge (preconceptions):** When you push or pull something, it starts moving.

### Level 1

A force is a push or pull that acts between two objects.

### Level 2

Forces can be touching or non-touching.

### Level 3

More than one force can act on an object at the same time. When those forces are balanced, a still object will remain still; when those forces are unbalanced, the object will start to move.

# Beginning the Unit

The first lesson of every Unit is a pre-unit assessment.

## Chapters

Chapter 1: How does Spruce the Sea Turtle do what she needs to do to survive? ⓘ



LESSON 1.1  
Pre-Unit Assessment



LESSON 1.2  
Tortoise Parts



LESSON 1.3  
Animal and Plant  
Structures



LESSON 1.4  
Surviving by Not Being  
Eaten



LESSON 1.5  
Explaining Sea Turtle  
Survival

# Balancing Forces Family Connection

## Lesson 1.1: Pre-Unit Assessment

2

TEACHER-LED DISCUSSION  
Introducing Investigation  
Notebooks

RESET LESSON

GENERATE PRINTABLE LESSON

Overview

Materials & Preparation

Differentiation

Standards

Unplugged?

### Overview

Students watch a short video about a floating train and write their initial explanations about what they think makes the train rise, float, and then fall. Figuring out how the floating train works is the problem students will solve in this unit. The explanations they provide today serve as a Pre-Unit Assessment for formative purposes, designed to reveal students' initial understanding of the unit's core content prior to instruction. As such, students' explanations offer a baseline from which to measure growth of understanding over the course of the unit. These three-dimensional assessments can also provide the teacher with insight into students' thinking as they begin this unit of instruction. This will allow the teacher to draw connections to students' experiences and to watch for preconceptions that might get in the way of students' understanding. At the end of the lesson, students will receive their Investigation Notebooks and learn some of the ways that scientists use notebooks.

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

**Chapter-level Anchor Phenomenon:** The train rises above the track.

**Students learn:**

- Reflecting on what you understand and don't understand allows you to prepare for learning new things.

### Digital Resources

- Classroom Slides 1.1 | PowerPoint
- Classroom Slides 1.1 | Google Slides
- Classroom Videos 1.1 | Zip
- Video: Floating Train
- Pre-Unit Writing: Explaining the Float copymaster
- Assessment Guide: Interpreting Student Unit Explanations About the Floating
- Balancing Forces Investigation Notebook
- Questioning Strategies for Grades 2-4
- Balancing Forces Family Connections Homework**
- Eliciting and Leveraging Students' Prior Knowledge, Personal Experiences, and Backgrounds
- Crosscutting Concept Tracker

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## ***Balancing Forces Family Connections Homework***

1. Choose a member of your family and tell them about what we are investigating in science class.
2. Ask them about their experiences, ideas, and questions related to our investigations.
3. Write notes about what you learn.

### **Summary of our investigation you can share:**

In science class, we are working as scientists to figure out how a floating train works. We will be answering the question, *What can make an object move or not move?*

### **Ask questions such as:**

- What does our investigation make you think of?
- Do you have any memories, stories, expertise, or experiences about something like what we're investigating?
- What have you heard or learned about these topics?
- What do you wonder about what we are investigating?

# Beginning the Unit

## Model lesson 1.2

### Chapters

Chapter 1: How does Spruce the Sea Turtle do what she needs to do to survive? ⓘ



LESSON 1.1  
Pre-Unit Assessment



LESSON 1.2  
Tortoise Parts



LESSON 1.3  
Animal and Plant  
Structures



LESSON 1.4  
Surviving by Not Being  
Eaten



LESSON 1.5  
Explaining Sea Turtle  
Survival

A sleek, white high-speed train with a black stripe and a glowing red light on its nose is traveling on a grey track. The track curves through a vibrant green landscape with rolling hills. The sky is a clear blue with soft, white clouds. The train is moving from the right side of the frame towards the left.

**Grade 3 | Balancing Forces**

# **Lesson 1.2: Making an Object Move**



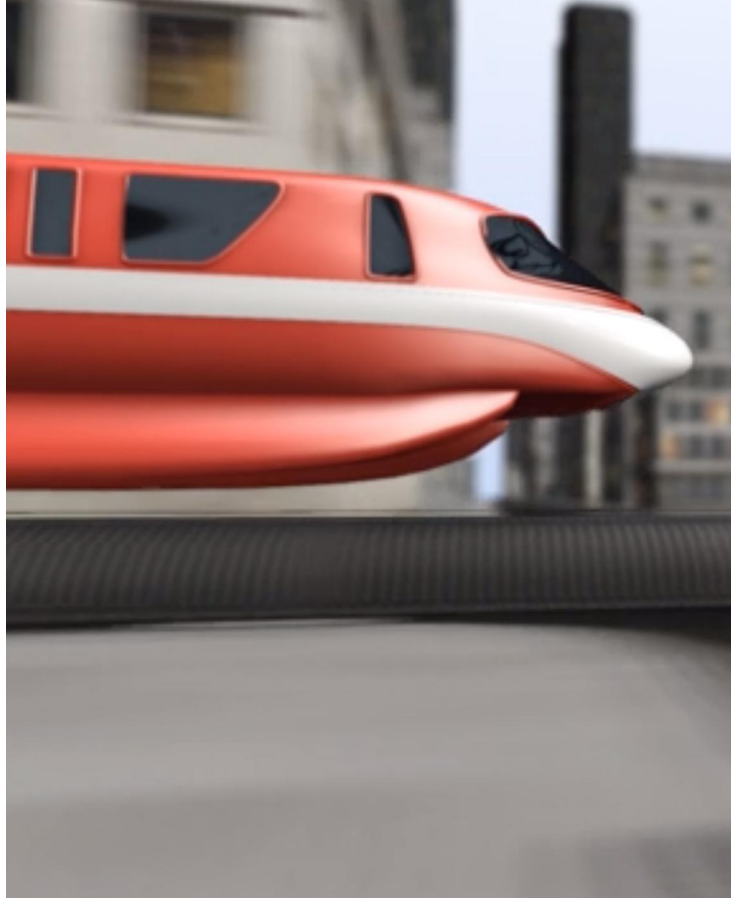
## Activity 1

# Discussing Initial Ideas









Real engineers invented floating trains. The trains are faster and use less energy than regular trains.



You will be student **scientists** investigating what can make things move, float, and fall.

# Think-Pair-Share Routine



## Think

Think silently about the question.



## Pair

Turn and talk to a partner about the question.

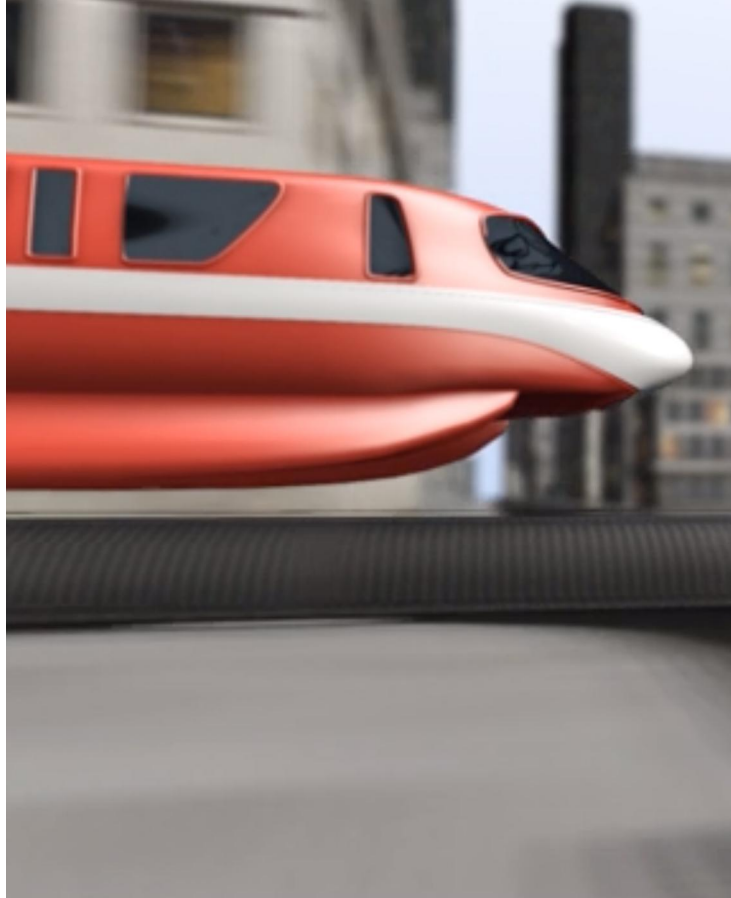


## Share

Share your ideas about the question with the class.



