

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/>

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

Amplify Science

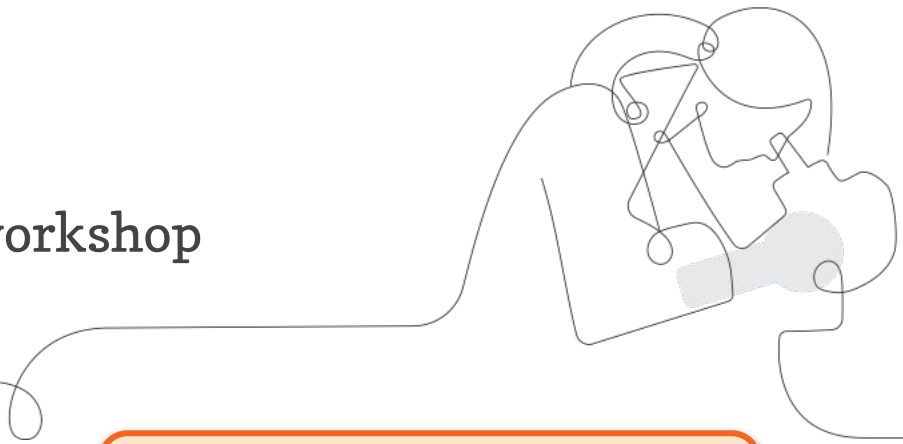
Unit Internalization Part II

Deep-dive and strengthening workshop
Light and Sound, Grade 1

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

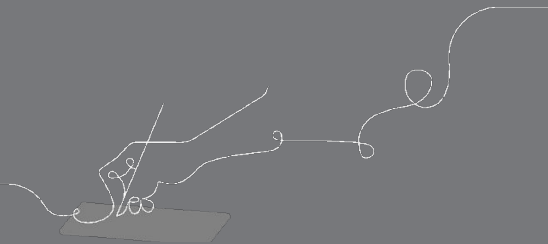
Planning to teach the unit remotely

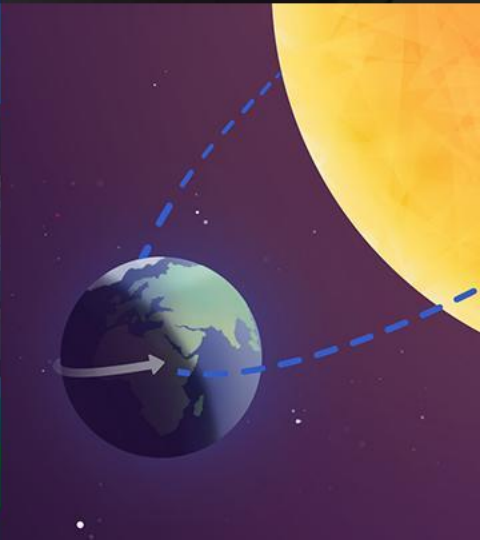


Workshop goals

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



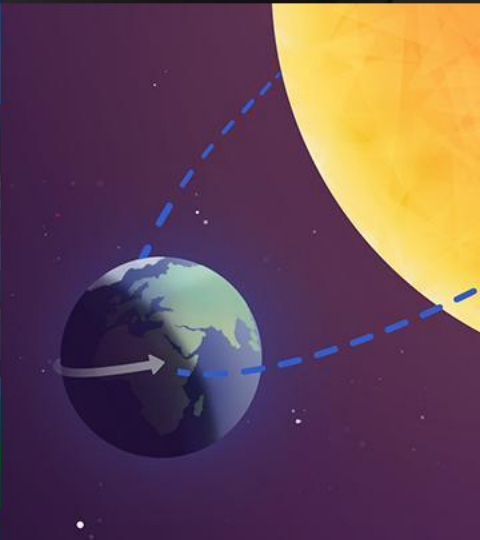


Plan for the day

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



Questions?



Plan for the day

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

Accessing @Home resources

Hello Teacher Considine
t.lconsidine@tryamplify.net

Log Out

Go To My Account ⚙️

Classroom Language Settings

LA Science Program Guide

Program Hub

Science Program Guide

FLORIDA EDITION Standards Map

Help

11 Lessons
Microbiome

FUTURA
FOOD ENGINEERING

https://www.amplify.com/floridastandards

Amplify Science@Home resources reference

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

Instructional materials:

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

@Home Unit resources:

These will appear when you 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 resources:

After selecting your grade 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.
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Additional remote and hybrid instructional materials:

These can be accessed 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:

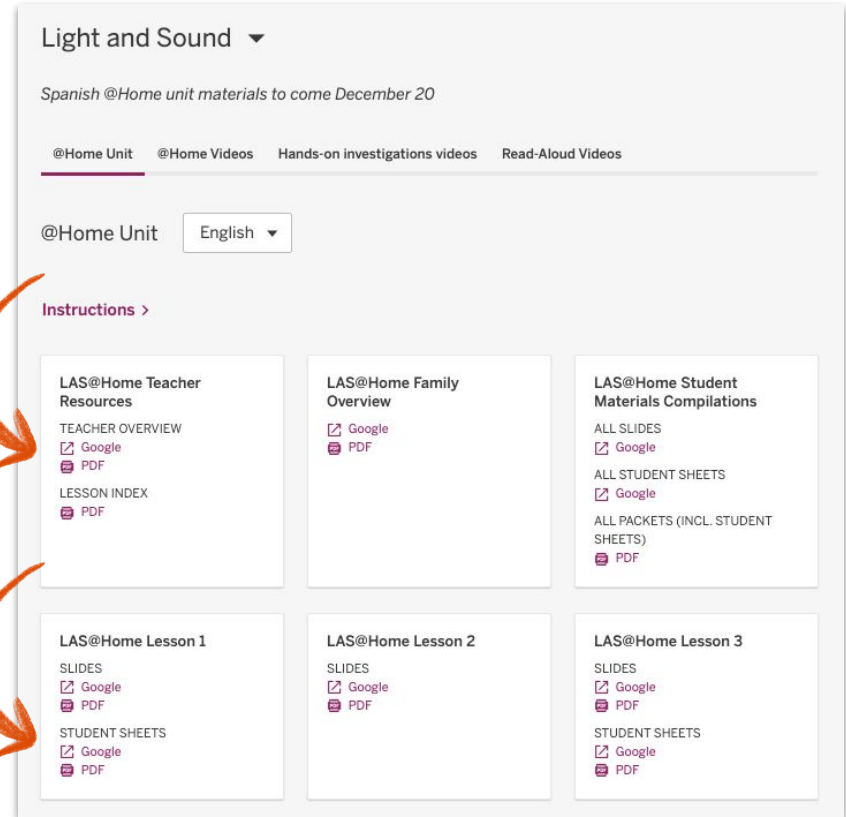
Click Remote and hybrid learning resources, then select your grade from the dropdown menu. Click Orientation and Tutorials. You'll not only find videos to help you use the resources, but also videos you can share with students and caregivers.

