

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, & school you teach in.



Amplify Science

New York City

Unit 3: Supporting Diverse Learner Needs

Grade 4 returning teachers

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/8a31e095506df8a2015256f88ab544_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 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 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

Overarching goals

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

- Identify the embedded supports for diverse learner needs within your third unit.
- Understand the research-based principles that guided the creation of these supports & strategies in Amplify Science.





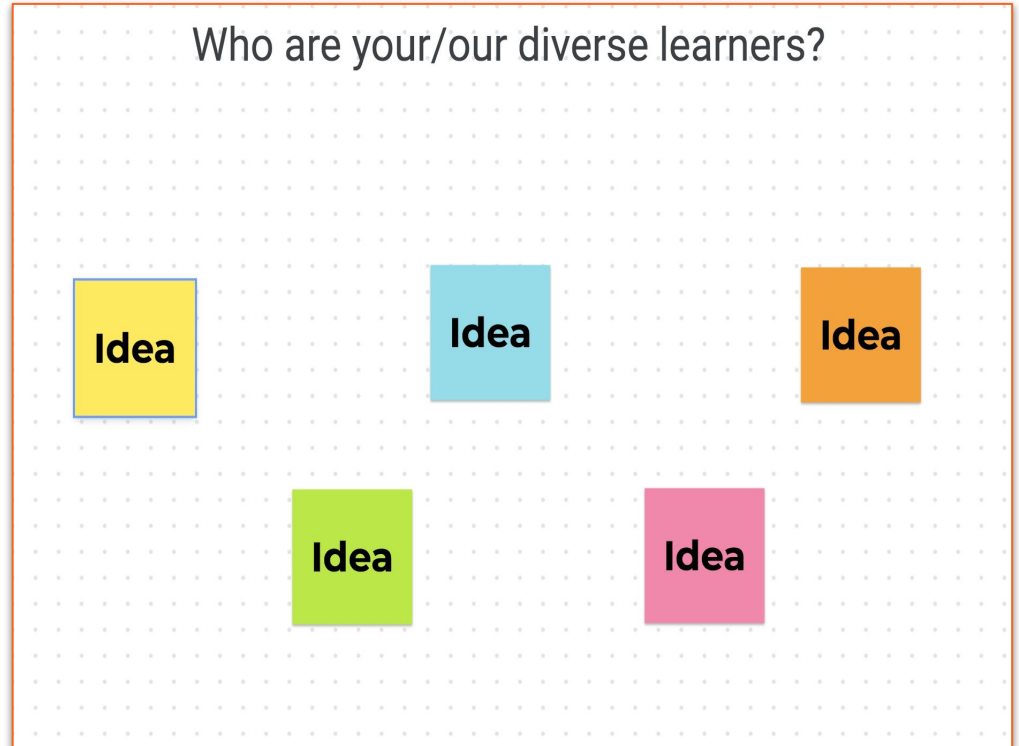
Plan for the day

- **Framing the day**
 - Welcome and introductions
 - Anticipatory activity
- Embedded supports for diverse learners
 - Research-based principles
- Analyzing an instructional sequence
 - Diverse learner profiles
 - Disciplinary literacy in science
- Multimodal instruction @home
- Closing
 - Reflection & additional resources
 - Survey

Anticipatory activity

On the Jamboard “post”

- Your thoughts on this prompt: “Who are your/our **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



Questions?



Plan for the day

- **Framing the day**
 - Welcome and introductions
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The Amplify Science curriculum was developed with supporting diverse learning needs in mind.



Two overarching conceptual frameworks informed Amplify Science's approach to ensuring access and equity for all students:

Universal Design for Learning & Culturally Linguistically Responsive Teaching.



