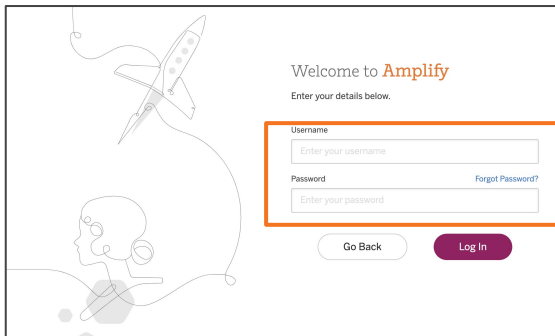
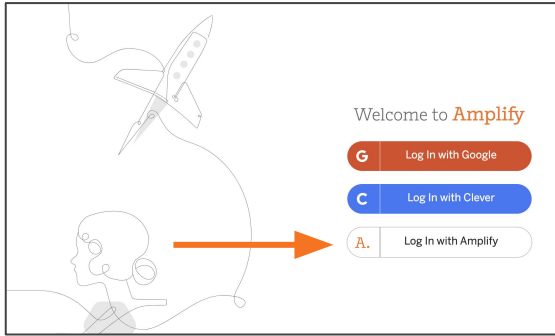
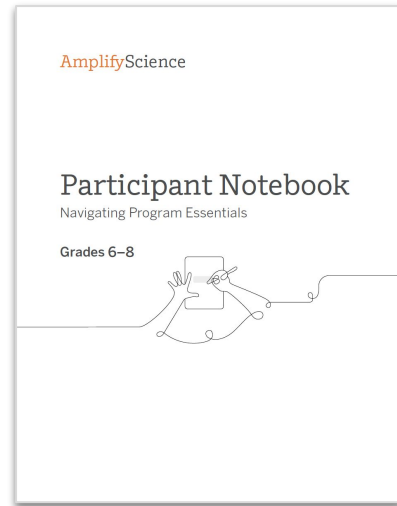


# Welcome to Amplify Science!

Do Now: Login and open your digital participant packet

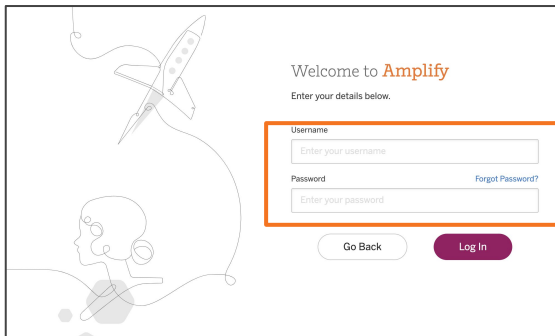
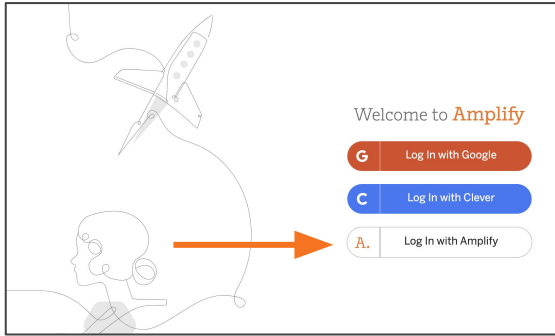


1. Go to **learning.amplify.com**
2. Select **Log in with Amplify**
3. Enter teacher demo account credentials
  - nycdoe\_middle@tryamplify.net
  - Password: AmplifyNumber1
4. Explore as we wait to begin

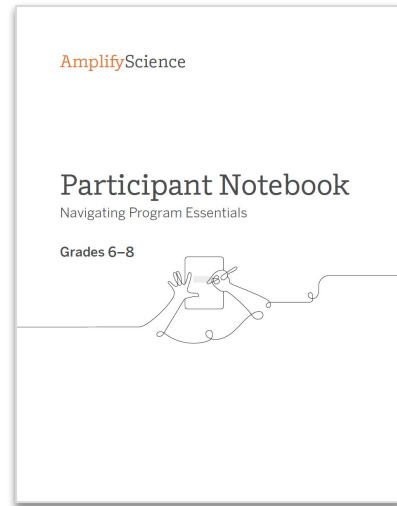


# Welcome to Amplify Science!

## 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...

21 You

Miller Copy of Navigation Prop... x Amplify Curriculum x PM\_Resource\_Coherence\_Flow... x

apps.learning.amplify.com/curriculum/#unit/8a31e095506df8a2015256f884b4544\_californiaintegrated2019-2020#progress-build

Amplify Science

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 x +

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

TEACHER Why Geologists Value Fossils

2 TEACHER-LED DISCUSSION Introducing Mesos

RESET LESSON

GENERATE PRINTABLE LESSON

Lesson Brief

Digital Resources

Overview

Materials & Preparation

Differentiation

Español rds

All Projections

Completed Scientific Argumentation Wall Diagram

Video: Meet a Paleontologist

The Ancient Mesosaurus

# Amplify Science

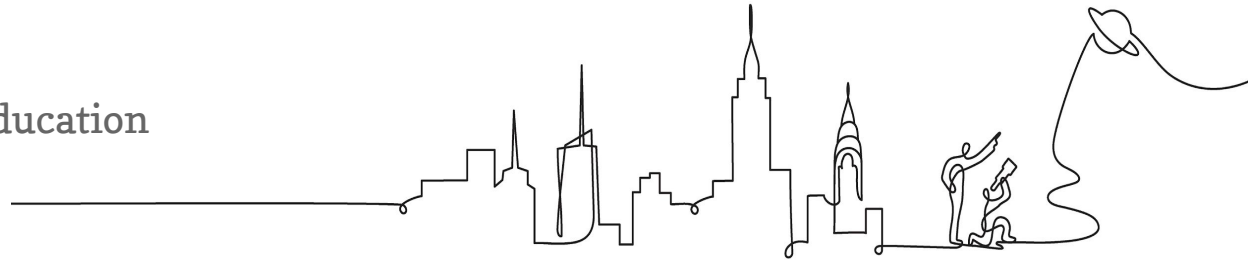
New York City

## Introduction to Amplify Science NYC Summer Institute, Day 1

Grade 6: Harnessing Human Energy & Thermal Energy

New York City Department of Education  
July 21, 2020

Presented by

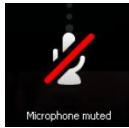


# Remote Professional Learning Norms

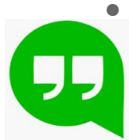


**Orient yourself to the platform**

- *“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**

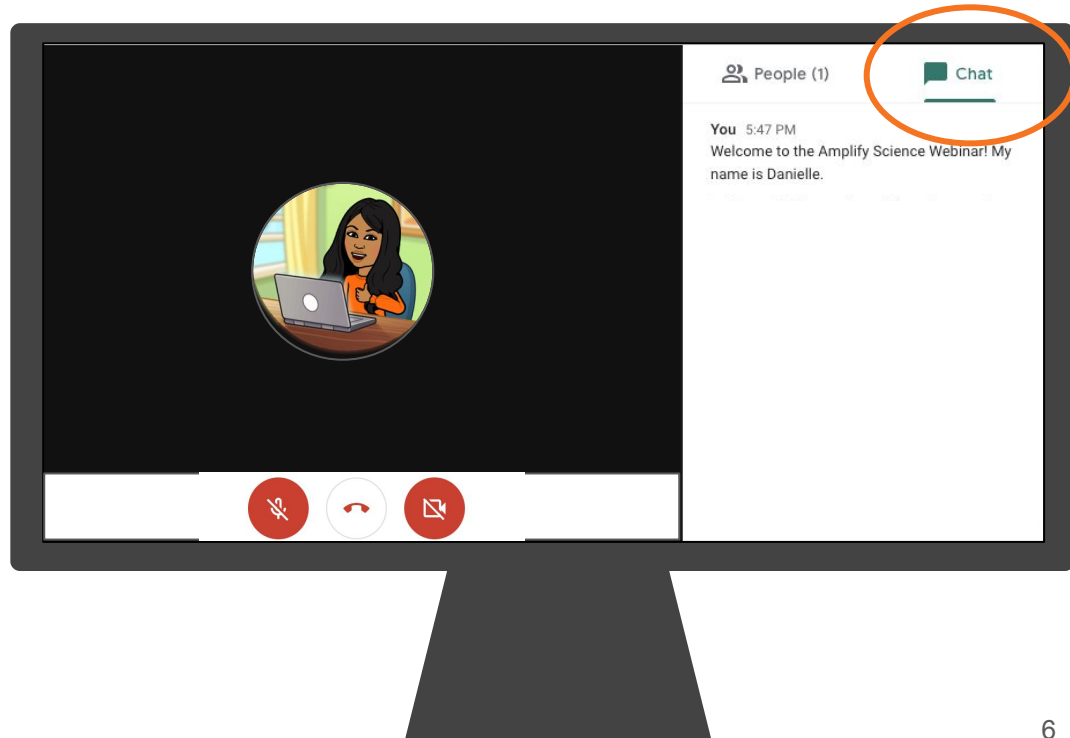


**Engage at your comfort level** - chat, ask questions, discuss.

# Introductions!

## Who do we have in the room today?

- **Question 1:** What do you love about teaching science?
- **Question 2:** What do you need to learn today and tomorrow to feel confident with this new curriculum?



# 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.

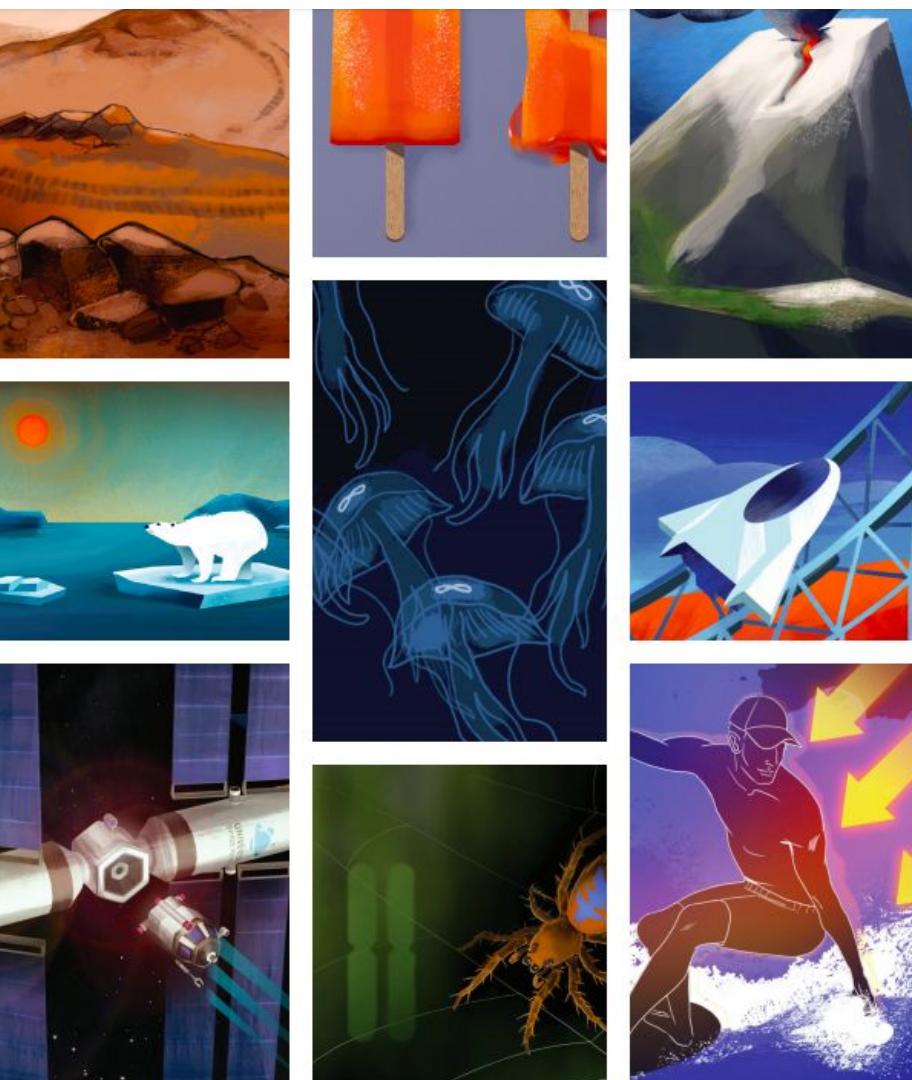


# Day 1 Objectives

By the end of today you will be able to:

- Navigate the Amplify Science curriculum.
- Understand the program's phenomenon-based approach and instructional materials.

