

Welcome to Amplify Science!

Follow the directions below as we wait to begin.

1. Please log in to your Amplify Account.
2. Sign in using link dropped in chat.
3. In the chat, share your name, grade level, and school you teach in.



Amplify Science

New York City

Analyzing Student Assessment Data Grade 3- Environments and Survival

Date xx

Presented by xx



Remote Professional Learning Norms



Take some time to orient yourself to the platform

- *“Where’s the chat box? What are these squares at the top of my screen?, where’s the mute button?”*



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



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



Make sure you have a note-catcher present



Engage at your comfort level - chat, ask questions, discuss, share!

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

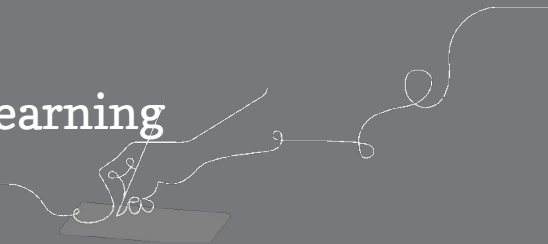
Overview
Materials & Preparation
Differentiation
Español rds

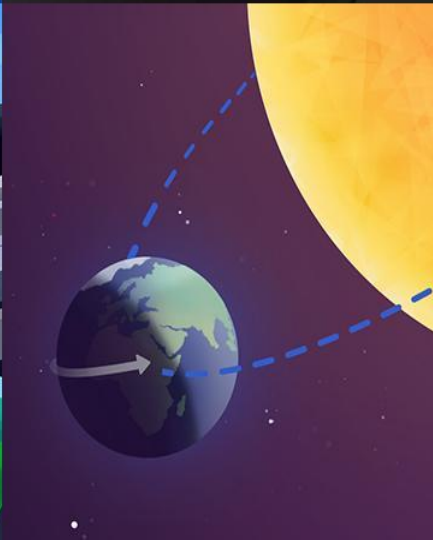
Digital Resources
All Projections
Completed Scientific Argumentation Wall Diagram
Video: Meet a Paleontologist
The Ancient Mesosaurus

Objectives:

By the end of this 1-hour workshop, you will be able to...

- Explore the Amplify Science Formative Assessment system.
- Explore how to use Embedded Formative Assessments to gain access to credible, actionable, and timely diagnostic information about students progress toward learning the unit goals.
- Learn strategies for analyzing student's work & assessment data, examine resources to help plan for tailoring instruction.
- Explore supports for differentiation to meet the diverse learning needs in their classroom





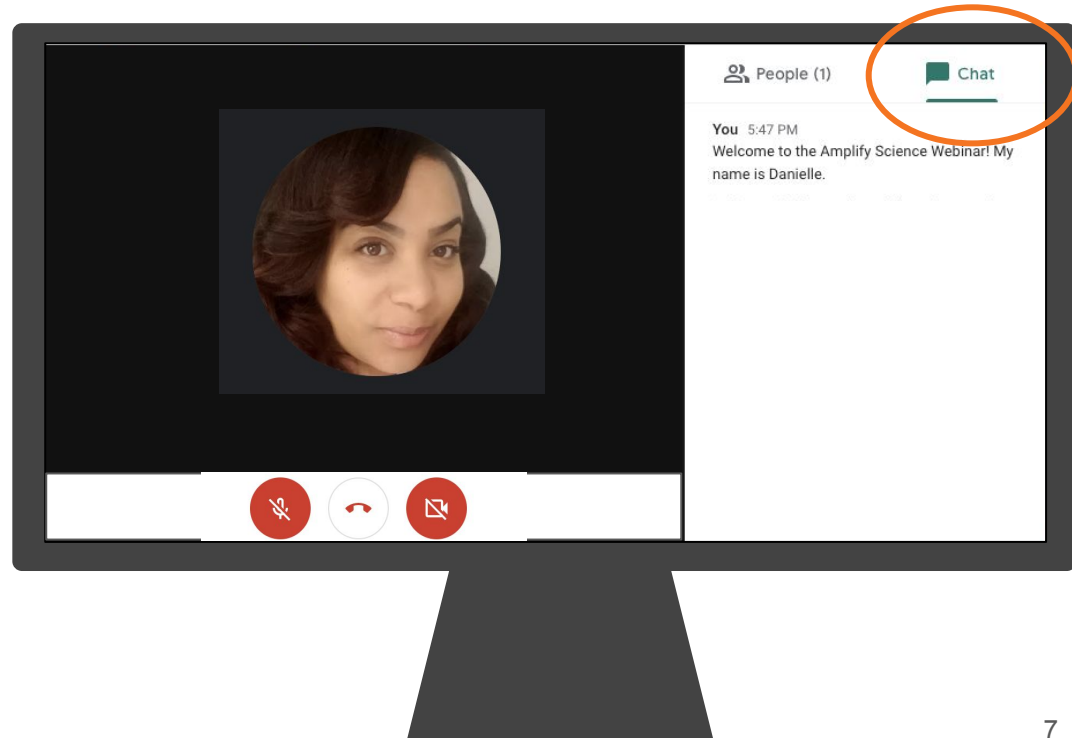
Plan for the day

- **Framing the day**
 - Welcome and introductions
 - Anticipatory Activity
- **Amplify Science Assessment System**
 - Credible, Actionable, Timely
 - Embedded Formative Assessments
 - Monitoring Student Progress
- **Amplify Science Diagnostics Tools**
 - Strategies for collecting/analyzing student work & assessment data
 - Resources for tailoring instruction
- **Amplify Science Embedded Supports**
 - Multimodal Instruction
 - Discourse routines
 - Differentiation/ Meeting the needs of diverse learners
- **Closing**
 - Reflection/Survey

Introductions!

Who do we have in the room today?

- **Introduce yourself (Name, School, Role)**
- **In the chat, share one word or phrase that describes how you teaching Amplify.**



Anticipatory activity

On the Jamboard “post”

- How are you currently collecting student data?
- How are you using that data to form your instruction?

Please respond to the question in the Jamboard. If having difficulty use the chat.

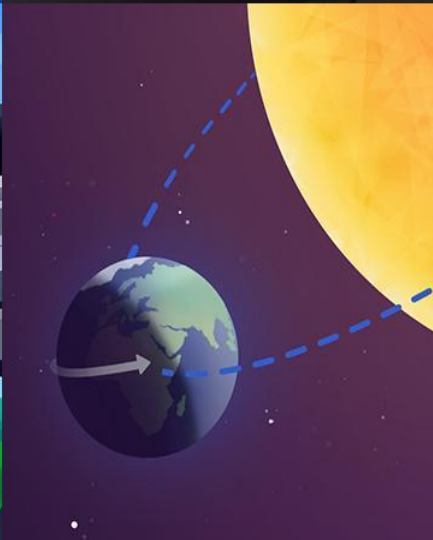
Idea

Idea

Idea

Idea

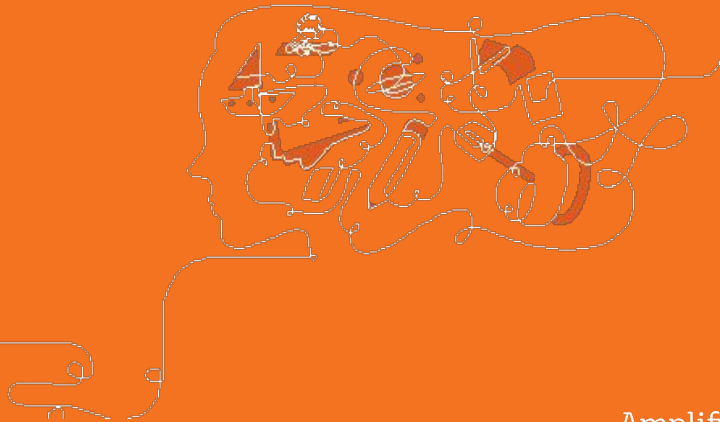
Idea



Plan for the day

- **Framing the day**
 - Welcome and introductions
 - Anticipatory Activity
- **Amplify Science Assessment System**
 - Credible, Actionable, Timely
 - Embedded Formative Assessments
 - Monitoring Student Progress
- **Amplify Science Diagnostics Tools**
 - Strategies for collecting/analyzing student work & assessment data
 - Resources for tailoring instruction
- **Amplify Science Embedded Supports**
 - Multimodal Instruction
 - Discourse routines
 - Differentiation/Meeting the needs of diverse learners
- **Closing**
 - Reflection/Survey

