Amplify Science
New York City **Guided Unit** Internalization **Phase Change**

Who's in the Room? Represent for your Borough!



Share your name, role, borough.

- 1- Brooklyn North
 2- Brooklyn South
 3- Queens North
 4- Queens South
 5- The Bronx
- 6- Staten Island

Workshop Norms



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



• 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!

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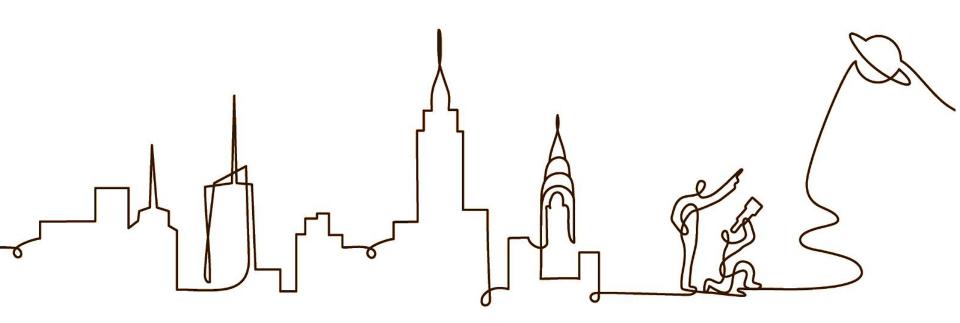
Workshop Goals

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

- Make instructional decisions about remote or hybrid learning
- Develop a plan for using @Home resources within your class schedule and instructional format.



Reflection and Goal Setting



Reflect- then in <u>chat</u> Choose One: While teaching through new instructional models (Hybrid/Remote)

- What is **one** challenge, problem, or roadblock you or your students experienced?
- What are **two** successes you or your students experienced?
- What are **three** new things you learned or new insights you gained?

Amplify Science New York City

Guided Unit Internalization With @Home Resources



uided Unit Internalization	
art 1: Unit-level internalization	
Init title:	
HSXX C-72	
What is the phenomenon students are investigating	in your unit?
mac is the phenomenon students are investigating	in your unit:
Init Ouestion:	Student role:
init Question:	Student role:
y the end of the unit, students figure out	
y the end of the time, statems ngure out	
What science ideas do students need to figure out it	order to explain the phenomenon?

Participant Materials

AmplifyScience@Lesson Adaptation Tool (Remote/Hybrid)

Lesson:	Date:
Lesson purpose: (Lesson Brief: Overview)	3-D connections and formative assessment opportunities:
What the students will learn in this lesson and potential challenges.	How will the students be practicing the multiple modalities during this lesson?

Plan for the day

- Framing the day
- Unit Internalization
- Amplify Science @Home
- Planning
- Reflection and closing



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NYC Middle School Unit Pacing Calendar 20-21*



Middle School Curriculum New York City Edition

Grade 6

- Launch: *
 Harnessing Human
 Energy
- · Thermal Energy
- Ocean, Atmosphere, and Climate
- · Weather Patterns
- Populations and Resources
- Matter and Energy in Ecosystems
- Earth's Changing Climate

Grade 7

- Launch: *
 Microbiome
- Metabolism
- Phase Change
- · Chemical Reactions
- Plate Motion
- Engineering Internship:
 Plate Motion
- · Rock Transformations
- Engineering Internship: Earth's Changing Climate

Grade 8

- Launch: Geology on Mars
- Force and Motion
- Engineering Internship:
 Force and Motion
- · Earth, Moon, and Sun
- Magnetic Fields
- Light Waves
- Traits and Reproduction
- Natural Selection
- Evolutionary History



Unit	@Home Unit Release	@Home Videos Release
Chemical Reactions	January 15	December 11
Earth's Changing Climate	March 13	March 26
Earth, Moon, and Sun	January 10	December 11
Evolutionary History	February 26	March 26
Light Waves	December 17	October 26
Magnetic Fields	November 15	N/A (already posted)
Matter and Energy in Ecosystems	March 21	March 26
Natural Selection	February 20	February 12
Ocean, Atmosphere, and Clime	January 17	December 11
Phase Change	December 19	October 26
Populations and Resources	February 20	February 12
Rock Transformations	November 6	N/A (already posted)
Thermal Energy	December 13	October 26
Traits and Reproduction	November 4	N/A (already posted)
Weather Patterns	February 17	February 12

