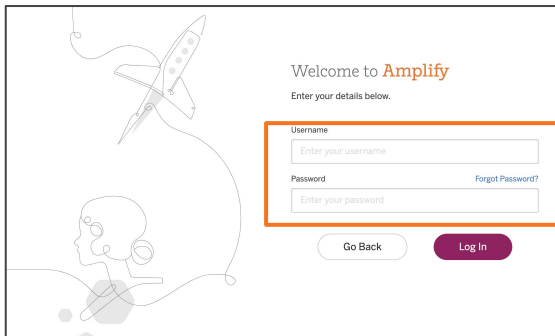
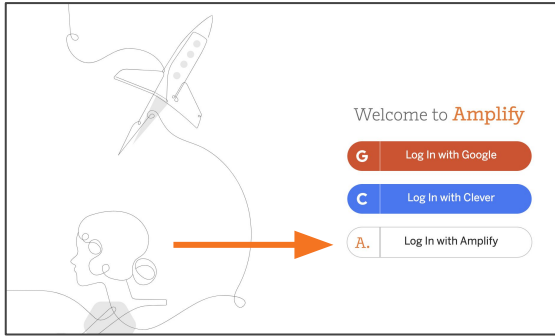
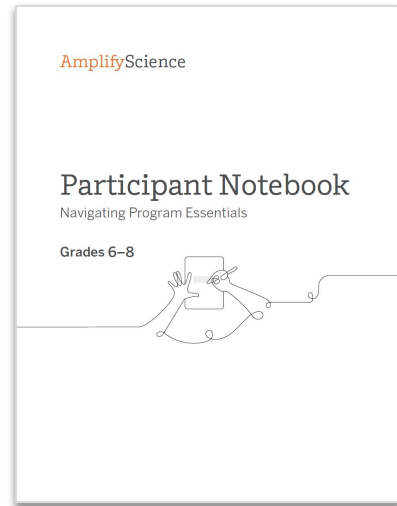


Welcome to Amplify Science!

Do Now: Login and open your digital participant packet

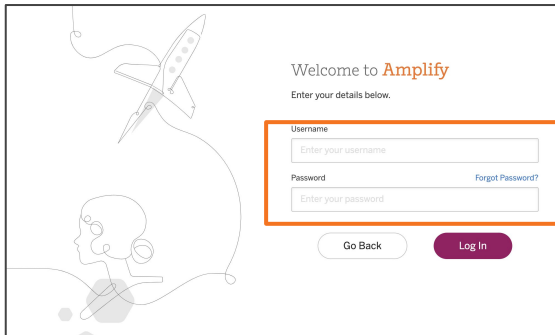
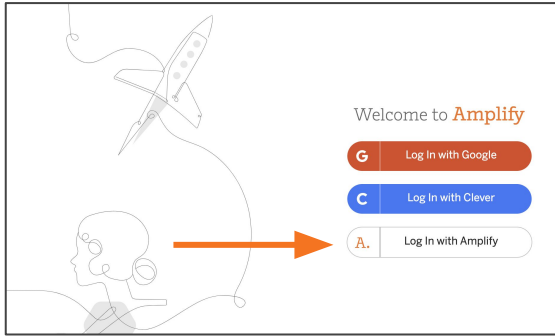


1. Go to **learning.amplify.com**
2. Select **Log in with Amplify**
3. Enter teacher demo account credentials
 - nycdoe_middle@tryamplify.net
 - Password: AmplifyNumber1
4. Explore as we wait to begin

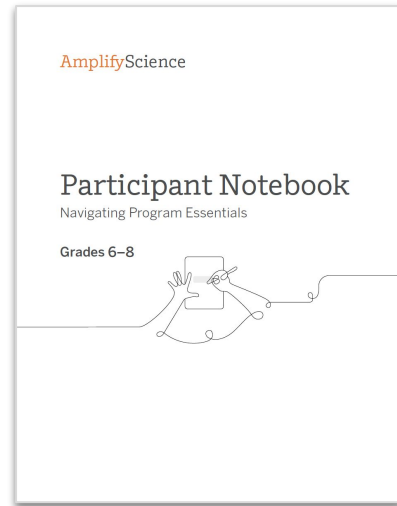


Welcome to Amplify Science!

Student log-in (optional)



1. Go to **learning.amplify.com**
2. Select **Log in with Amplify**
3. Enter teacher demo account credentials
 - s.nycdoe_middle@tryamplify.net
 - Password: AmplifyNumber1
4. Explore as we wait to begin



Use two windows for today's webinar

Window #1

Meet - Etiwanda Grade 7 N x +
meet.google.com/hcs-dxpk-wrm?aut...

Miller Copy of Navigation Prop... x Amplify Curriculum
apps.learning.amplify.com/curriculum/#unit/8a31e095506df8a2015256f884b4544_californiaintegrated2019-2020#progress-build

Amplify Science CALIFORNIA > Plate Motion

OPEN PRINTABLE PROGRESS BUILD

Progress Build Level 1: The Earth's entire outer layer (below the water and soil that we see) is made of solid rock that is divided into plates. Earth's plates can move.

Underneath the soil, vegetation, and water that we see on the surface of Earth is the outer layer of Earth's geosphere, the solid part of our rocky planet. This outer layer of Earth is covered entirely with hard, solid rock that is divided into sections called plates. And, these plates can move.

Progress Build Level 2: The plates move on top of a soft, solid layer of rock called the mantle. At plate boundaries where the plates are moving away from each other, rock rises from the mantle and hardens, adding new solid rock to the edges of the plates. At plate boundaries where plates are moving toward each other, one plate moves underneath the other and sinks into the mantle.

Underneath the soil, vegetation, and water that we see on the surface of Earth is the outer layer of Earth's geosphere, the solid part of our rocky

Getting Ready to Teach
Materials and Preparation

Flexension Compilation
Investigation Notebook
NGSS Information for Parents and Guardians
Print Materials (11" x 17")
Print Materials (8.5" x 11")
Offline Preparation
Teaching without reliable classroom internet? Prepare unit and lesson materials for offline access.
Offline Guide

Window #2

Amplify Curriculum
apps.learning.amplify.com/curriculu...
Amplify Science CALIFORNIA > Plate Motion > Chapter 1 > Lesson 1.2

Lesson 1.2:
Using Fossils to Understand Earth

Lesson Brief (4 Activities) 1 WARM-UP Warm-Up T TEACHER-LED DISCUSSION Why Geologists Value Fossils 2 TEACHER-LED DISCUSSION Introducing Mesos

RESET LESSON GENERATE PRINTABLE LESSON

Lesson Brief

Overview
Materials & Preparation
Differentiation
Español rds

Digital Resources
All Projections
Completed Scientific Argumentation Wall Diagram
Video: Meet a Paleontologist
The Ancient Mesosaurus

Amplify Science

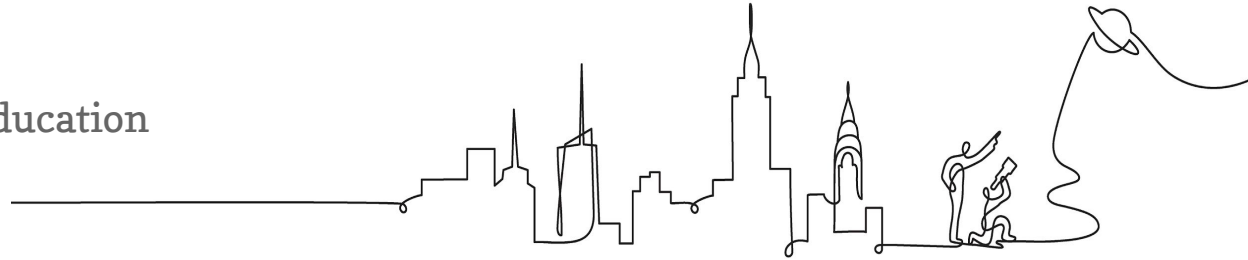
New York City

Introduction to Amplify Science NYC Summer Institute, Day 2

Grade 6: Harnessing Human Energy & Thermal Energy

New York City Department of Education
July 22, 2020

Presented by

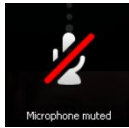


Remote Professional Learning Norms



Orient yourself to the platform

- *“Where’s the chat box? Where’s the mute button?”*



Mute your microphone unless sharing with the group



Use the chat box for posting questions or responses



Have a note-catcher

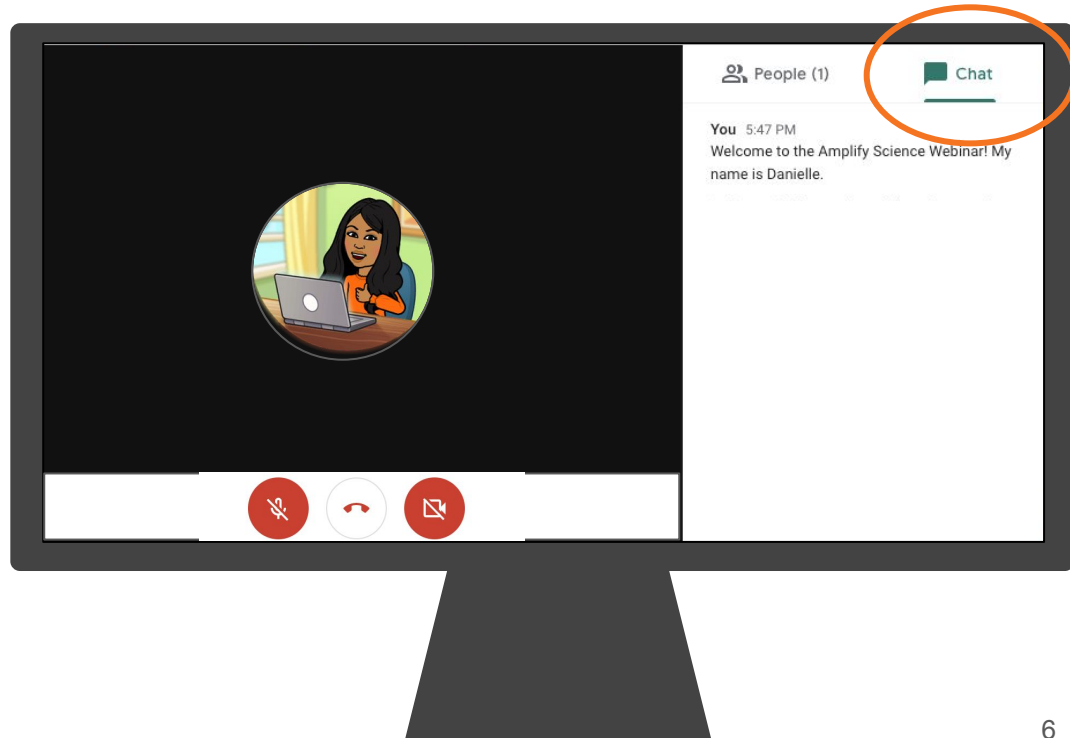


Engage at your comfort level - chat, ask questions, discuss.

Culture Building

Share your answers in the chat.

- **Question 1:** What did you learn about yesterday that made you excited to teach Amplify Science?
- **Question 2:** What are you looking forward to learning more about today?



Overarching goals

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

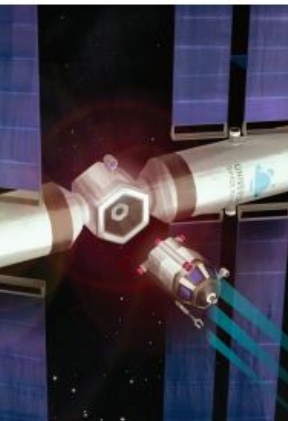
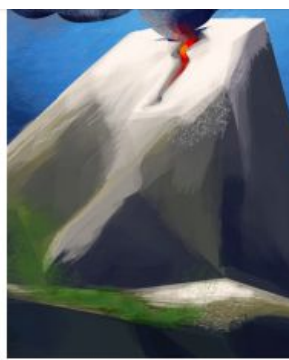
- Navigate the Amplify Science curriculum.
- Understand the program's multimodal approach and instructional materials.
- Apply program essentials to prepare to teach an Amplify Science unit.
- Make an informed decision about which of the Amplify Science Hybrid Learning Resources will best support your students.