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

I. Provide Multiple Means Representation

1: Provide options for perception

- 1.1 Offer ways of customizing the display of information
- 1.2 Offer alternatives for auditory information
- 1.3 Offer alternatives for visual information

2: Provide options for language, mathematical expressions, and symbols

- 2.1 Clarify vocabulary and symbols
- 2.2 Clarify syntax and structure
- 2.3 Support decoding of text, mathematical expressions, and symbols
- 2.4 Promote understanding across languages and symbols
- 2.5 Illustrate through multiple media

3: Provide options for comprehension

- 3.1 Activate or supply background knowledge
- 3.2 Highlight patterns, critical features, big ideas, and relationships
- 3.3 Guide information processing, visualization, and manipulation
- 3.4 Maximize transfer and generalization

<http://www.cast.org/>

4: Provide options for physical action

- 4.1 Vary the methods for response and navigation
- 4.2 Optimize access to tools and assistive technologies

5: Provide options for expression and communication

6: Provide options for executive functions

- 6.1 Guide appropriate goal-setting
- 6.2 Support planning and strategy development
- 6.3 Facilitate managing information and resources
- 6.4 Enhance capacity for monitoring progress

Provide Multiple Means of Engagement

7: Provide options for recruiting interest

- 7.1 Optimize individual choice and autonomy
- 7.2 Optimize relevance, value, and authenticity
- 7.3 Minimize threats and distractions

8: Provide options for sustaining effort and persistence

- 8.1 Optimize challenge and experience of goals and objectives
- 8.2 Optimize resources to optimize challenge
- 8.3 Optimize collaboration and community
- 8.4 Optimize feedback, including mastery-oriented feedback

9: Provide options for self-regulation

- 9.1 Promote expectations and beliefs that optimize motivation
- 9.2 Facilitate personal coping skills and strategies
- 9.3 Develop self-assessment and reflection

Virtual round robin: Give an instructional strategy from each category that you've used in your classroom.

Resourceful, knowledgeable learners

Strategic, goal-directed learners

Purposeful, motivated learners

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.



Source: (l): Aaron Yaazie; (um): Kyle Spradley/ University of Missouri; (lm) Dr. Grace O'Connell; (ur) Jane Rigby; (lr) Tina Shelton/ John A. Burns/ University of Hawaii at Manoa

Culturally and linguistically responsive teaching

Think, type, chat: What have you leveraged from the Amplify curriculum to support culturally and linguistically responsive teaching?

CULTURALLY AND LINGUISTICALLY RESPONSIVE TEACHING PRINCIPLES

- ∨ Promote a positive disposition toward diversity: +
- ∨ Leverage students' cultural and experiential backgrounds: +
- ∨ Value language diversity and multilingualism: +
- ∨ Cultivate students' development of the language of science: +

Differentiation strategies to support ALL students

t.rsinha-das@tryamplify.net

Log Out

Go To My Account ⚙️

Classroom Language Settings

LEA Resources

LA Science Program Guide

Science Program Guide

Help

Interim Assessments

Program Hub

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

Diverse learner needs

Student population	Strategies for support
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	

- In pairs, choose a **student population**.
- Jot down strategies you've read about from the **Program Guide** & those from your **own practice**.



Questions?



Plan for the day

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 - **Diverse learner profiles**
 - **Disciplinary literacy in science**
- Multimodal instruction @home
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Sample student profiles

Learner A: Enjoys science and math. Loves to tell stories about her many travels and enjoys figuring out phenomena presented. While she finds verbal explanations to be sufficient, she does not find it necessary to elaborate on her ideas through written explanation or written argument. She often shuts down when pushed to provide supporting details in writing.

Learner B: Enjoys reading and writing. When provided a written assignment, he is anxious to provide lengthy written and verbal explanations. Although, this learner enjoys reading, writing and speaking, he is challenged by sentence structure, spelling and staying on topic.

Learner C: This new student enjoys expressing himself through art and drawings. He is not a strong reader, yet, as English is his second language. This student has strong comprehension skills and has adapted to using the classroom artifacts to help him construct written explanations.

Learner D: Enjoys solving critical thinking problems and has rich science vocabulary. She works best when provided independent tasks and does not work well in collaborative group settings. She relies on step by step teacher validation and is not likely to complete a task without making sure her answer is affirmed by an adult in the room.

