

# Amplify Science

## New Teachers: Part 2

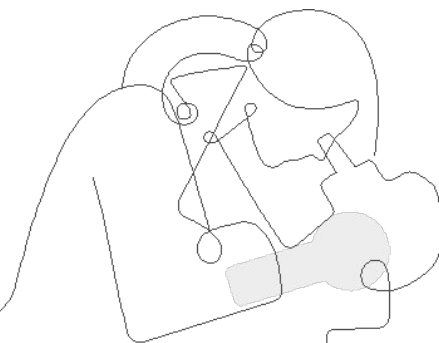
### Unit 1 - Guided Planning

#### Grade 5: Patterns of Earth and Sky

School/District Name: LAUSD

Date:

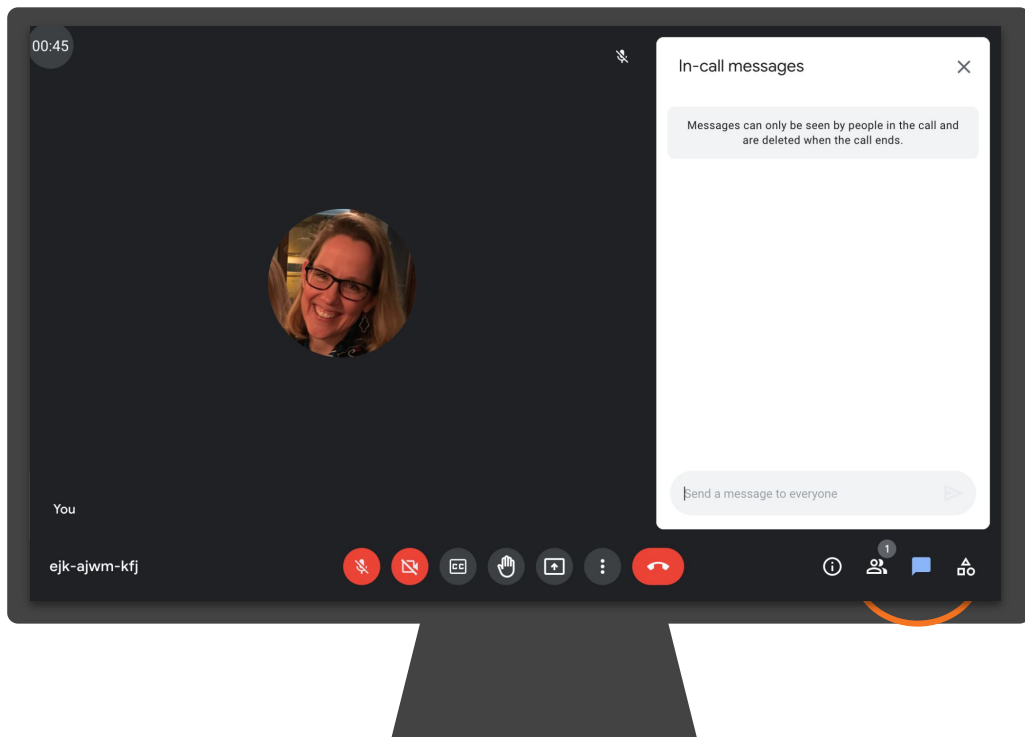
Presented by: Jolene Hori



# Ice Breaker!

## Who do we have in the room today?

- **Question:** Now that we have gone through Part 1, which aspects of Amplify Science do you feel more comfortable with or have a greater understanding of?



# Amplify's Purpose Statement

Dear teachers,

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

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

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

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


Sincerely,  
Amplify

# Norms: Establishing a culture of learners

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




# Last year's Amplify apps.



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## LOS ANGELES UNIFIED SCHOOL DISTRICT



[mCLASS Student](#)

**Content Area:** ELA  
**Grade Level:** ES  
**Content Type:** Assessment  
**Integration Type:** App (Left Navigation)  
**Purchase Type:** District  
[Getting Started Guide](#)  
**Other Info:** App to be installed for all course members.


**Vendor Support Desk:**  
 P: 800.823.1969  
 E: [help@amplify.com](mailto:help@amplify.com)  
 S: [amplify.com/support/](https://amplify.com/support/)  
**Textbook Title(s):**  
 NA



[mCLASS Assessment](#)

**Content Area:** ELA  
**Grade Level:** ES  
**Content Type:** Assessment  
**Integration Type:** App (Left Navigation)  
**Purchase Type:** District  
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[mCLASS Portal](#)


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**Textbook Title(s):**  
 NA





**LOS ANGELES UNIFIED**


## COURSES





Course Options



**Materials**



 Updates



 Gradebook



 Grade Setup



 Mastery


 Amplify Reading: Teac...


 Amplify Science: Eleme...



 Amplify Science: Middl...


 mCLASS Portal


 mCLASS Student




# This year's app(s).



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## LMS App Center

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


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

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

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


[Search Again](#)

### Amplify



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

**Vendor Support Desk:**  
 P: 800.823.1969  
 E: [help@amplify.com](mailto:help@amplify.com)  
 S: [amplify.com/support/](http://amplify.com/support/)  
**Textbook Title(s):**  
 NA



**Content Area:** ELA  
**Grade Level:** ES  
**Content Type:** Supplemental  
**Integration Type:** App (Left Navigation)  
**Purchase Type:** District and School  
[Getting Started Guide](#)  
**Other Info:** School licenses required. This app is for teacher use only (install for Course Admins only)

**Vendor Support Desk:**  
 P: 800.823.1969  
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 S: [amplify.com/support/](http://amplify.com/support/)  
**Textbook Title(s):**  
 NA

All Amplify Products

Grade Sync for MS Science

Publisher Name: Starts With

Content Area: All

Grade Level: All

Content Type: All

Textbook Title: Starts With

Submit

 mCLASS Educators: To view or make changes to your account go to [mclass.amplify.com](https://mclass.amplify.com).

Hi, Terin

## Classes

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Account Settings

Help Center 



[CKLA Hub](#)



[CKLA Resource Site](#)



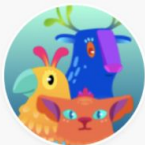
[mCLASS Assessment](#)



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[Reading 6-8](#)



[Reading K-5](#)



[Science](#)



[Vocabulary](#)



## Amplify. on Schoology

2021-2022



2020-2021  
SCHOOL YEAR  
SCHOOL YEAR



# Schoology

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



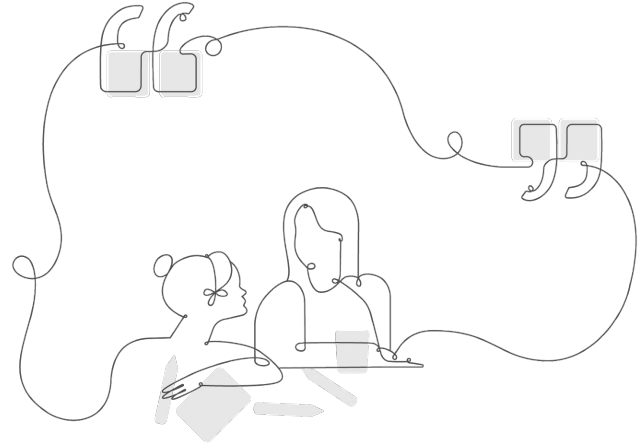
# Upcoming LAUSD Office Hours

**Last working Monday of the month**

**Next Office Hour:**

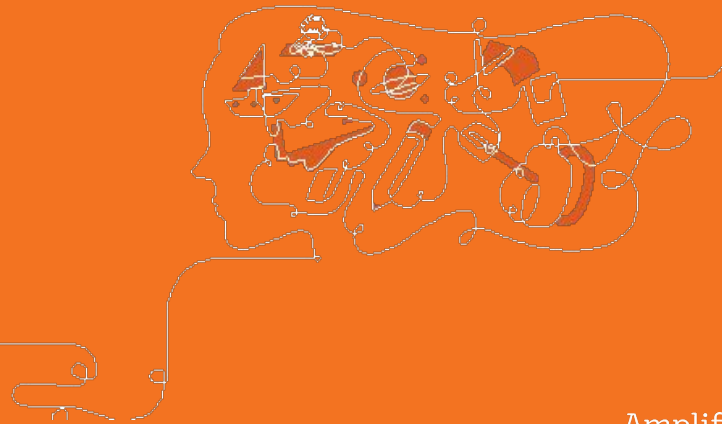
**January 31, 2022**

- Monday, (4-5pm)



**<https://meet.google.com/uwc-uuaz-qdc?authuser=0>**

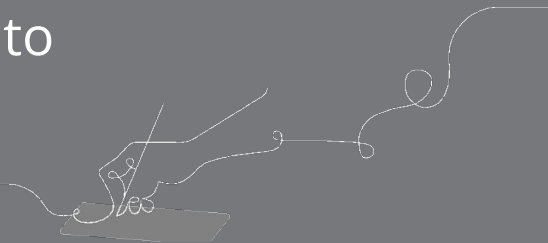
# Part 2: Guided Planning



# Overarching goals

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

- ❑ Navigate the Amplify Science curriculum.
- ❑ Describe what teaching and learning look like in Amplify Science.
- ❑ Apply the program essentials to prepare to teach.







## Plan for the day: Part 2

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



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# Course curriculum structure

## Grade K

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

## Grade 1

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

## Grade 2

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

## Grade 3

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

## Grade 4

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

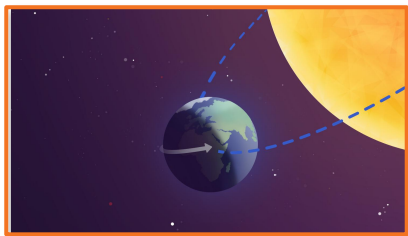
## Grade 5

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

## Key takeaways:

- There are 22 lessons per unit
- Lessons at grades 2-5 are 60 minutes long

# Year at a Glance: Grade 5

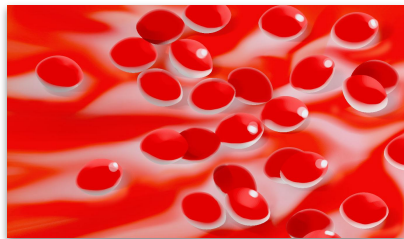


## Patterns of Earth and Sky

**Domain:** Earth and Space Science

**Unit type:** Investigation

**Student role:**  
Astronomers

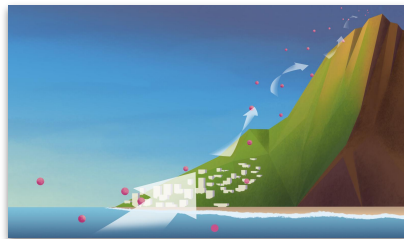


## Modeling Matter

**Domain:** Physical Science

**Unit type:** Modeling

**Student role:** Food scientists



## The Earth System

**Domain:** Earth and Space Science

**Unit type:** Engineering Design

**Student role:** Water resource engineers



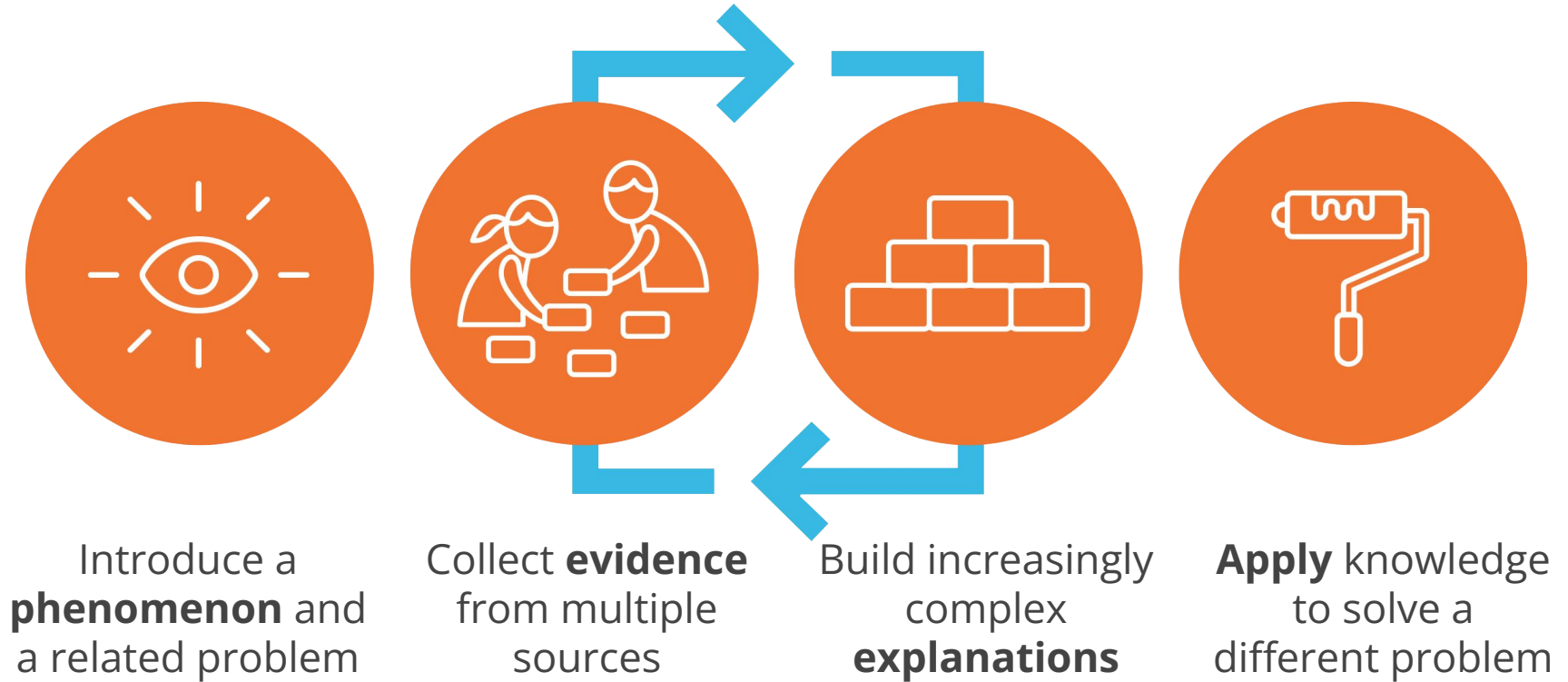
## Ecosystem Restoration

**Domain:** Life Science

**Unit type:** Argumentation

**Student role:** Ecologists

# Amplify Science Approach



# Patterns of Earth and Sky

Why do we see different stars at different times?