Program Hub work time

Navigate to the Program Hub. Open:

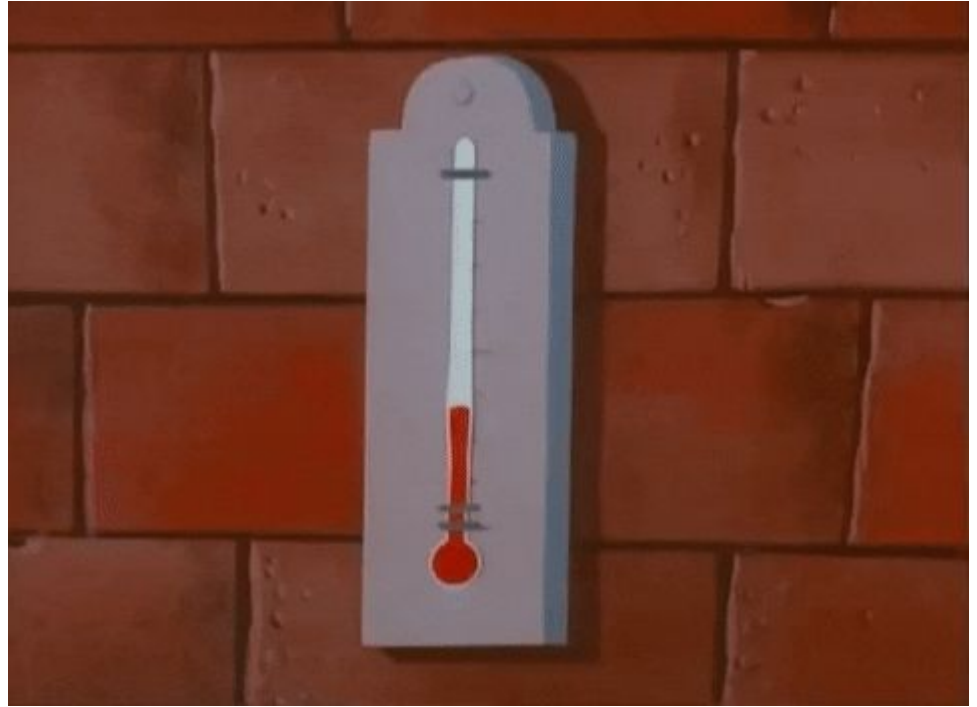
- Teacher Overview
- Lesson Index
- @Home Lesson 1
 - Slides- Google
 - Packet- Google

If you have extra time,
explore the other tabs.



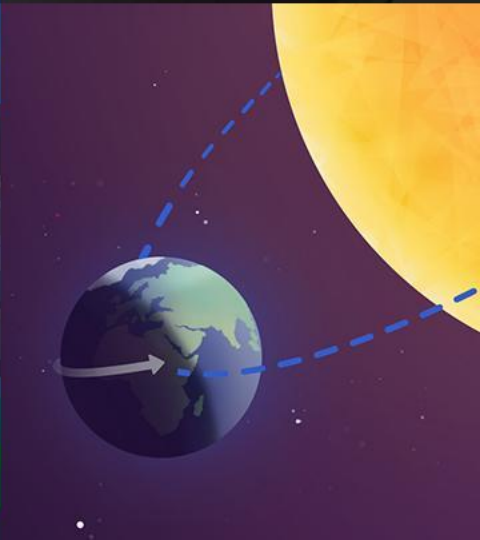
Temperature check: accessing @Home resources

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





Questions?



Plan for the day

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

Chapter-by-Chapter walkthrough



Chapter 1: How do we make brighter or darker areas?

5 Lessons



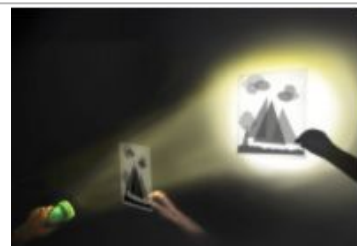
Chapter 2: How do we make a dark area in a bright puppet show scene?

5 Lessons



Chapter 3: How do we make bright, medium bright, and dark areas in a...

6 Lessons



Chapter 4: How do we design a sound source to go with a puppet show scene?

6 Lessons

Chapter 1:
Investigating
light sources

Chapters 2-3:
Investigating blocking materials
and designing puppet scenes

Chapter 4:
Investigating
sound

Light and Sound

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 *Light and Sound* Lessons 1.1 and 1.2

Key Activities

- **Talk:** Students observe a series of images and discuss what they notice in the images.
- **Draw and Write:** Students draw and/or write their ideas about how they think someone made brighter and darker areas on a surface.
- **Introducing the Puppet-Theater Company:** Students are introduced to the puppet-theater company's problem and the design goals they will work toward to help solve the problem.
- **Read:** Students are introduced to their role as light and sound engineers and browse the reference book to gather information about the kinds of problems addressed by engineering.