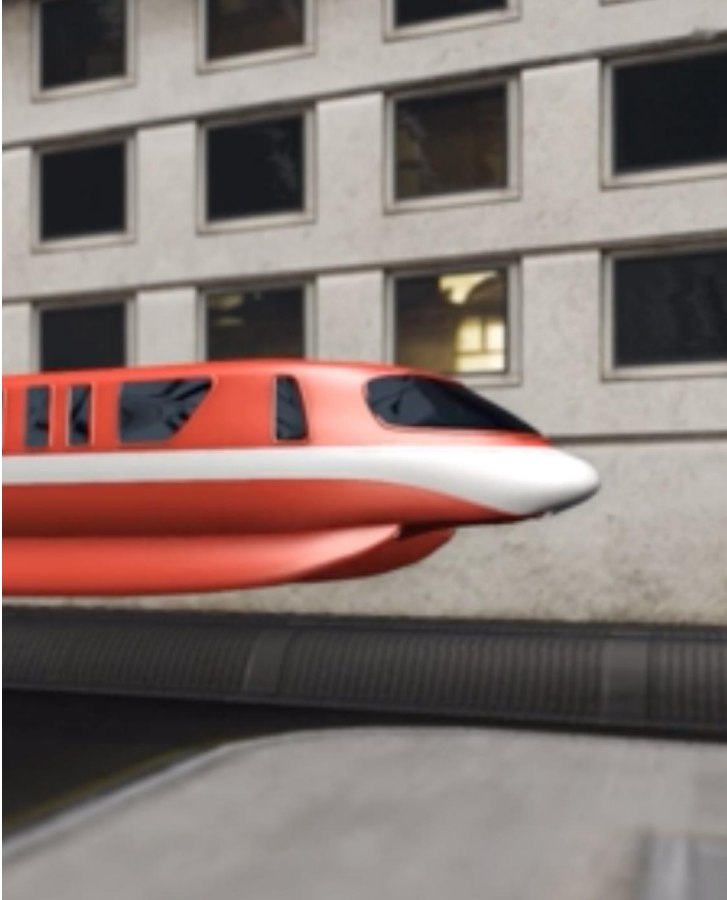
What do you think could  
make a train **rise up** off  
the track?



What do you think could  
make a train **float above**  
the track?



What do you think could  
make a train **fall back**  
onto the track?



What questions do you have about the floating train?





## **Unit Question**

What can make an object move or not move?



## Chapter 1 Question

Why does the train rise?

## Activity 2

# Making Blocks Move



Today, we're going to investigate this question:

What makes an object start to move?



## Vocabulary



**observe**

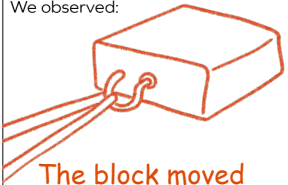
to use any of the five senses to learn more about something

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Making Blocks Move**

Directions:

1. With your partner, use the materials in your bag to make a block start moving.
2. In each box, record the object you used to make the block move.
3. In each box, record or draw your observation.

<p>We used <u>a rubber band</u>.</p> <p>We observed:</p>  <p>The block moved forward.</p>	<p>We used _____.</p> <p>We observed:</p>
<p>We used _____.</p> <p>We observed:</p>	<p>We used _____.</p> <p>We observed:</p>

On page 2 of the Investigation Notebook, we will **record what we observed** with words and drawings.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Making Blocks Move**

Directions:

1. With your partner, use the materials in your bag to make a block start moving.
2. In each box, record the object you used to make the block move.
3. In each box, record or draw your observation.

We used _____. We observed:	We used _____. We observed:
We used _____. We observed:	We used _____. We observed:



**Write and draw** to record how you made the block move and what you observed.






Find many ways to make one of the blocks start moving.

## Activity 3

# Sharing Observations




Class Observation Table

Object 1	Object 2	Observation	Push, a pull, or not sure
			

We will gather observations from the whole class and record them in this table.

Class Observation Table

Object 1	Object 2	Observation	Push, a pull, or not sure
			

When scientists gather observations, they look for patterns they can notice.



What patterns do you notice?

## Vocabulary



**force**

a push or a pull

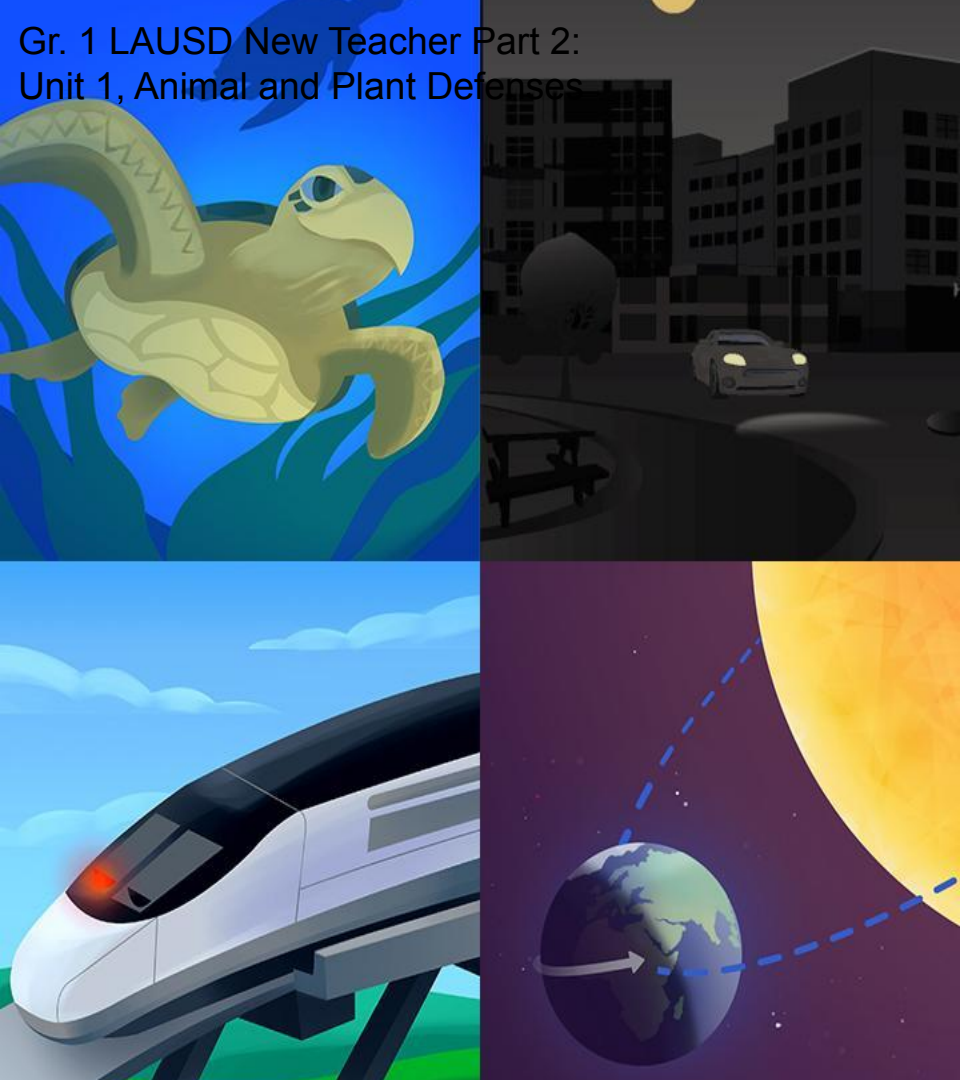
# End of Lesson



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HALL OF SCIENCE  
UNIVERSITY OF CALIFORNIA, BERKELEY

Amplify.

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## Plan for the day: Part 2

- Teaching and Learning in an Amplify Science Lesson
- Instructional Approach Reflection
- Planning a Lesson
- Closing

# Balancing Forces Lesson 1.2



Class Observation Table			
Object 1	Object 2	Observation	Push, a pull, or not sure



# Evidence sources work together

## Investigate making blocks move and sharing observations

How do these activities  
**work together** to  
support understanding of  
what makes an object  
start to move?

Investigation Question: What makes an  
object start to move?



# Gathering evidence

## Balancing Forces Lesson 1.2

Chapter Question: Why does the train rise?



Investigation Question: What makes an object start to move?



