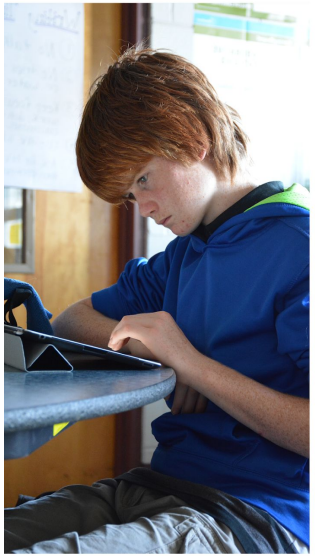
AmplifyScience

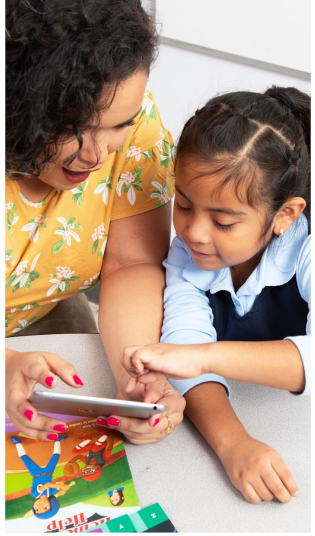
Supporting Students with Special Needs in Remote Learning

Grades 6-8

Do now: Log in to your Amplify Science account.

November 20, 2020





Objectives

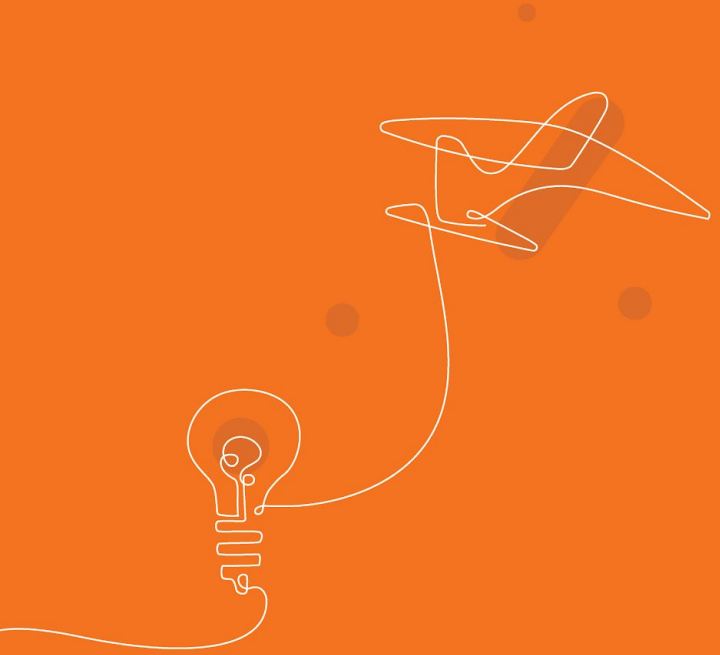
By the end of this workshop, you will be able to...

- Select the Amplify Science@Home resources that best fit the instructional needs of your students
- Internalize tips and strategies for remote and hybrid instruction using Amplify Science@Home
- Plan how you will leverage Amplify Science@Home resources to best meet the needs of your students

Consultation agenda

- Introductions
- Reflection and goal-setting
- Revisiting the Amplify Science approach
- Amplify Science@Home resources
- Differentiation and Modifications Planning
- Reflection and closing

Participant Notebook



Reflection and goal-setting

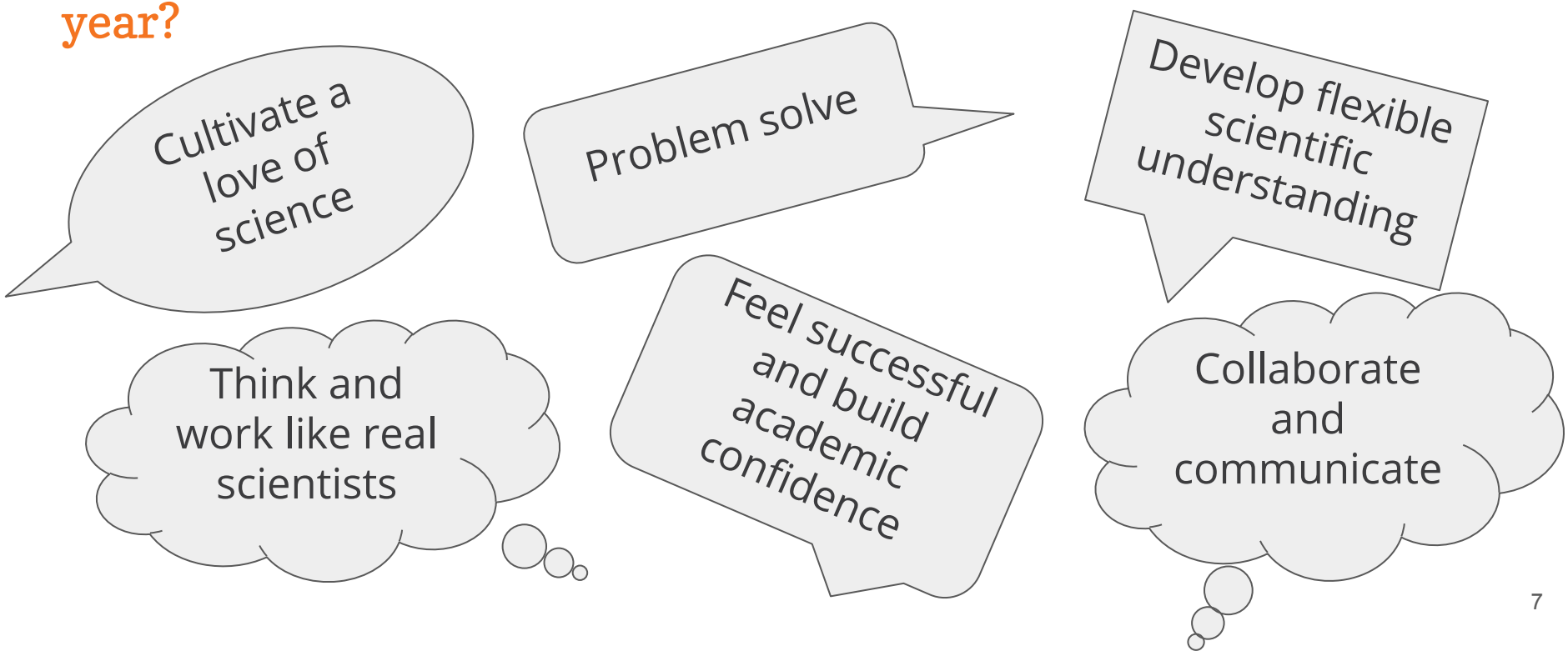
Reflection: what is your year like so far?

