

Do Now: Use the link in the chat to add something you love about teaching Amplify Science to the Jamboard.

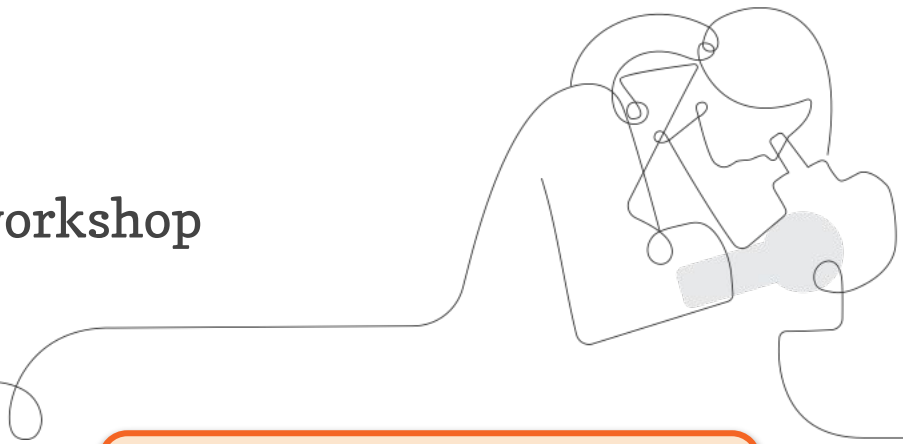
Amplify Science

Unit Internalization & Guided Planning

Deep-dive and strengthening workshop
Grade 7, Phase Change

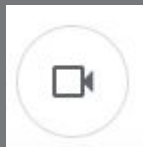
LAUSD
10/17/2020

Presented by Your Name



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

Norms: Establishing a Culture of Learners



- Please keep your camera on, if possible.
- Take some time to orient yourself to the platform
 - *“where’s the chat box? what are these squares at the top of my screen?, where’s the mute button?”*



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



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



- Make sure you have a note-catcher present



- 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.

e





Plan for the day

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





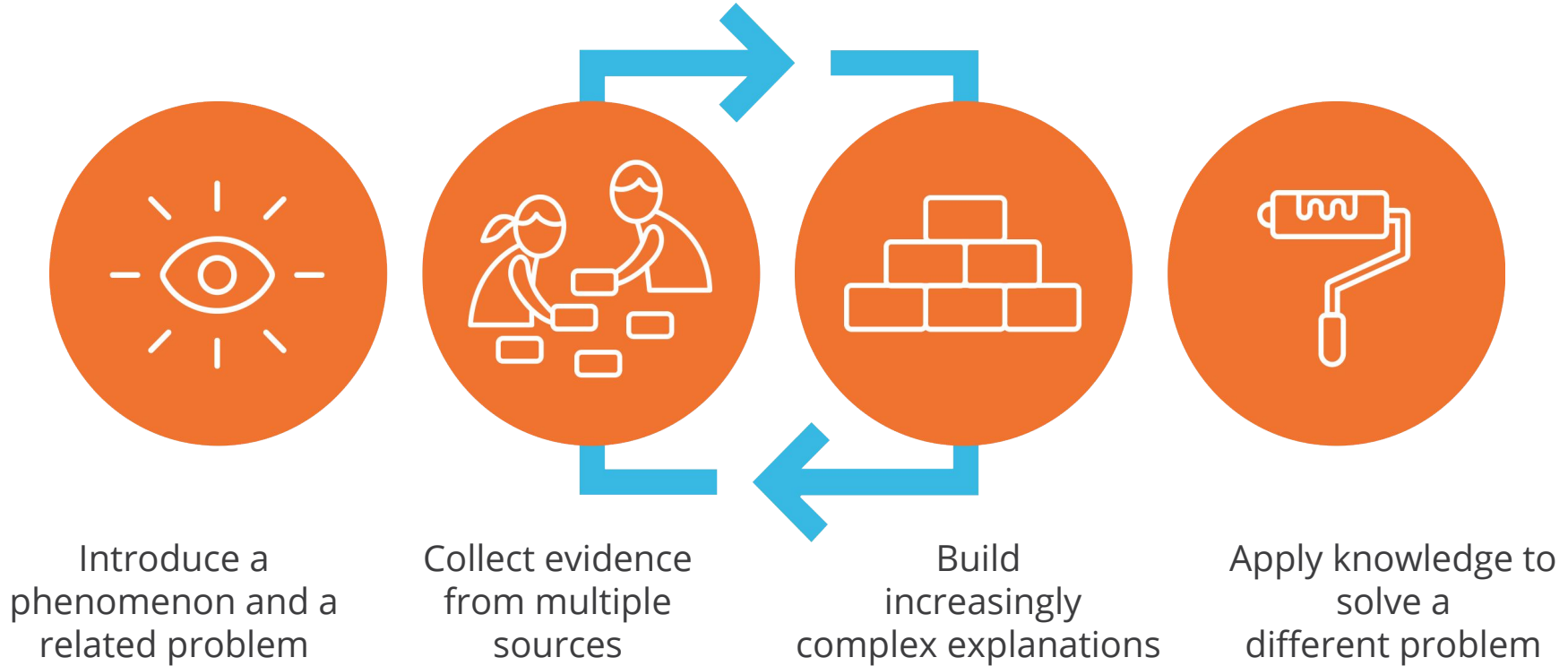
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- **Framing the day**
 - **Amplify Science Refresher**
 - **Instructional Materials**
- Unit Internalization
- Planning to teach
 - Collecting evidence of student learning to meet diverse learner needs
- Reflection and closing