Amplify Science@Home Schedule



@Home ResourcesRelease Dates

https://my.amplify.com/help/en/articles/4562101-amplify-science-home-schedule

Classroom Slides Release Dates

https://my.amplify.com/help/en/articles/4004263-amplify-science-classroom-slides-for-grades-6-8

1st and 2nd unit of each grade: August 2020

- Microbiome
- Geology on Mars
- Harnessing Human Energy
- Metabolism
- Plate Motion
- Force and Motion

3rd unit of each grade: September 2020

- Metabolism Engineering Internship
- Plate Motion Engineering Internship
- Force and Motion Engineering Internship

4th unit of each grade: October 2020

- Traits and Reproduction
- Rock Transformations
- Magnetic Fields

5th unit of each grade: November 2020

- Thermal Energy
- Phase Change
- Light Waves

6th unit of each grade: December 2020

- · Ocean, Atmosphere, and Climate
- Plate Motion Engineering Internship
- Earth, Moon, and Sun

7th unit of each grade: February 2021

- Weather Patterns
- Chemical Reactions
- Natural Selection

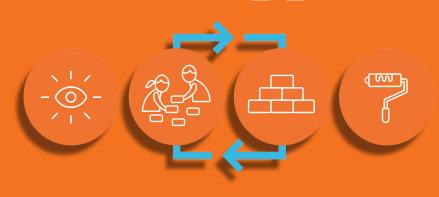
8th unit of each grade: March 2021

- · Earth's Changing Climate
- Populations and Resources
- Natural Selection Engineering Internship

9th unit of each grade: April 2021

- Earth's Changing Climate Engineering Internship
- Matter and Energy in Ecosystems
- Evolutionary History

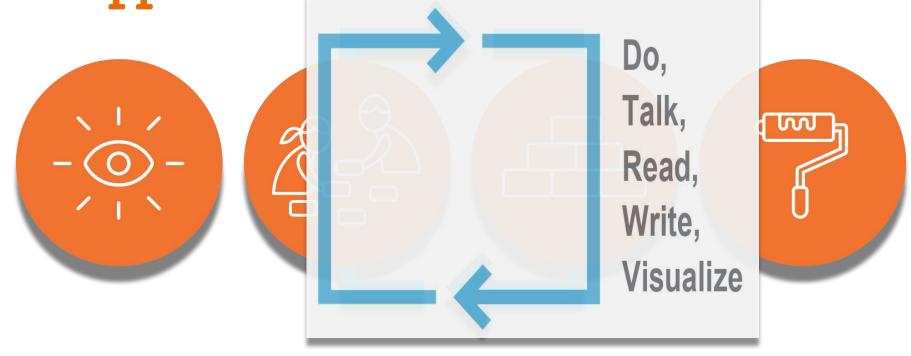
Revisiting the Amplify Science approach





Questions Reflections Connections	Unit 2 Planning Notes
	Amplify Science Approach Review:
	Note Taking Opportunities A version of this presentation will be available to you.
	However, you may want to record some of the
	presenter's comments and suggestions from your colleagues!

The approach



Introduce a phenomenon/real world problem

from multiple sources

Build increasingly complex explanations

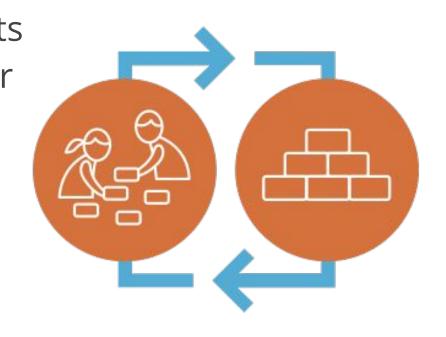
Apply knowledge to solve a different problem