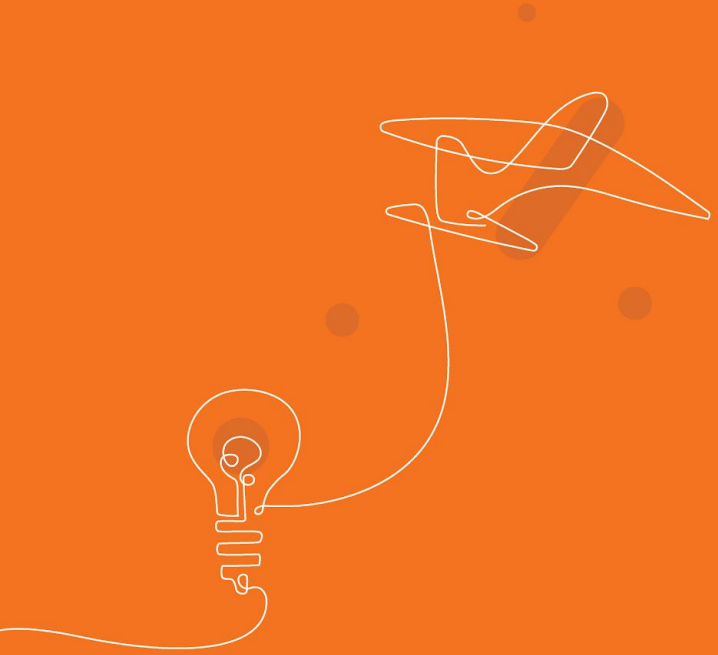
1-2-3 Stop and jot: This year, while teaching remotely...

- What was **one** challenge, problem, or roadblock you or your students experienced?
- What were **two** successes you or your students experienced?
- What are **three** new things you learned or new insights you gained?

Setting a vision

What are you hoping students at your school get out of science this year?



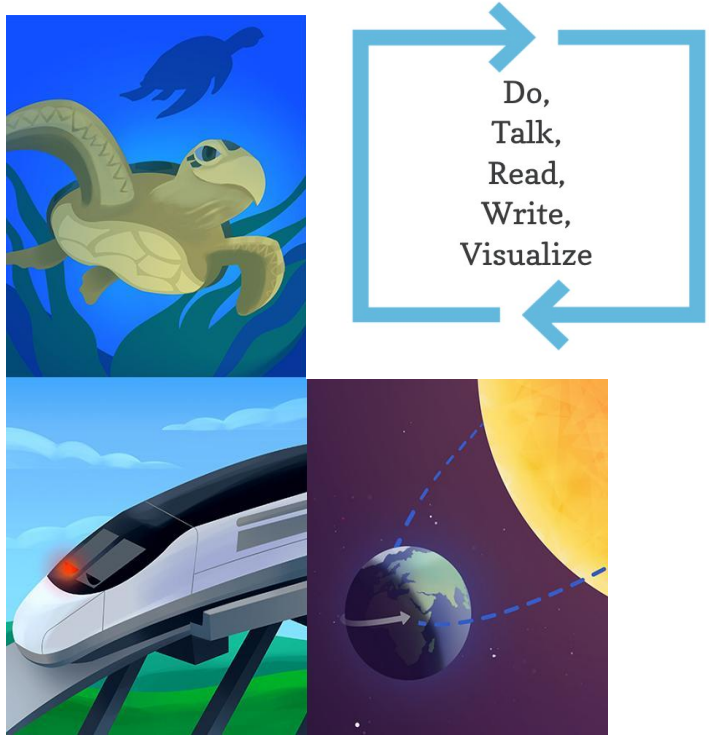


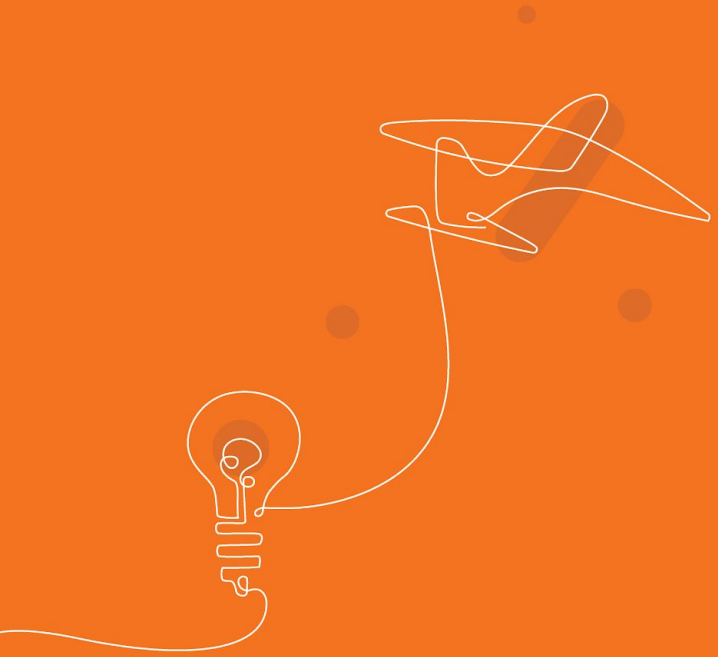
Revisiting the Amplify Science approach

Multimodal, phenomenon-based learning

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

They gather evidence from multiple sources, using multiple modalities.