Amplify Science Refresher

Amplify Science Instructional Approach



Middle school course curriculum structure

Integrated model*

Grade 6

- Launch: Microbiome
- Metabolism
- Engineering Internship: Metabolism
- Traits and Reproduction
- Thermal Energy
- Ocean, Atmosphere, and Climate
- Weather Patterns
- Earth's Changing Climate
- Engineering Internship: Earth's Changing Climate

Grade 7

- Launch: Geology on Mars
- Plate Motion
- Engineering Internship: Plate Motion
- Rock Transformations
- Phase Change
- Engineering Internship: Phase Change
- Chemical Reactions
- Populations and Resources
- Matter and Energy in Ecosystems

Grade 8

- Launch: Harnessing Human Energy
- Force and Motion
- Engineering Internship: Force and Motion
- Magnetic Fields
- Light Waves
- Earth, Moon, and Sun
- Natural Selection
- Engineering Internship: Natural Selection
- Evolutionary History

AmplifyScience

authored by



THE LAWRENCE
HALL OF SCIENCE
UNIVERSITY OF CALIFORNIA, BERKELEY

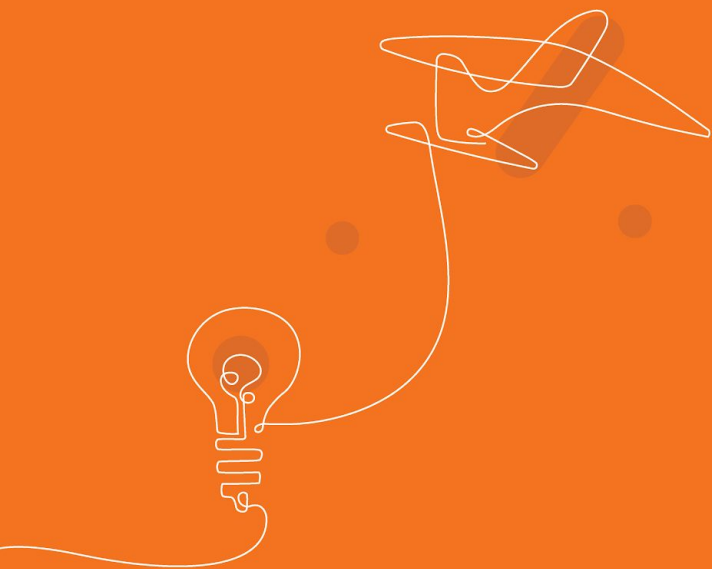
Launch units

- First unit
- 11 lessons

Core units

- Majority of units
- 19 lessons

*These are the prioritized units for 7th grade.

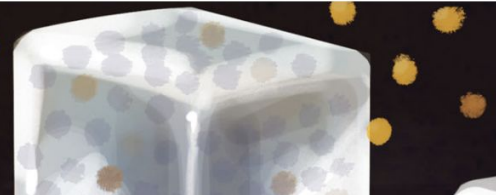


Instructional Materials

Standard Amplify Science Curriculum

19 Lessons

Phase Change



✓ JUMP DOWN TO UNIT GUIDE

GENERATE PRINTABLE TEACHER'S GUIDE

Standard Amplify Science Curriculum

The Phase Change unit has **19 lessons** across 4 chapters. Each lesson is written to be **45 minutes** long.



Chapter 1:
Describing Phase
Change at Two
Scales

6 Lessons



Chapter 2:
Investigating Energy
and Phase Change

3 Lessons



Chapter 3:
Investigating
Attraction and Phase
Change

5 Lessons



Chapter 4: Science
Seminar

5 Lessons

Skip slide if modeling
live on the platform.

Standard Amplify Science Curriculum

Below the chapters you will find the unit guide. This includes all of your key documents for planning for the unit.

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

Planning for the Unit

Unit Overview

Unit Map

Progress Build

Getting Ready to Teach

Materials and Preparation

Science Background

Standards at a Glance

Teacher References

Lesson Overview Compilation

Standards and Goals

3-D Statements

Assessment System


Embedded Formative Assessments


Articles in This Unit


Apps in This Unit


Flexextensions in This Unit


Printable Resources


 Article Compilation


 Coherence Flowchart


 Copymaster Compilation

 Flexextension Compilation

 Investigation Notebook

 NGSS Information for Parents and Guardians

 Print Materials (8.5" x 11")

 Print Materials (11" x 17")

Offline Preparation

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

Skip slide if modeling live on the platform.

Standard Amplify Science Curriculum

When you click into a lesson, 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.

The screenshot shows the Amplify Science curriculum interface. At the top, the navigation bar includes the Amplify Science logo, "CALIFORNIA EDITION", and the path "Phase Change > Chapter 1 > Lesson 1.2". The main header area features a large image of three orange popsicles on sticks, with the text "Lesson 1.2: Introducing Titan's Disappearing Lake" overlaid. Below the header is a horizontal navigation bar with five tabs: "Lesson Brief (5 Activities)", "1 WARM-UP Warm-Up", "2 STUDENT-TO-STUDENT DISCUSSION Discussing Difference in Appearance", "3 READING Reading: 'Titan Fact Sheet'", and "4 HOME". The "Lesson Brief" tab is currently selected. Below the navigation bar, there is a "RESET LESSON" button and a "GENERATE PRINTABLE LESSON GUIDE" button. The main content area is divided into two columns. The left column contains a sidebar with links: "Overview", "Materials & Preparation", "Differentiation", "Standards", "Vocabulary", and "Unplugged?". The right column displays the "Overview" section, which includes a paragraph of text about students being introduced to their role as student chemists and solving the mystery of the disappearing lake on Saturn. A yellow box is overlaid on the bottom right of the screenshot, containing the text "Skip slide if modeling live on the platform.".