Earth's Features

What was the environment of this place like in the past?

Playing the role of geologists, students help the director of Desert Rocks National Park explain how and when a particular fossil formed and how it came to be in its current location. Students figure out what the environment of the park was like in the past and why it has so many visible rock layers.

As you experience model activity:

- Choose a **learner profile**.
- Reflect on what this student may be **challenged by**.

Keeping Diverse Learner Needs in Mind Reflection Tool

Unit Name: _____ Chapter #: _____ Lesson #: _____

Circle the Selected Learner Profile: A B C D

Directions: Reflect on each lesson activity and jot down strategies to support the student you selected from the Learner Profile.

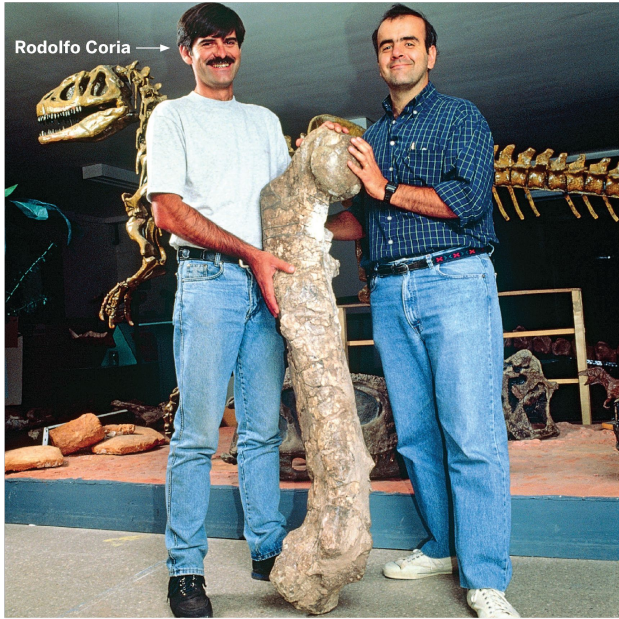
Lesson Activity	My Student May be Challenged by...	Suggestions from the Differentiation Brief	Suggestions from my own Teacher Toolkit
1			
2			
3			
4			
5			

Take a Moment: How will this activity influence your planning practices?

Activity 3

Partner Reading





"I felt like a mouse looking up the giant leg of an elephant." That's what Rodolfo Coria remembers about his first look at *Argentinosaurus* (ar-jen-TEEN-oh-SORE-us), a dinosaur he helped discover.

Turn to page 3.

Let's read this page together.



Rodolfo Coria is a scientist who studies dinosaurs. He lives in Argentina, a country in South America. The dinosaurs Coria studies are extinct—there are none left alive on Earth. To study dinosaurs, Coria has to make **inferences**. An inference is something he figures out by putting together what he can **observe** and what he already knows.

Turn to page 4.



Follow along as a
volunteer reads out loud.



Rodolfo Coria is a scientist who studies dinosaurs. He lives in Argentina, a country in South America. The dinosaurs Coria studies are extinct—there are none left alive on Earth. To study dinosaurs, Coria has to make **inferences**. An inference is something he figures out by putting together what he can **observe** and what he already knows.

The last two sentences mention **inferences** and **observations**. I will reread those two sentences.



This photo shows Rodolfo Coria observing a fossil in Argentina.

Coria can't observe living dinosaurs, but he *can* observe **fossils** of dinosaurs. Fossils are imprints or parts of animals, plants, and other **organisms** that have been preserved in rock. Fossils can be found millions of years after an organism died.



Read the rest of
the book.

Name: _____ Date: _____

Reading About the Work of a Geologist: *Clues from the Past*

1. Reread each page from *Clues from the Past* listed in the table below.
2. For each page, record an observation that Dr. Coria made of *Argentinosaurus*.
3. For each observation, record the inference that he made.
4. In the last row, choose another observation and inference from the book to record. Be sure to record the page number in the first column.

Observations of <i>Argentinosaurus</i>	Inferences about <i>Argentinosaurus</i>
Page 11:	
Page 12:	
Page 13:	

Turn to page 5 in your notebooks.