Credible, Actionable, Timely



Design Principles of Formative Assessment

- **Credible:** information from the assessment is trustworthy
- **Actionable:** information is at a level of specificity such that a teacher can use it to bolster instruction
- **Timely:** information comes at a time when a teacher is able to take action and when a student can productively leverage feedback

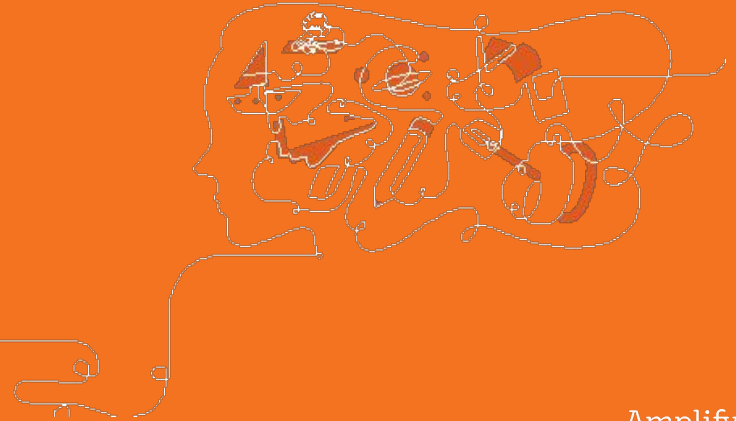
Assessment System

- The Assessment System includes formal and informal opportunities for students to demonstrate understanding and for teachers to gather information throughout the unit. Built largely around instructionally embedded performances, these opportunities encompass a range of modalities that, as a system, attend to the three-dimensional nature of science learning specified in the Next Generation Science Standards (NGSS) and the National Research Council’s *Framework for K–12 Science Education* (2012).
- Each assessment was developed for a particular purpose. Entry-Level and Summative Assessments, includes assessments that can be used to measure growth, including entry-level assessments that reveal students’ thinking at the beginning of the unit, and assessments that indicate students’ level of understanding at the end of the unit, which can show the progress students have made and that can be used summatively.
- The second section, Monitoring Progress, includes assessments that can be used to monitor students’ progress—formative assessments that provide teachers with actionable information and instructional suggestions for supporting students’ learning and keeping all students on track—and assessments that help students monitor their own progress.
- Finally, the Assessments and Grading section provides suggestions around how the assessments might relate to grading.
- Assessment in kindergarten and grade 1 emphasizes multiple opportunities for students to show what they know through their oral and physical responses to prompts during partner and class discussions, through their engagement and participation in activities, and through some independent work products.

Assessment System Components

- **Assessment guides/rubrics:** Guidance is provided to gauge the level of student performance on the assessment task, with suggestions for student feedback and questioning strategies to advance learning, revise performance, or elicit and clarify student thinking. Assessment guides/rubrics are available in Digital Resources in the Lesson Brief for the lesson in which the task occurs.
- **Clipboard Assessment Tool:** The Clipboard Assessment Tool offers support for conducting brief, talk-based checks that reveal students' thinking and correspond to the level of the Progress Build. The Clipboard Assessment Tool is provided at key points in the unit (in Digital Resources) and includes tailored sets of questions and the specific activities that present an opportunity to ask those questions. Also included is space to write notes about students' ideas.
- **Possible student responses:** Possible student responses are provided to model how evidence of understanding, or partial understanding, may be demonstrated by the student for the specific task. Possible student responses are provided in the Possible Responses tab in the activity where there is an applicable notebook page. Possible student responses also appear in the Assessment Guide for the End-of-Unit Assessment (in Digital Resources).
- **Look for/Now what? notes:** Each On-the-Fly Assessment includes a two-part description of what evidence of understanding would look like for the task (Look for) and how instruction may be adjusted in response (Now what?). These are accessible by pressing the orange hummingbird icon in the activity in which they appear.
- **Assess understanding/Tailor instruction notes:** Each Critical Juncture Assessment includes a two-part description of how the expected level of student understanding may be demonstrated in the task (Assess understanding) and how instruction may be adjusted in response (Tailor instruction) at the class, group, and student level. These are accessible by pressing the orange hummingbird icon for the activity in which they appear.

Embedded Formative Assessments

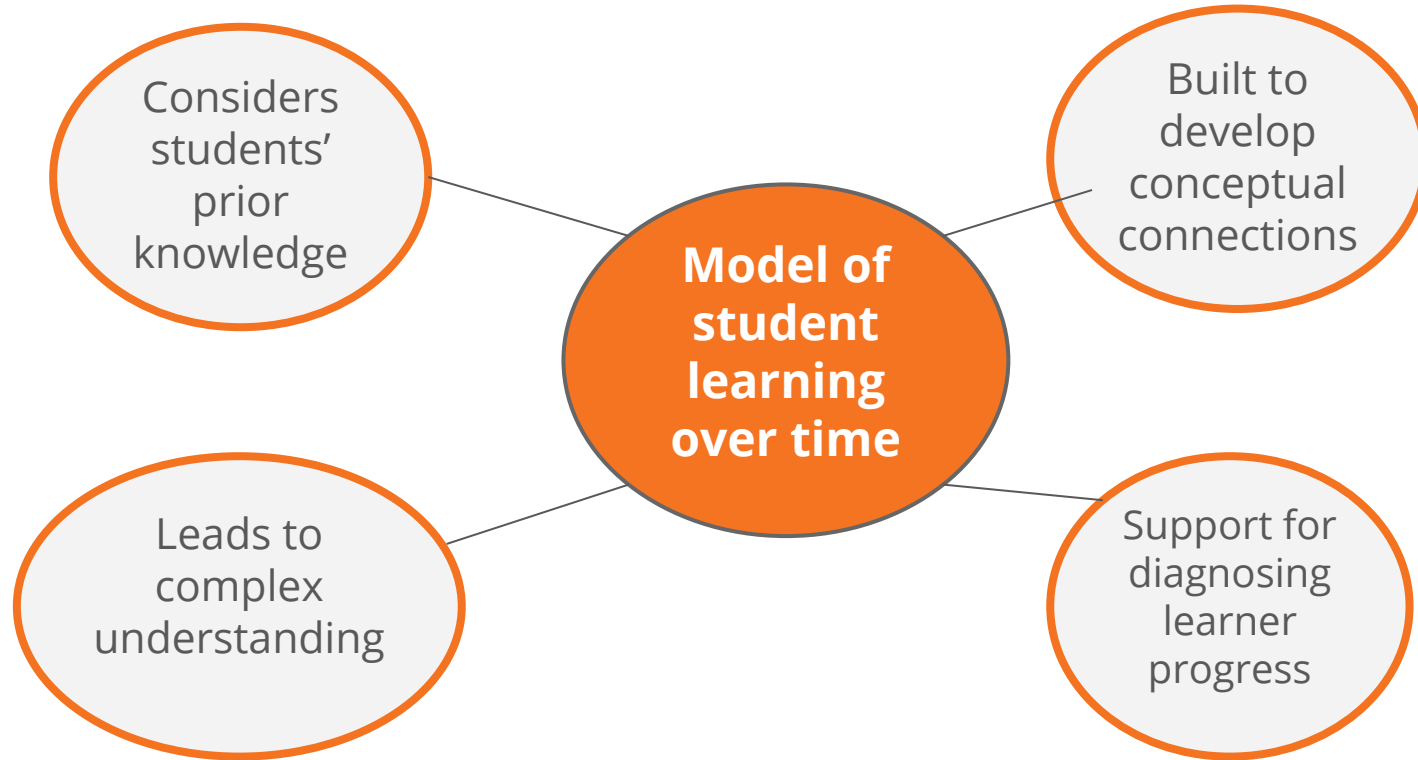


What is Formative Assessment?

Formative assessment is a cycle of eliciting, interpreting, and taking action on information about student learning.



Design Principles of Formative Assessment



Types of assessments



Formative Assessments

Used to guide instruction

Pre-Unit

Designed to gauge students' initial understanding and pre-conceptions about core ideas in the unit.

On-the-Fly

Quick check for understanding designed to help monitor and support student progress throughout the unit.

Critical Juncture

Designed to occur at points in the unit in which it is especially important that students understand the content before continuing.



Summative Assessments

Used to measure student learning at the end of instruction

End-of-Unit

Final evaluation of students' understanding of core ideas in the unit.