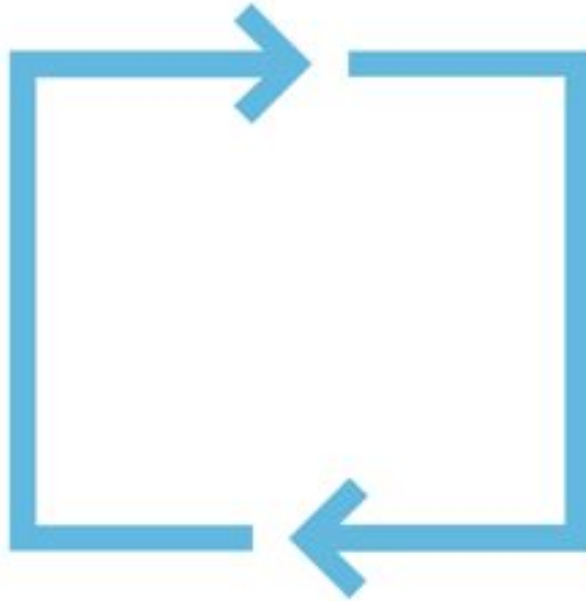
Class Observation Table			
Object 1	Object 2	Observation	Push, a pull, or not sure



**What have students figured out so far?**

# Multimodal learning

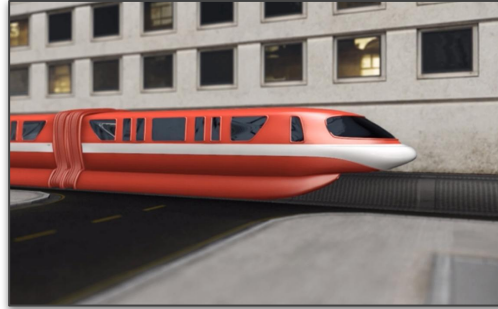
Gathering evidence over multiple lessons



**Do,  
Talk,  
Read,  
Write,  
Visualize**

# Evidence sources work together

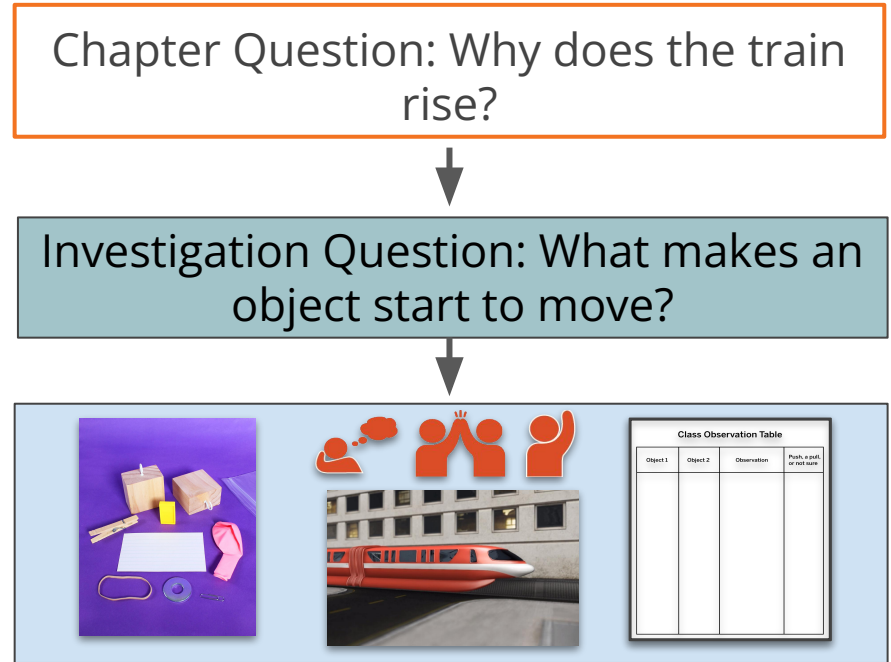
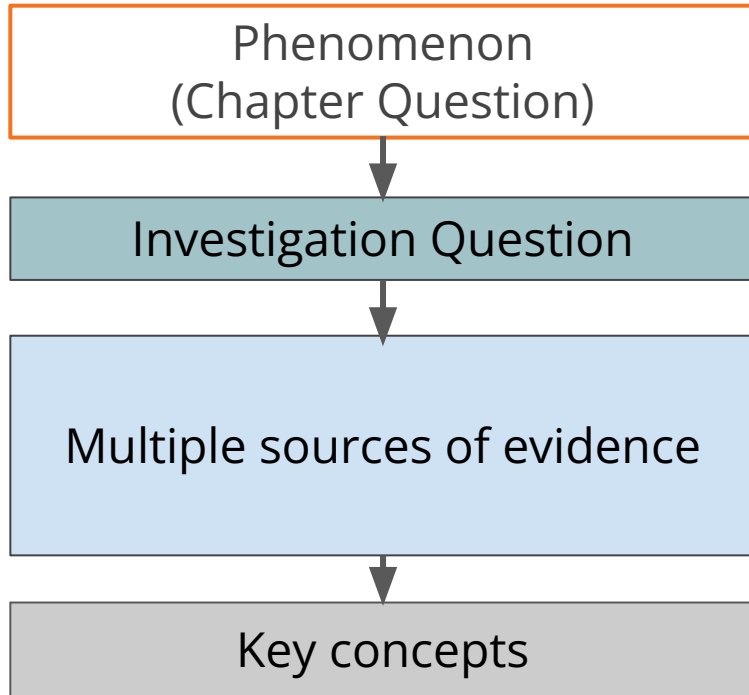
**Teacher tip:** Every evidence source plays an important role in student learning. Be sure to teach every activity in order!



Class Observation Table			
Object 1	Object 2	Observation	Push, a pull, or not sure

# Coherence Flowchart

## A diagram of student learning



# Coherence Flowchart

## Balancing Forces Lesson 1.2-1.4

Chapter Question: Why does the train rise?



Investigation Question: What makes an object start to move?



Evidence: Investigate by making blocks move (1.2)

**Evidence: Read *Forces All Around* (1.3)**

**Evidence: View *Domino* video(1.4)**

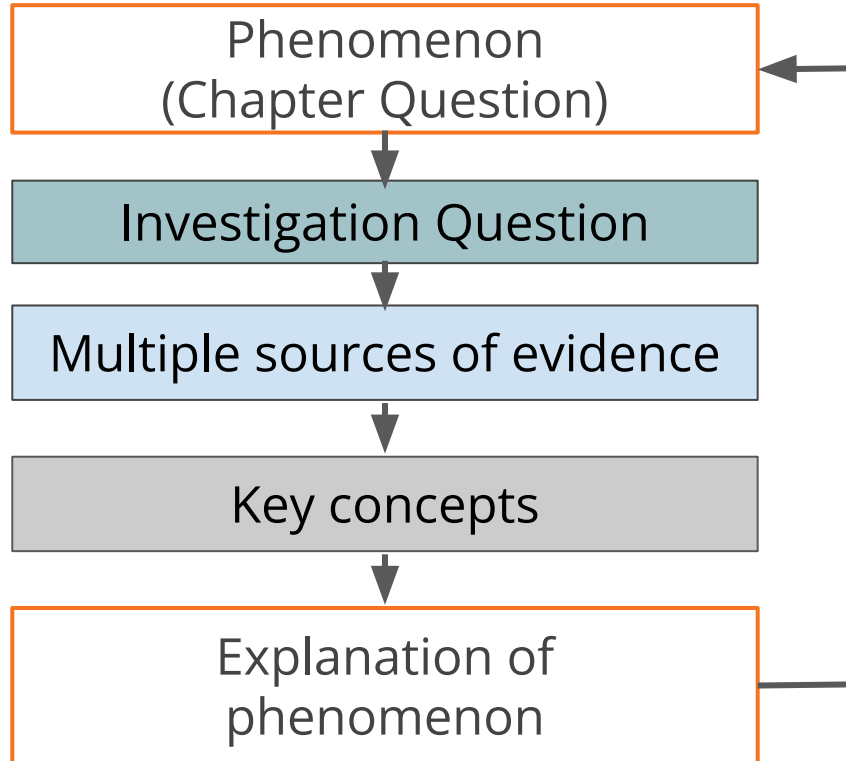
**Evidence: Create and analyze chain reactions (1.4)**



Key concepts: A force acts between two objects. When an object starts moving or stops moving, that is evidence that a force has acted on it.

# Coherence Flowchart

A diagram of student learning



# Coherence Flowchart

## Balancing Forces Lesson 1.2-1.4

Chapter Question: Why does the train rise?



Investigation Question: What makes an object start to move?



