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!

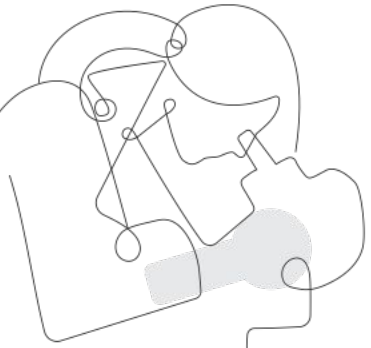
https://amplify.com/lausd-science/

Do Now: *Use the link in the chat to add your best remote learning tips and tricks for teaching Amplify Science to the Jamboard.*

Amplify Science

Unit Internalization & Guided Planning

Deep-dive and strengthening workshop
Grade 8: Earth, Moon, and Sun



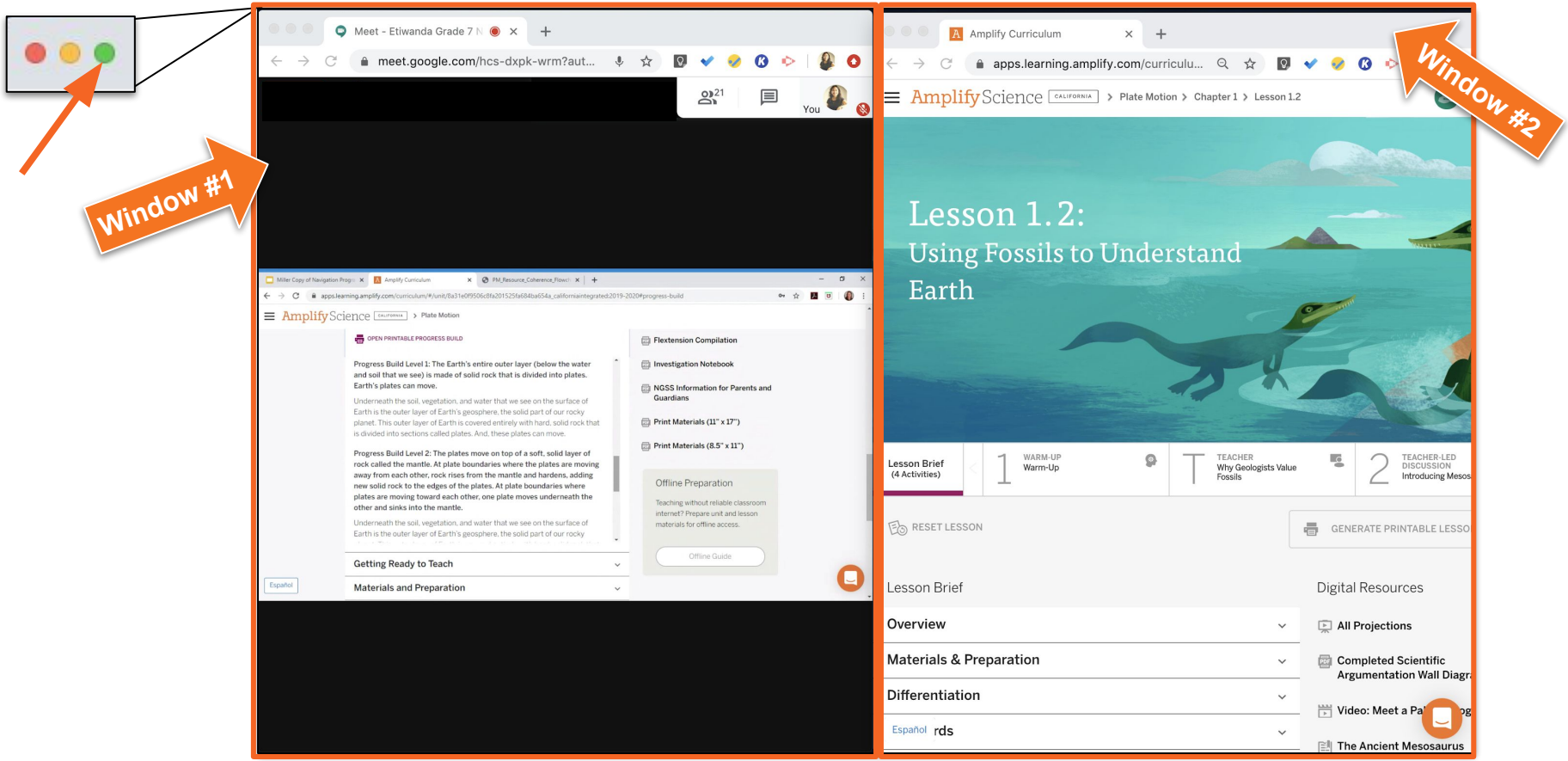
LAUSD

xx/xx/2021

Presented by Your Name

In a new tab, please log in to your Amplify Science account through Schoology.

Use two windows for today's webinar



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

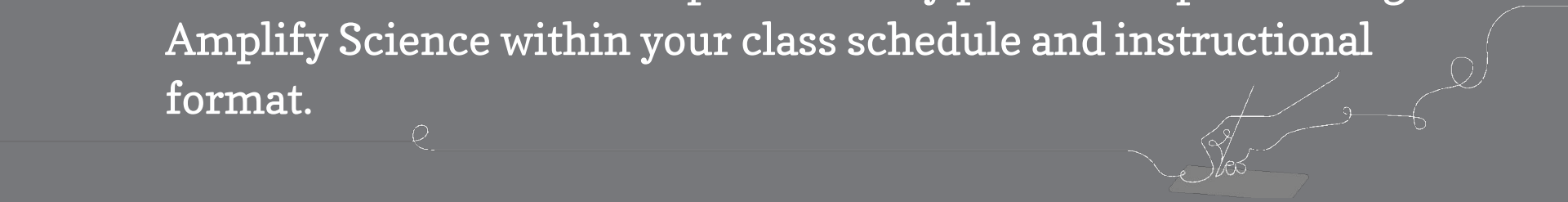
- Make sure you have a note-catcher present

- Be an active participant - chat, ask questions, discuss, share!

Workshop goals

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

- Internalize your upcoming unit.
- Plan for collecting **evidence of student learning** in order to make instructional decisions to **support diverse learner needs**.
- Gather resources to develop a multi-day plan for implementing Amplify Science within your class schedule and instructional format.



Plan for the day

- Framing the day
  - Welcome
  - Instructional Materials
- Unit Internalization
- Planning to teach
  - Collecting evidence of student learning to meet diverse learner needs
- Reflection and closing

Plan for the day

- **Framing the day**
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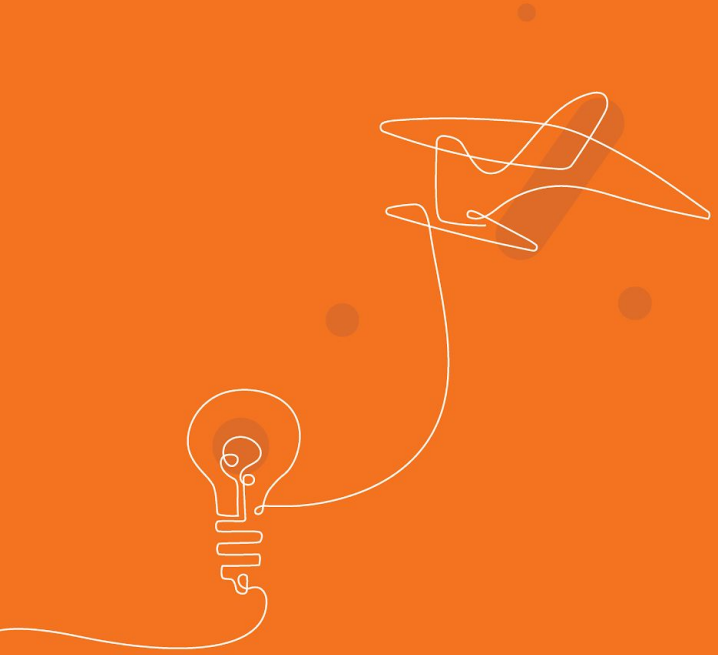
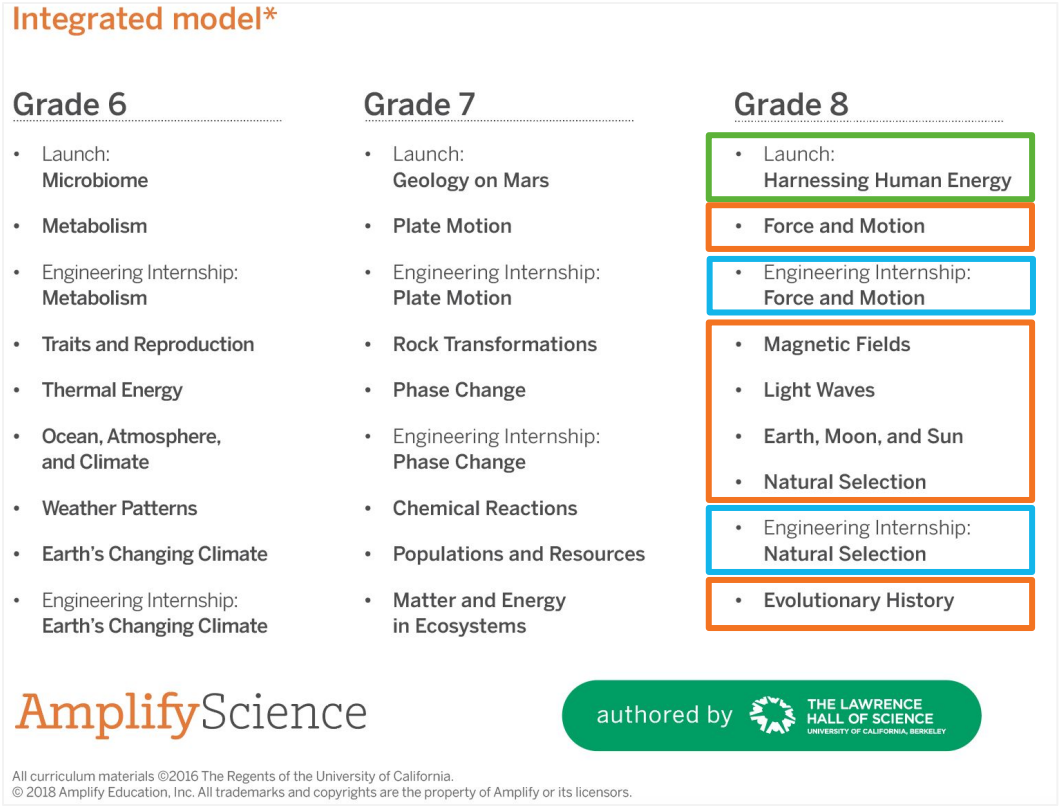


Instructional Materials

Amplify.

Middle school course curriculum structure



Launch unit

- First unit
- 11 lessons

Core units

- Majority of units
- 19 lessons

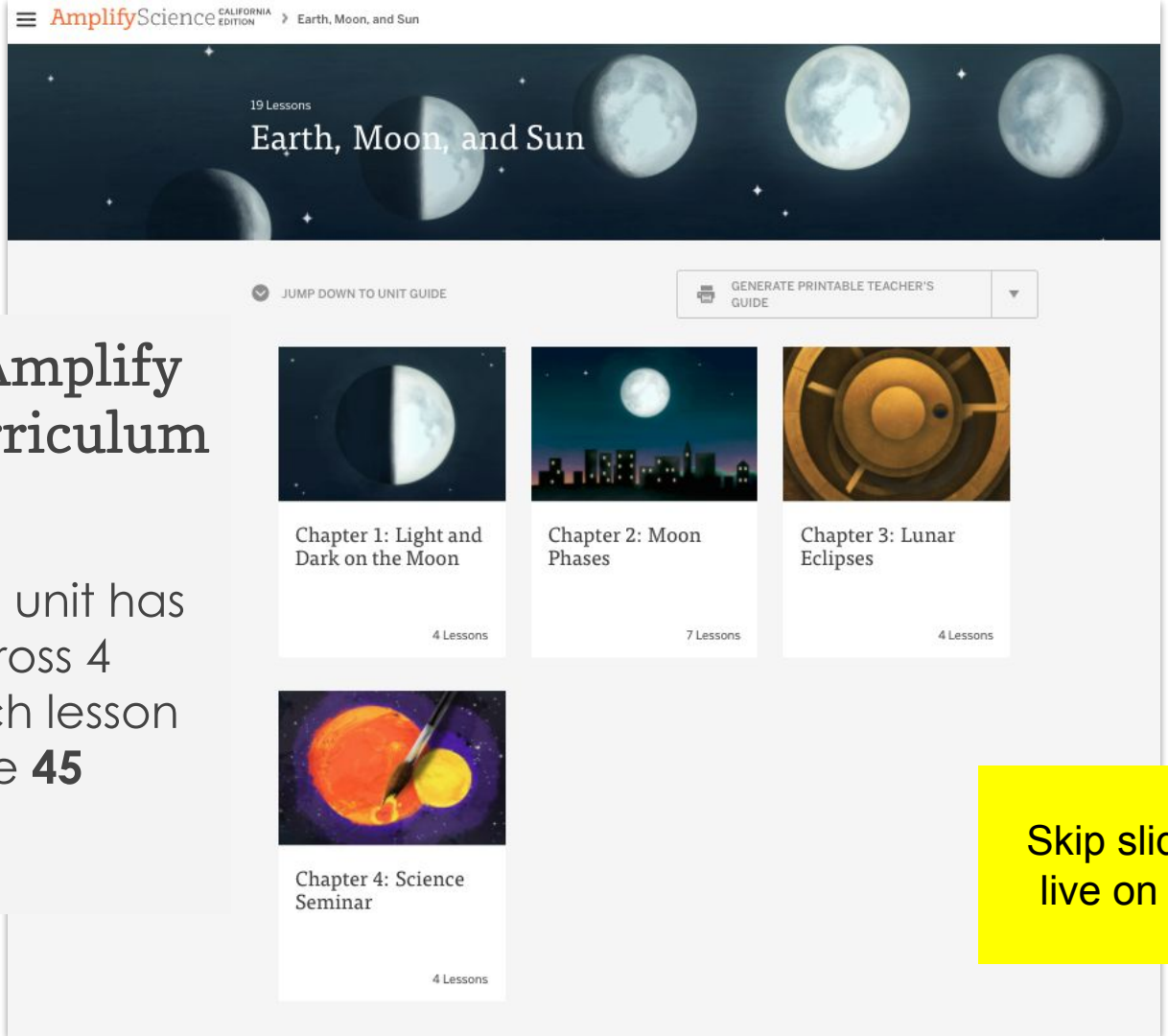
Engineering Internships

- Two per year
- 10 lessons

Standard Amplify Science Curriculum

Standard Amplify Science Curriculum

The Traits and Reproduction unit has **19 lessons** across 4 chapters. Each lesson is written to be **45 minutes** long.

