#### Amplify.

#### Welcome to Amplify Science!

This site contains supporting resources designed for the Los Angeles Unified School District Amplify Science adoption for grades TK–8.

All LAUSD schools have access to Amplify Science resources at this time.

Click here for Remote Learning Resources for Amplify Science

Click here to go back to the LAUSD homepage.

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



#### https://amplify.com/lausd-science/

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**Do Now:** *On the Jamboard, share what you remember about the* Pushes and Pulls *unit. What are the big ideas in this unit?* 

# **Amplify** Science

## Unit Internalization Part II

Deep-dive and strengthening workshop Pushes and Pulls, Grade K

LAUSD

1/x/2021 Presented by Your Name In a new tab, please log in to your Amplify Science account through Schoology.

## Norms: Establishing a culture of learners



Please keep your camera on, if possible. Take some time to orient yourself to the platform

• "Where's the chat box? What are these squares at the top of my screen?, where's the mute button?"



Mute your microphone to reduce background noise unless sharing with the group



The chat box is available for posting questions or responses to during the training



Make sure you have a note-catcher present



Engage at your comfort level - chat, ask questions, discuss, share!

## 2-Part Unit-specific PD

#### Part I: December

Focus on **unit content** and the **early childhood instructional approach** in Amplify Science

#### Part II: Today

Planning to **teach the unit remotely** 



## Workshop goals

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

- Locate and access your unit's @Home resources
- Plan for remote instruction
- Describe strategies for effective remote instruction for young students



## Plan for the day

- Welcome
- Program Hub
- Planning to teach using @Home resources
- Reflection and closing









### Plan for the day

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#### Accessing @Home resources



#### Amplify Science@Home resources reference

Use this guide to keep track of the different resources available for remote and hybrid learning.

#### Instructional materials:

can share with students and caregivers.

Click Remote and hybrid learning resources, then select your grade level from the dropdown menu. Select your unit.

Teacher Overview	General information for teaching with @Home Units, planning information, chapter and lesson outlines
Lesson Index	Lists the original Amplify Science lessons associated with each @Home lesson, and the Investigation Notebook pages, copymasters, and print materials associated with the @Home Unit Student Sheets
Family Overview	Information to send home to families to help them support students with remote learning
Student lesson materials for @Home Units	Printable or digital lessons condensed to be about 30 minutes long. You can access compilations of all student materials for your unit, or select from individual lessons.
@Home Video resou After selecting your g	res: trade level and unit, select the @Home Videos tab below your unit title.
@Home Video links	Links to video lessons that include all activities from the original units. Lesson playlists are on YouTube, and they autoplay in a playlist form.
Additional remote a These can be accesse	nd hybrid instructional materials: ed from the tabs below your unit title.
Hands-on investigations support	Videos of every unit's hands-on activities (note, these videos also appear in the student lesson materials).
Read-aloud videos	Link to a YouTube playlist of read-aloud videos of all books in your unit.

Orientation and Tutorials. You'll not only find videos to help you use the resources, but also videos you



Page 1

## Program Hub work time

Navigate to the Program Hub. Open:

- Teacher Overview
- Lesson Index
- @Home Lesson 1
  - Slides- Google
  - Packet- Google

If you have extra time, explore the other tabs.



#### Temperature check: accessing @Home resources

Take a moment to self-assess your comfort navigating the Program Hub and accessing your unit resources.











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#### Pushes and Pulls



#### Pushes and Pulls

What are the big ideas in this unit?

What big understandings will students come to?

What about the unit makes you excited to teach your students?



# @Home Lesson Walkthrough Look for: What is the big idea in this lesson?

@Home Lesson 1

Adapted from: Amplify Science Pushes and Pulls Lesson 1.1

#### **Key Activities**

- **Observe:** Students are introduced to the design goal for the unit and observe a video of a working pinball machine.
- Draw and Write: Students draw and/or write their ideas about what made the pinball in the video move in different ways.
- Introducing Students' Role as Engineers: Students are introduced to the Unit Question and to the engineering role they will take on as they work to answer this question throughout the unit.
- Introducing the Chapter 1 Question: Students are introduced to the Chapter 1 Question and the piece of the pinball machine problem they will work to solve in this chapter.
- Do: Students explore objects at home to figure out how to make them move.

# Pushes and Pulls **Output Output <b>Output <b>Output <b>Output <**

AmplifyScience

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# We will begin a new science unit. We will investigate **how things move**.

We have a chance to take on an interesting new challenge. We will figure out how to **design a pinball machine**.

Let's get started!

#### Let's think about what we already know about pinball machines.

# Do you know what a pinball machine is? What do pinball machines do?



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

This will help us start thinking about how to design a pinball machine.

Note: All videos in this @Home Unit can be viewed on a smartphone or any other connected device.