Day 2 Objectives

By the end of the session you will be able to:

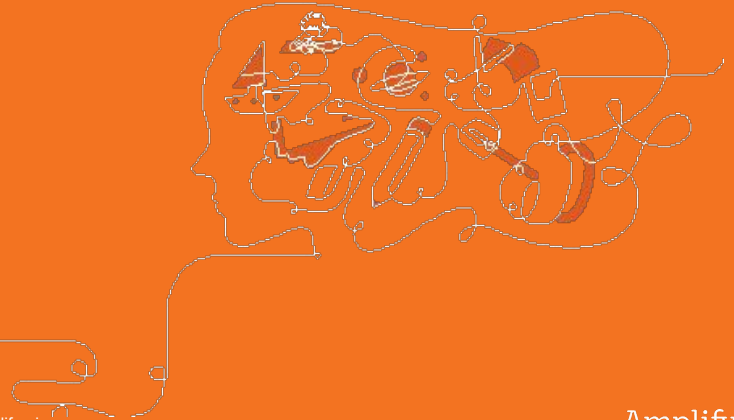
- Understand the purpose of Launch Units.
- Apply program essentials to prepare to teach an Amplify Science Launch Unit.
- Make an informed decision about which of the Amplify Science Hybrid Learning Resources will best support your students.



Plan for the day

- Experiencing the Launch Unit
- Launch Unit Components
- Planning to Teach
- Remote/Hybrid Resources
- Closing and reflection

Experiencing the Launch Unit



Middle School Curriculum New York City Edition

Grade 6

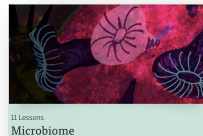
- Launch: Harnessing Human Energy



- Thermal Energy
- Populations and Resources
- Matter and Energy in Ecosystems
- Weather Patterns
- Ocean, Atmosphere, and Climate
- 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

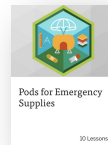


Grade 8

- Launch: Geology on Mars



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



What is a launch unit?

- First unit of the year
- Interesting, immersive, and often surprising problem-context
- Introduces **practices** that are integral to science, such as:
 - **Argumentation**
 - **Reading**
 - **Writing**
 - **Talking about science ideas**
 - **Using models**
- Introduces **routines** such as:
 - **Active reading**
 - **Discourse routines**

An illustration of two miners in a dark, rocky cave. The miners are wearing red jumpsuits and hard hats with headlamps. One miner is on the left, looking down with a headlamp in hand. The other miner is on the right, leaning forward. The cave walls are dark blue and black with some yellow highlights, suggesting a dimly lit underground environment.

Launch unit: Harnessing Human Energy



Harnessing Human Energy



Problem: Students need to help a team of rescue workers find a way to power the batteries in their equipment during rescue missions.

Role: Energy Scientists at the Energy Research Lab

Students learn about energy transfer and conversion in order to design a solution for the rescue workers.

Unit Question

How is it possible to charge electrical devices when the power is out?



Back
LHS Amplify Science Middle School

11 Lessons

Harnessing Human Energy

[READ FULL OVERVIEW](#)



Chapter 1: What Is Energy?

4 Lessons



Energy Needs

3 Lessons



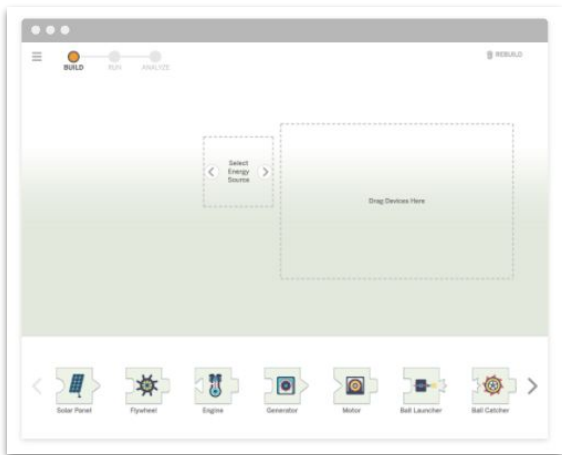
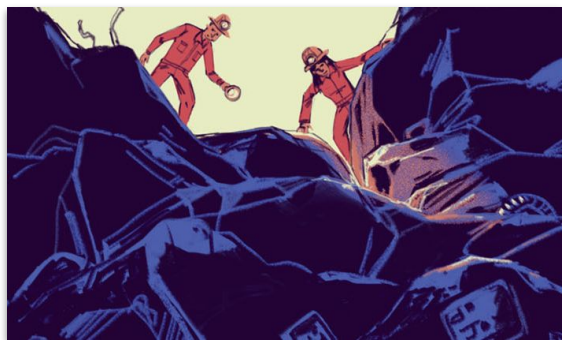
Solution

4 Lessons

Chapter 1 Question

What is energy and why does it matter to the rescue team?

Harnessing Human Energy—Chapter 1 Question—Lesson 1.1
© 2018 The Regents of the University of California



Chapter 1: What Is Energy?

☑ JUMP DOWN TO CHAPTER OVERVIEW

Lesson 1.1:
Welcome to the
Energy Research Lab

Lesson 1.2:
Investigating Energy
Claims

Lesson 1.3:
Identifying Kinetic
Energy and Potential
Energy

Lesson 1.4:
“Energy Inventions”

Chapter 1: What Is Energy?

☑ JUMP DOWN TO CHAPTER OVERVIEW

Lesson 1.1:
Welcome to the
Energy Research Lab

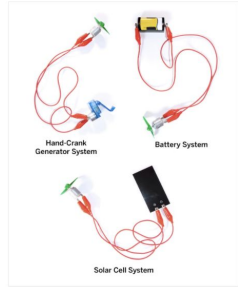
Lesson 1.2:
Investigating Energy
Claims

Lesson 1.3:
Identifying Kinetic
Energy and Potential
Energy

Lesson 1.4:
“Energy Inventions”

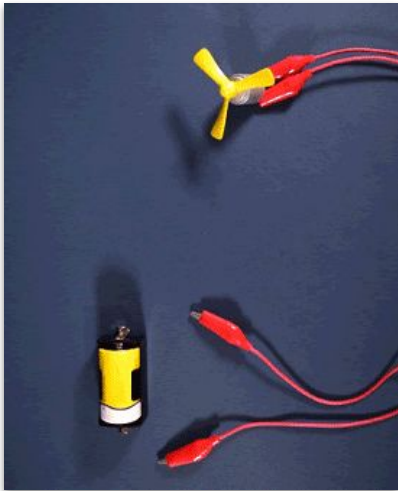
Harnessing Human Energy: Lesson 1.2

Activity 3



Next, we will **build three different systems** and make a scientific argument that answers this **question:**

Do all the systems have energy?



Classroom Wall

Unit Question

How is it possible to charge electrical devices when the power is out?

Chapter 1 Question

What is energy and why does it matter to the rescue team?

Investigation Question

How do you know something has energy?

Key Concepts

1. Whenever something moves or changes it's because of energy.

Vocabulary

system

claim

energy

evidence

reasoning

Model Lesson

Lesson 1.3: Identifying Kinetic Energy and Potential Energy



Preparing to Teach

Know the
unit's big
idea

Understand
how the
lesson will
flow

Prepare your
digital
device plan

Gather your
materials



Harnessing Human Energy

Lesson 1.3: Identifying Kinetic Energy and Potential Energy

Activity 1

Warm-Up





Warm-Up

The lead energy scientist has forwarded you a message from an Energy Research Lab client. Read the message and decide how you would respond to the client.

Dear student energy scientists,

Now that you have been learning about energy, I would like your help responding to some questions we receive here at the Energy Research Lab. Please see the email I've included below.

Sincerely,
Morgan Lewis
Lead Energy Scientist, Energy Research Lab

Email from client:

Dear Energy Research Lab,
My friend drives around in her electric car, and she has to charge the car's batteries every night. However, I never need to plug in my bike! Therefore, I think I can get from place to place without using energy at all.
What do you think? **Is riding a bike a way to travel that doesn't use energy?**

Sincerely,
Sasha (Energy Research Lab client)



Activity 2

Evidence of Energy



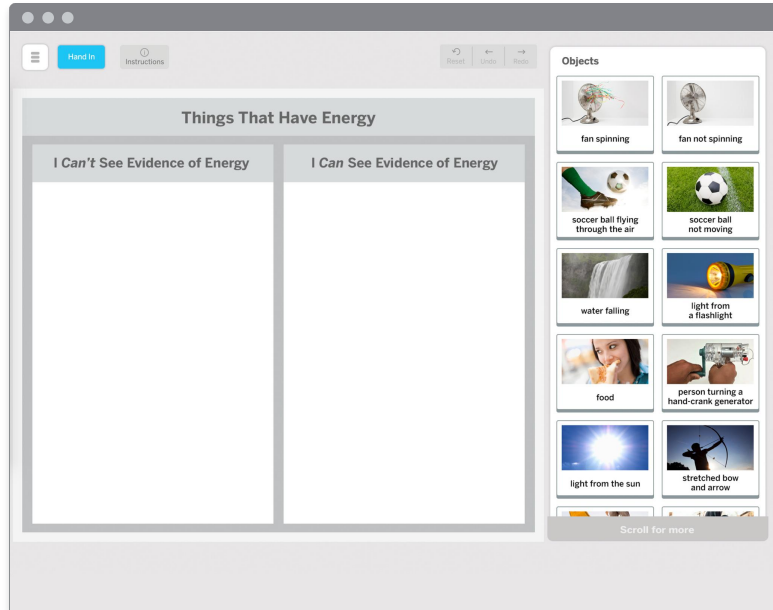
Key Concept

1. Whenever something moves or changes, it is because of energy.

Remember, we are investigating this question:

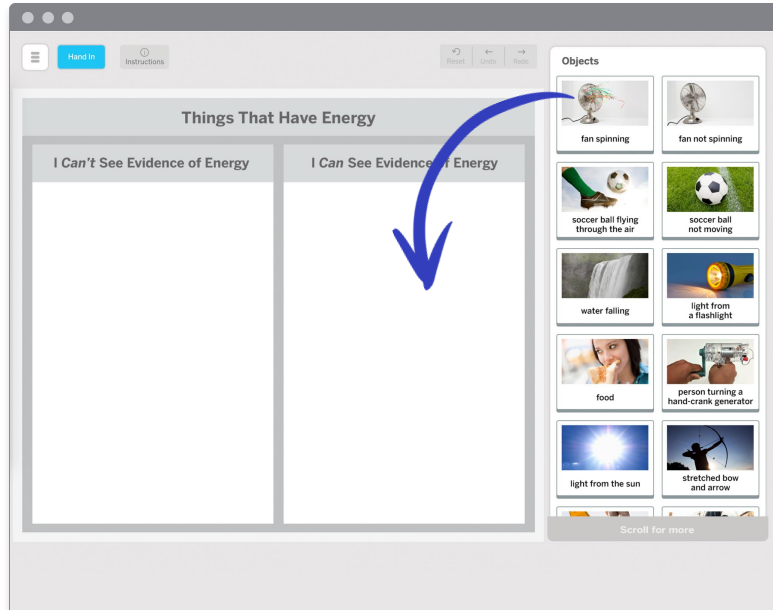
Investigation Question:

How do you know something has energy?



Today you'll do another **sorting** activity to show your ideas about energy.

You'll drag objects into the bins to show whether you can see **evidence of energy** or not.