AmplifyScience CALIFORNIA EDITION > Phase Change > Chapter 1 > Lesson 1.2

Lesson 1.2: Introducing Titan's Disappearing Lake

Lesson Brief (5 Activities) 1 WARM-UP Warm-Up 2 STUDENT-TO-STUDENT DISCUSSION Discussing Difference in Appearance 3 READING Reading: "Titan Fact Sheet" 4 HOME

RESET LESSON GENERATE PRINTABLE LESSON GUIDE

Overview

Students are introduced to their role as student chemists and solve the mystery of the disappearing lake on Saturn's moon Titan. They learn that scientists think the lake disappeared through evaporation or freezing. As an introduction to phase change, they discuss video clips of examples of everyday phase changes. They use their background knowledge and video observations to describe the macro-scale appearance of solids, liquids,

Skip slide if modeling live on the platform.



Questions?



Plan for the day

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

Unit Guide Resources

Planning for the Unit

Unit Overview

Unit Map

Progress Build

Getting Ready to Teach

Materials and Preparation

Science Background

Standards at a Glance

Teacher References

Lesson Overview Compilation

Standards and Goals

3-D Statements

Assessment System

Embedded Formative Assessments

Articles in This Unit

Apps in This Unit

Flextensions in This Unit

Printable Resources

Article Compilation

Coherence Flowchart

Copymaster Compilation

Flextension Compilation

Investigation Notebook

NGSS Information for Parents and Guardians

Print Materials (8.5" x 11")

Print Materials (11" x 17")

Offline Preparation

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

Offline Guide

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 Next Generation Science Standards (NGSS) (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) 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
Books 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 2-5)

Printable resources

Copymaster Compilation	Compilation of all copymasters for the teacher to print and copy throughout the unit
Investigation Notebook	Digital version of the Investigation Notebook, for copying and projecting
Multi-Language Glossary	Glossary of unit vocabulary in multiple languages
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 Unit Question, Chapter Questions, and Key Concepts provided in the kit

Unit Map

Pages 2-3

Planning for the Unit

Unit Overview

Unit Map

Progress Build

Getting Ready to Teach

Materials and Preparation

Science Background

Standards at a Glance

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Lesson Overview Compilation

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Offline Preparation

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

Offline Guide

Phase Change

Planning for the Unit

Unit Map

Unit Map

Why did the methane lake on Titan disappear?
Taking on the role of student chemists working for the fictional Universal Space Agency, students investigate the mystery of a disappearing methane lake on Titan. One team of scientists at the Universal Space Agency claims that the lake evaporated while the other team of scientists claims that the lake froze. The students' assignment is to determine what happened to the lake. They discover what causes phase changes, including the role of energy transfer and attraction between molecules.

Chapter 1: What happened to the liquid in Titan's lake?
Students figure out: The liquid in the lake changed phase, either from liquid to gas (evaporated) or from liquid to solid (froze). Both of these changes involve a change in the freedom of movement of the molecules. As liquid, molecules of the lake moved around each other. If the lake evaporated, its molecules would have become able to move apart from one another. If the lake froze, its molecules would have become able only to move in place. The number of molecules and the size of molecules do not change during a phase change.

How they figure it out: They analyze the movement of molecules during each of the phases in a digital Simulation. They read a text, engage in hands-on investigations of evaporation and condensation, and visually represent their understanding of possible phase changes in the lake using a Modeling Tool.

Chapter 2: What could cause liquid methane to change phase?
Students figure out: An increase or decrease of energy could have caused the liquid methane to change phase. If the energy increased, this would have caused the kinetic energy of the molecules—and possibly their freedom of movement—to increase. If the energy decreased, the molecules' kinetic energy and possibly their freedom of movement would have decreased. The lake disappeared during Titan's summer, when the amount of energy being transferred into the lake was higher than at other times, so the lake must have evaporated, not frozen.

How they figure it out: In the Sim, they investigate how adding or removing energy can affect molecules' freedom of movement. They use magnetic marbles as a physical model and, based on new evidence about the seasons on Titan, represent their thinking using the Modeling Tool.

Chapter 3: Why didn't the liquid methane change phase before 2007?
Students figure out: It had been summer since 2002, but the lake didn't evaporate until 2007. This is because attraction between molecules pulls them toward each other, and there hadn't been enough energy transferred to the lake to overcome this attraction until 2007. During this time, the kinetic energy of the methane molecules in the lake was increasing, but the lake was still liquid. After 2007, the sun had transferred enough energy so that the kinetic energy of the methane molecules increased enough to overcome the attraction between them. The lake evaporated and the molecules started moving away from each other.

How they figure it out: They use the Simulation and hands-on observations to investigate why some substances do not change phase as easily as others. They read an article and compare a physical model to the Sim to help explain differences between substances. Using the Modeling Tool, students visually represent their thinking.

1

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2

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Amplify.

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 4

Phase Change Planning for the Unit

Unit Map



Unit Map

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Pages 2-3

Phase Change Planning for the Unit

n—Why is the liquid oxygen machine

use liquid oxygen for fuel, but the device that makes it in air by changing the phase of nitrogen, water, device and analyze each phase change involved in malfunctioning and review the available evidence n-led discourse routine called a Science Seminar

Unit Guide Document

Unit Map

Lesson Overview
Compilation

Progress Build

Guided Unit Internalization

Part 1: Unit-level internalization

Unit title: Phase Change

What is the phenomenon students are investigating in your unit?

Working for the Universal Space Agency, students investigate the mystery of a disappearing methane lake on Titan.

Unit Question:

How can the appearance of a substance change without it becoming a different substance?