Ideas for synchronous or in-person instruction

While meeting, have students observe the series of images and discuss what they notice in the images and how they think someone made brighter and darker areas on the wall in the final image in the series. Then, introduce the puppet-theater company's problem and students' role as light and sound engineers.

A hand holding a flashlight, casting a beam of light. The flashlight is green and yellow, and the beam is a bright yellow-green. The background is dark, and the light beam illuminates a surface above.

Light and Sound

@Home Lesson 1

We will start learning about **light and sound**.

We will be **engineers** who work with light and sound. Today we will learn what light and sound engineers do.

Let's get ready by **observing** some pictures.
You will need a **partner** to talk with.

Your partner can be a family member, a friend or classmate on the phone, a stuffed animal, or even a pet!



For each picture, **describe** what you notice.

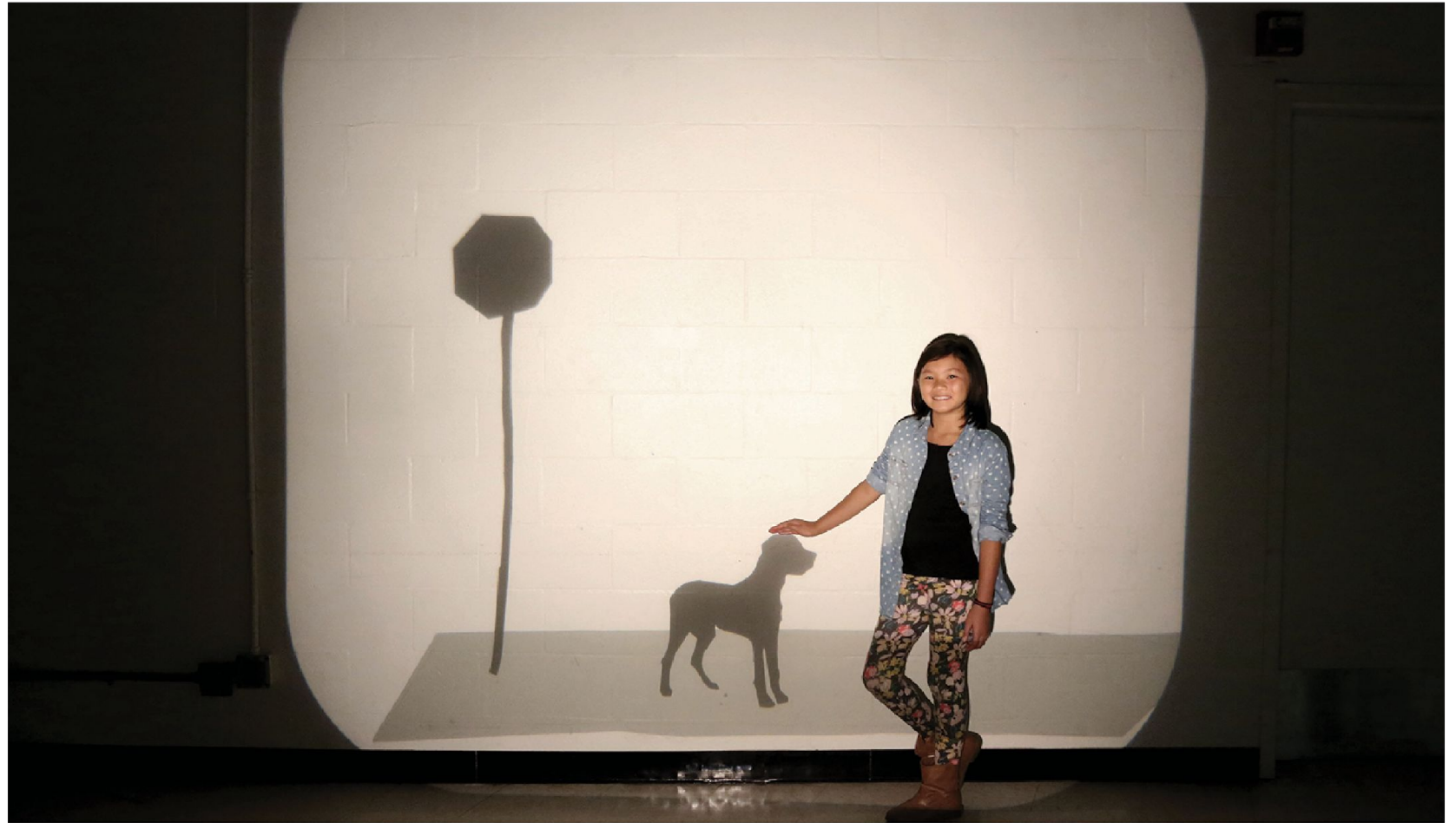


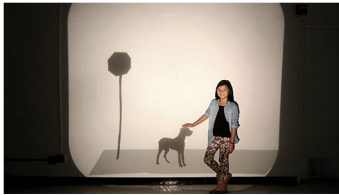












What was the **same** in all of the pictures we just observed?

Let's think about what we know about how **brighter and darker areas** on a surface, such as a wall or the ground, might be made.

We will look at one of the pictures again. It shows brighter and darker areas on a wall. We will **discuss our ideas** about why some areas are brighter and some areas are darker.



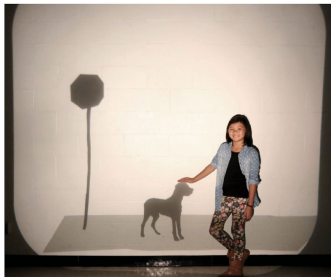
How do you think
someone made those
brighter and darker
areas on the wall?

Name: _____ Date: _____

Thinking About Brighter and Darker Areas

Directions:

1. Think about what you know about how brighter and darker areas on a surface might be made.
2. Look carefully at the picture.
3. In the box, draw to show how you think someone made the brighter and darker areas on the wall.
4. Label your drawing.