For instance, this image shows a fan moving. Energy is the ability to make things move or change, and this movement is evidence I can see that the fan has energy.

Evidence of Energy

Launch the Sorting Tool activity: [Evidence of Energy](#) and follow the instructions below. Talk to a partner about your ideas as you work.

Goal: Look at each object and decide whether you can see evidence of energy.

Do:

- Think about the definition of *energy* as you look at each object. Do you see evidence of energy?
- If you can't see evidence of energy, drag the object to bin on the left.
- If you can see evidence of energy, drag the object to the bin on the right.
- Leave objects you are not sure about in the toolbar.



☰ Instructions ↻ Reset ← Undo → Redo

Things That Have Energy









I Can't See Evidence of Energy	I Can See Evidence of Energy

Labels

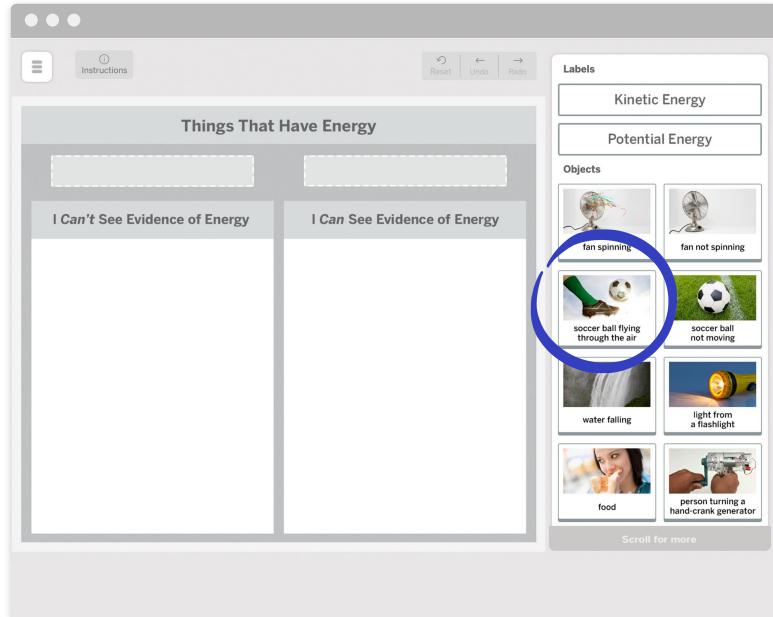
Kinetic Energy

Potential Energy

Objects

 fan spinning	 fan not spinning
 soccer ball flying through the air	 soccer ball not moving
 water falling	 light from a flashlight
 food	 person turning a hand-crank generator

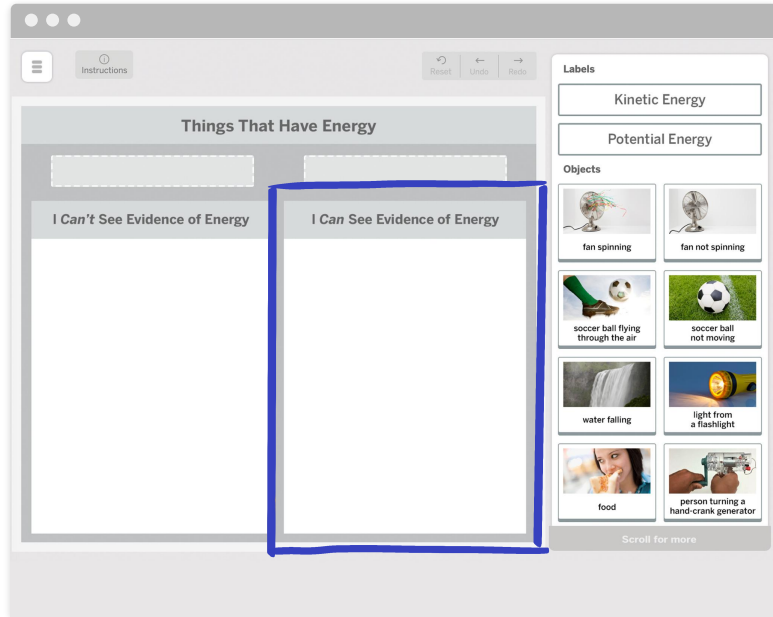
Scroll for more



Let's think about the soccer ball flying through the air.








Which bin did you place the **flying soccer ball** in, and why?



Which other objects did you place in the **I Can See Evidence of Energy** bin?

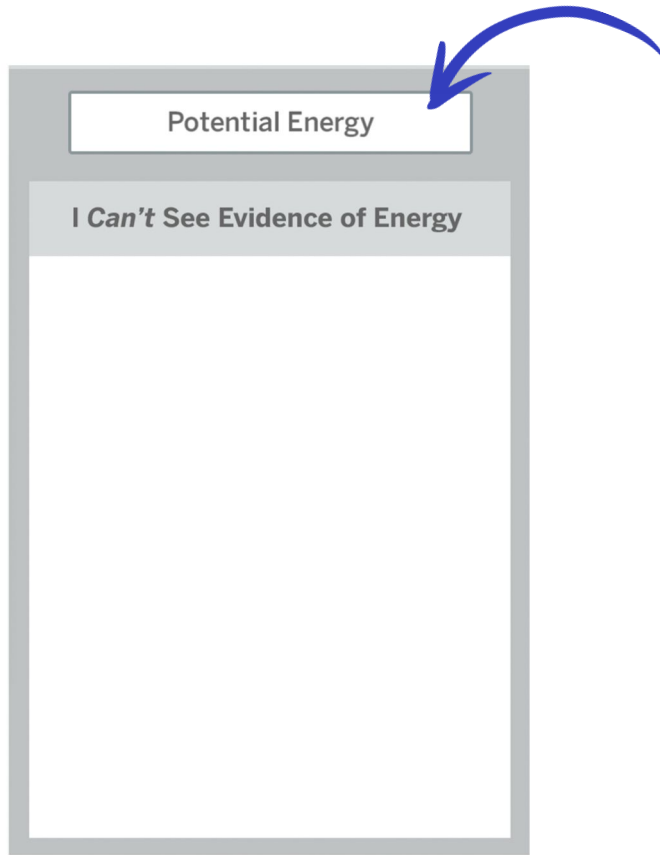
Kinetic Energy

I Can See Evidence of Energy

- 
soccer ball flying through the air
- 
fan spinning
- 
water falling
- 
person turning a hand-crank generator
- 

All of these objects are moving. When an object is moving, it has a certain type of energy called **kinetic energy**.

I labeled this bin **Kinetic Energy**.



Some objects have **stored energy**. Though they might not be moving or changing, they have the **ability** to make things move or change.

This is **potential energy**.

Things That Have Energy

I Can't See Evidence of Energy

I Can See Evidence of Energy

soccer ball not moving

fan spinning

water falling

person turning a hand-crank generator

skateboard moving

soccer ball flying through the air

fan not spinning


light from a flashlight

food

light from the sun


stretched bow and arrow


skateboard at top of ramp


 Which objects did you place in the the **I Can't See Evidence of Energy** bin?


Potential Energy


I Can't See Evidence of Energy


food


stretched bow
and arrow


skateboard at
top of ramp


gasoline


charged battery

These objects all have potential energy.



Let's discuss how each of these objects has the ability to make something move or change.

Vocabulary



kinetic energy

the energy that an object has because it is moving

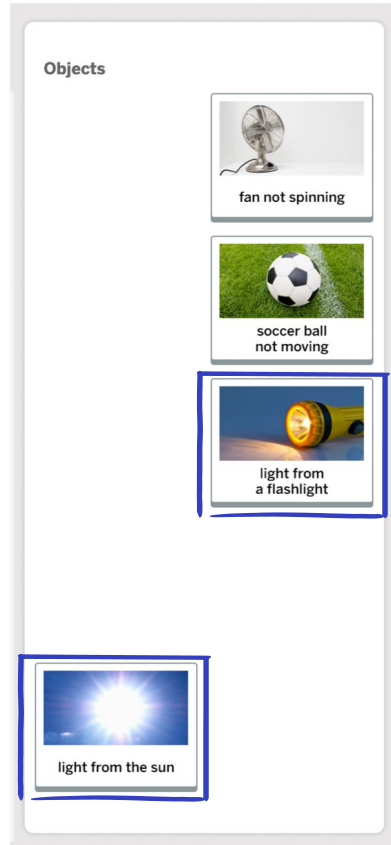
Vocabulary



potential energy

the energy that is stored in an object or system

Objects



fan not spinning

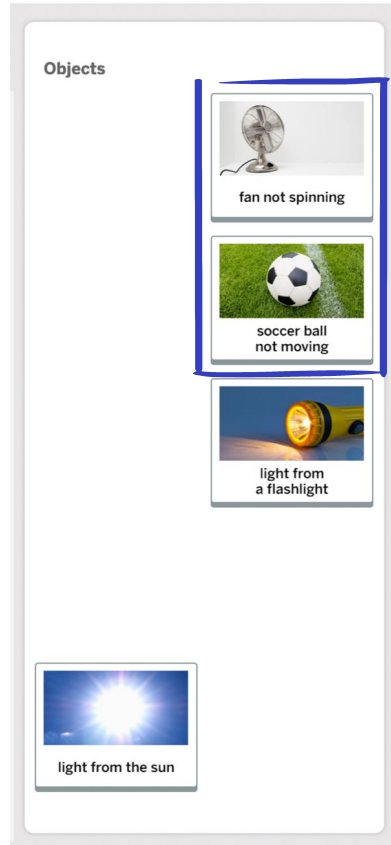
soccer ball not moving

light from a flashlight

light from the sun

Some objects are still in the toolbar. The **light from a flashlight** and the **light from the sun** have energy, but they don't fit into our two bins. We will just leave them where they are for now.

Objects



fan not spinning

soccer ball not moving

light from a flashlight

light from the sun

We'll leave the **fan** and the **soccer ball** too. They are not moving, so they don't have kinetic energy, and it does not appear that they have the ability to make anything move or change in the future.

Key Concept

2. When something is moving, it has kinetic energy.

Key Concept

3. When something has the ability to make things move or change in the future, it has potential energy, even if it is not moving or changing now.

Activity 3

Kinetic Energy and Potential Energy Demonstration





stretched bow
and arrow



soccer ball flying
through the air

Identifying evidence of potential energy can be challenging.



Why is it **easier** to gather evidence that something has **kinetic energy**?



We will use these **wind-up toys** to think more deeply about how to **gather evidence** that objects have kinetic energy or potential energy.



Before we begin the wind-up toy demonstration, let's **answer some poll questions** to get us thinking about wind-up toys.



Kinetic Energy and Potential Energy Demonstration

Observing Kinetic and Potential Energy

Before your teacher begins the demonstration, answer the following poll questions.

1. A wind-up toy that is not wound up . . .

- does not have energy.
- has kinetic energy.
- has potential energy.
- has both kinetic and potential energy.

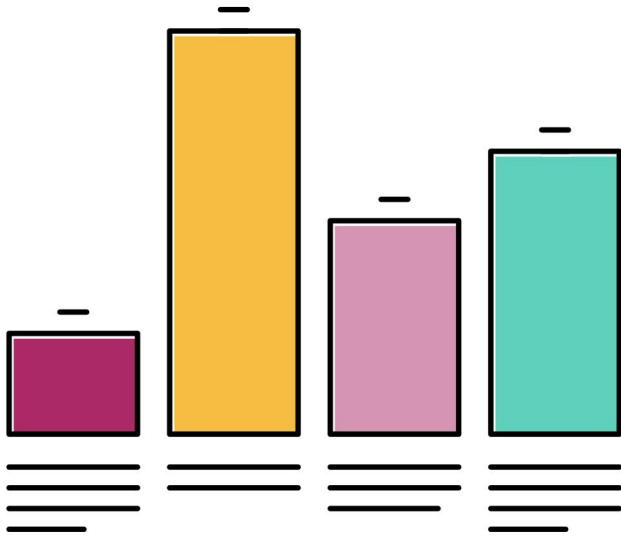
2. A wind-up toy that is wound up but not moving . . .

