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

Accessing Complex Texts Grade 5

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

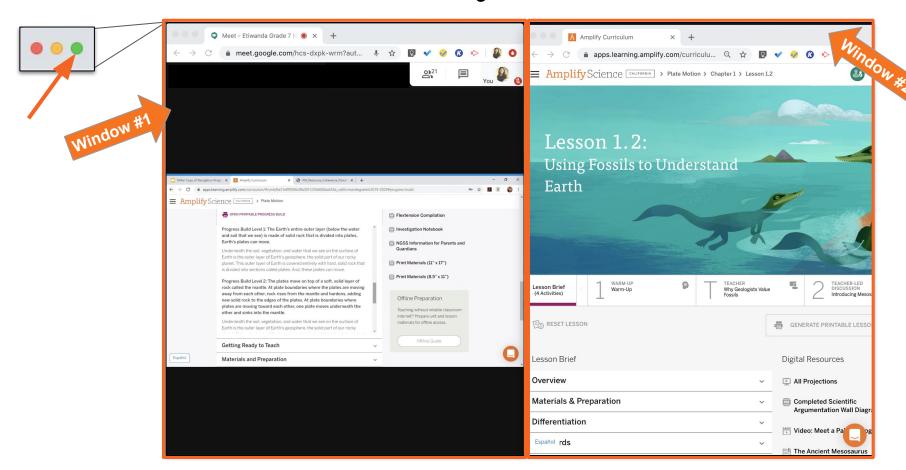


Make sure you have a note-catcher present



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

Use two windows for today's webinar



Objectives

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

- Describe how the Amplify Science approach to reading supports students in making sense of science ideas.
- Identify the different roles that text can play in figuring out science concepts.
- Be ready to teach specific reading strategies for diverse learners in a remote/hybrid instructional setting.



Plan for the day

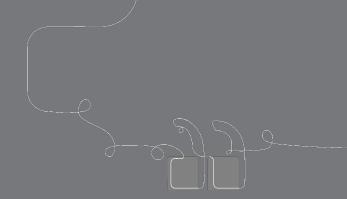
- Framing the day
 - Welcome and introductions
 - Anticipatory activity
- Measuring text complexity
- Text roles: reader & task measures
- Differentiation & other supports
- Closing
 - Reflection & additional resources
 - Survey

Anticipatory activity

On the Jamboard "post"....

 Best practices and strategies you already implement to support your students in accessing complex texts

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Questions?



Plan for the day

- Framing the day
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What is text complexity?





Amplify.

Qualitative Measures

- Knowledge demands
- Text structure (including visual representations)

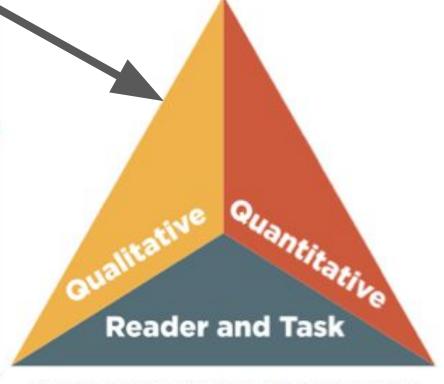


Figure 1: The Standards' Model of Text Complexity

Qualitative Measures

Lipase-Catalyzed Production of Biodiesel¹

Lloyd A. Nelson, Thomas A. Foglia*, and William N. Marmer USDA, ARS, ERRC, Wyndmoor, Pennsylvania 19038

Knowledge demands

Text Structure



Figure 1: The Standards' Model of Text Complexity

ABSTRACT: Lipases were screened for their ability to transesterify triglycerides with short-chain alcohols to alkyl esters. The lipase from Mucor miehei was most efficient for converting triglycerides to their alkyl esters with primary alcohols, whereas the lipase from Candida antarctica was most efficient for transesterifying triglycerides with secondary alcohols to give branched alkyl esters. Conditions were established for converting tallow to short-chain alkyl esters at more than 90% conversion. These same conditions also proved effective for transesterifying vegetable oils and high fatty acid-containing feedstocks to their respective alkyl ester derivatives.