We want the pinball machine we design to be able to **move the ball** many different ways.

Pay careful attention to the **different ways that the ball moves**.



Using the print version? Find the video at tinyurl.com/AMPPAP-01



Let's think about what we noticed.

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

Name:

#### Thinking About How a Pinball Moves

Date:

Directions:

1. Go to tinyurl.com/AMPPAP-01 to watch a video of what pinball machines do. Work with someone in your family to talk about what you noticed in the pinball video.



- 2. Think about this question: What made the pinball move in different ways?
- 3. In the box, draw to show what you think made the pinball move in different ways.
- 4. Label your drawing.

Find the **Thinking About How a Pinball Moves** page.

**Draw** to show what you think made the pinball move in different ways.

Label your drawing.

Pushes and Pulls @Home Lesson 1 © 2020 The Regents of the University of Colfornia. All rights reserved. To help us figure out how to design a pinball machine that can do all the things the pinball machine in the video does, we will work to answer this question:

#### **Unit Question**

Why do things move in different ways?

# To figure out how to design 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.

# We will be learning new **science words** to help with our investigations.

# Now we will think more about **one** of the new words we are learning.

# An **engineer** is a person who makes something in order to solve a problem.



- 1. Practice saying the word to yourself: engineer
- 2. Practice saying the word to someone at home: engineer
- **3.** Practice whispering the word: **engineer**

#### **Pushes and Pulls Glossary**

**design:** to try to make something new that people want or need **diseñar**: intentar hacer algo nuevo que las personas quieren o necesitan

direction: the way something is facing or moving, such as left, right, toward you, or away from you dirección: la forma en que algo se enfrenta o se mueve, como izquierda, derecha, hacia usted, o lejos de usted

distance: how far it is between two things distancia: la medida entre dos cosas

exert: to cause a force to act on an object ejercer: hacer que una fuerza afecte a un objeto

engineer: a person who makes something in order to solve a problem ingeniero: una persona que hace algo para solucionar un problema

force: a push or a pull fuerza: un empuje o un jalón

**object:** a thing that can be seen or touched **objeto**: una cosa que se puede ver o tocar

**solution:** something that helps people do what they want or need to do **solución**: algo que ayuda a las personas a hacer lo que quieren o necesitan hacer

visualize: to make a picture in your mind visualizar: hacer una imagen en tu mente

Pushes and Pulls @Home Lesson 1 © 2020 The Regents of the University of California. All rights reserved. You have a **Glossary** you can use if you need to find definitions for science words we are using. There are different kinds of **engineers** that you might have heard about.

One kind of engineer drives a train.

We are going to be thinking and working as a different kind of engineer—an engineer who **makes things to solve problems**.

## Now is a good time to take a break.

### 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**, or make, a pinball machine needs to **learn** how to make the pinball start to move.

#### In this chapter, we will work to figure out:

#### **Chapter 1 Question**

How do we make a pinball start to move?

# We need to know what makes all kinds of different things start to move before we can solve the problem of how to make a pinball start to move.

#### We are going to investigate this question:

#### What makes an object start to move?



We will try to get objects, or things, to start to move.

This will help us start to answer our Investigation Question.

#### Pushes and Pulls @Home Lesson 1



#### Find the Movement Hunt pages.



**Look for** objects that you can make start to move.

Try to make the objects move. Then, draw and write about each object.

# We are trying to figure out what makes an object **start to move.** During your Movement Hunt, you made many **objects** start to move.

Now, we will think more about **one** of the new science words we are learning.

#### An **object** is a thing that can be seen or touched.



- 1. Practice saying the word to yourself: object
- 2. Practice saying the word to someone at home: object
- **3.** Practice whispering the word: **object**

Let's think about the Movement Hunt.

#### e...

# 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! Pushes and Pulls @Home Lesson 1

# End of @Home Lesson





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@Home Lesson 1
Please respond in the chat

What is the big idea in this lesson?

What's most important?



Lesson planning with @Home Units		
Day	Day	Page 2
Minutes for science:	Minutes for science:	
Lesson or part of lesson:	Lesson or part of lesson:	

#### **@Home Lesson 1**

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Day Monday		Day <u>Tuesday</u>		Page 4
Minutes for science: 30	)	Minutes for science:	50	
esson or part of lesson Home Lesson 1 s Purpose or big idea: Introducing the pir role as engineers	: lides 1-14 nball context and students'	Lesson or part of lesson @Home Lesson 1 Purpose or big idea: Making objects s	n: slides 16-25 tart to move.	
students will	Teacher will	Students will	Teacher will	
lucus for s	ynchronous or in-person i	Instruction		
While meeti they think m and student Hunt and dis	ng, have students observe the nade the pinball move in differences so role as engineers. If you a scuss how they made differences	he pinball video, and erent ways. Next, int are meeting in perso ent objects move.	I then discuss their obser roduce the Unit and Char n, have students engage i	rvations and what pter 1 Questions in the Movement