- does not have energy.
- has kinetic energy.
- has potential energy.
- has both kinetic energy and potential energy.

3. A wind-up toy that is wound up and moving . . .

- does not have energy.
- has kinetic energy.
- has potential energy.
- has both kinetic energy and potential energy.

Let's look at the poll results to see your current ideas about **whether wind-up toys have energy.**





Let's start the demonstration with both toys just sitting on the table.



Is there any evidence that either of the toys has **kinetic energy**?



Now I'll wind up one of the toys and let it go.



What evidence of **kinetic energy** do you see now?



For the next part, both toys are just sitting on the table again.



Is there any evidence that either of the toys has **potential energy**?



Now I'll wind up one of the toys and hold it in the wound-up position.



Is there any evidence that either of the toys has **potential energy** now?



The two toys look identical, but one has potential energy.



Is there anything we could do to gather **evidence** about the **potential energy** stored in the wind-up toy?



Even though the toys looked nearly identical before, it is clear now that one toy had a form of energy that the other did not.

This is **potential energy**.

Activity 4

Reflection



skateboard at top
of ramp



charged battery



food



stretched bow
and arrow



You will now have a chance to apply what you have learned about **potential energy**. You'll choose an object you think has potential energy and explain your thinking.



Reflection

How Do You Know Whether an Object Has Potential Energy?

- Select *one* object from the choices below that you think has potential energy.
- Explain why you think the object you selected has potential energy.

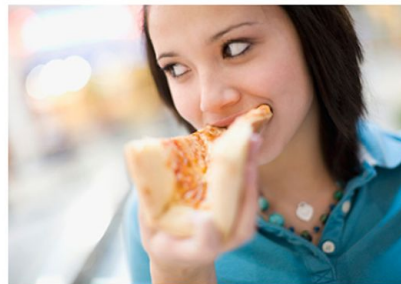
skateboard at top of ramp



charged battery



food



stretched bow and arrow



Activity 5

Homework





For this activity, you will reflect on what you've learned about energy and **respond to some questions** about the Rescue Team.



Homework

Energy and the Rescue Team

You have been investigating why energy matters to the rescue team, and now you've learned about two different categories of energy.

1. What is one way that kinetic energy might be involved in rescue team missions?

End of Lesson

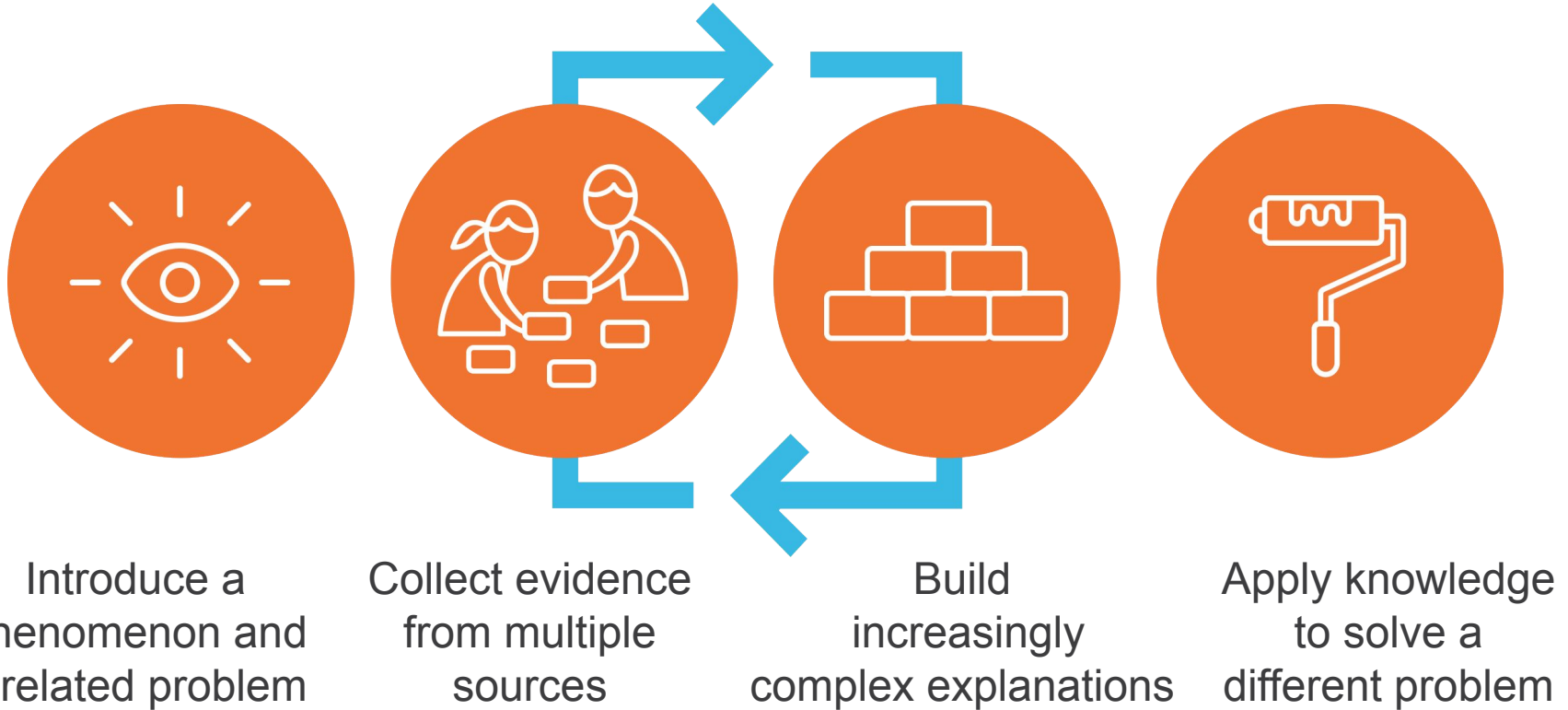


THE LAWRENCE
HALL OF SCIENCE
UNIVERSITY OF CALIFORNIA, BERKELEY

Amplify.

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What aspects of the Amplify Science Instructional Approach did you experience in the Launch Unit?



Lesson Reflection



Answer in the chat feature

How is a launch unit lesson similar/different from a core unit lesson?

What questions do you have?





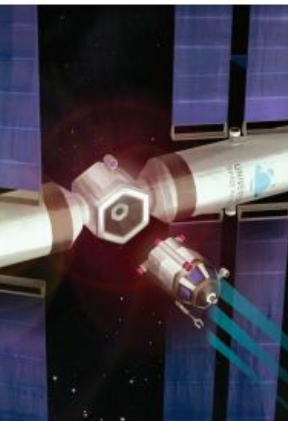
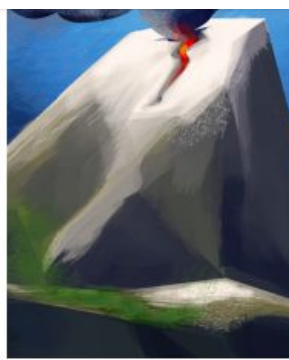
Ask in the chat feature



Questions?

5 min break



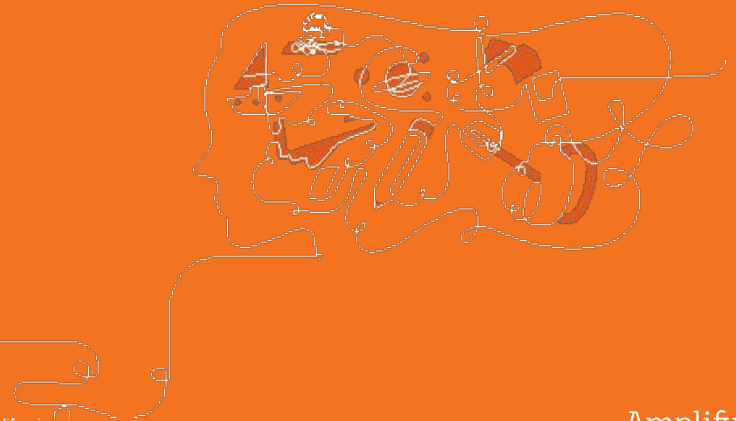


Plan for the day

✓ Experiencing the Launch Unit

- Launch Unit Components
- Planning to Teach
- Remote/Hybrid Resources
- Closing and reflection

Launch Unit Components

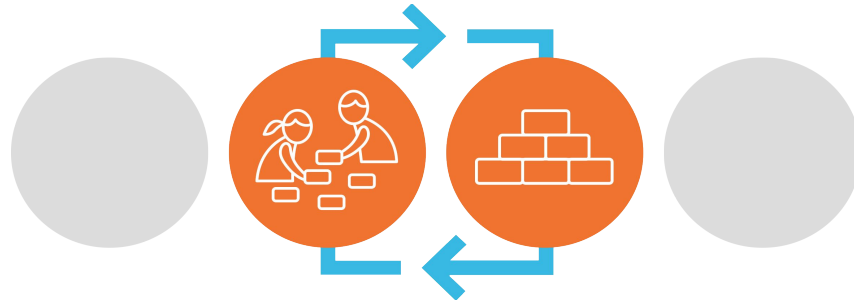


Argumentation in Amplify Science



Goals for argumentation in Amplify Science

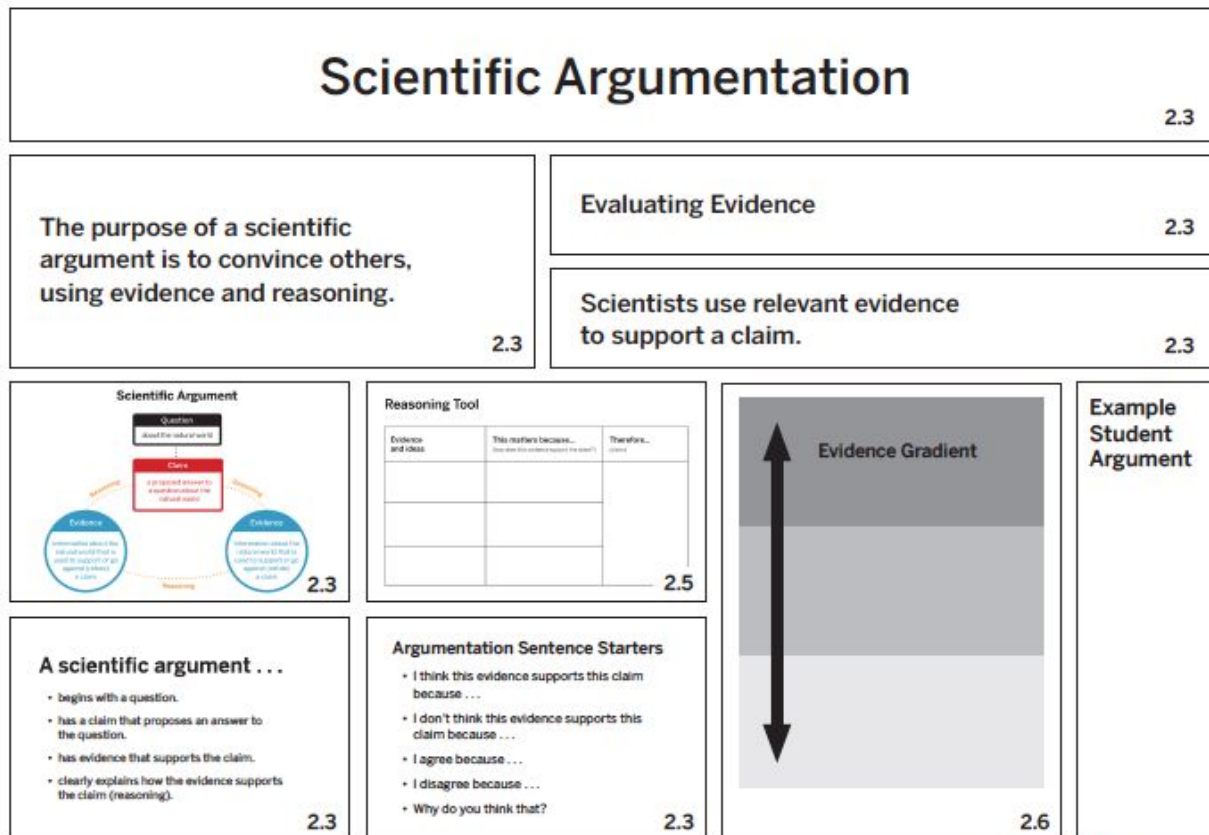
- To provide students an authentic opportunity to engage in the practice of argumentation
- To make clear to students the purpose of argumentation and the role it plays in building and communicating scientific knowledge
- To help students build their own knowledge through argumentation