You will record observations and inferences that Dr. Coria made. We'll do the first one together.



This artwork shows what *Argentinosaurus* may have looked like. It is based on inferences.

Coria observed the shapes and sizes of the fossil bones he had found. They looked similar to fossils from large dinosaurs that had been found before. Coria could infer that the bones were from the lower leg and backbone of a dinosaur. He could also infer that the dinosaur was big and walked on four legs. Coria and the scientist he was working with named the dinosaur *Argentinosaurus* after their country. It was a type of dinosaur no one had known about before.

Let's reread page 11.



What *observation* did Coria make of the fossil bones he found?

Name: _____ Date: _____

Reading About the Work of a Geologist: *Clues from the Past*

1. Reread each page from *Clues from the Past* listed in the table below.
2. For each page, record an observation that Dr. Coria made of *Argentinosaurus*.
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Observations of <i>Argentinosaurus</i>	Inferences about <i>Argentinosaurus</i>
Page 11: He observed the sizes and shapes of fossil bones.	
Page 12:	
Page 13:	

Now we can **record** the **observation** that Dr. Coria made of the fossil bones he found.



This artwork shows what *Argentinosauros* may have looked like. It is based on inferences.

Coria observed the shapes and sizes of the fossil bones he had found. They looked similar to fossils from large dinosaurs that had been found before. Coria could infer that the bones were from the lower leg and backbone of a dinosaur. He could also infer that the dinosaur was big and walked on four legs. Coria and the scientist he was working with named the dinosaur *Argentinosauros* after their country. It was a type of dinosaur no one had known about before.



What **inferences** did Coria make based on his observation?

Name: _____ Date: _____

Reading About the Work of a Geologist: *Clues from the Past*

1. Reread each page from *Clues from the Past* listed in the table below.
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Page 11: He observed the sizes and shapes of fossil bones.	The bones were from the lower leg and backbone of a dinosaur.
Page 12:	
Page 13:	

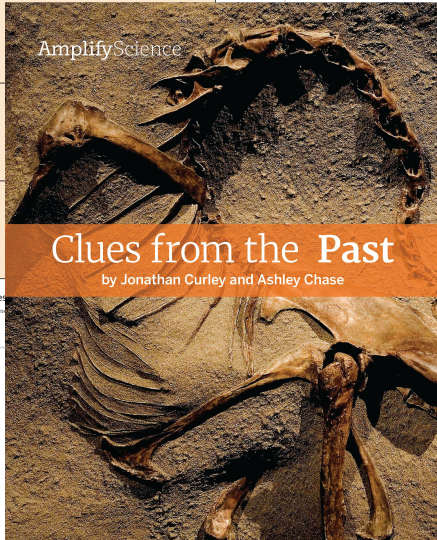
Next, we can record the **inference** that Dr. Coria made based on this observation.

Name: _____ Date: _____

Reading About the Work of a Geologist: Clues from the Past

1. Reread each page from *Clues from the Past* listed in the table below.
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Page 11: He observed the sizes and shapes of fossil bones.	The bones were from the lower leg and backbone of a dinosaur.
Page 12:	
Page 13:	



Reread the book and **record** observations and inferences.

End of model activity

Differentiation in Amplify Science

Lesson Brief	
Overview	▼
Materials & Preparation	▼
Differentiation	▼
Standards	▼
Vocabulary	▼
Unplugged?	▼



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

Reflection part 1:

- Navigate to the **model** lesson **activity**.
- Review the **differentiation brief** and jot down notes on the **note-catcher** to describe the supports you think would best support your **diverse learner**.

Keeping Diverse Learner Needs in Mind
Reflection Tool

Unit Name: _____ Chapter #: ____ Lesson #: ____

Circle the Selected Learner Profile: A B C D

Directions: Reflect on each lesson activity and jot down strategies to support the student you selected from the Learner Profile.