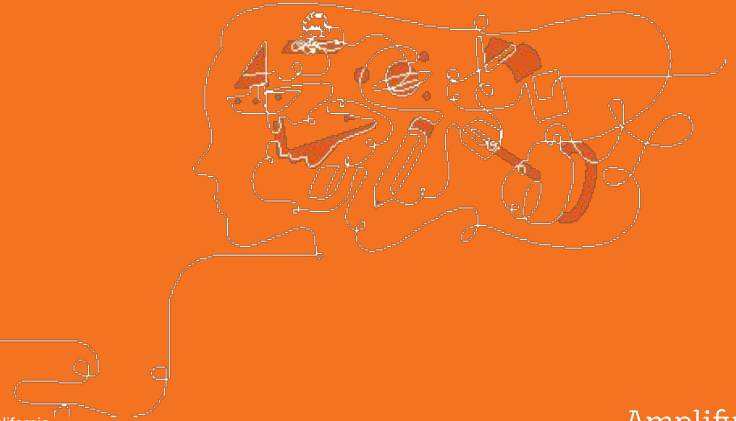




# Plan for the day

- What is Amplify Science?
- Navigation essentials
- Teaching a phenomenon-based lesson
- Unit Guide Resources
- Assessments
- Closing and reflection

# What is Amplify Science?





THE LAWRENCE  
HALL OF SCIENCE  
UNIVERSITY OF CALIFORNIA, BERKELEY

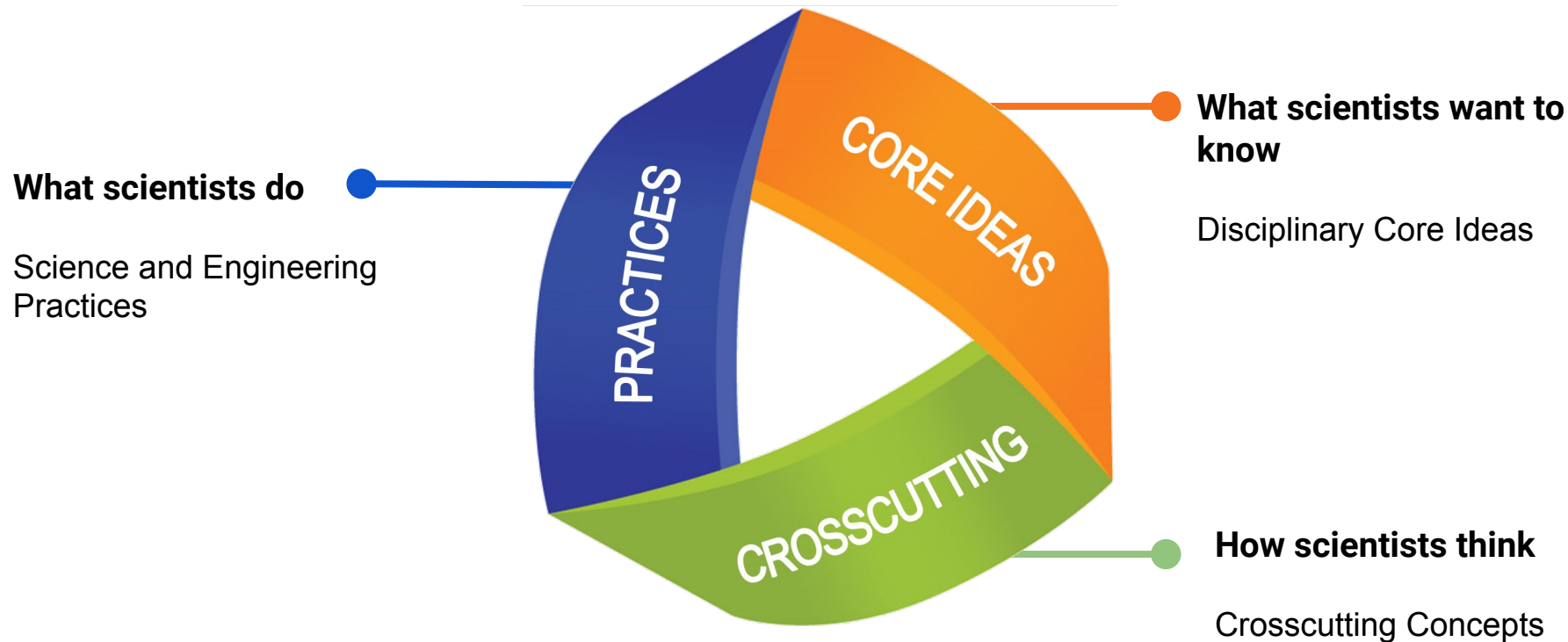
+ Amplify.

---

Amplify Science

# Next Generation Science Standards

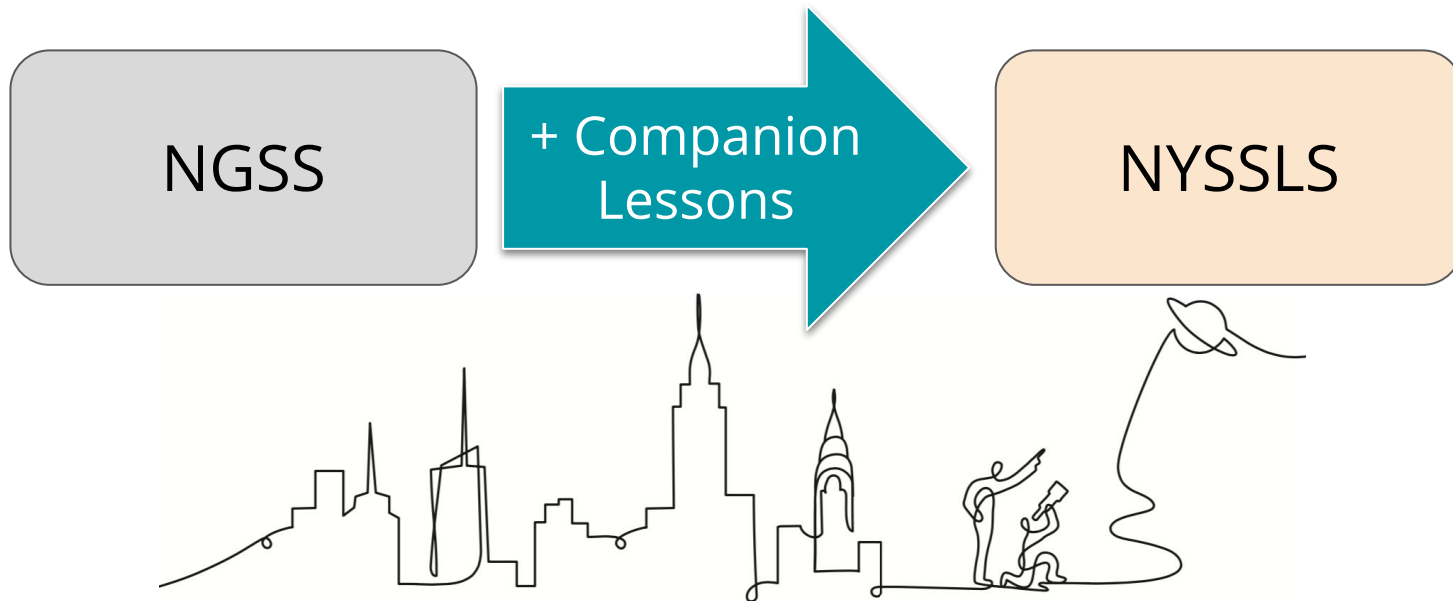
Designed to help students build a cohesive understanding of science



# NYC Companions

Amplify Science

Amplify Science NYC Edition



# NYC Companion Lesson Slides, Grade 6

<https://amplify.com/resources-page-for-nyc-6-8/>

Grade 6 lesson guides and copymasters

Harnessing Human Energy: Investigating Electrical Devices: >

Harnessing Human Energy: Investigating Non-Touching Forces: >

Harnessing Human Energy: Reading About Non-Touching Forces: >

Thermal Energy: Designing Hot and Cold Packs: >

Populations and Resources: Reading “The Amazing Variety of Life in a Coral Reef”: >

Weather Patterns: Reading “What Makes Water Move?” >

Ocean, Atmosphere, and Climate: Investigating Deep Ocean Currents: >

Slides for the first unit will be available on the NYC Resources site in September.

# Middle School Units: **Launch; Core; Internship**



11 Lessons  
Geology on Mars



19 Lessons  
Plate Motion

**FUTURA**  
GEOTECHNICAL ENGINEERING

10

10 Lessons  
Plate Motion Engineering Internship

The graphic features a hexagonal shape divided into four quadrants, each containing a different technical icon: a radio tower, a microscope, a circuit board, and a waveform. The background is a light gray with a subtle geometric pattern.

AmplifyScience

authored by  THE LAWRENCE  
HALL OF SCIENCE  
UNIVERSITY OF CALIFORNIA, BERKELEY

All curriculum materials ©2016 The Regents of the University of California  
© 2017 Amplify Education, Inc. All trademarks and copyrights are the property of Amplify or its licensors.