This unit involves understanding the position of stars in relation to Earth and the sun, as well as figuring out how Earth's spin and orbit cause us to see different things across a day and across a year





# Patterns of Earth and Sky



**Problem:** Archaeologists discovered part of an ancient artifact that depicts the sun and other stars. How can we figure out what would have appeared on the missing piece?

**Role:** Astronomers

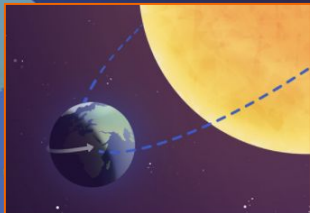
Students observe and investigate patterns in the sky by day and by night with kinesthetic models, as well as using a digital simulation, and informational text. They learn that stars are all around us in space, develop an understanding of scale and distance in the universe, and discover how the spin and orbit of our planet causes us to observe daily and yearly patterns of stars.

# Coherent Storylines



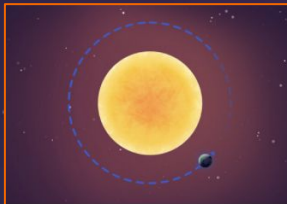
Chapter 1: Why don't we see a lot of stars in the daytime?

7 Lessons



Chapter 2: Why is the sun up sometimes, but not other times?

6 Lessons



Chapter 3: Why do we see different stars at different times of year?

6 Lessons



Chapter 4: How can we investigate why we see different stars on different nights?

3 Lessons





# Explaining the phenomenon: Science Concepts

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



# Progress Build

## Energy Conversions

**Assumed prior knowledge (preconceptions):** They are likely to know the sun is up during the daytime and stars are up during the nighttime. Students may understand that Earth is round and that Earth moves.

### Level 1

The sun looks bigger and brighter than all other stars because it is much closer to Earth than all other stars.

### Level 2

As Earth spins, what we see in the sky changes throughout the day.

### Level 3

As Earth orbits the sun, the stars we see in the night sky change throughout the year.

# Key Unit Guide Documents for Planning

Planning for the Unit	Printable Resources
<a href="#">Unit Overview</a> ▾	<a href="#">Coherence Flowcharts</a>
<a href="#">Unit Map</a> ▾	<a href="#">Copymaster Compilation</a>
<a href="#">Progress Build</a> ▾	<a href="#">Flexextension Compilation</a>
<a href="#">Getting Ready to Teach</a> ▾	<a href="#">Investigation Notebook</a>
<a href="#">Materials and Preparation</a> ▾	<a href="#">Multi-Language Glossary</a>
<a href="#">Science Background</a> ▾	<a href="#">NGSS Information for Parents and Guardians</a>
<a href="#">Standards at a Glance</a> ▾	<a href="#">Print Materials (8.5" x 11")</a>
	<a href="#">Print Materials (11" x 17")</a>
<b>Teacher References</b>	
<a href="#">Lesson Overview Compilation</a> ▾	
<a href="#">Standards and Goals</a> ▾	
<a href="#">3-D Statements</a> ▾	
<a href="#">Assessment System</a> ▾	
<a href="#">Embedded Formative Assessments</a> ▾	
<a href="#">Books in This Unit</a> ▾	
<a href="#">Apps in This Unit</a> ▾	
<a href="#">Flexextensions in This Unit</a> ▾	

**Offline Preparation**

Teaching without reliable classroom internet? Prepare unit and lesson materials for offline access.

[Offline Guide](#)

## Core Unit Planning & Internalization

Unit Title:

### Patterns of Earth and Sky

#### Overview

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

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

Archaeologists discovered part of an ancient artifact that depicts the sun and other stars. How can we figure out what would have appeared on the missing piece?

Student Role:

Astronomers

Unit Question:

Why do we see different stars at different times?

Relationship between the Unit Phenomenon and Unit Question:

Students apply their understanding of why we see different stars at different times to explain what is shown on the artifact, and what might be on the missing piece.

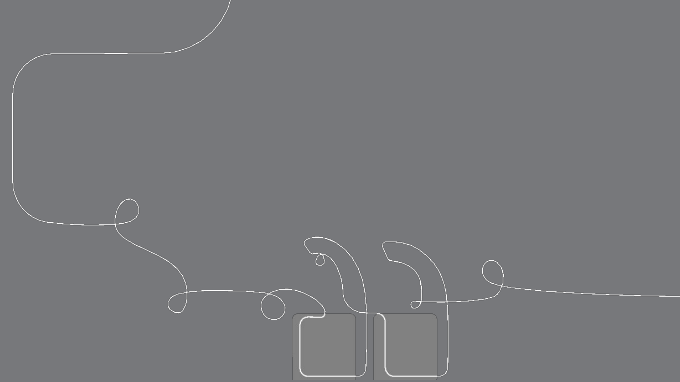
By the end of the unit, students figure out...

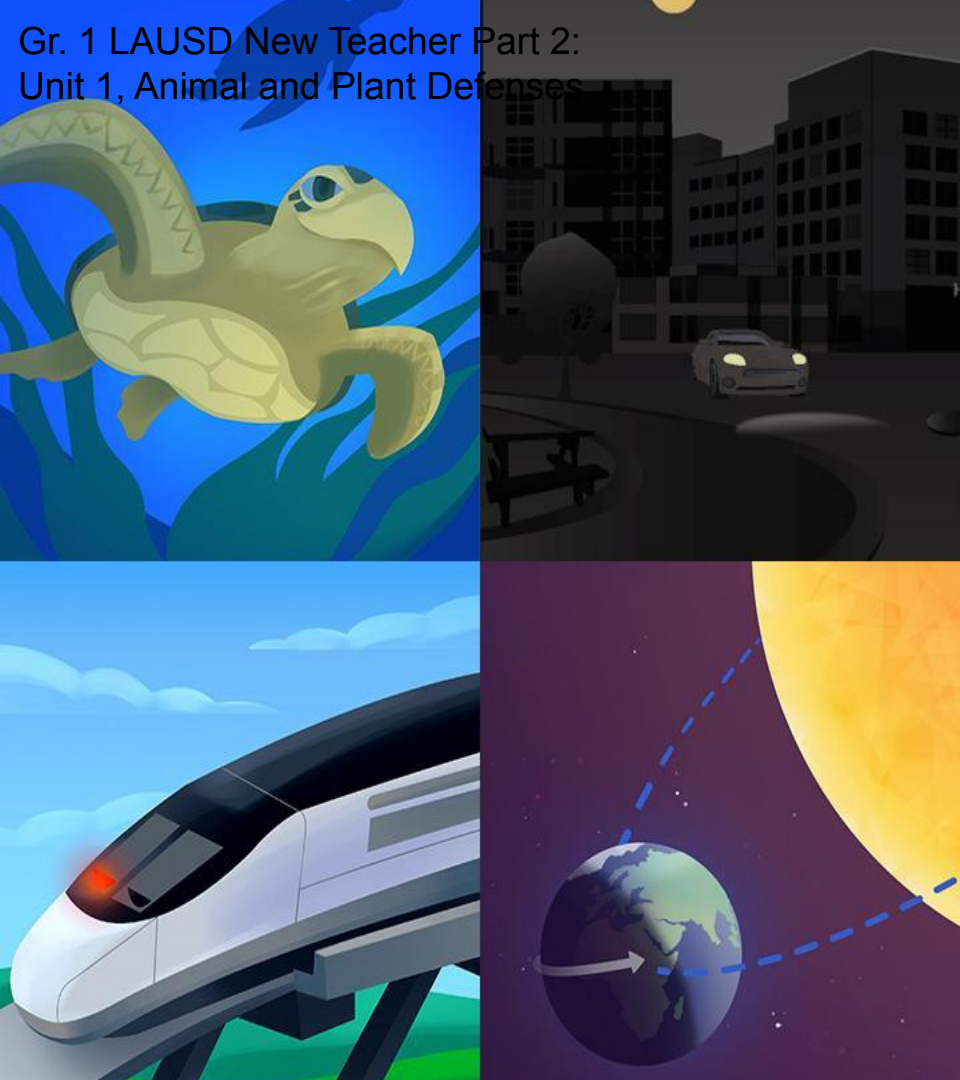
Our view of the stars in the nighttime sky changes in a pattern that repeats each year because Earth is traveling along its orbital path. This is why the artifact shows different constellations in the different nighttime panels

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

T  
Students investigate why we see different stars at different times, using digital and kinesthetic models to figure out what causes daily and yearly patterns of Earth and sky.

# Questions?





## Plan for the day: Part 2

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

# Beginning the Unit

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

Chapter 1: Why don't we see a lot of stars in the daytime?

🔍 JUMP DOWN TO CHAPTER OVERVIEW

<b>Lesson 1.1:</b> Pre-Unit Assessment	<b>Lesson 1.2:</b> Earth and Stars in Space	<b>Lesson 1.3:</b> How Big Is Big? How Far Is Far?
<b>Lesson 1.4:</b> Distances to the Stars	<b>Lesson 1.5:</b> Investigating Size and Distance	<b>Lesson 1.6:</b> The Brightness of Starlight
<b>Lesson 1.7:</b> Explaining When We See Stars		

# Patterns of Earth and Sky - Family Connection

Lesson 1.1:  
Pre-Unit Assessment

Discussion  
Class  
Reading  
Assessment

3 CLASS Pre-Unit Assessment

4 READING Pre-Unit Assessment

RESET LESSON

GENERATE PRINTABLE LESSON GUIDE

Overview  
Materials & Preparation  
Differentiation  
Standards  
Vocabulary  
Unplugged?

Overview

Students' Initial Explanations

This lesson introduces students to the scientific phenomenon that they will investigate in this unit: why we see stars at different times. Students are introduced to their role as astronomers who are being asked to help determine what the missing piece of an archaeological artifact might look like. They write initial explanations about why the sky depicted in the artifact looks different at different times. The explanations students provide in this lesson serve as a Pre-Unit Assessment for formative purposes, designed to reveal students' initial understanding of some of the unit's core content, both unit-specific science concepts and the crosscutting concept of Patterns, prior to instruction. As such, students' explanations offer a baseline from which to measure growth of understanding over the course of the unit. These explanations can also provide the teacher with insights into students' thinking as they begin this unit. This three-dimensional assessment will allow the teacher to draw connections to students' experiences and to watch for preconceptions that might get in the way of students' understanding. Students also receive their *Patterns of Earth and Sky Investigation* Notebooks and learn how scientists use notebooks as an investigation tool. Finally, they familiarize themselves with *Handbook of Stars and Constellations*, a reference book that they will use throughout the unit.

Unit Anchor Phenomenon: Different stars are visible in the sky at

Digital Resources

- Classroom Slides 1.1 | PowerPoint
- Classroom Slides 1.1 | Google Slides
- All Projections
- Pre-Unit Writing: Explaining the Discovered Artifact copymaster
- Assessment Guide: Interpreting Students' Pre-Unit Explanations About the Discovered Artifact
- Partner Reading Guidelines
- Questioning Strategies for Grades 2-5
- Patterns of Earth and Sky Investigation Notebook
- Patterns of Earth and Sky Investigation Notebook, page 3
- Patterns of Earth and Sky Family Connections Homework
- Crosscutting Concept Tracker

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

## ***Patterns of Earth and Sky Family Connections Homework***

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

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

In science class, we are working as astronomers to figure out and explain the significance of the illustrations on a recently discovered thousand-year-old artifact with a missing piece. We will be answering the question, *Why do we see different stars at different times?*

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

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



# Beginning the Unit

## Model lesson 1.2

Chapter 1: Why don't we see a lot of stars in the daytime?