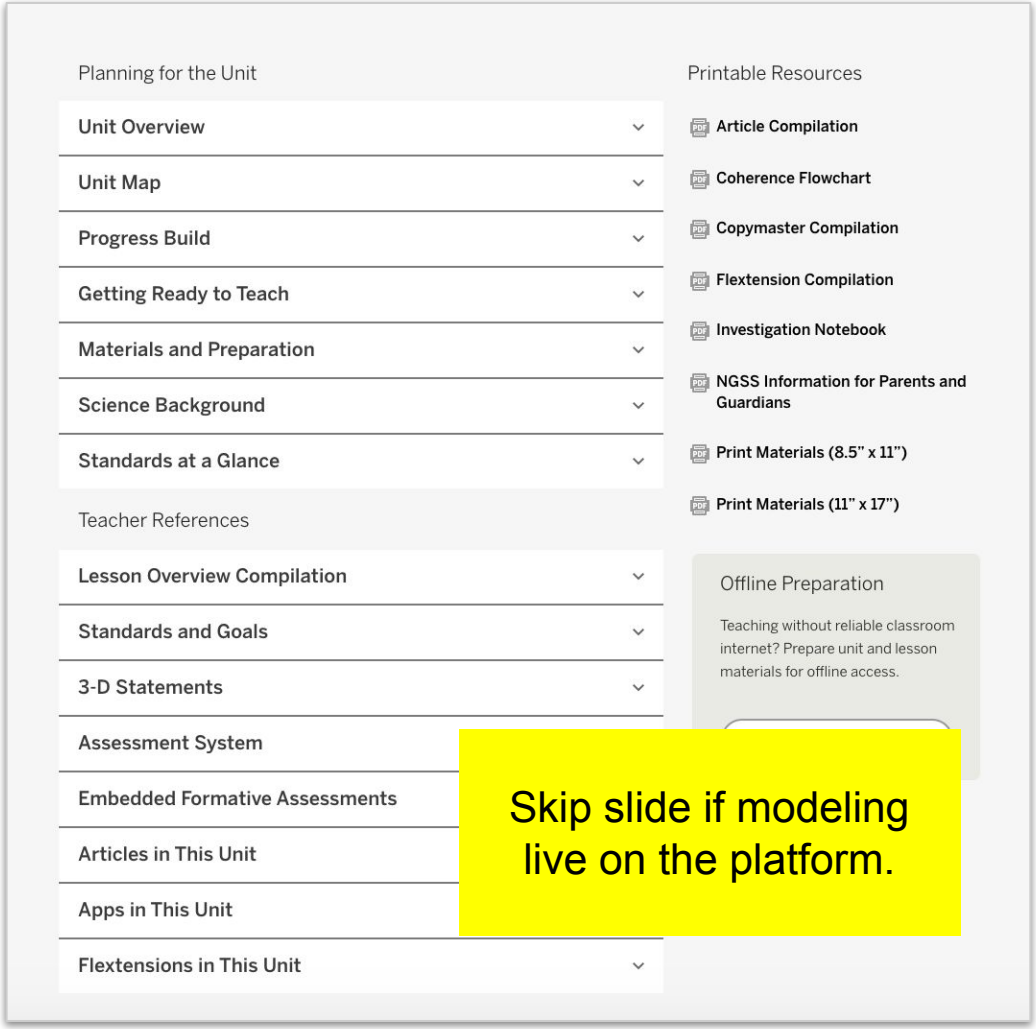


Skip slide if modeling live on the platform.

Standard Amplify Science Curriculum

On the standard Amplify Science platform you will find all of your key documents for planning for the unit.

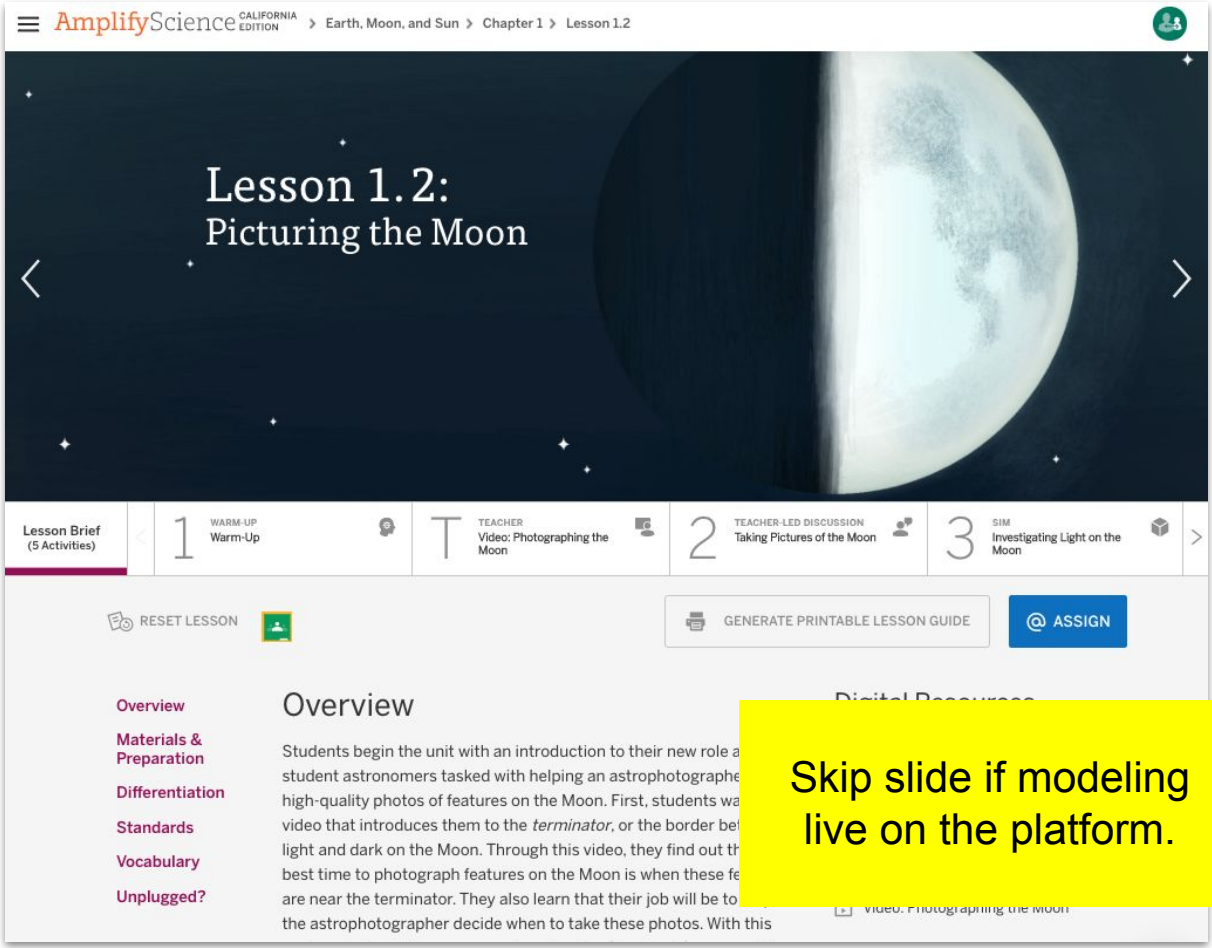
We will be using many of these in today's workshop.



Standard Amplify Science Curriculum

On the standard Amplify Science platform you will find key lesson level information.

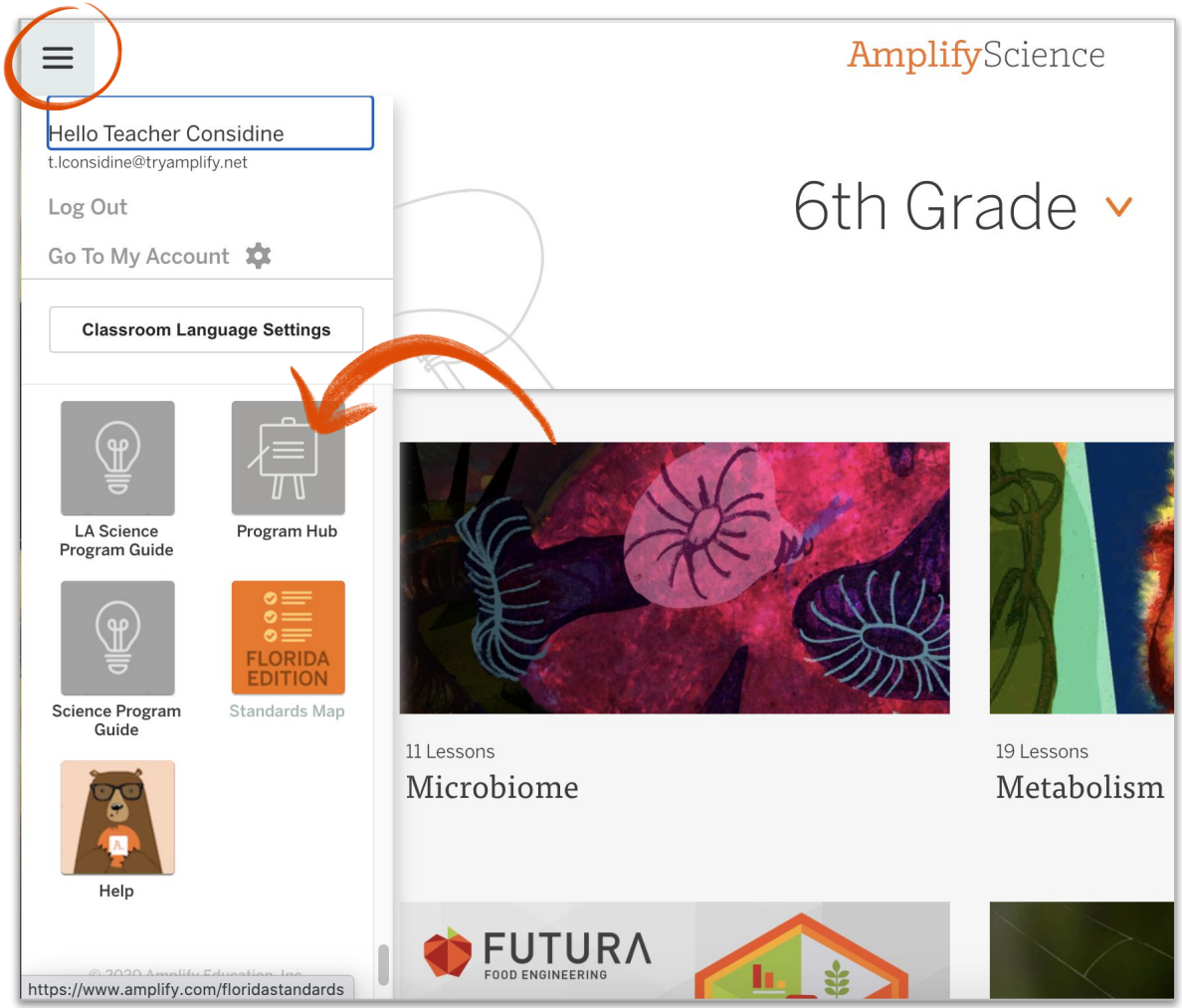
We will be navigating to lessons during today's workshop in order to better plan for collecting evidence of student learning in order to plan to meet the needs of diverse learners.



Amplify Science @Home Curriculum

Amplify Science @Home Curriculum

In addition to the standard Amplify Science curriculum, you also have access to Amplify Science @Home Curriculum on the Science Program Hub.



AmplifyScience@Home

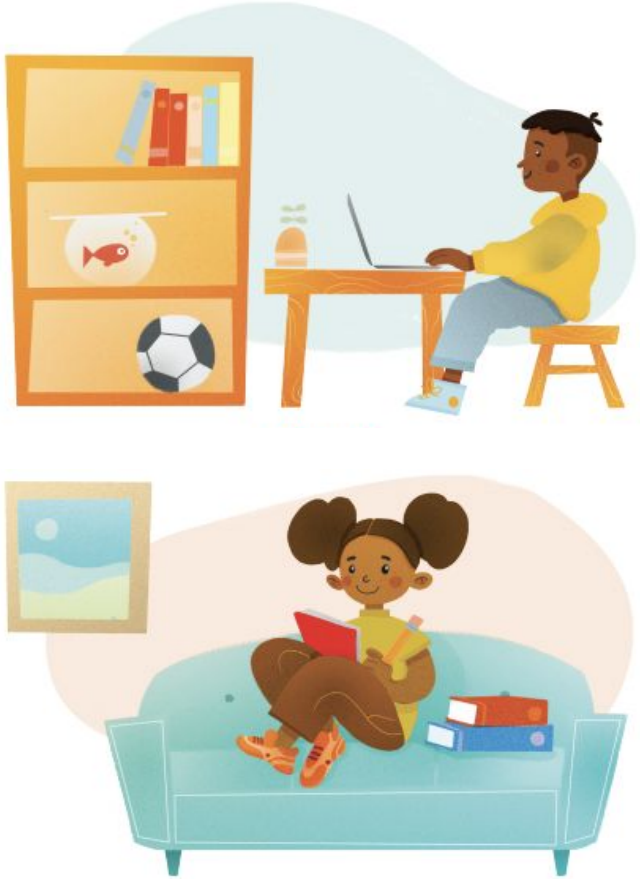
Two different options:

@Home Units

- Digital or print-based versions of Amplify Science units condensed by about 50%

@Home Videos

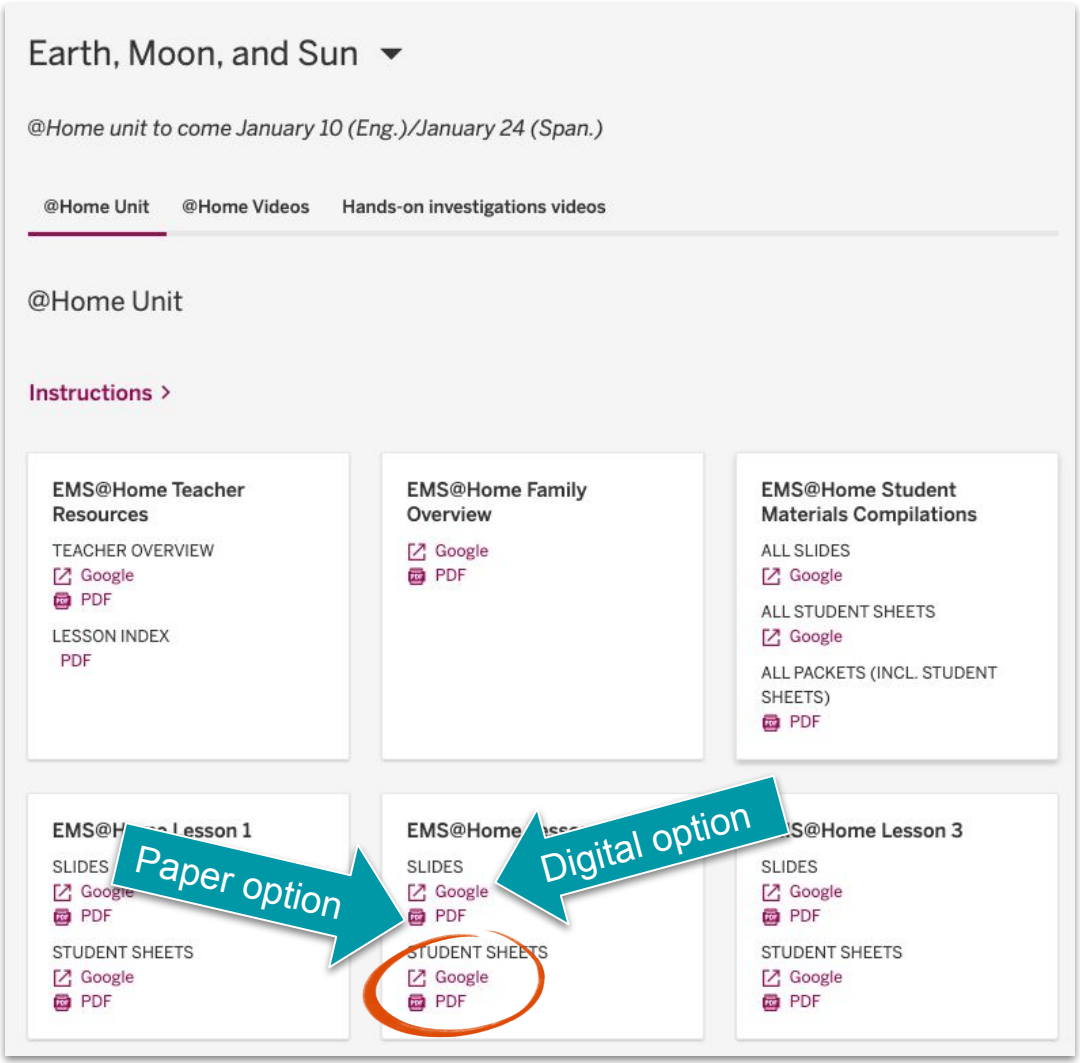
- Video playlists of Amplify Science lessons, taught by real Amplify Science teachers



Amplify Science @Home Curriculum

You have access to the Earth, Moon, and Sun @Home Unit.