Light and Sound @Home Lesson 1
© 2020 The Regents of the University of California. All rights reserved.

Find the **Thinking About Brighter and Darker Areas** page.



Draw to show how you think someone made the brighter and darker areas on the wall.

Label your drawing.



Now, look around you and find **bright and dark areas**.

Talk about **why** the areas you find are bright or dark.

This is the end of the partner work in this lesson.

A **puppet-theater company** has come to us with a **problem** that they think we can **solve** by using **light and sound**.

Their puppet shows use many heavy parts that are difficult to carry around.

They are hoping that we can figure out how to **use light to make a picture on a wall** instead.

Using light to make a picture will make it so the puppet-theater company will not have to carry all the heavy parts to their shows.

Now, we'll look at **pictures of their puppet shows.**



Think about what you **notice** in the pictures.





We can see **light** shining from the left side.

Light can be used to do many different things. It can help us **see what is around us**, it can **send signals**, and it can be used to **make pictures on walls**.



We can also see the musicians on the left side.

They are making **sound** for the show.

A **scene** is the **background** of a play or a puppet show.

The puppet-theater company wants us to **create a picture on the wall using light** for a scene in their puppet show.





What do you think this scene is showing for the story?

Think about **how light is being used** in this scene.

Puppet Scene Design Goals

- The scene should have a bright area.



- The scene should have a dark area.



- The scene should have a medium bright area, between bright and dark.



This list shows our **design goals**.

The puppet-theater company asked us to make scenes that create **three different areas** on the wall.

By making these **three areas**, the puppet-theater company will be able to include many different things in their scenes.

Engineers who **study light** try to answer questions about **how to make brighter and darker areas**.

We will think about this question as we help the puppet-theater company solve its problem:



Unit Question

How do we make different parts of a surface brighter or darker?

Glossary

block: to stop something from passing through

bloquear: no permitir que algo pase

design: to try to make something new that people want or need

diseñar: intentar crear algo nuevo que las personas quieren o necesitan

engineer: a person who makes something to solve a problem

ingeniero/a: una persona que crea algo para solucionar un problema

material: what something is made of

material: lo que constituye algo

observe: to use any of the five senses (sight, hearing, smell, taste, touch)
to learn more about something

observar: usar cualquiera de los cinco sentidos (vista, oído, olfato, gusto, tacto) para aprender más sobre algo

source: the place where something comes from

fuentes: el lugar desde donde viene algo

surface: the outside part of something

superficie: la parte exterior de algo

vibrate: to move back and forth quickly

vibrar: mover hacia adelante y hacia atrás rápidamente

You have a **Glossary**
you can use if you need
to find definitions for
science words we are
using.



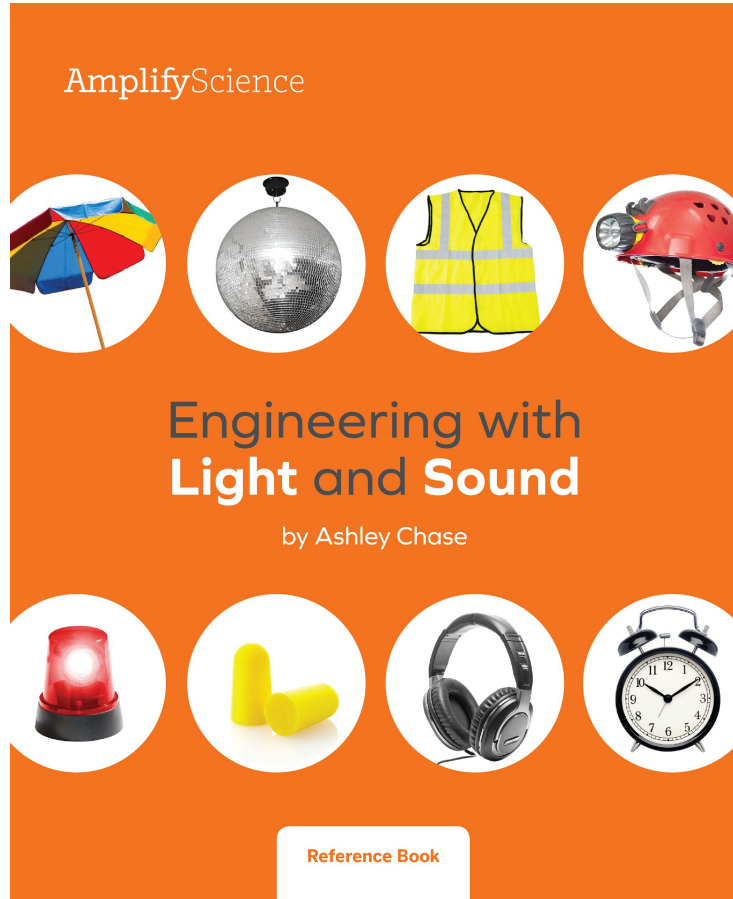
Now is a good time to take a break.

In order to help the puppet-theater company solve its problem, we will work as **light and sound engineers**.

Engineers are people who **make things** to solve problems.