✓ JUMP DOWN TO CHAPTER OVERVIEW

<b>Lesson 1.1:</b> Pre-Unit Assessment	<b>Lesson 1.2:</b> Earth and Stars in Space	<b>Lesson 1.3:</b> How Big Is Big? How Far Is Far?
<b>Lesson 1.4:</b> Distances to the Stars	<b>Lesson 1.5:</b> Investigating Size and Distance	<b>Lesson 1.6:</b> The Brightness of Starlight
<b>Lesson 1.7:</b> Explaining When We See Stars		



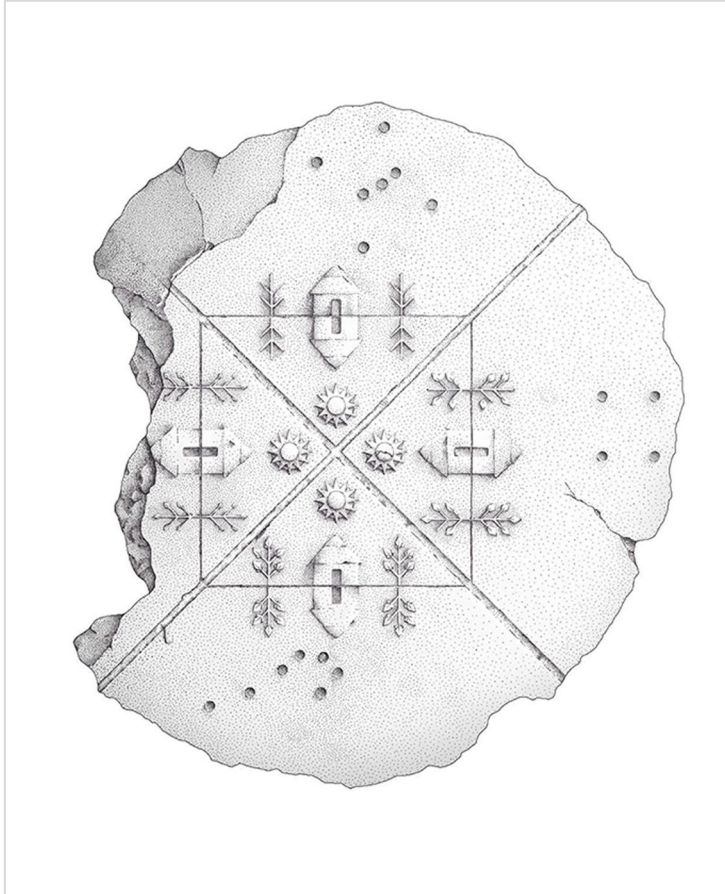
**Grade 5 | Patterns of Earth and Sky**

# **Lesson 1.2: Earth and Stars in Space**

## Activity 1

# Modeling the Shape of Earth



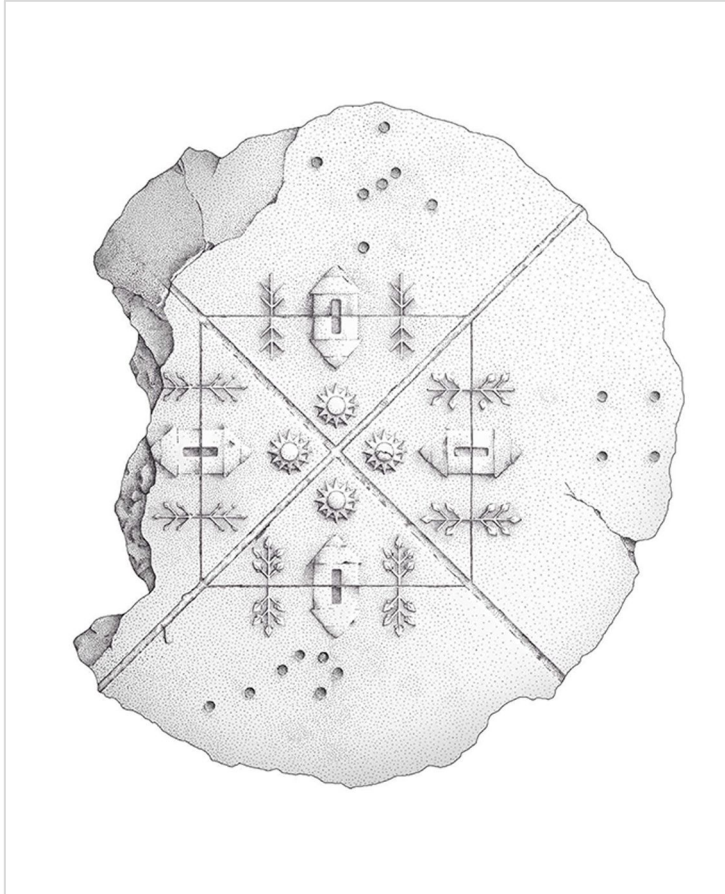


As **astronomers**, we are trying to figure out what the missing piece of this artifact might look like. To figure this out, we need to be aware of **when things appear in the sky**.



If we went outside **right now**, what do you think we would see in the sky?

What if we waited **until dark**, what do you think we would see in the sky then?



Do you see anything on the artifact that might also be **something you can see in the sky?**

## **Chapter 1 Question**

Why don't we see a lot of stars during the daytime?

# Patterns of Earth and Sky Classroom Wall

## **Unit Question**

Why do we see different stars at different times?

## **Chapter 1 Question**

Why don't we see a lot of stars during the daytime?

## **Key Concepts**

## **Vocabulary**

astronomer

star



If we want to understand what we see in the sky, we should first decide how we will show **Earth's shape**.

For this, we can use **models**.



In what way are these models **similar** to Earth's shape?

In what ways are these models **different** from Earth's shape?



Which model of Earth do these images support? Globe or map?





The photographs of Earth from space are **evidence**, or information that supports our idea, that **Earth is a sphere** like the globe, rather than flat like the map.



When might a **map** be a more useful representation of Earth?

# Vocabulary



**model**

something scientists make to answer questions  
about the real world

# Patterns of Earth and Sky Classroom Wall

## Unit Question

Why do we see different stars at different times?

## Chapter 1 Question

Why don't we see a lot of stars during the daytime?

## Key Concepts

## Vocabulary

astronomer

star

model

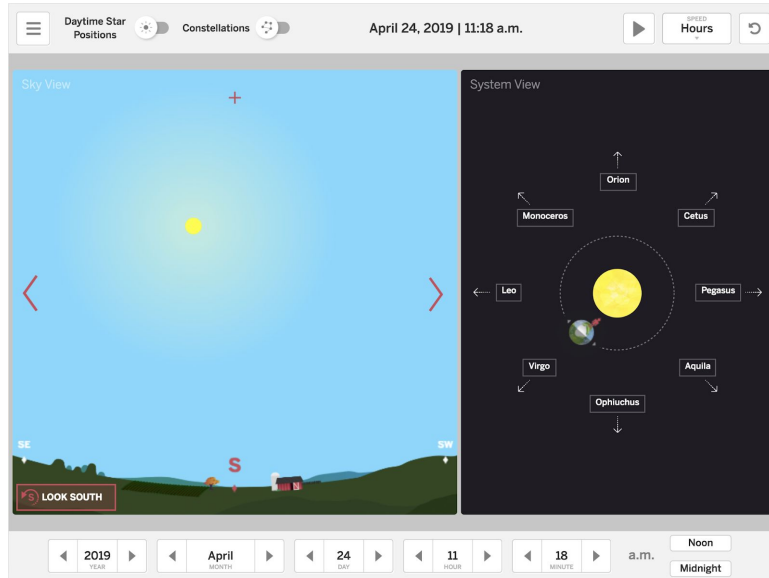
## Activity 2

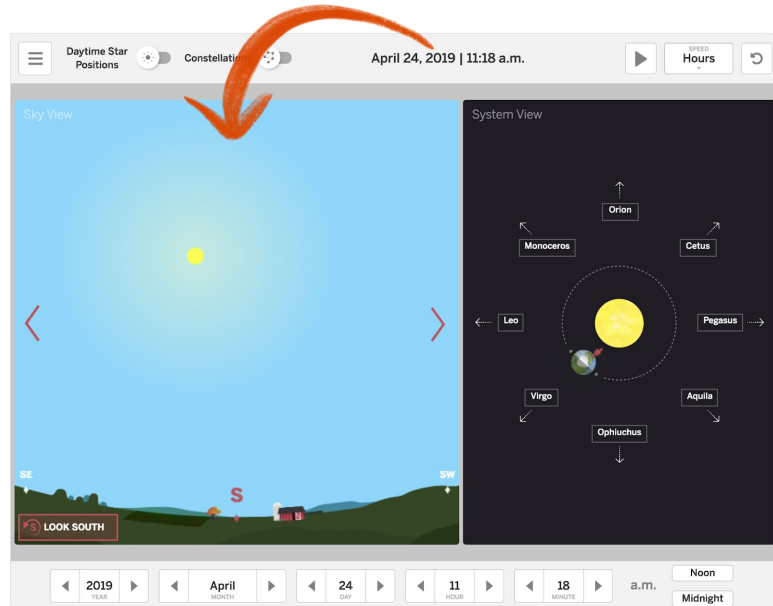
# Exploring a Simulation of Earth and Sky



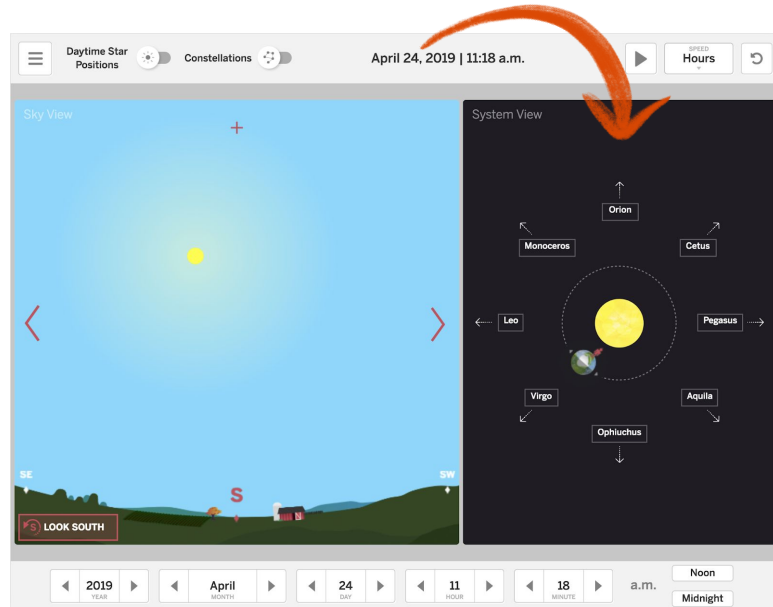


This Sim is a **scientific model of Earth and the sky**. Although this model is different from the real Earth and sky, it is also accurate in many ways.

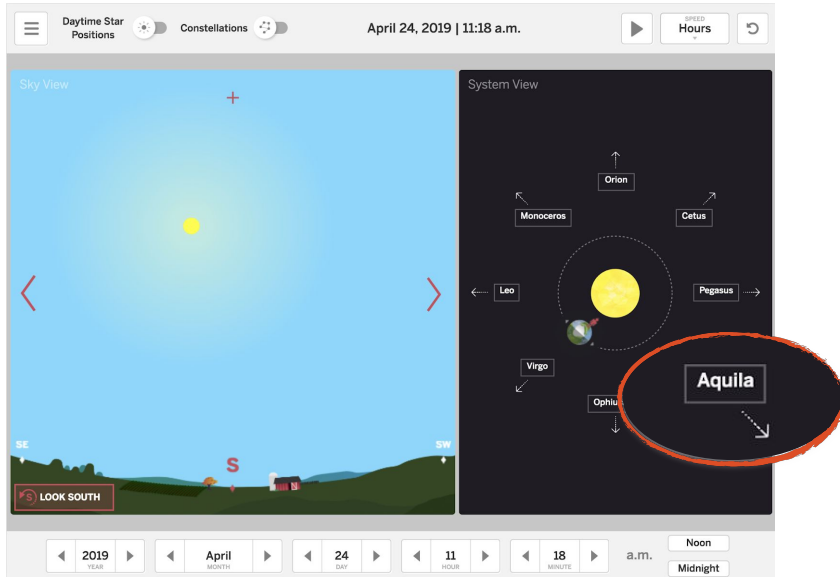




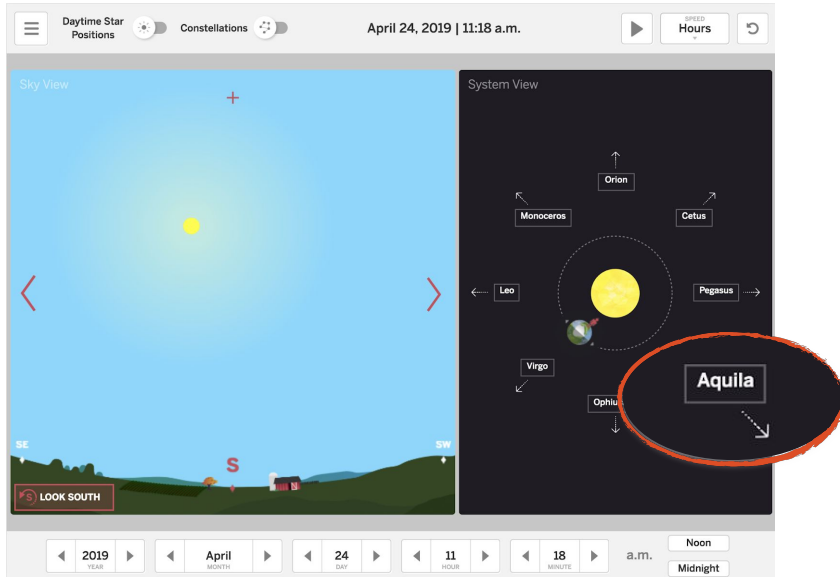
**Sky View:**  
This view shows the sky as if you are **standing on Earth**.



**System View:**  
This view shows Earth as if you are seeing it from **above Earth's North Pole**, but far enough away to also see the sun.



**Constellations:**  
The name labels (**in boxes**) do not represent the actual constellations because they are too far away.



**Arrows:**  
The white arrows represent the **direction in which you would need to travel** in space in order to get to those constellations.

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

**Exploring Stars in a Simulation**

Explore the Sim with your partner, and then record your ideas.

**A.** List some things you discovered about how the Sim works.


**B.** List some questions you have about how the Sim works.


Turn to page 5, Exploring Stars in a Simulation, in your notebooks.