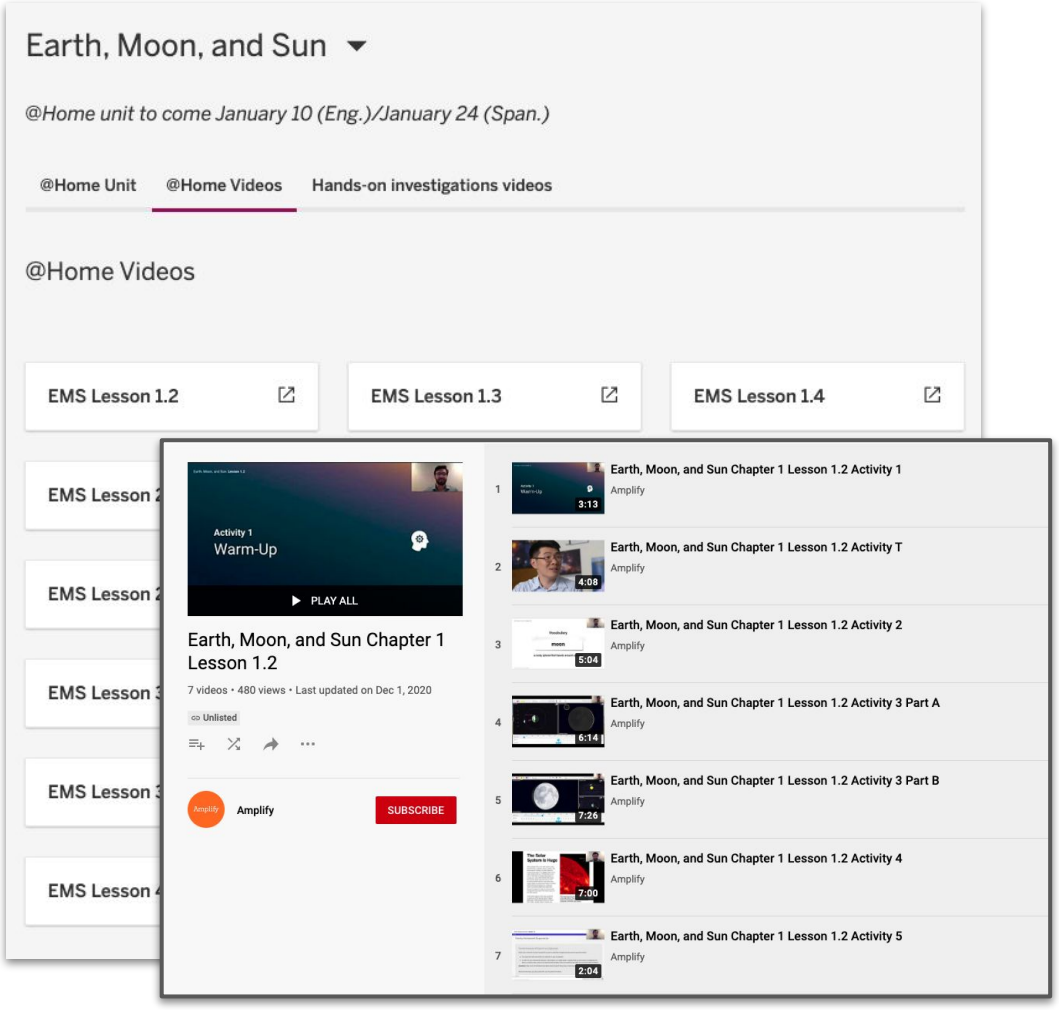
The Earth, Moon, and Sun @Home Unit has **14 lessons.** Each lesson is written to be **30 minutes** long.



Amplify Science @Home Curriculum

You have access to the Earth, Moon, and Sun @Home Videos.

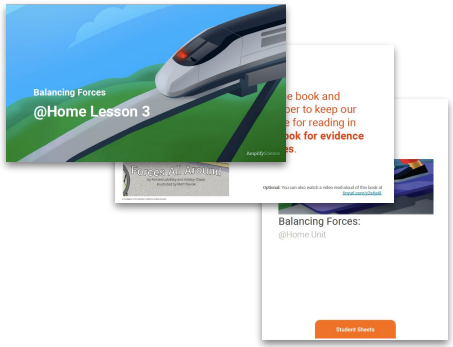
There are 16 @Home Videos for the Earth, Moon, and Sun unit. This covers all lessons expect for the assessment lessons (1.1, 2.6, and 4.4). The video playlists on YouTube teach the standard Amplify Science Lessons.



@Home Units

A shift in approach to respond to user feedback

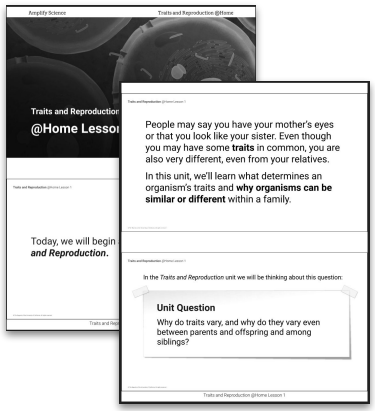
Original approach: two different resources

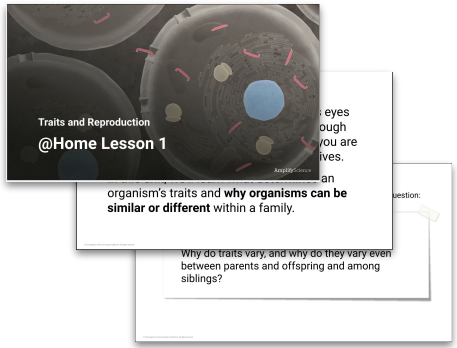


Print-based: @Home packets

Digital: @Home slides and student sheets

Updated approach: one resource, two formats





Print-based: PDFs of @Home Slides and student sheets

Digital: Google Slides @Home Slides and Google Doc student sheets

Amplify Science @Home Curriculum

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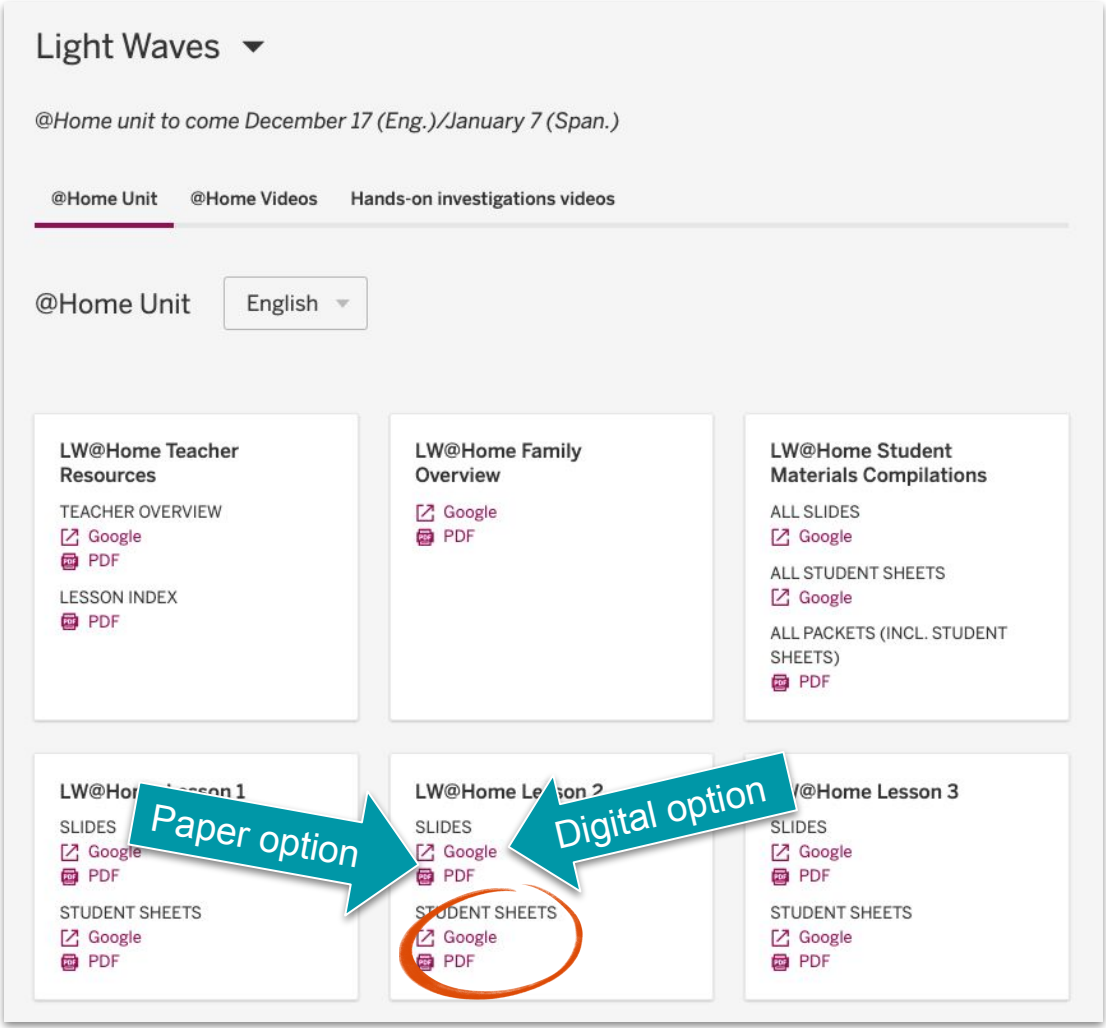

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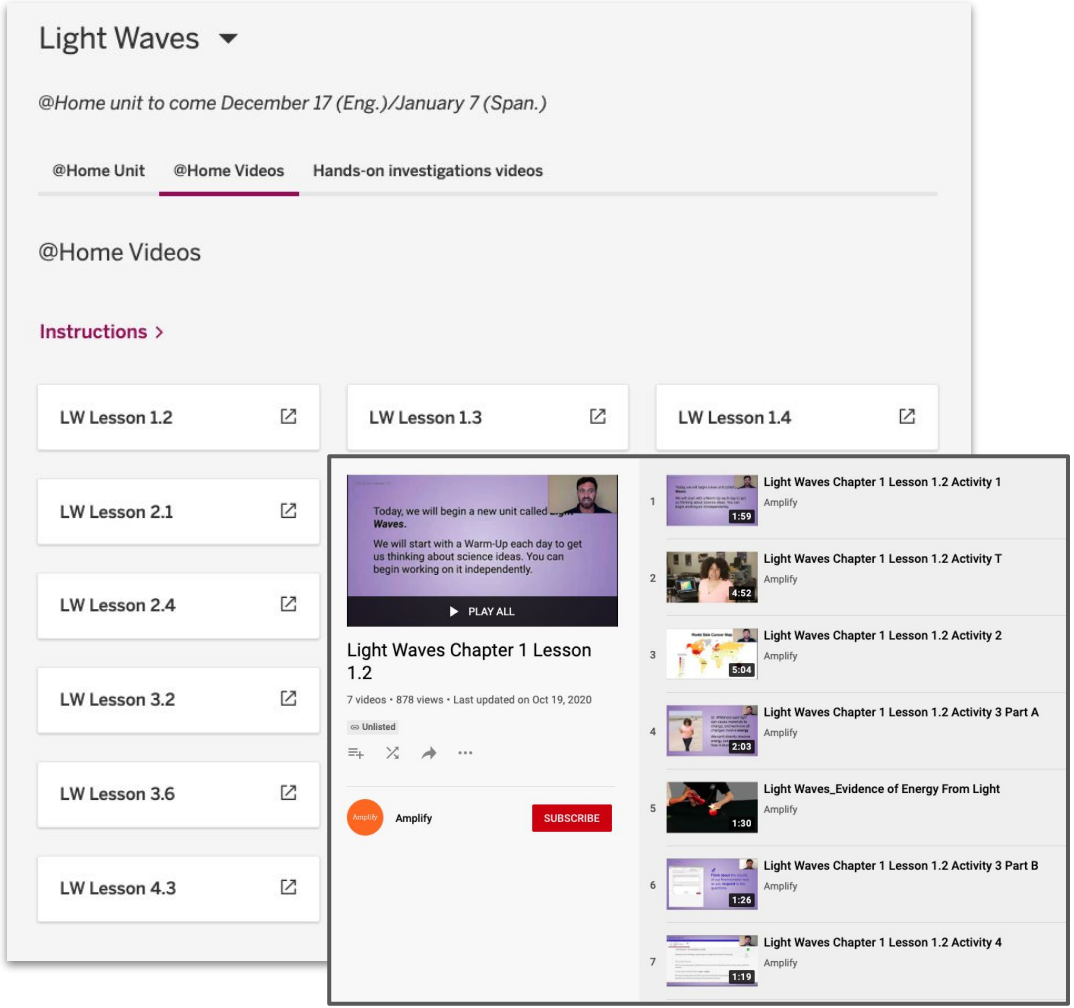

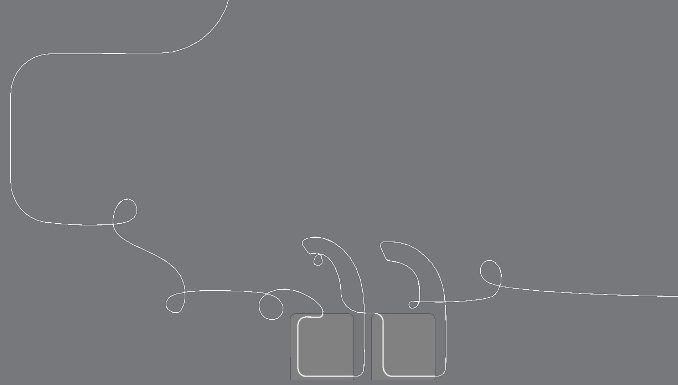

Questions?