Environments and Survival Progress Build

Deep, causal understanding



Prior knowledge

What is adaptive can change when the environment changes.

There can be adaptive and non-adaptive traits in a population.

When it is easier for organisms to meet their needs in an environment, they are more likely to survive.

What new ideas are added at each level?

Pre and End of Unit Assessments

Deep, causal understanding



Prior knowledge

What is adaptive can change when the environment changes.

There can be adaptive and non-adaptive traits in a population.

When it is easier for organisms to meet their needs in an environment, they are more likely to survive.

Pre-Unit Assessment

- Reveals preconceptions
- Reveals ideas and experiences students can build on throughout the unit
- Contains multiple choice questions and two written responses
- Multiple choice section is auto-scored
- Contains a Scoring Guide with rubrics for analyzing student responses
- Happens in Lesson 1.1

Critical Juncture Assessments

Deep, causal understanding



Prior knowledge

What is adaptive can change when the environment changes.



There can be adaptive and non-adaptive traits in a population.



When it is easier for organisms to meet their needs in an environment, they are more likely to survive.



Critical Juncture Assessment

- Occurs at a key point in the unit
- Gauges students' growing understanding about core ideas in the unit
- Contains multiple choice questions and two written responses
- Multiple choice section is auto-scored
- Contains a Scoring Guide with rubrics for analyzing student responses
- Followed by a differentiated lesson based on results

On-the-Fly Assessments

Deep, causal understanding



Prior knowledge



What is adaptive can change when the environment changes.



There can be adaptive and non-adaptive traits in a population.



When it is easier for organisms to meet their needs in an environment, they are more likely to survive.

On the Fly Assessment

- Mostly frequently occurring assessment
- Quick check for understanding designed to help monitor and support student progress throughout the unit.
- Provides teachers with an opportunity to adjust instruction to meet student needs
- Contains Look For and Now What evaluation guidance
- Followed by a differentiated lesson based on results

Self Assessments

Deep, causal understanding



Prior knowledge

What is adaptive can change when the environment changes. 😊

There can be adaptive and non-adaptive traits in a population. 😊

When it is easier for organisms to meet their needs in an environment, they are more likely to survive. 😊

Portfolio Assessments

Deep, causal
understanding



Prior knowledge

What is adaptive can change
when the environment
changes.

There can be adaptive and
non-adaptive traits in a population.

When it is easier for organisms to meet their
needs in an environment, they are more likely
to survive.

Investigation Assessments



Deep, causal understanding



Prior knowledge

What is adaptive can change when the environment changes.

There can be adaptive and non-adaptive traits in a population.

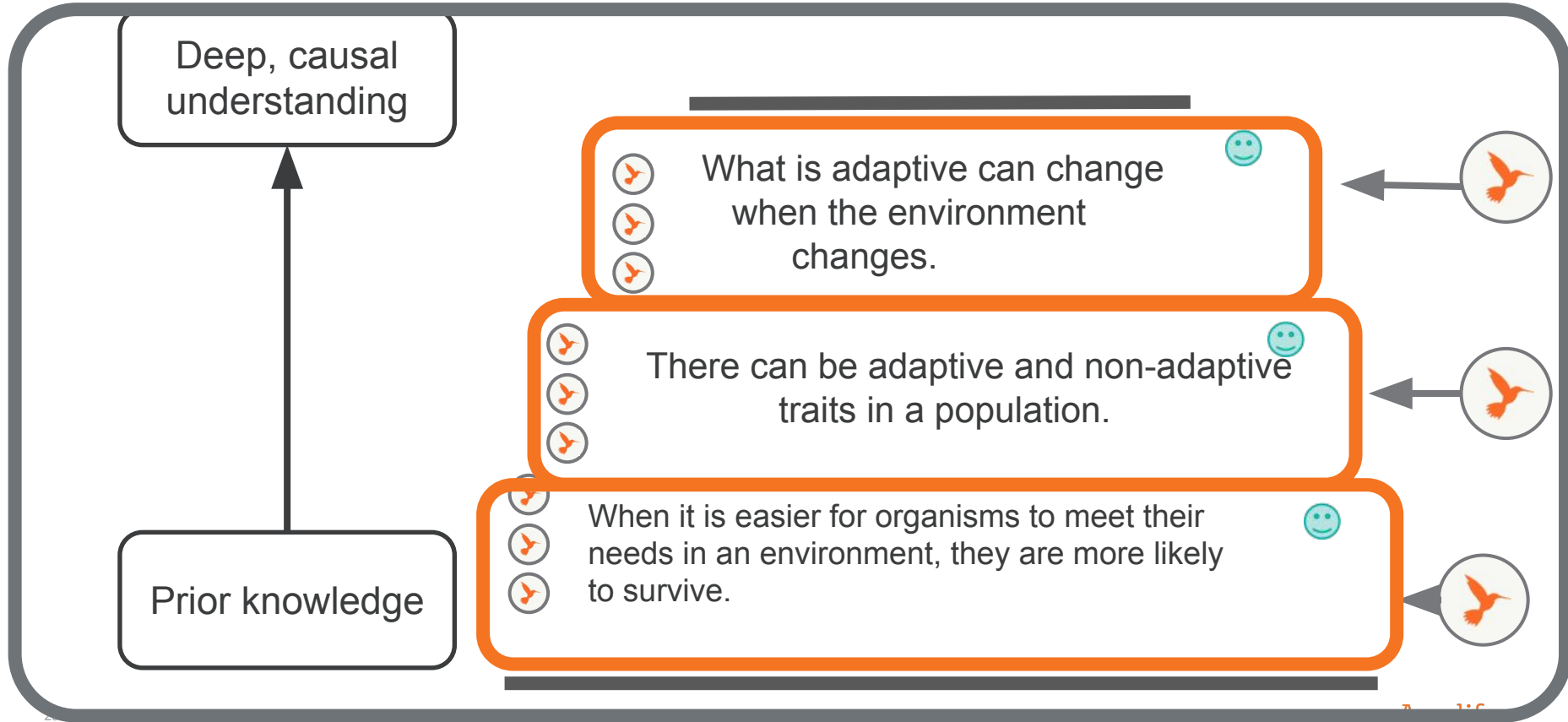
When it is easier for organisms to meet their needs in an environment, they are more likely to survive.

Investigation Assessments



Grade	Unit Title
Kindergarten	Sunlight and Weather
First Grade	Light and Sound
Second Grade	Plant and Animal Relationships
Third Grade	Balancing Forces
Fourth Grade	Vision and Light
Fifth Grade	Patterns of Earth and Sky

Assessment System



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
Lesson 1.1: 3-D Performance Task: Scientific Explanation	DCI: <ul style="list-style-type: none">• PS3.A: Definitions of Energy SEPs: <ul style="list-style-type: none">• Practice 1: Asking Questions and Defining Problems• Practice 6: Constructing Explanations and Designing Solutions CCC: <ul style="list-style-type: none">• Systems and System Models	Coherence Flowcharts
Assessment Type: Pre-Unit Assessment		Copymaster Compilation
Evaluation Guidance: <ul style="list-style-type: none">• 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.• Possible Student Responses		Flextension Compilation
		Investigation Notebook
		Multi-Language Glossary
		NGSS Information for Parents and Guardians

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

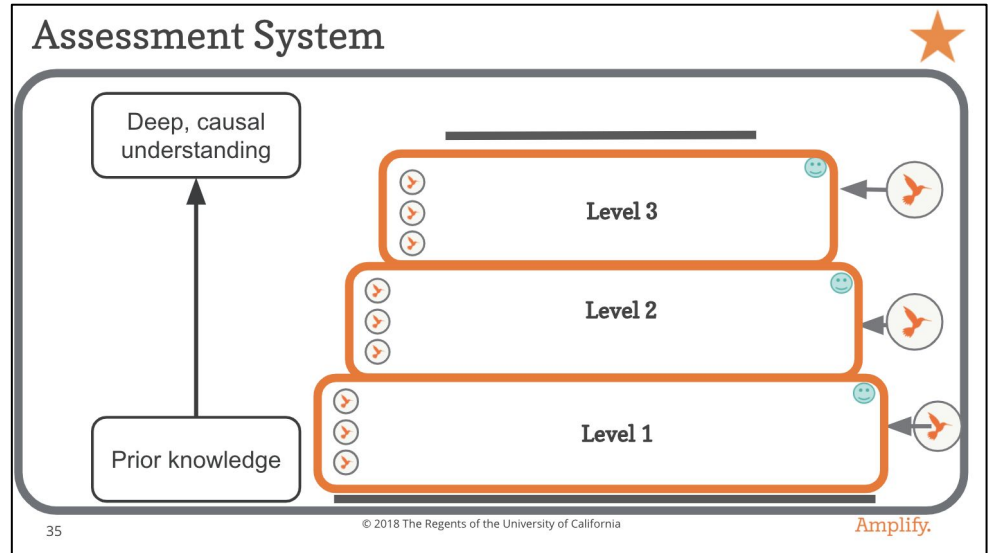
On-the-Fly Assessment 1: Synthesizing Information

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?