Evidence: Investigate by making blocks move (1.2)

Evidence: Read Forces All Around (1.3)

Evidence: View Domino video(1.4)

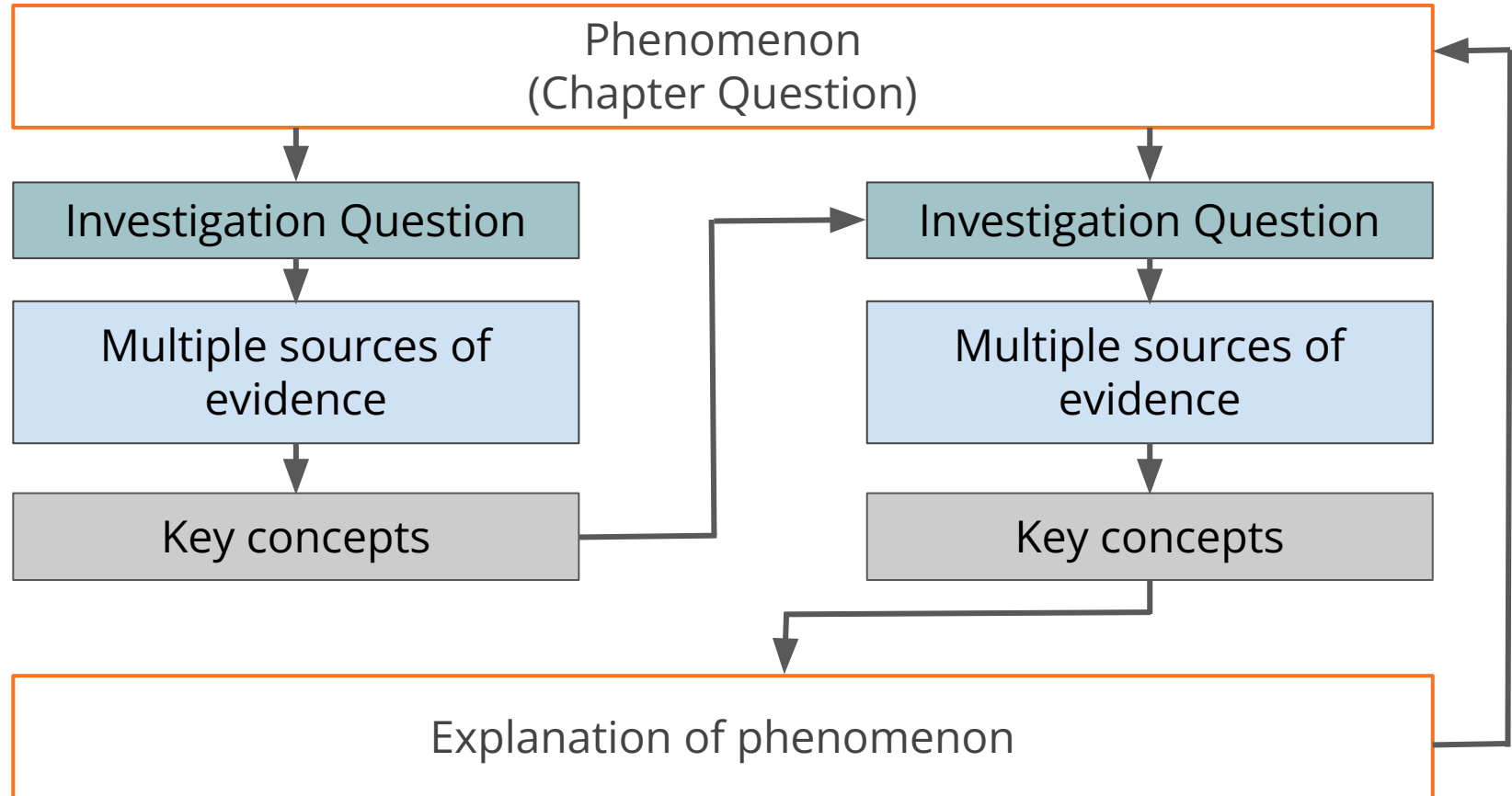
Evidence: Create and analyze chain reactions (1.4)



Key concepts: A force acts between two objects. When an object starts moving or stops moving, that is evidence that a force has acted on it.



# Coherence Flowchart



## Unit Anchor Phenomenon

*Problem students work to solve*

**Chapter-level Anchor Phenomenon**  
*Chapter 1 Question*

**Investigative Phenomenon**  
*Investigation Question*

**Evidence sources and reflection opportunities**

**Key concepts**

**Application of key concepts to problem**

**Explanation that students can make to answer the Chapter 1 Question**

## Balancing Forces: Investigating Floating Trains

The floating train rises, floats above the track, then later falls back to the track.  
*How is it possible for a train to float?*

The train rises above the track.  
*Why does the train rise?*

Sometimes objects start to move.  
*What makes an object start to move? (1.2, 1.3, 1.4)*

- Investigate by making blocks move (1.2)
- Read *Forces All Around* (1.3)
- View *Domino* video (1.4)
- Create and analyze chain reactions (1.4)

- A force acts between two objects. (1.3)
- When an object starts moving or stops moving, that is evidence that a force has acted on it. (1.3)

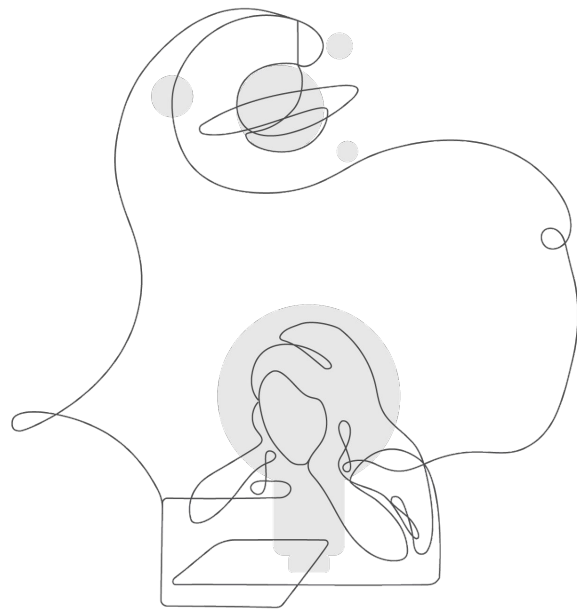
- Discuss why the train starts to move (1.4)
- Write a scientific explanation about the floating train (1.4)

The train rises because a force acts on it. The train started to move and when an object changes how it is moving, that means a force acted on it.

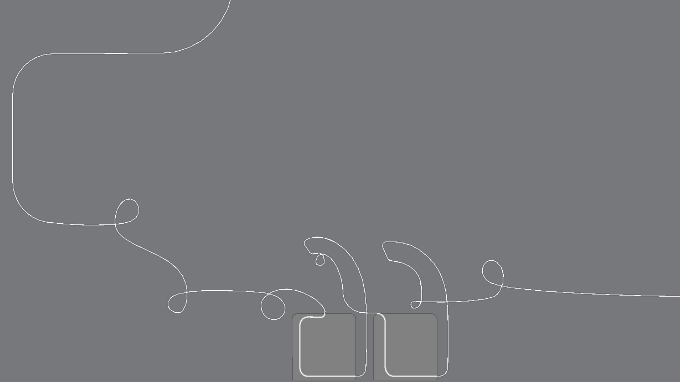
# Explore the Coherence Flowchart

Skim the Chapter 1 Coherence Flowchart.

Think about how you might use the Coherence Flowchart to summarize learning throughout Chapter 1.



# Questions?




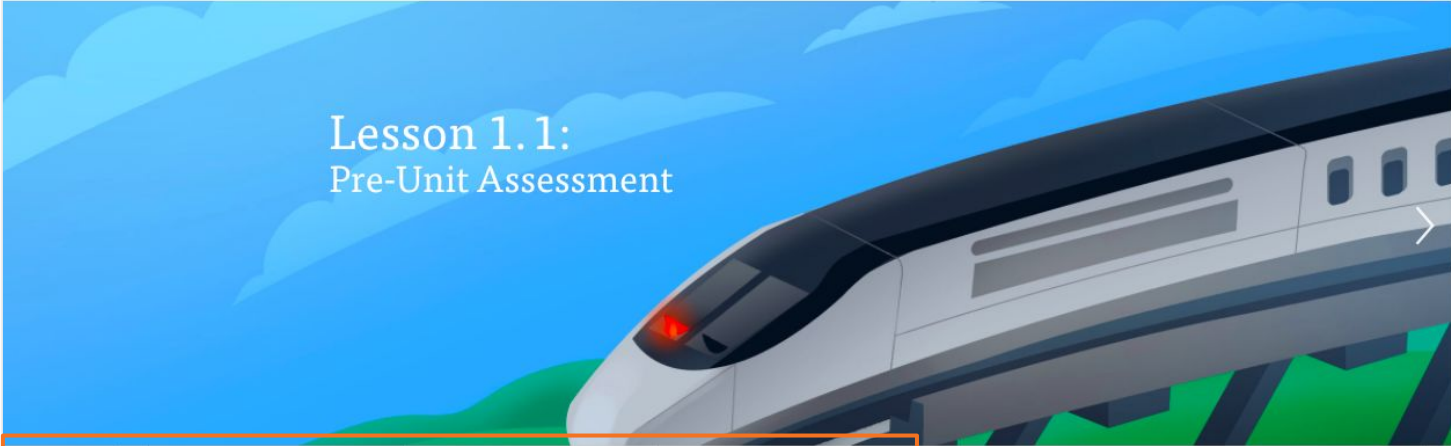


## Plan for the day: Part 2

- Teaching and Learning in an Amplify Science Lesson
- Instructional Approach Reflection
- Planning a Lesson
- Closing

# The Lesson Brief

 AmplifyScience > Balancing Forces > Chapter 1 > Lesson 1.1




## Lesson 1.1: Pre-Unit Assessment


Lesson Brief  
(2 Activities)

T  
TEACHER  
The Floating Train Video

1  
WRITING  
Students Write Initial  
Explanations

2  
TEACHER-LED DISCUSSION  
Introducing Investigation  
Notebooks

 RESET LESSON

 GENERATE PRINTABLE LESSON GUIDE

Overview

Materials & Preparation

Differentiation




Standards


Unplugged?