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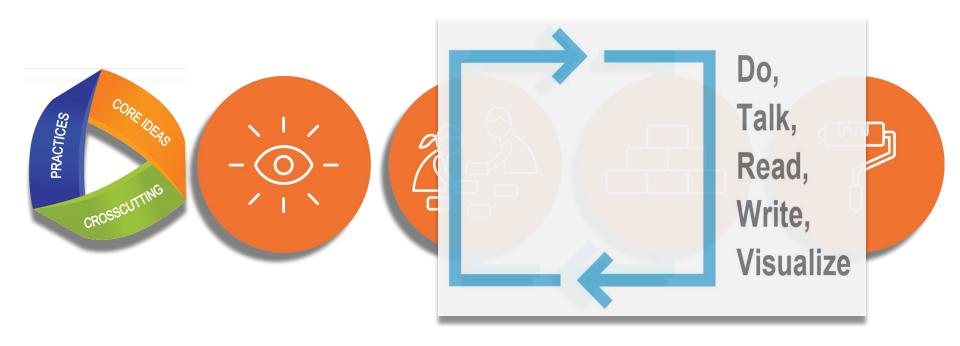
Multimodal Phenomenon-based approach

The anchor phenomenon drives instruction through a whole unit

Taking on the **roles** of scientists and engineers, students gather evidence and use it to build increasingly complex explanations about a rich, real-world anchoring phenomenon.



Using three dimensions to figure out



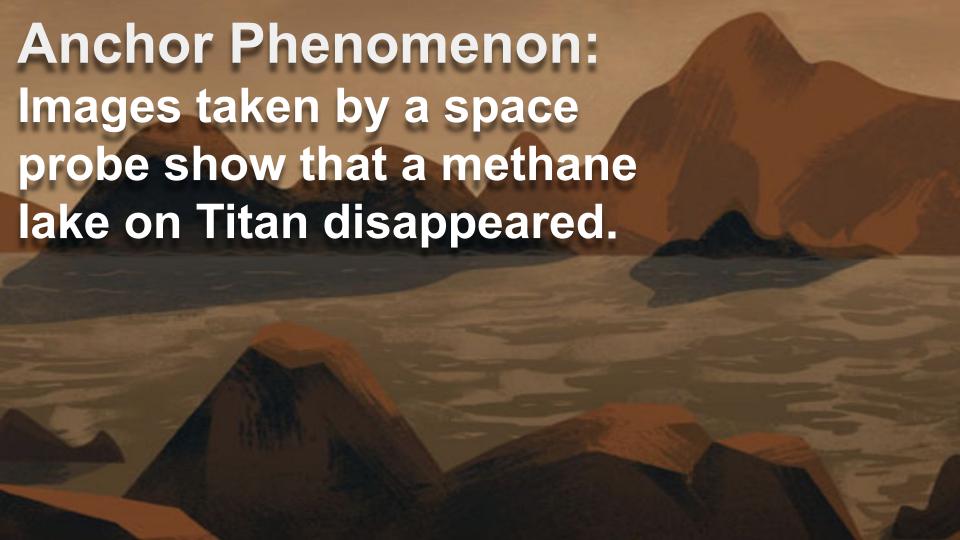
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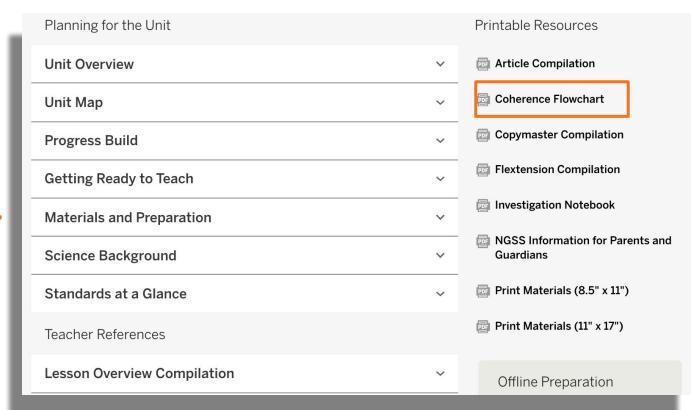
Plan for the day

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Where do you find all of the Unit Phenomena listed with Unit questions?



The problem students work to solve

Chapter 1 Question

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

Ocean, Atmosphere, and Climate: Cold Years in New Zealand

During El Niño years, why is Christchurch, New Zealand's air temperature cooler than usual?

What determines the air temperature of Christchurch, New Zealand?