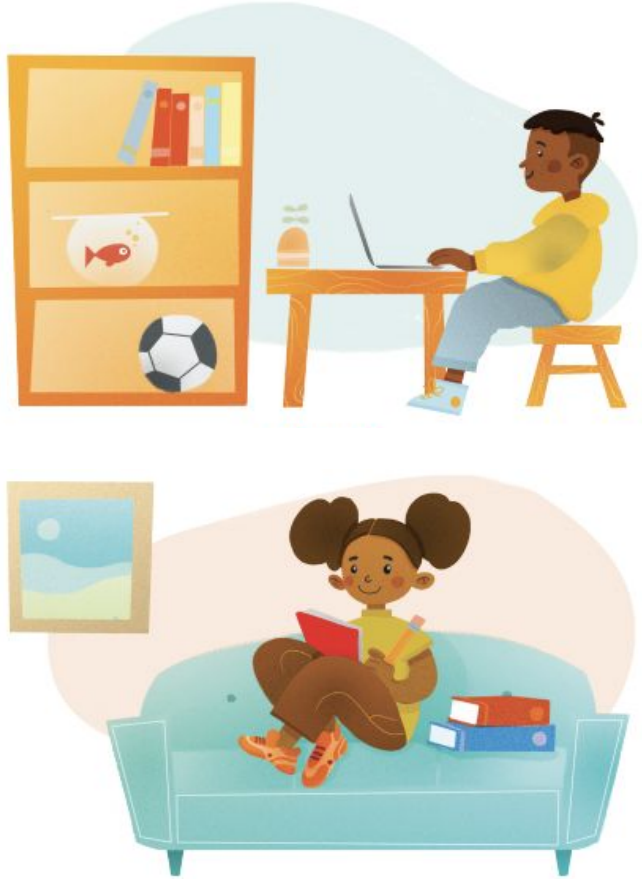


Amplify Science@Home

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

AmplifyScience@Home

- Built for a variety of instructional formats
- Digital and print-based options
- No materials required
- Available in English and Spanish (student and family materials)
- Accessible on the Amplify Science Program Hub



AmplifyScience@Home

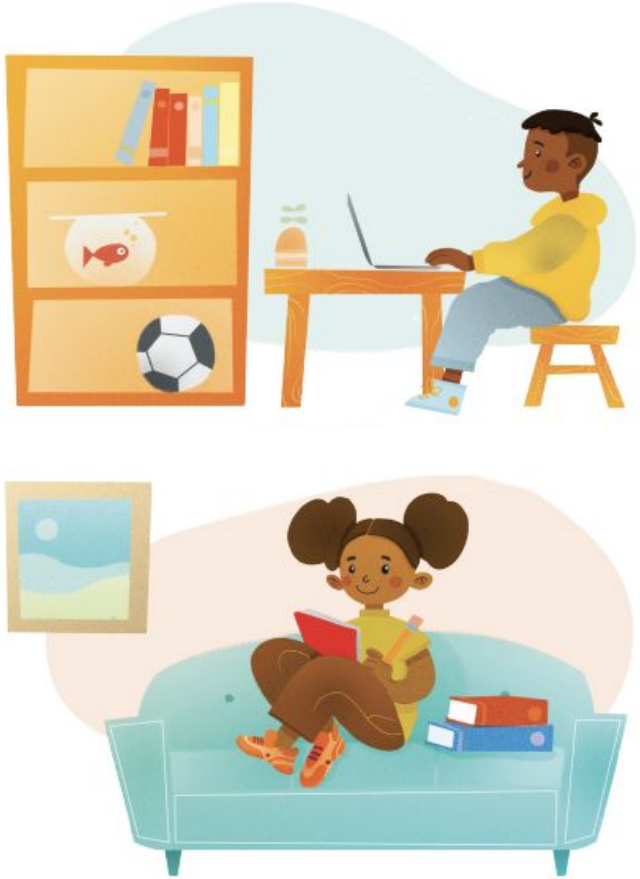
Two different options:

@Home Units

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

@Home Videos

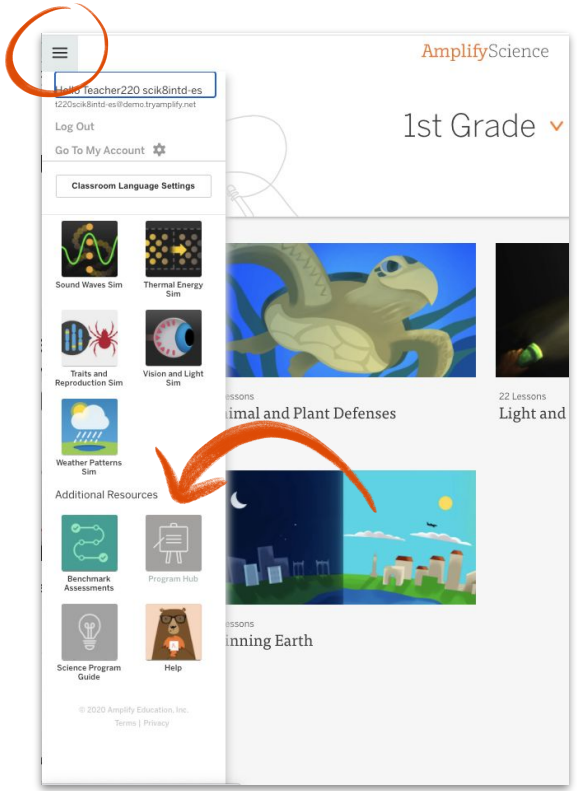
- Video playlists of Amplify Science lessons, taught by real Amplify Science teachers



Accessing Amplify Science@Home

Amplify Science Program Hub

- New site containing Amplify Science@Home and additional PL resources
- Accessible via the Global Navigation menu



Amplify Science 6-8

Integrated model

Grade 6

- Launch: **Microbiome**
- **Metabolism**
- Engineering Internship: **Metabolism**
- **Traits and Reproduction**
- **Thermal Energy**
- **Ocean, Atmosphere, and Climate**
- **Weather Patterns**
- **Earth's Changing Climate**
- Engineering Internship: **Earth's Changing Climate**

Grade 7

- Launch: **Geology on Mars**
- **Plate Motion**
- Engineering Internship: **Plate Motion**
- **Rock Transformations**
- **Phase Change**
- Engineering Internship: **Phase Change**
- **Chemical Reactions**
- **Populations and Resources**
- **Matter and Energy in Ecosystems**

Grade 8

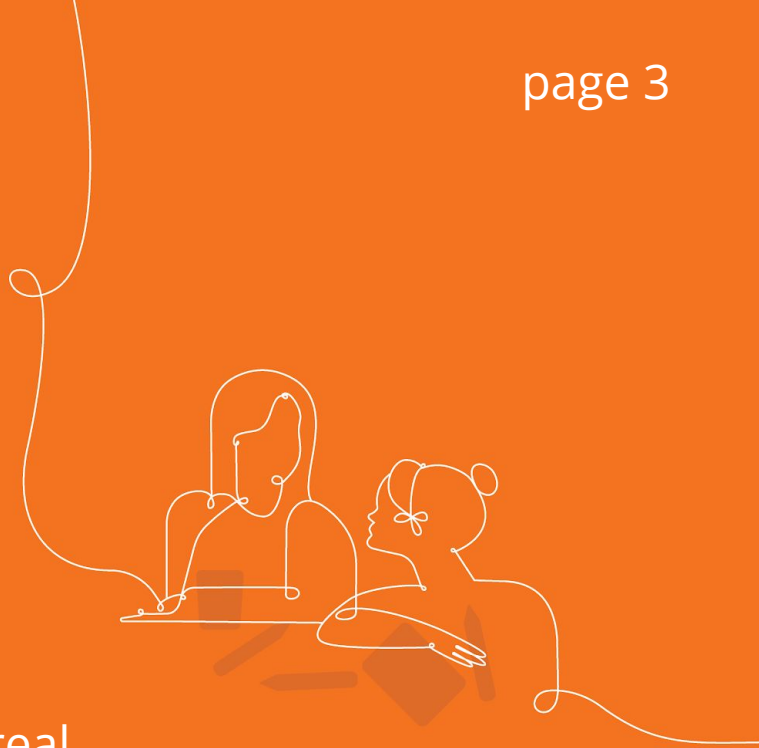
- Launch: **Harnessing Human Energy**
- **Force and Motion**
- Engineering Internship: **Force and Motion**
- **Magnetic Fields**
- **Light Waves**
- **Earth, Moon, and Sun**
- **Natural Selection**
- Engineering Internship: **Natural Selection**
- **Evolutionary History**