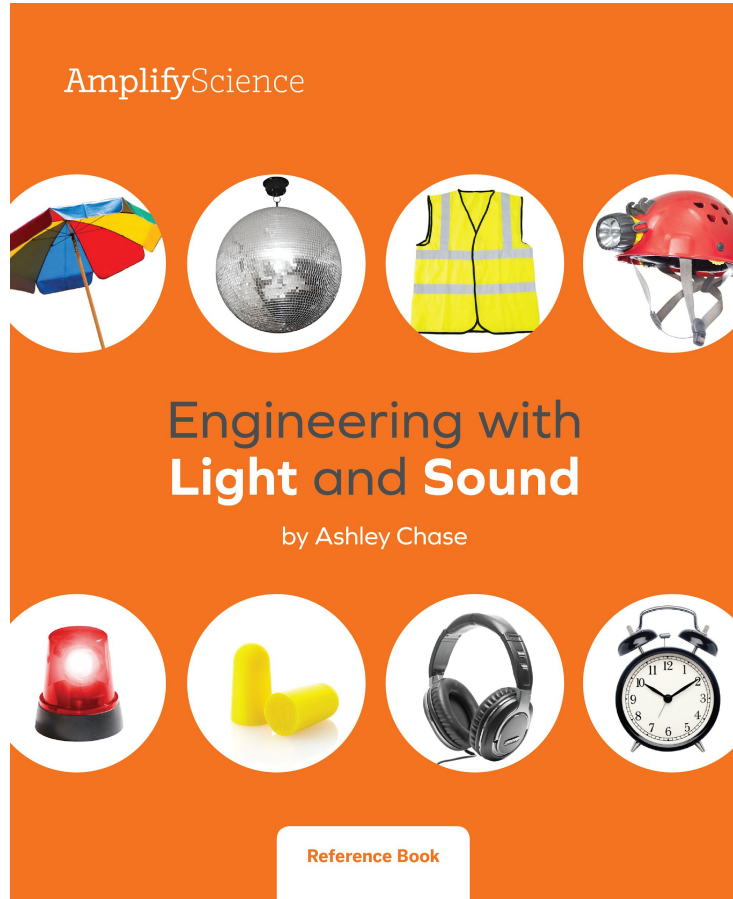
Now, we will read a **book** to find out more about **what engineers do**.

Check with your teacher about how you will access books in this @Home Unit.



This is a special type of book called a **reference book**.

Instead of reading the book from beginning to end, we can read **specific parts** of the book to **gather information**.



Find someone to **read**
out loud to you.

Using the digital library? Find the book at tinyurl.com/AMPLAS-60

Watching a read-aloud video? Find the video at
tinyurl.com/AMPLAS-01 tinyurl.com/AMPLAS-02

Contents

What Is an Engineer?.....	4
Designing Light Sources.....	7
Designing Things That Block Light or Let Light Pass Through.....	13
Designing Things That Reflect Light.....	22
Designing Sound Sources.....	26
Designing Things That Block Sound.....	33
Designing Things That Use Both Light and Sound.....	36
Glossary.....	39
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Turn to **page 3**. This is the **Contents** page.

It lists the different sections where we can find out more about **what engineers do**.

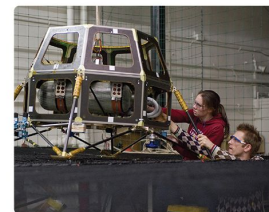
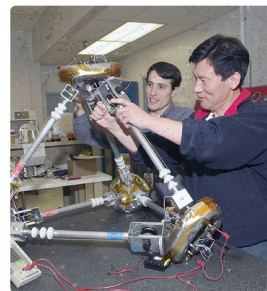
Turn to pages 4 and 5 and read them.

What Is an Engineer?

Engineers make things to solve problems. They call this **designing**. Engineers design **solutions** to problems.



This man is an engineer.



These engineers are designing solutions.

First, engineers learn all they can about a problem. Next they plan how to solve the problem. Once they have finished planning, they make their solutions. Then engineers **test** their solutions to see if they work. They may need to change their solutions or try new solutions.

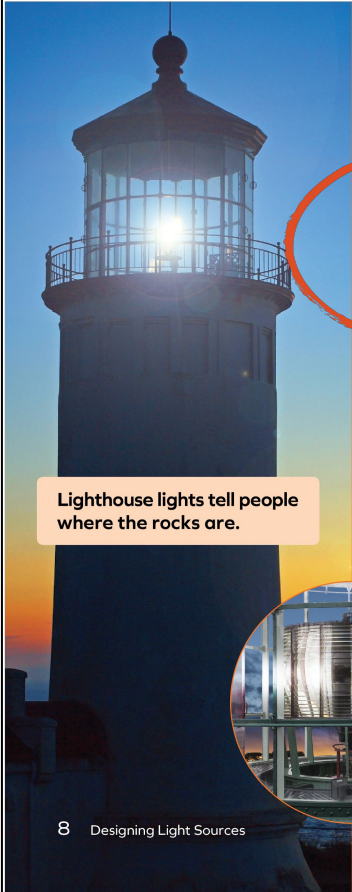


What have you learned from these pages?

Let's explore this book more.

Each section has the same two headings:

“The Problem” and “The Solution”




Lighthouse Lights

The Problem
Boats may sink if they run into a rock. Rocks are hard to see at night. People in boats need a way to stay safe from rocks at night.

The Solution
Engineers designed bright lights to warn people in boats. The lights tell people where the rocks are.

Lighthouse lights tell people where the rocks are.

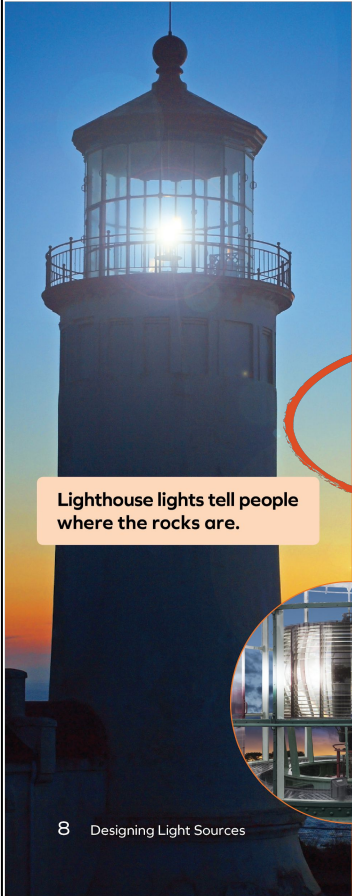


This photo shows a lighthouse light up close.

8 Designing Light Sources

Turn to page 8.

“The Problem” section describes something that people wanted or needed to do but could not.