## Overview

Students watch a short video about a floating train and write their initial explanations about what they think makes the train rise, float, and then fall. Figuring out how the floating train works is the problem students will solve in this unit. The explanations they provide today serve as a Pre-Unit Assessment for formative purposes, designed to

## Digital Resources

-  Classroom Slides 1.1 | PowerPoint
-  Classroom Slides 1.1 | Google Slides
-  Classroom Videos 1.1 | Zip





# 4 Easy Steps to Teaching a lesson

## DIRECTIONS:

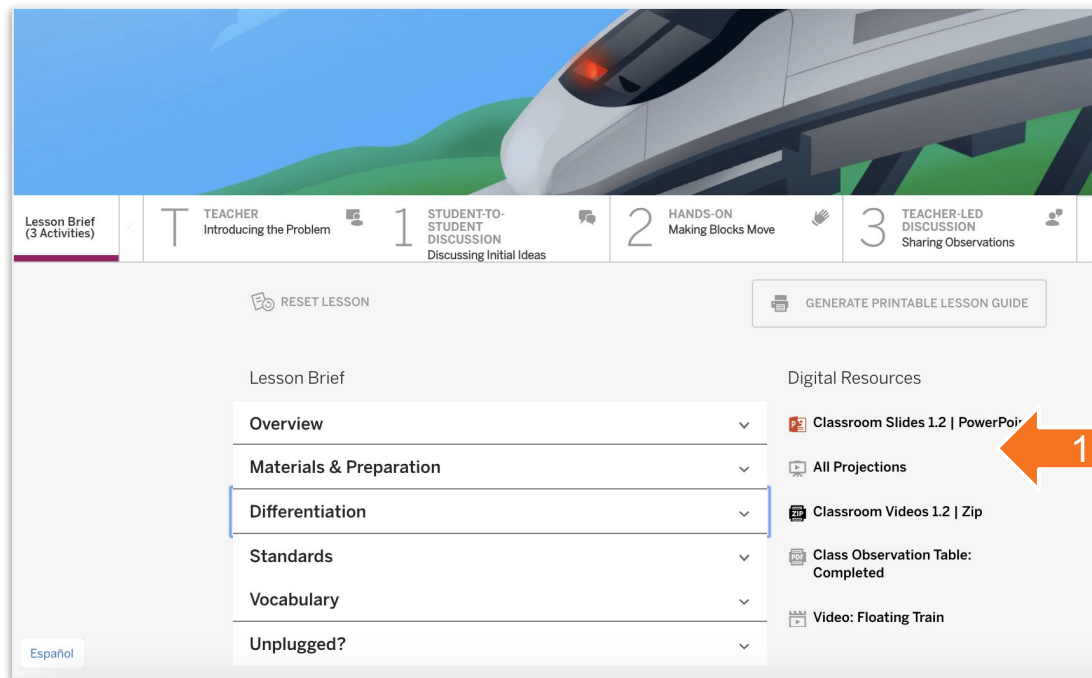
1. Download the **Classroom Slides** for **Lesson 1.1** and review them.
2. Read the **Overview**.
3. Explore the **Materials & Preparation** document.
4. Read the **Differentiation** document.

The screenshot shows the AmplifyScience website interface for Lesson 1.1: Pre-Unit Assessment. The top navigation bar includes the AmplifyScience logo and the path: Balancing Forces > Chapter 1 > Lesson 1.1. The main header features a large illustration of a high-speed train and the text "Lesson 1.1: Pre-Unit Assessment". Below the header is a horizontal navigation bar with tabs for Lesson Brief (2 Activities), Teacher (The Floating Train Video), Writing (Students Write Initial Explanations), and Teacher-Led Discussion (Introducing Investigation Notebooks). The main content area is divided into three sections: a sidebar on the left with links to Lesson Brief, Overview, Materials & Preparation, Differentiation, Standards, and Unplugged?; a central "Overview" section with a description of the lesson; and a "Digital Resources" section on the right with links to Classroom Slides 1.1 | PowerPoint, Classroom Slides 1.1 | Google Slides, and Classroom Videos 1.1 | Zip. Four orange arrows with numbers 1 through 4 point to specific elements: Arrow 1 points to the "Classroom Slides 1.1 | PowerPoint" link; Arrow 2 points to the "Overview" link in the sidebar; Arrow 3 points to the "Materials & Preparation" link in the sidebar; and Arrow 4 points to the "Differentiation" link in the sidebar.

# 4 Easy Steps to Teaching a lesson

## DIRECTIONS:

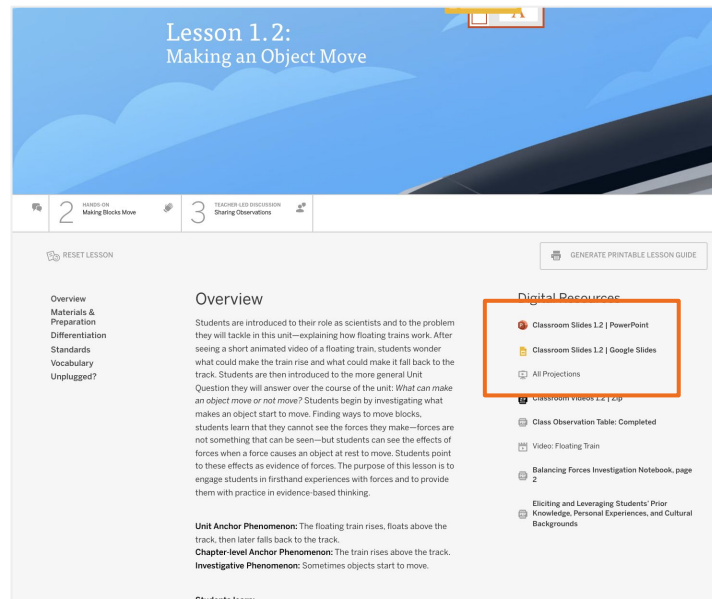
1. Download the **Classroom Slides** for **Lesson 1.1** and review them.
2. Read the **Overview**.
3. Explore the **Materials & Preparation** document.
4. Read the **Differentiation** document.





# Preparing to teach Classroom Slides

1. Open the **Classroom Slides** under the **Digital Resources** (a lesson of your choice)
2. Read through the Classroom Slides including the **presenter notes** to gain a better understanding of the lesson.
3. **Consider:**
  - What features of the Classroom Slides will support you in teaching this lesson?

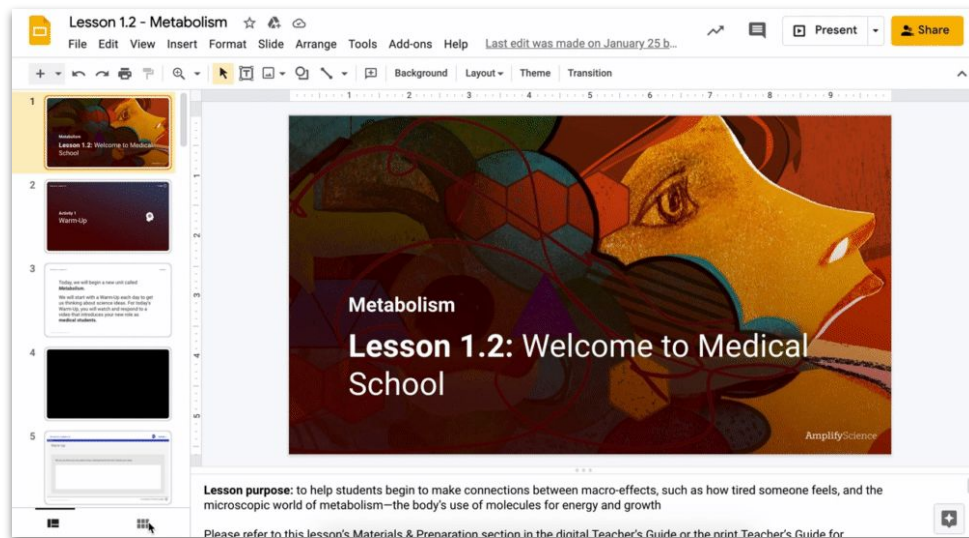


# Using Classroom Slides as a planning tool

Teacher tip: Classroom Slides are a great visual summary of a lesson.