Specific goals for argumentation in launch units

- Introduce the **practice of argumentation** in science
- Introduce **tools** that will be used throughout the year to support students in getting better at specific aspects of oral and written argumentation:
 - **Card sorts**
 - **Evidence gradient**
 - **Reasoning tool**

Completed Scientific Argumentation Wall Diagram



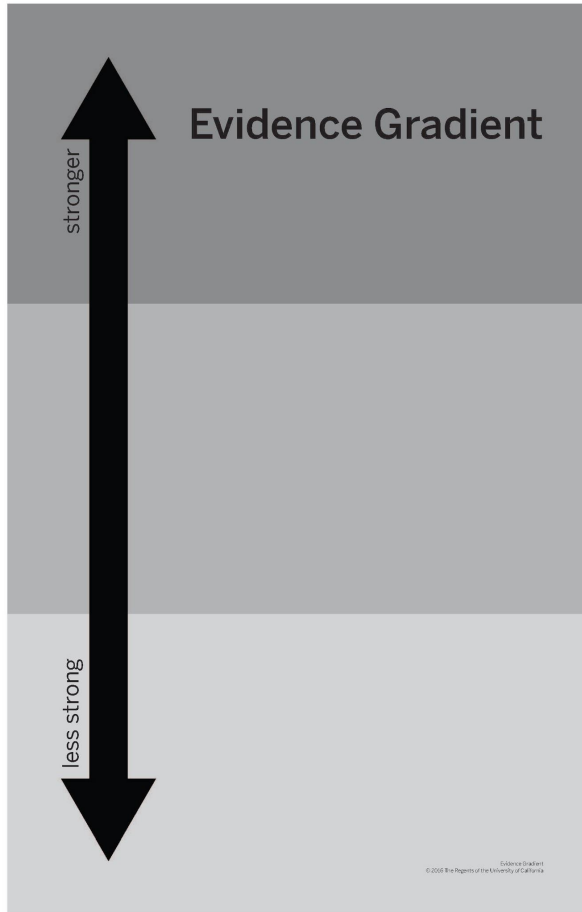
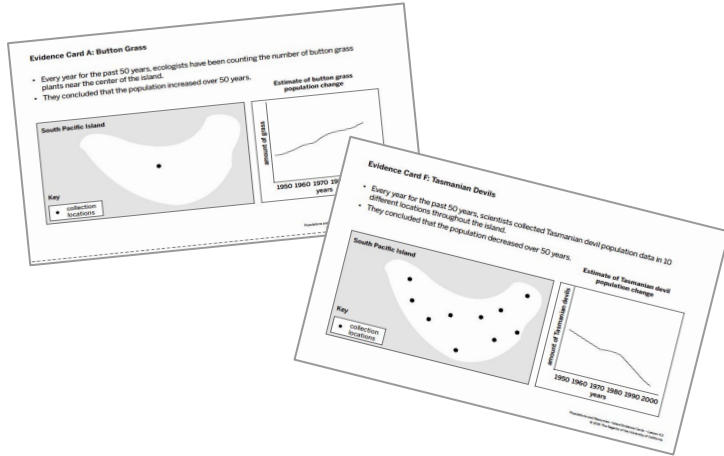
Reasoning Tool

Reasoning Tool

Evidence	This matters because . . . (How does this evidence support the claim?)	Therefore, . . . (claim)

Evidence Gradient

Evidence is higher quality if it comes from a reliable source.



Introducing Argumentation, Lesson 1.2

Independent work time directions:

- Navigate to lesson 1.2
- Use the lesson materials to find out how argumentation is introduced.
- Be ready to share out.

Reflection

- How is argumentation introduced? What tools/scaffolds are included to support students in developing this practice?
- Is there anything you anticipate your students will find challenging? What action will you take to support them?

Active Reading in Amplify Science



Active Reading

Teacher Modeling



Jelly population explosions can happen all over the world. This photo shows lots of jellies the ocean near Denmark.

Jelly Population Explosion: How Competition Can Affect Population Size

Jelly Population Explosions

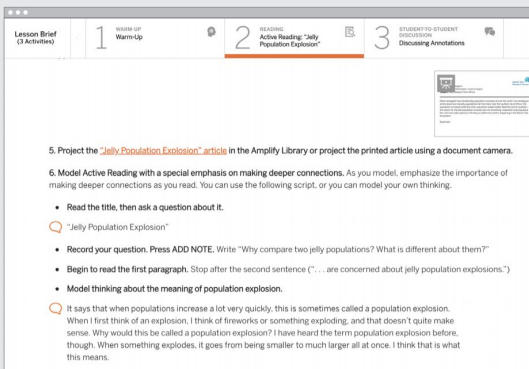
In some ecosystems, the population of jellies has increased so much over a short period of time that people call it a population explosion. Ecologists, fishermen, and many other people around the world are concerned about jelly population explosions. In some places where jelly populations are getting bigger, the increase in population can affect human activities and the ecosystems we depend on: masses of jellies damage fishing nets, clog water pipes for power plants, and drive swimmers away from beaches. Scientists around the world are hard at work trying to understand why these population increases occur and how we can avoid causing them.

Moon jellies are one of the most common types of jelly living in the ecosystem Southern Benguela.

Jelly Population Explosion: How Competition Can Affect Population Size

Example text and modeling suggestion taken from the Amplify Science Populations and Resources unit.

Step 1: An excerpt of student text is read aloud by the teacher



Lesson Brief (3 Activities)

1 WARM UP Warm-Up

2 READING Active Reading: "Jelly Population Explosion"

3 STUDENT TO STUDENT DISCUSSION Discussing Annotations

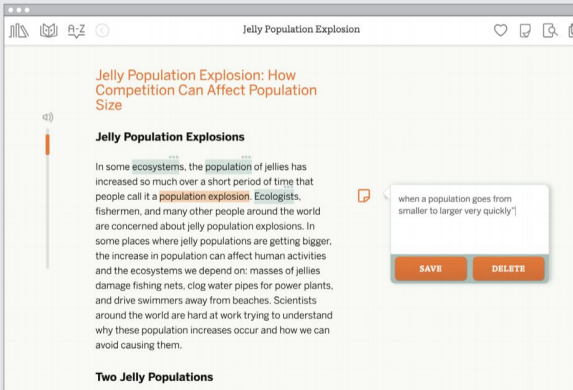
5. Project the "Jelly Population Explosion" article in the Amplify Library or project the printed article using a document camera.

6. Model Active Reading with a special emphasis on making deeper connections. As you model, emphasize the importance of making deeper connections as you read. You can use the following script, or you can model your own thinking.

- Read the title, then ask a question about it.
 - "Jelly Population Explosion"
- Record your question. Press ADD NOTE. Write "Why compare two jelly populations? What is different about them?"
- Begin to read the first paragraph. Stop after the second sentence ("... are concerned about jelly population explosions.")
- Model thinking about the meaning of population explosion.
 - It says that when populations increase a lot very quickly, this is sometimes called a population explosion. When I first think of an explosion, I think of fireworks or something exploding, and that doesn't quite make sense. Why would this be called a population explosion? I have heard the term population explosion before, though. When something explodes, it goes from being smaller to much larger all at once. I think that is what this means.

Amplify Science digital Teacher's Guide

Step 2: The teacher models her thinking



Jelly Population Explosion

Jelly Population Explosion: How Competition Can Affect Population Size

Jelly Population Explosions

In some ecosystems, the population of jellies has increased so much over a short period of time that people call it a **population explosion**. Ecologists, fishermen, and many other people around the world are concerned about jelly population explosions. In some places where jelly populations are getting bigger, the increase in population can affect human activities and the ecosystems we depend on: masses of jellies damage fishing nets, clog water pipes for power plants, and drive swimmers away from beaches. Scientists around the world are hard at work trying to understand why these population increases occur and how we can avoid causing them.

Two Jelly Populations

when a population goes from smaller to larger very quickly!

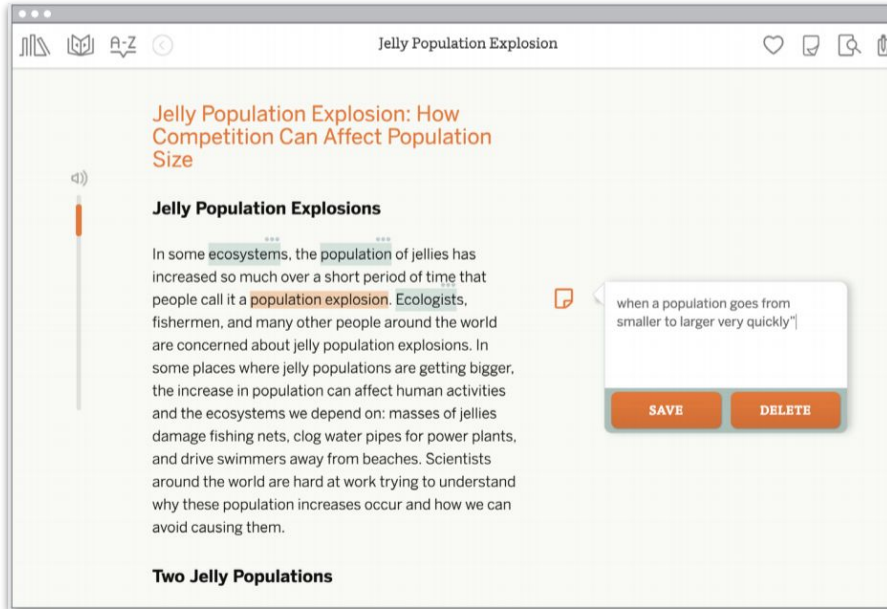
SAVE DELETE

Amplify Science student article

Step 3: The teacher models annotating the text

Active Reading

The first read



The screenshot shows a digital reading interface titled "Jelly Population Explosion". The main heading is "Jelly Population Explosion: How Competition Can Affect Population Size". Below this, there is a section titled "Jelly Population Explosions" with a volume icon on the left. The text in this section discusses how jelly populations have increased in some ecosystems, leading to "population explosions". A callout box on the right contains the definition: "when a population goes from smaller to larger very quickly". At the bottom of the callout box are "SAVE" and "DELETE" buttons. Below the main text is another section titled "Two Jelly Populations".