Lighthouse Lights

The Problem
Boats may sink if they run into a rock. Rocks are hard to see at night. People in boats need a way to stay safe from rocks at night.

The Solution
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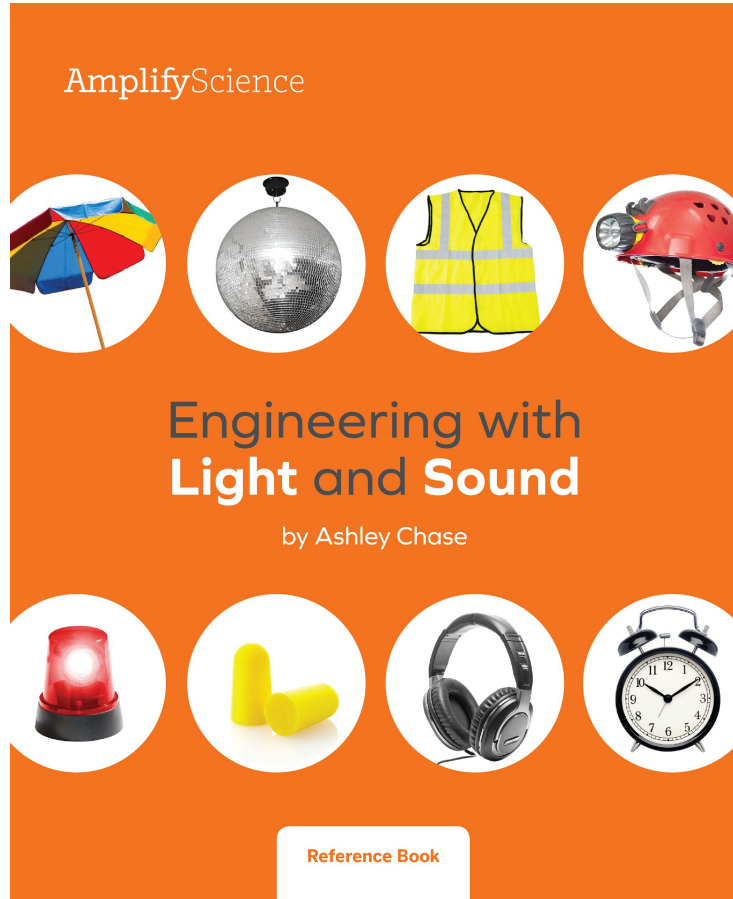
Lighthouse lights tell people where the rocks are.



This photo shows a lighthouse light up close.

8 Designing Light Sources

“The Solution” section describes what the engineers made to solve that problem and help people do what they wanted or needed to do.



Now you will look at the **solutions** in the book to get ideas about what **light and sound engineers** do and make.



Look for a page you think is **interesting**.

Think about the **problem** and the **solution**.

What Is an Engineer?

Engineers make things to solve problems. They call this **designing**. Engineers design **solutions** to problems.



What did you learn
about what **engineers**
do?

What **problems** and
solutions did you look
at?

People depend on the **solutions** engineers make, like the examples we saw today. Engineers are people who use what they know to make things to solve **problems**.

We will work like **engineers** as we help the puppet-theater company solve their problem.

When engineers hear about a **problem**, they try to make a **solution**.



What do you think the puppet-theater company needs you to do?

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 to solve a problem.



engineer

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

End of @Home Lesson



THE LAWRENCE
HALL OF SCIENCE
UNIVERSITY OF CALIFORNIA, BERKELEY

Amplify.

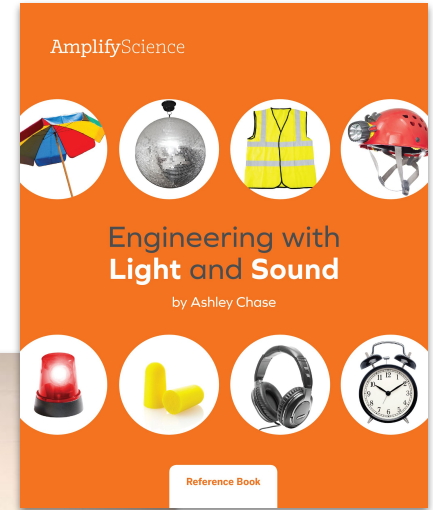
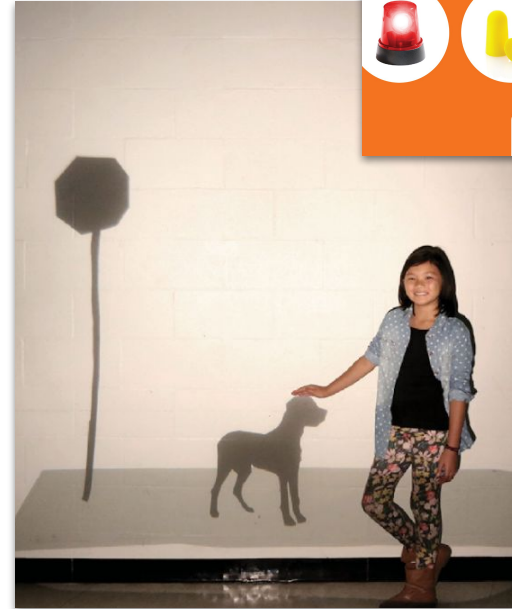
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@Home Lesson 1

Please respond in the chat

What is the big idea in this lesson?

What's most important?



Day _____

Minutes for science: _____

Day _____

Minutes for science: _____

@Home Lesson 1

Adapted from: Amplify Science *Light and Sound* Lessons 1.1 and 1.2

Key Activities

- **Talk:** Students observe a series of images and discuss what they notice in the images.
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Ideas for synchronous or in-person instruction

While meeting, have students observe the series of images and discuss what they notice in the images and how they think someone made brighter and darker areas on the wall in the final image in the series. Then, introduce the puppet-theater company's problem and students' role as light and sound engineers.



will...