Selecting a resource

We'll take a deeper look at each resource type, following this structure:

- Overview of the resource
- Exploration time
- Share insights, ask questions

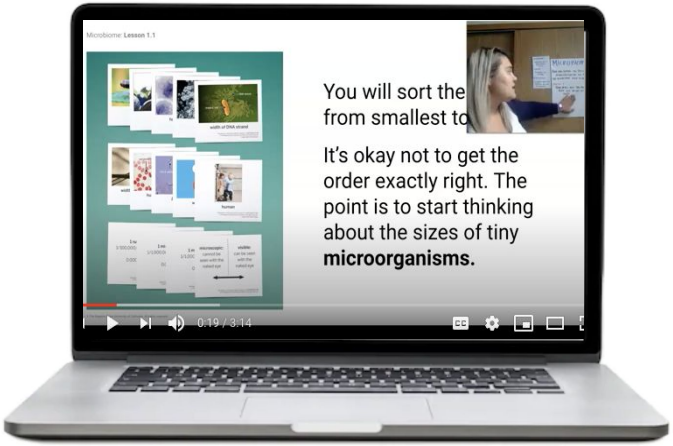
@Home Videos



Versions of original Amplify Science lessons adapted for remote learning and recorded by real Amplify Science teachers

@Home Videos

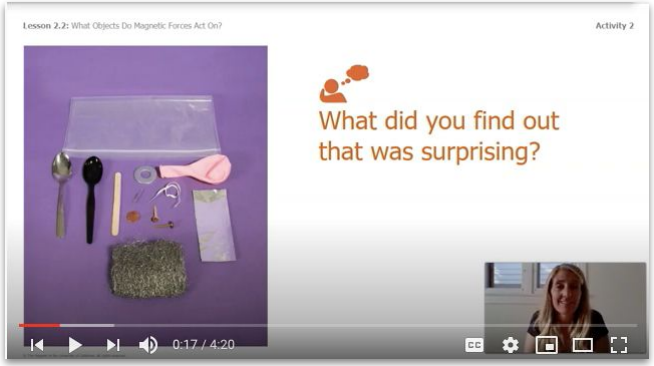
- Lesson playlists include **all activities** from original units
- Great option if have the **same amount of instructional time** as you typically would for science
- Requires **tech access** at home
- Can be used as models for **creating your own videos**

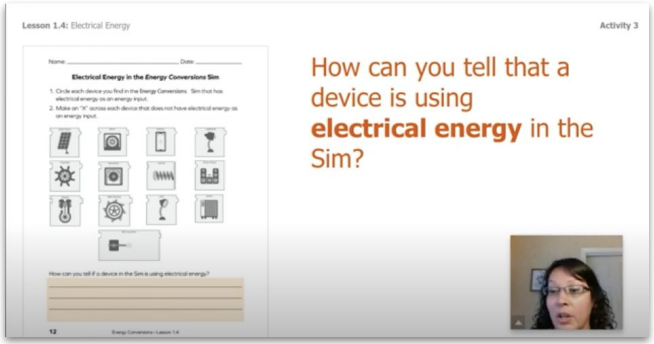


@Home Videos: student experience

Interactive videos

- **Calls to action**
  - Think prompts, pause and take notes, stand up and try it, talk to someone
- **Stand-alone videos within lesson playlists**
  - Read-alouds, digital tool uses, hands-on
- **Options** to use notebooks, student platform, and/or physical materials if available





Reading and digital tool uses

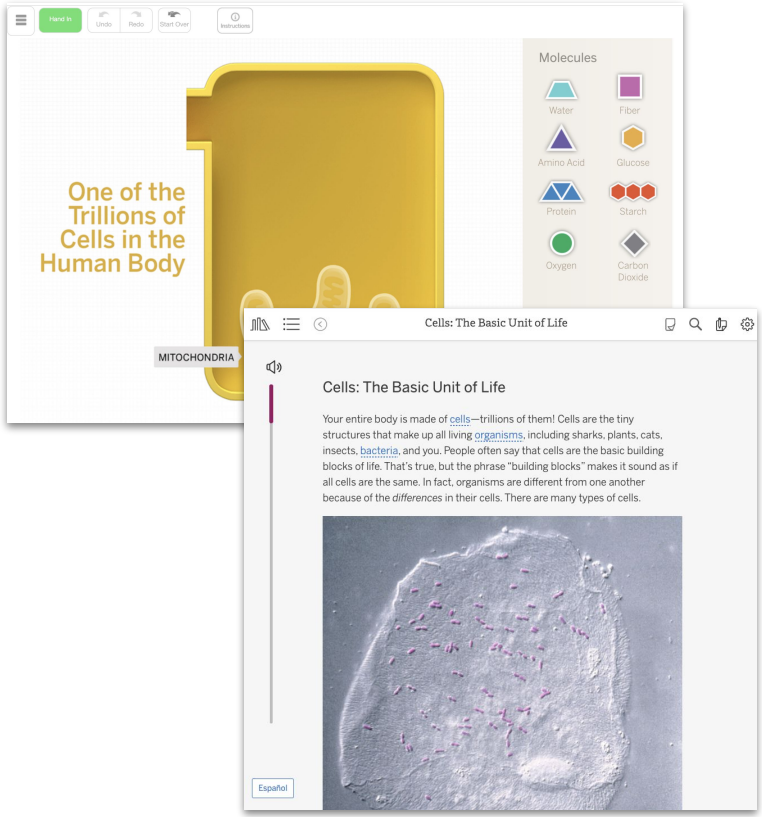
Options for student access

Access via curriculum (students using tablets or laptops):