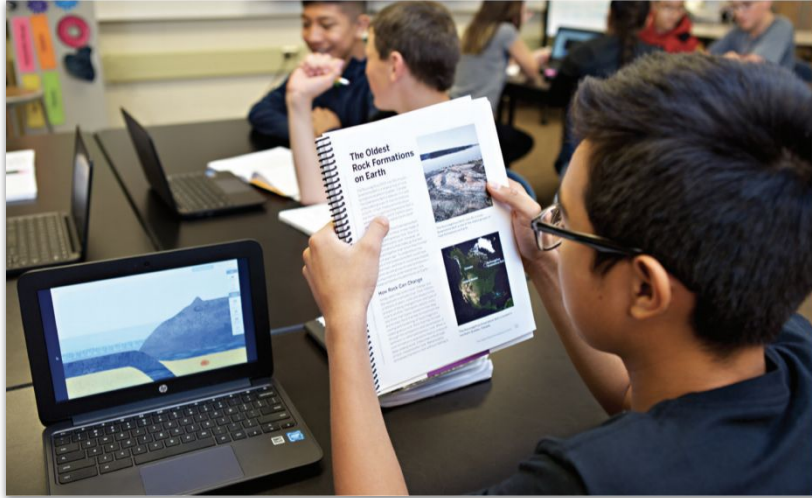


Students discuss their ideas and annotations with partners and dig back into the text together.

Students individually annotate the text by taking notes, and recording questions.

Active Reading

The second read



Students discuss the text
with a partner

Students reread a portion of the article for a particular purpose such as to examine a specific visual representation, answer a question, find evidence to support a claim or draw conclusions across texts.

Active Reading Guidelines

1. Think carefully about what you read. Pay attention to your own understanding.
2. As you read, annotate the text to make a record of your thinking. Highlight challenging words and add notes to record questions and make connections to your own experience.
3. Examine all visual representations carefully. Consider how they go together with the text.
4. After you read, discuss what you have read with others to help you better understand the text.

Introducing Active Reading, Lesson 1.4

Independent work time directions:

- Navigate to lesson 1.4
- Use the lesson materials to see how active reading is introduced.
 - Make sure to click on the article link to explore the digital text.
- Be ready to share out.

Reflection

- How is active reading introduced? What tools/scaffolds are included to support students?
- Is there anything you anticipate your students will find challenging? What action will you take to support them?



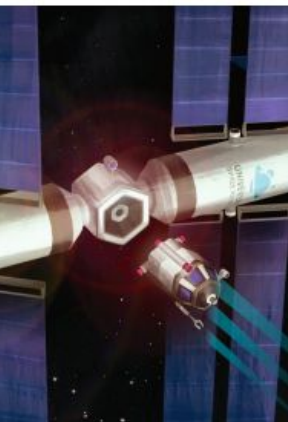
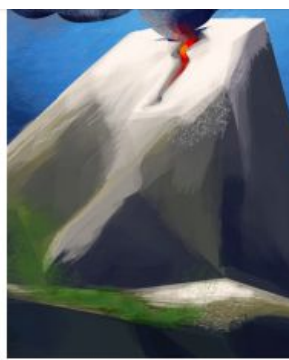
Ask in the chat feature



Questions?

5 min break

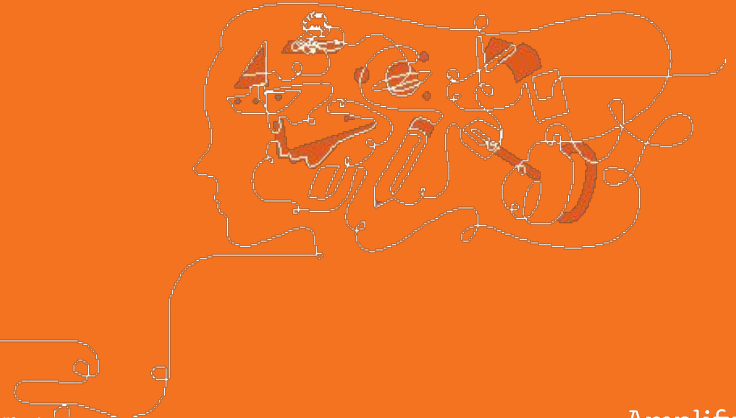




Plan for the day

- ✓ Experiencing the Launch Unit
- ✓ Launch Unit Components
- Planning to Teach
- Remote/Hybrid Resources
- Closing and reflection

Planning to Teach



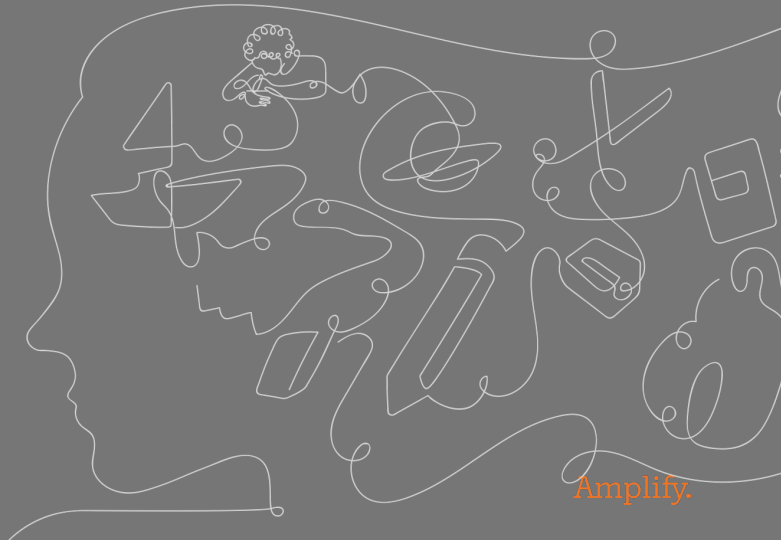


Answer in the chat feature



Group Talk

How do you typically prepare to teach a new unit?



Practice Planning a Lesson



What you need for this section:



Google or Word document

OR



Pen + paper



Your Turn!

Follow these 3 Easy Steps for lesson preparation

Step 1: Read the lesson overview

Step 2: Read the Materials and Preparation section

Step 3: Read the Differentiation section

The screenshot shows the Amplify lesson preparation interface for Lesson 1.2: Investigating Hot and Cold. The background features a pattern of blue and orange circles. The lesson title is displayed in the top right. Below the title is a navigation bar with four steps: 1. WARM-UP Warm-Up, 2. TEACHER-LED DISCUSSION Introducing the Unit, 3. HANDS-ON Investigating Hot and Cold Things, and 4. CLASS Reflecting on the Investigation. The first step is highlighted. Below the navigation bar, there are three orange arrows labeled Step 1, Step 2, and Step 3, pointing to the Overview, Materials & Preparation, and Differentiation sections, respectively. The Overview section is currently selected and displays a paragraph of text. On the right side, there is a 'GENERATE PRINTABLE LESSON GUIDE' button and a 'Digital Resources' section with several links. At the bottom left, there is a language selector for 'Español'.

Lesson 1.2:
Investigating Hot and Cold

Lesson Brief (4 Activities) 1 WARM-UP Warm-Up T TEACHER Video: A Tale of Two Heating Systems 2 TEACHER-LED DISCUSSION Introducing the Unit 3 HANDS-ON Investigating Hot and Cold Things 4 CLASS Reflecting on the Investigation

RESET LESSON

GENERATE PRINTABLE LESSON GUIDE

Digital Resources

- Video: A Tale of Two Heating Systems
- Thermal Energy Investigation Notebook, pages 5–9
- Completed Scientific Argumentation Wall Diagram
- Printable Thermal Energy Glossary
- Printable Thermal Energy Multi-Language Glossary

Español

Step 1 Overview

Step 2 Overview

Step 3 Overview

Overview

Students begin the unit with an introduction to their role as thermal scientists investigating how two types of heating systems will heat a school differently during the winter. To begin their research, students focus on the differences between the two heating systems. Students collect evidence by experimenting with food coloring in hot and cold water, and find that the food coloring disperses more quickly in warmer water. The purpose of this lesson is for students to begin to build an understanding that temperature is related to motion, a stepping stone to understanding temperature in terms of molecular motion.

Go 'live' to walk through lesson planning

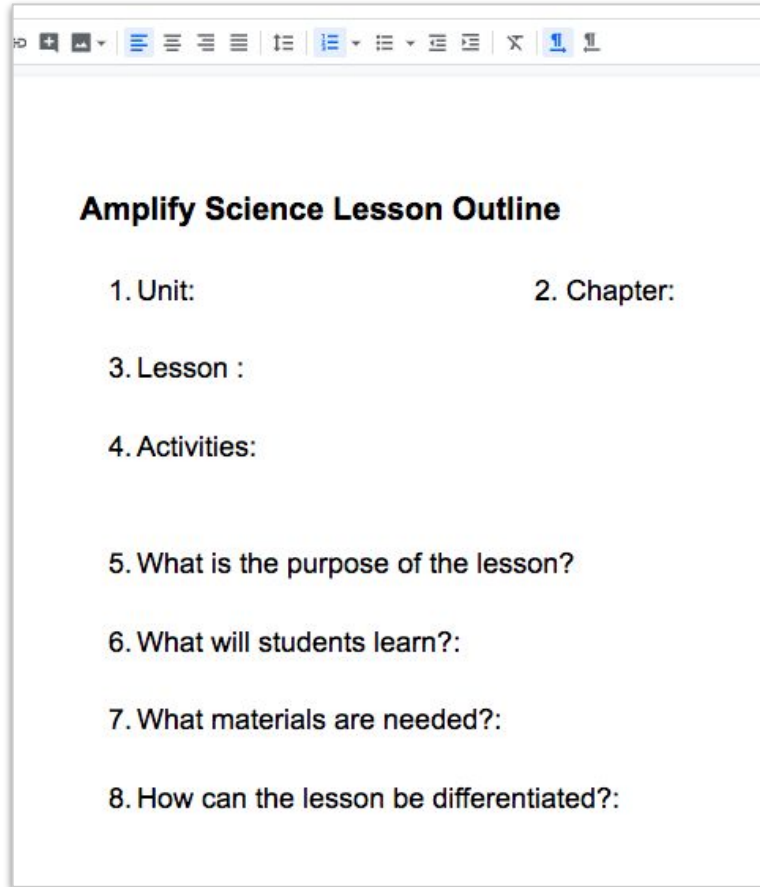
Outline your lesson

Follow these 3 Easy Steps for lesson preparation

Step 1: Read the lesson overview

Step 2: Read the Materials and Preparation section

Step 3: Read the Differentiation section



The image shows a screenshot of a web browser displaying a lesson outline form. The browser's address bar and toolbar are visible at the top. The form is titled "Amplify Science Lesson Outline" and contains eight numbered items for completion:

Amplify Science Lesson Outline

1. Unit:
2. Chapter:
3. Lesson :
4. Activities:
5. What is the purpose of the lesson?
6. What will students learn?:
7. What materials are needed?:
8. How can the lesson be differentiated?:



Reflect on planning a lesson

Reflecting on planning a lesson

How are students introduced to the unit's anchor phenomenon?

What are the big ideas students take away from the lesson?

What key vocabulary will students engage with?

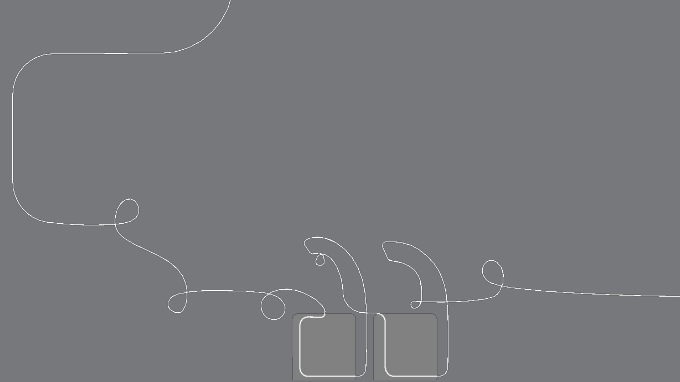
What are a few learning modalities students engaged with during the lesson?

How are students thinking and solving problems like a scientist?

Debrief



Answer in the chat feature



How are students thinking like scientists?

What might your students be challenged by?