JAOCS 73, 1191-1195 (1996).

KEY WORDS: Alcoholysis, alkyl esters, biodiesel, grease, lipase, rapeseed, soy oil, tallow.

There have been a considerable number of studies that report transesterification and interesterification reactions by using lipases with and without organic solvents (1–6). Recently, research has centered on the use of lipases to transesterify higher-molecular weight fatty acids to alkyl esters. Lipase-catalyzed alcoholyses of sunflower oil (7), rapeseed oil (8), soybean oil, and beef tallow (9) have been reported. The alcoholysis reactions generally involve primary alcohols with a few scattered reports on transesterifications with secondary alcohols.

ture properties. Another way of improving cold-temperature properties of tallow esters would be to substitute methanol with branched higher-molecular weight alcohols.

Though efficient in terms of reaction yield and time, the chemical approach to synthesizing alkyl esters (18-20) from triglycerides has drawbacks, such as difficulties in the recovery of glycerol, the need for removal of salt residue, and the energy-intensive nature of the process. On the other hand, biocatalysts allow for synthesis of specific alkyl esters, easy recovery of glycerol, and transesterification of glycerides with high free fatty acid (FFA) content. This technology could be extended to transesterification of greases, which are even less expensive than soybean oil and tallow. This process can further be used to synthesize other value-added products, including biodegradable lubricants and additives for fuel and lubricants. Lipase can also be used to introduce other functionalities into alkyl esters that may further improve the coldtemperature properties of the resulting biodiesel. In this paper, we report the lipase-catalyzed synthesis of normal and branched-chain alkyl esters of agriculturally derived triglycerides (TG): vegetable oils, tallow, and restaurant grease.

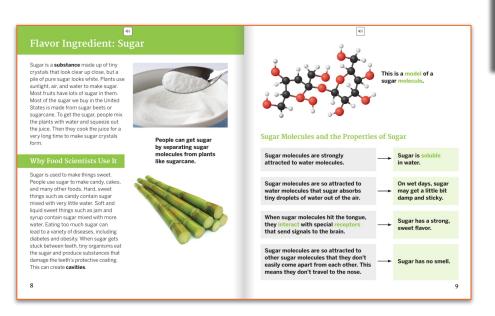
MATERIALS AND METHODS

Materials. Tallow was obtained from Chemol Corp. (Greens-

Qualitative Measures

Text structure

(including visual representations)



Header for the page

Does not need to be read from start to finish.

Labeled graphs and diagrams correspond with text

Informational text paragraphs

Quantitative Measures

- Sentence length
- Vocabulary load

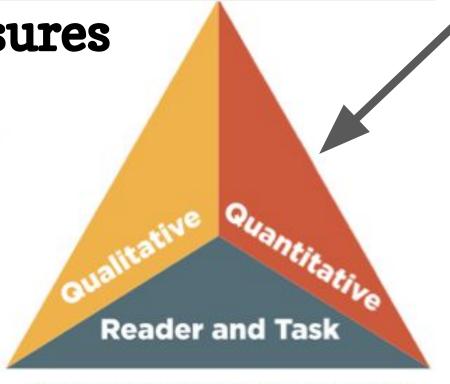


Figure 1: The Standards' Model of Text Complexity

Quantitative Measures

- Sentence length
- Vocabulary load



Figure 1: The Standards' Model of Text Complexity

Amplify Science Clues from the Past (grade 4) - original



Rodolfo Coria works with other scientists to study fossils



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

found. They looked similar to fossils from large dinosaurs that had

Coria observed the shapes and sizes of the fossil bones he had

By observing fossils, Coria and other scientists can make inferences about organisms from long ago. On the day he helped discover

Argentinosaurus, Coria was out in working with another scientist to d

Coria knows a lot about bones. He and **infer** what kind of dinosaur it (where the bone belonged in the dir whether it is a leg bone, a neck bor

Sample

Simplified

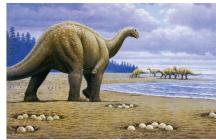
Text version



Rodolfo Coria works with other scientists to study fossils.