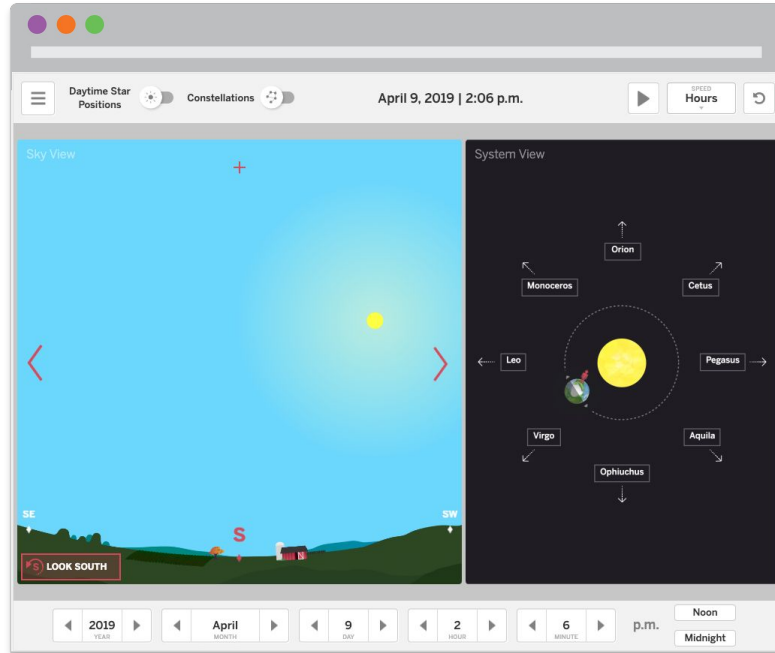


**Explore the Sim** with your partner, and then **record** some things you discover and some questions.

## Activity 3

# Sharing What We Discovered

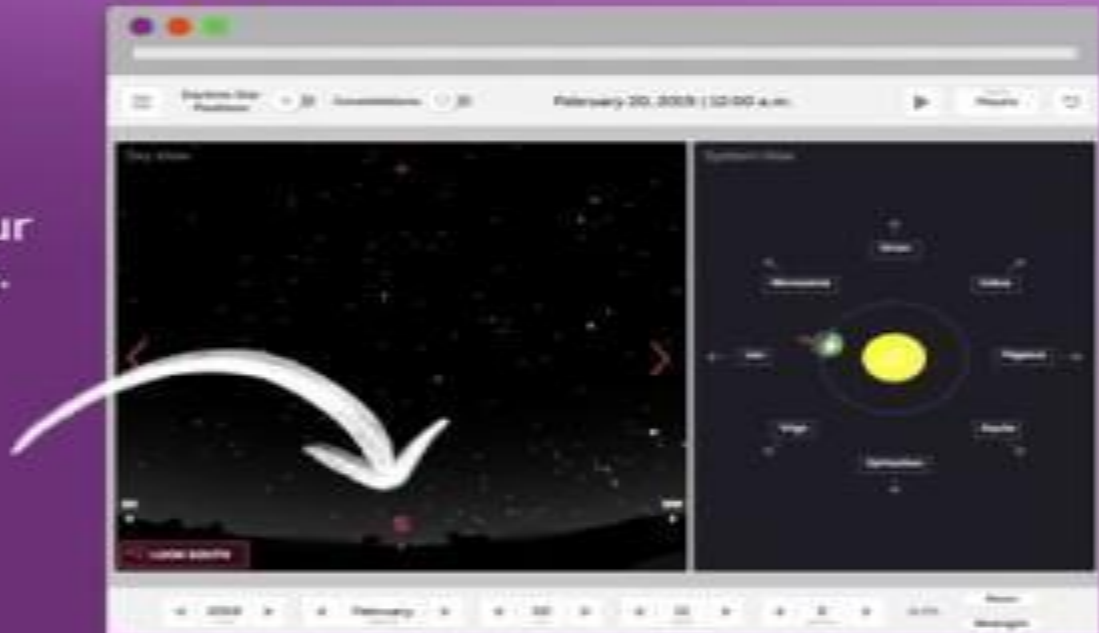




What did you **notice** about the Sim?



When we press  
**LOOK SOUTH** we turn our  
view to the south horizon.



## Activity 4

# Ideas About Where the Stars Are



We're going to investigate this question:

Where are the stars in space?

# Patterns of Earth and Sky Classroom Wall

## Unit Question

Why do we see different stars at different times?

## Chapter 1 Question

Why don't we see a lot of stars during the daytime?

## Investigation Question

Where are the stars in space?

## Key Concepts

## Vocabulary

astronomer

star

model

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

**Think-Write-Pair-Share: Where Are the Stars in Space?**

1. Think about the question, *Where are the stars in space?*
2. Record your ideas.
3. Share your ideas with your partner.


Turn to page 6 in your notebooks.



**Where** are the stars in  
space?

# End of Lesson



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## Plan for the day

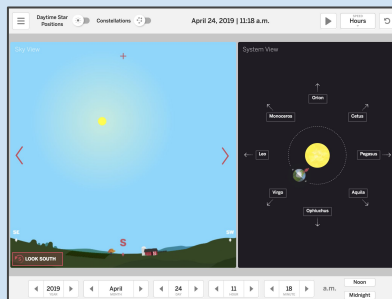
- Introduction and framing
- Navigation and planning
- Teaching and learning in an Amplify Science lesson
- **Instructional approach reflection**
- Additional program resources
- Closing

# Gathering evidence

## Patterns of Earth and Sky Lesson 1.2

Chapter Question: Why don't we see a lot of stars in the daytime?

Investigation Question: Where are the stars in space?





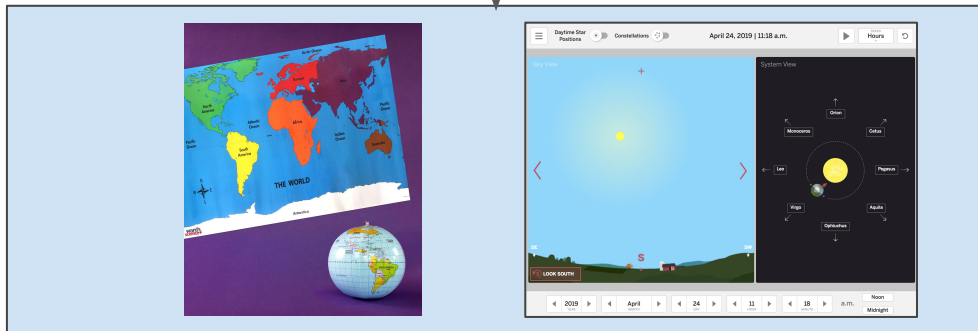
# Introducing the Investigation Question

## Where are the stars in space?

Before introducing the Investigation Question, students figure out

- ✓ the Earth is sphere
- ✓ to use models
- ✓ how to explore the Sim

Investigation Question: Where are the stars in space?

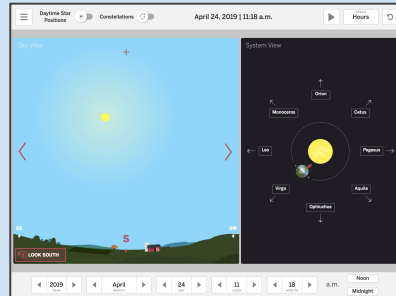


# Evidence sources work together

## Comparing models of the Earth

How do these activities **work together** to support understanding of where are the stars in space?

Investigation Question: Where are the stars in space?

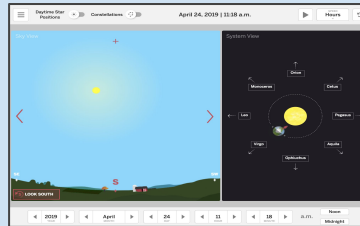


# Gathering evidence

## Patterns of Earth and Sky Lesson 1.2

Chapter Question: Why don't we see a lot of stars in the daytime?

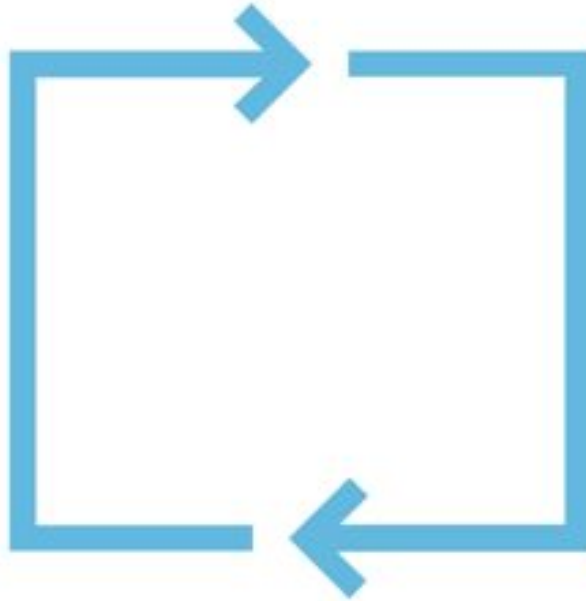
Investigation Question: Where are the stars in space?



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

# Multimodal learning

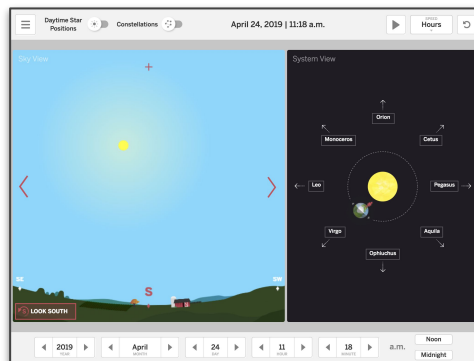
Gathering evidence over multiple lessons



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

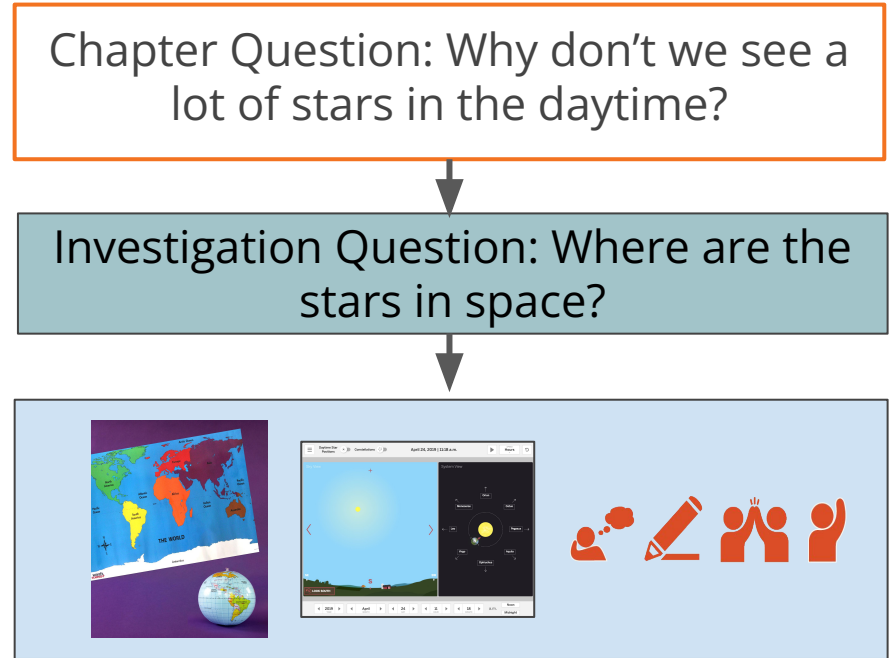
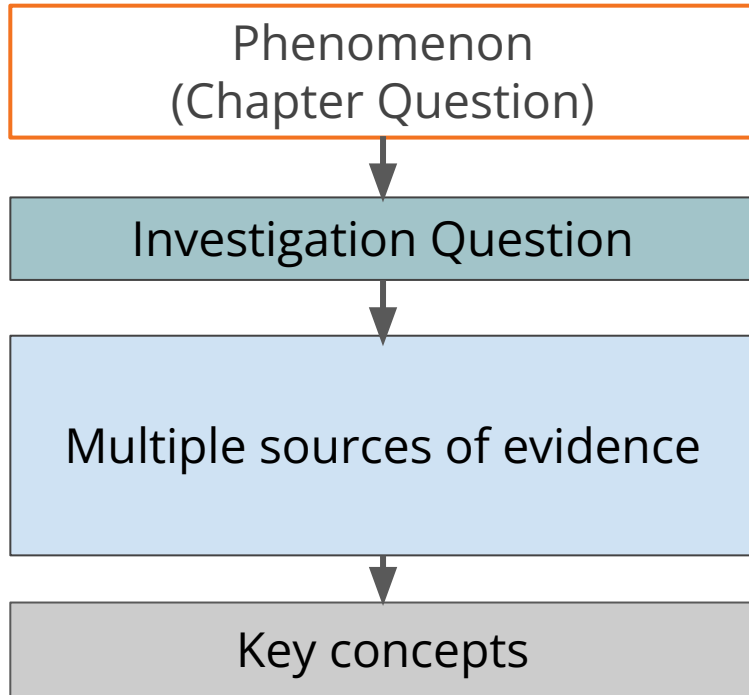
# Evidence sources work together

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



# Coherence Flowchart

## A diagram of student learning



# Coherence Flowchart

## Patterns of Earth and Sky Lesson 1.2-1.4

Chapter Question: Why don't we see a lot of stars in the daytime?

Investigation Question: Where are the stars in space?