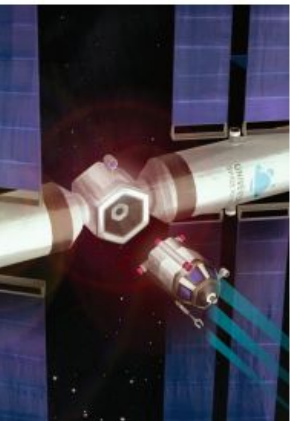
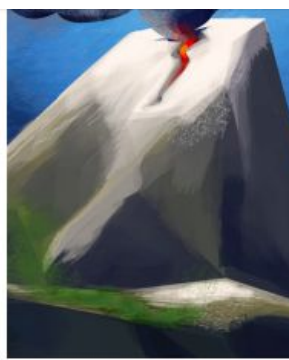
Ask in the chat feature



Questions?

5 min break

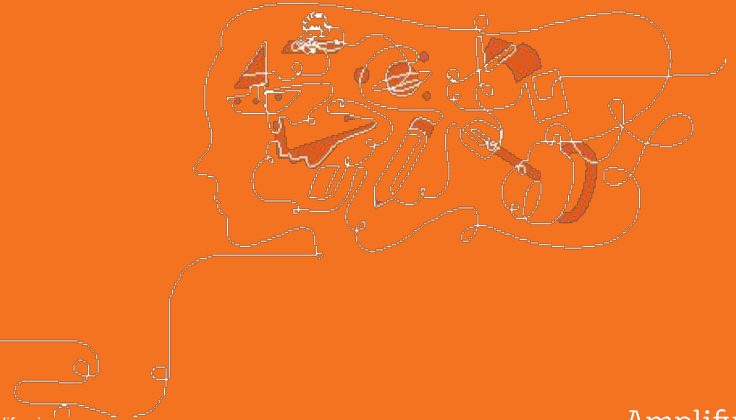




Plan for the day

- ✓ Experiencing the Launch Unit
- ✓ Launch Unit Components
- ✓ Planning to Teach
 - Remote/Hybrid Resources
 - Closing and reflection

Remote/Hybrid Resources



Remote/Hybrid Learning Guidance

- **amplify.com/remoteteaching**
 - Access resources and suggestions for using Amplify programs remotely.
- **Program Hub**
 - Access two new product features for teaching select units in various remote models.
 - **Amplify Science@Home Videos**
 - **Amplify Science@Home Units**

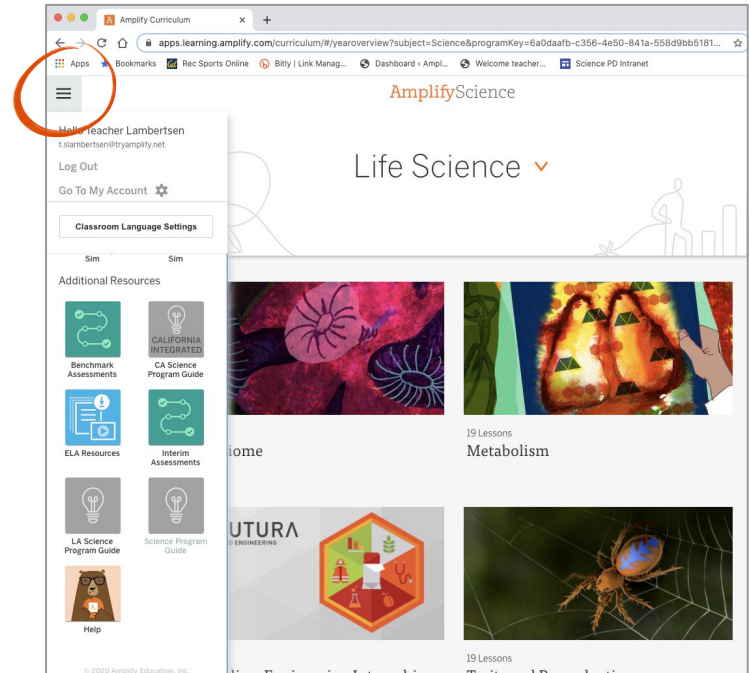


Amplify Science Program Hub

A new hub for Amplify Science resources

- Videos and resources to continue getting ready to teach
- Coming soon: Amplify@Home resources
- Keep checking back for updates

science.amplify.com/programhub



Amplify Science@Home

A suite of resources that...

- Are designed for students to complete independently
- Require no materials except a pencil and paper
- Include digital and print-only options
- Can be leveraged in a variety of remote and hybrid instructional formats



Amplify Science@Home

@Home Units

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

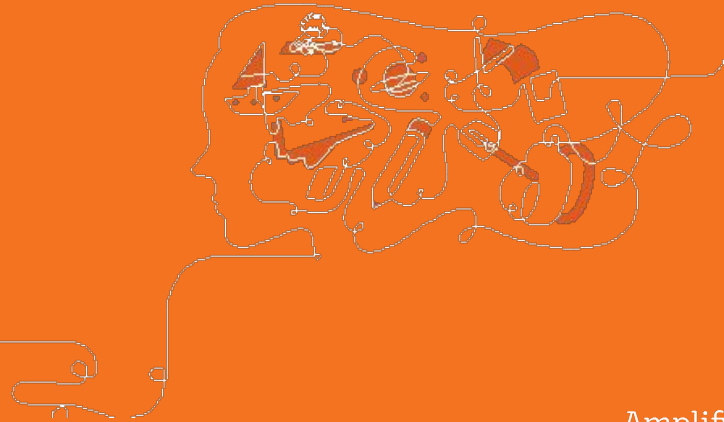
@Home Videos

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



@Home Units

Tips for selecting and using the resource



Selecting @Home Units

You might use this resource if...

- You have **less instructional time** for science than you normally would
- You need a solution for remote, asynchronous student learning some or all of the time

@Home Unit resources

All resources are fully editable and customizable

- Teacher Overview
 - Outlines the unit and summarizes each lesson
- Family Overview
 - Provides context for families
- Student materials
 - 30-minute lessons featuring subsets of activities from Amplify Science curriculum

@Home Units

Teacher Overview

- Instructions for establishing key routines
- Pacing suggestions for expanding or further condensing
- Assessment considerations for each chapter
- Guidance for synchronous and in-person learning for each lesson

@Home Unit Overview: Microbiome

About the @Home Units

The Amplify Science @Home Units are versions of Amplify Science units adapted for use with asynchronous instruction in a remote learning or hybrid learning situation. The resources, delivered in either digital or printable form, allow students to complete activities independently or with minimal help from a family member. @Home Units focus on a reduced set of prioritized activities, while preserving a coherent instructional build. The @Home Units retain a multimodal approach, engaging students in adapted versions of doing, talking, reading, writing, and visualizing.

These resources are intended to be modified and adapted for your particular situation. We provide suggestions for further adjusting the lessons for your context, including how to use the resources when some synchronous or in-person instruction is possible. For more in-depth information and the full teaching guide, please refer to the *Microbiome* unit at learning.amplify.com or your print Teacher's Guide.

Overview of @Home Unit Resources

Teacher resources

This @Home Unit Overview provides general information for teaching with the @Home Units. It also contains chapter-specific outlines for the @Home Microbiome unit with guidance about the subset of unit activities to be taught.

Student resources

The @Home Units include two options for student access during asynchronous learning:

- @Home Slides + Student Sheets (for students with consistent access to technology at home)
- @Home Packets (for students without consistent access to technology at home)

Both options provide guidance for students to complete the lessons independently or with minimal family support. For students using the @Home Packets, adaptations have been made so that digital resources, such as student apps and videos, are eliminated or optional. Similarly, for both @Home Slides and @Home Packets, activities which require specific physical materials have been modified or made optional. Note: student resources include information about how to access videos of these activities, which can be viewed on any digital device, including smart phones.

te only one chapter, your students will
(do not complete the entire unit, you may
phenomenon.

; students engage with key ideas through
ling, talking and writing. If needed one or
dents will still have exposure to key
ng activities are provided with each

ssons may be appropriate in your
) include:

Microbiome unit. Specific suggestions

ie Microbiome Investigation Notebook.
d of each chapter.

nts to explore, for example mold growing
ome explorations, phenomena ideas,

ie Microbiome Opportunities for Unit

<https://learning.amplify.com/uploads/science-unit-extensions/MB-O>

Remote Learning

ia by using science and engineering
and make explanations and arguments
ling, and visualizing. They also make
assroom wall. While we have retained
at home will require adaptations.

se adaptations, but you may need to set

up expectations for specific routines or provide additional supports 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

@Home Units

Family Overview

- Introduction to the unit and types of activities
- List of key ideas and vocabulary
- Suggestions for supporting students working at home



Hello!

Your student is about to start a unit called *Microbiome* in science class. We hope that the information here can help support you as you guide your student through their at-home science learning.

We are using a program called Amplify Science, which is split up into units about different areas of science. In each unit, students start by wondering about something that happens in the real world and they investigate, talk, read, write, think, and argue like real scientists and engineers in order to figure out how and why that thing happens.

In the *Microbiome* unit, students learn about the trillions of microorganisms that live on and in the human body, which all together are called the human microbiome. As they figure out what's going with one patient's microbiome, students get familiar with the practices of science, including the specific ways that scientists investigate, talk, read, write, and argue. These practices will be important as students study science throughout the year, and beyond.

We are using a version of *Microbiome* that is specially designed for at-home learning. It gives students many opportunities to consider different questions about the human microbiome, gather evidence to help them understand, then use that evidence to make an explanation. This means students will be doing activities that involve talking, writing, reading, and investigating.

In order to support your student, you can help them with understanding directions, writing about their ideas, and reading articles. Students are asked to do some activities with a partner, and you can be your student's partner as they talk over questions and ideas and practice scientific arguments.

In this unit, students are investigating what's happening with Patient 23, and you may wish to ask your student:

- "What did you figure out in your science lesson today?"
- "How does that help you understand what's happening with Patient 23?"

Answering these questions after every lesson can help students understand more deeply and keep them interested in learning more.

evidencia: información sobre el mundo natural que se utiliza para respaldar o rechazar (refutar) una afirmación

- **microbiome:** all of the microorganisms that live in a particular environment, such as a human body
microbioma: todos los microorganismos que viven en un ambiente específico, por ejemplo en un cuerpo humano
- **microorganism:** an organism that is too small to be seen with the naked eye
microorganismo: un organismo que es demasiado pequeño como para ver a simple vista
- **microscopic:** too small to be seen with the naked eye

...see, cells are much bigger than molecules.

...imately 100 trillion microorganisms. Most of

...nt (food and space) for bacteria to survive. ... types of bacteria.

...uman microbiome can make a person sick. ... and harmful bacteria in the microbiome. ...ful bacteria in their guts can become infected and space available for harmful bacteria.