# Middle School Curriculum New York City Edition

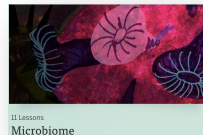
## Grade 6

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



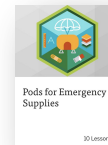
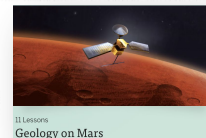
## Grade 7

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

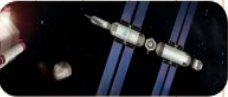


## Grade 8

- 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



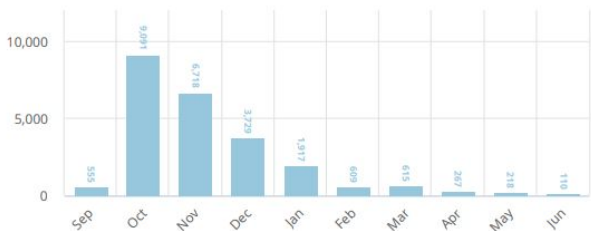


Sept.				Oct.				Nov.				Dec.				Jan.				Feb.				Mar.				Apr.				May				Jun.								
9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/30	1/6	1/13	1/20	1/27	2/3	2/10	2/24				3/2	3/9	3/16	3/23	3/30	4/6	4/20	4/27				5/4	5/11	5/18	5/25	6/1	6/8	6/15	6/22
																																												
Launch Unit: Harnessing Human Energy				Thermal Energy				Populations and Resources				Matter and Energy in Ecosystems				Weather Patterns				Ocean, Atmosphere, and Climate				Earth's Changing Climate																				
																																												
Launch Unit: Microbiome				Metabolism				Phase Change				Chemical Reactions				Plate Motion				Engineering Internship: Plate Motion				Rock Transformations				Engineering Internship: Earth's Changing Climate																
																																												
Launch Unit: 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												
9/9	9/16	9/23	9/30	10/7	10/14	10/21	10/28	11/4	11/11	11/18	11/25	12/2	12/9	12/16	12/30	1/6	1/13	1/20	1/27	2/3	2/10	2/24				3/2	3/9	3/16	3/23	3/30	4/6	4/20	4/27				5/4	5/11	5/18	5/25	6/1	6/8	6/15	6/22

# 6th Grade Overview: Scope and Sequence

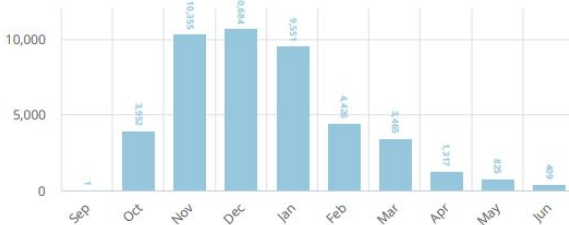
Harnessing Human Energy

Sept-Oct



Thermal Energy

Oct-Nov



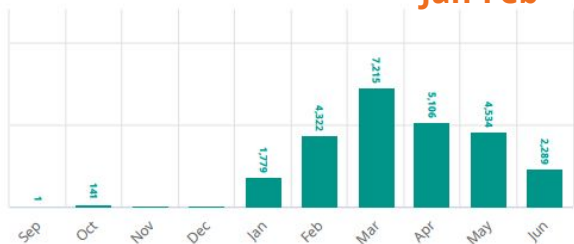
Populations and Resources

Nov-Dec



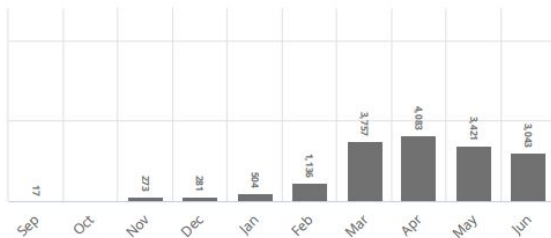
Matter and Energy in Ecosystems

Jan-Feb\*



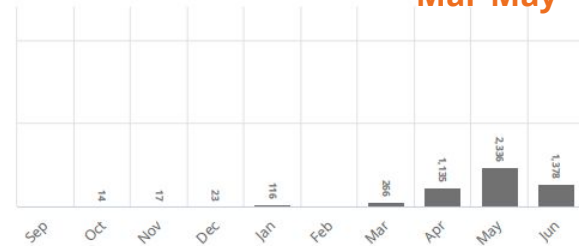
Weather Patterns

Feb-Mar



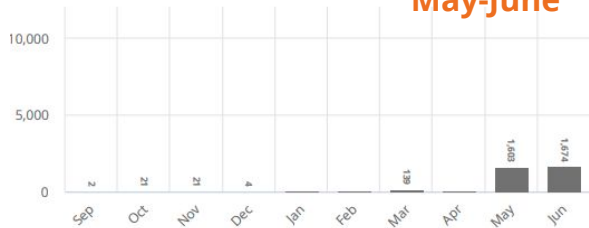
Ocean, Atmosphere, and Climate

Mar-May



Earth's Changing Climate

May-June



# Unit at a Glance: Thermal Energy



## Thermal Energy

16 lessons

45 minutes each

3 assessment days

**Domain:** Physical Science

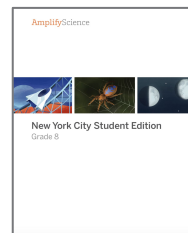
**Unit type:** Core

**Student role:** Thermal Scientists

**Phenomenon:** Riverdale School needs a new heating system.

# Middle School Unit Resources

NYC Print student editions



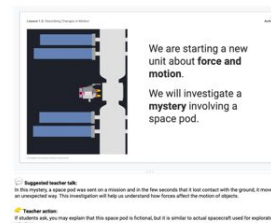
Investigation  
Notebooks or digital  
student experience



Articles  
(digital or print)



Simulations and other  
digital tools



Classroom Slides



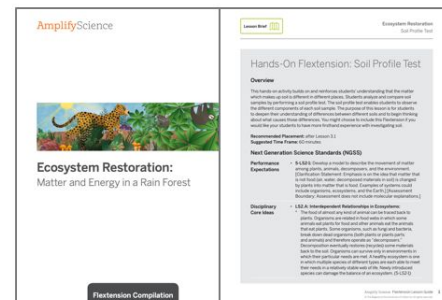
Teacher's Guide  
(digital or print)

ACTIVITIES		LEVELS
SUBMISSIONS	LAST SUBMISSION	FEEDBACK
23/05	5:38 PM Mon 4/10/23	0
23/05	5:00 PM Mon 4/10/23	2 reading
23/05	4:57 PM Mon 4/10/23	0
23/05	1:42 PM Mon 4/10/23	0

Assessments and  
Reporting



Hands-on and print  
materials



Hands-on Flexensions

# Classwork

UNIT	CHAPTER	LESSON	ACTIVITY TYPE	ACTIVITY	SUBMISSIONS	LAST SUBMISSION	FEEDBACK
Force and Motion	1   Force and Velocity	1   Pre... X 2   Des... X	All	CLASS Multiple Choice Lesson 1	26/26	5:38 PM Wed. 4/17/19	0
				CLASS Written-Response Question #1 Lesson 1	23/26	5:00 PM Wed. 4/17/19	2 awaiting
				CLASS Written-Response Question #2 Lesson 1	23/26	4:57 PM Wed. 4/17/19	0
				WARM-UP Warm-Up Lesson 2	23/26	1:42 PM Thu. 4/18/19	0

1. Which statement best describes what Earth's outer layer is like underneath the surface in the image?

a Underneath both the soil and the ocean, Earth's outer layer is made of sand and water.

b Underneath both the soil and the ocean, Earth's outer layer is made of hard, solid rock. ✓

c Underneath the soil, Earth's outer layer is made of hard, solid rock. Underneath the ocean, Earth's outer layer is made of sand.

d Hard-working

65% of students answered correctly.

2. Dr. Robie and her team of geologists have been studying GPS data that shows that two plates moved apart. Which diagram shows what happened between the two plates as they moved away from each other?

a Diagram A: A new plate from underneath filled in the gap that was created by the plates moving apart.

b Diagram B: Sand and dirt filled in the gap that was created by the plates moving apart.

c Diagram C: Ocean water filled in the gap that was created by the plates moving apart.

d Diagram D: Soft, solid rock from underneath the plate's rose and hardened, adding solid rock to the edges of both plates.

87% of students answered correctly.

Annotations: "Easily advance to the next student" points to the 'Next' button. "Use the feedback panel to input rubric scores, comments, and award badges" points to the feedback panel. "Easily reference the total number of students who answered an automatically graded question correctly" points to the percentage of students who answered correctly.

Written Response #1

A team of geologists learned from GPS data that two continents that have an ocean between them are moving toward each other. Diego's little brother hears this and cannot believe that continents can move and is worried that those two continents are going to run into each other. How would you explain to him what is happening?

I would tell Diego's little brother that he doesn't have to worry about the two continents moving towards each other because **plate motion is a gradual process** that takes place over a very long period of time. Plate collisions don't happen suddenly. **The rate of plate motion** is so slow that the geologists discovered is probably an extremely small amount and Diego **wouldn't be able to detect that tiny change**.

Word Count: 70

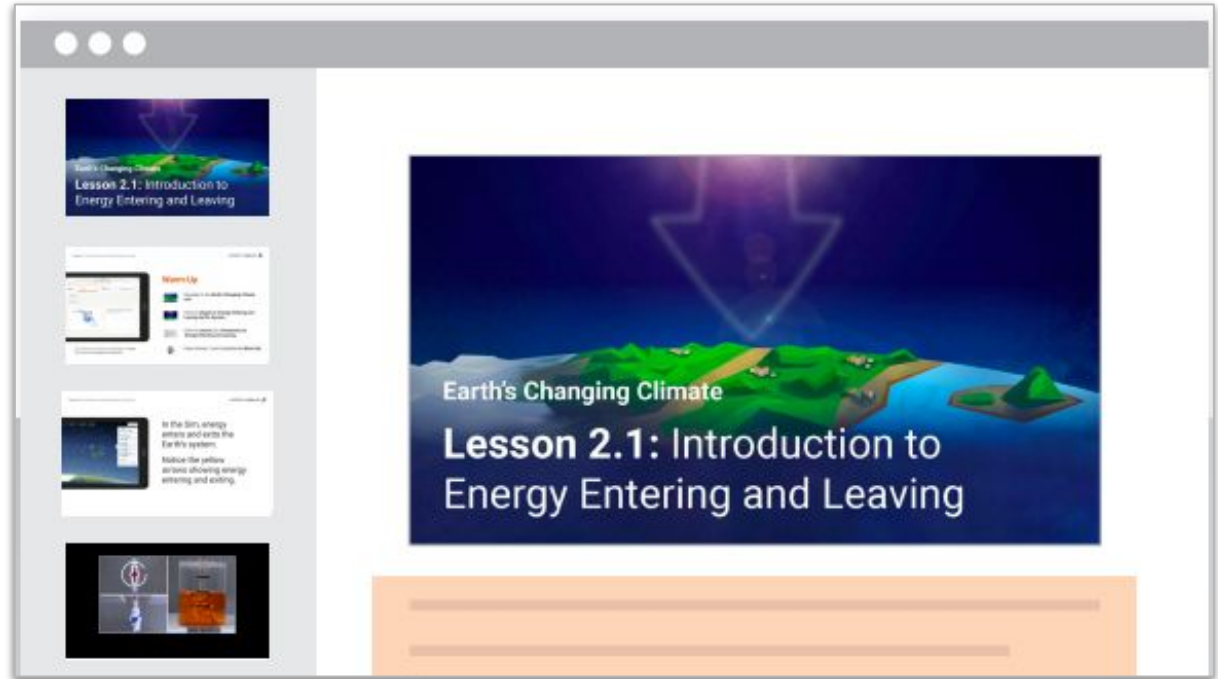
Written Response #2

Annotations: "Include emoji" points to the emoji button in the feedback panel.