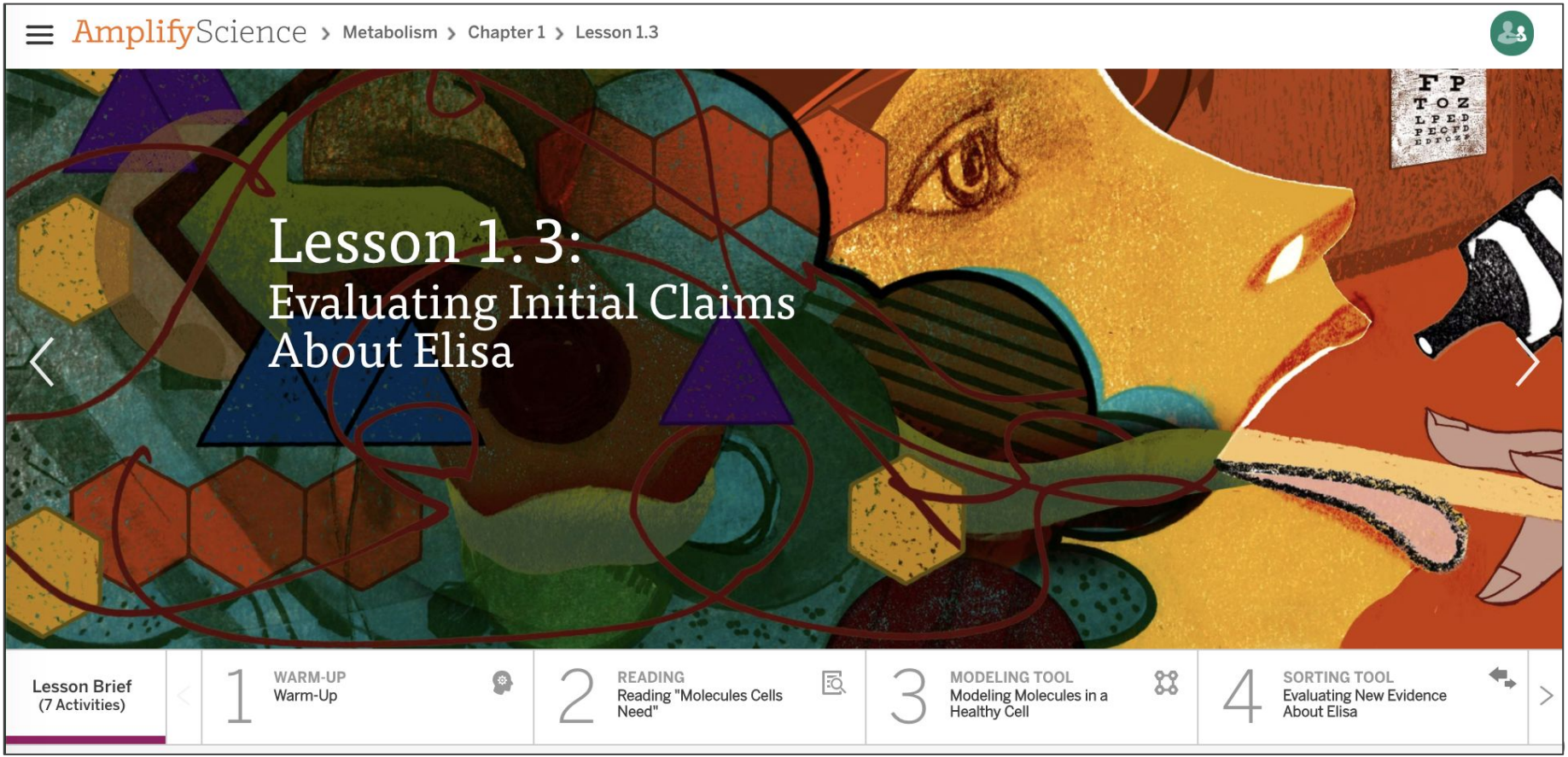
- Digital tools
- Amplify Library

Access via @Home Videos (students using smartphones):

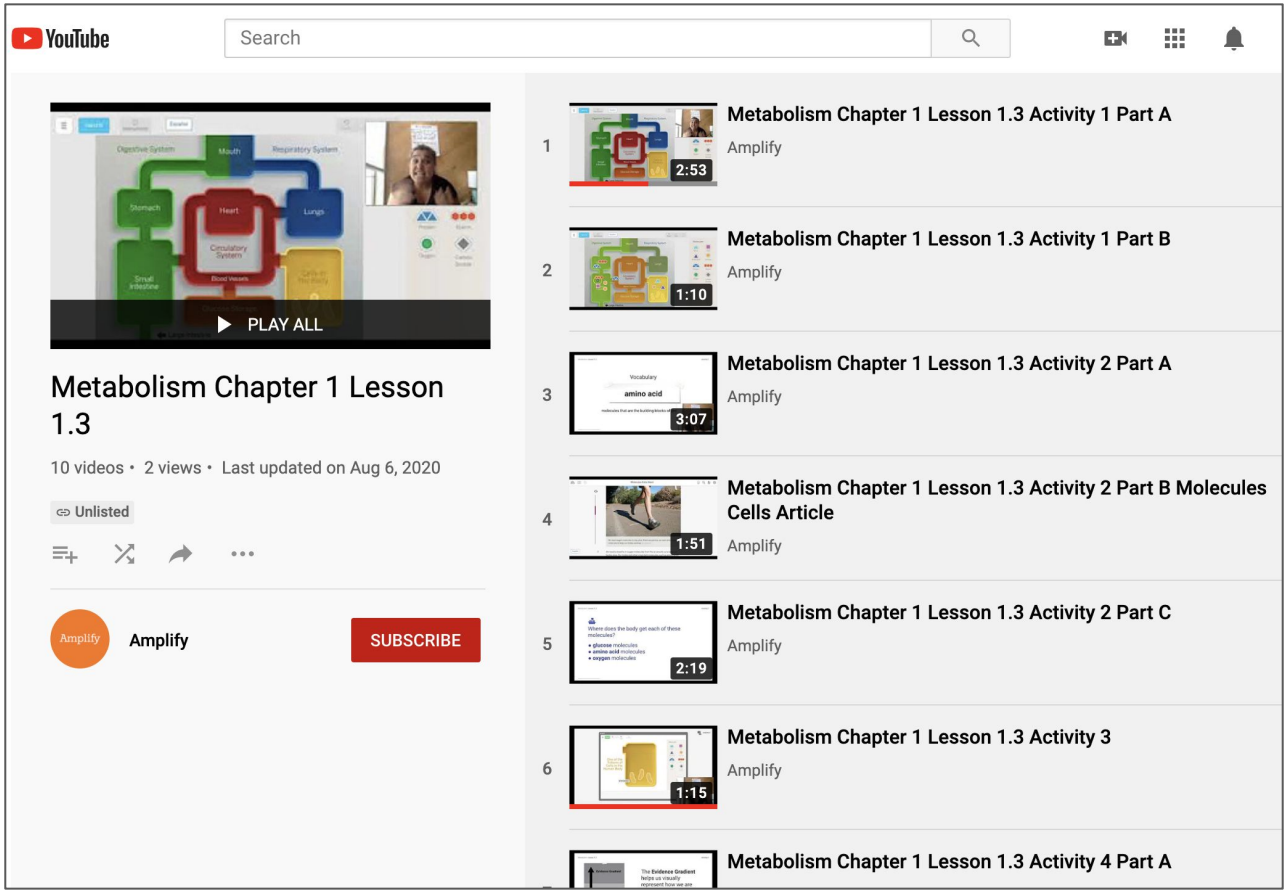
- Read-alouds of articles
- Screencast videos of digital tool uses