How does air get energy? (1.3)

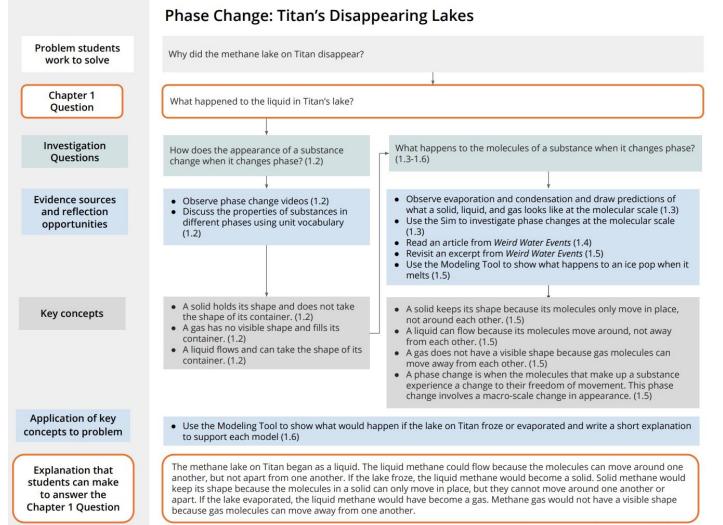
- Use the Sim to gather evidence about what causes the air temperature of a place to change (1.2)
- Set up a lamp heating experiment to compare the air temperature over a surface and the air temperature over no surface (1.3)
- Conduct a similar test to the lamp heating experiment in the Sim to gather more evidence that energy is not directly transferred to the air (1.3)
- Energy from the sun is transferred to Earth's surface. Some of that energy is then transferred to the air above the surface. (1.3)

Why do different locations have different air temperatures? (1.4, 1.5)

- Analyze energy and air temperature maps to figure out why different locations have different temperatures (1.4)
- Use the Modeling Tool to show why the Equator and South Pole have different air temperatures (1.4)
- The closer a location is to the equator, the more energy it receives from the sun. Therefore, a location's air temperature is affected by its distance from the equator. (1.4)
- Write and share to explain why the average air temperature of Christchurch is different from the air temperature is different from the air temperature at another location (1.5)
- Use data from bar graphs showing energy from the sun and average ocean surface temperature during normal years and El Niño years to refute the claim that Christchurch's air temperature is cooler because the amount of energy from the sun changes (1.5)

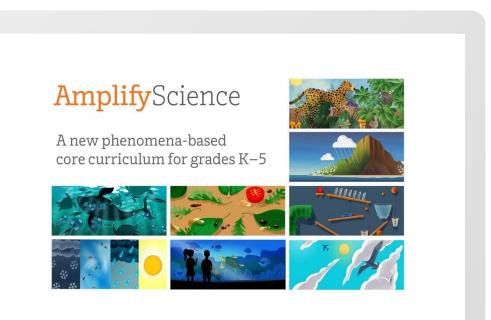
The air temperature of Christchurch is determined by how much energy is transferred to the air. Energy from the sun is transferred to the surface of Earth, and then to the air above the surface. The amount of energy that is transferred to the air in Christchurch is determined by its latitude. The closer to the equator a location is, the more energy from the sun is transferred to the surface and then to the air. The amount of energy from the sun does not change during El Niño years, so there must be another cause for the cooler air temperature.

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Live Navigation

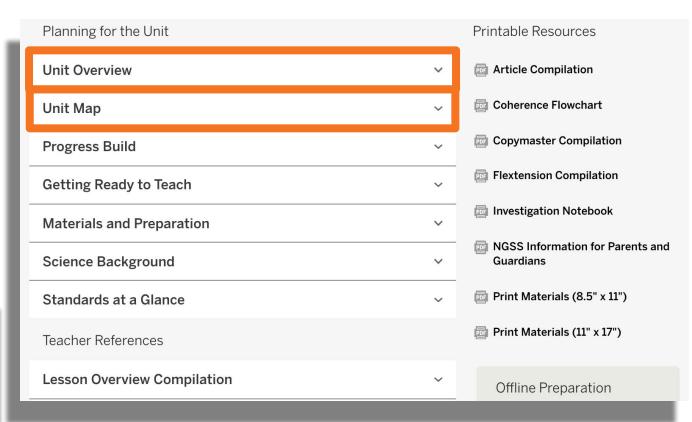


Guided Unit Internalization Part 1: Unit-level internalization		
Unit title:		
What is the phenomenon students are investigating	in your unit?	
Unit Question:	s	tudent role:
By the end of the unit, students figure out		
What science ideas do students need to figure out in	order to explain the phenomenon?	