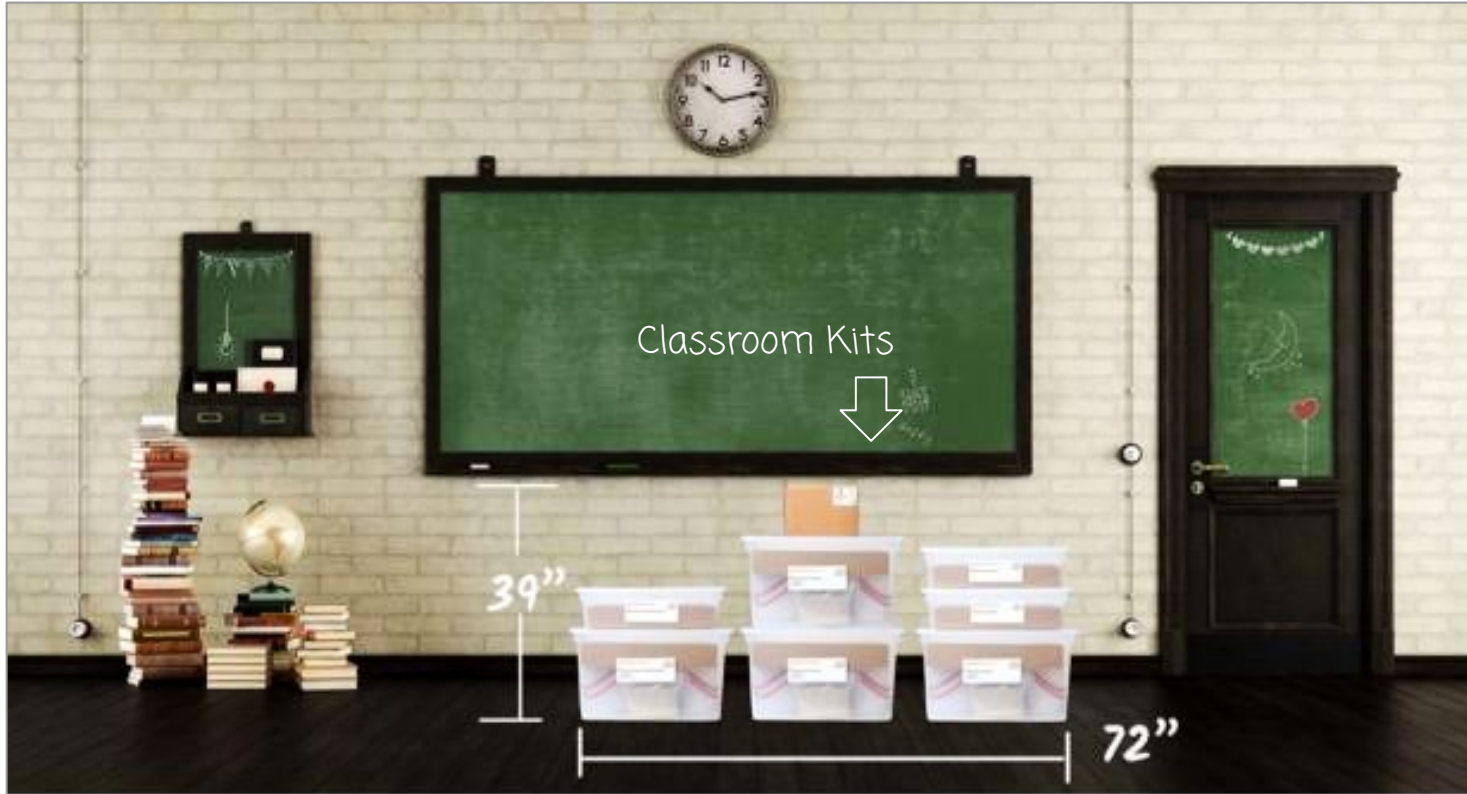
# Coming Soon for Back to School!

## Classroom Slides

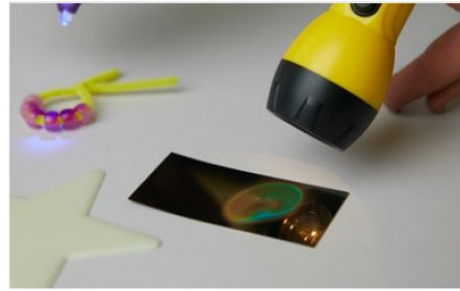
Each lesson will have a downloadable and editable PowerPoint file to help guide teachers and their students through the lesson.



# Classroom Kits



# Hands On Learning Materials





# Classroom Wall Print Materials

## Unit Question

Why do things change temperature?

## Chapter 1 Question

What is happening when the air in the school gets warmer?

## Investigation Question

How is something different when it's warmer or cooler?

## Key Concepts

1. Things are made of molecules (or other types of atom groups).

2. When a thing gets hotter, its molecules are moving faster.

3. When a thing gets colder, its molecules are moving slower.

## Vocabulary

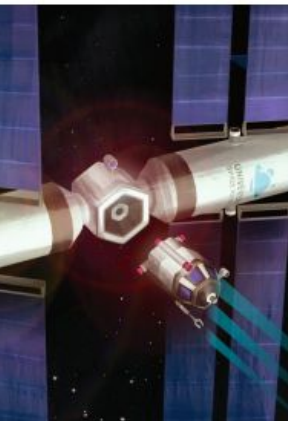
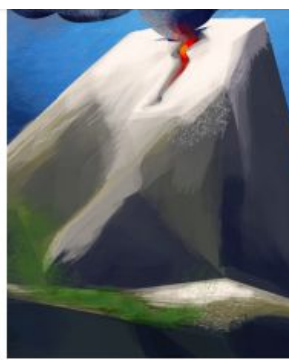
**molecule**



**Ask in the chat feature**



# Questions?

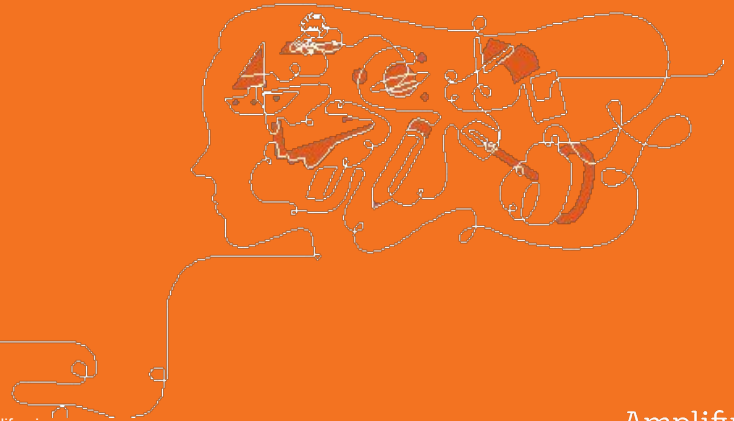


# Plan for the day

## ✓ What is Amplify Science?

- Navigation essentials
- Teaching a phenomenon-based lesson
- Unit Guide Resources
- Assessments
- Closing and Reflection

# Navigation Essentials



Unit



Chapters



Lessons



Activities

19 Lessons  
Thermal Energy

Chapter 1:  
Understanding  
Temperature

4 Lessons

Chapter 2:  
Temperature and  
Energy

7 Lessons

Chapter 3: Changes  
in Temperature

4 Lessons

Chapter 4: Water  
Pasteurization

4 Lessons

Lesson 1.1:  
Pre-Unit Assessment

SETTINGS

Lesson 1.2:  
Investigating Hot  
and Cold

Lesson 1.3:  
Temperature and  
Motion

Lesson 1.4:  
Molecules and  
Temperature

1	WARM-UP Warm-Up	2	TEACHER-LED DISCUSSION Redefining Temperature	3	MODELING TOOL Modeling Differences in Temperature	4	STUDENT-TO-STUDENT DISCUSSION Considering the Heating Systems	5	HOMEWORK Homework	6	HOMEWORK Self-Assessment (Optional)
---	--------------------	---	---	---	---	---	--	---	----------------------	---	--

# 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

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

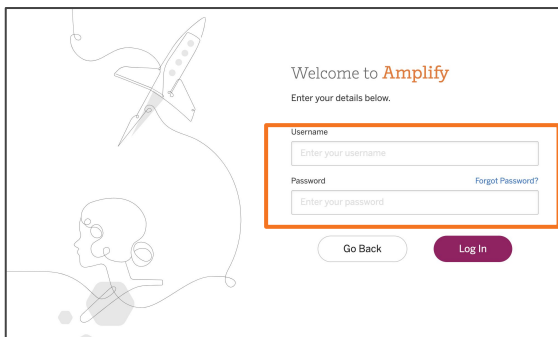
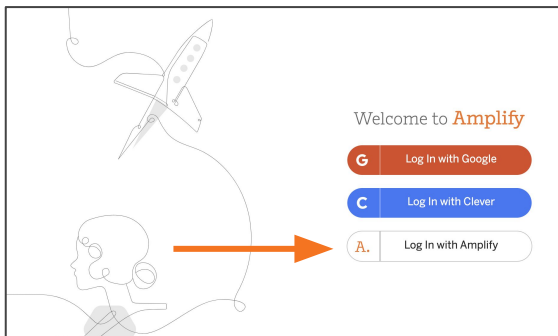
Overview

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.

Español

# Welcome to Amplify Science!

## Do Now: Login



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

# Lesson Level Exploration

## Scavenger Hunt

Lesson-level scavenger hunt

---

Goals:

- Practice navigating at the lesson level and deepen your understanding of the student role and anchor phenomenon in your unit.

**PART 1: Lesson 1.1.**

Task	Notes
Navigate to Lesson 1.1 in your Launch unit. Scroll down to the Lesson Brief and scroll/click to view the Overview. Skim the section then answer the following questions:	
What is the purpose of this lesson?	
How many activities are in the lesson?	
How long is the activity that introduces the students to the role they'll play in the unit? <ul style="list-style-type: none"><li>Microbiome: Activity 1<ul style="list-style-type: none"><li>Harnessing Human Energy: Teacher-only activity between activities 1 and 2.</li></ul></li><li>Geology on Mars: Teacher-only activity between activities 3 and 4.</li></ul>	

Task	Notes
Scroll/click to view Materials & Preparation.	
List the materials you'll need for this lesson.	
Describe one step of preparation you will need to do before this lesson, between classes, and at the end of the day.	

8 Grade 6-8  
Navigating Program Essentials

6-8 Lesson-level scavenger hunt cont.

---

Task	Notes
Scroll up to the Lesson Map. Select the activity in which the student role is introduced. [Tip: Use the arrow at the end of the lesson map to reveal all activities.] Read the steps for teaching the activity listed in the Step-by-Step to gain a better understanding of the activity.	
What is the student role and how is it introduced?	

Task	Notes
Try the following navigation features: <ul style="list-style-type: none"><li>Click on the Instructional Guide icon to see the student view of the lesson, and click on it again to toggle back to the teacher instructions.</li><li>Click Next Activity or Next at the bottom to read the next activity in the lesson.</li></ul>	
What additional resources can you find on each page of the guide—what links, tabs, and other supports do you notice?	

**PART 2: Introduction of the anchor phenomenon or design problem**

Task	Notes
Use the breadcrumb (Unit-Chapter-Lesson) trail (top left) to navigate to the lesson and activity in which the anchor phenomenon is introduced. <ul style="list-style-type: none"><li>Microbiome: Lesson 2.2: Teacher-only activity video message and Activity 3 message from the Microbiome Research Institute</li><li>Geology on Mars Lesson 1.2, Activity 3. (be sure to click NEXT at the bottom)</li><li>Harnessing Human Energy: Lesson 1.1: Teacher-only activity video message (introduces both the student role and the design problem)</li></ul>	
How is the design problem or anchor phenomenon introduced to students? What ideas or questions do you think students will have about the problem they're asked to solve?	