Example lesson: *Metabolism* 1.3



Example lesson: *Metabolism* 1.3



Example lesson: *Metabolism* 1.3

@Home Videos

Using the resources

- Assign videos for students to watch during remote, asynchronous time
- Leverage synchronous time for live teaching
  - Lots of time? Teach full lessons
  - Less time? Revisit and preview (see table)

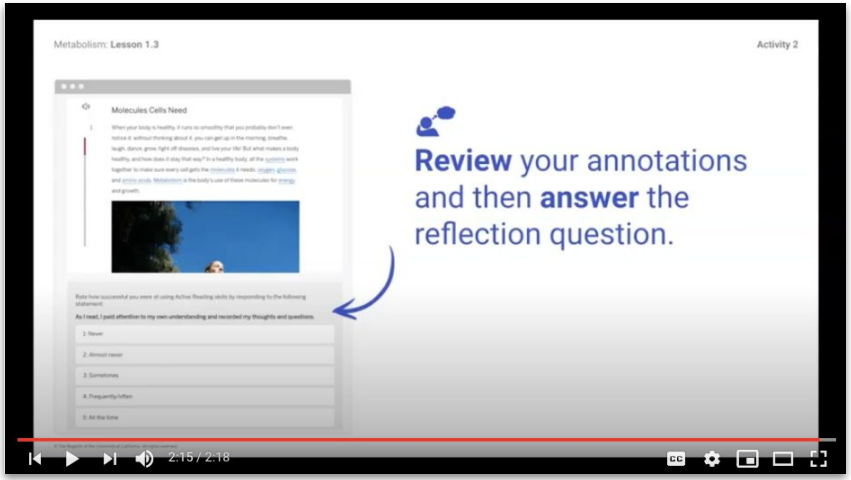
Synchronous time	
In-person	**Online class**
• Discourse routines • Class discussions • Hands-on investigations (option for teacher demo) • Physical modeling activities	• Online discussions • Sim demonstrations • Interactive read-alouds • Shared Writing • Co-constructed class charts

@Home videos

Completing written work

Students can complete written work using:

- Digital student platform
- Investigation Notebook
- Pencil and paper



Teaching Tips:

- Make a plan for how students will **submit** written work.
- Use the **Teacher's Guide** to plan which work products you will collect.

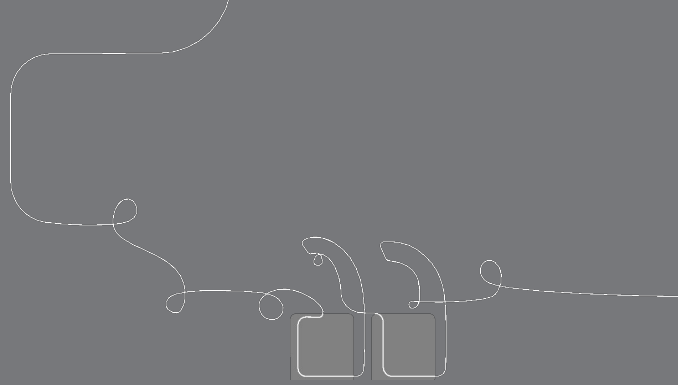
Explore your @Home Videos

Navigate to your unit and explore a video lesson. You may want to compare the video lesson to the lesson in the Teacher's Guide.

During your exploration, consider how this resource can help you reach the vision you set for science this year.

Share insights

How could @Home Videos help you and your students achieve the vision you set for science this school year?



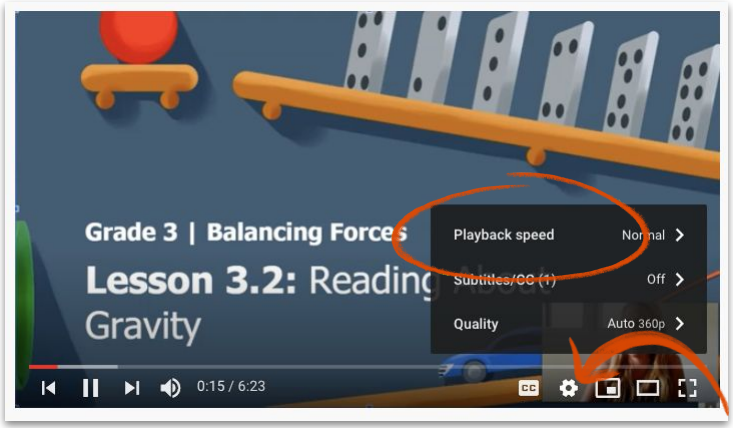
Questions?

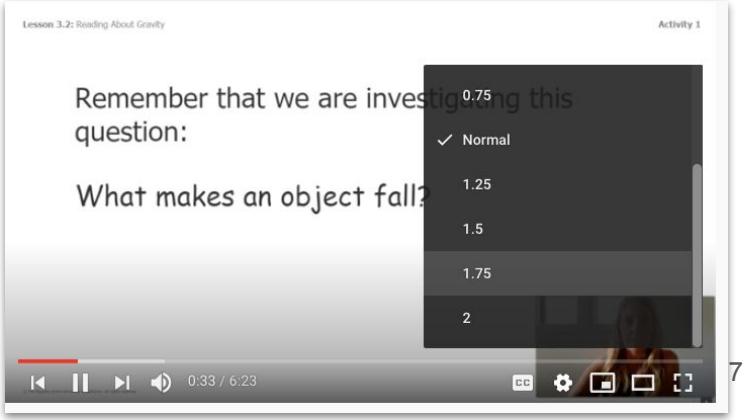
Planning suggestions: @Home Videos

The Teacher's Guide is the best planning tool for @Home videos.