By looking at fossils, Coria and other scientists can learn more about living things from long ago. On the day he helped find a new dinosaur, Coria was out in the desert. He was working with another scientist to dig up fossil bones.

Coria knows a lot about bones. He can look at the shape of a bone and figure out what kind of dinosaur it came from. He can also figure out where the bone belonged in the dinosaur's body. He can figure out whether it is a leg bone, a neck bone, or a different kind of bone.



This artwork shows what the dinosaur Coria found may have looked like when it was alive.

Coria looked at 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 figure out that the bones were from the lower leg and backbone of a dinosaur. He could also figure out that the dinosaur was big and walked on four legs. Coria and the scientist he was working with named the dinosaur after their country. It was a type of dinosaur no one had known about before.



Read the samples and discuss:

What do you notice as the differences between the two texts?

Amplify Science Clues from the Past (grade 4) - original



Rodolfo Coria works with other scientists to study fossils



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Rodolfo Coria works with other scientists to study fossils.

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By observing fossils, Coria and other scientists can make inferences about organisms from long ago. On the day he helped discover Argentinosaurus, Coria was out in the desert in Argentina. He was working with another scientist to dig up fossil bones.

Coria knows a lot about bones. He can observe the shape of a bone and inferwhat kind of dinosaur it came from.

Coria and other scientists use fossils to think about living things from long ago. Coria helped find a new dinosaur when he was out in the desert. He was working with another scientist to dig up fossil bones.

Coria knows a lot about bones. He can look at the shape of a bone and figure out many things.

By <u>observing</u> fossils, Coria and other scientists can make inferences about organisms from long ago. On the day <u>he helped discover Argentinosaurus</u>, Coria was out in the desert <u>in Argentina</u>. He was working with another scientist to dig up fossil bones.

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Coria knows a lot about bones. He can look at the shape of a bone and figure out many things.

Sentence lengths: 14, 14, 11

Hard words and phrases: 7

By <u>observing</u> fossils, Coria and other scientists can make inferences about <u>organisms</u> from long ago. On the day he helped <u>discover Argentinosaurus</u>, Coria was out in the desert <u>in Argentina</u>. He was working with another scientist to dig up fossil bones.

Sentence lengths: 14, 12, 11

Hard words and phrases: 1

Coria and other scientists use fossils to think about living things from long ago. Coria helped find a new dinosaur when he was out in the desert. He was working with another scientist to dig up fossil bones.

Reader and Task Measures

- Background, experience
- Purpose, assignment
- Motivation



Figure 1: The Standards' Model of Text Complexity



Questions?



Plan for the day

- Framing the day
 - Welcome and introductions
 - Anticipatory activity
- Measuring text complexity
- Text roles: reader & task measures
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- Closing
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Think-Type-Chat!

How do scientists and engineers use text?

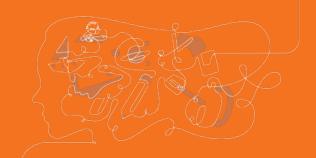






Reading in Amplify Science

Students are apprenticed into reading like scientists—that is, reading actively, curiously, and critically, with a focus on making meaning and using the text as a source of evidence.





Amplify Science Approach



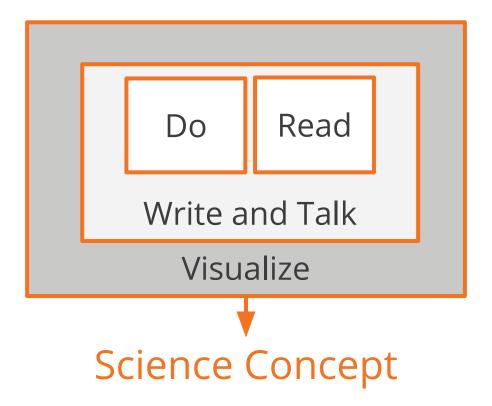
Introduce a **phenomenon** and a related problem