Student role:

Student chemists

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

It had been summer since 2002, but the lake didn't evaporate until 2007. This is because attraction between molecules pulls them toward each other, and there hadn't been enough energy transferred to the lake to overcome this attraction until 2007. During this time, the kinetic energy of the methane molecules in the lake was increasing, but the lake was still liquid. After 2007, the sun had transferred enough energy so that the kinetic energy of the methane molecules increased enough to overcome the attraction between them. The lake evaporated and the molecules started moving away from each other.

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

When a substance changes phase, the freedom of movement of its molecules has changed. Energy transfers cause phase changes. Molecular attraction affects the amount of energy transfer required for a phase change.



Questions?



Plan for the day

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

Phase Change

Planning for the Unit

Unit Map



Unit Map

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Chapter 1: Describing Phase Change at Two Scales

▼ JUMP DOWN TO CHAPTER OVERVIEW

Lesson 1.1:
Pre-Unit Assessment

Lesson 1.2:
Introducing Titan's
Disappearing Lake

Lesson 1.3:
Investigating the
Molecular Scale

Lesson 1.4:
Weird Water Events

Lesson 1.5:
Investigating
Evaporation and
Freezing

Lesson 1.6:
Modeling the
Molecular Scale

Overview

Students are introduced to their role as student chemists, enlisted to solve the mystery of the disappearing lake on Saturn's moon, Titan. They learn that scientists think the lake disappeared through either evaporation or freezing. As an introduction to phase change, students discuss video clips of examples of everyday phase changes on Earth. They use their background knowledge and video observations to describe the macro-scale appearance of solids, liquids, and gases and the changes between these three phases. Students end the lesson by reading and annotating a short fact sheet about Titan. The purpose of this lesson is to engage students and activate their prior knowledge of phase and phase change.

Anchor Phenomenon: Images taken by a space probe show that a methane lake on Titan disappeared.

Everyday Phenomenon: Condensation appears on a cup of ice water, a puddle of mud evaporates, an ice pop melts, and ice forms on tree branches.

Students learn:

- A solid holds its shape and does not take the shape of its container.
- A gas has no visible shape and fills its container.
- A liquid flows and can take the shape of its container.
- Laws are mathematical descriptions of natural phenomena.

Lesson at a Glance

1: Warm-Up (5 min.)

Students are introduced to the term *phase* and the idea that one substance can exist in three phases.

(Teacher Only) Investigating Methane on Titan (10 min.)

A short video and a series of slides introduce students to phase change and their role as student chemists. Students are enlisted to solve the mystery of Titan's disappearing lake.

(Teacher Only) Introducing Phase and Phase Change (10 min.)

Videos of everyday changes in phase activate and enhance students' background knowledge, providing a foundation for learning key content.

2: Discussing Difference in Appearance (15 min.)

Students engage their prior knowledge, reviewing how a substance's appearance changes depending on whether it is a solid, liquid, or gas.

3: Reading: "Titan Fact Sheet" (5 min.)

A short reading connects students back to the Titan context, providing them with additional background knowledge.

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Modifications needed
for remote learning:

Classroom wall

Amplify Science @Home Curriculum

The Teacher Overview document gives suggestions for modifying activities for remote learning.

AmplifyScience

Hello Teacher Considine
t.lconsidine@tryamplify.net

Log Out

Go To My Account ⚙️

Classroom Language Settings

LA Science Program Guide

Program Hub

Science Program Guide

Standards Map

Help

6th Grade ▾

11 Lessons
Microbiome

19 Lessons
Metabolism

FUTURA
FOOD ENGINEERING

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

Adapting the Amplify Approach for Remote Learning

(Excerpt from the @Home Teacher Overview)



Adapting the Amplify Science Approach for Remote Learning

In Amplify Science units, students figure out phenomena by using science and engineering practices. They gather evidence from multiple sources and make explanations and arguments through multiple modalities: doing, talking, reading, writing, and visualizing. They also make their learning visible by posting key concepts on the classroom wall. While we have retained this core approach in the @Home Lessons, enacting it at home will require adaptations.

The @Home Lessons provide general guidance for these adaptations, but you may need to set up expectations for specific routines or provide additional support to your students. Below are ideas for how different aspects of the Amplify Science approach might be adapted for your learners' particular contexts.

Student talk options

- Talk to a member of their household about their ideas.
- Call a friend or classmate and discuss their ideas.
- Talk in breakout groups in a video class meeting.
- Use asynchronous discussion options on technology platforms.

Student writing options

- Write in a designated science notebook.
- Photograph writing and submit digitally.
- Complete prompts in another format. (Teachers can convert prompts so they are completed in an on-line survey or an editable document so students can submit digitally.)
- Submit audio or video responses digitally, rather than submit a written response.
- Share a response orally with a family member or friend with no submission required.
- For students with technology access, complete written work in the students' Amplify accounts (links to corresponding student activities are provided in the @Home Slides).

Student reading options

- Read printed version of article, included with @Home Packets. (Note: although the articles are originally in color, they are provided in the @Home Packets in grayscale for ease of copying. Most articles translate well into grayscale but there will be some exceptions).

included with @Home Student Sheets.

by the audio feature in the Amplify Science @Home Library (links are

from their home.

nts are likely to have at home. (For activities video.)

ies in the @Home Units, a video / images of

ble. For example,

o students who need them.