Evidence: Compare models of Earth (1.2)

**Evidence: Read *How Big is Big? How Far is Far?* (1.3)**

**Evidence: Investigate distances to stars in the Sim (1.4)**

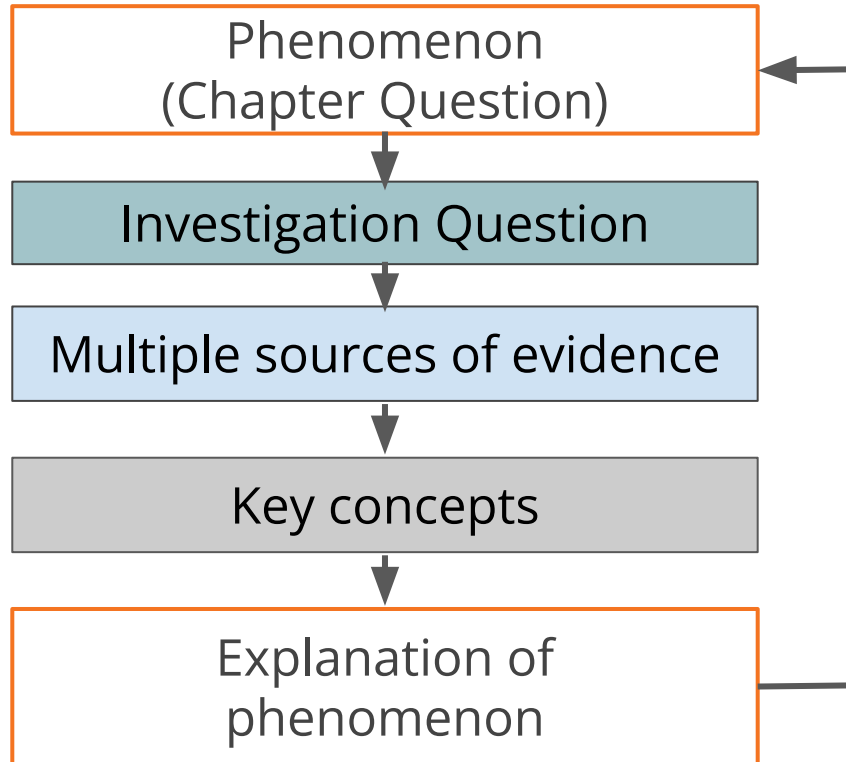
**Evidence: Create a physical model of Great Square of Pegasus (1.4)**

**Evidence: Compare representations of stars (1.4)**

Key concepts: Stars are very far away from Earth in every direction. The sun is the only star in our solar system. Other stars are far outside our solar system.

# Coherence Flowchart

A diagram of student learning





# Coherence Flowchart

## Patterns of Earth and Sky Lesson 1.2-1.4

Chapter Question: Why don't we see a lot of stars in the daytime?



Investigation Question: Where are the stars in space?

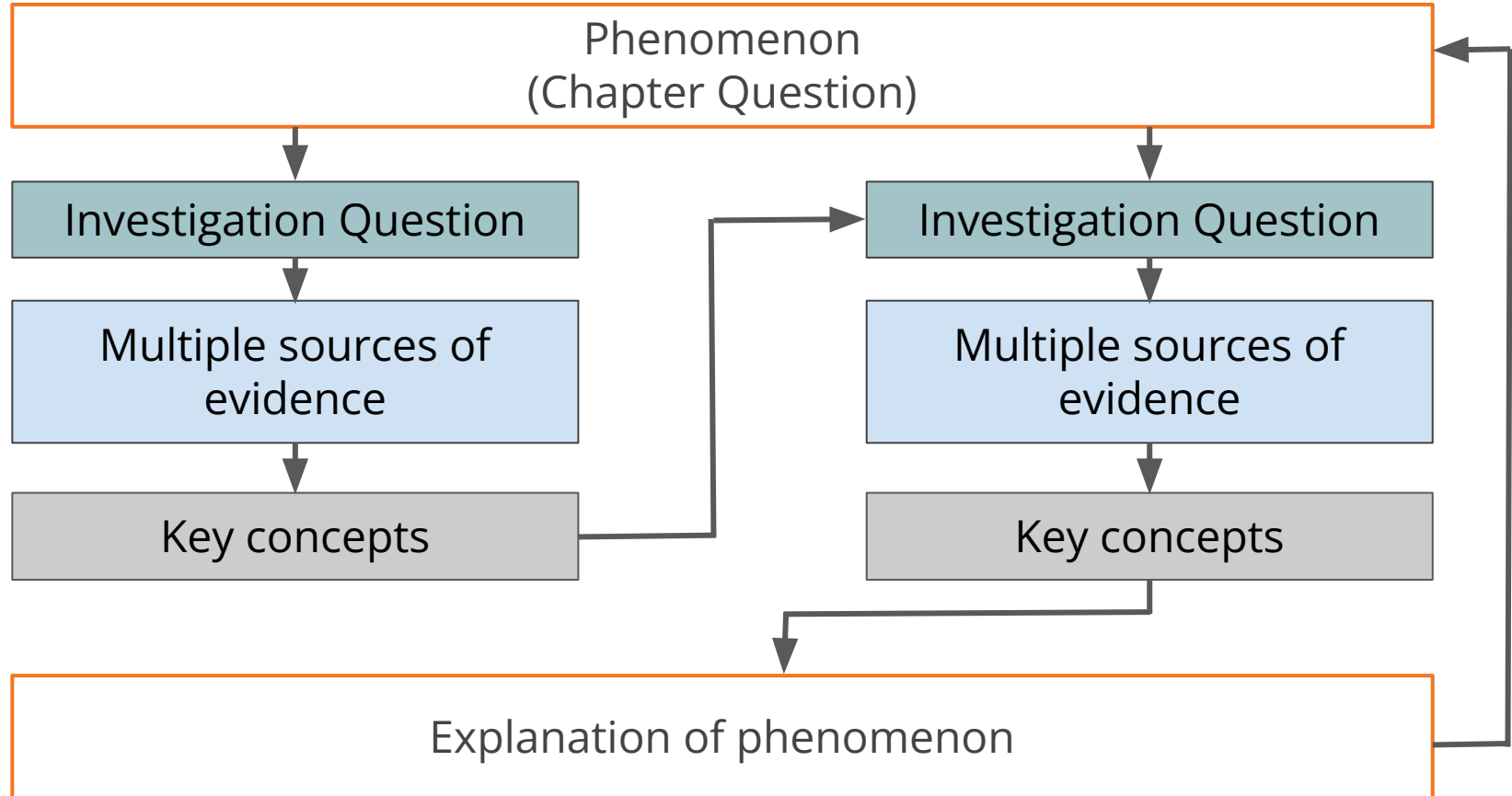


Evidence: Compare models of Earth (1.2)  
Evidence: Read *How Big is Big? How Far is Far?* (1.3)  
Evidence: Investigate distances to stars in the Sim (1.4)  
Evidence: Create a physical model of Great Square of Pegasus (1.4)  
Evidence: Compare representations of stars (1.4)



Key concepts: Stars are very far away from Earth in every direction. The sun is the only star in our solar system. Other stars are far outside our solar system.

# Coherence Flowchart



**Unit Anchor  
Phenomenon**

*Problem students work  
to solve*

**Chapter-level Anchor  
Phenomenon**

*Chapter 1 Question*

**Investigative Phenomena**

*Investigation Questions*

Evidence sources and  
reflection opportunities

Key concepts

Application of key  
concepts to the problem

Explanation that students  
can make to answer the  
Chapter 1 Question

# Patterns of Earth and Sky: Analyzing Stars on Ancient Artifacts

Different stars are visible in the sky at different times

*Archaeologists discovered part of an ancient artifact that depicts the sun and other stars. How can we figure out what would have appeared on the missing piece?*

In the daytime the sun is visible in the sky but other stars are not.  
*Why don't we see a lot of stars in the daytime?*

Sometimes stars are visible in the sky, sometimes only the sun is visible.

*Where are the stars in space? (1.2–1.4)*

- Compare models of Earth (1.2)
- Read *How Big Is Big? How Far Is Far?* (1.3)
- Investigate distances to stars in the Sim (1.4)
- Create a physical model of Great Square of Pegasus (1.4)
- Compare representations of stars (1.4)

- Stars are very far away from Earth in every direction. (1.4)
- The sun is the only star in our solar system. Other stars are far outside our solar system. (1.4)

- Discuss the Chapter 1 Question in pairs (1.7)
- Write a scientific explanation to answer the Chapter 1 Question (1.7)
- Discuss ideas about the artifact (1.7)

The stars are all around Earth in every direction. Because the sun is much closer to Earth than all other stars it appears bigger and brighter. The sun's brightness overwhelms the brightness of all other stars during the daytime, and that is why we can see only the sun during the daytime. This is why the artifact doesn't show the sun and the other stars being visible at the same time.

Sometimes stars are visible in the sky, sometimes only the sun is visible.  
*If the stars are all around us, why can't we always see them? (1.5–1.6)*

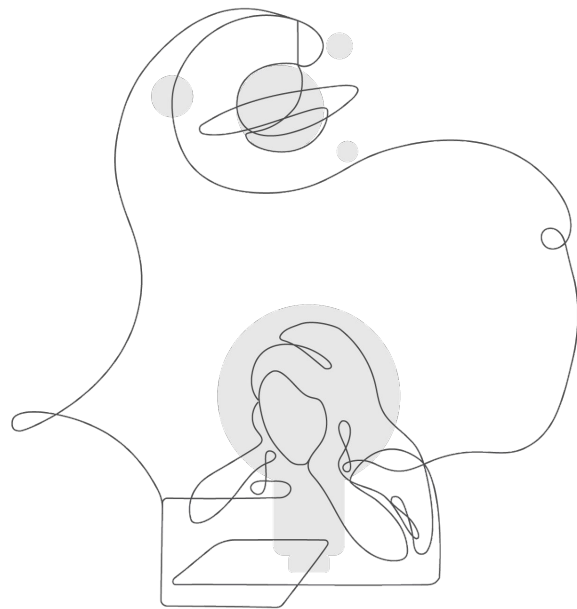
- Observe stars in the Sim (1.5)
- Investigate size and distance of stars with a physical model (1.5)
- Read about star visibility in *Handbook of Stars and Constellations* (1.6)
- Watch *Lost in Light* video (1.6)
- Discuss why we can't always see stars using unit vocabulary (1.6)

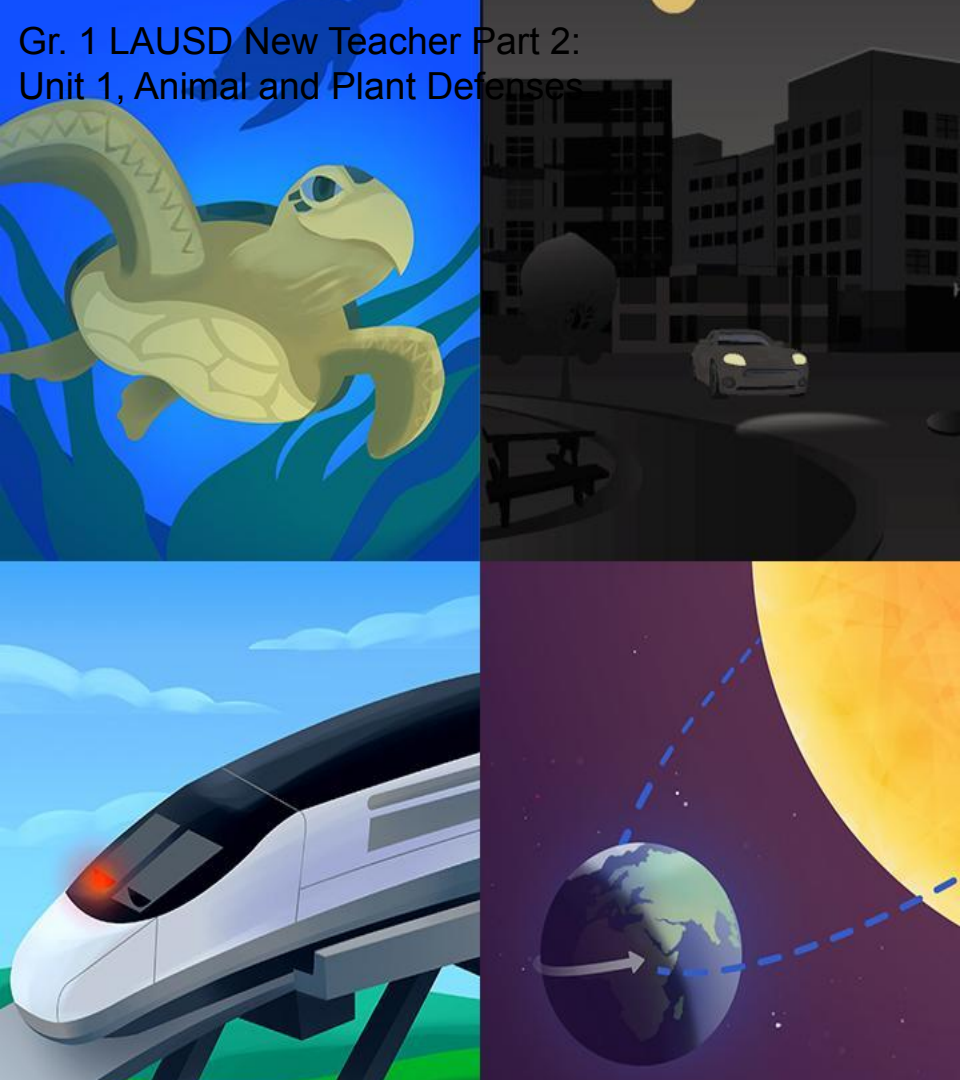
- The sun looks bigger and brighter because it is much closer to Earth than other stars. (1.6)
- The sun is the only star we can see in the daytime because the sun looks so bright. (1.6)

# Explore the Coherence Flowchart

Skim the Chapter 1 Coherence Flowchart.