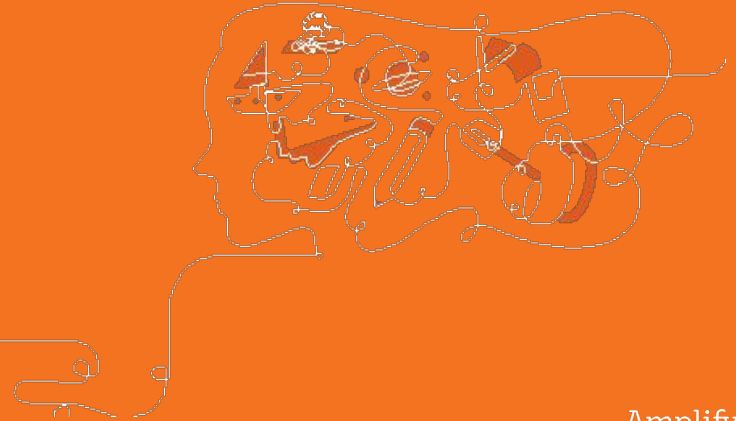
Now what? If students are having trouble getting started with synthesizing, or if they are connecting the reading to unrelated information, provide some additional models. You may wish to provide examples that combine information from the first section of *Systems* with information from other sources. 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.

Assessment Reflection

- There are many assessment opportunities in each Amplify Science unit.
- What does having this quantity of assessment opportunities do for students? For teachers?



Monitoring Student Progress



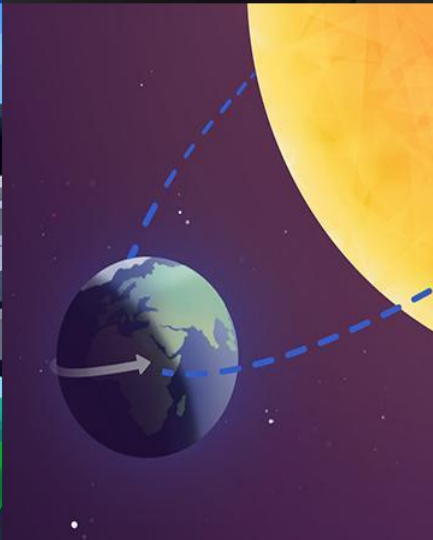
How can you monitor students progress?

- Through the implementation of multimodal instruction
(Do, Talk, Read, Write, Visualize)
- Using the embedded formative assessments
(Pre/End of unit, On-the-fly, Critical Juncture, etc)
- Observation
- Student Work

Multiple Modalities: Do, Talk, Read, Write, Visualize

The crosscutting concept emphasized in the *Environments and Survival* unit is Structure and Function. In their role as biomimicry engineers, students delve deeply into making observations of traits that are structures in a variety of organisms, and they investigate the role those structures play in making it easier or harder for organisms to survive in an environment. As students observe particular structural traits, they make inferences about how they function and consider how those structures may influence an organism's survival in its environment. Students return to the idea of structure and function again and again throughout the unit, through a variety of modalities.

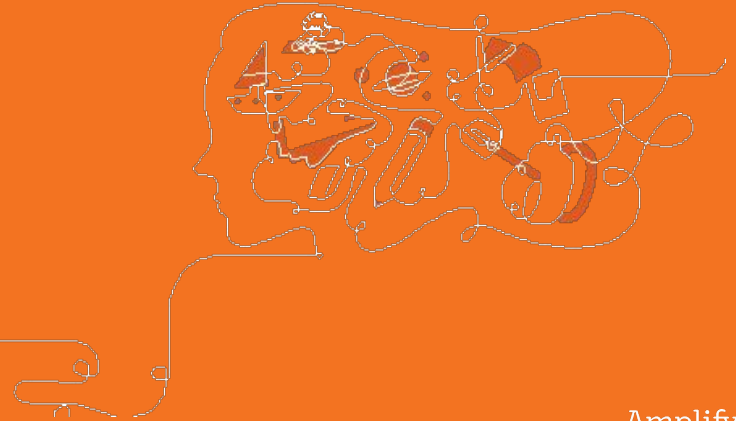
- **Do.** Students engage in a physical model that represents variation in traits for hummingbird beak structure and use their model beaks to collect nectar in their environment. Students collect and analyze data about the amount of nectar collected by different beak structures and discover the role of different structural traits in making it easier or harder for an organism to meet its needs for survival. Students apply their understanding of traits for neck and mouth structures in giraffes in order to plan, make, and test designs for a robot that removes invasive plants.
- **Talk.** Multiple opportunities for student-to-student talk engage the class in figuring out how traits for different structures affect an organism's likelihood of survival in an environment. By the end of the unit, students present oral arguments describing how the structures employed in their robot designs function to meet the design criteria.
- **Read.** Students read a book about different mouth structures in a variety of organisms to discover how each structure functions to help the organism survive. In their role as biomimicry engineers, students also read about different examples of structures in organisms that have provided engineers with inspiration for their design solutions.
- **Write.** Students write explanations of how organisms' structures function in a given environment, based on digital models they have created.
- **Visualize.** Students observe structures in fossilized organisms and visualize how each structure may have functioned in environments long ago to help organisms survive. Students also use diagrams in text and in a digital simulation to visualize the function of structural traits in different organisms in order to inspire ideas for designs that solve problems.



Plan for the day

- **Framing the day**
 - Welcome and introductions
 - Anticipatory Activity
- **Amplify Science Assessment System**
 - Credible, Actionable, Timely
 - Embedded Formative Assessments
 - Monitoring Student Progress
- **Amplify Science Diagnostics Tools**
 - Strategies for collecting/analyzing student work & assessment data
 - Resources for tailoring instruction
- **Amplify Science Embedded Supports**
 - Multimodal Instruction
 - Discourse routines
 - Differentiation/Meeting the needs of diverse learners
- **Closing**
 - Reflection/Survey

Strategies for Collecting and Analyzing Student Work



Collecting Data

How do you typically collect and record student data?

What strategies have you successfully used for collecting data in a remote learning setting ?

Collecting data

What ideas do you have for collecting student data?

Synchronous

Formative assessments
Summative assessments
Observations
Classwork
Homework
Simulations
Modeling Tools
Student Talk

Asynchronous

Formative assessments
Summative assessments
Observations
Classwork
Homework
Simulations
Modeling Tools
Student Talk

Recording Data

What ideas do you have for collecting student data from assessments?

Synchronous

Amplify Platform

Note - taking

Graphic Organizer

Google doc/forms

Google Classroom

Asynchronous

Amplify Platform

Google Classroom

Google Forms

Google Doc

Third Party Apps

Collecting and Analyzing Embedded Formative Assessment Data

Look at the class data, what do you notice about the class as a whole? Individually?

Amplify Science

[On-The- Fly Status of the Class Data Organization Tool]

Teacher: _____ Grade Level : _____ Date: _____
Unit Name: _____ Chapter: _____ Lesson: _____

Directions: A.) Determine the "Look For's" for the On the Fly Assessment.

Look For's: (Input all "Look For relevant to the on the fly assessment)

- 1.
- 2.
- 3.

B.) On the chart below, place a **plus (+)** if student demonstrates a strong understanding of the look for, a **backslash (/)** if student demonstrates some understanding and a **minus (-)** if student demonstrates no understanding of the above look for.

C.) After data are collected in the OTF, refer to the NOW WHAT section for ideas on how to respond to your students' needs.