- Use the **Lesson Overview Compilation** in the Unit Guide as a pacing and planning tool.
- Refer to the lessons themselves to plan for synchronous instruction.

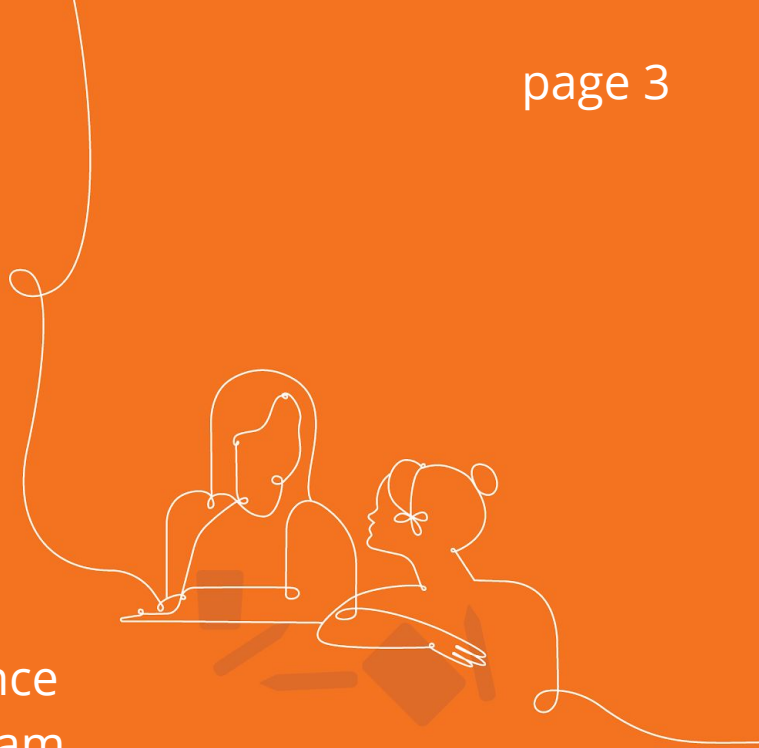
Try **adjusting the playback speed** of videos to preview them.





5 min break

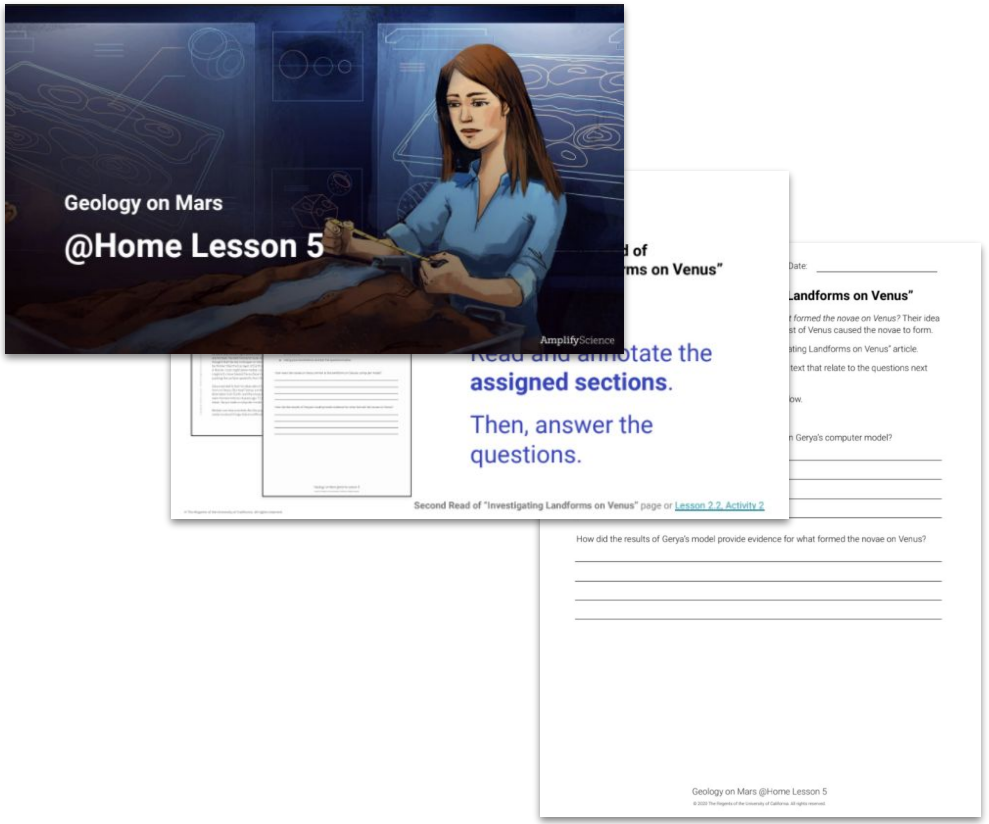
@Home Units



Strategically modified versions of Amplify Science units, highlighting key activities from the program

@Home Units

- Solution for **reduced instructional time**
- Print-based and tech-based access options
- Available in .pdf and Google Slides/Docs format



@Home Unit resources

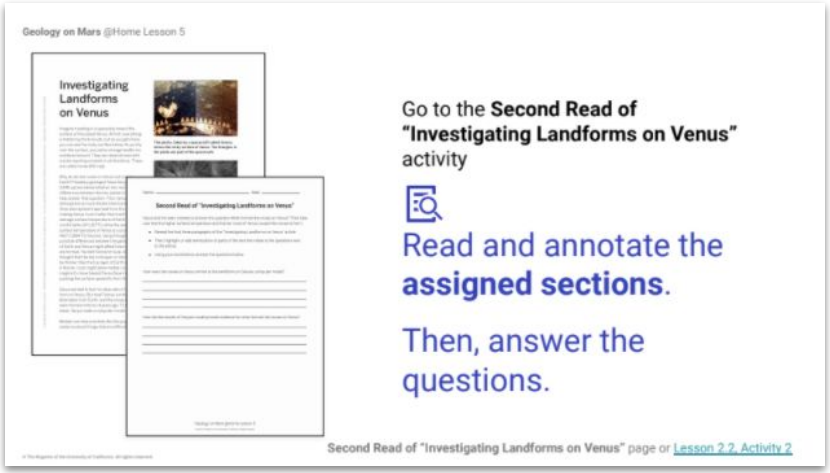
All resources are fully editable and customizable