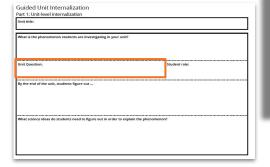
Guided Unit Internalization Document

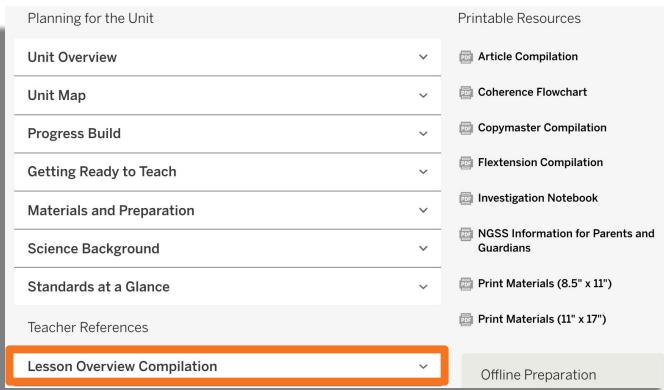
What is the student role? What will students figure out in Chapter 1?

Unit title:			
ome duci			
What is the phenomenor	n students are investigating in your o	unit?	
Unit Question:			Student role:
By the end of the unit, st	udents figure out		
What science ideas do st	udents need to figure out in order to	explain the phenomenor	17
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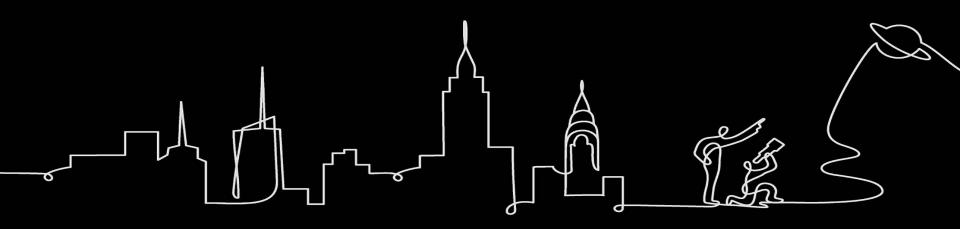


What are the Unit and Chapter Questions unit two?

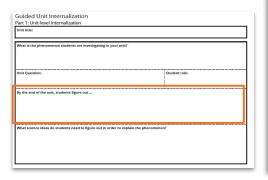


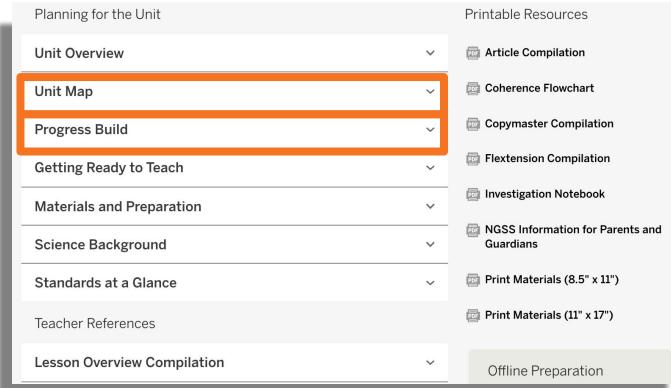


Reflect-Type-Chat! Share and Learn
In two sentences or less, what do
students figure out by the end of the
unit?