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




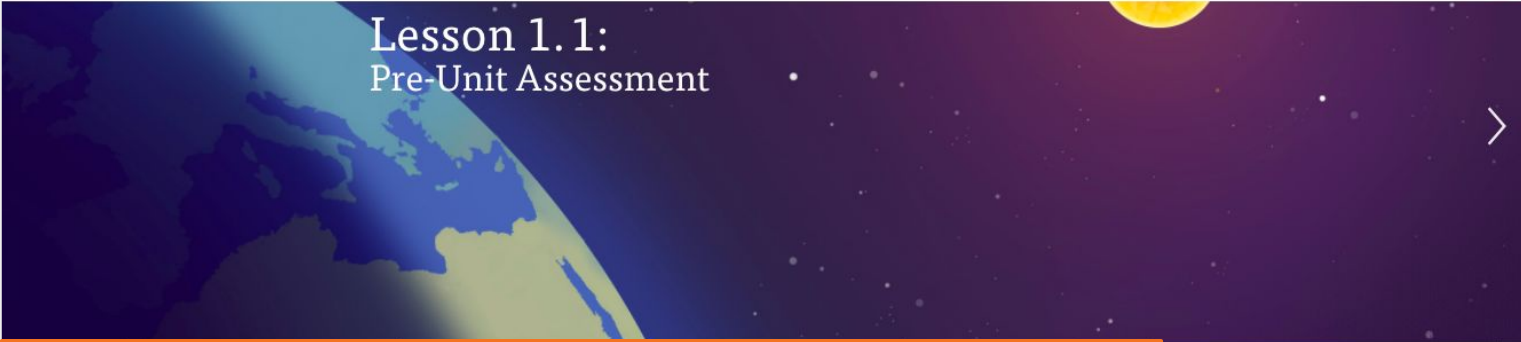


## Plan for the day: Part 2

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

# The Lesson Brief

 AmplifyScience > Patterns of Earth and Sky > Chapter 1 > Lesson 1.1



## Lesson 1.1: Pre-Unit Assessment


Lesson Brief  
(4 Activities)


1 TEACHER-LED DISCUSSION  
Introducing the Unit

2 TEACHER-LED DISCUSSION  
Introducing the Artifact

3 CLASS  
Pre-Unit Assessment

4 READING  
Previewing the Reference Book

 RESET LESSON

 GENERATE PRINTABLE LESSON GUIDE

Overview

Materials & Preparation

Differentiation

Standards

Vocabulary


Unplugged?


## Overview


### Students' Initial Explanations


This lesson introduces students to the scientific phenomenon that they will investigate in this unit: why we see stars at different times. Students are introduced to their role as astronomers who are being asked to help determine what the missing piece of an archaeological artifact might look like. They write initial explanations about why the sky depicted in the artifact looks different at different times. The


## Digital Resources


 Classroom Slides 1.1 | PowerPoint


 Classroom Slides 1.1 | Google Slides

 All Projections

 Pre-Unit Writing: Explaining the Discovered Artifact copymaster

 Español





# 4 Easy Steps to Teaching a lesson

## DIRECTIONS:

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

The screenshot shows the interface for Lesson 1.2: Earth and Stars in Space. At the top, a navigation bar contains four steps: 1. TEACHER-LED DISCUSSION Modeling the Shape of Earth, 2. SIM Exploring a Simulation of Earth and Sky, 3. TEACHER-LED DISCUSSION Sharing What We Discovered, and 4. STUDENT-TO-STUDENT DISCUSSION Ideas About Where the Stars Are. Below this, the main content area is divided into three sections: Overview, Materials & Preparation, and Digital Resources. The Overview section contains text about the simulation. The Materials & Preparation section lists documents: Overview, Materials & Preparation, Differentiation, Standards, Vocabulary, and Unplugged?. The Digital Resources section lists: Classroom Slides 1.2 | PowerPoint, Classroom Slides 1.2 | Google Slides, All Projections, and Classroom Videos 1.2 | Zip. A 'RESET LESSON' button is located above the Materials & Preparation section, and a 'GENERATE PRINTABLE LESSON GUIDE' button is in the top right. Four orange arrows with numbers 1 through 4 point to specific elements: Arrow 1 points to the 'Classroom Slides 1.2 | PowerPoint' link. Arrow 2 points to the 'Overview' link in the Materials & Preparation section. Arrow 3 points to the 'Materials & Preparation' link in the Materials & Preparation section. Arrow 4 points to the 'Differentiation' link in the Materials & Preparation section.

Lesson 1.2:  
Earth and Stars in Space

1 TEACHER-LED DISCUSSION Modeling the Shape of Earth

2 SIM Exploring a Simulation of Earth and Sky

3 TEACHER-LED DISCUSSION Sharing What We Discovered

4 STUDENT-TO-STUDENT DISCUSSION Ideas About Where the Stars Are

RESET LESSON

Overview

Overview

Students are introduced to two different models of Earth and engage in an open exploration of the *Patterns of Earth and Sky* Simulation. Students are introduced to the question that will guide their work over the next few lessons. *Why don't we see a lot of stars during the daytime?* To start thinking about this question, students first consider Earth's shape and the purpose of using models by *modeling earth and stars* and *differentiation of observation*.

Overview

Materials & Preparation

Differentiation

Standards

Vocabulary

Unplugged?

Digital Resources

Classroom Slides 1.2 | PowerPoint

Classroom Slides 1.2 | Google Slides

All Projections

Classroom Videos 1.2 | Zip

GENERATE PRINTABLE LESSON GUIDE

# 4 Easy Steps to Teaching a lesson

## DIRECTIONS:

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

The screenshot shows the interface for Lesson 1.2: Earth and Stars in Space. At the top, there's a header with the lesson title and a background image of Earth and a full moon. Below the header is a progress bar with four steps: 1. TEACHER-LED DISCUSSION Modeling the Shape of Earth, 2. SIM Exploring a Simulation of Earth and Sky, 3. TEACHER-LED DISCUSSION Sharing What We Discovered, and 4. STUDENT-TO-STUDENT DISCUSSION Ideas About Where the Stars Are. Below the progress bar is a sidebar with links: Overview, Materials & Preparation, Differentiation, Standards, Vocabulary, and Unplugged?. The main content area is titled 'Overview' and contains text about the lesson. On the right, there's a 'Digital Resources' section with links to Classroom Slides 1.2 in PowerPoint, Classroom Slides 1.2 in Google Slides, All Projections, and Classroom Videos 1.2 in Zip. A red arrow points to the 'Classroom Slides 1.2 | Google Slides' link, with the number '1' next to it.

Lesson 1.2:  
Earth and Stars in Space

1 TEACHER-LED DISCUSSION Modeling the Shape of Earth

2 SIM Exploring a Simulation of Earth and Sky

3 TEACHER-LED DISCUSSION Sharing What We Discovered

4 STUDENT-TO-STUDENT DISCUSSION Ideas About Where the Stars Are

RESET LESSON

GENERATE PRINTABLE LESSON GUIDE

Overview

Students are introduced to two different models of Earth and engage in an open exploration of the *Patterns of Earth and Sky* Simulation. Students are introduced to the question that will guide their work over the next few lessons. *Why don't we see a lot of stars during the daytime?* To start thinking about this question, students first consider Earth's shape and the purpose of using models by

Digital Resources

Classroom Slides 1.2 | PowerPoint

Classroom Slides 1.2 | Google Slides

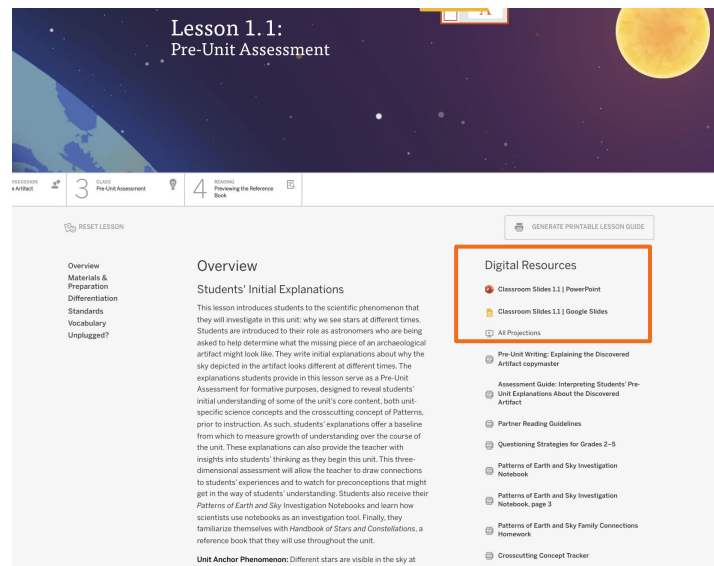
All Projections

Classroom Videos 1.2 | Zip



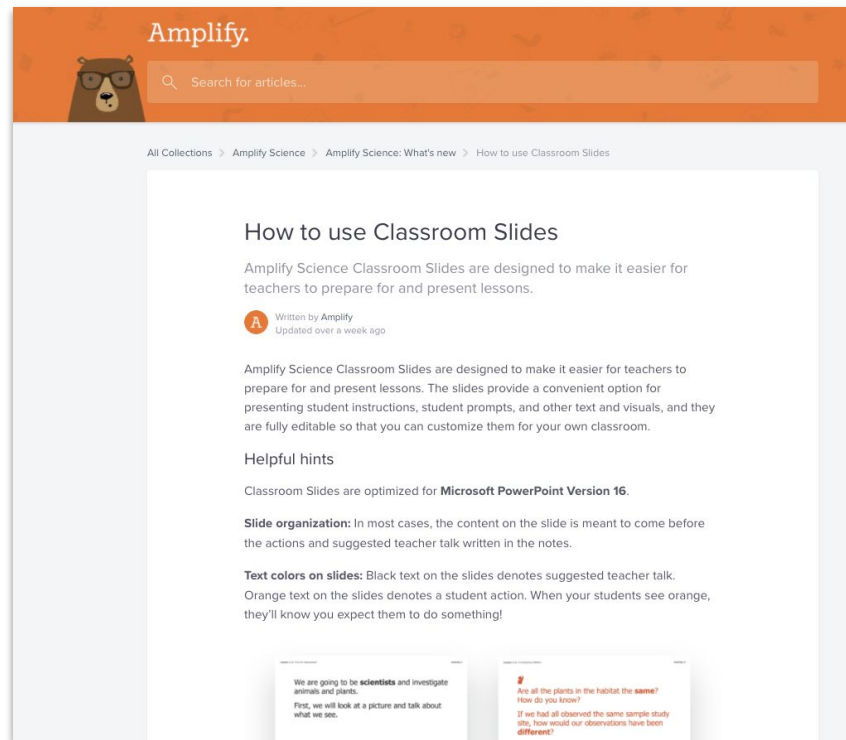
# Preparing to teach Classroom Slides

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



# Teaching with Classroom Slides

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



# 4 Easy Steps to Teaching a lesson

## DIRECTIONS:

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

Lesson 1.2:  
Earth and Stars in Space

1 TEACHER-LED DISCUSSION  
Modeling the Shape of Earth

2 SIM  
Exploring a Simulation of Earth and Sky

3 TEACHER-LED DISCUSSION  
Sharing What We Discovered

4 STUDENT-TO-STUDENT DISCUSSION  
Ideas About Where the Stars Are

RESET LESSON

Overview

Overview

Students are introduced to two different models of Earth and engage in an open exploration of the *Patterns of Earth and Sky* Simulation. Students are introduced to the question that will guide their work over the next few lessons. *Why don't we see a lot of stars during the daytime?* To start thinking about this question, students first consider Earth's shape and the purpose of using models by

Digital Resources

- Classroom Slides 1.2 | PowerPoint
- Classroom Slides 1.2 | Google Slides
- All Projections
- Classroom Videos 1.2 | Zip

GENERATE PRINTABLE LESSON GUIDE

# Preparing to teach

## The Overview

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

Lesson 1.1:  
Pre-Unit Assessment

Introduction: A Artifact 3 CLASS Pre-Unit Assessment 4 READING Interpreting the Reference Book

RESET LESSON

Overview  
Materials & Preparation  
Differentiation  
Standards  
Vocabulary  
Unplugged?

Overview

Students' Initial Explanations

This lesson introduces students to the scientific phenomenon that they will investigate in this unit: why we see stars at different times. Students are introduced to their role as astronomers who are being asked to help determine what the missing piece of an archaeological artifact might look like. They write initial explanations about why the sky depicted in the artifact looks different at different times. The explanations students provide in this lesson serve as a Pre-Unit Assessment for formative purposes, designed to reveal students' initial understanding of some of the unit's core content, both unit-specific science concepts and the crosscutting concept of Patterns, prior to instruction. As such, students' explanations offer a baseline from which to measure growth of understanding over the course of the unit. These explanations can also provide the teacher with insights into students' thinking as they begin this unit. This three-dimensional assessment will allow the teacher to draw connections to students' experiences and to watch for preconceptions that might get in the way of students' understanding. Students also receive their *Patterns of Earth and Sky Investigation* Notebooks and learn how scientists use notebooks as an investigation tool. Finally, they familiarize themselves with *Handbook of Stars and Constellations*, a reference book that they will use throughout the unit.