Collect **evidence** from multiple sources

duild increasingly complex **explanations**

Apply knowledge to solve a different problem

Multimodal Instruction



Revisiting Reader and Task Measures

- Background, experience
- Purpose, assignment
- Motivation

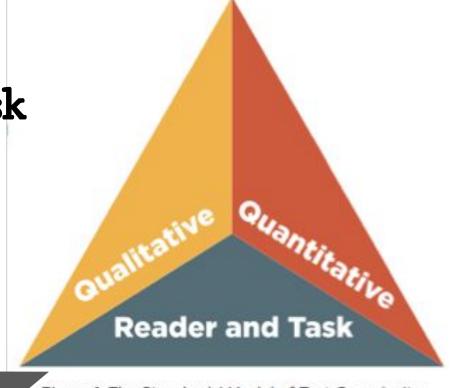


Figure 1: The Standards' Model of Text Complexity

Text Roles are authentic to scientific inquiry

Set context	Connect to the outside world
Deliver content	Scientists read to learn findings
Model	Scientists replicate others' procedures and experiments
Support secondhand investigations	Scientists read and interpret others' data and findings
Support first hand investigations	Scientists use reference books

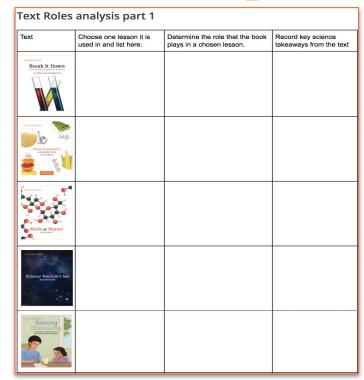
From Cervetti, G. N. & Barber, J. (2009). Text in hands-on science. In Hiebert, E. H. & Sailors, M. (Eds.) *Finding the Right Texts: What Works for Beginning and Struggling Readers.*New York: The Guilford Press.

Set context	Connect to the world outside the classroom								
Deliver content	Read to learn about science								
Model	Demonstrate a process or scientific practice								
Support secondhand investigations	Provide data for students to interpret								
Support first hand investigations	Provide information for investigations								

From Cervetti, G. N. & Barber, J. (2009). Text in hands-on science. In Hiebert, E. H. & Sailors, M. (Eds.) *Finding the Right Texts: What Works for Beginning and Struggling Readers.*New York: The Guilford Press.

Text roles collaborative work time part 1

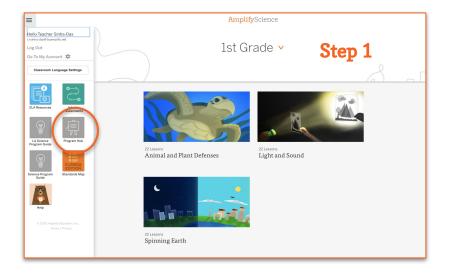
- In pairs, choose a text from the unit
- Determine the role that the book plays in the unit
- Record key science takeaways from the text

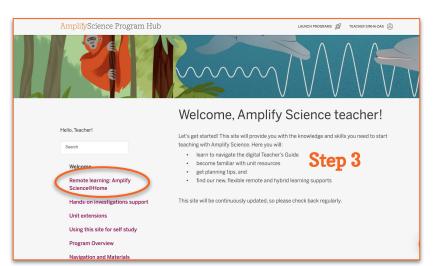


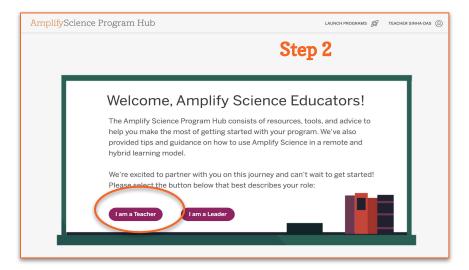
Temperature Check

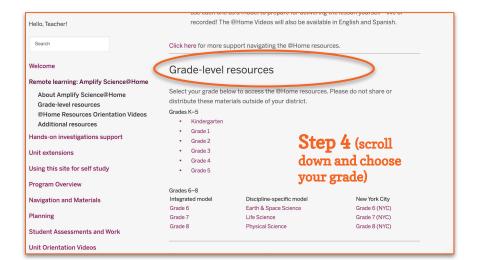
Rate your comfort level accessing and navigating the Amplify Science @Home Resources