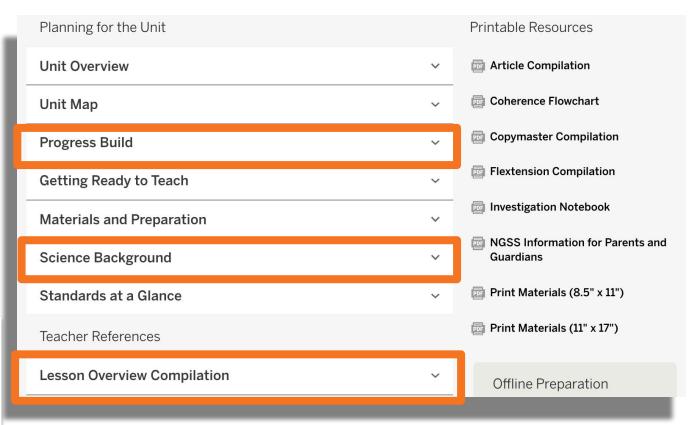
By the end of the unit what will the students figure out?





What science concepts do students need to figure out in order to build an explanation of the unit phenomena?

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 or	der to explain the phenomenon?



Guided Unit Internalization Part 1: Unit-level internalization Unit title: What is the phenomenon students are investigating in your unit? **Unit Overview** Unit Ouestion: Student role: **Unit Overview Lesson Overview Compilation** By the end of the unit, students figure out ... Unit Map, See also **Progress Build** What science ideas do students need to figure out in order to explain the phenomenon? Unit Map, Progress Build, Science Background Document

Where to Look!

Amplify.



Science Seminar: Remote/Hybrid



Considering claims and evidence



Participating in the Science Seminar



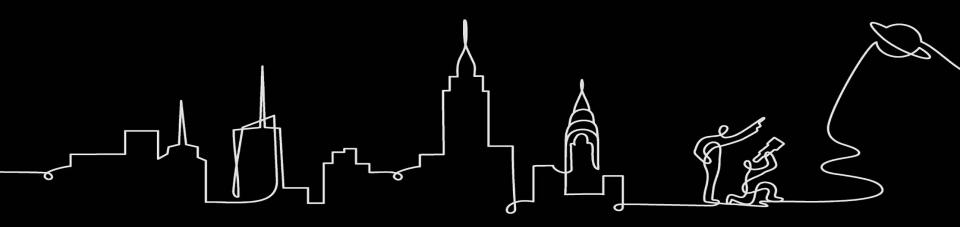


Writing an argument



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Reflect-Type-Chat! Share and Learn How can you adapt the science seminar for remote and hybrid instructional models?

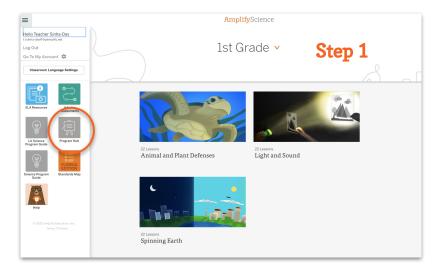


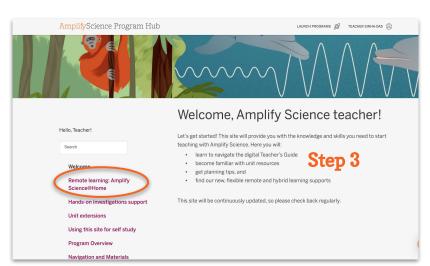
Plan for the day

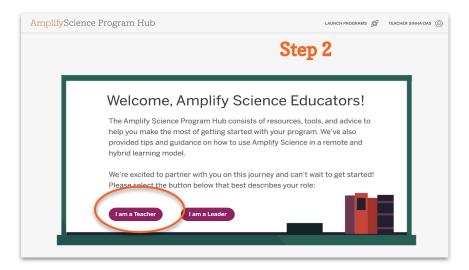
- Framing the day
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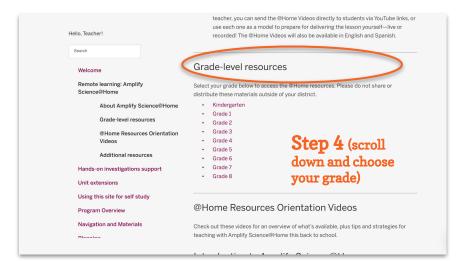


Questions Reflections Unit 2 Planning Notes Connections Global Program Hub Self Study Navigation