Science kit, and have opportunities to teach hands-on activities with student input.

reference for students to track and reflect on or phenomenon and content, has been the list of Chapter Questions, key concepts, are provided in the last lesson of each chapter. Science Wall, you could have students:

@Home Science Wall pages.

ford that is introduced.

rd. These can be then posted on a wall, large

motely, you could create a virtual

routines

support for student reading includes: teacher up discussion of texts; multiple readings of y, as well as suggestions for additional

need more reading support. Some suggestions to offer @Home Lessons are:

ass or in small groups and read the first part of the article ling how you would read the text.

meet after reading to discuss their annotations.

meet with someone in their home to read at least some of the discuss their annotations after reading.

ience units students periodically talk in small groups using onships and Write and Share. You may consider including by having students meet and talk to their peers in small ent to conduct the routine with someone in their home.

unit in Amplify Science 6–8 culminates with a Science lass, student-led argumentation routine. An adapted version been included in the @Home Units. Some suggestions for

seminar in class, if you are meeting in person some of the

your whole class, remotely. Students can participate all at the ight break the group up in thirds or in half and have the t talking take notes using the Science Seminar Observations

airs or small groups meeting on the phone, on video calls, rooms.

o someone in their household about the Science Seminar

nt considerations

iderations for assessment and feedback in the Amplify e pre-unit and end-of-unit assessments. Generally, we

ormat in which you collect student work. See the "Student

students, you may wish to focus on how students are n and/or the Chapter Questions, if they are using evidence rt their responses to questions, and if they are using in their responses.

onous and in-person learning

ing these asynchronous resources in is. If you are able to choose particular lessons d:

y figuring out the unit phenomenon.

o students can share their initial ideas or omenon.

its can talk as they make sense of evidence, of information, and make an explanation or

n conduct hands-on demonstrations when dents. Solicit student input as you

xy at home, when in-person, you can provide discuss ideas related to the simulations and

Classroom wall options

The classroom wall, which provides an important reference for students to track and reflect on their developing understanding of the unit's anchor phenomenon and content, has been reimagined as an @Home Science Wall. A complete list of Chapter Questions, key concepts, and vocabulary that have been introduced so far are provided in the last lesson of each chapter. To enhance students' experience of the @Home Science Wall, you could have students:

- Draw a picture or write their ideas on their @Home Science Wall pages.
- Highlight each question, key concept, or word that is introduced.
- Cut out each question, key concept, or word. These can be then posted on a wall, large sheet of paper, or refrigerator at home.

Additionally, if you are meeting with your class remotely, you could create a virtual @Home Science Wall.

Lesson at a Glance

1: Warm-Up (5 min.)

Students are introduced to the term *phase* and the idea that one substance can exist in three phases.

(Teacher Only) Investigating Methane on Titan (10 min.)

A short video and a series of slides introduce students to phase change and their role as student chemists. Students are enlisted to solve the mystery of Titan's disappearing lake.

(Teacher Only) Introducing Phase and Phase Change (10 min.)

Videos of everyday changes in phase activate and enhance students' background knowledge, providing a foundation for learning key content.

2: Discussing Difference in Appearance (15 min.)

Students engage their prior knowledge, reviewing how a substance's appearance changes depending on whether it is a solid, liquid, or gas.

3: Reading: "Titan Fact Sheet" (5 min.)

A short reading connects students back to the Titan context, providing them with additional background knowledge.

Modifications needed
for remote learning:

Classroom wall

Student-to-student
discussion

Student talk options

- Talk to a member of their household about their ideas.
- Call a friend or classmate and discuss their ideas.
- Talk in breakout groups in a video class meeting.
- Use asynchronous discussion options on technology platforms.

- **Talk routines.** In Amplify Science units students periodically talk in small groups using routines such as Word Relationships and Write and Share. You may consider including and adapting these routines by having students meet and talk to their peers in small groups or asking each student to conduct the routine with someone in their home.

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.



Lesson at a Glance

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Co-constructed class charts: You can create digital charts, or create physical charts in your home with student input.

Day 1: <u>Lesson 12</u>			
Minutes for science: <u>15 min</u>		Minutes for science: _____	
Instructional format: <input checked="" type="checkbox"/> Asynchronous <input type="checkbox"/> Synchronous		Instructional format: <input type="checkbox"/> Asynchronous <input checked="" type="checkbox"/> Synchronous	
Lesson or part of lesson: <u>Lesson 12 Warm-up and Video</u>		Lesson or part of lesson: _____	
Mode of instruction: <input checked="" type="checkbox"/> Preview <input type="checkbox"/> Review <input type="checkbox"/> Teach full lesson live <input type="checkbox"/> Teach using synchronous suggestions <input checked="" type="checkbox"/> Students work independently using: <input type="checkbox"/> @Home Packet <input type="checkbox"/> @Home Slides and @Home Student Sheets <input type="checkbox"/> @Home Videos		Mode of instruction: <input type="checkbox"/> Preview <input type="checkbox"/> Review <input type="checkbox"/> Teach full lesson live <input type="checkbox"/> Teach using synchronous suggestions <input type="checkbox"/> Students work independently using: <input type="checkbox"/> @Home Packet <input type="checkbox"/> @Home Slides and @Home Student Sheets <input type="checkbox"/> @Home Videos	
Students will... <u>complete the warm-up activity on the Amplify Science site and submit, students will watch the unit introduction video, and jot down answers to the video question.</u>	Teacher will... <u>create an assignment in Schoology asking students to compete the warm-up activity, view the video and answer the video reflection question. The teacher will review answer to the warm-up.</u>	Students will... _____	Teacher will... _____