Lesson planning with @Home Units

Day <u>Monday</u>		Day <u>Tuesday</u>	
Minutes for science: <u>30</u>		Minutes for science: <u>20-30</u>	
Lesson or part of lesson: <u>@Home Lesson 1 slides 1-27</u> Purpose or big idea: <u>Thinking about light and introducing the puppet scene design challenge</u>		Lesson or part of lesson: <u>@Home Lesson 1 slides 28-45</u> Purpose or big idea: <u>What engineers do and how engineers work to design solutions to problem</u>	
Students will...	Teacher will...	Students will...	Teacher will...
Additional notes:		Additional notes:	



Day <u>Monday</u>		Day <u>Tuesday</u>	
Minutes for science: <u>30</u>		Minutes for science: <u>20-30</u>	
Lesson or part of lesson: @Home Lesson 1 slides 1-27 Purpose or big idea: Thinking about light and introducing the puppet scene design challenge		Lesson or part of lesson: @Home Lesson 1 slides 28-45 Purpose or big idea: What engineers do and how engineers work to design solutions to problem	
Students will... -Describe what they notice in each image (slides 4-9) -Discuss initial ideas about brighter and darker areas -Listen to introduction of puppet scene task -Share ideas and questions	Teacher will... -Use pick sticks to choose students to share their ideas on slides 4-9 -Change slide 13 to remove student sheet prompt -Facilitate class discussion about puppet scene	Students will...	Teacher will...
Additional notes: -Send home slides 4-9 and slide 24 for optional family discussion about the unit problem and the design challenge -Send home student sheet for optional work at home and family discussion.		Additional notes:	



Day <u>Monday</u>		Day <u>Tuesday</u>	
Minutes for science: <u>30</u>		Minutes for science: <u>20-30</u>	
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Students will... -Describe what they notice in each image (slides 4-9) -Discuss initial ideas about brighter and darker areas -Listen to introduction of puppet scene task -Share ideas and questions	Teacher will... -Use pick sticks to choose students to share their ideas on slides 4-9 -Change slide 13 to remove student sheet prompt -Facilitate class discussion about puppet scene	Students will... -Engage in shared read of <i>Engineering with Light and Sound</i> -Choose which pages to focus on -Participate in sensemaking discussion about text	Teacher will... -Begin the lesson by reviewing the puppet scene context -Teach using slides 29-31 then project digital book and lead reading. Conclude lesson with slides 41-45.
Additional notes: -Send home slides 4-9 and slide 24 for optional family discussion about the unit problem and the design challenge. -Send home student sheet for optional work at home and family discussion.		Additional notes: -Share instructions for accessing digital <i>Engineering with Light and Sound</i> with families and invite them to flip through it to keep learning more about how engineers work	

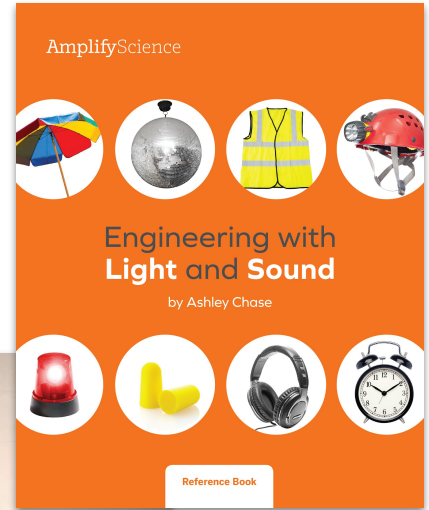
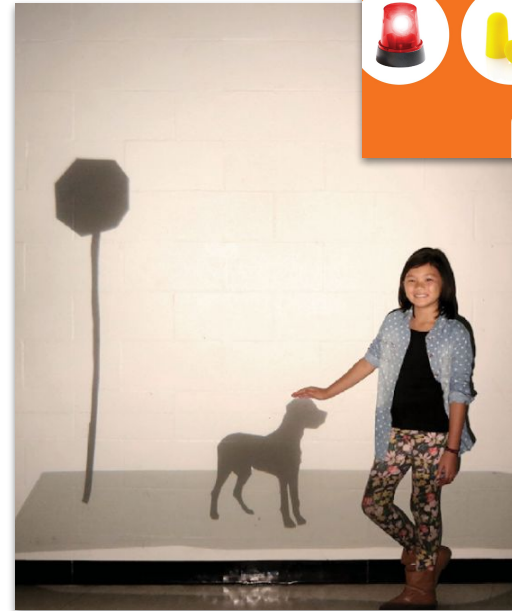


Breakout groups

Additional ideas for Lesson 1

Discuss your ideas for planning Lesson 1. Share:

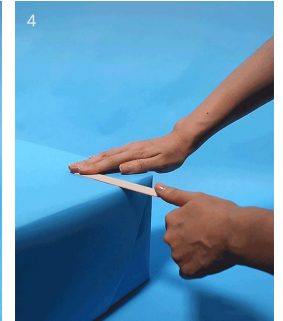
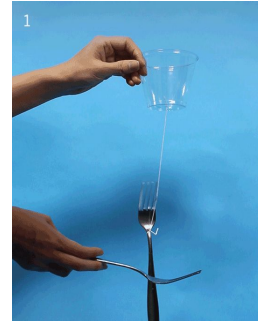
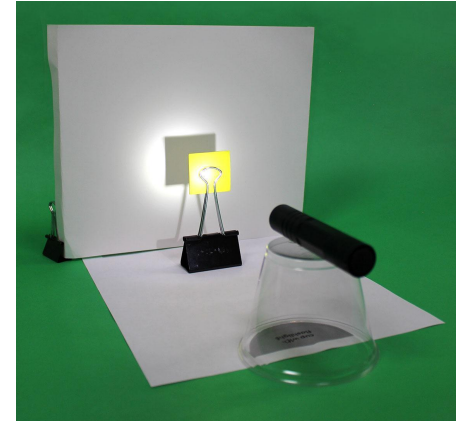
- strategies for remote teaching
- ideas for differentiation
- how you might collect evidence of student thinking