- 1 = Extremely Uncomfortable
- 2 = Uncomfortable
- 3 = Mild
- 4 = Comfortable
- 5 = Extremely Comfortable



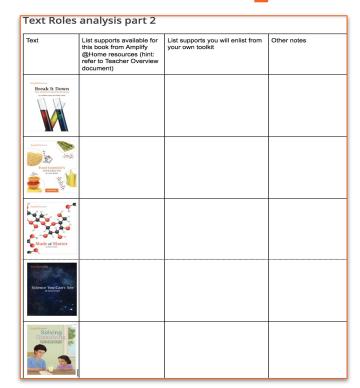






Text roles collaborative work time part 2

- Navigate to @Home resources. Indicate supports available for each book in a remote/hybrid setting.
- Indicate supports you will enlist from your own educator's toolkit



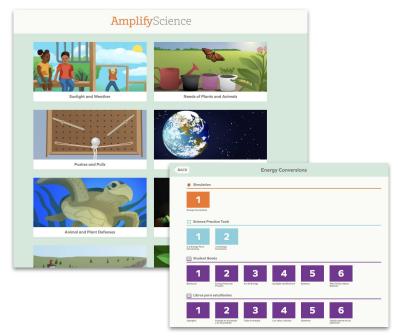
K-5 digital access

apps.learning.amplify.com/elementary



Username: nyc5

Password: science1





Questions?

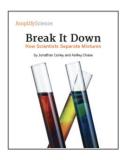


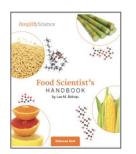
Plan for the day

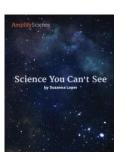
- Framing the day
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- Differentiation & other supports
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 - Survey

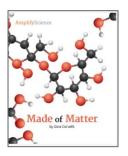
Making inferences in Modeling Matter







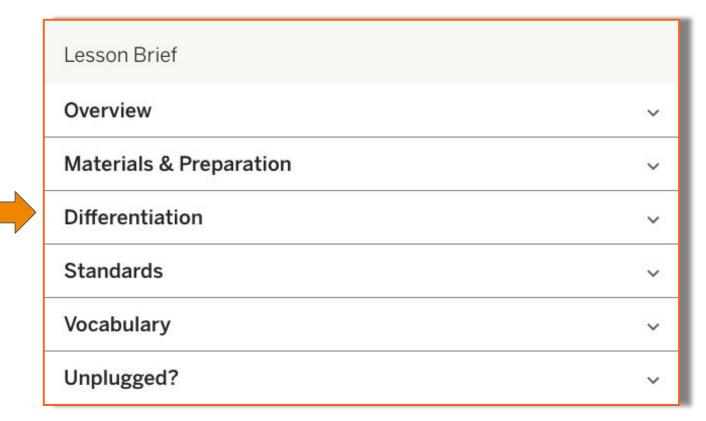






- High utility strategy: used for inquiring with text and investigations
- Gradual release of responsibility
- Multiple opportunities to practice the sense-making strategy

Differentiation for reading in Amplify Science



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

Planning for differentiation

Lesson #	Type of support	Instructional suggestion (summary)
1.2	Students who need more support	Anticipation guide

Which of your students might need support? When could you provide it?

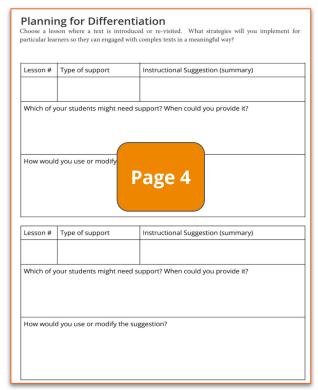
Whole class-during our shared reading block

How would you use or modify the suggestion?