Student Name	Look For # 1	Look For # 2	Look For # 3	Notes
A	+	+	+	Use lesson extension
B	/	/	/	RT
C	-	-	-	Small group reteach required (see differentiation brief)
D	+	+	/	RT
E	+	-	-	Small group reteach required (see differentiation brief)
F	-	-	-	Small group reteach required (see differentiation brief)
G	/	/	-	RT
H	+	/	-	RT
I	+	-	-	Small group reteach required (see differentiation brief)
J	+	/	-	RT
K	/	-	-	RT

Environments and Survival: Lesson 1.2 Overview

Lesson Goal:

The purpose of this lesson is for students to begin developing the understanding that organisms' likelihood of survival depends on their ability to meet their needs in their environment.

Activity 1: Introducing Needs for Survival

- Students consider what organisms need in order to survive and are introduced to the Investigation Question.

Activity 2: Investigating Needs for Survival

- Students gain experience evaluating whether or not an organism is able to meet its needs for survival in a given environment.

Activity 3: Making Inferences about Survival?

- Students make inferences about whether the organisms they investigated are likely or not likely to survive in a given environment.


Planning for an Upcoming Assessment

1. Choose an upcoming assessment for your unit.

2. Plan using the template or your note catcher.

Unit:			
Lesson:			
Analyzing student data: refer to the Look for section of the Lesson ____ assessment. <i>(If using the @Home Units refer to the chapter assessment considerations).</i>		Taking action based on student data: refer to the Now what section of the ____ assessment and consider how you might adjust instruction in your classroom.	
How will I collect data?	Which misconception?	When?	How?
	<input type="checkbox"/> Key Concept <input type="checkbox"/> Practice <input type="checkbox"/> Crosscutting Concept Notes:	<input type="checkbox"/> In the moment <input type="checkbox"/> In upcoming activity <input type="checkbox"/> Outside of lesson Notes:	<input type="checkbox"/> Keep an eye on certain students <input type="checkbox"/> Provide additional instruction <input type="checkbox"/> Revisit an activity Notes:

Model Analysis: 1.2 Activity 3

Analyzing Student Assessment Data: Refer to the “Look For” section of Lesson 1.2 Act. 3 and refer to your observation notes.		Taking action based on student data: refer to the Now what section of the 1.2 Act. 3 assessment and consider how you might adjust instruction in your classroom.	
Which misconception? 	Which students?	When?	How?
<input type="checkbox"/> Key Concept <input checked="" type="checkbox"/> Practice <input checked="" type="checkbox"/> Crosscutting Concept Notes: <i>As students discuss their inferences about whether or not an organism is likely or not likely to survive in a given environment, listen to how they are incorporating the environment into their reasoning. Students should be building an understanding that in order to determine whether or not an organism is likely to survive, they must think about the organism and its needs and also about the affordances of the environment.</i>	<i>Tristian</i> <i>Trent</i> <i>Wanda</i> <i>Zena</i>	<input type="checkbox"/> In the moment <input type="checkbox"/> In upcoming activity <input type="checkbox"/> Outside of lesson Notes:	<input type="checkbox"/> Keep an eye on certain students <input type="checkbox"/> Provide additional instruction <input type="checkbox"/> Revisit an activity Notes:

Model Analysis: 2.1 Activity 3

Analyzing Student Assessment Data: Refer to the “Look For” section of Lesson 1.2 Act. 2 and refer to your observation notes.

Taking action based on student data: refer to the Now what section of the 1.2 Act. 2 assessment and consider how you might adjust instruction in your classroom.

Which misconception?



Which students?

- Key Concept
- Practice
- Crosscutting Concept

Notes:

As students discuss their inferences about whether or not an organism is likely or not likely to survive in a given environment, listen to how they are incorporating the environment into their reasoning. Students should be building an understanding that in order to determine whether or not an organism is likely to survive, they must think about the organism and its needs and also about the affordances of the environment.

*Tristian
Trent
Wanda
Zena*

When?

- In the moment
- In upcoming activity
- Outside of lesson

Notes:

In order to focus students on the idea that an organism's chances of survival depend on what is in its environment, have students look at the Red-Eyed Tree Frog Organism Card and the Tropical Forest Environment Card. Have students make an inference about how likely the red-eyed tree frog is to survive in a tropical forest. If students do not bring it up, point out that the tree frog can find food and water and can possibly avoid predators in the tropical forest environment. In addition, the temperature in a tropical forest is not too hot or too cold for the tree frog. Guide students to agree on the inference that the tree frog is likely to survive in this environment. Then, ask students if the tree frog is just better at surviving than the red fox, for whom the tropical forest would be too hot. Have students share their ideas and then focus them on the Grassland Environment Card. Ask students to make an inference about how likely the red-eyed tree frog is to survive in a grassland environment.

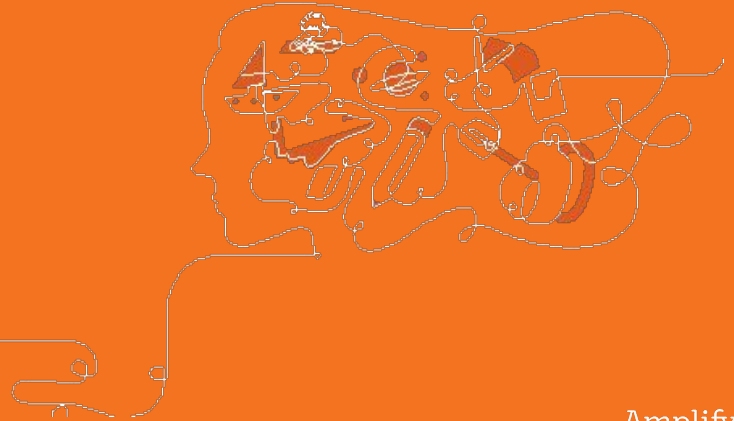
How?

- Keep an eye on certain students
- Provide additional instruction
- Revisit an activity

Notes:

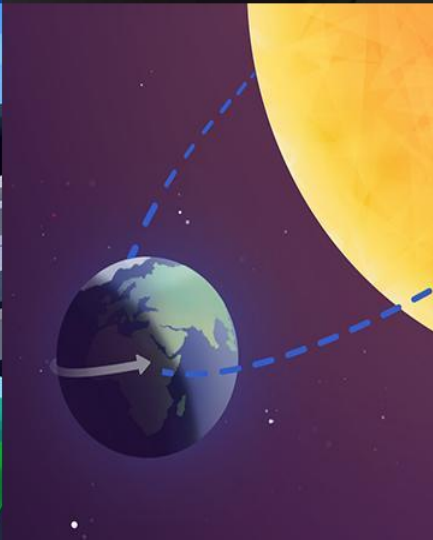
Coach students listed after 2.1 Act 3

Resources for Tailoring Instruction



How do I tailor instruction for my classroom?

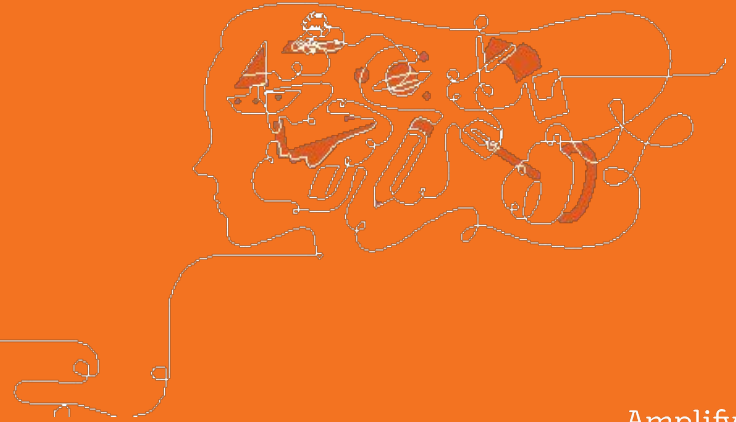
- Group students according to ability level
- Use the “Look For” and “Now what” tools to provide support based on formative assessment data
- Use the differentiation brief within each lesson
- Pull intervention suggestions from the student online component



Plan for the day

- **Framing the day**
 - Welcome and introductions
 - Anticipatory Activity
- **Amplify Science Assessment System**
 - Credible, Actionable, Timely
 - Embedded Formative Assessments
 - Monitoring Student Progress
- **Amplify Science Diagnostics Tools**
 - Strategies for collecting/analyzing student work & assessment data
 - Resources for tailoring instruction
- **Amplify Science Embedded Supports**
 - Multimodal Instruction
 - Discourse routines
 - Differentiation/Meeting the needs of diverse learners
- **Closing**
 - Reflection/Survey

Multimodal Instruction



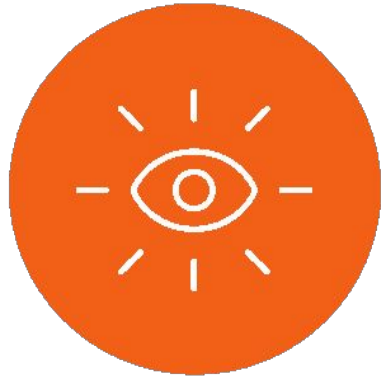
Multimodal, phenomenon-based learning

In each Amplify Science unit, students embody the role of a scientist or engineer to **figure out** phenomena.