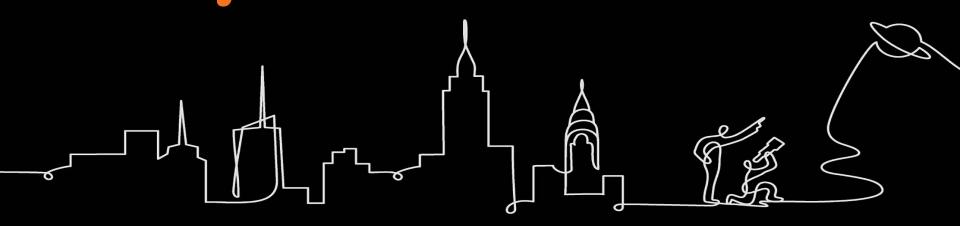
Navigate to your unit on the Program Hub locate and record planning notes on:

- 1. Self-Study Resources
- 2. @Home Videos for Unit 3



In Chat What are some possible uses for the @Home Videos

Reflect-Type-Chat! Share and Learn
Which self-study resource on the
Program-Hub will you use most often
and why?



AmplifyScience@Home

Updated Approach @Home Units

Packet or slide deck versions of Amplify Science units condensed by about 50%



https://my.amplify.com/help/en/articles/460 0152-updated-approach-to-amplify-sciencehome-unit-student-materials





Suggestions for Online Synchronous Time







Online synchronous time

Online discussions: It's worthwhile to establish norms and routines for online discussions in science to ensure equity of voice, turn-taking, etc.

Digital tool demonstrations: You can share your screen and demonstrate, or invite your students to share their screen and think-aloud as they use a Simulation or other digital tool.

Interactive read-alouds: Screen share a digital book or article, and pause to ask questions and invite discussion as you would in the classroom.

Shared Writing: This is a great opportunity for a collaborative document that all your students can contribute to.

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

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Plan for the day

- Framing the day
- Unit Internalization
- Amplify Science @Home
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Sample instructional scenario

Hybrid pod model

Select 1-2 lessons for the week and decide the best instructional format for the different parts of the lesson

In class



Hands-on investigations (option for teacher demo)

- Discourse routines
- Class discussions
- Physical modeling activities

Remote online class







Remote

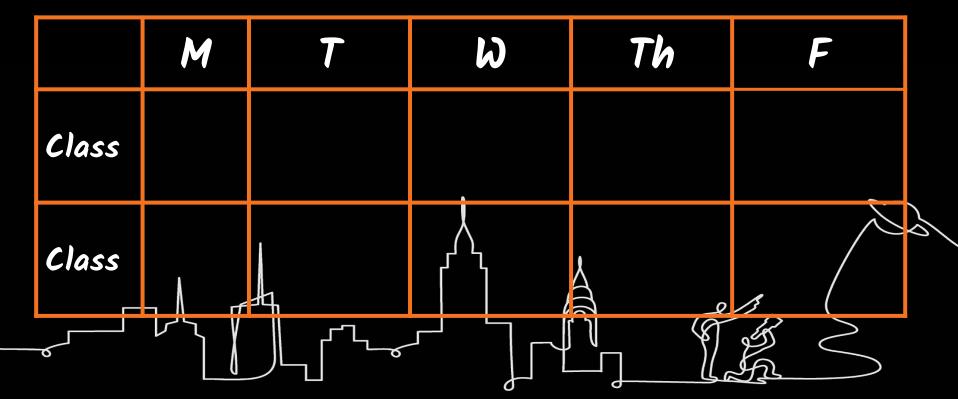


- Sim demonstrations
- Read-alouds
- Shared Writing
- Co-constructed class charts

- @Home video lessons
- @Home Unit activities
- Reflective writing
- Independently review

Think-Type-Chat Share and Learn

Take a moment to think about your current instructional model. Please share in chat!



@Home Resources example use case

Hybrid Model: Teach live during in-person/synchronous time









Day 4



Day 1

Assign: Lesson 1.1

@Home Video

Remote

In-person

live

Teach: Lesson 1.2

Day 2

Day 3

Synchronous

Teach: Lesson 1.3 using clips from @Home Video

Remote

Assign: Lesson 1.4 @Home Packet/Slides

Day 5

In-person

Revisit: hands-on or discourse-based activities the week's lessons

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@Home Resources example use case

Remote Model: with synchronous & asynchronous learning



Days 1 & 2
Asynchronous

Assign: Lesson 1.1 @Home Video and sheets for students to work through on their own



Day 3

Synchronous

Teach: Lesson 1.2 using clips from the @Home Video



Day 4

Asynchronous

Assign: Lesson 1.3 @Home Packet or @Home Slides for students to work through on their own



Day 5

Synchronous

Revisit: hands-on or discourse-based activities from the week's lessons

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Guided Planning

Objectives

- Use the resources we have explored to compare@Home lessons w/ in-class lessons.
- Use the lesson adaptation tool to adjust an in-class lesson for remote and hybrid learning.