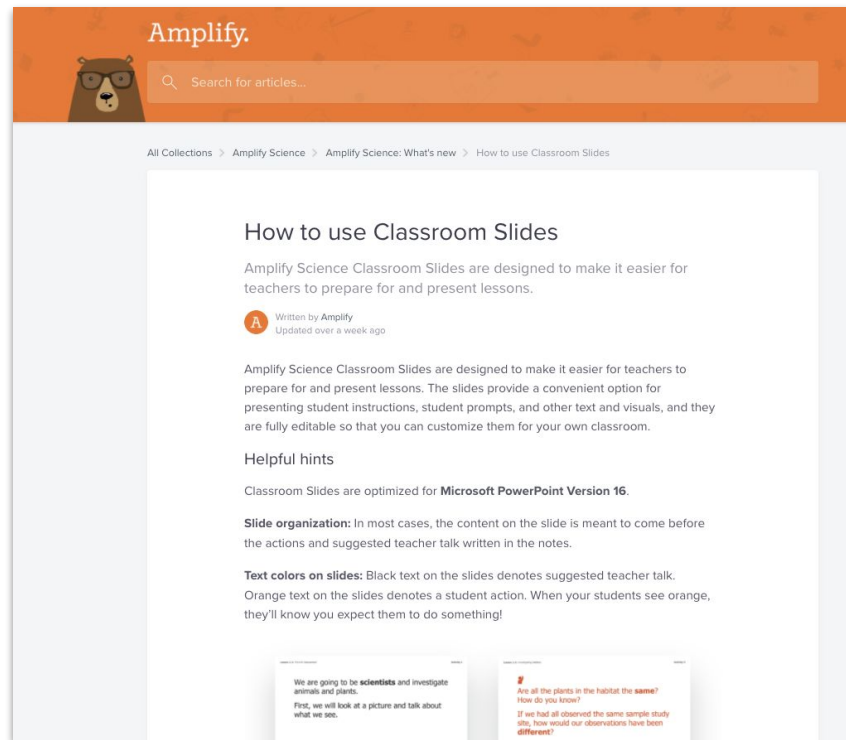
Many teachers download and flip through a lesson's Classroom Slides deck to preview what happens in the lesson.

This is a useful first step for preparing to teach the lesson.



# Teaching with Classroom Slides

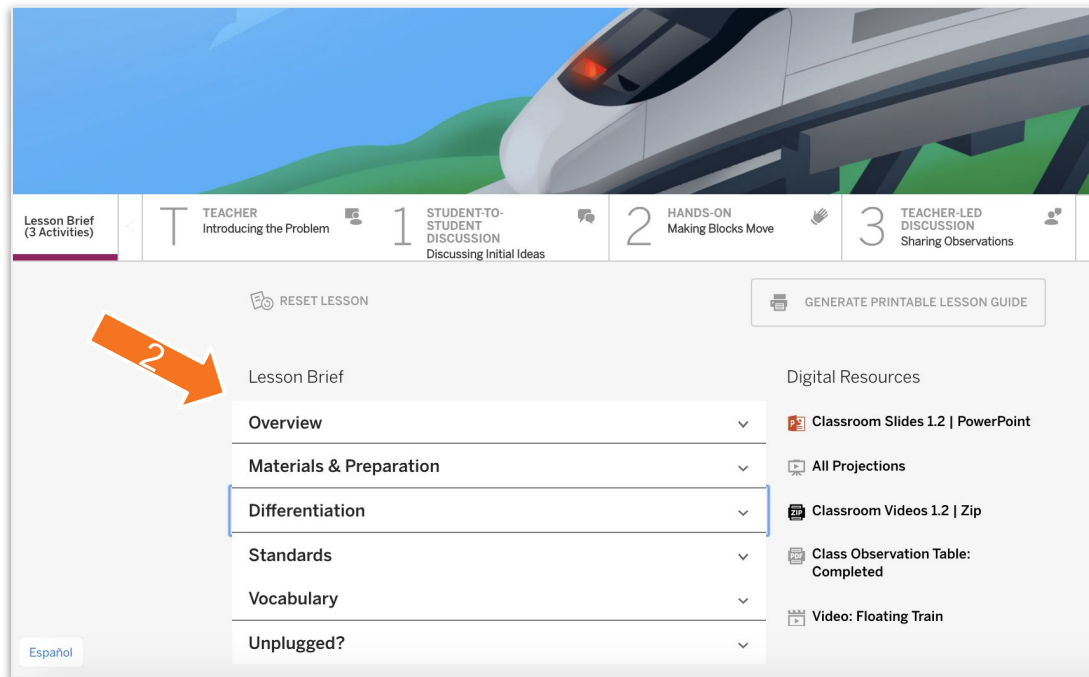
This detailed guide on the Amplify Science Help Site includes tips for teaching with Classroom Slides and information about the different symbols and activity types you'll find in the slide deck.



# 4 Easy Steps to Teaching a lesson

## DIRECTIONS:

1. Download the **Classroom Slides** for **Lesson 1.2** and review them.
2. Read the **Overview**.
3. Explore the **Materials & Preparation** document.
4. Read the **Differentiation** document.



# Preparing to teach

## The Overview

- Read through the lesson overview.
- Find the purpose of the lesson.

Lesson 1.2:  
Making an Object Move

2 HANDS ON  
Making Blocks Move

3 TEACHER-LED DISCUSSION  
Sharing Observations

RESET LESSON

Overview  
Materials & Preparation  
Differentiation  
Standards  
Vocabulary  
Unplugged?

Overview

Students are introduced to their role as inventors and to the problem they will tackle in this unit—explaining how floating trains work. After seeing a short animated video of a floating train, students wonder what could make the train rise and what could make it fall back to the track. Students are then introduced to the more general Unit Question they will answer over the course of the unit: *What can make an object move or not move?* Students begin by investigating what makes an object start to move. Finding ways to move blocks, students learn that they cannot see the forces they make—forces are not something that can be seen—but students can see the effects of forces when a force causes an object at rest to move. Students point to these effects as evidence of forces. The purpose of this lesson is to engage students in firsthand experiences with forces and to provide them with practice in evidence-based thinking.

**Unit Anchor Phenomenon:** The floating train rises, floats above the track, then later falls back to the track.  
**Chapter-level Anchor Phenomenon:** The train rises above the track.  
**Investigative Phenomenon:** Sometimes objects start to move.

Students learn:

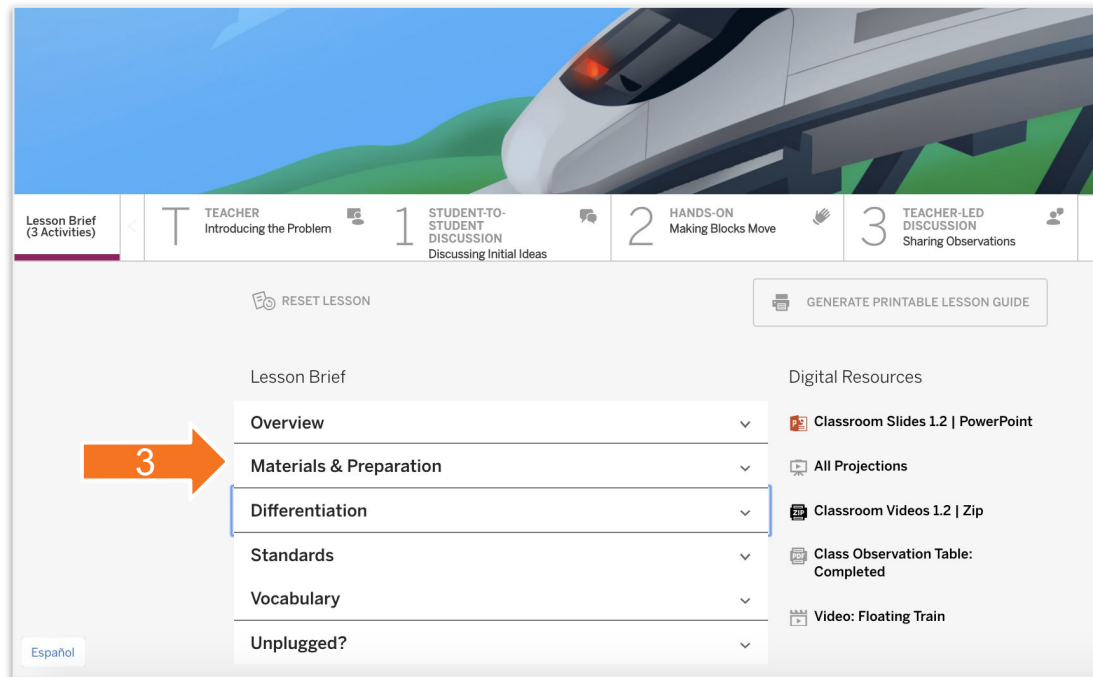
Digital Resources

- Classroom Slides 1.2 | PowerPoint
- Classroom Slides 1.2 | Google Slides
- All Projections
- Classroom Videos 1.2 | Zip
- Class Observation Table: Completed
- Video: Floating Train
- Balancing Forces Investigation Notebook, page 2
- Eliciting and Leveraging Students' Prior Knowledge, Personal Experiences, and Cultural Backgrounds

# 4 Easy Steps to Teaching a lesson

## DIRECTIONS:

1. Download the **Classroom Slides** for **Lesson 1.1** and review them.
2. Read the **Overview**.
3. Explore the **Materials & Preparation** document.
4. Read the **Differentiation** document.