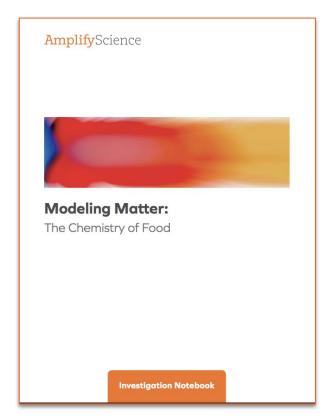
- Read statements aloud
- Have students stand up and discuss with a partner, then put an A over their head if they agree, and D if they disagree. (Can offer "not sure" as an option).
- · Record responses, and revisit after reading...

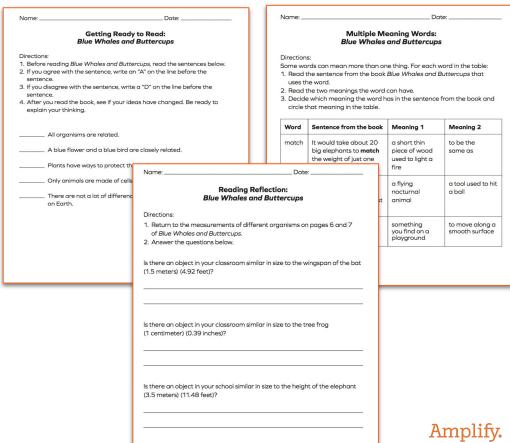
Planning for differentiation in your unit

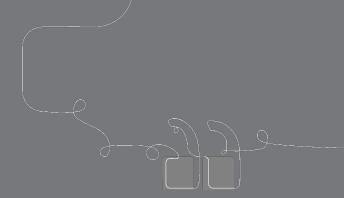
- Navigate to a reading lesson you recently taught.
- Navigate to and read the
 Differentiation section of the
 Lesson Brief
- Complete the Planning for Differentiation for one lesson



Optional notebook pages to support reading







Questions?



Plan for the day

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Revisiting our objectives

Do you feel ready to...

- Describe how the Amplify Science approach to reading supports students in making sense of science ideas.
- Identify the different roles that text can play in figuring out science concepts.
- Be ready to teach specific reading strategies for diverse learners in a remote/hybrid instructional setting.

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 Schave access to the many updates and upgrades in or your regular credentials to login and begin your sur curriculum until late August/early September whe rosters from STARS.

Site Resources

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

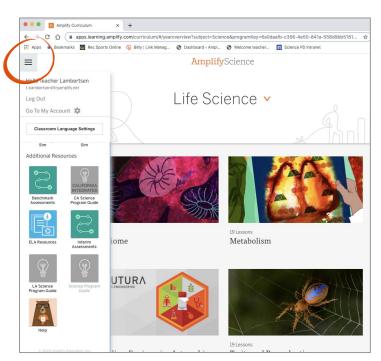
Any schools or teachers new to Amplify Science in 20/21 are encouraged to contact our Help Desk (1-800-823-1969) for access to your temporary login for summer planning.

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!

Amplify Science Program Hub

A new hub for Amplify Science resources

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



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



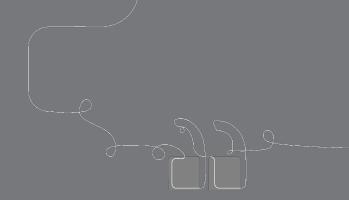
800-823-1969



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?

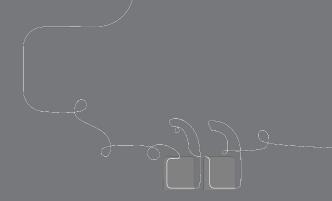
Please provide us feedback!

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

Presenter name: XXX







30 minute open office hours to follow...