Day 1: Lesson 1.2			
Minutes for science: <u>15 min</u>		Minutes for science: <u>30 min</u>	
Instructional format: <input checked="" type="checkbox"/> Asynchronous <input type="checkbox"/> Synchronous		Instructional format: <input type="checkbox"/> Asynchronous <input checked="" type="checkbox"/> Synchronous	
Lesson or part of lesson: Lesson 1.2 Warm-up and Video		Lesson or part of lesson: Lesson 1.2 Teacher Only activities, discussion and reading	
Mode of instruction: <input checked="" type="checkbox"/> Preview <input type="checkbox"/> Review <input type="checkbox"/> Teach full lesson live <input type="checkbox"/> Teach using synchronous suggestions <input checked="" type="checkbox"/> Students work independently using: <input type="checkbox"/> @Home Packet <input type="checkbox"/> @Home Slides and @Home Student Sheets <input type="checkbox"/> @Home Videos		Mode of instruction: <input type="checkbox"/> Preview <input type="checkbox"/> Review <input type="checkbox"/> Teach full lesson live <input checked="" type="checkbox"/> Teach using synchronous suggestions <input type="checkbox"/> Students work independently using: <input type="checkbox"/> @Home Packet <input type="checkbox"/> @Home Slides and @Home Student Sheets <input type="checkbox"/> @Home Videos	
Students will... complete the warm-up activity on the Amplify Science site and submit, students will watch the unit introduction video, and jot down answers to the video question.	Teacher will... create an assignment in Schoology asking students to complete the warm-up activity, view the video and answer the video reflection question. The teacher will review answer to the warm-up.	Students will... engage in a discussion about their initial ideas about the phenomenon, watch videos and engage in discussion to access prior knowledge about phase changes, and read/annotate an article to collect more background information.	Teacher will... lead students through the lesson using the Amplify Science site (including projections) and a few teacher-created slides.



Sample Teacher Created Slides

Classroom Wall

Unit Question

How can the appearance of a substance change without it becoming a different substance?

Chapter 1 Question

What happened to the liquid in Titan's lake?

Key Concepts

1. A solid holds its shape and does not take the shape of its container.

2. A gas has no visible shape and fills its container.

3. A liquid flows and can take the shape of its container.

Vocabulary

phase

Video Reflection Questions

What questions about Titan are Dr. Mike Malaska and Dr. Alex Hayes trying to answer through their research? What evidence are they using to answer these questions?

Video Reflection Questions

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.

Asynchronous: students complete the warm-up activity and jot down their initial ideas

Synchronous: record observations of rocks, students will also jot down their initial ideas about each of the claims

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.

Asynchronous: students will submit their work digitally on the Amplify Science website, and jot initial ideas on paper to bring with them to the asynchronous lesson

Synchronous: during activity 2, Students will submit their work on the Amplify Science site OR by taking a picture of their Investigation Notebook page and emailing it, activity 3 students can read and annotate digitally or on paper

Some Types of Written Work in Amplify Science

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

Completing 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)

Submitting Written Work

- 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.)



English-Chinese Glossary

freedom of movement: the way molecules in a substance move around relative to each other
 热运动: 物质中的分子相对于彼此的运动方式

kinetic energy: the energy that an object has because it is moving
 动能: 物体由于运动而具备的能量

molecular attraction: a pull between two molecules that is always the same for a substance
 分子引力: 物质中两个分子之间始终恒定不变的吸引力

molecule: a group of atoms joined together in a particular way
 分子: 物质中具有该物质属性的最小微粒

phase: a noticeably different form or state of the same substance
 相: 同种物质的明显不同形式或状态

refute: to provide evidence that goes against a claim
 反驳: 提供与某个主张相反的论据

scale: the relative size of things
 规模: 事物的相对大小

temperature: a measure of how hot or cold something is
 温度: 衡量物体冷热的尺度

2

Phase Change—Multi-Language Glossary
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Some Types of Written Work in Amplify Science

- Daily written reflections
- Homework tasks
- Investigation notebook pages
- Written explanations (typically at the end of Chapter)

pages for Sim uses, investigations, etc

Written Work

and pencil
 ide prompts

Submitting Written Work

- (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

- I notice/observe ...
- I think this is important because ...
- I wonder ...

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.)

Supports:

- Provide students with the Multi-Language Glossary where appropriate
- Provide sentence starters
- Leverage primary language for discussions

Extension:

- Have students write questions about the unit phenomenon.

Planning Resource

pages 8 & 9

Day 2: _____		Day 3: _____	
Minutes for science: _____		Minutes for science: _____	
Instructional format: <input type="checkbox"/> Asynchronous <input type="checkbox"/> Synchronous		Instructional format: <input type="checkbox"/> Asynchronous <input type="checkbox"/> Synchronous	
Lesson or part of lesson:		Lesson or part of lesson:	
Mode of instruction: <input type="checkbox"/> Preview <input type="checkbox"/> Review <input type="checkbox"/> Teach full lesson live <input type="checkbox"/> Teach using synchronous suggestions <input type="checkbox"/> Students work independently using: <input type="checkbox"/> @Home Packet <input type="checkbox"/> @Home Slides and @Home Student Sheets <input type="checkbox"/> @Home Videos		Mode of instruction: <input type="checkbox"/> Preview <input type="checkbox"/> Review <input type="checkbox"/> Teach full lesson live <input type="checkbox"/> Teach using synchronous suggestions <input type="checkbox"/> Students work independently using: <input type="checkbox"/> @Home Packet <input type="checkbox"/> @Home Slides and @Home Student Sheets <input type="checkbox"/> @Home Videos	
Students will...	Teacher will...	Students will...	Teacher will...

Types of Written Work in Amplify Science	
ten reflections rk tasks ion notebook pages explanations (typically at the end of Chapter) g pages for Sim uses, investigations, etc	
Written Work	Submitting Written Work
er and pencil lude prompts ent platform on Notebook leo or audio file vering prompt reated digital oogle , etc)	<ul style="list-style-type: none">• 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
Science platform and click on differentiation in the left menu.)	