Plan for the day

- Framing the day
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- **Unit Internalization**
- Planning to teach
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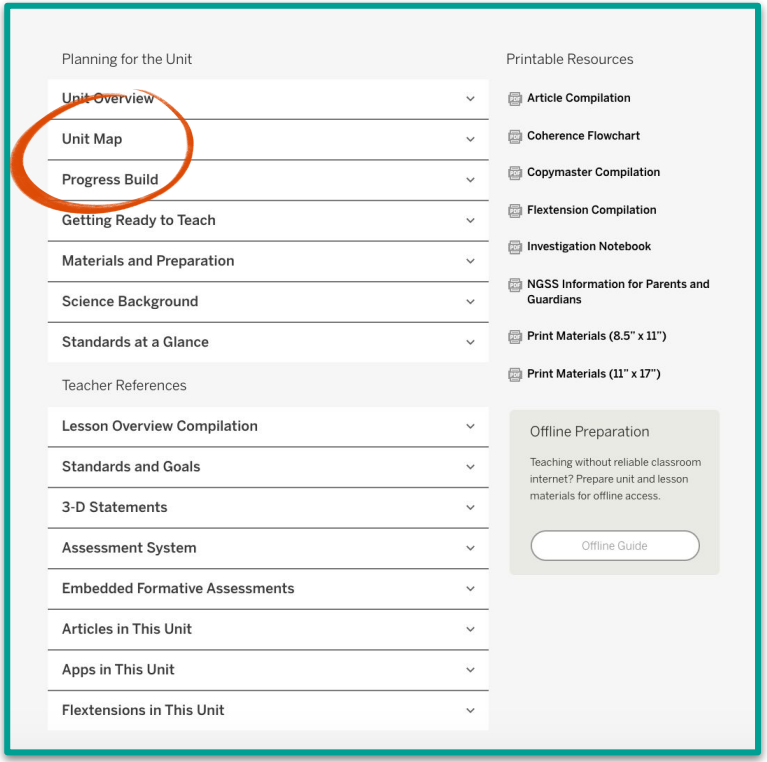
Unit Guide Resources



Page 1

Unit Guide resources

Once a unit is selected, select **JUMP DOWN TO UNIT GUIDE** in order to access all unit-level resources in an Amplify Science unit.

Planning for the unit	
Unit Overview	Describes what's in each unit, the rationale, and how students learn across chapters
Unit Map	Provides an overview of what students figure out in each chapter, and how they figure it out
Progress Build	Explains the learning progression of ideas students figure out in the unit
Getting Ready To Teach	Provides tips for effectively preparing to teach and teaching the unit in your classroom
Materials and Preparation	Lists materials included in the unit's kit, items to be provided by the teacher, and briefly outlines preparation requirements for each lesson
Science Background	Adult-level primer on the science content students figure out in the unit
Standards at a Glance	Lists NGSS Standards (Performance Expectations, Science and Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts), Common Core State Standards for English Language Arts, and Common Core State Standards for Mathematics
Teacher references	
Lesson Overview Compilation	Lesson Overview of each lesson in the unit, including lesson summary, activity purposes, and timing
Standards and Goals	Lists NGSS (Science and Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts) and CCSS (English Language Arts and Mathematics) standards in the unit, explains how the standards are reached
3-D Statements	Describes 3-D learning across the unit, chapters, and in individual lessons
Assessment System	Describes components of the Amplify Science assessment system, identifies each 3-D assessment opportunity in the unit
Embedded Formative Assessments	Includes full text of formative assessments in the unit
Articles in This Unit	Summarizes each unit text and explains how the text supports instruction
Apps in This Unit	Outlines functionality of digital tools and how students use them (in grades 6-8)
Flextensions in This Unit	Summarizes information about the Hands-On Flextension lesson(s) in the unit
Printable resources	
Coherence Flowcharts	Visual representation of the storyline of the unit
Copymaster Compilation	Compilation of all copymasters for the teacher to print and copy throughout the unit
Flextension Compilation	Compilation of all copymasters for Hands-on Flextension lessons throughout the unit
Investigation Notebook	Digital version of the Investigation Notebook, for copying and projecting
Multi-Language Glossary	Unit vocabulary words in 10 languages
NGSS Information for Parents and Guardians	Information for parents about the NGSS and the shifts for teaching and learning
Print Materials (8.5" x 11")	Digital compilation of printed cards (i.e. vocabulary cards, student card sets) provided in the kit
Print Materials (11" x 17")	Digital compilation of printed Chapter Questions and Key Concepts provided in the kit

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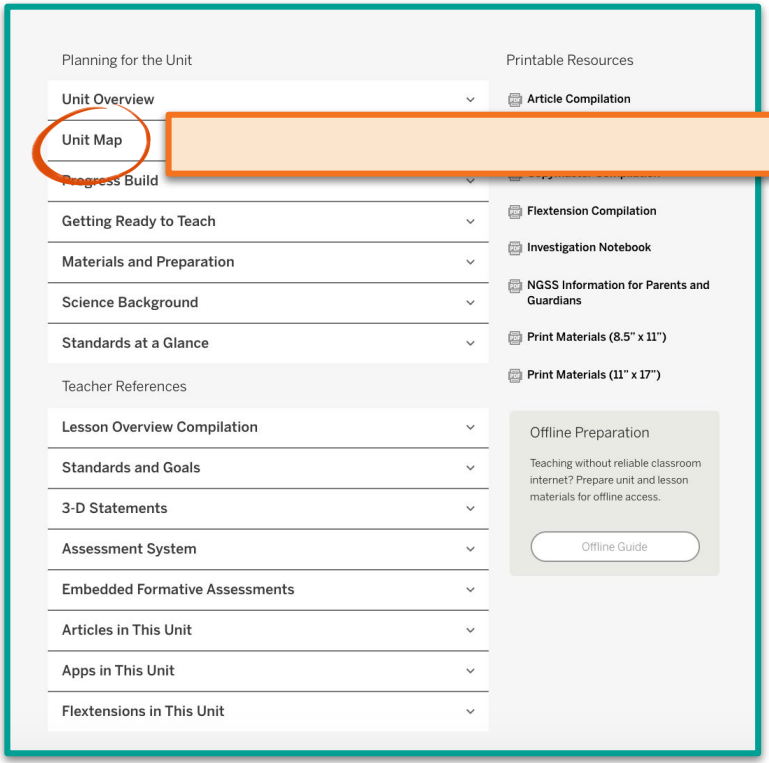
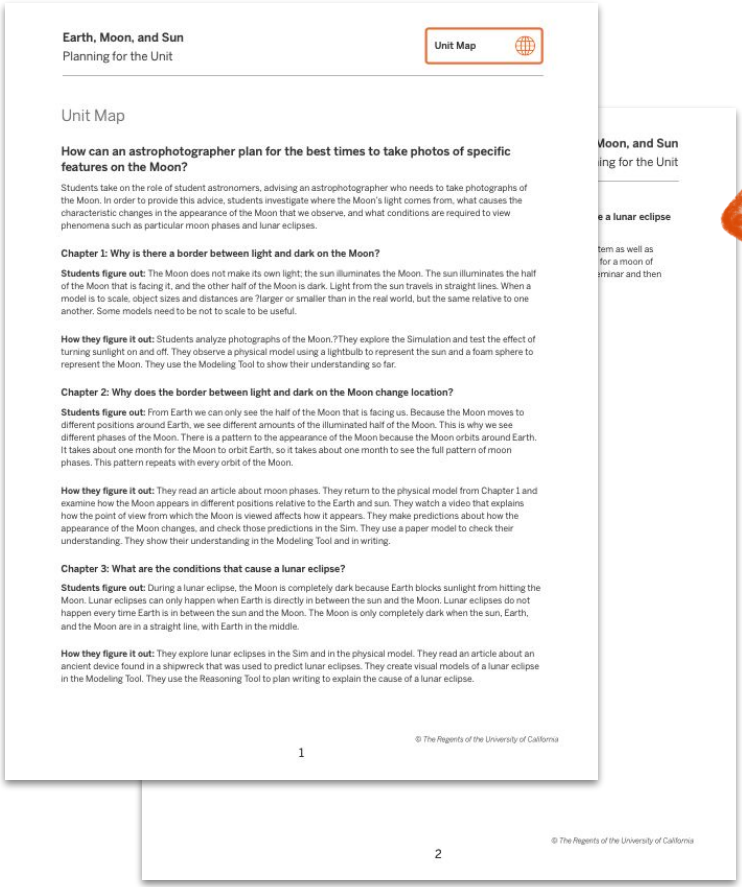
Unit Map

Pages 2-3





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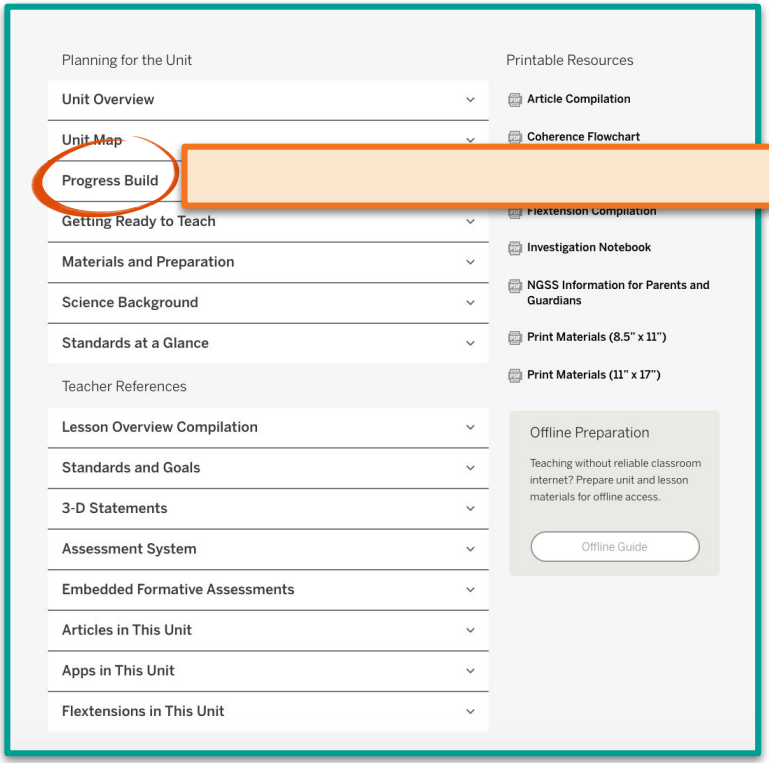
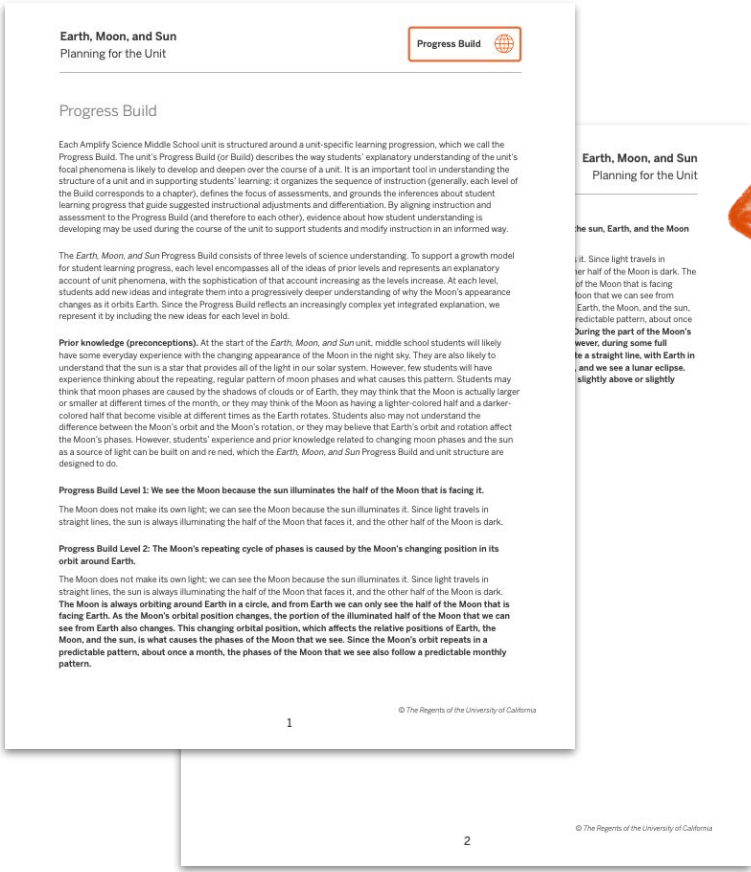
Progress Build





Earth, Moon, and Sun
Planning for the Unit

Progress Build

Progress Build

Each Amplify Science Middle School unit is structured around a unit-specific learning progression, which we call the Progress Build. The unit's Progress Build (or Build) describes the way students' explanatory understanding of the unit's focal phenomena is likely to develop and deepen over the course of a unit. It is an important tool in understanding the structure of a unit and in supporting students' learning; it organizes the sequence of instruction (generally, each level of the Build corresponds to a chapter), defines the focus of assessments, and grounds the inferences about student learning progress that guide suggested instructional adjustments and differentiation. By aligning instruction and assessment to the Progress Build (and therefore to each other), evidence about how student understanding is developing may be used during the course of the unit to support students and modify instruction in an informed way.

The *Earth, Moon, and Sun* Progress Build consists of three levels of science understanding. To support a growth model for student learning progress, each level encompasses all of the ideas of prior levels and represents an explanatory account of unit phenomena, with the sophistication of that account increasing as the levels increase. At each level, students add new ideas and integrate them into a progressively deeper understanding of why the Moon's appearance changes as it orbits Earth. Since the Progress Build reflects an increasingly complex yet integrated explanation, we represent it by including the new ideas for each level in bold.

Prior knowledge (preconceptions). At the start of the *Earth, Moon, and Sun* unit, middle school students will likely have some everyday experience with the changing appearance of the Moon in the night sky. They are also likely to understand that the sun is a star that provides all of the light in our solar system. However, few students will have experience thinking about the repeating, regular pattern of moon phases and what causes this pattern. Students may think that moon phases are caused by the shadows of clouds or of Earth, they may think that the Moon is actually larger or smaller at different times of the month, or they may think of the Moon as having a lighter-colored half and a darker-colored half that become visible at different times as the Earth rotates. Students also may not understand the difference between the Moon's orbit and the Moon's rotation, or they may believe that Earth's orbit and rotation affect the Moon's phases. However, students' experience and prior knowledge related to changing moon phases and the sun as a source of light can be built on and re ned, which the *Earth, Moon, and Sun* Progress Build and unit structure are designed to do.

Progress Build Level 1: We see the Moon because the sun illuminates the half of the Moon that is facing it.

The Moon does not make its own light; we can see the Moon because the sun illuminates it. Since light travels in straight lines, the sun is always illuminating the half of the Moon that faces it, and the other half of the Moon is dark.

Progress Build Level 2: The Moon's repeating cycle of phases is caused by the Moon's changing position in its orbit around Earth.

The Moon does not make its own light; we can see the Moon because the sun illuminates it. Since light travels in straight lines, the sun is always illuminating the half of the Moon that faces it, and the other half of the Moon is dark. **The Moon is always orbiting around Earth in a circle, and from Earth we can only see the half of the Moon that is facing Earth. As the Moon's orbital position changes, the portion of the illuminated half of the Moon that we can see from Earth also changes. This changing orbital position, which affects the relative positions of Earth, the Moon, and the sun, is what causes the phases of the Moon that we see. Since the Moon's orbit repeats in a predictable pattern, about once a month, the phases of the Moon that we see also follow a predictable monthly pattern.**

Earth, Moon, and Sun
Planning for the Unit

Unit Internalization Work Time

Guided Unit Internalization

Part 1: Unit-level internalization

Unit title:

What is the phenomenon students are investigating in your unit?