Use? ...at students use throughout the unit. Getting ...imes different from how people use these ...port your student's at-home learning. Your words along with additional words from the

...anisms, especially bacteria
microorganismos, especialmente las bacterias
...f a single cell
son hechos de una sola célula
...l living things and are the smallest units able to

constituyen todos los seres vivos y que son las ...mpañar las funciones de la vida
...about the natural world
una pregunta sobre el mundo natural
...world that is used to support or go against

Selecting @Home Units

Different ways to use the resource

- Assign students @Home Lessons to work through independently at home
- Teach live during in-person or online synchronous time
 - Refer to Teacher Overview resources for suggestions for synchronous instruction, or
 - Revisit hands-on activities, digital tool uses, or discussion moments

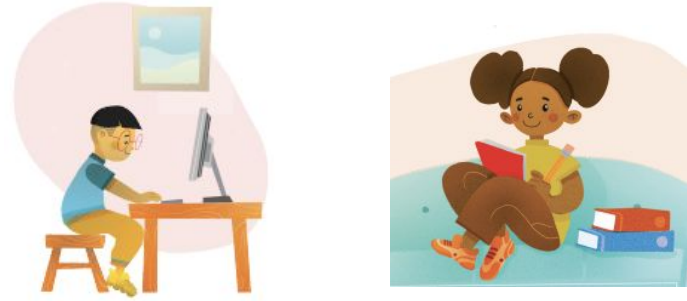
@Home Units example use case

Remote Asynchronous Model: Students work flexibly through content



Monday-Thursday

Assign @Home Lessons 1-2
(Packets or Slides)



Friday

Students submit work product
through email, or by writing on
paper and texting the teacher a
photo of their work

@Home Units example use case

Hybrid Model: Teach live during in-person time



Monday-Tuesday

Remote

Assign: @Home Lesson 1 (Packet or Slides)

Wednesday

In-person

Teach: @Home Lesson 1: Ideas for synchronous or in-person instruction

Thursday-Friday

Remote

Assign: @Home Lesson 3 (Packet or Slides)

Planning to use @Home Units

- Download and read your unit's **Teacher Overview** on the Program Hub
- Plan for establishing **key routines** for talk, writing, reading, hands-on, and classroom wall references
 - *(See: Adapting the Amplify Science Approach for Remote Learning in your unit's Teacher Overview)*
- Determine **how students will access** slides or packets, and how they will **submit work**
- Consider **pacing**, including when you have synchronous science time with your students (if applicable)

Reflection

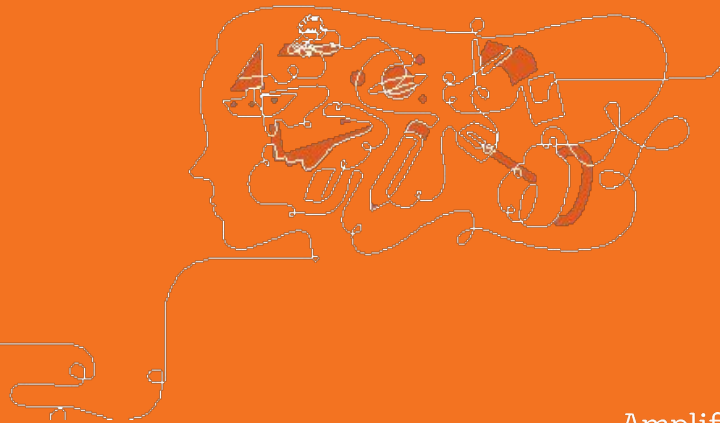
What other ideas do you have for using @Home Units?

How could you make this resource work for your learning scenario?



@Home Videos

Tips for selecting and using the resource



Selecting @Home Videos

You might use this resource if...

- Your students have **access to internet-connected devices** at home
- You have **about the same amount of instructional time** for science as you normally would
- You need a solution for remote, asynchronous student learning some or all of the time



Selecting @Home Videos

Different ways to use the resource

- Assign students video lessons to watch at home
- Teach live during in-person or online synchronous time!
 - Teach full lessons, or
 - Revisit parts of lessons in the videos students have already watched
- Watch the videos yourself as a model, then make videos of yourself teaching to send to your students

@Home Videos example use case

Hybrid Model: Teach live during in-person time



Monday

Remote

Assign: Lesson 1.1
Video



Tuesday

In-person

Teach: Lesson 1.2
live



Wednesday

Remote

Assign: Lesson 1.3
Video



Thursday

Remote

Assign: Lesson 1.4
Video



Friday

In-person

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

@Home Videos example use case

Remote Synchronous Model: Discussions during online class



Monday

Asynchronous

Assign: Lesson 1.1
Video



Tuesday

Asynchronous

Assign: Lesson 1.2
Video



Wednesday

Synchronous

Teach: Lead class
discussion to review
key ideas from 1.1
and 1.2



Thursday

Asynchronous

Assign: Lesson
1.3 Video



Friday

Asynchronous

Assign: Independent
written reflection
about week's lessons

Planning to use @Home Videos

- Determine **how students will access** videos, and how they will **submit work**
- Consider **pacing**, including when you have synchronous science time with your students (if applicable)
- Plan for **student access to digital tools** and/or digital books and articles (if applicable)
- Consider how you'll **communicate with families** about this resource

Reflection

What other ideas do you have for using @Home Videos?

How could you make this resource work for your learning scenario?

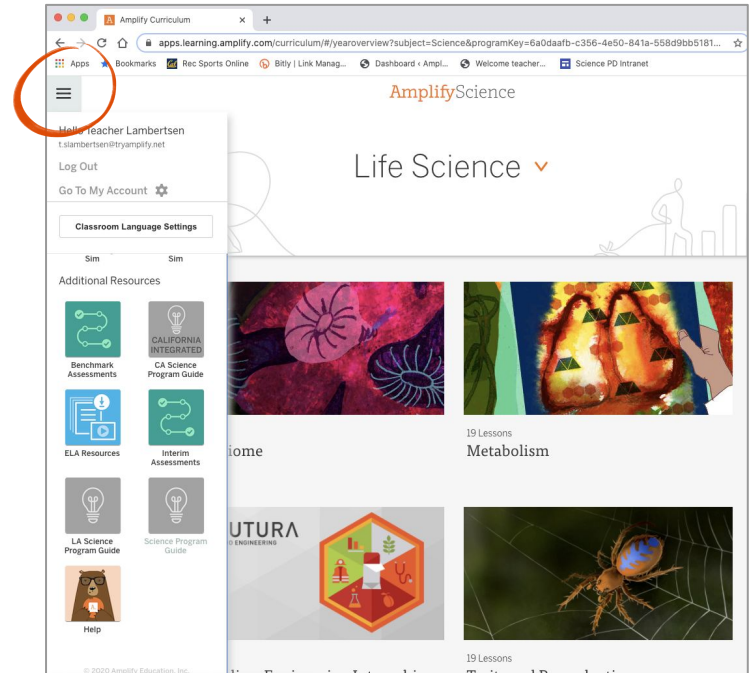


Amplify Science Program Hub

A new hub for Amplify Science resources

- Click on Global Navigation
- Scroll down and click on Program Hub
- Take some time to explore the resources here.

science.amplify.com/programhub

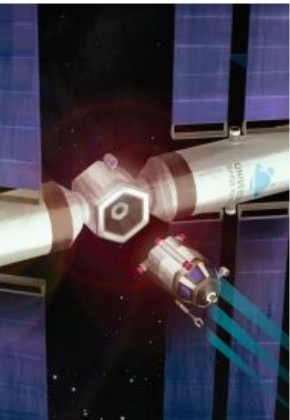
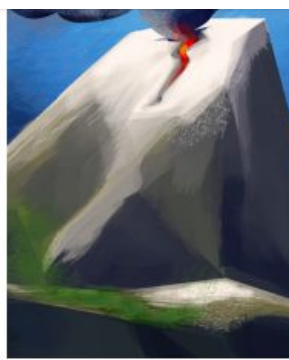




Ask in the chat feature



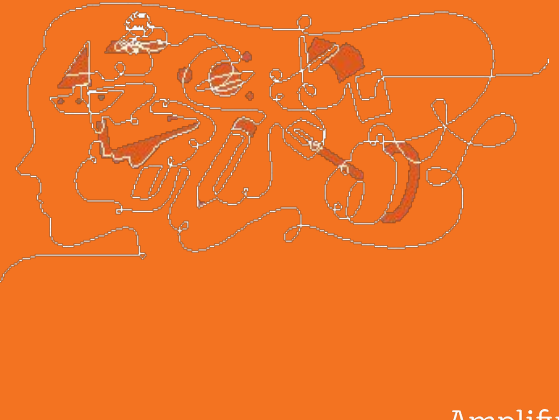
Questions?



Plan for the day

- ✔ Experiencing the Launch Unit
 - ✔ Launch Unit Components
 - Planning to Teach
 - ✔ Remote/Hybrid Resources
- Closing and reflection

Closing and Reflection





Ask in the chat feature



Questions?

Revisiting Day 2 Objectives

Are you able to...

- Understand the purpose of Launch Units?
- Apply program essentials to prepare to teach an Amplify Science Launch Unit?
- Make an informed decision about which of the Amplify Science Hybrid Learning Resources will best support your students?

Overarching goals

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

- Navigate the Amplify Science curriculum.
- Understand the program's multimodal approach and instructional materials.
- Apply program essentials to prepare to teach an Amplify Science unit.
- Make an informed decision about which of the Amplify Science Hybrid Learning Resources will best support your students.



Closing reflection

Based on our work today, share:



Answer in the chat feature

Brain: something you'll keep in mind

Heart: something you're feeling

Feet: something you're planning to do

New York City Resources Site

<https://amplify.com/amplify-science-nyc-doe-resources/>

- Login information
- Pacing guides
- Getting started guide
- NYC Companion Lessons
- Resources from professional learning sessions
- And much more!

Amplify.

Amplify Science

Resources for NYC (6-8)

resources designed for
Amplify Science



THE LAWRENCE
HALL OF SCIENCE
UNIVERSITY OF CALIFORNIA, BERKELEY

Amplify.

UPDATES: Summer 2020

Program Rollover – Login Access: It's an exciting time for Amplify Science as we are updating our program to reflect all of the amazing new features for the 2020-21 school year! During this rollover process (July 1- 17), you will be temporarily unable to login with your personal account so we can apply the most recent upgrades to our content that will assist with your summer planning for the 20/21 school year.

We encourage you to use the [NYC reviewer site](#) for full curriculum access during the transition. Once on the site, scroll to the bottom of the page and select *Begin your review* → *select your grade level* → *teacher*.

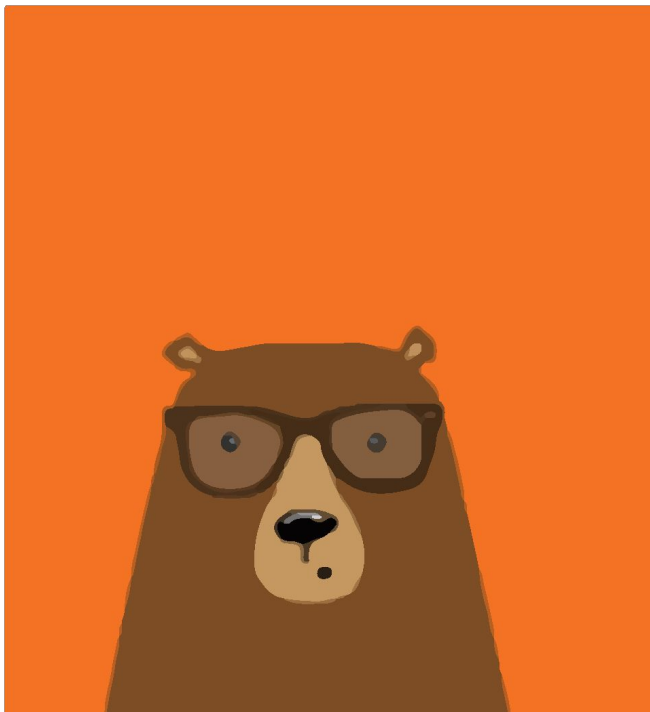
On **July 18**, your personal login will be restored and you will be able to log back in with your regular credentials to see the updated curriculum for 20/21 in your

COVID- 19 Remote learning resources 2020

Professional learning resources

Questions

Additional Amplify resources



Program Guide

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

my.amplify.com/programguide

Amplify Help

Find advice and answers from the Amplify team.

my.amplify.com/help

Additional Amplify support

Customer Care

Access 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

Additional Amplify Support

Customer Care

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



scihelp@amplify.com



800-823-1969



Amplify Chat

When contacting the customer care team:

- Identify yourself as an Amplify Science user.
- Note the unit you are teaching.
- Note the type of device you are using (Chromebook, iPad, Windows, laptop).
- Note the web browser you are using (Chrome or Safari).
- Include a screenshot of the problem, if possible.
- Copy your district or site IT contact on emails.

Please provide us feedback!

URL: <https://www.surveymonkey.com/r/InitialAmplifySciPL>

Presenter name: XXX

Workshop title: Navigating Program Essentials 6-8

Modality: Remote