Through problem based deep dives, they gather evidence from multiple sources, using multiple modalities.



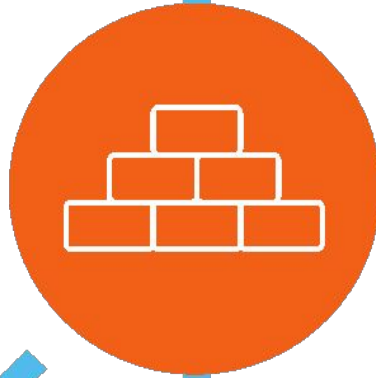
Amplify Science approach



**Introduce a phenomenon
and a related problem**



**Collect evidence from
multiple sources**



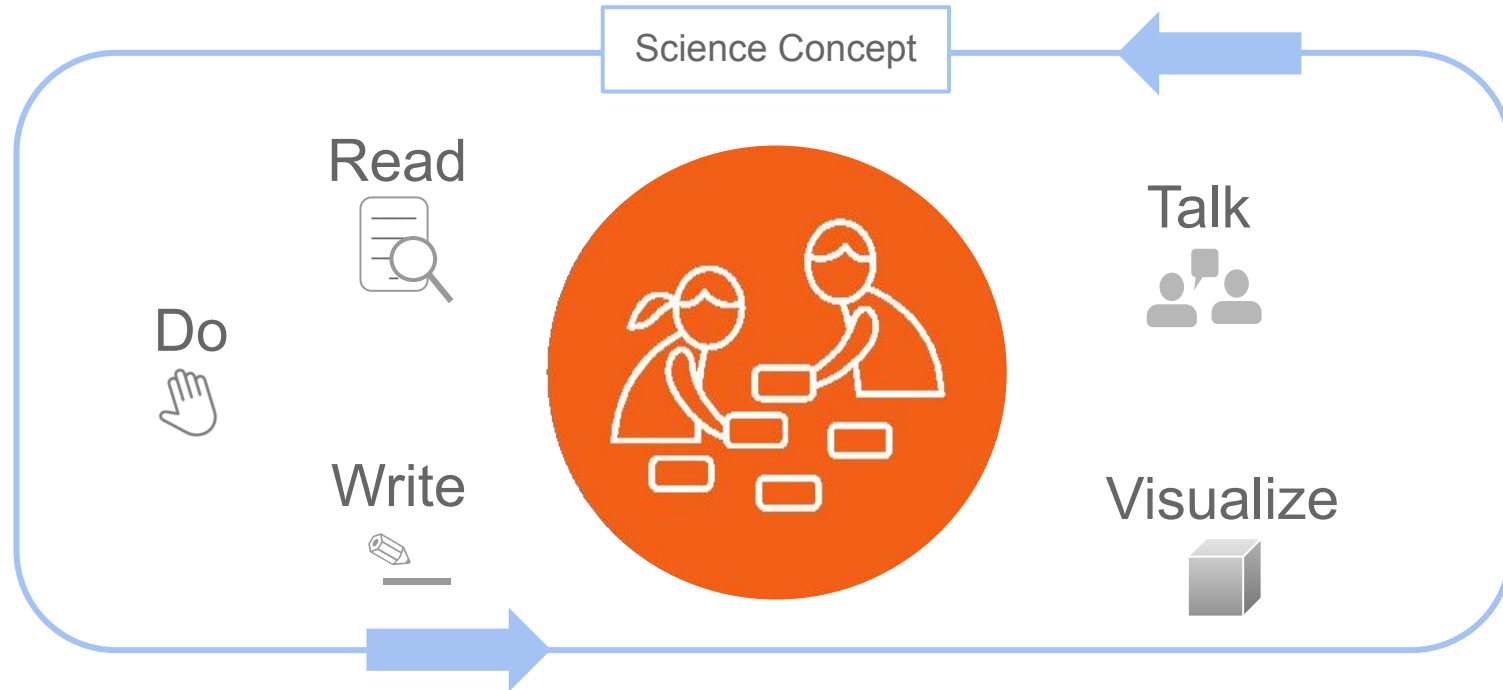
**Build increasingly
complex explanations**



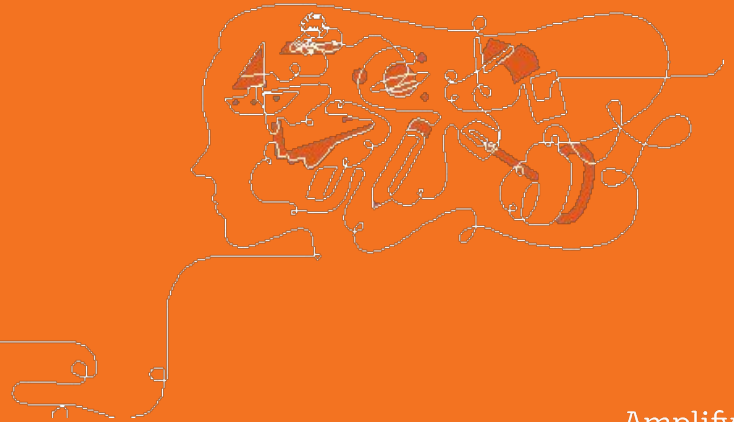
**Apply knowledge
to a different context**

Multimodal learning

Gathering evidence from different sources



Discourse Routines



Amplify Science discourse routines

- Oral Composition and/or Drawings as teacher captures words (K-1)
- Explanation Language Frames
- Shared Listening
- Partner Reading
- Thought Swap
- Think-Pair-Share
- Word Relationships
- Questioning Strategies [K-8]
 - Do you agree/disagree?





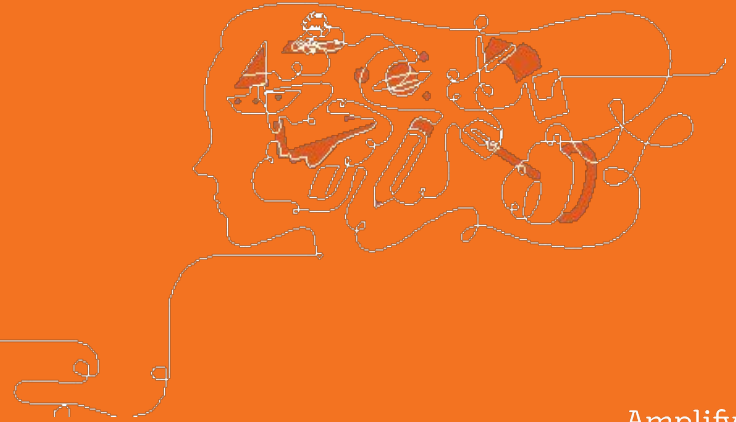
	Kindergarten - Grade 1	Grades 2-5
Discourse routines	<p>Students engage in informal partner, small group, and full class talk as well as with Shared Listening, a structured discourse routine.</p> <p>To work towards answering each Chapter question, students first compose responses orally with a Language Frame activity using sentence frames written on sentence strips, completed with cards. They use this practiced sentence structure to write explanations together as a class (Shared Writing) or in their investigation notebooks.</p>	<p>Students engage in informal partner, small group, and full class talk as well as with a variety of structured discourse routines. Each unit includes 2-3 different routines such as:</p> <ul style="list-style-type: none">• Shared listening• Think-pair-share• Think-draw (or write) -pair-share• Thought swap• Concept mapping• Word relationships• Building on ideas• Evidence circles

Additional support considerations

Modifying the instructional suggestions for my students

- Additional practice time
- Strategic grouping
- Additional resources (multilingual glossary, word banks, other environmental print)
- Increased support for gradual release of responsibility
- Alternative response options

Differentiation



Differentiation Briefs

- Embedded supports for diverse learners
- Potential challenges in this lesson
- Specific differentiation strategies for English learners
- Specific differentiation strategies for students who need more support
- Specific differentiation strategies for students who need more challenge

The screenshot shows a digital interface for a Lesson Brief. At the top, the title "Lesson Brief" is displayed in a light green header. Below it is a vertical navigation menu with the following items: "Overview", "Materials & Preparation", "Differentiation", "Standards", "Vocabulary", and "Unplugged?". Each item has a downward-pointing chevron icon on its right side. A prominent orange arrow points from the right towards the "Differentiation" menu item. At the bottom of the interface is a horizontal navigation bar with four tabs: "Step-by-step", "Teacher Support", "Possible Responses", and "My Notes". The "Teacher Support" tab is currently selected, indicated by a purple underline.