Day Monday	Monday		Day Tuesday	
Minutes for science: <u>30</u> Lesson or part of lesson: @Home Lesson 1 slides 1-14 Purpose or big idea: Introducing the pinball context and students' role as engineers		Minutes for science: <u>30</u> Lesson or part of lesson: @Home Lesson 1 slides 16-25 Purpose or big idea: Making objects start to move.		
				Students will -VVatch the pinball video and share their ideas about what made the pinball move in different ways in a class discussion. -Practice saying "engineer" together as a class.
Additional notes: -Send Glossary sheets home so families can use them as a resource -Preview Movement Hunt in second half of the lesson for families		Additional notes:	l	

Lesson planning with @Home Units							
Day <u>Monday</u> Minutes for science: <u>30</u> Lesson or part of lesson: @Home Lesson 1 slides 1-14 Purpose or big idea: Introducing the pinball context and students' role as engineers		Day <u>Tuesday</u> Minutes for science: <u>30</u> Lesson or part of lesson: @Home Lesson 1 slides 16-25 Purpose or big idea: Making objects start to move.					
				Students will -Watch the pinball video and share their ideas about what made the pinball move in	Teacher will -Modify slide deck to prompt students to discuss instead of drawing	Students will -Go on a Movement Hunt in their homes (walk around and make objects start to move	Teacher will -Begin the lesson by reviewing the Pinball context (add slide) -Model cently making
				different ways in a class discussion. -Practice saying "engineer" together as a class.	-Lead class through video and slides	paying attention to how they are doing it). -Draw what they did. -Share what they did to make objects start to move	an object start to move when introducing Movement Hunt -Lead discussion following Movement Hunt.
Additional notes: -Send Glossary sheets home so families can use them as a resource -Preview Movement Hunt in second half of the lesson for families.		Additional notes: -If possible, ask students picture of their Movemen	s' families to email a nt Hunt drawings.				

#### Breakout groups Additional ideas for Lesson 1

Discuss your ideas for planning Lesson 1. Share:

- strategies for remote teaching
- ideas for differentiation
- how you might collect evidence of student thinking



#### Engineering design and hands-on Modified activities for remote learning

- Hands-on experiences making objects move in different ways using common household materials
- Videos of student box models
- Teacher demonstration of class pinball machine



#### Suggestions and strategies for remote teaching

- Break lessons over multiple days as needed
- Edit and modify slide decks
- Use @Home Videos on the Program Hub for ideas for remote teaching
- Share read-aloud videos and/or digital books so students can watch or read outside of class time
- Refer to the Differentiation section in the standard curriculum for differentiation suggestions









### Plan for the day

- Welcome
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#### Head or hands reflection

Reflect independently, then volunteer to share

Based on our work today with the unit storyline and the role of evidence sources....

**Head:** What will you keep in mind while you plan?

**Hands:** What will you do when you're teaching?



## During this workshop did we meet our objectives?

Do you feel able to...

- Locate and access your unit's @Home resources
- Plan for remote instruction
- Describe strategies for effective remote instruction for young students



## Upcoming LAUSD Office Hours

#### **Twice Monthly from 4-5pm:**

- Thursday, 2/11
- Thursday, 2/25
- Thursday, 3/11
- Thursday, 3/25



#### http://bit.ly/TK-6OfficeHours

#### Program Hub: Self Study Resources



#### Back to school national webinar series



#### **Topics included:**

- Remote and hybrid learning support
- Navigation support
- What's new for 2020-2021
- Planning support
- Curriculum overview

## bit.ly/BTSwebinars

## Additional Amplify resources



#### **Caregivers site**

Provide your students' families information about Amplify Science and what students are learning **amplify.com/amplify-science-familyresource-intro/** 

## Additional Amplify resources



#### **Program Guide**

Glean additional insight into the program's structure, intent, philosophies, supports, and flexibility.

https://cascience.wpengine.com/content/ welcome-k-8/integrated-model/

#### **Amplify Help**

Find lots of advice and answers from the Amplify team.

my.amplify.com/help

## Additional Amplify Support

#### **Customer Care**

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



scihelp@amplify.com



800-823-1969



# When contacting the customer care team:

- Identify yourself as an Amplify Science user.
- Note the unit you are teaching.
- Note the type of device you are using (Chromebook, iPad, Windows, laptop).
- Note the web browser you are using (Chrome or Safari).
- Include a screenshot of the problem, if possible.
- Copy your district or site IT contact on emails.

## Please provide us feedback!

#### Respond to the survey that has been dropped into chat

Presenter name:

Date: xx