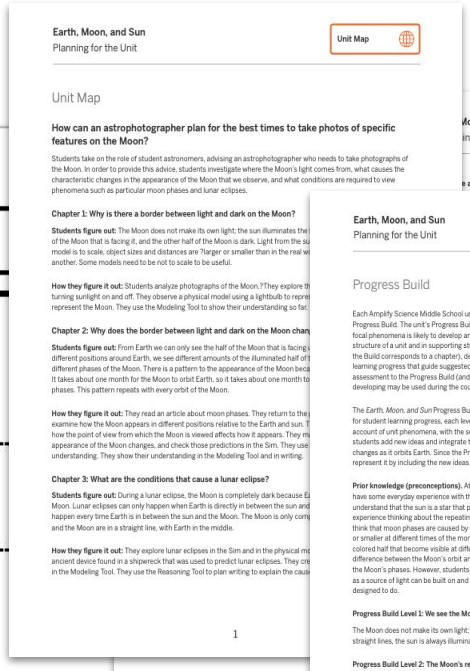
Unit Question:

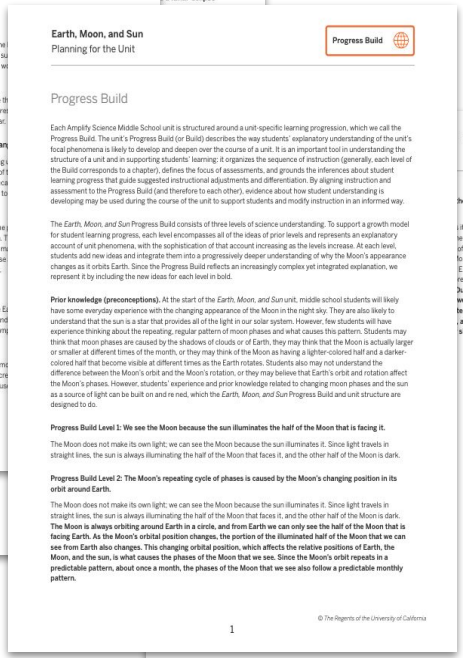
Student role:

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

What science ideas do students need to figure out in order to explain the phenomenon?

Page 6


Earth, Moon, and Sun
Planning for the Unit
Unit Map
Unit Map
How can an astrophotographer plan for the best times to take photos of specific features on the Moon?
Students take on the role of student astronomers, advising an astrophotographer who needs to take photographs of the Moon. In order to provide this advice, students investigate where the Moon's light comes from, what causes the characteristic changes in the appearance of the Moon that we observe, and what conditions are required to view phenomena such as particular moon phases and lunar eclipses.
Chapter 1: Why is there a border between light and dark on the Moon?
Chapter 2: Why does the border between light and dark on the Moon chan
Chapter 3: What are the conditions that cause a lunar eclipse?
1


Earth, Moon, and Sun
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Progress Build
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Progress Build Level 2: The Moon's repeating cycle of phases is caused by the Moon's changing position in its orbit around Earth.
The Moon does not make its own light; we can see the Moon because the sun illuminates it. Since light travels in straight lines, the sun is always illuminating the half of the Moon that faces it, and the other half of the Moon is dark.
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1

Earth, Moon, and Sun
Planning for the Unit
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2

Pages 2-5

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Unit Guide Document

Unit Map

Lesson Overview Compilation

Unit Map

Progress Buld

Guided Unit Internalization

Part 1: Unit-level internalization

Unit title: Earth, Moon, and Sun

What is the phenomenon students are investigating in your unit?

An astrophotographer can only take pictures of specific features on the Moon at certain times.

Unit Question: What determines the appearance of the Moon from Earth?

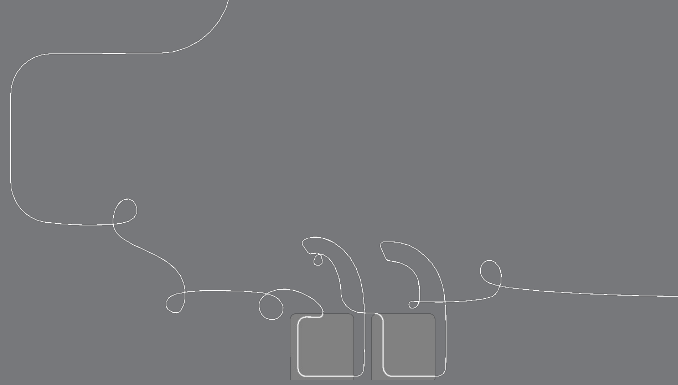
Student role: Student astronomers

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

The sun illuminates the Moon, and light from the sun travels in straight lines. The sun illuminates the half of the Moon that is facing it, and the other half of the Moon is dark. Because the Moon moves to different positions around Earth, we see different amounts of the illuminated half of the Moon. There is a pattern to the appearance of the Moon because the Moon orbits around Earth. During a lunar eclipse, the Moon is completely dark because Earth blocks sunlight from hitting the Moon.

What science ideas do students need to figure out in order to explain the phenomenon?

We can see the Moon because the sun illuminates the half of the Moon that is facing it. The Moon is always orbiting around Earth in a circle, and from Earth we can only see the half of the Moon that is facing Earth. The changing orbital positions of the Moon, which affects the relative positions of Earth, the Moon, and the sun, is what causes the phases of the Moon that we can see. During the part of the Moon's orbit when Earth is between the sun and the Moon, we usually see a full moon. During some full moons, a lunar eclipse happen, a rare moment when the sun, Earth, and the Moon are perfectly aligned.



Questions?

Plan for the day

- Framing the day
  - Welcome
  - Instructional Materials
- Unit Internalization
- **Planning to teach**
  - **Collecting evidence of student learning to meet diverse learner needs**
- Reflection and closing

Unit Map

How can an astrophotographer plan for the best times to take photos of specific features on the Moon?

Students take on the role of student astronomers, advising an astrophotographer who needs to take photographs of the Moon. In order to provide this advice, students investigate where the Moon's light comes from, what causes the characteristic changes in the appearance of the Moon that we observe, and what conditions are required to view phenomena such as particular moon phases and lunar eclipses.

Chapter 1: Why is there a border between light and dark on the Moon?

Students figure out: The Moon does not make its own light; the sun illuminates the Moon. The sun illuminates the half of the Moon that is facing it, and the other half of the Moon is dark. Light from the sun travels in straight lines. When a model is to scale, object sizes and distances are larger or smaller than in the real world, but the same relative to one another. Some models need to be not to scale to be useful.

How they figure it out: Students analyze photographs of the Moon. They explore the Simulation and test the effect of turning sunlight on and off. They observe a physical model using a lightbulb to represent the sun and a foam sphere to represent the Moon. They use the Modeling Tool to show their understanding so far.

Chapter 1: Light and Dark on the Moon

JUMP DOWN TO CHAPTER OVERVIEW

Lesson 1.1:
Pre-Unit Assessment

SETTINGS

Lesson 1.2:
Picturing the Moon

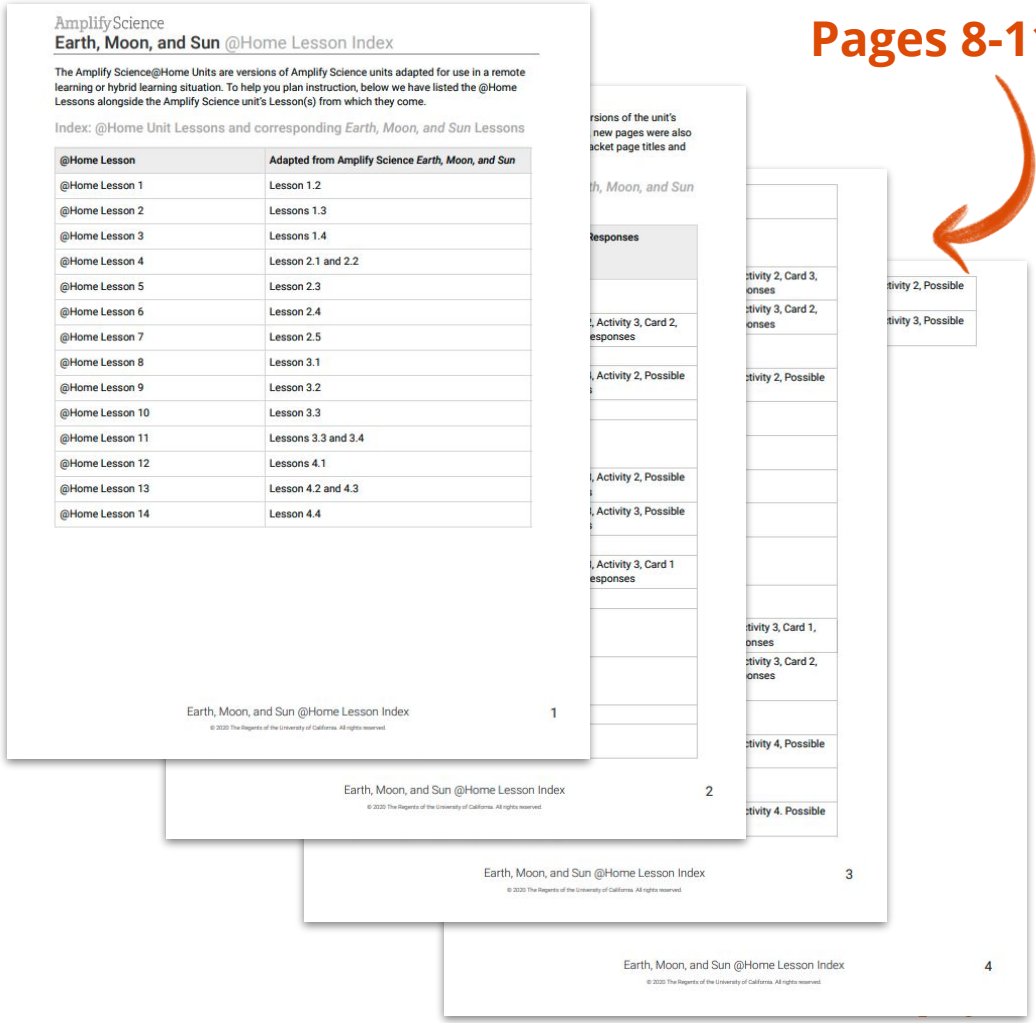
Lesson 1.3:
Modeling Light and Dark on the Moon

Lesson 1.4:
Simulating Light and Dark on the Moon

@Home Unit Lesson Index

This resource correlates lessons from the Standard Curriculum with @Home Unit Lessons.

It also lists the @Home Unit Student Sheets with information about where they came from (i.e. Student Investigation Notebook, copymaster, or new for the @Home Unit)



@Home Lesson 1

Adapted from: Amplify Science *Earth, Moon, and Sun* Lesson 1.2

Key Activities

- **Introducing the Astrophotographer's Challenge:** Students are introduced to the unit problem and their role as student astronomers.
- **Talk:** Students are introduced to three Moon features and discuss with a partner their initial thoughts about when the photographer can take pictures of them.
- **Do:** Students are introduced to the *Earth, Moon, and Sun* Simulation and look for evidence that will help them explain where the Moon gets its light.

Ideas for synchronous or in-person instruction

Before meeting, have students watch the introductory video and read the message from Eric Wu. While meeting, lead a class discussion about students' initial ideas of the unit problem. If possible, have students use the Sim with a partner and ask them to discuss what they are observing and doing.

Earth, Moon, and Sun

@Home Lesson 1

AmplifyScience

Today, we will begin a new unit called ***Earth, Moon, and Sun*.**

In the *Earth, Moon, and Sun* unit, we will be thinking about this question:

Unit Question

What determines the appearance of the Moon from Earth?

Look at these images and think about what you already know about the **Moon.**

You will watch a video that will introduce you to your role in this unit.

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

Using the print version? Watch the video at tinyurl.com/AMPEMS-01

While the characters in the video are fictional, what is going on in the video will help you learn more about the Moon.

Astrophotography is a real field, and studying the movement of objects in space helps astrophotographers take better photographs.

Next, you will read a memo from Eric Wu asking for your help in figuring out how to photograph the three famous features on the Moon’s surface.

@Home Lesson 1

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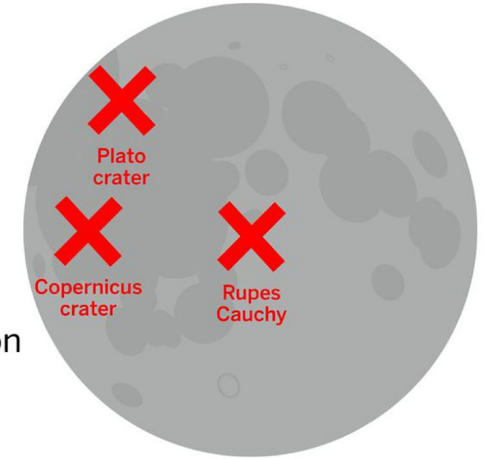
Before meeting, have students watch the introductory video and read the message from Eric Wu. While meeting, lead a class discussion about students' initial ideas of the unit problem. If possible, have students use the Sim with a partner and ask them to discuss what they are observing and doing.

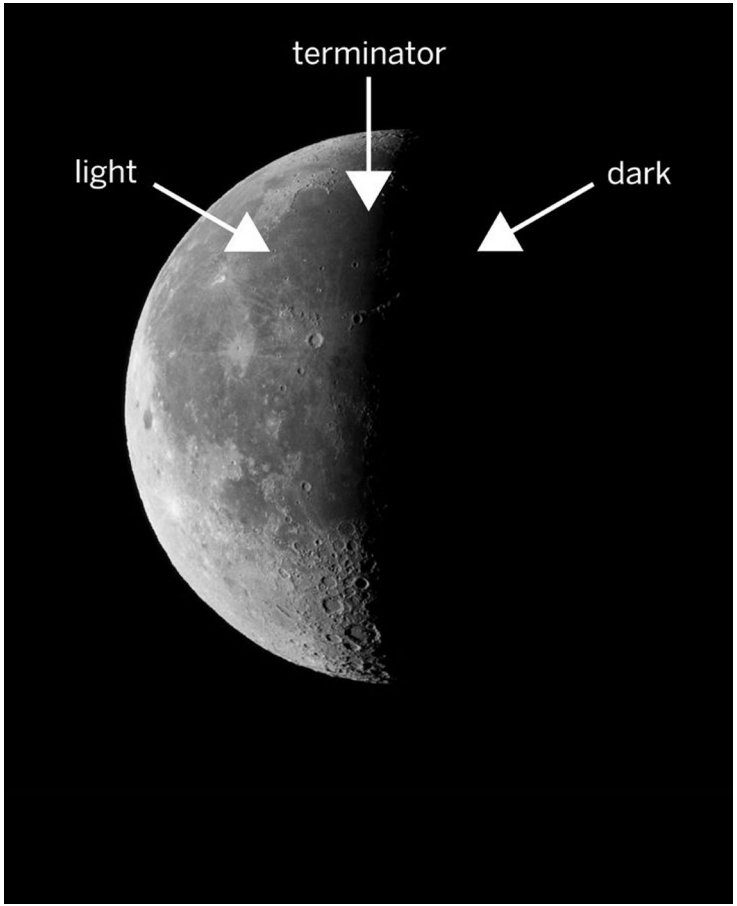
To: Student Astronomers
From: Eric Wu, Astrophotographer
Subject: Taking Pictures of the Moon

Thanks for helping me with my assignment! As you know, the editors of *About Space* magazine have asked me to photograph three famous features on the surface of the Moon. (See the attached graphic.)