Differentiation briefs

Categories of differentiation briefs

- Embedded supports for diverse learners
- Potential challenges in this lesson
- Specific differentiation strategies for English learners
- Specific differentiation strategies for students who need more support
- Specific differentiation strategies for students who need more challenge

Lesson 1.2 Specific Differentiation

Embedded Supports for Diverse Learners

Accessible examples. Students are introduced to the idea that organisms can be more likely or less likely to survive. In order to support students in understanding this concept, students view several familiar examples (in Activity 3) and are asked how likely something is to happen. Thinking about and discussing familiar examples draws on students' background knowledge about probability and prepares them to consider the chances that an organism has of surviving in its environment, based on whether or not it can meet its needs.

Visual representations. This lesson uses a variety of visual representations to support students' learning. Students use two card sets to explore how organisms meet their needs in their environments. Both the Needs for Survival Organism Cards and the Needs for Survival Environment Cards provide visuals to accompany the text. The three "Likely to . . ." projections (in Activity 3) help support students' learning by providing visual examples of familiar situations in which an outcome would be more likely or less likely to occur. Visuals are especially helpful for English learners and students who need more support to process oral or written language.

Potential Challenges in This Lesson

Multiple vocabulary words introduced. In this lesson, the words *environment*, *inference*, and *survive* are introduced. It may be challenging for some students to make sense of so many new words. Students will have many other opportunities to read, write, hear, and say these words throughout the unit and will encounter them in context many times in this unit. However, you might want to consider spending extra time discussing these new words if you think this will be a challenge for your students.

Reading-centered. In Activity 2 (Investigating Needs for Survival), students will be working with one organism card and four environment cards and will need to read information on all five cards as they work with a partner. If you feel that this is too much information for your students to read, consider having some students just work through two or three environments instead of all four.

Specific Differentiation Strategies for English Learners

Vocabulary support. Some students may need more experience with the terms *likely* and *not likely*. You may want to work with these students and provide some additional familiar scenarios for them to think about before they consider how likely organisms are to survive in their environment. For example, you could show students a cup with many yellow pencils and only a few red pencils and ask them if they are likely or not to pick a red pencil if their eyes are closed. Point out how, even though it is *possible* to pick a red pencil, it is not likely that students would. You can also compare the likelihood of picking a red pencil or a yellow pencil and point out that students would be more likely to pick a yellow pencil.

Bilingual Spanish glossary. Having access to translations and definitions of vocabulary words in Spanish is helpful for English learners for whom Spanish is their primary language. Have these students turn to pages 75–76, Glossary, in the *Environments and Survival Investigation Notebook*. Encourage students to refer to this glossary as needed throughout the unit.

Specific Differentiation Strategies for Students Who Need More Support

Reading support. If students need more support in reading the information on the organism cards and environment cards, you can model how to get information from the tables on those cards. In addition, you can point out how students can use the photographs of the environments on the environment cards to help them understand the text on those cards. You might want to meet with a small group, read the environment cards together, and assist students as they complete the tables in their notebooks (pages 4–5, Needs for Survival).

Specific Differentiation Strategies for Students Who Need More Challenge

Apply ideas. At the end of this lesson, ask students to create their own likely/not likely scenarios. Encourage students to consider both familiar examples and examples related to organisms and their survival.

Embedded instructional design

- Modeling Active Reading/ Active Reading
- Anticipation Guides
- Science/ Everyday Word Chart
- Word Relationships Activities
- Graphic Organizers
- Reflective writing with language frames/ sentence starters
- Practice Tools
- Physical and digital models

Additional supports

- Cognates
- Multilingual Glossary
- Word Banks
- Multiple-Meaning Words
- Extended Modeling
- Additional Visual Representations
- Optional Graphic Organizers
- Response Option

English-Arabic Glossary (continued)

يُنْجُو: يبقى على قيد

English-Arabic Glossary (continued)

works or why
at it is made out
هيكل: الشكل الذي ي

English-Arabic Glossary

adaptive: making it easier for an organism to meet its needs in an environment
تكيفي: سهولة تلبية كائن ما لاحتياجاته في بيئة ما

biomimicry: getting engineering ideas from organisms' traits
محاكاة حيوية: الحصول على أفكار هندسية من سمات الكائنات

criteria: the things that engineers think about and test in order to know how well something solves a problem
معايير: الأمور التي يفكر المهندسون فيها ويختبرونها لمعرفة مدى فعالية شيء ما في حل مشكلة ما

data: observations or measurements recorded in an investigation
بيانات: ملاحظات أو قياسات مسجلة في دراسة ما

design (noun): something new made to solve a problem
تصميم (اسم): شيء ما يتم القيام به لحل إحدى المشكلات

engineer: a person who uses science knowledge to design something in order to solve a problem
مهندس: شخص يستخدم المعرفة لتصميم شيء ما لحل إحدى المشكلات

environment: all the living and nonliving things in an area
بيئة: كل الكائنات الحية والأشياء الجامدة الموجودة في منطقة ما

سمّة: شيء ما يمكن
التباين: الفروق
استدلال: شيء ما تستعمل
سم to meet its
غير تكيفي: صعوبة ت
animal
كائن: كائن حي كنبات
nism living in the
جماعة: مجموعة من
er animals
حيوان مقترن: حيوان
sary
3
تناسل: يخلف نسلاً
ossary
1
Environments and Survival—English-Arabic Glossary
© 2018 The Regents of the University of California. All rights reserved. Permission is granted to photocopy this glossary for classroom use.

Resources for Diverse Learners

- Optional investigation notebook pages
- Digital copy of vocabulary words
- Access to lesson level powerpoints (editable)
- Remote learning access for students (via Program Hub)
 - Student readers (English/Spanish)
 - Modeling tools/Sims/Practice tools
 - Videos with calls to action (English/Spanish)
 - Student slides, packets, and sheets (editable)

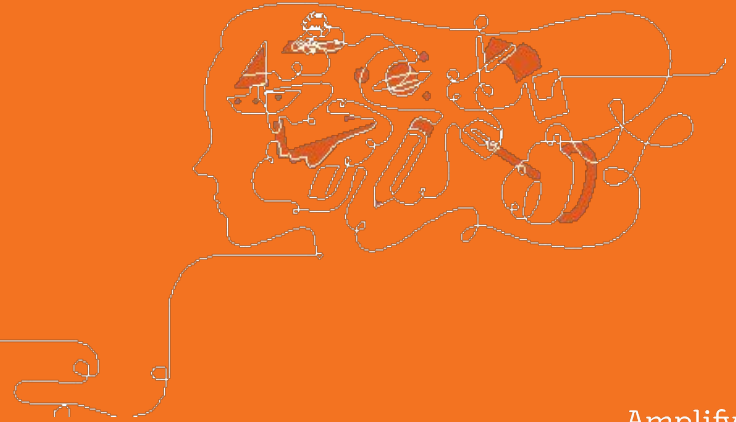


Reflect and Share



What is an example of an embedded differentiation strategy you want to use in your classroom to support students?

Meeting the Needs of Diverse Learners



Who are our Diverse Learners?

“Diverse learning is not based on race or dependent on a deficit model. Students who are considered gifted are also diverse learners. All students are diverse and unique, in their own right. Let’s agree that diverse learning recognizes that all students have unique learning needs and we educators must be prepared to provide multiple entry points for all learners to access the rigor of the goals and standards.”

Anonymous Educator

Universal Design for Learning

Universal Design for Learning (UDL) is a **research-based framework** for improving student learning experiences and outcomes by **focusing on careful instructional planning to meet the varied needs of students**. UDL is **NOT a special-education initiative**. Through the UDL framework, the **needs of ALL learners are considered** and planned for at the point of first teaching, thereby **reducing the need to reteach concepts**.