Questions?



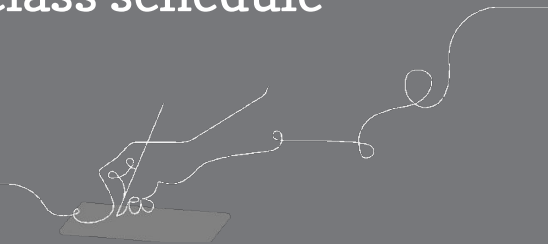
Plan for the day

- Framing the day
 - Amplify Science Refresher
 - 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?

e

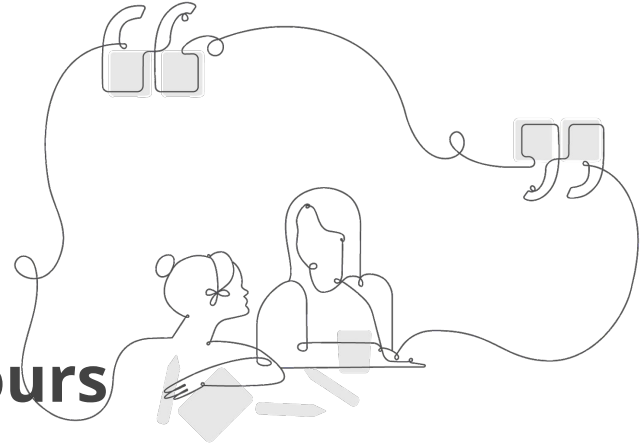


Upcoming LAUSD Office Hours

Bi-weekly through October

- Thursday, 10/29 (3-4pm)

<https://tinyurl.com/6-8OfficeHours>



Program Hub: Self Study Resources

The screenshot displays the Amplify Science Program Hub interface. On the left, a sidebar menu is visible with a hamburger icon circled in orange. The menu includes options like 'Hello Teacher Considine', 'Log Out', 'Go To My Account', 'Classroom Language Settings', and icons for 'LA Science Program Guide', 'Program Hub' (highlighted with an orange arrow), 'Science Program Guide', 'FLORIDA EDITION Standards Map', and 'Help'. The main content area is titled 'AmplifyScience' and features a 'Welcome' message. It lists several resource categories: 'Remote learning: Amplify Science@Home', 'Hands-on investigations support', 'Unit extensions' (circled in orange), and 'Using this site for self study' (circled in orange). Below these are links for 'Video Synopses', 'Video Pathway: Amplify Science K-5', and 'Video Pathway: Amplify Science 6-8'. Further down are links for 'Program Overview', 'Navigation and Materials', 'Planning', 'Student Assessments and Work', 'Unit Orientation Videos', and 'Support'. On the right, a section titled 'Video Pathway: Amplify Science 6-8' explains the learning path and lists 'Getting Started' and 'Main Topics' with bullet points. At the bottom, there is a 'Microbiome' section with '11 Lessons' and a 'FUTURA FOOD ENGINEERING' logo.

AmplifyScience

Welcome

Remote learning: Amplify Science@Home

Hands-on investigations support

Unit extensions

Using this site for self study

Video Synopses

Video Pathway: Amplify Science K-5

Video Pathway: Amplify Science 6-8

Program Overview

Navigation and Materials

Planning

Student Assessments and Work

Unit Orientation Videos

Support

Video Pathway: Amplify Science 6-8

You'll start with the big picture ("Getting Started"), then move on to examining increasingly detailed aspects of the program ("Main Topics"). Finally, you'll take a closer look at content from your specific grade level ("Unit orientation videos").

Getting Started

- 6-8 Program Overview
- 6-8 Navigation and logging in

Main Topics

- 6-8 Unit Level
- 6-8 Chapter Level
- 6-8 Lesson Level

Unit Orientation Videos

- Grade 6 Core: Metabolism
- Grade 7 Core: Plate Motion
- Grade 8 Core: Force and Motion

11 Lessons

Microbiome

FUTURA
FOOD ENGINEERING

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

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](#)

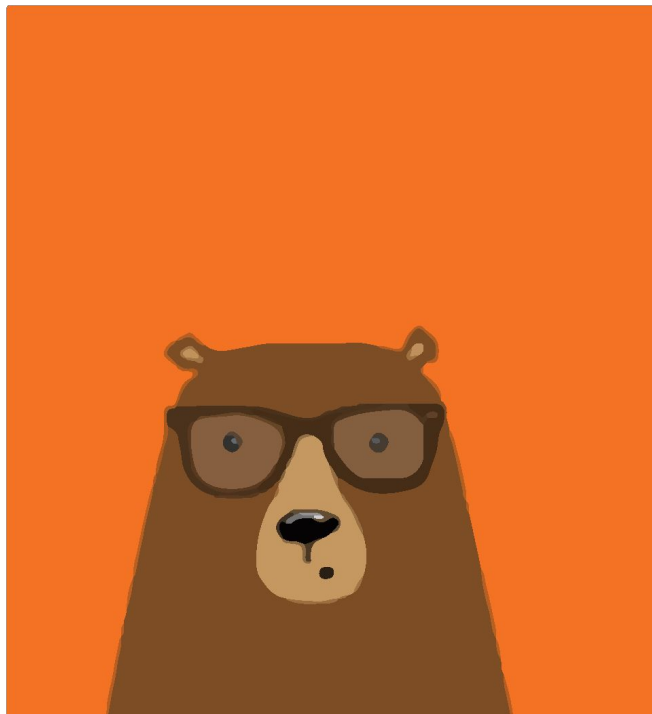
[Click here](#) to go back to the LAUSD homepage.