# Preparing to teach

## Materials and Prep

Review the materials needed for:

- The Classroom Wall
- For the Class
- For each pair of students (if applicable)
- Preparation

### Materials & Preparation

#### Materials

##### For the Classroom Wall

- Unit Question: *What can make an object move or not move?*
- Chapter 1 Question: *Why does the train rise?*
- section headers: Key Concepts, Vocabulary
- vocabulary: force

##### For the Class

- 1 bag, plastic, gallon, self-sealing
- 2 wooden blocks with hooks
- 1 balloon
- 1 paper clip
- 1 domino
- 1 clothespin
- 1 index card
- 1 rubber band\*
- 1 sheet of chart paper\*
- masking tape\*
- marker\*
- scissors\*

##### For Each Pair of Students

- 1 bag, plastic, gallon, self-sealing
- 2 wooden blocks, with hooks
- 1 balloon

# 4 Easy Steps to Teaching a lesson



## DIRECTIONS:

1. Download the **Classroom Slides** for **Lesson 1.1** and review them.
2. Read the **Overview**.
3. Explore the **Materials & Preparation** document.
4. Read the **Differentiation** document.

Lesson Brief (3 Activities)

TEACHER Introducing the Problem

1 STUDENT-TO-STUDENT DISCUSSION Discussing Initial Ideas

2 HANDS-ON Making Blocks Move

3 TEACHER-LED DISCUSSION Sharing Observations

RESET LESSON

GENERATE PRINTABLE LESSON GUIDE

Lesson Brief

- Overview
- Materials & Preparation
- Differentiation**
- Standards
- Vocabulary
- Unplugged?

Digital Resources

- Classroom Slides 1.2 | PowerPoint
- All Projections
- Classroom Videos 1.2 | Zip
- Class Observation Table: Completed
- Video: Floating Train

Español



# Preparing to Teach

## Lesson-specific differentiation

- Embedded supports
- Potential challenges
- Strategies for:
  - English Learners
  - Students who need more support
  - Students who need more challenge

### Differentiation

#### Embedded Supports for Diverse Learners

**Frequent student-to-student discussions.** This introductory lesson is intended to get students excited about the specific content of the

unit. It includes multiple opportunities for students to discuss and share their initial thinking. Students will come into the classroom with very different experiences and understandings; providing frequent student discussion allows students to learn from one another. As students share, the teacher can carefully listen for incorrect ideas and can either address them in the moment or make a plan for addressing them during later lessons. Students learn from and are motivated by frequent student discussions. This strategy is especially effective when students have a range of background knowledge.

**Initial experiences with touching forces.** Having students experience touching forces in this lesson supports learning that students will do in upcoming lessons about the non-touching forces of magnetic force and gravity. It is easier to establish the idea of a force as a push or a pull with touching forces because in these examples, the push or pull is more active and easily observed.

**Visual references.** The Problem in Faraday Slideshow, the Floating Train video, the images on the concept wall, and the use of physical materials during discussions help support students' learning. Visuals are especially helpful for English learners and students who struggle to process oral or written language.

#### Potential Challenges in This Lesson

**Discussion-centered.** Since discussion is central to this lesson, you might want to consider how you can support participation of students who are not as confident in their abilities to communicate orally or who have difficulties with this kind of communication.

**Partner work with physical materials.** Some students may have difficulty focusing on the task at hand when presented with engaging materials and/or when working independently with a partner. Consider ways you can make expectations clear ahead of time and support students in focusing their efforts on the specific goals for the activity.

Specific Differentiation Strategies for English

# 4 Easy Steps to Teaching a lesson

## DIRECTIONS:

1. Download the **Classroom Slides** for **Lesson 1.1** and review them.
2. Read the **Overview**.
3. Explore the **Materials & Preparation** document.
4. Read the **Differentiation** document.

AmplifyScience > Balancing Forces > Chapter 1 > Lesson 1.1

### Lesson 1.1: Pre-Unit Assessment

Lesson Brief (2 Activities) | TEACHER The Floating Train Video | 1 WRITING Students Write Initial Explanations | 2 TEACHER LED DISCUSSION Introducing Investigation Notebooks

RESET LESSON

Overview

Students watch a short video about a floating train and write their initial explanations about what they think makes the train rise, float, and then fall. Figuring out how the floating train works is the problem students will solve in this unit. The explanations they provide today serve as a Pre-Unit Assessment for formative purposes, designed to...

Digital Resources

- Classroom Slides 1.1 | PowerPoint
- Classroom Slides 1.1 | Google Slides
- Classroom Videos 1.1 | Zip

GENERATE PRINTABLE LESSON GUIDE

Lesson ____		Activity Overview		From the Lesson at a glance in the overview
What is the purpose of this lesson?		Activity 1 (##min)		
	From the lesson overview			
What will students learn?		Activity 2 (##min)		
3-D Statement (identify SEP, CCC, and DCI):	From the lesson standards	Activity 3 (##min)		
Student Resources:	From the lesson materials and preparation	Activity 4 (##min)		
Assessment Opportunities:	From the lesson at a glance in the overview or classroom slides	Activity 5 (##min)		

# Directions for Planning Time

(Make your own copy first before planning)

1. Make a copy of this planning slide.
2. Download the classroom slides for the lesson you would like to plan
3. Insert the planning slide at the front of the classroom slide deck
4. Navigate at the lesson level to answer the questions on this slide
5. Make edits directly on your side deck to meet the needs of your students