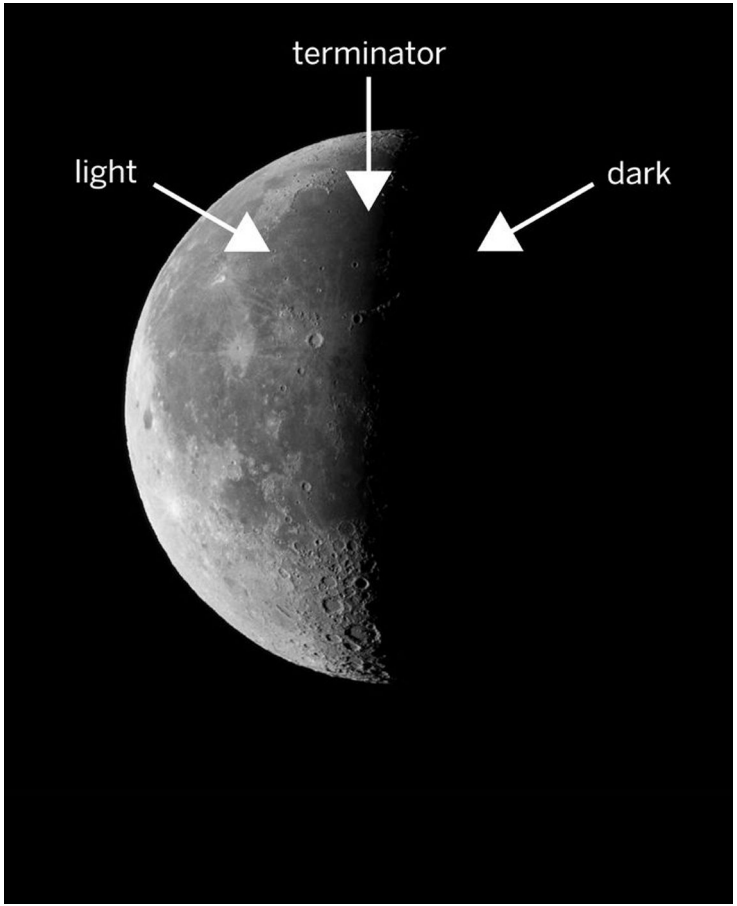
I can't wait to start taking pictures, but I want to make sure I take them at the right time. I've heard the best time to take pictures of Moon features is when they are near the *terminator*, the border between light and dark on the Moon.

Does that mean that I can take these pictures on any clear night? Or, can I only take these pictures on some nights? Thanks for helping me out!





The word **terminator** means the border between light and dark on the Moon.



Remember, the video said the best time to take photographs of features of the Moon is when they are near the border between light and dark.

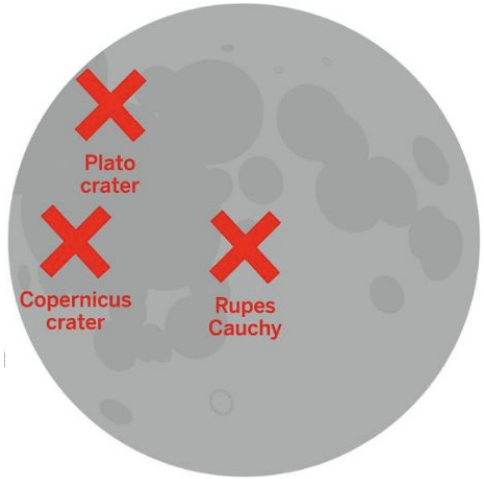
In this lesson and many others in the *Earth, Moon, and Sun* @Home unit you will need to **talk with a partner.** Check with your teacher about how you will work with partners in this @Home Unit.

Your partner could be a classmate on the phone or someone at home with you.

When can Eric Wu take pictures of the three Moon features?

Claim 1: Photographs of these features can be taken on any night.

Claim 2: Photographs of these features can only be taken on some nights.



With your partner, share your **first thoughts** about the question and claims.

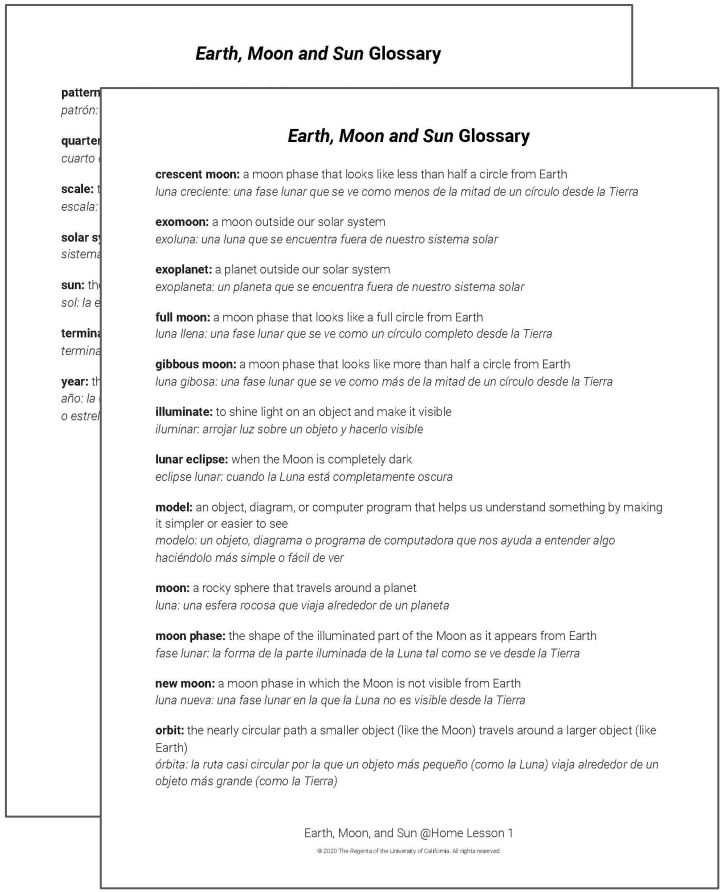
This is the end of the partner work in this lesson

Throughout the unit, you will be studying Earth's moon.

moon

a rocky sphere that travels around a planet

In this lesson and throughout the unit, you will need to **access different pages** such as the glossary on the next slide. Check with your teacher about how you will access materials and complete and submit work in this @Home Unit.



Earth, Moon and Sun Glossary

pattern
patrón:

quarter
cuarto

scale:
escala:

solar sy
sistema

sun:
sol: la e

termina
termina

year:
año: la
o estrel

Earth, Moon and Sun Glossary

crescent moon: a moon phase that looks like less than half a circle from Earth
luna creciente: una fase lunar que se ve como menos de la mitad de un círculo desde la Tierra

exomoon: a moon outside our solar system
exoluna: una luna que se encuentra fuera de nuestro sistema solar

exoplanet: a planet outside our solar system
exoplaneta: un planeta que se encuentra fuera de nuestro sistema solar

full moon: a moon phase that looks like a full circle from Earth
luna llena: una fase lunar que se ve como un círculo completo desde la Tierra

gibbous moon: a moon phase that looks like more than half a circle from Earth
luna gibosa: una fase lunar que se ve como más de la mitad de un círculo desde la Tierra

illuminate: to shine light on an object and make it visible
iluminar: arrojar luz sobre un objeto y hacerlo visible

lunar eclipse: when the Moon is completely dark
eclipse lunar: cuando la Luna está completamente oscura

model: an object, diagram, or computer program that helps us understand something by making it simpler or easier to see
modelo: un objeto, diagrama o programa de computadora que nos ayuda a entender algo haciéndolo más simple o fácil de ver

moon: a rocky sphere that travels around a planet
luna: una esfera rocosa que viaja alrededor de un planeta

moon phase: the shape of the illuminated part of the Moon as it appears from Earth
fase lunar: la forma de la parte iluminada de la Luna tal como se ve desde la Tierra

new moon: a moon phase in which the Moon is not visible from Earth
luna nueva: una fase lunar en la que la Luna no es visible desde la Tierra

orbit: the nearly circular path a smaller object (like the Moon) travels around a larger object (like Earth)
órbita: la ruta casi circular por la que un objeto más pequeño (como la Luna) viaja alrededor de un objeto más grande (como la Tierra)

Earth, Moon, and Sun @Home Lesson 1

You can look up vocabulary words in the **glossary** to help you understand what they mean. You can find this in your student sheets or in the Amplify Library.

***Earth, Moon, and Sun* Glossary** pages or Amplify Library

The title of our unit is ***Earth, Moon, and Sun*.**

Even though Eric Wu is trying to photograph the Moon, we will need to learn how Earth, the Moon, and the sun all **work together** as part of a **system** in order to help him.

We will investigate this question over the next few lessons.

Chapter 1 Question

Why is there a border between light and dark on the Moon?

Before we can help Eric Wu decide when to photograph the Moon, we need to understand why there is a border between light and dark on the Moon.

During this chapter, we will examine both light and dark on the Moon. First, we will focus on this question:

Investigation Question:
Where does the Moon get its light?

Let's look back at these images and think about this question:

Can you find evidence about **where the Moon gets its light?**

We just saw some evidence about **light on the Moon** by looking at images of the Moon.

Images are an important **source of evidence** for scientists, but scientists also use simulations to collect evidence. Today, we're going to use a **digital simulation** to find out more about where the Moon gets its light.

@Home Lesson 1

Adapted from: Amplify Science *Earth, Moon, and Sun* Lesson 1.2

Key Activities

- **Introducing the Astrophotographer's Challenge:** Students are introduced to the unit problem and their role as student astronomers.
- **Talk:** Students are introduced to three Moon features and discuss with a partner their initial thoughts about when the photographer can take pictures of them.
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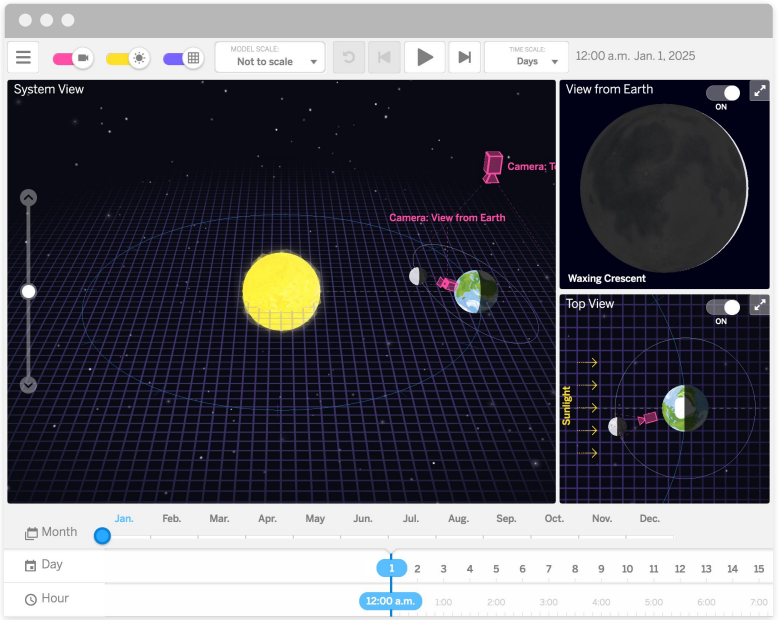
Ideas for synchronous or in-person instruction

Before meeting, have students watch the introductory video and read the message from Eric Wu. While meeting, lead a class discussion about students' initial ideas of the unit problem. If possible, have students use the Sim with a partner and ask them to discuss what they are observing and doing.



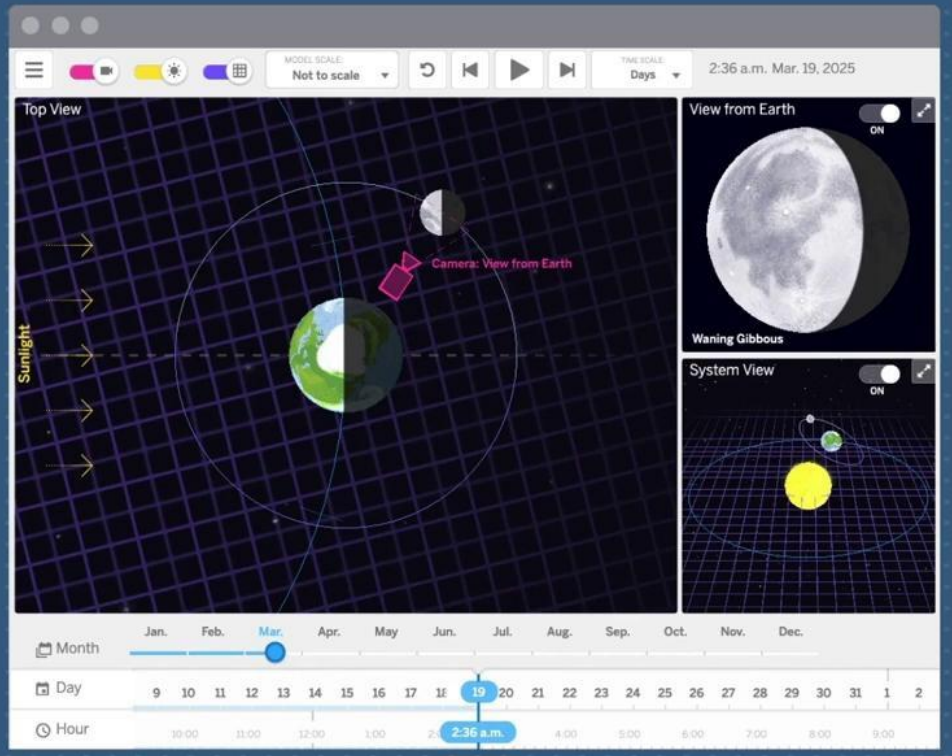
You will be using this Sim throughout the unit.

It's a **model** of the Earth, Moon, and sun system, similar to the models that real astronomers use to study outer space.

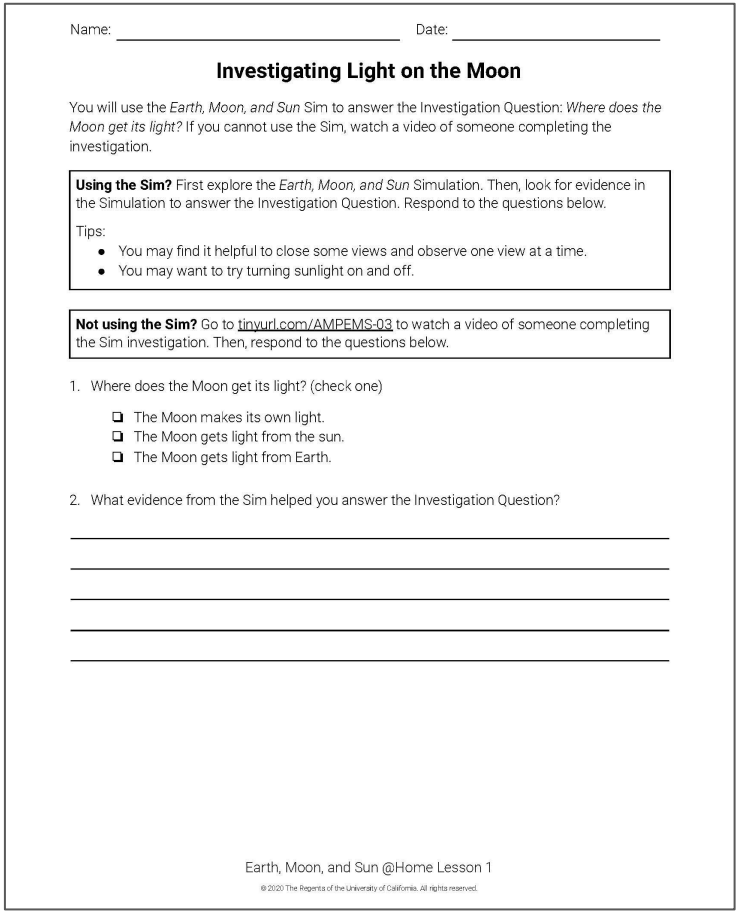
Models are especially important to astronomers, since planets, moons, and stars are so big and far apart. Models like the Sim help astronomers **study the movements of Earth, the Moon, and the sun**.