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/>

Back to school national webinar series



Now-October, topics include:

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

bit.ly/BTSwebinars

Additional Amplify resources

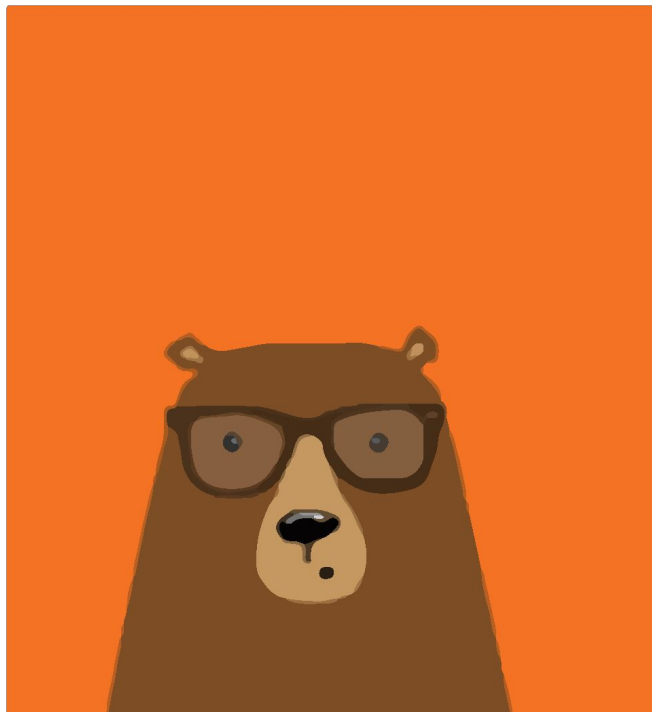


Caregivers site

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.

Smart Start Plans

Middle School Science Schoology Group

- Access code to join the Schoology Group: **SPG7G-K7BT9**
- Once in the group, you will find the Smart Start Plans under *resources*.

Day	Learning objective	What teacher does	What students do
Monday	Instructional Support Day		
Day 4	Synchronous (60 min)		
	1. Community Building (SEL) <ul style="list-style-type: none"> Creating a safe space for sharing on Zoom using Community Circle. 2. Aspects of Modeling: <ul style="list-style-type: none"> Deepen students' understanding of scientific models. (SEP Modeling) 3. Uploading Images to a Discussion <ul style="list-style-type: none"> Learn how to upload an image to a Schoology Discussion using a video tutorial. (Tool) 4. Introduce Initial Model Critique <ul style="list-style-type: none"> Critique a model of a classmate in a constructive way to promote collaboration and student discussion. (SEP Modeling) 	1. Community Building (SEL) <ul style="list-style-type: none"> The teacher will pose a question to students and have students respond in the Zoom chat. <i>Thinking about the world around you, name at least 2 instances where you observe science happening.</i> 2. Aspects of Modeling: <ul style="list-style-type: none"> Read article and watch video Students need to understand the role of modeling in science. 1. Uploading Images to a Discussion <ul style="list-style-type: none"> The teacher provides students the link to the informational video on "How to upload the image to Schoology discussion." 4. Introduce Initial Model Critique <ul style="list-style-type: none"> Using the Discussion and Writing Prompts PDF select sentence starters from pages 6 and 8 to have students use to critique the models of classmates. 	1. Community Building (SEL) <ul style="list-style-type: none"> Students will respond to the question posed by the teacher in the chat. 2. Aspects of Modeling <ul style="list-style-type: none"> Students will read this article and watch this video and answer questions in a Schoology Quiz in LAUSD MS Science Group: SPG7G-K7BT9) or in Google Docs. 3. Uploading Images to a Discussion <ul style="list-style-type: none"> Students will watch a tutorial on how to upload an image to a Schoology discussion. Students upload their initial model of the phenomenon to a Schoology discussion. 4. Introduce Initial Model Critique <ul style="list-style-type: none"> Students return to the Initial Model in Schoology Discussion and critique the model of at least 1 classmate.
Day 4	Asynchronous		
	Revise Initial Model: <ul style="list-style-type: none"> Apply understanding of modeling (SEP modeling) and students revise their initial model. 	Revise Initial Model: <ul style="list-style-type: none"> The teacher provides an opportunity for students to revise their initial model based on article and feedback. 	Revise Initial Model: <ul style="list-style-type: none"> Students will revisit their initial model and make edits based on critiques from classmates and the reading. Students will add an explanation of how their model changed and why they made the changes. Students upload their revised model to Schoology discussion.

Creating Assignments in Schoology

- Click Add Materials.
- Select Add Assignment.
- Fill out the Create Assignment form.
- Options. Use Options to turn on/off the following features: Use Individually Assign to only display the assignment to a specific member of the course or a grading group.
- Click Create to complete

LAUSD Shared Logins

AmplifyScience

Go to: my.amplify.com

A.

Log In with Amplify

District Shared Logins		
Grade	Username	Password
Kindergarten	LAUSDscienceK	LAUSD1234
1	LAUSDscience1	LAUSD1234
2	LAUSDscience2	LAUSD1234
3	LAUSDscience3	LAUSD1234
4	LAUSDscience4	LAUSD1234
5	LAUSDscience5	LAUSD1234
6	LAUSDscience6	LAUSD1234
7	LAUSDscience7	LAUSD1234
8	LAUSDscience8	LAUSD1234

Elementary Student Apps Shared Logins

English

- Username: **ampsci123**
- Password: **ampsci123**

Spanish

- Username: **ampsci123sp**
- Password: **ampsci123sp**



Elementary Student Apps