## Digital Resources



Classroom Slides 1.1 | PowerPoint

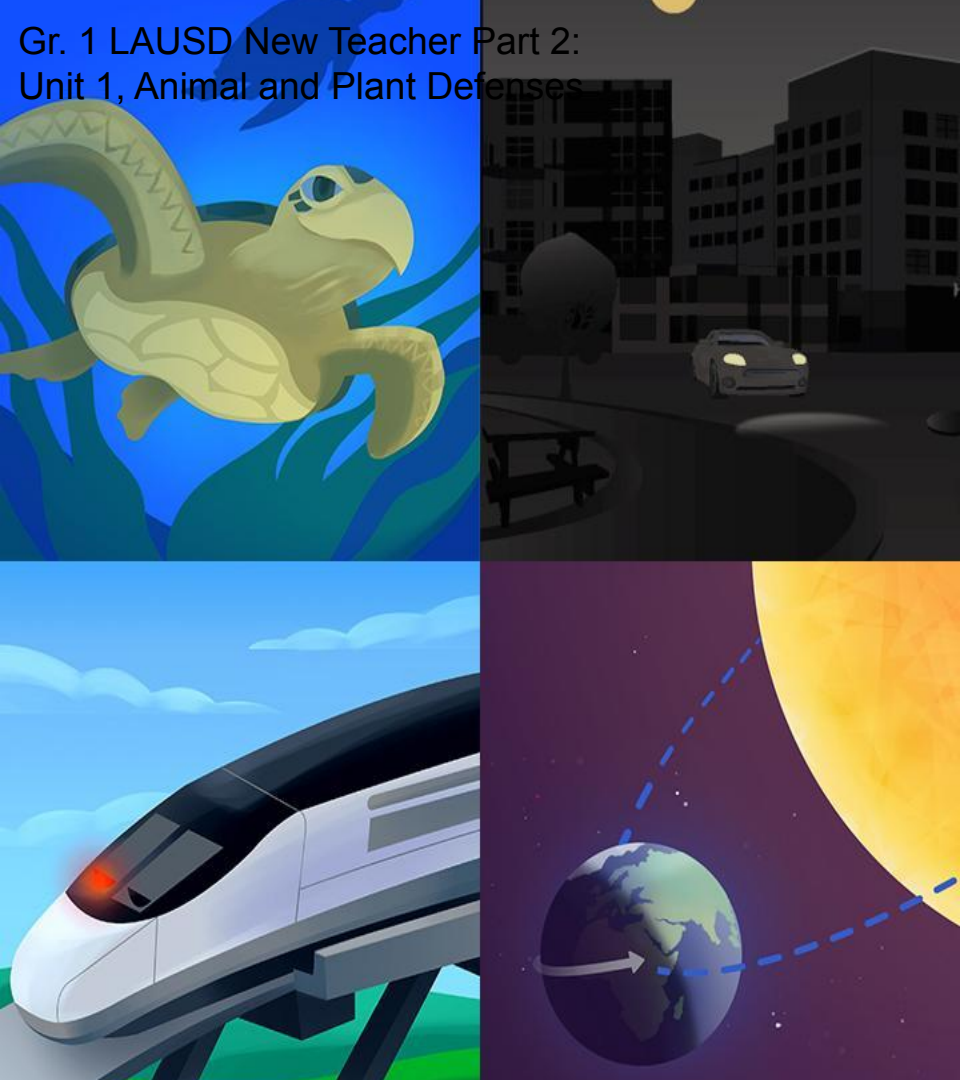


Classroom Slides 1.1 | Google Slides

Lesson <u>1.2</u>	Activity Overview	
<p><b>What is the purpose of this lesson?</b></p> <p>The purpose of this lesson is to engage students in firsthand experiences with forces and to provide them with practice in evidence-based thinking</p>	<p><b>Activity 1</b> (10 min)</p>	<p>Introducing the Problem</p>
<p><b>What will students learn?</b></p> <p>Scientists gather information by making observations. Compiling many observations in a table makes it easier to look for patterns. An object can start moving when it is pushed or pulled by another object. This push or pull is called a force.</p>	<p><b>Activity 2</b> (10 min)</p>	<p>Discussing Initial Ideas</p>
<p><b>3-D Statement (identify SEP, CCC, and DCI):</b></p> <p>Students ask questions about the floating train. They plan and conduct investigations to figure out many ways to cause a wooden block to start to move (cause and effect) and learn that these pushes and pulls are called forces.</p>	<p><b>Activity 3</b> (20 min)</p>	<p>Making Blocks Move</p>
<p><b>Student Resources:</b></p> <p>1 bag, plastic, gallon, self-sealing, 2 wooden blocks, with hooks, 1 balloon, 1 rubber band*, 1 paper clip, 1 domino, 1 clothespin, 1 index card, Investigation Notebook (pg 2)</p>	<p><b>Activity 4</b> (20 min)</p>	<p>Sharing Observations</p>
<p><b>Assessment Opportunities:</b></p> <p>n/a</p>	<p><b>Activity 5</b> (## min)</p>	

# Questions?





## Plan for the day: Part 2

- Part 1 Review
- Teaching and Learning in an Amplify Science Lesson
- Instructional Approach Reflection
- Planning a Lesson
- Closing

# Additional resources

## Welcome, caregivers!

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We hope you enjoy learning more about Amplify Science and what students are learning in science this year.

[Para acceder a este sitio en español haga clic aquí.](#)

Amplify welcomes you and your learner to the Science program for the new school year. We are very excited to



Grades 6-8



[Caregivers](#)



LAUSD Microsite-  
<https://amplify.com/lausd-science>



# Welcome to Amplify Science!

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This site contains supporting resources designed for the LAUSD Amplify Science adoption for grades TK–8.

- Access the [Amplify Science Program Hub](#) (To help orient you to the new design, watch this [video](#) and view this [reference guide](#).)
- Find out more about [Amplify Science@Home](#)
- Share the [Caregiver Hub](#) (Eng/Span) with your families
- For LAUSD ES Teachers- [Amplify Science & Benchmark Advance Crosswalk](#)
- Instructional guidance for a [Responsive Relaunch of Amplify Science in 21-22](#)

Click the button below to preview the digital Teacher's Guide, and check back for exciting updates to this site!

# Program Hub

Use the Amplify Science Program Hub to find useful resources for implementing Amplify Science, including unit overview videos and planning tools.

The screenshot shows the Amplify Science Program Hub interface. At the top, there's a navigation bar with 'Amplify', 'CURRICULUM', 'CLASSWORK', 'REPORTING', 'PROGRAMS & APPS', and 'NATIONALSCI200 TEACHER'. Below this, the 'Science California' section is active, showing the 'Balancing Forces' unit. A large illustration of a train on a track is the background. The unit title 'Balancing Forces' is prominently displayed, along with '22 Lessons' and a 'Printable Teacher Guide' button. On the left, a sidebar lists 'Unit Overview', 'Chapters', 'Printable Resources', 'Planning for the Unit', 'Teacher References', and 'Offline Preparation'. The main content area is titled 'Unit Overview' and includes a 'What's in This Unit?' section with a paragraph about the unit's focus on forces and motion. Below this, there's a 'Read more' link. The 'Chapters' section is also visible, listing 'Chapter 1: Why does the train rise?' with three lesson thumbnails: 'LESSON 1.1 Pre-Unit Assessment', 'LESSON 1.2 Making an Object Move', and 'LESSON 1.3 Force All Around'. A language selector at the bottom left shows 'English' and 'Español'.

This screenshot shows the Amplify Science Program Hub interface for the 'Energy Conversions' unit. The top navigation bar is identical to the previous screenshot. The 'Science' section is active, showing the 'Energy Conversions' unit. A large illustration of a train on a track is the background. The unit title 'Energy Conversions' is prominently displayed, along with '22 Lessons' and a 'Printable Teacher Guide' button. On the left, a sidebar lists 'Unit Overview', 'Chapters', 'Printable Resources', 'Planning for the Unit', 'Teacher References', and 'Offline Preparation'. The main content area is titled 'Unit Overview' and includes a 'What's in This Unit?' section with a paragraph about the unit's focus on energy and forces. Below this, there's a 'Read more' link. The 'Chapters' section is also visible, listing 'Chapter 1: Why does the train rise?' with three lesson thumbnails: 'LESSON 1.1 Pre-Unit Assessment', 'LESSON 1.2 Making an Object Move', and 'LESSON 1.3 Force All Around'. A language selector at the bottom left shows 'English' and 'Español'.

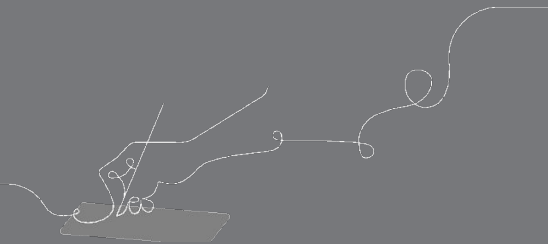
This screenshot shows the Amplify Science Program Hub interface for the 'Vision and Light' unit. The top navigation bar is identical to the previous screenshots. The 'Science' section is active, showing the 'Vision and Light' unit. A large illustration of a train on a track is the background. The unit title 'Vision and Light' is prominently displayed, along with '22 Lessons' and a 'Printable Teacher Guide' button. On the left, a sidebar lists 'Unit Overview', 'Chapters', 'Printable Resources', 'Planning for the Unit', 'Teacher References', and 'Offline Preparation'. The main content area is titled 'Unit Overview' and includes a 'What's in This Unit?' section with a paragraph about the unit's focus on light and vision. Below this, there's a 'Read more' link. The 'Chapters' section is also visible, listing 'Chapter 1: Why does the train rise?' with three lesson thumbnails: 'LESSON 1.1 Pre-Unit Assessment', 'LESSON 1.2 Making an Object Move', and 'LESSON 1.3 Force All Around'. A language selector at the bottom left shows 'English' and 'Español'.

# Overarching goals

By the end of this workshop, you will be able to:

- ✓ Describe what teaching and learning look like in Amplify Science.
- ✓ Prepare to teach using Amplify Science resources.

e



# Closing reflection

Based on our work today in Part 2, share:

**Head:** something you'll keep in mind

**Heart:** something you're feeling

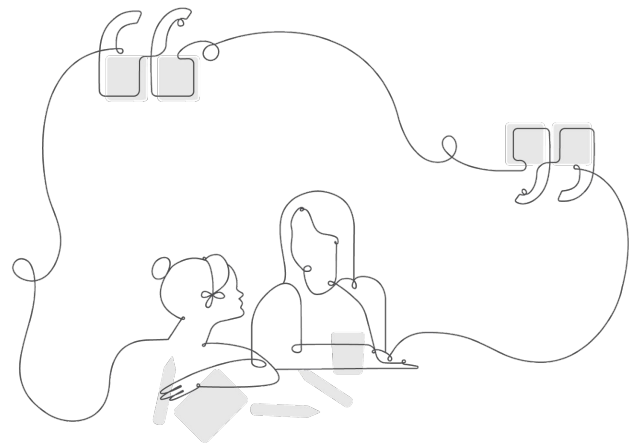
**Feet:** something you're planning to do

# Onsite Upcoming Professional Development!

## Part 3: Unit 1 - Supporting English Learners

- October 15th (Alta California ES, NW)
- October 29th (Ochoa Learning Center, East)

In this session, participants explore strategies to support English learners' ability to do, talk, read, write, visualize, and construct arguments like scientists. Participants will identify the supports and strategies embedded in Unit 1 by engaging in model activities followed by independent planning.



# Additional resources and ongoing support

## Customer Care

Seek information specific to enrollment and rosters, technical support, materials and kits, and teaching support, weekdays 7AM-10PM EST and weekends 10AM-6PM EST.



help@amplify.com



800-823-1969



Amplify Chat



# Please provide feedback!

**Type:**

Strengthen

**Session title:**

Unit Internalization / Guided Planning

(Part 2)

**Professional Learning Specialist name:**

Insert name

(insert email, if you would like)