9





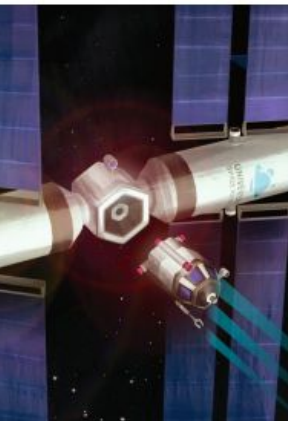
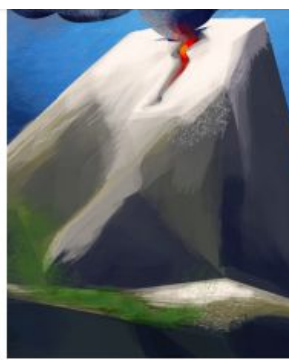
**Ask in the chat feature**



# Questions?

# 5 min break





# Plan for the day

✓ What is Amplify Science?

✓ Navigation essentials

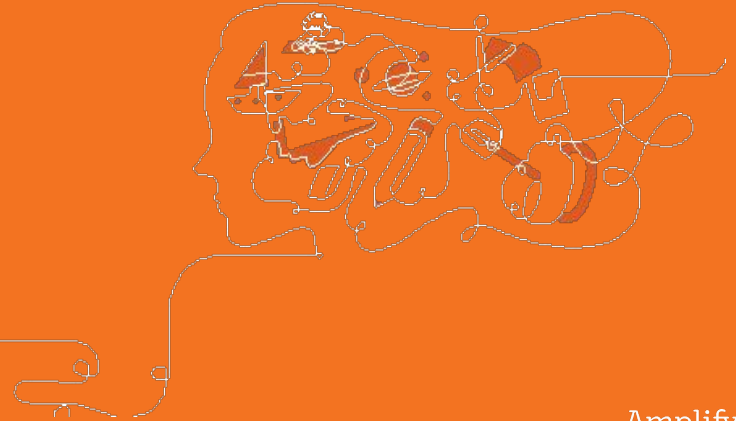
● Teaching a phenomenon-based lesson

● Unit Guide Resources

● Assessments

● Closing and Reflection

# What is phenomenon-based instruction?



# Next Generation Science Standards

## Phenomenon-based teaching and learning

A scientific phenomenon is an **observable event** that occurs in the universe that we can use science ideas to explain or predict.



# Next Generation Science Standards

## Think-Type-Discuss: How might learning be different?

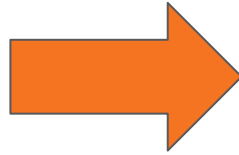
Topic-based	Phenomenon-based
What is the water cycle?	What caused the storms in this area to be severe?
What is an ecosystem?	Why are there suddenly so many moon jellies?
How does light energy interact with matter?	Why does Australia have an elevated skin cancer rate?

# Comparing topics and phenomena

## A shift in science instruction

from learning about

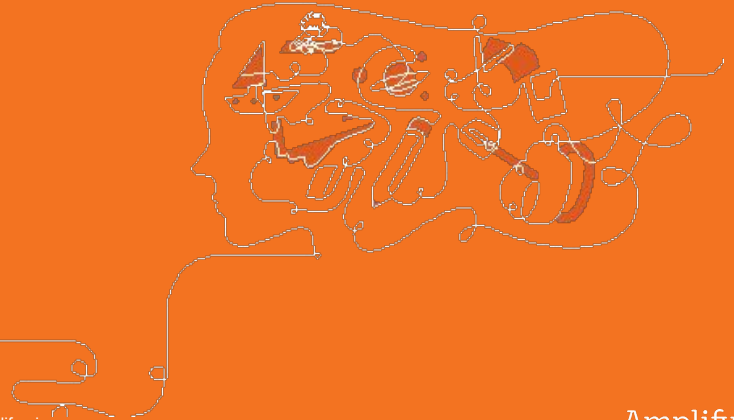
(like a student)



to figuring out

(like a scientist)

# Teaching a phenomenon-based lesson





# Thermal Energy Instructional sequence



# Chapter 1: Understanding Temperature

▼ JUMP DOWN TO CHAPTER OVERVIEW

**Lesson 1.1:**  
Pre-Unit Assessment

⚙️ SETTINGS

**Lesson 1.2:**  
Investigating Hot  
and Cold

**Lesson 1.3:**  
Temperature and  
Motion

**Lesson 1.4:**  
Molecules and  
Temperature



# Go 'Live' to Model Preparing to Teach

# Classroom Wall

## Unit Question

Why do things change temperature?

Key Concepts

Vocabulary

## Chapter 1 Question

What is happening when the air in the school gets warmer?

## Investigation Question

How is something different when it's warmer or cooler?

# Transition to model lesson

# End model lesson

# Classroom Wall

## Unit Question

Why do things change temperature?

## Chapter 1 Question

What is happening when the air in the school gets warmer?

## Investigation Question

How is something different when it's warmer or cooler?

## Key Concepts

1. Things are made of molecules (or other types of atom groups).

2. When a thing gets hotter, its molecules are moving faster.

3. When a thing gets colder, its molecules are moving slower.

## Vocabulary

**molecule**



# I notice, I wonder...



Answer in the chat feature



What did you **notice** about the model lesson?

What do you now **wonder** ?

# Chapter 1: What is happening when the air in the school gets warmer?



**Investigation Question:**  
How is something different when it's warmer or cooler?



Multiple sources of evidence



Simulation



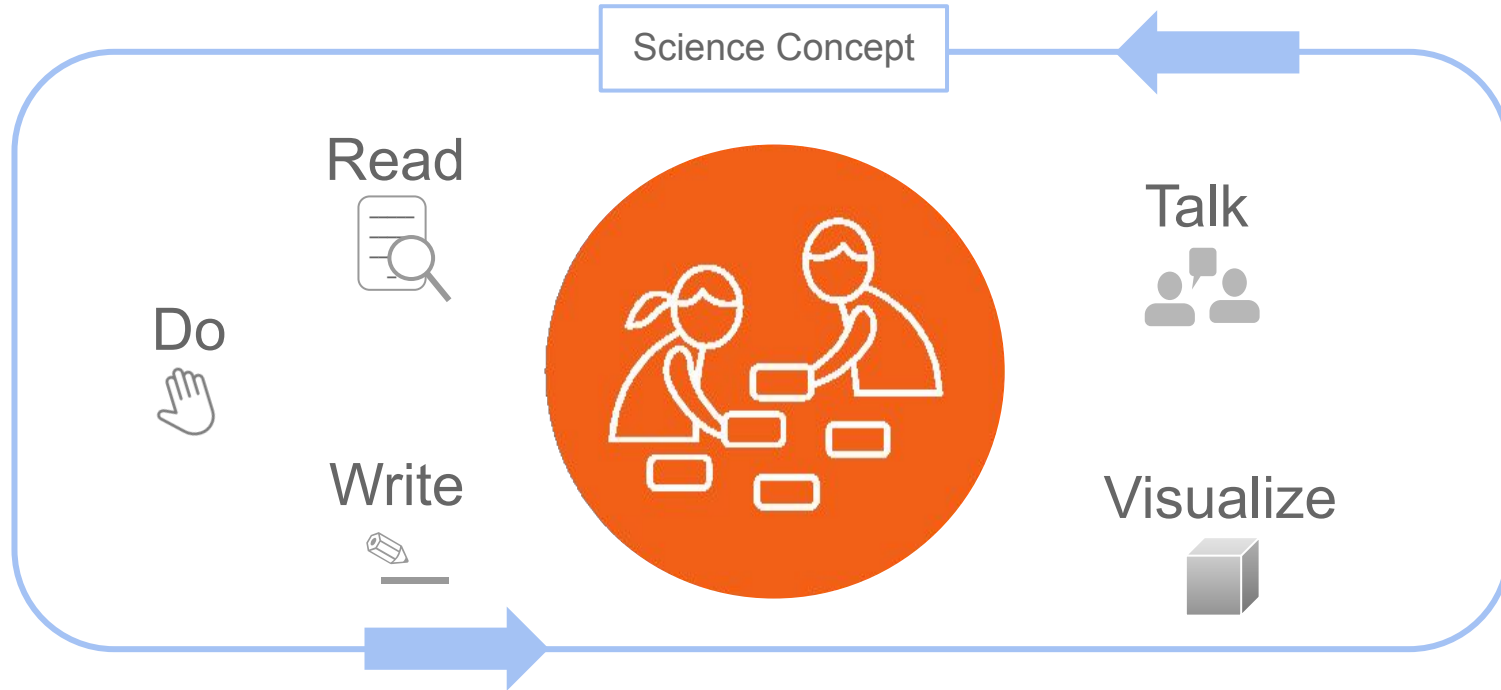
Hands-on



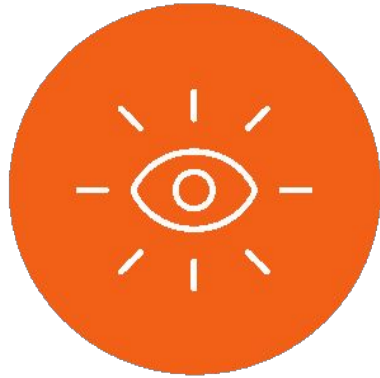
Discourse

# Multimodal learning

## Gathering evidence from different sources



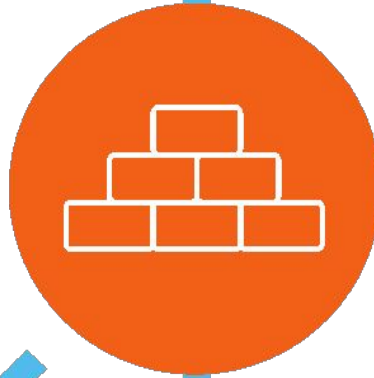
# Amplify Science approach



Introduce a real world problem



Collect evidence from multiple sources



Build increasingly complex explanations



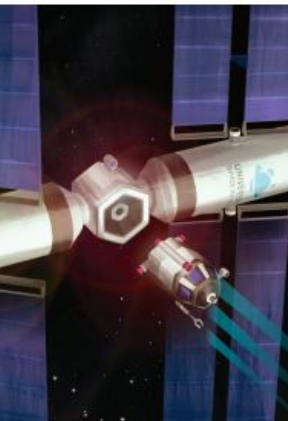
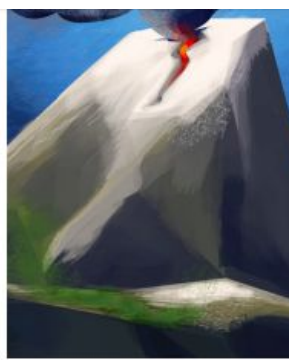
Apply knowledge to solve a different problem



**Ask in the chat feature**



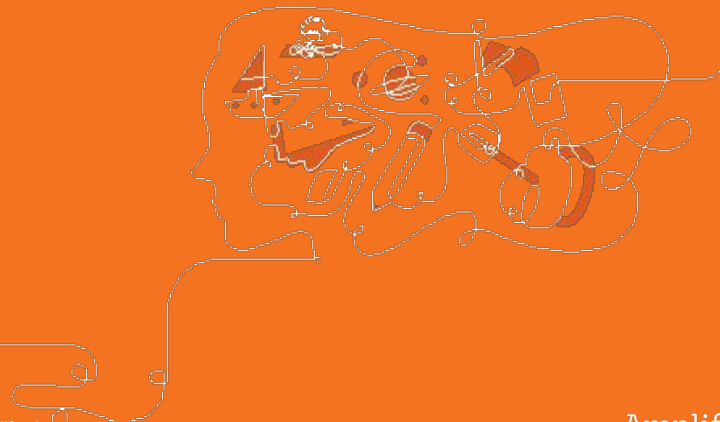
# Questions?