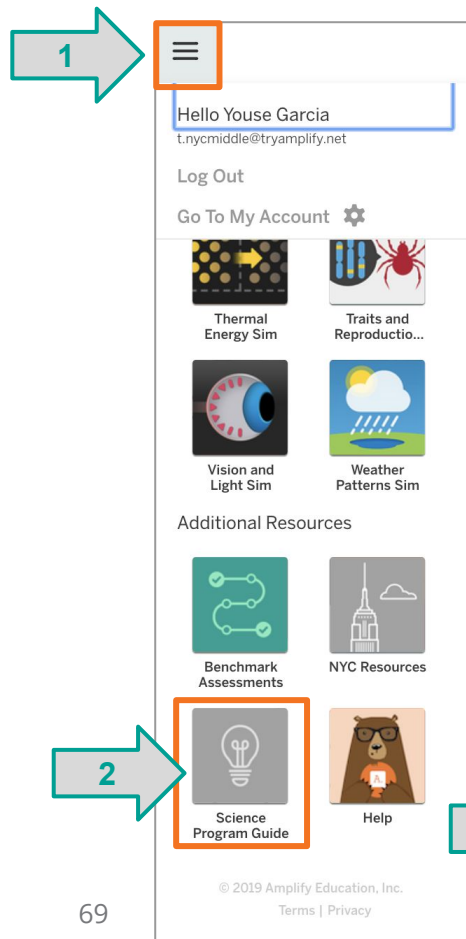
Universal Design for Learning Guidelines



Culturally and linguistically responsive teaching

Culturally and linguistically responsive teaching (CLRT) principles **emphasize validating and valuing students' cultural and linguistic heritage and creating positive and nurturing learning environments** so that learning is more effective.

Differentiation Strategies




1


☰


Hello Youse Garcia
t.nycmiddle@tryamplify.net

Log Out

Go To My Account ⚙️

 Thermal Energy Sim


 Traits and Reproductio...

 Vision and Light Sim


 Weather Patterns Sim

Additional Resources

 Benchmark Assessments

 NYC Resources

 Science Program Guide

 Help

© 2019 Amplify Education, Inc.
Terms | Privacy

2

3

AmplifyScience

Amplify Science

Welcome

Program developers

Designed for the NGSS

Program components

Scope and Sequence

Phenomena, standards, and progressions

Assessments

Science and literacy

Access and equity

Resources

Access and equity

Universal Design for Learning

Culturally and linguistically responsive

Differentiation strategies

– English learners

– Students with disabilities

– Standard English learners

– Girls and young women

– Advanced learners and gifted learners

– Students living in poverty, foster children and youth, and migrant students

Lesson-level differentiation

4

What resources can you use to meet the needs of diverse learners?

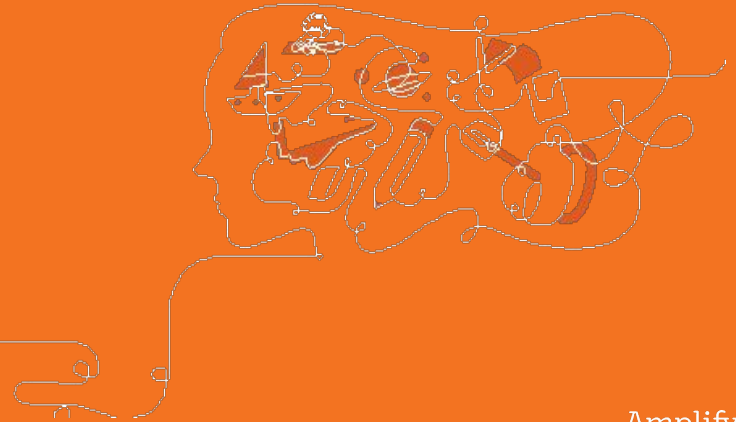
A Differentiation

C Do, Talk, Read,
Write, Visualize

B Universal Design
for Learning

D All of the Above

Closing/ Reflection



Revisiting Objectives:

By the end of this 1-hour workshop, you will be able to...

- Explore the Amplify Science Formative Assessment system.
- Explore how to use Embedded Formative Assessments to gain access to credible, actionable, and timely diagnostic information about students progress toward learning the unit goals.
- Learn strategies for analyzing student's work & assessment data, examine resources to help plan for tailoring instruction.
- Explore supports for differentiation to meet the diverse learning needs in their classroom



New York City Resources Site

<https://amplify.com/resources-page-for-nyc-k-5/>



Amplify.

Amplify Science Resources for NYC (K-5)

Welcome! This site contains supporting resources designed for the New York City Department of Education Amplify Science adoption for grades K-5.

UPDATE: Summer 2020

Introduction

Getting started resources

Planning and implementation resources

Admin resources

Parent resources

COVID-19 Remote learning resources 2020

Professional learning resources

Questions

UPDATE: Summer 2020

Account Access: It's an exciting time for Amplify Science! We have access to the many updates and upgrades in our curriculum until late August/early September when we will update our rosters from STARS.

Any schools or teachers new to Amplify Science in 20/21 are encouraged to contact our Help Desk (1-800-823-1969) for access to your temporary login for summer planning.

Upcoming PL Webinars: Join us for our Summer 2020 Professional Learning opportunities in July for NEW teachers and administrators and August for RETURNING teachers and administrators. Links to register coming soon!

Site Resources

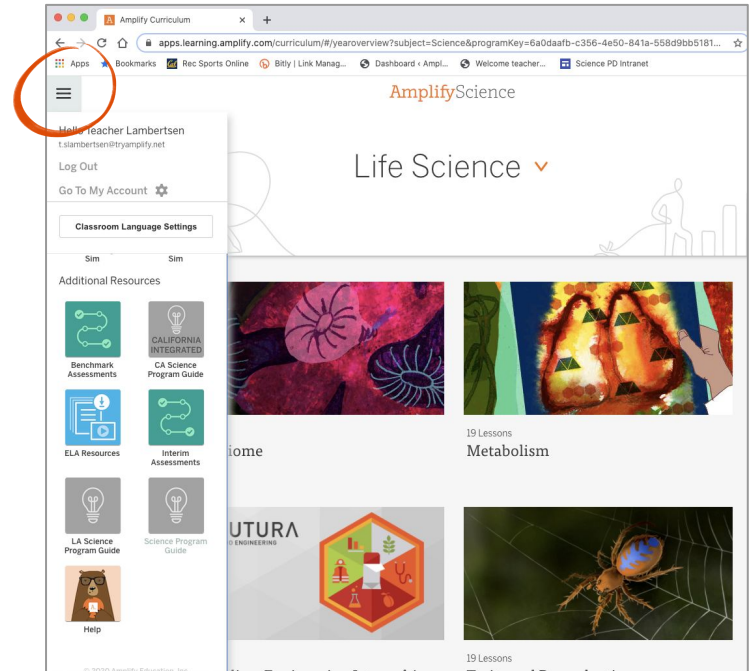
- Login information
- Pacing guides
- Getting started guide
- NYC Companion Lessons
- **Resources from PD sessions**
- And much more!

Amplify Science Program Hub

A new hub for Amplify Science resources

- **Videos and resources to prepare for instruction**
- **Amplify@Home resources**
- **Self study resource and much more!**

***Check back often to stay update to date with Amplify Science ***



Additional Amplify resources



Program Guide

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

<https://my.amplify.com/programguide/content/national/welcome/science/>

Amplify Help

Find lots of advice and answers from the Amplify team.

my.amplify.com/help

Additional Amplify Support

Customer Care

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



scihelp@amplify.com



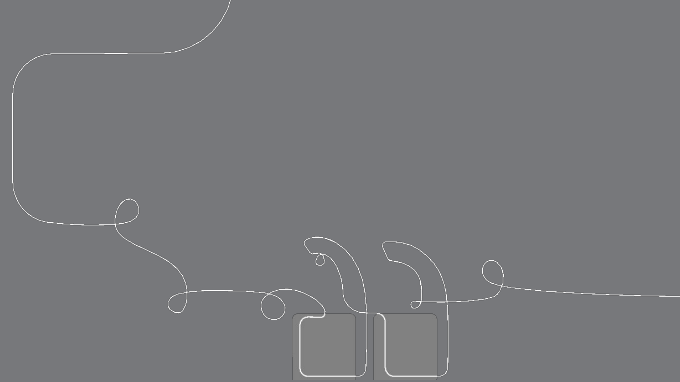
800-823-1969



Amplify Chat

When contacting the customer care team:

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



Final Questions?