Unit Anchor Phenomenon: Different stars are visible in the sky at

GENERATE PRINTABLE LESSON GUIDE

Digital Resources

- Classroom Slides 1.1 | PowerPoint
- Classroom Slides 1.1 | Google Slides
- All Projections
- Pre-Unit Writing: Explaining the Discovered Artifact copymaster
- Assessment Guide: Interpreting Students' Pre-Unit Explanations About the Discovered Artifact
- Partner Reading Guidelines
- Questioning Strategies for Grades 2-5
- Patterns of Earth and Sky Investigation Notebook
- Patterns of Earth and Sky Investigation Notebook, page 3
- Patterns of Earth and Sky Family Connections Homework
- Crosscutting Concept Tracker

# 4 Easy Steps to Teaching a lesson

## DIRECTIONS:

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

Lesson 1.2:  
Earth and Stars in Space

1 TEACHER-LED DISCUSSION  
Modeling the Shape of Earth

2 SIM  
Exploring a Simulation of  
Earth and Sky

3 TEACHER-LED DISCUSSION  
Sharing What We  
Discovered

4 STUDENT-TO-STUDENT  
DISCUSSION  
Ideas About Where the  
Stars Are

RESET LESSON

GENERATE PRINTABLE LESSON GUIDE

Overview

Students are introduced to two different models of Earth and engage in an open exploration of the *Patterns of Earth and Sky* Simulation. Students are introduced to the question that will guide their work over the next few lessons. *Why don't we see a lot of stars during the daytime?* To start thinking about this question, students first consider Earth's shape and the purpose of using models by *modeling the shape and the purpose of using models by*

Digital Resources

- Classroom Slides 1.2 | PowerPoint
- Classroom Slides 1.2 | Google Slides
- All Projections
- Classroom Videos 1.2 | Zip

# Preparing to teach

## Materials and Prep

Review the materials needed for:

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

### Materials & Preparation

#### Materials

##### For the Classroom Wall

- Chapter 1 Question: *Why don't we see a lot of stars during the daytime?*
- vocabulary: *model*

##### For the Class

- 1 inflatable globe
- folded world map
- masking tape\*
- optional: Chapter 1 Home Investigation: Observing the Stars copymaster

##### For Each Pair of Students

- 1 digital device\*

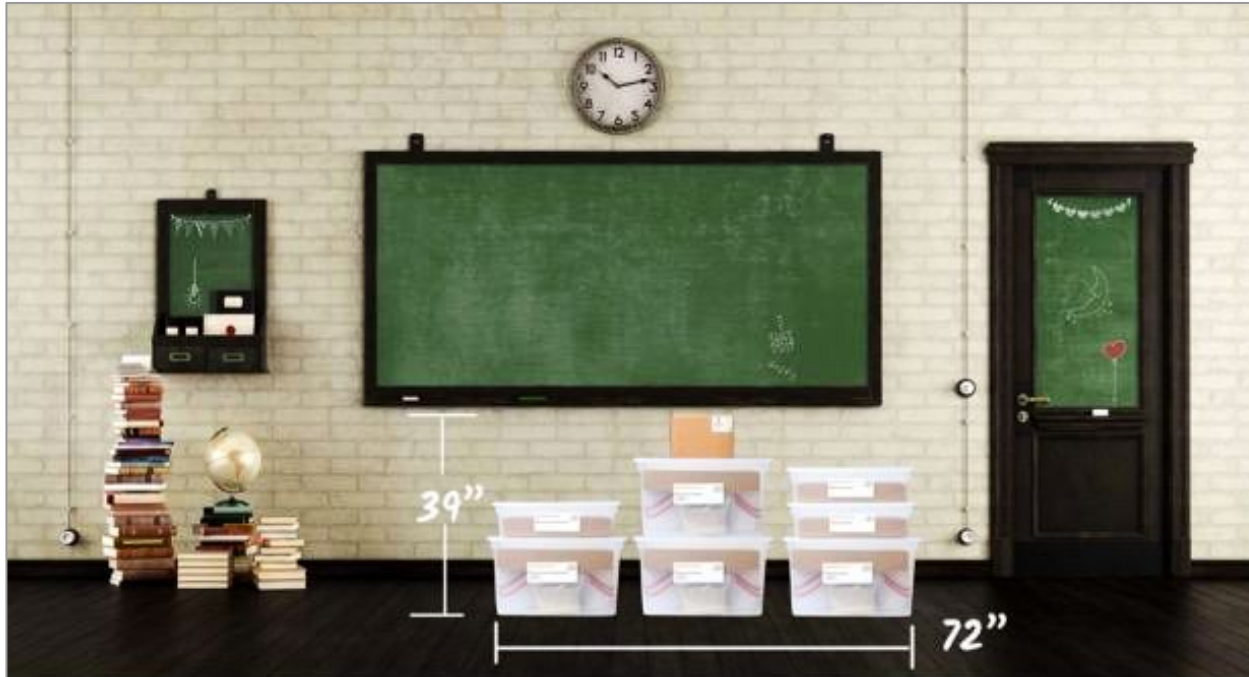
##### For Each Student

- optional: 1 copy of Chapter 1 Home Investigation: Observing the Stars student sheet
- *Patterns of Earth and Sky Investigation Notebook* (pages 5–6, optional: page 4)

\*teacher provided

# Prepping Hands-On Materials for the Unit

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



### Classroom Kits

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

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



# Welcome to Amplify Science!

---

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

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

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



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

## Classroom kits

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

## Classroom Kits

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

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

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

LOS ANGELES USD

Home

COURSES GROUPS **RESOURCES** TOOLS

Search

Personal

Public

Group

Group Resources

Amplify Science- Elementary

LAUSD Middle School Science - Di...

School Resources

LOS ANGELES USD - 9999

Los Angeles Unified School District

Amplify Science- Elementary

Title

NGSS Resources

Added by MARIA ARTEAGA · Jun 1, 2021

Google Drive link for K-6 Phenomenal Notebooking Resources

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

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

Subfolders for Unit 1 and Unit 2.

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

Added by INYOUNG LEE · Feb 1, 2021

Amplify\_Science\_Shared\_Logins.pdf

Added by Señor Fernando REYES · Aug 9, 2021

Lesson Prep Videos

Added by Terin Ngo · Oct 11, 2021

# Hands On Material Organization

## Directions

1. Open the Digital Lesson Guides Only page 7 from the Unit Landing page or go the Print TE to page 31. (Chapter 1 Activities)

2. Look for the lessons with Hands On.

HANDS-ON 

3. Note in the table below.

4. Review the materials and preparation to determine if it can be prepared prior to the lesson or on the day of the lesson.

5. Use this same procedure for each Chapter. (Go to the Chapter Activities Contents)

Chapter/Lesson	Activity	Prep Prior	Prep Day of	What to do	
1.1	1	X		Prep plastic bags with labels A, B, C, D and M. Place 1 tsp of the following cinnamon, salt, flour, cornstarch in A,B,C, D. In bag M mix 1 tsp salt and 1 tsp cinnamon.	<i>This is an example from Properties of Materials Grade 2</i>

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



JUMP DOWN TO UNIT GUIDE

GENERATE PRINTABLE TEACHER'S GUIDE

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

Generate

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

OPEN IN NEW TAB

RESET LESSON

Overview  
Materials & Preparation  
Differentiation  
Standards  
Vocabulary  
Unplugged?

## Overview

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

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

6 Lessons

## Inheritance and Traits Lesson Guides

Chapter 1  
Activities



### Chapter 1 Activities

#### Lesson 1.1: Pre-Unit Assessment

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

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

#### Lesson 1.2: Blue Whales and Buttercups

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

TEACHER-LED DISCUSSION  
READING  
TEACHER-LED DISCUSSION

#### Lesson 1.3: Observing Similarities and Differences

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

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



HANDS-ON

#### Lesson 1.4: Introducing Species

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

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

# Hands On Material Organization

Completed for Inheritance  
and Traits

Chapter/Lesson	Activity	Prep Prior	Prep Day of	What to do
1.3	1	X		<b>Prep Prior:</b> For each group of 4: • 1 set of Animal Cards, clipped together (10 cards/set), I put them in envelopes and label them. For each group of 2: 1 set of Bird Cards, clipped together (8 cards/set)
1.4	2	X		<b>Prep Prior:</b> Bird cards from prior lesson, locate the Bear cards. Each pair of students will receive 1 bear card. Here are the bear groupings : • Black bear: 1, 5, 9, 13, 17 • Brown bear: 2, 6, 10, 14, 18 • Spectacled bear: 4, 8, 12, 16, 20 • Sun bear: 3, 7, 11, 15, 19
1.5	1	X		<b>Prep Prior:</b> For each group of 4: 1 set of Elk Mountain Pack Data Cards, clipped together (6 cards/set)
2.4	2	X	X	<b>Prep Prior:</b> Print out Parent 1 and 2 Instructions copymaster. Make two copies of each sheet so you have a total of three sheets of Parent 1 Instructions and three sheets of Parent 2 Instructions. Cut apart each Parent 1 and Parent 2 strip. You should have 18 Parent 1 strips and 18 Parent 2 strips. Each pair of students will receive 1 strip of instructions from each parent. Using a permanent marker, label 1 cup with "Instructions from Parent 1." On the other cup, write "Instructions from Parent 2." Place the respective strips in each cup. Each pair of students will choose one Parent 1 strip of instructions and one Parent 2 strip of instructions from the cups. <b>Prep Day of:</b> Each pair will get three pieces of clay: red, green, and yellow. Each piece of clay should be about 2 inches.
3.1	2	X		<b>Prep Prior:</b> For each group of 4: 1 set of Flamingo Family Data Cards, clipped together (3 cards/set)
3.3	3	X		<b>Prep Prior:</b> For each group of 4: Label 3 cups: cup 1, cup 2, cup 3. Each group will also need 1 bottle of red and 1 bottle of blue food coloring. Note: Each group will need approximately one cup of water for each of the three cups. Teacher will need to provide three stalks of celery (the lighter, inner stalks with leaves intact work best) per group. The length of the celery stalks you will need for the investigation will depend on the thickness of the stalks. Cut off the end of a stalk so the stalk measures approximately 10 inches. Place the stalk in a cup of water to ensure that the stalk does not cause the cup to tip over.
3.4	1	X		Trays from previous days celery experiment
4.3	1	X		<b>Prep Prior:</b> For each group of 4: 1 set of Sparrow Family Data Cards, clipped together (3 cards/set) For each group of 2: crayons and/or color pencils (minimum: gray, brown, black, yellow, pink)*

# 4 Easy Steps to Teaching a lesson

## DIRECTIONS:

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

The screenshot shows the interface for Lesson 1.2: Earth and Stars in Space. At the top, there's a header with the lesson title and a background image of Earth and a full moon. Below the header is a navigation bar with four steps: 1. TEACHER-LED DISCUSSION Modeling the Shape of Earth, 2. SIM Exploring a Simulation of Earth and Sky, 3. TEACHER-LED DISCUSSION Sharing What We Discovered, and 4. STUDENT-TO-STUDENT DISCUSSION Ideas About Where the Stars Are. Below the navigation bar is a main content area with a sidebar on the left containing links: Overview, Materials & Preparation, Differentiation, Standards, Vocabulary, and Unplugged?. A large orange arrow with the number 4 points to the 'Unplugged?' link. The main content area has a heading 'Overview' and a paragraph of text. On the right side, there's a 'Digital Resources' section with links to Classroom Slides 1.2 in PowerPoint, Google Slides, All Projections, and Classroom Videos 1.2 in Zip. A 'RESET LESSON' button is in the top left of the main content area, and a 'GENERATE PRINTABLE LESSON GUIDE' button is in the top right.

Lesson 1.2:  
Earth and Stars in Space

1 TEACHER-LED DISCUSSION Modeling the Shape of Earth

2 SIM Exploring a Simulation of Earth and Sky

3 TEACHER-LED DISCUSSION Sharing What We Discovered

4 STUDENT-TO-STUDENT DISCUSSION Ideas About Where the Stars Are

RESET LESSON

Overview  
Materials & Preparation  
Differentiation  
Standards  
Vocabulary  
Unplugged?

Overview

Students are introduced to two different models of Earth and engage in an open exploration of the *Patterns of Earth and Sky* Simulation. Students are introduced to the question that will guide their work over the next few lessons. *Why don't we see a lot of stars during the daytime?* To start thinking about this question, students first consider Earth's shape and the purpose of using models by *modeling Earth's shape and the purpose of using models by*

Digital Resources

- Classroom Slides 1.2 | PowerPoint
- Classroom Slides 1.2 | Google Slides
- All Projections
- Classroom Videos 1.2 | Zip

GENERATE PRINTABLE LESSON GUIDE

# Preparing to Teach

## Lesson-specific differentiation

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

### Differentiation

#### Embedded Supports for Diverse Learners

**Accessible examples.** The lesson begins with students accessing prior knowledge by discussing what they normally expect to see in the sky during the day and at night. They then use models of Earth that are likely fairly well-known to them—a map and a globe—so they can begin thinking about models and establish that Earth is a sphere. Beginning class with these common experiences and models from which to draw initial student thinking helps students begin the unit on common footing and provides a common base from which to build the more complex conceptual understanding that follows. In addition, thinking about simple and familiar models prior to starting their exploration of the more complex model offered by the *Patterns of Earth and Sky* Simulation helps prepare students to think critically about the Sim during Activity 2.

**Visual representations.** Visual models and representations are essential for many students as they make sense of two-dimensional and three-dimensional representations of Earth. The *Patterns of Earth and Sky* Simulation provides a highly visual, interactive, and engaging tool for students to orient themselves on Earth and to explore their positional relationship to different stars.

**Discourse routine.** Engaging in Think-Write-Pair-Share provides students with an opportunity to activate their prior knowledge and discuss science ideas. This routine is especially helpful for English learners: it allows time for students to organize their own ideas before discussing them with a partner, and it provides students the opportunity to rehearse language with a peer before sharing with the whole class.

# 4 Easy Steps to Teaching a lesson

## DIRECTIONS:

1. Download the **Classroom Slides** for **Lesson 1.1** and review them.
2. Read the **Overview**.
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4. Read the **Differentiation** document.