# Plan for the day

- ✔ What is Amplify Science?
- ✔ Navigation essentials
- ✔ Teaching a phenomenon-based lesson
- Unit Guide Resources
- Assessments
- Closing and reflection

# Unit Guide Resources



# 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



Books in This Unit



Apps in This Unit



Flextensions in This Unit



## Printable Resources



Coherence Flowcharts



Copymaster Compilation



Flextension Compilation



Investigation Notebook



Multi-Language Glossary



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

<b>Unit Overview</b>	Describes what's in each unit, the rationale, and how students learn across chapters
<b>Unit Map</b>	Provides an overview of what students figure out in each chapter, and how they figure it out
<b>Progress Build</b>	Explains the learning progression of ideas students figure out in the unit
<b>Getting Ready To Teach</b>	Provides tips for effectively preparing to teach and teaching the unit in your classroom
<b>Materials and Preparation</b>	Lists materials included in the unit's kit. Items to be provided by the teacher, and briefly outlines preparation requirements for each lesson
<b>Science Background</b>	Adult-level primer on the science content students figure out in the unit
<b>Standards at a Glance</b>	Lists NGSS Standards (Performance Expectations, Science and Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts), Common Core State Standards for English Language Arts, and Common Core State Standards for Mathematics

### Teacher references

<b>Lesson Overview Compilation</b>	Lesson Overview of each lesson in the unit, including lesson summary, activity purposes, and timing
<b>Standards and Goals</b>	Lists NGSS (Science and Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts) and CCSS (English Language Arts and Mathematics) standards in the unit, explains how the standards are reached
<b>3-D Statements</b>	Describes 3-D learning across the unit, chapters, and in individual lessons
<b>Assessment System</b>	Describes components of the Amplify Science assessment system, identifies each 3-D assessment opportunity in the unit
<b>Embedded Formative Assessments</b>	Includes full text of formative assessments in the unit
<b>Articles in This Unit</b>	Summarizes each unit text and explains how the text supports instruction
<b>Apps in This Unit</b>	Outlines functionality of digital tools and how students use them (in grades 6-8)
<b>Flextensions in This Unit</b>	Summarizes information about the Hands-On Flextension lesson(s) in the unit

### Printable resources

<b>Coherence Flowcharts</b>	Visual representation of the storyline of the unit
<b>Copymaster Compilation</b>	Compilation of all copymasters for the teacher to print and copy throughout the unit
<b>Flextension Compilation</b>	Compilation of all copymasters for Hands-on Flextension lessons throughout the unit
<b>Investigation Notebook</b>	Digital version of the Investigation Notebook, for copying and projecting
<b>Multi-Language Glossary</b>	Unit vocabulary words in 10 languages
<b>NGSS Information for Parents and Guardians</b>	Information for parents about the NGSS and the shifts for teaching and learning
<b>Print Materials (8.5" x 11")</b>	Digital compilation of printed cards (i.e. vocabulary cards, student card sets) provided in the kit
<b>Print Materials (11" x 17")</b>	Digital compilation of printed Chapter Questions and Key Concepts provided in the kit



# Unit Guide Exploration

## Scavenger Hunt

### Unit Guide scavenger hunt

The purpose of this optional activity is to practice utilizing the Unit Guide resources to answer questions. Practicing now will help you determine which Unit Guide resources to use when questions arise as you're teaching. Use the Unit Guide Resources document to help decide and record which resource you would use to answer each question. For additional practice, open the resource you've identified, and record your answer in the space provided.

What do students do in the first activity of Lesson 3.1?

Unit Guide document to reference:	Answer:

Which lesson will take the most time to prepare for Chapter 1?

Unit Guide document to reference:	Answer:

Describe one piece of evidence students can get using the Simulation.

Unit Guide document to reference:	Answer:

What is some background information pertaining to the science content of the unit?

Unit Guide document to reference:	Answer:

### Unit Guide scavenger hunt cont.

List some of the NGSS crosscutting concepts emphasized in the unit.

Unit Guide document to reference:	Answer:

Describe one material you will print and make copies of during this unit.

Unit Guide document to reference:	Answer:

What is one article that students read in this unit?

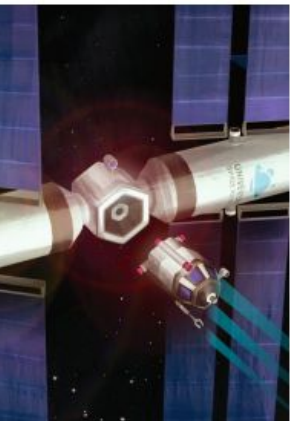
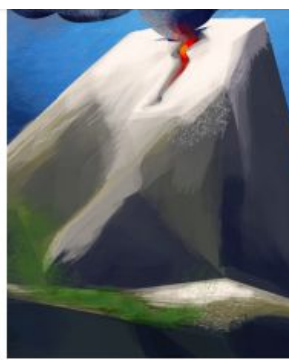
Unit Guide document to reference:	Answer:

Which lessons in Chapter 2 include On-the-Fly Assessments?

Unit Guide document to reference:	Answer:

# 5 min break





# Plan for the day

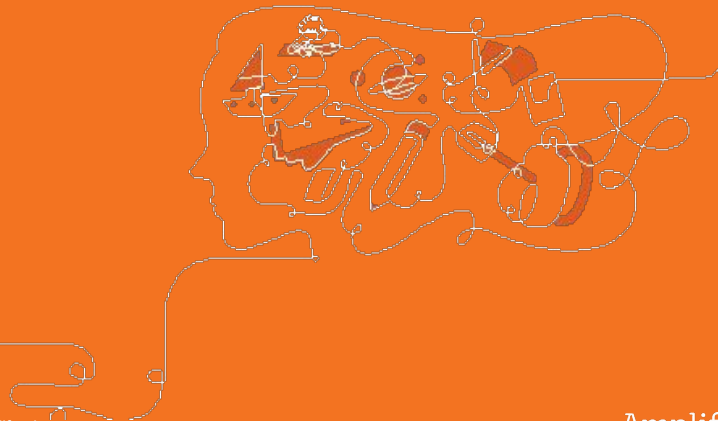
- ✔ What is Amplify Science?
- ✔ Navigation essentials
- ✔ Teaching a Lesson
- ✔ Unit Guide Resources

- Assessments

- Closing and Reflection

# Progress Build

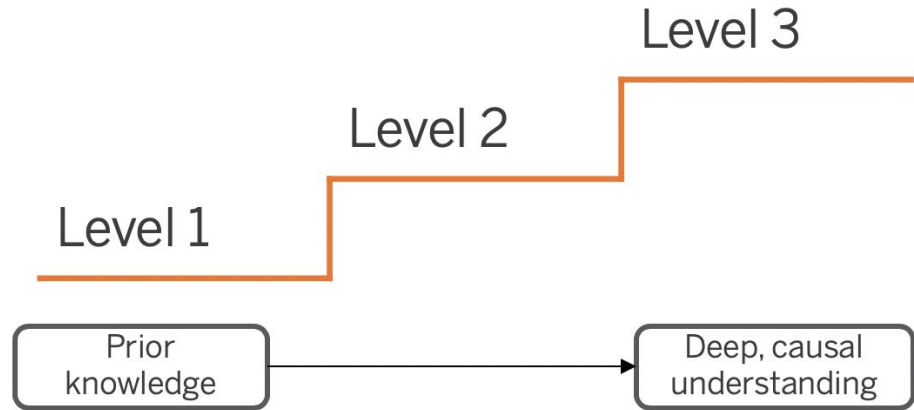
A unit-specific learning progression



# Progress Build

## Teaching tip

Being familiar with your unit's Progress Build means you know what's coming. This will help you avoid giving ideas away too early in the unit!



# Thermal Energy

## How do these ideas relate to one another?

- The temperature of an object is related to the kinetic energy of its molecules, which increases as the speed of the molecules increases.
- Warmer objects transfer energy to cooler objects when they are in contact.



# Thermal Energy

## Building upon a foundation

### Chapter 1

---

The temperature of an object is related to the kinetic energy of its molecules, which increases as the speed of the molecules increases.

### Chapter 2

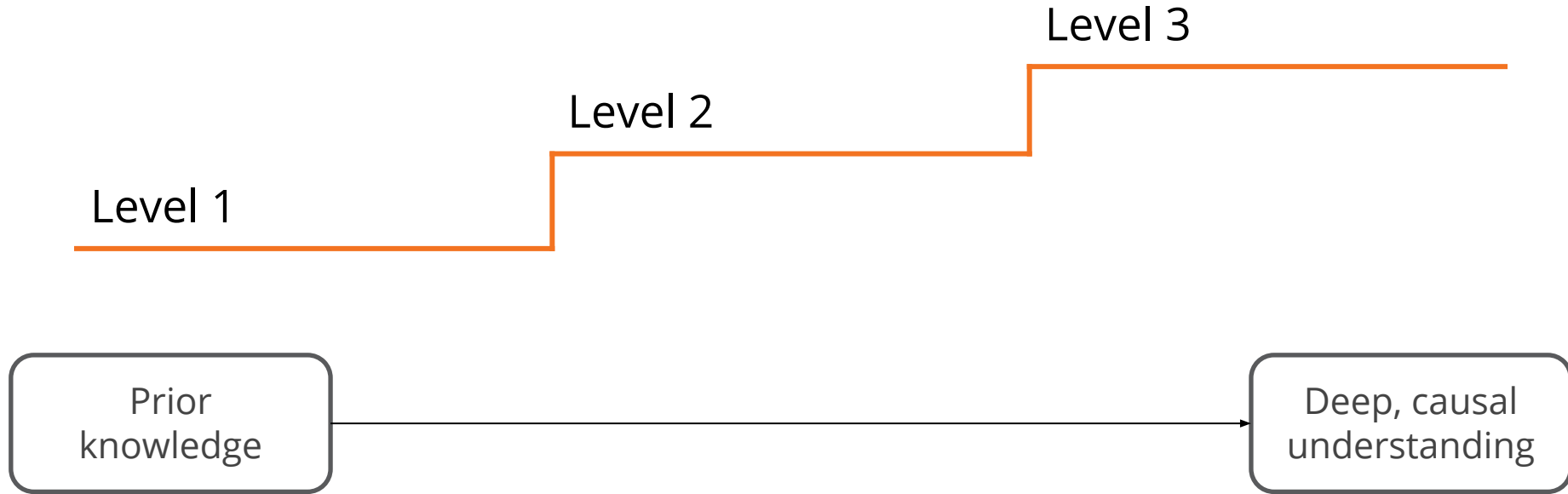
---

Warmer objects transfer energy to cooler objects when they are in contact.