Lesson Activity	My Student May be Challenged by...	Suggestions from the Differentiation Brief	Suggestions from my own Teacher Toolkit
1			
2			
3			
4			
5			

Take a Moment: How will this activity influence your planning practices?

A disciplinary literacy approach to learning science

In the Amplify Science program, students **learn to read, write, and speak as scientists do** as they acquire facility with the **academic language** and vocabulary of science. Through the **seamless integration of science and literacy instruction**, students also learn that reading, writing, and talking are **essential practices of science**, and that all scientists use these practices to gather information, communicate claims, leverage evidence, draw conclusions from data, and share their ideas through oral and written **explanations and arguments**.

Reflection part 2:

How did language & literacy help students in developing scientific understanding in the model activity?





Questions?



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- **Multimodal instruction @home**
- Closing
 - Reflection & additional resources
 - Survey

AmplifyScience@Home

A suite of resources designed to make extended remote and hybrid learning easier for teachers and students.



Temperature Check

Rate your comfort level accessing and navigating the Amplify Science @Home Resources

1 = Extremely Uncomfortable

2 = Uncomfortable

3 = Mild

4 = Comfortable

5 = Extremely Comfortable


AmplifyScience

Hello Teacher Sinha-Das
 Log Out
 Go To My Account


Classroom Language Settings

ELA Resources
 Job Postments
 LA Science Program Guide
 Science Program Guide
 Florida Edition
 Standards Map
 Help


1st Grade ▾ **Step 1**



22 Lessons
Animal and Plant Defenses



22 Lessons
Light and Sound



22 Lessons
Spinning Earth

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Amplify Science Program Hub

Welcome Science Educators! **Step 2**

The Amplify Science Program Hub was created to provide you with resources, tools, and advice for all stages of your implementation. Want a tour? Click [here!](#)

Remote and hybrid learning resources
 Amplify Science@Home makes remote and hybrid learning easier.

Professional Learning Resources
 Let's get started!

Additional Unit Materials
 Additional resources to complement the units you're teaching.

AmplifyScienceProgramHub HELP CENTER LAUNCH PROGRAMS TEACHER SINHA

Amplify Science Program Hub > Remote and hybrid learning resources

Remote and hybrid learning resources ▾

Resources for the first unit of each grade level are available now, and subsequent units will be released on a rolling basis. For grades 6-8, materials will be released and organized according to our national Integrated Sequence.

Step 3 (choose your grade)

Grade Level Units Grade TK ▾

Transitional Kindergarten

AmplifyScienceProgramHub HELP CENTER LAUNCH PROGRAMS TEACHER SINHA

Amplify Science Program Hub > Remote and hybrid learning resources

Remote and hybrid learning resources ▾

Resources for the first unit of each grade level are available now, and subsequent units will be released on a rolling basis. For grades 6-8, materials will be released and organized according to our national Integrated Sequence.

Step 4 (scroll down and choose your unit)

Grade Level Units NYC Grade 7 ▾

Orientation and Tutorials
 Learn more about how to use @Home resources.