Next, you will watch a video on how to use the Sim.

You can do the same by **dragging the Moon** in Top View.



Using the print version? Watch the video at tinyurl.com/AMPEMS-02



Name: _____ Date: _____

Investigating Light on the Moon

You will use the *Earth, Moon, and Sun* Sim to answer the Investigation Question: *Where does the Moon get its light?* If you cannot use the Sim, watch a video of someone completing the investigation.

Using the Sim? First explore the *Earth, Moon, and Sun* Simulation. Then, look for evidence in the Simulation to answer the Investigation Question. Respond to the questions below.

Tips:

- You may find it helpful to close some views and observe one view at a time.
- You may want to try turning sunlight on and off.

Not using the Sim? Go to tinyurl.com/AMPEMS-03 to watch a video of someone completing the Sim investigation. Then, respond to the questions below.

1. Where does the Moon get its light? (check one)

   ❑ The Moon makes its own light.
   ❑ The Moon gets light from the sun.
   ❑ The Moon gets light from Earth.

2. What evidence from the Sim helped you answer the Investigation Question?

_____

_____

_____

_____

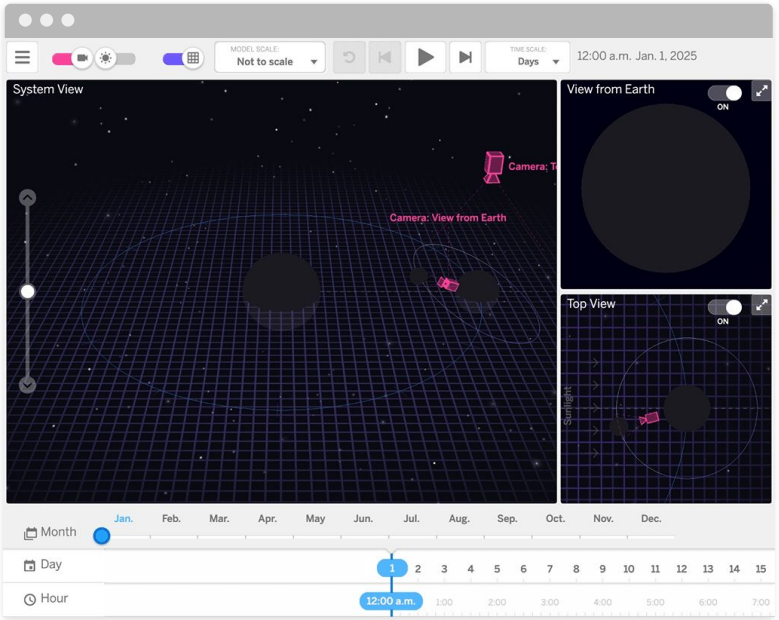
_____

Earth, Moon, and Sun @Home Lesson 1

Go to the Investigating Light on the Moon activity. Use the Sim or watch a video of this Sim investigation.

Look for evidence to help you answer the Investigation Question.

Investigating Light on the Moon page or Lesson 1.2, Activity 3, part 2



You probably noticed in the Sim, when the sunlight is turned off, Earth and the Moon are **completely dark.**

This is evidence that **the Moon gets light from the sun**.

The evidence you have gathered from the Sim, helps us understand this **key concept:**

1. **The Moon does not make its own light; the sun illuminates the Moon.**

Here is an important word we will use in this unit.

illuminate

to shine light on an object and make it visible

This is a scientific definition of the word *sun* that we will use in this unit.

sun

the star that is the main source of light at the center of our solar system

We are trying to figure out why there is a border between light and dark on the Moon. In the Sim, you observed **the Moon gets its light from the sun**.

In the next lesson, you will investigate why part of the Moon is dark.

End of @Home Lesson

THE LAWRENCE HALL OF SCIENCE
UNIVERSITY OF CALIFORNIA, BERKELEY

Amplify.

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Suggestions for Online Synchronous Time

Online synchronous time
Online discussions: It's worthwhile to establish norms and routines for online discussions in science to ensure equity of voice, turn-taking, etc.
Digital tool demonstrations: You can share your screen and demonstrate, or invite your students to share their screen and think-aloud as they use a Simulation or other digital tool.
Interactive read-alouds: Screen share a digital book or article, and pause to ask questions and invite discussion as you would in the classroom.
Shared Writing: This is a great opportunity for a collaborative document that all your students can contribute to.
Co-constructed class charts: You can create digital charts, or create physical charts in your home with student input.

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Reflection: Teaching @Home Lesson 1

How would you teach this lesson?

Multi-day planning, including planning for differentiation and evidence of student work

Day @Home Lesson 1

Minutes for science: 15 min.

Instructional format:
- [x] Asynchronous
- [ ] Synchronous

Lesson or part of lesson:
Introducing the Astrophotographer's Challenge (slides 1-9)

Mode of instruction:
- [x] Preview
- [ ] Review
- [ ] Teach full lesson live
- [ ] Teach using synchronous suggestions
- [x] Students work independently using:
  - [ ] Printed @Home Slides
  - [x] Digital @Home Slides
  - [ ] @Home Videos

Students will...	Teacher will...
View the introductory video about a photographing the moon, read the letter from Eric Wu, and jot down initial thoughts. .	Assign slides 1-9 in Schoology and provide directions for students to jot down their ideas about when and where Eric Wu can take pictures to share when the class meets together.

Minutes for science: _____

Instructional format:
- [ ] Asynchronous
- [x] Synchronous

Lesson or part of lesson:

Mode of instruction:
- [ ] Preview
- [ ] Review
- [ ] Teach full lesson live
- [ ] Teach using synchronous suggestions
- [ ] Students work independently using:
  - [ ] Printed @Home Slides
  - [ ] Digital @Home Slides
  - [ ] @Home Videos

Students will...	Teacher will...

Multi-day planning, including planning for differentiation and evidence of student work

Day @Home Lesson 1

Minutes for science: 15 min.	**Minutes for science:** 30 min
Instructional format: ☒ Asynchronous ☐ Synchronous	**Instructional format:** ☐ Asynchronous ☒ Synchronous
Lesson or part of lesson: Introducing the Astrophotographer's Challenge (slides 1-9)	**Lesson or part of lesson:** Discuss ideas of when the photographer can take pictures and use SIM and explain where Moon gets it light (slides 9-32)
Mode of instruction: ☒ Preview ☐ Review ☐ Teach full lesson live ☐ Teach using synchronous suggestions ☒ Students work independently using: ☐ Printed @Home Slides ☒ Digital @Home Slides ☐ @Home Videos	**Mode of instruction:** ☐ Preview ☐ Review ☐ Teach full lesson live ☒ Teach using synchronous suggestions ☐ Students work independently using: ☐ Printed @Home Slides ☐ Digital @Home Slides ☐ @Home Videos

Students will...	Teacher will...	Students will...	Teacher will...
View the introductory video about a photographing the moon, read the letter from Eric Wu, and jot down initial thoughts. .	Assign slides 1-9 in Schoology and provide directions for students to jot down their ideas about when and where Eric Wu can take pictures to share when the class meets together.	Discuss initial thoughts about when Eric Wu can take pictures of the three Moon features and use the Sim to explain where the Moon gets its light with a partner and complete Investigating Light on the Moon student sheet..	Lead students through the lesson activities using slides 9-32, pausing for partner discussion. Demo how to use the Sim and assign students partners to complete student sheet. Return as a full group to key concept and vocabulary.

Breakout groups

page 13

Discussion prompts

Planning:

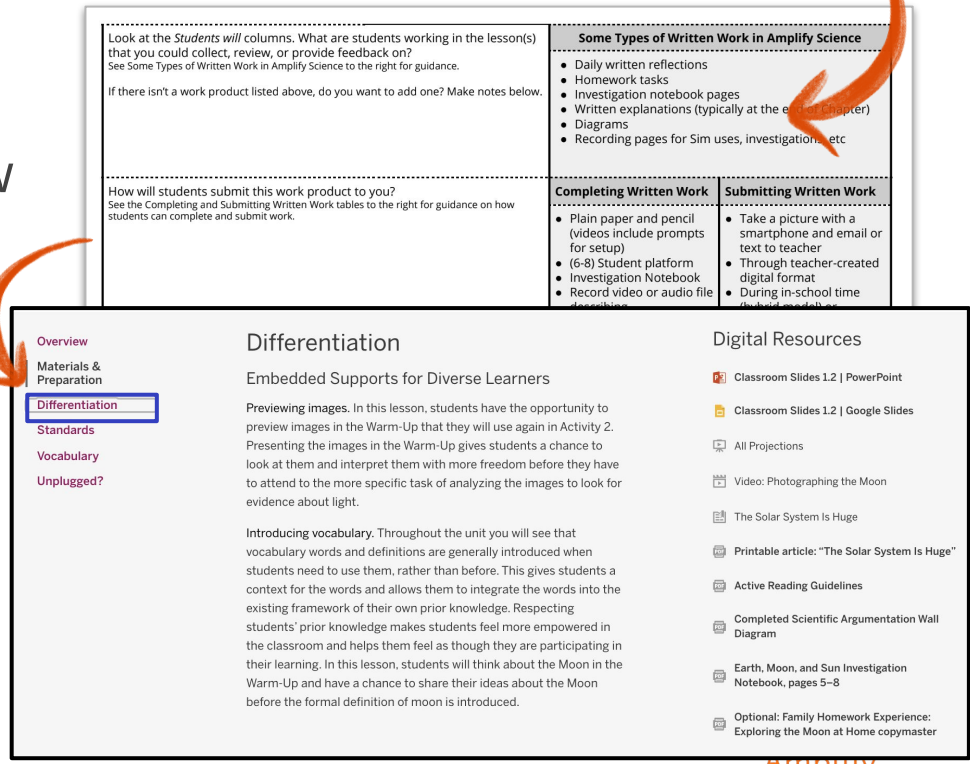
- Share additional ideas for how you plan to lead Lesson 1

Student work:

- Discuss how you can collect evidence of student work

Differentiation:

- Consider how you might differentiate this lesson



Look at the *Students will* columns. What are students working in the lesson(s) that you could collect, review, or provide feedback on?
See Some Types of Written Work in Amplify Science to the right for guidance.

If there isn't a work product listed above, do you want to add one? Make notes below.

Some Types of Written Work in Amplify Science

- Daily written reflections
- Homework tasks
- Investigation notebook pages
- Written explanations (typically at the e… Chapter)
- Diagrams
- Recording pages for Sim uses, investigation… etc

How will students submit this work product to you?
See the Completing and Submitting Written Work tables to the right for guidance on how students can complete and submit work.

Completing Written Work	Submitting Written Work
• Plain paper and pencil (videos include prompts for setup) • (6-8) Student platform • Investigation Notebook • Record video or audio file	• Take a picture with a smartphone and email or text to teacher • Through teacher-created digital format • During in-school time

Overview
Materials & Preparation
Differentiation
Standards
Vocabulary
Unplugged?

Differentiation

Embedded Supports for Diverse Learners

Previewing images. In this lesson, students have the opportunity to preview images in the Warm-Up that they will use again in Activity 2. Presenting the images in the Warm-Up gives students a chance to look at them and interpret them with more freedom before they have to attend to the more specific task of analyzing the images to look for evidence about light.

Introducing vocabulary. Throughout the unit you will see that vocabulary words and definitions are generally introduced when students need to use them, rather than before. This gives students a context for the words and allows them to integrate the words into the existing framework of their own prior knowledge. Respecting students' prior knowledge makes students feel more empowered in the classroom and helps them feel as though they are participating in their learning. In this lesson, students will think about the Moon in the Warm-Up and have a chance to share their ideas about the Moon before the formal definition of moon is introduced.

Digital Resources

- Classroom Slides 1.2 | PowerPoint
- Classroom Slides 1.2 | Google Slides
- All Projections
- Video: Photographing the Moon
- The Solar System Is Huge
- Printable article: "The Solar System Is Huge"
- Active Reading Guidelines
- Completed Scientific Argumentation Wall Diagram
- Earth, Moon, and Sun Investigation Notebook, pages 5–8
- Optional: Family Homework Experience: Exploring the Moon at Home copymaster

Look at the *Students will* columns. What are students working in the lesson(s) that you could collect, review, or provide feedback on?
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- Investigation notebook pages
- Written explanations (typically at the end of Chapter)
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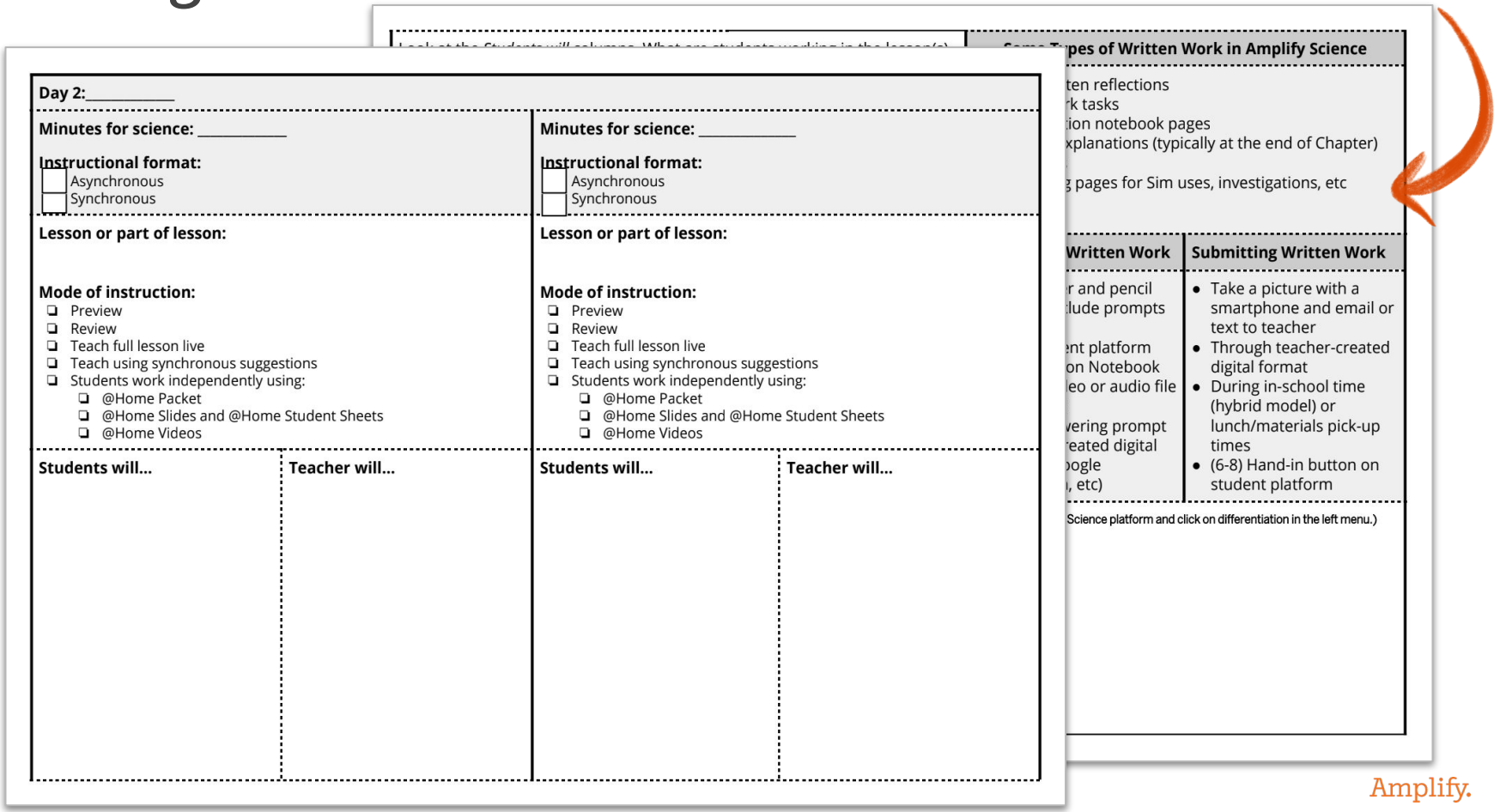
Completing Written Work	Submitting Written Work
• Plain paper and pencil (videos include prompts for setup) • (6-8) Student platform • Investigation Notebook • Record video or audio file describing work/answering prompt • Teacher-created digital format (Google Classroom, etc)	• Take a picture with a smartphone and email or text to teacher • Through teacher-created digital format • During in-school time (hybrid model) or lunch/materials pick-up times • (6-8) Hand-in button on student platform

How will you differentiate this lesson for diverse learners? (Navigate to the lesson level on the standard Amplify Science platform and click on differentiation in the left menu.)