Engineering design and hands-on

Modified activities for remote learning

- Use videos to observe the testing of different materials
- Teacher models creating puppet scene stencils
- Chapter 4 sound investigation using materials at home

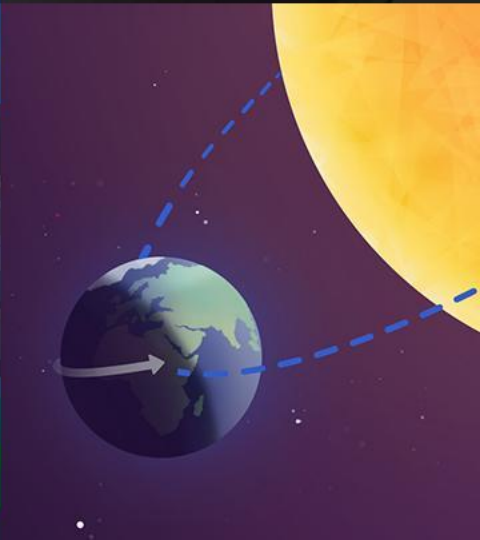


Suggestions and strategies for remote teaching

- 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



Questions?



Plan for the day

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

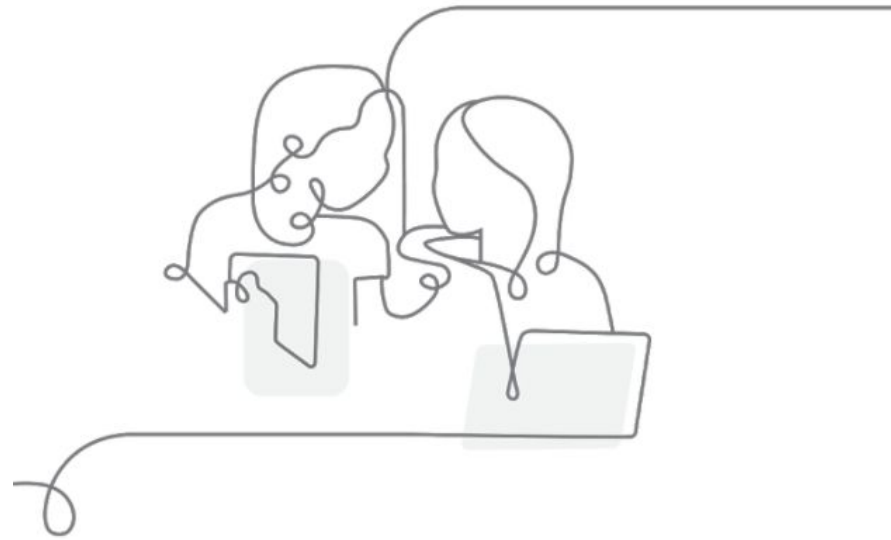
Head or hands reflection

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?

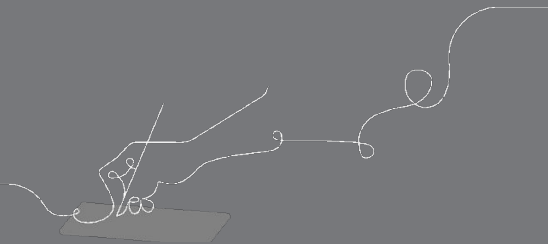


During this workshop did we meet our objectives?

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

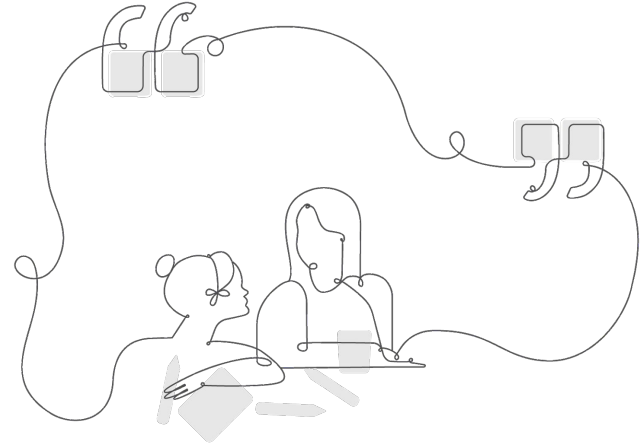
e



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

The image shows a composite of three overlapping screenshots of the Amplify Science Program Hub website. The leftmost screenshot shows a sidebar navigation menu with a hamburger menu icon circled in red. Below it are links for 'Hello Teacher Considine', 'Log Out', and 'Go To My Account'. A 'Classroom Language Settings' button is also present. Further down are icons for 'LA Science Program Guide', 'Program Hub' (highlighted with a red arrow), 'Science Program Guide', 'FLORIDA EDITION Standards Map', and 'Help'. The middle screenshot shows a 'Microbiome' unit card with '11 Lessons' and the 'FUTURA FOOD ENGINEERING' logo. The rightmost screenshot shows the main content area with the heading 'Welcome Science Educators!' and a welcome message. Below this are three resource categories: 'Remote and hybrid learning resources', 'Professional Learning Resources', and 'Additional Unit Materials'. Red arrows point from the 'Program Hub' icon in the sidebar to the 'Remote and hybrid learning resources' card, and from the 'Professional Learning Resources' card to the 'Additional Unit Materials' card.

AmplifyScience

Welcome Science Educators!

The Amplify Science Program Hub was created to provide you with resources, tools, and advice for all stages of your implementation.

Remote and hybrid learning resources

Amplify Science@Home makes remote and hybrid learning easier.

Professional Learning Resources

Let's get started!

Additional Unit Materials

Additional resources to complement the units you're teaching.

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<https://www.amplify.com/floridastandards>

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-family-resource-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



Amplify Chat

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