Microbiome

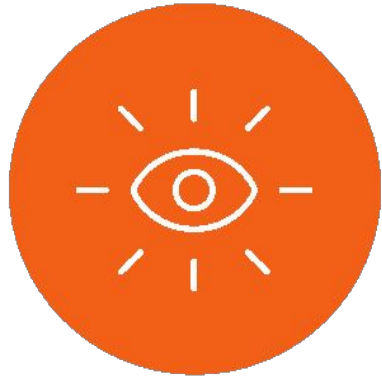
Metabolism

Phase Change

Chemical Reactions

Plate Motion

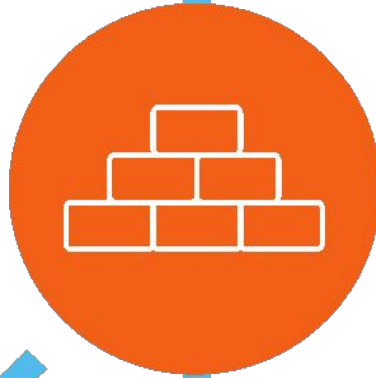
Amplify Science approach



Introduce a phenomenon
and a related problem



Collect evidence from
multiple sources



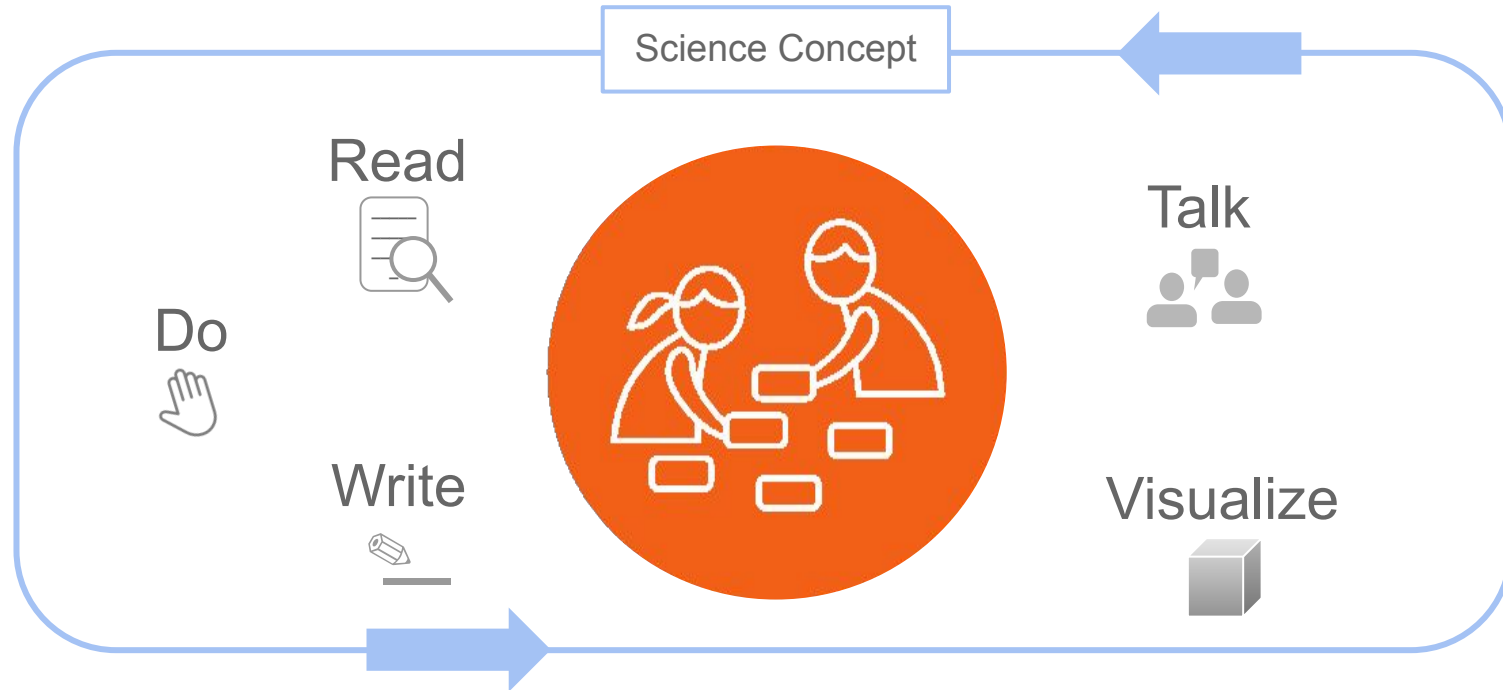
Build increasingly
complex explanations



Apply knowledge
to a different context

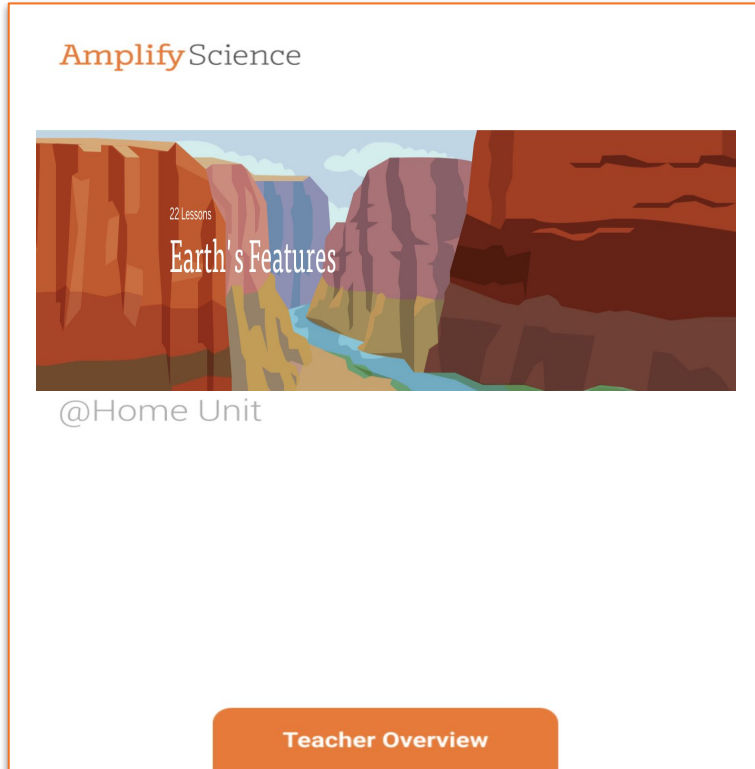
Multimodal learning

Gathering evidence from different sources



@Home units diverse learner supports

The multimodal approach



- Preserves a **coherent** instructional build
- Retains a **multi-modal & 3-D** learning approach
- **Adapted** versions of doing, talking, reading, and writing



Questions?



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Revisiting our objectives

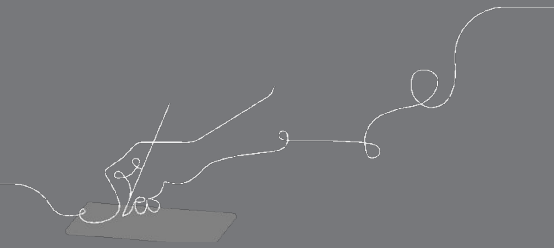
Do you feel ready to...

- Identify the embedded supports for diverse learner needs within your third unit.
- Understand the research-based principles that guided the creation of these supports & strategies in Amplify Science.

1- I'm not sure how I'm going to do this!

3- I have some good ideas but still have some questions.

5- I have a solid plan for how to make this work!



New York City Resources Site

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



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!