Planning Resource

pages 14-15



Day 2:_____

Minutes for science: _____ **Instructional format:** ☐ Asynchronous ☐ Synchronous	**Minutes for science:** _____ **Instructional format:** ☐ Asynchronous ☐ Synchronous
Lesson or part of lesson: **Mode of instruction:** ❑ Preview ❑ Review ❑ Teach full lesson live ❑ Teach using synchronous suggestions ❑ Students work independently using: ❑ @Home Packet ❑ @Home Slides and @Home Student Sheets ❑ @Home Videos	**Lesson or part of lesson:** **Mode of instruction:** ❑ Preview ❑ Review ❑ Teach full lesson live ❑ Teach using synchronous suggestions ❑ Students work independently using: ❑ @Home Packet ❑ @Home Slides and @Home Student Sheets ❑ @Home Videos

Students will...	Teacher will...	Students will...	Teacher will...

pes of Written Work in Amplify Science

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ion notebook pages
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Written Work	Submitting Written Work
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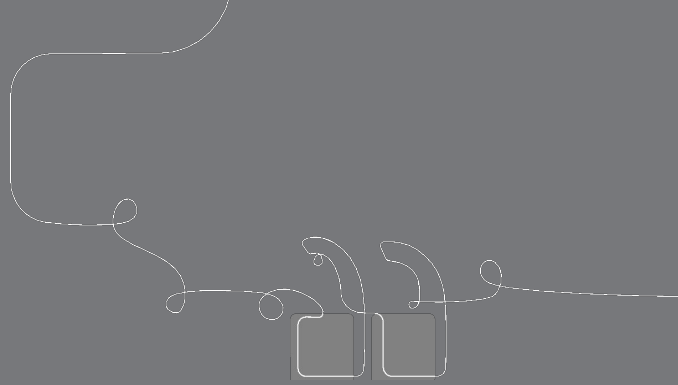
Science platform and click on differentiation in the left menu.)



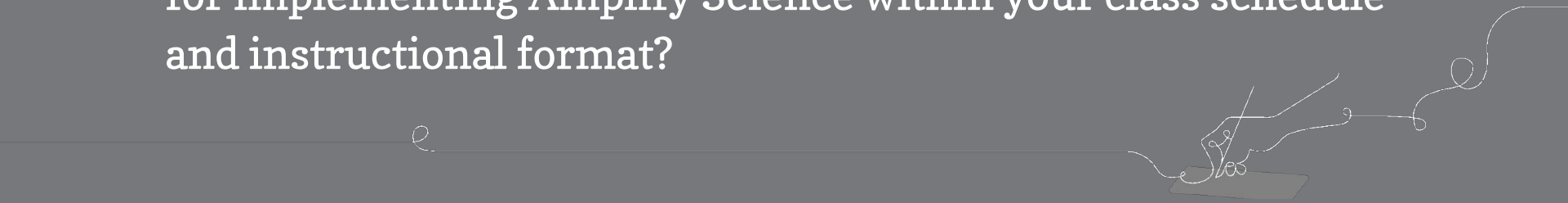
Questions?

Plan for the day

- Framing the day
  - Welcome
  - Instructional Materials
- Unit Internalization
- Planning to teach
  - Collecting evidence of student learning to meet diverse learner needs
- **Reflection and closing**

During this workshop did we meet our objectives?

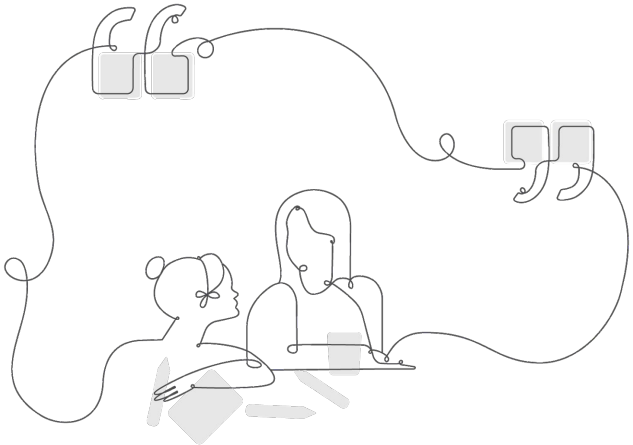
- Were you able to internalize your upcoming unit?
- Do you know how to plan for **collecting evidence of student learning** in order to make instructional decisions to **support diverse learner needs**?
- Do you have the resources you need to develop a multi-day plan for implementing Amplify Science within your class schedule and instructional format?



Upcoming LAUSD Office Hours

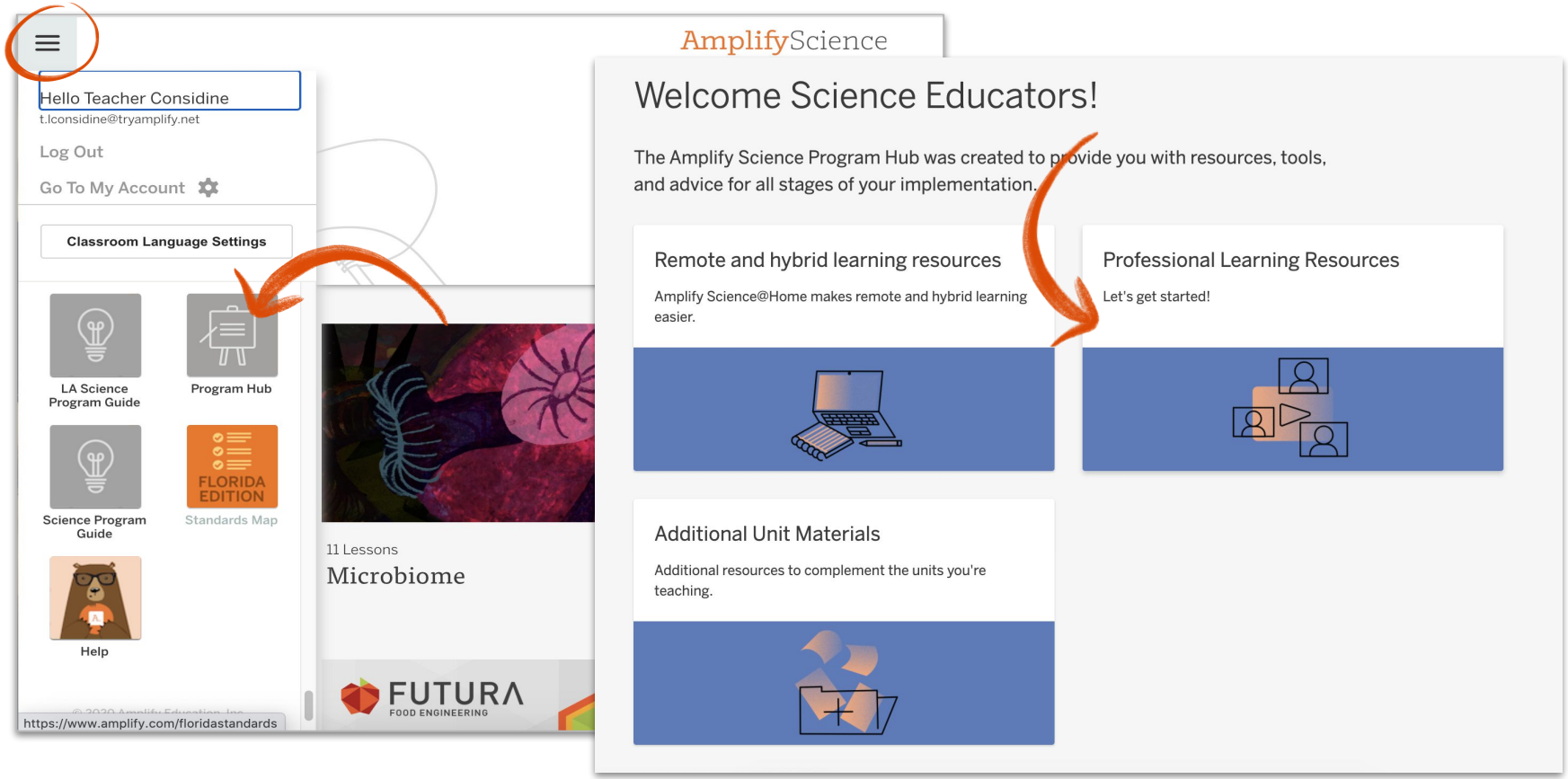
Twice Monthly

- Thursday, 2/11 (3-4pm)
- Thursday, 2/25 (3-4pm)
- Thursday, 3/11 (3-4pm)
- Thursday, 3/25 (3-4pm)

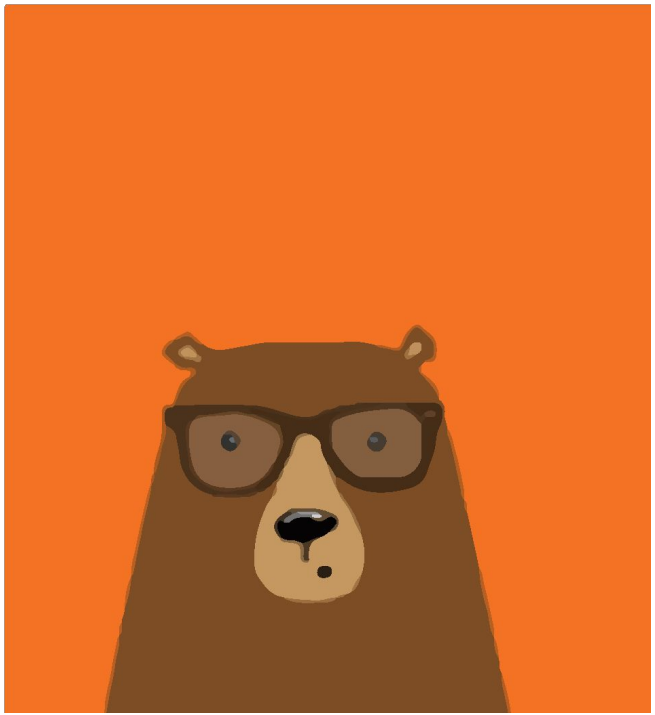


http://bit.ly/LAUSDMSOfficeHours

Program Hub: Self Study Resources



Back to school national webinar series

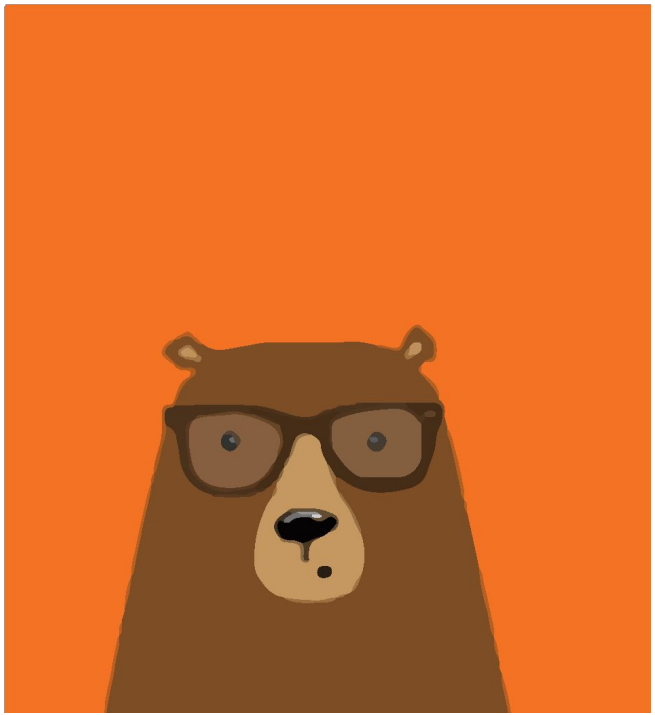


Topics included:

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

bit.ly/BTSwebinars

Additional Amplify resources

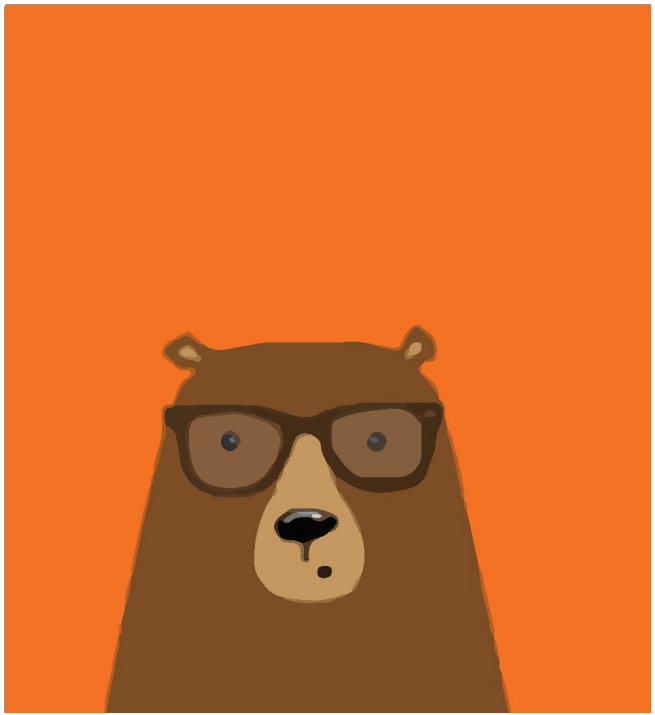


Caregivers site

Provide your students' families information about Amplify Science and what students are learning

amplify.com/amplify-science-family-resource-intro/

Additional Amplify resources



Program Guide

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

http://amplify.com/science/california/review

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!

URL: https://www.surveymonkey.com/r/AmplifyLAUSDMS

Presenter names:

Date: xx