# Progress Build

A unit-specific learning progression





# Thermal Energy Progress Build

## Level 1

The temperature of an object is related to the kinetic energy of its molecules, which increases as the speed of the molecules increases.

## Level 2

Warmer objects transfer energy to cooler objects when they are in contact.

## Level 3

The size of the objects in contact affects the amount of energy transfer between them and the amount of temperature change.

Prior  
knowledge

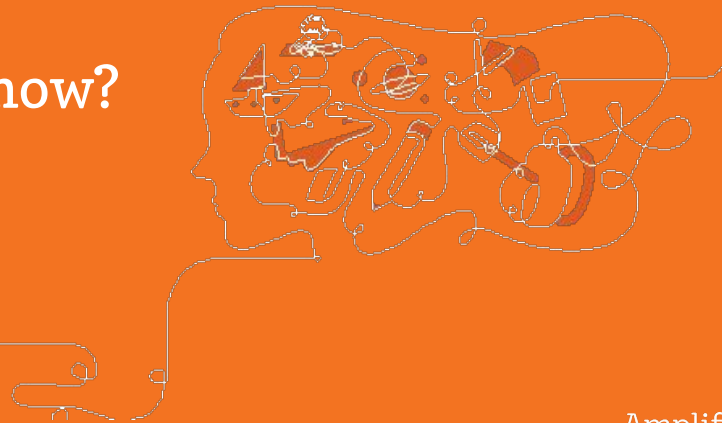
Deep, causal  
understanding

# 5 min break



# Assessment System

Think to yourself: How do your students show you what they know?



# Pre- and End-of-Unit Assessments

Pre-Unit  
Assessment

End-of-Unit  
Assessment

Level 3

Level 2

Level 1

# Critical Juncture Assessments

Pre-Unit  
Assessment



Critical Juncture

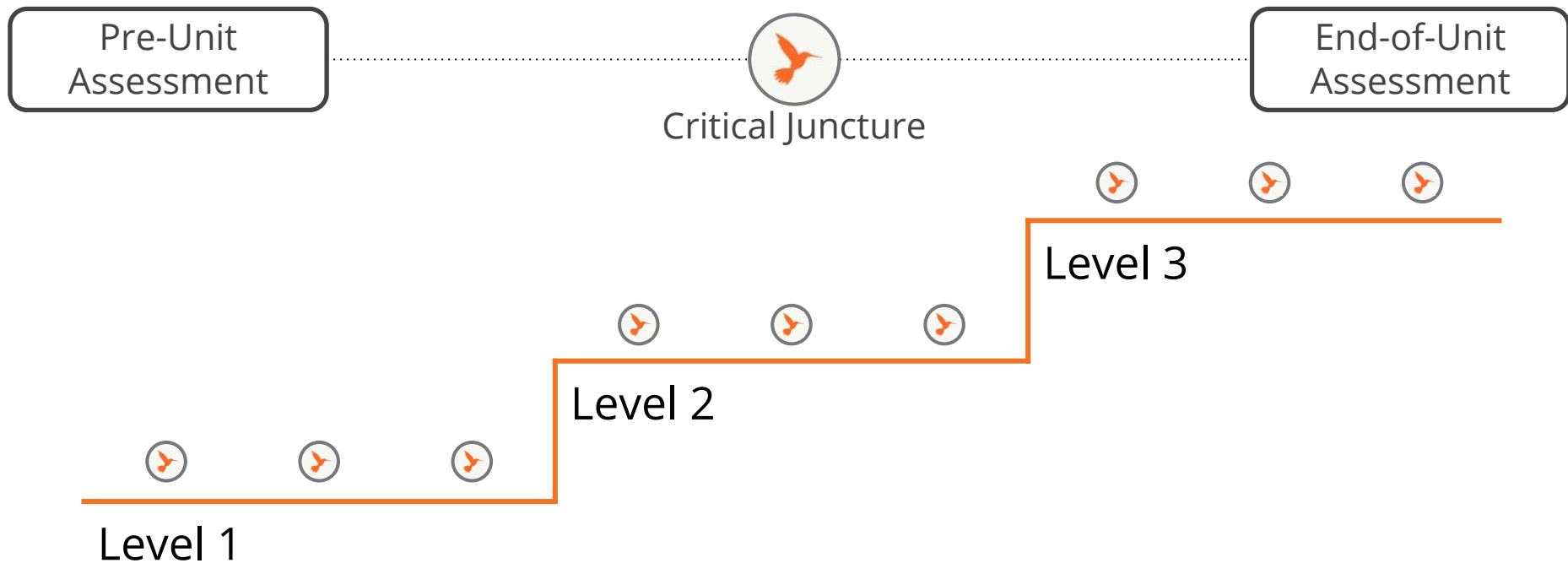
End-of-Unit  
Assessment

Level 3

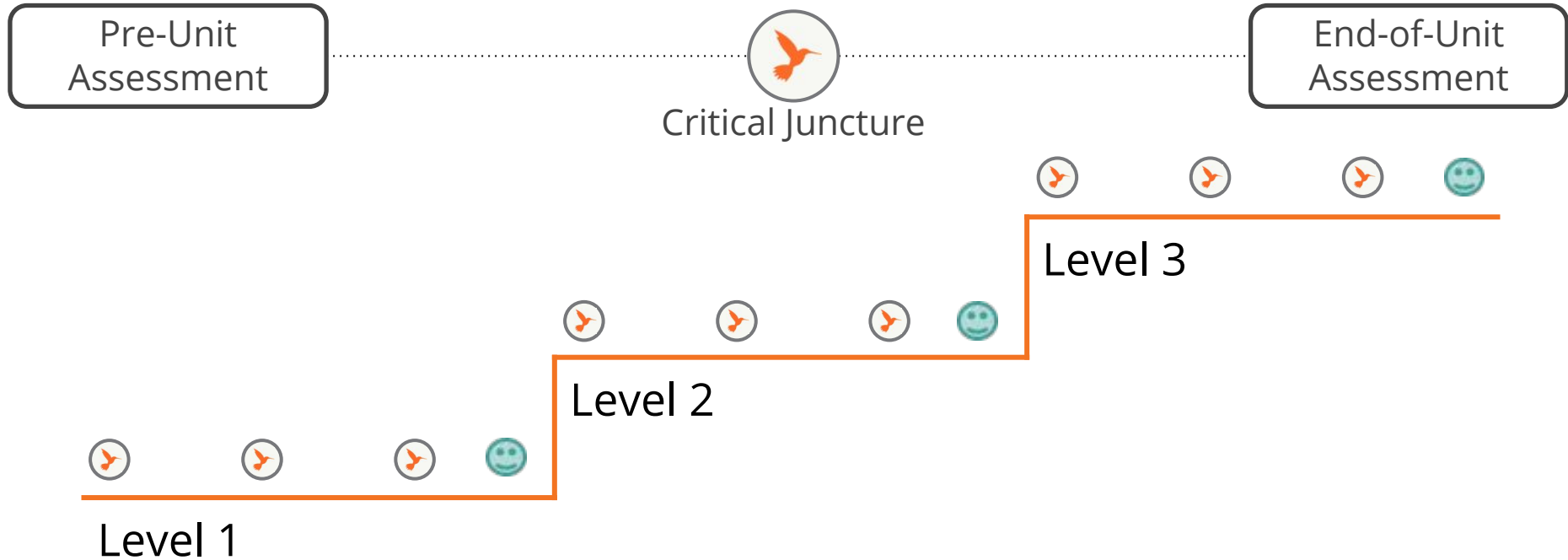
Level 2

Level 1

# On-the-Fly Assessments

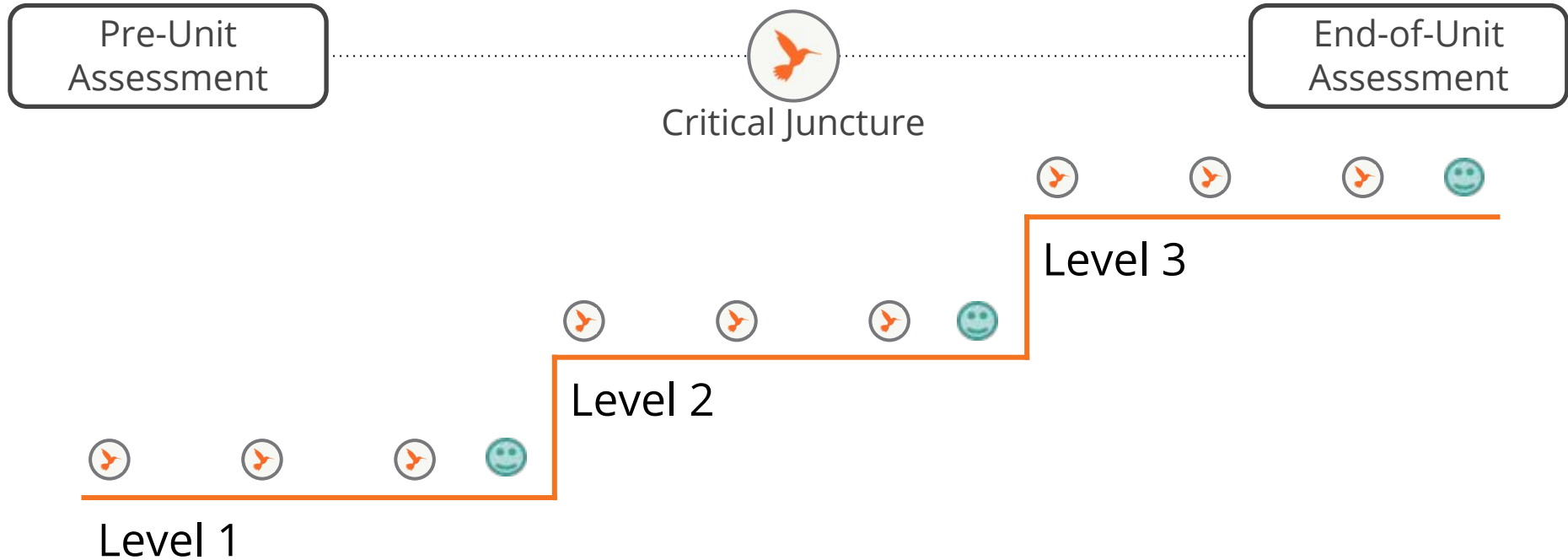


# Student Self-Assessments



# 6-8 Assessment System

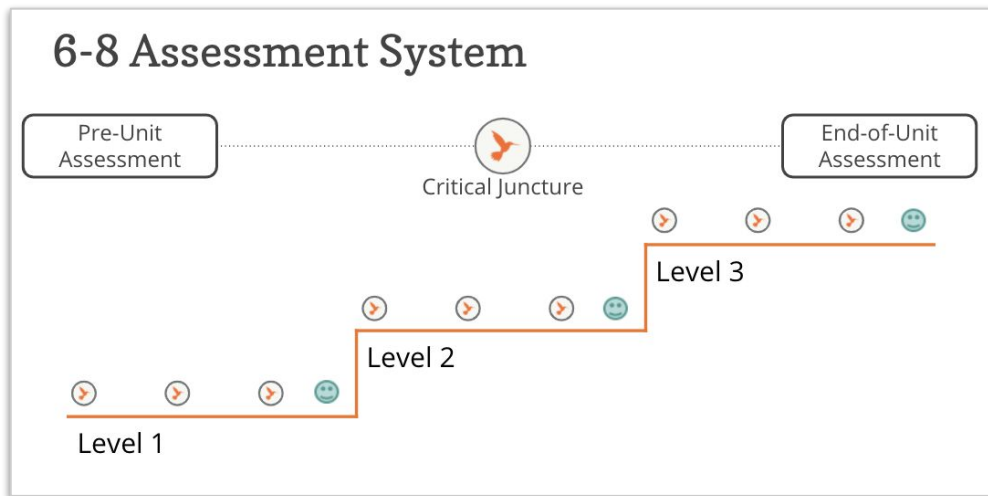
Pages 11-12





# Capture your thinking!

- How will you use these embedded assessment opportunities?