Lesson Adaptation Considerations

While planning consider the information below to select the appropriate resources:

- O Do you have more, less, or the same time as last year for Science?
- Your classroom instructional model (Hybrid or Remote)
- Student's access to technology (packet or slides/sheets)
- The 3rd party applications will you pair with Amplify resources (if any)?
- Do I want to add a hands on component? (model via video? Or complete during in person synchronous instruction)

AmplifyScience@Lesson Adaptation Tool (Remote/Hybrid)

Lesson:	Date:
Lesson purpose: [Lesson Brief: Overview]	3-D connections and formative assessment opportunities:
What the students will learn in this lesson and potential challenges.	How will the students be practicing the multiple modalities during this lesson?

Amplify Science sample lesson planning template cont. Part 2: Getting ready to teach

Look at the Classroom Slides, digital tools, and books, as well as the Step-by-Step. Teacher Supports, and Possible Responses tabs in the Instructional Guide.

	Teaching notes	Remote/Hybrid Adaptation notes
	Consider:	Consider:
	What will the students experience in each activity? How does each activity support students in achieving the purpose of the lesson? What do you feel comfortable with? What do you feel comfortable with? That challenges might you encounter in teaching this lesson, and how might you address these challenges?	Materials will you need to prepare Differentiate Time for lesson Your classroom instructional model Student's access to technology 3rd party applications Add a hands on component? (model video Or complete during in person synchronous instruction)
Activity 1		
Time:		
Activity 2		
Time:		
Activity 3		
Time:		
Activity 4		
Time:		
Activity 5		
Time:		

Lesson Adaptation Tool for Remote and Hybrid Learning

AmplifyScience@Lesson Adaptation Tool (Remote/Hybrid)

Lesson:	Date:
Lesson purpose: [Lesson Brief. Overview]	3-D connections and formative assessment opportunities:
What the students will learn in this lesson and potential challenges.	How will the students be practicing the multiple modalities during this lesson?

Lesson Adaptation!

Choose a lesson and use the Lesson **Adaptation Tool to** begin recording planning information about the lesson.

Amplify Science sample lesson planning template cont.

Part 2: Getting ready to teach

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	Teaching notes	Remote/Hybrid Adaptation notes	
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Activity 1			
Time:			
Activity 2			
Time:			
Activity 3			
Time:			
Activity 4			
Time:			
Activity 5			
Time:			

Lesson Adaptation!

With the Lesson
Adaptation Tool
begin adjusting the
lesson for remote
and hybrid learning.
Note begin with in-class slides

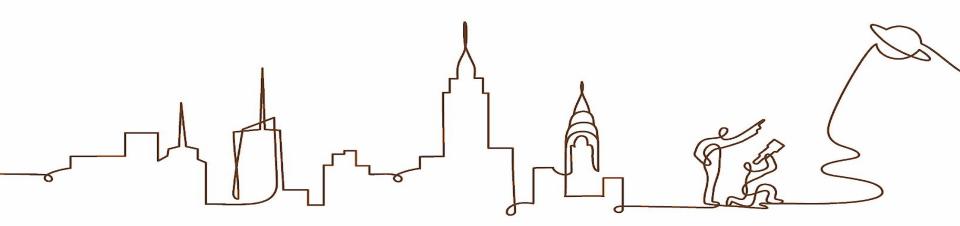
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- Do I want to add a hands on component? (model via video? Or complete during in person synchronous instruction)

Differentiation

Quick Review of Lesson Level Brief



Plan for the day

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NYC Program Guide

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

https://my.amplify.com/programguide/content/national/welcome/nyc/

Amplify Help

Find lots of advice and answers from the Amplify team.

my.amplify.com/help



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