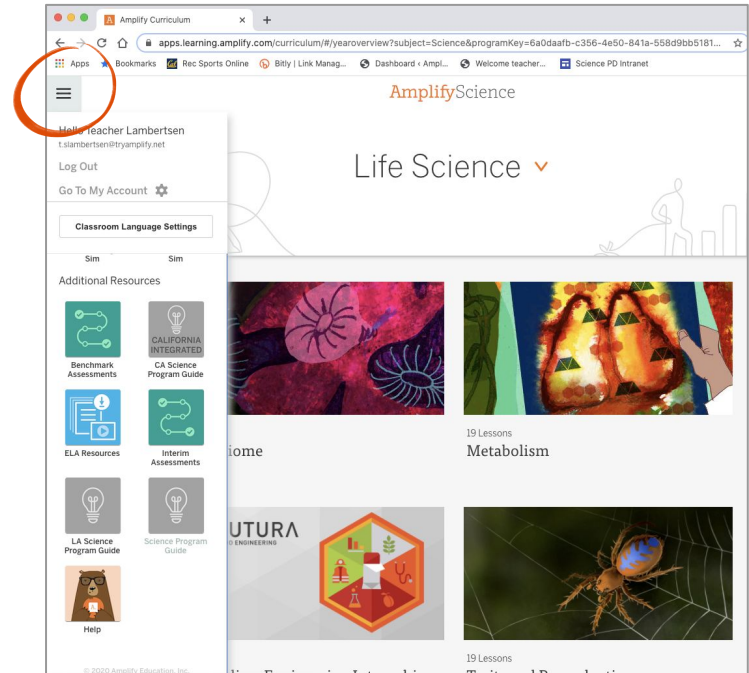
Site Resources

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

Amplify Science Program Hub

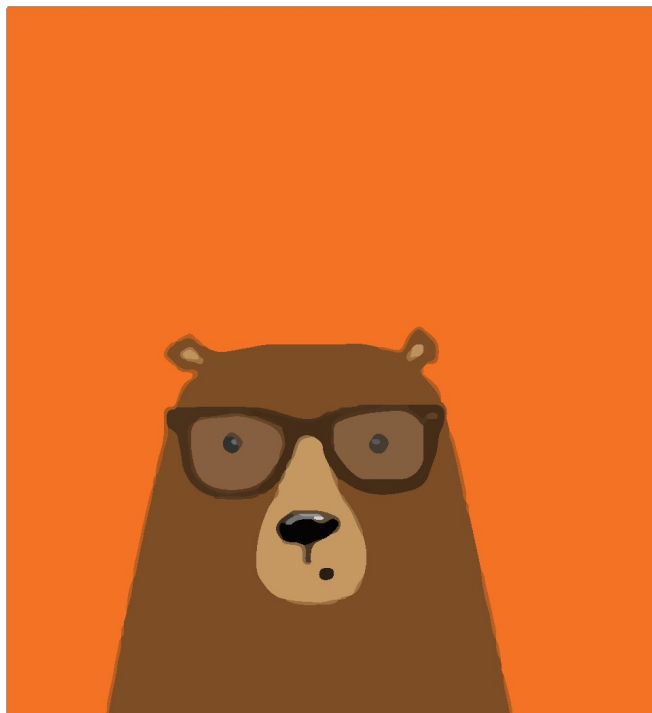
A hub for Amplify Science resources

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



The screenshot shows the Amplify Science Program Hub website. The browser address bar displays the URL: apps.learning.amplify.com/curriculum/#/yearoverview?subject=Science&programKey=6a0daafb-c356-4e50-841a-558d9bb5181.... The page features a navigation menu on the left with a hamburger icon circled in orange. The main content area includes a user profile for "Molly Teacher Lambertsen" with options for "Log Out" and "Go To My Account". Below this is a "Classroom Language Settings" section. The "Additional Resources" section lists several items: "Benchmark Assessments", "ELA Resources", "LA Science Program Guide", "Interim Assessments", "Science Program Guide", and "Help". The "Life Science" section is expanded, showing a grid of resources including "iome" and "Metabolism" (19 Lessons). The footer contains the copyright notice: "© 2020 Amplify Education, Inc."

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.

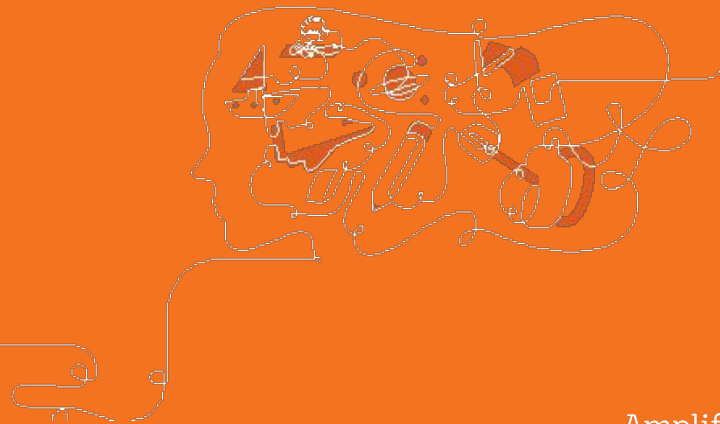


Final Questions?

Please provide us feedback!

URL: <https://www.surveymonkey.com/r/BY56SBR>

Presenter name: XXX



30 minute open office hours
to follow...