# Unit Level Assessment Documents

## Assessment System:

- explains the organization of the assessment system
- lists out each assessment in the unit with key information
- goes into an explanation of each type of assessment found in the unit

Assessment Opportunity	Next Generation Science Standards	Printable Resources
<b>Lesson 1.1:</b> 3-D Performance Task: Scientific Explanation	<b>DCI:</b> <ul style="list-style-type: none"><li>• PS3.A: Definitions of Energy</li></ul> <b>SEPs:</b> <ul style="list-style-type: none"><li>• Practice 1: Asking Questions and Defining Problems</li><li>• Practice 6: Constructing Explanations and Designing Solutions</li></ul> <b>CCC:</b> <ul style="list-style-type: none"><li>• Systems and System Models</li></ul>	<b>Coherence Flowcharts</b>
<b>Assessment Type:</b> Pre-Unit Assessment		<b>Copymaster Compilation</b>
<b>Evaluation Guidance:</b> <ul style="list-style-type: none"><li>• Assessment Guide (in Digital Resources for Lesson 1.1), with support for revealing students' prior knowledge, preconceptions, and to gauge their facility for using the SEPs and CCCs.</li><li>• Possible Student Responses</li></ul>		<b>Flextension Compilation</b>
		<b>Investigation Notebook</b>
		<b>Multi-Language Glossary</b>
		<b>NGSS Information for Parents and Guardians</b>

## Embedded Formative Assessments:

- explains what to look for at each assessment opportunity
- gives guidance for instructional next steps



Standards and Goals
3-D Statements
Assessment System
Embedded Formative Assessments
Books in This Unit
Apps in This Unit
Flextensions in This Unit

**Lesson 1.2, Activity 4**

**On-the-Fly Assessment 1: Synthesizing Information**

**Look for:** This lesson provides students' first opportunity to learn about and discuss how to synthesize information as a reading strategy. They will continue to develop facility with this strategy throughout the unit through repeated practice. As you circulate, make note of what students are connecting to the reading and what deeper understanding they come to as a result. Are they connecting together relevant pieces of information from different sources? Are they using these connections to help them better understand systems?

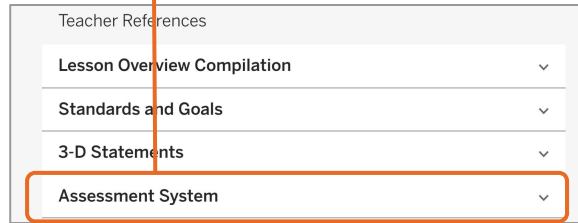
**Now what?** If students are having trouble getting started with synthesizing, or if they are connecting the reading to unrelated information, provide some additional models. You may wish to provide examples that combine information from the first section of *Systems* with information from other sources. Depending on how many students need this support, you could either coach a few students individually during the reading or you could work with a small group or the whole class. Be sure to remind students to keep in mind the goal of connecting pieces of information in order to come to a deeper understanding of the concept of systems.

Go 'live' to show assessment resources and assessments

# Review an assessment

## Part 1: Choose an Assessment Opportunity

1. Navigate to the *Assessment System* reference in the Unit Guide



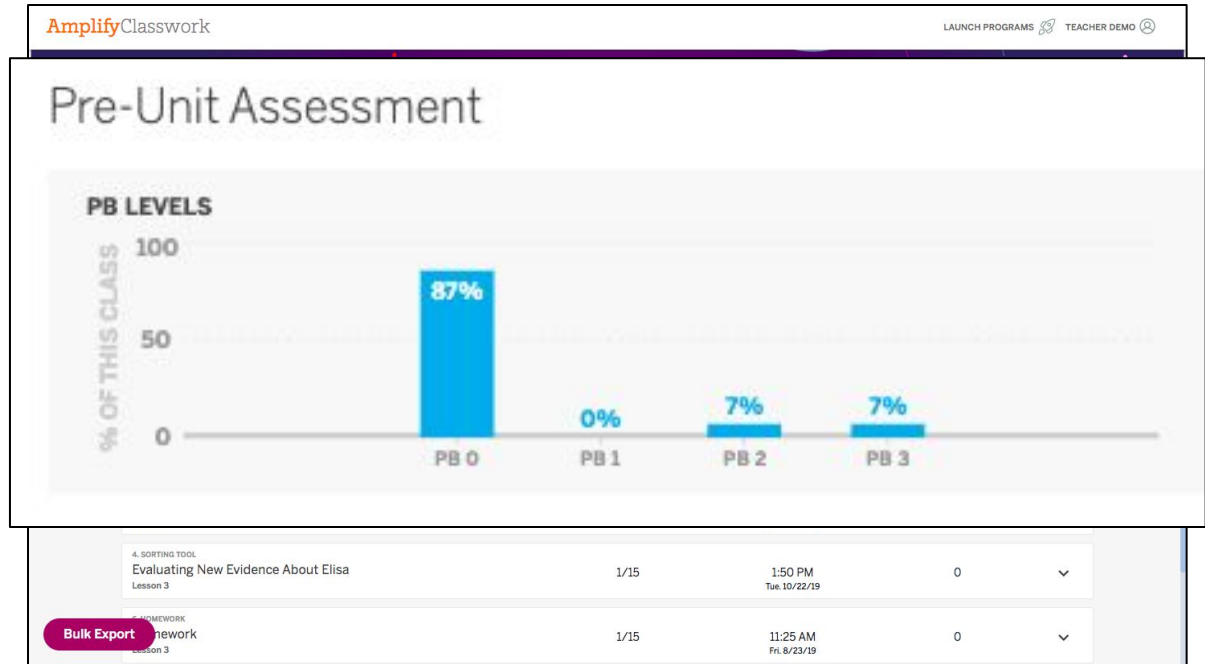
2. Choose an 'Assessment opportunity' to preview.  
*i.e.* Pre-Unit, On-the-Fly, Critical Juncture, or End-of-Unit
3. Navigate to the lesson and review the assessment

## Part 2: Review the Assessment

4. As you review the assessment, answer these questions:
  - a. What are students doing?
  - b. What would student performance tell me about student understanding?
  - c. How could I adjust instruction based on student performance?
  - d. How could I record student data?

# Classwork and Reporting

The image shows the AmplifyScience user interface. At the top left, there is a hamburger menu icon (three horizontal lines) enclosed in an orange box. Below it, the text "AmplifyScience" is displayed in orange, followed by "CALIFOR" in a small box. A blue box highlights the user information: "Hello Teacher Williams" and "t.dawilliams@tryamplify.net". Below this are "Log Out" and "Go To My Account" with a gear icon. A "Tools" section is visible, containing four icons: "Classwork" (a purple icon with a document and arrow), "Library" (a teal icon with an open book), "Reporting" (a pink icon with a line graph), and "Spotlight" (a blue icon with a lightbulb). The "Classwork" and "Reporting" icons are also enclosed in an orange box.



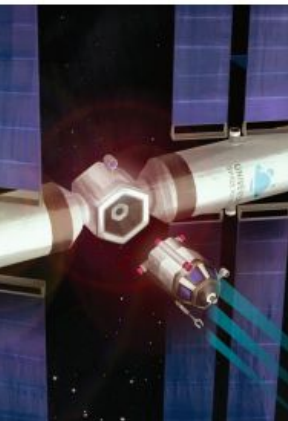
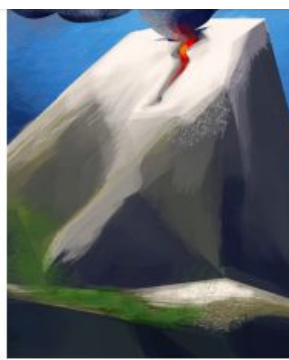
Go 'live' to show classwork and reporting tool



**Ask in the chat feature**



# Questions?



# Plan for the day

- ✓ What is Amplify Science?
- ✓ Navigation essentials
- ✓ Teaching a phenomenon-based lesson
- ✓ Unit Guide Resources
- ✓ Assessments
- Closing and reflection



# Navigation Temperature Check

Rate yourself on your comfort level accessing Amplify Science materials and navigating a digital curriculum.

1 = Extremely Uncomfortable

2 = Uncomfortable

3 = Mild

4 = Comfortable

5 = Extremely Comfortable



**Ask in the chat feature**



# Questions?

# Revisiting Day 1 Objectives

## Are you able to...

- Navigate the Amplify Science curriculum?
- Understand the program's phenomenon-based approach and instructional materials?

# Day 2 Objectives

By the end of day 2 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.

# 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:



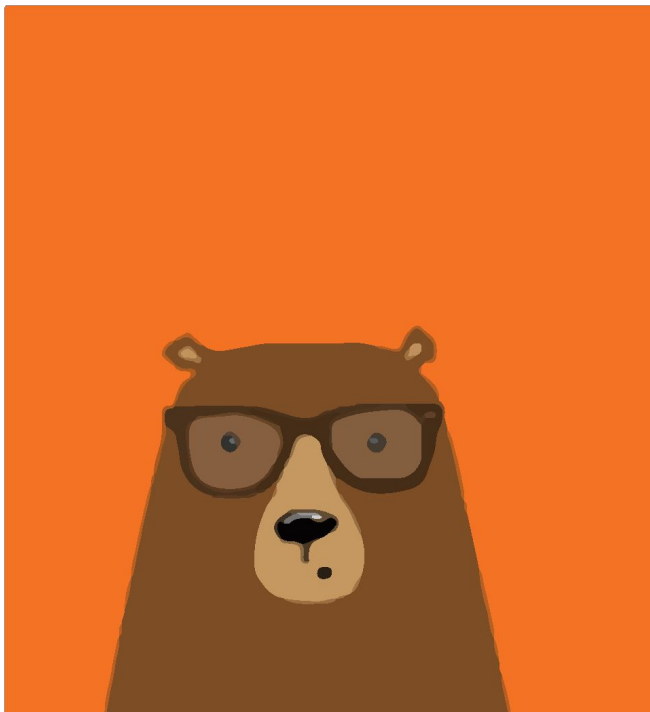
Answer in the chat feature

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

**Heart:** something you're feeling

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

# Additional Amplify resources



## Program Guide

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

[my.amplify.com/programguide](https://my.amplify.com/programguide)

## Amplify Help

Find advice and answers from the Amplify team.

[my.amplify.com/help](https://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](mailto: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.

Thank you for your participation in day 1.  
See you tomorrow for day 2!