The screenshot shows the interface for Lesson 1.2: Earth and Stars in Space. At the top, a navigation bar contains four steps: 1. TEACHER-LED DISCUSSION Modeling the Shape of Earth, 2. SIM Exploring a Simulation of Earth and Sky, 3. TEACHER-LED DISCUSSION Sharing What We Discovered, and 4. STUDENT-TO-STUDENT DISCUSSION Ideas About Where the Stars Are. Below this, the main content area is divided into three sections: Overview, Materials & Preparation, and Digital Resources. The Overview section contains text about the simulation. The Materials & Preparation section lists documents: Overview, Materials & Preparation, Differentiation, Standards, Vocabulary, and Unplugged?. The Digital Resources section lists: Classroom Slides 1.2 | PowerPoint, Classroom Slides 1.2 | Google Slides, All Projections, and Classroom Videos 1.2 | Zip. A 'RESET LESSON' button is located above the Materials & Preparation section, and a 'GENERATE PRINTABLE LESSON GUIDE' button is in the top right. Four orange arrows with numbers 1 through 4 point to specific elements: Arrow 1 points to the 'Classroom Slides 1.2 | PowerPoint' link. Arrow 2 points to the 'Overview' link in the Materials & Preparation section. Arrow 3 points to the 'Materials & Preparation' link in the Materials & Preparation section. Arrow 4 points to the 'Differentiation' link in the Materials & Preparation section.

Lesson 1.2:  
Earth and Stars in Space

1 TEACHER-LED DISCUSSION Modeling the Shape of Earth

2 SIM Exploring a Simulation of Earth and Sky

3 TEACHER-LED DISCUSSION Sharing What We Discovered

4 STUDENT-TO-STUDENT DISCUSSION Ideas About Where the Stars Are

RESET LESSON

Overview

Overview

Students are introduced to two different models of Earth and engage in an open exploration of the *Patterns of Earth and Sky* Simulation. Students are introduced to the question that will guide their work over the next few lessons. *Why don't we see a lot of stars during the daytime?* To start thinking about this question, students first consider Earth's shape and the purpose of using models by *modeling earth and stars* and *differentiation of observation*.

Overview

Materials & Preparation

Differentiation

Standards

Vocabulary

Unplugged?

Digital Resources

Classroom Slides 1.2 | PowerPoint

Classroom Slides 1.2 | Google Slides

All Projections

Classroom Videos 1.2 | Zip

GENERATE PRINTABLE LESSON GUIDE



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

From the Lesson at a glance in the overview

From the lesson overview

From the lesson standards

From the lesson materials and preparation

From the lesson at a glance in the overview or classroom slides

Lesson <u>1.2</u>	Activity Overview	
What is the purpose of this lesson?	Activity 1 (10 min)	Introducing the Problem
What will students learn?	Activity 2 (10 min)	Discussing Initial Ideas
3-D Statement (identify SEP, CCC, and DCI):	Activity 3 (20 min)	Making Blocks Move
Student Resources:	Activity 4 (20 min)	Sharing Observations
Assessment Opportunities: n/a	Activity 5 (## min)	

(Make your own copy first before planning)

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

## Digital Resources



Classroom Slides 1.1 | PowerPoint



Classroom Slides 1.1 | Google Slides

Lesson ____	Activity Overview	
<p>What is the purpose of this lesson?</p> <p>This lesson reinforces the idea that Earth is a sphere, gives students a chance to consider how and when to use models, and introduces students to the Sim that they will be using throughout the unit.</p>	<p><b>Activity 1</b> <b>(20 min)</b></p>	<p><b>Modeling the Shape of Earth</b></p>
<p>What will students learn?</p> <p>Earth is a sphere. Scientists use models to explore their ideas about the real world. Models need to be like the things they represent in some ways, but models are different from what they represent in other ways. Different models can be useful for different purposes.</p>	<p>Activity 2 (20 min)</p>	<p><b>Exploring a Simulation of Earth and Sky</b></p>
<p>3-D Statement (Identify SEP, CCC, and DCI):</p> <p>Students explore physical and digital models to begin understanding the shape and scale (scale, proportion, and quantity) of objects in space and communicate their initial ideas about where the stars are in space</p>	<p>Activity 3 (10min)</p>	<p><b>Sharing What We Discovered</b></p>
<p>Student Resources:</p> <p>1 digital device*, optional: 1 copy of Chapter 1 Home Investigation: Observing the Stars student sheet, <i>Patterns of Earth and Sky</i> Investigation Notebook (pages 5-6, optional: page 4)</p>	<p><b>Activity 4 (10 min)</b></p>	<p><b>Ideas About Where the Stars Are</b></p>
<p>Assessment Opportunities:</p> <p>Activity 1</p>	<p><b>Activity 5</b> <b>(##min)</b></p>	

# 4 Easy Steps to Teaching a lesson

## DIRECTIONS:

1. Download the **Classroom Slides** for **Lesson 1.1** and review them.
2. Read the **Overview**.
3. Explore the **Materials & Preparation** document.
4. Read the **Differentiation** document.
5. If you have time, navigate to **Lesson 1.3** and repeat steps 1-4.

The screenshot shows the interface for Lesson 1.2: Earth and Stars in Space. At the top, a navigation bar contains four steps: 1. TEACHER-LED DISCUSSION Modeling the Shape of Earth, 2. SIM Exploring a Simulation of Earth and Sky, 3. TEACHER-LED DISCUSSION Sharing What We Discovered, and 4. STUDENT-TO-STUDENT DISCUSSION Ideas About Where the Stars Are. Below this, the main content area is divided into three sections: Overview, Materials & Preparation, and Differentiation. The Overview section contains text about the Patterns of Earth and Sky Simulation. The Materials & Preparation section lists documents: Overview, Materials & Preparation, Differentiation, Standards, Vocabulary, and Unplugged?. The Differentiation section is currently empty. On the right side, there is a button labeled GENERATE PRINTABLE LESSON GUIDE and a section titled Digital Resources, which lists Classroom Slides 1.2 | PowerPoint, Classroom Slides 1.2 | Google Slides, All Projections, and Classroom Videos 1.2 | Zip. Four numbered orange arrows are overlaid on the interface: arrow 1 points to the Digital Resources section, arrow 2 points to the Overview section, arrow 3 points to the Materials & Preparation section, and arrow 4 points to the Differentiation section.

Lesson 1.2:  
Earth and Stars in Space

1 TEACHER-LED DISCUSSION Modeling the Shape of Earth

2 SIM Exploring a Simulation of Earth and Sky

3 TEACHER-LED DISCUSSION Sharing What We Discovered

4 STUDENT-TO-STUDENT DISCUSSION Ideas About Where the Stars Are

RESET LESSON

Overview

Materials & Preparation

Differentiation

Standards

Vocabulary

Unplugged?

Overview

Students are introduced to two different models of Earth and engage in an open exploration of the *Patterns of Earth and Sky* Simulation. Students are introduced to the question that will guide their work over the next few lessons. *Why don't we see a lot of stars during the daytime?* To start thinking about this question, students first consider Earth's shape and the purpose of using models by

GENERATE PRINTABLE LESSON GUIDE

Digital Resources

Classroom Slides 1.2 | PowerPoint

Classroom Slides 1.2 | Google Slides

All Projections

Classroom Videos 1.2 | Zip

# Questions?





## Plan for the day: Part 2

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

# Additional resources

## Welcome, caregivers!

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

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

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



Grades 6-8



[Caregivers](#)



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



# Welcome to Amplify Science!

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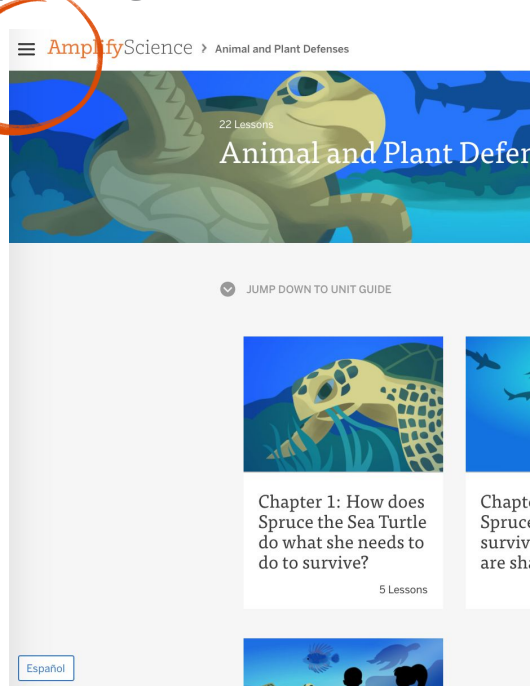
This site contains supporting resources designed for the LAUSD Amplify Science adoption for grades TK–8.

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

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

# Program Hub

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



Amplify Science > Animal and Plant Defenses

22 Lessons

## Animal and Plant Defenses

JUMP DOWN TO UNIT GUIDE

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

5 Lessons

Chapter 2: Spruce the Sea Turtle do what she needs to do to survive?

5 Lessons

Spanish



Amplify Science

Hello Teacher Martin

Log Out

Go To My Account

Classroom Language Settings

CA Science Program Guide

ELA Professional Learning

ELA Resources

Interim Assessments

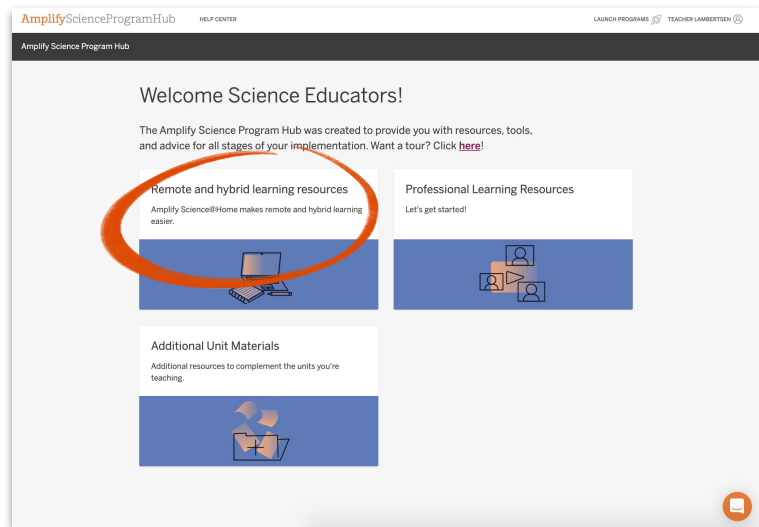
Program Hub

Science Program Guide

FLORIDA EDITION

Standards Map

Help



Amplify Science Program Hub

HELPER CENTER

LAUNCH PROGRAMS

TEACHER LAMBERTSEN

## Welcome Science Educators!

The Amplify Science Program Hub was created to provide you with resources, tools, and advice for all stages of your implementation. Want a tour? Click [here](#)!

**Remote and hybrid learning resources**

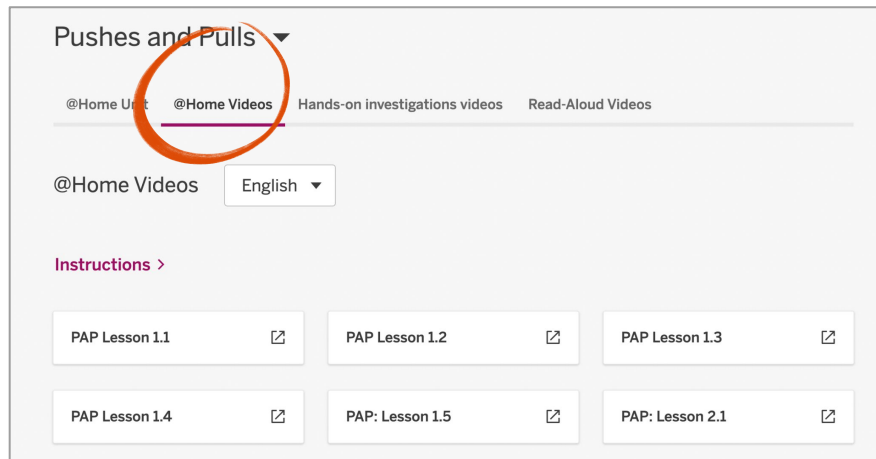
Amplify Science@Home makes remote and hybrid learning easier.

**Professional Learning Resources**

Let's get started!

**Additional Unit Materials**

Additional resources to complement the units you're teaching.



## Pushes and Pulls

@Home Unit | **@Home Videos** | Hands-on investigations videos | Read-Aloud Videos

@Home Videos

English

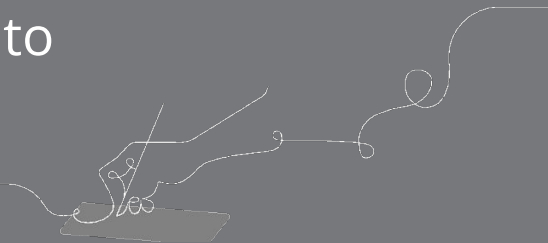
Instructions >

PAP Lesson 1.1	<a href="#">🔗</a>	PAP Lesson 1.2	<a href="#">🔗</a>	PAP Lesson 1.3	<a href="#">🔗</a>
PAP Lesson 1.4	<a href="#">🔗</a>	PAP: Lesson 1.5	<a href="#">🔗</a>	PAP: Lesson 2.1	<a href="#">🔗</a>

# Overarching goals

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

- ☑ Navigate the Amplify Science curriculum.
- ☑ Describe what teaching and learning look like in Amplify Science.
- ☑ Apply the program essentials to prepare to teach.



# Closing reflection

Based on our work today in Part 2, share:

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

**Heart:** something you're feeling

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

# Additional resources and ongoing support

## Customer Care

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



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



800-823-1969



Amplify Chat



# Please provide feedback!

**Presenter name:**

**Workshop title:**

Part 1: Relaunching the Standard Curriculum

Part 2: Guided Planning (Planning for a Lesson)

**Modality:**

Remote