- **Family Overview**
  - Provides context for families
- **Teacher Overview**
  - Outlines the unit and summarizes each lesson
  - Suggestions for adapting for different scenarios
- **Student materials**
  - ~30-minute lessons (digital or print-based) featuring prioritized activities from Amplify Science curriculum

@Home Units: student experience

Student materials

- Student-friendly text
- Supportive images (photos and illustrations)
- Activity instructions
- Prompts for writing, discussion, and reflection
- Embedded links to supplementary material



@Home Units: student experience

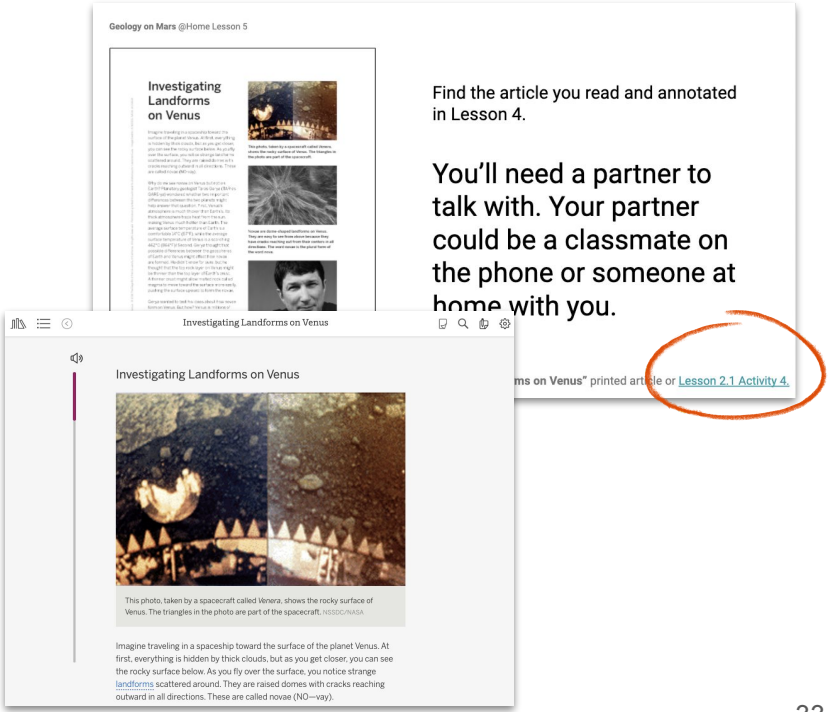
Embedded links

Links to curriculum resources:

- Amplify Library
- Sims and digital tools
- Student platform

Links to videos:

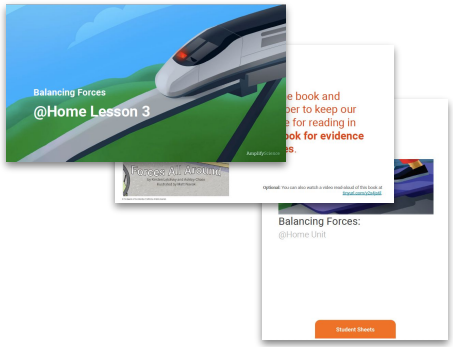
- Hands-on demonstrations
- Read-alouds



@Home Units

A shift in approach to respond to user feedback

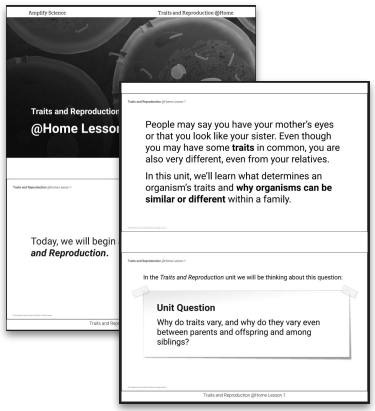
Original approach: two different resources

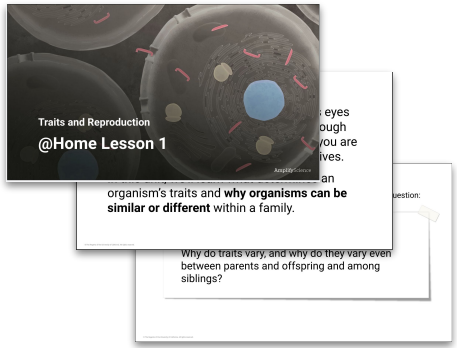


Print-based: @Home packets

Digital: @Home slides and student sheets

Updated approach: one resource, two formats





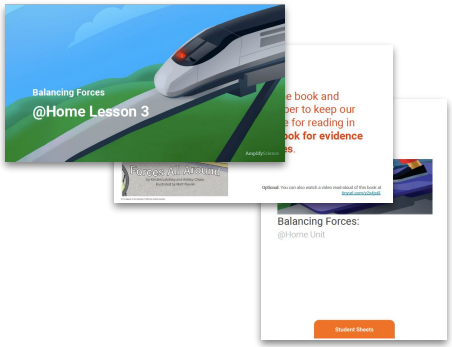
Print-based: PDFs of @Home Slides and student sheets

Digital: Google Slides @Home Slides and Google Doc student sheets

@Home Units

A shift in approach to respond to user feedback

Print-based:
@Home packets



Digital:
@Home slides and student sheets

Original approach: two different resources

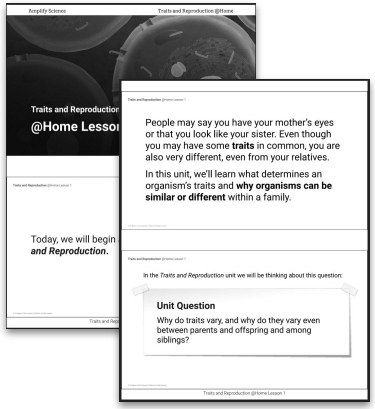
- Force and Motion
- Geology on Mars
- Harnessing Human Energy
- Plate Motion
- Metabolism
- Microbiome

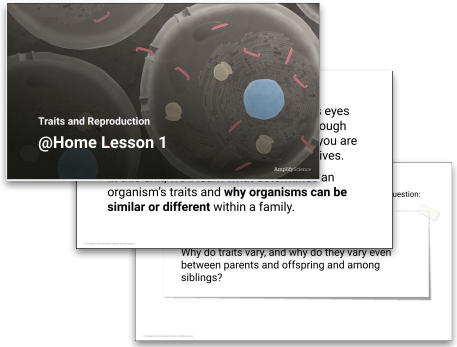
@Home Units

A shift in approach to respond to user feedback

All units released from November 4 onward (those not listed on previous slide) will follow the updated approach.

Updated approach: one resource, two formats

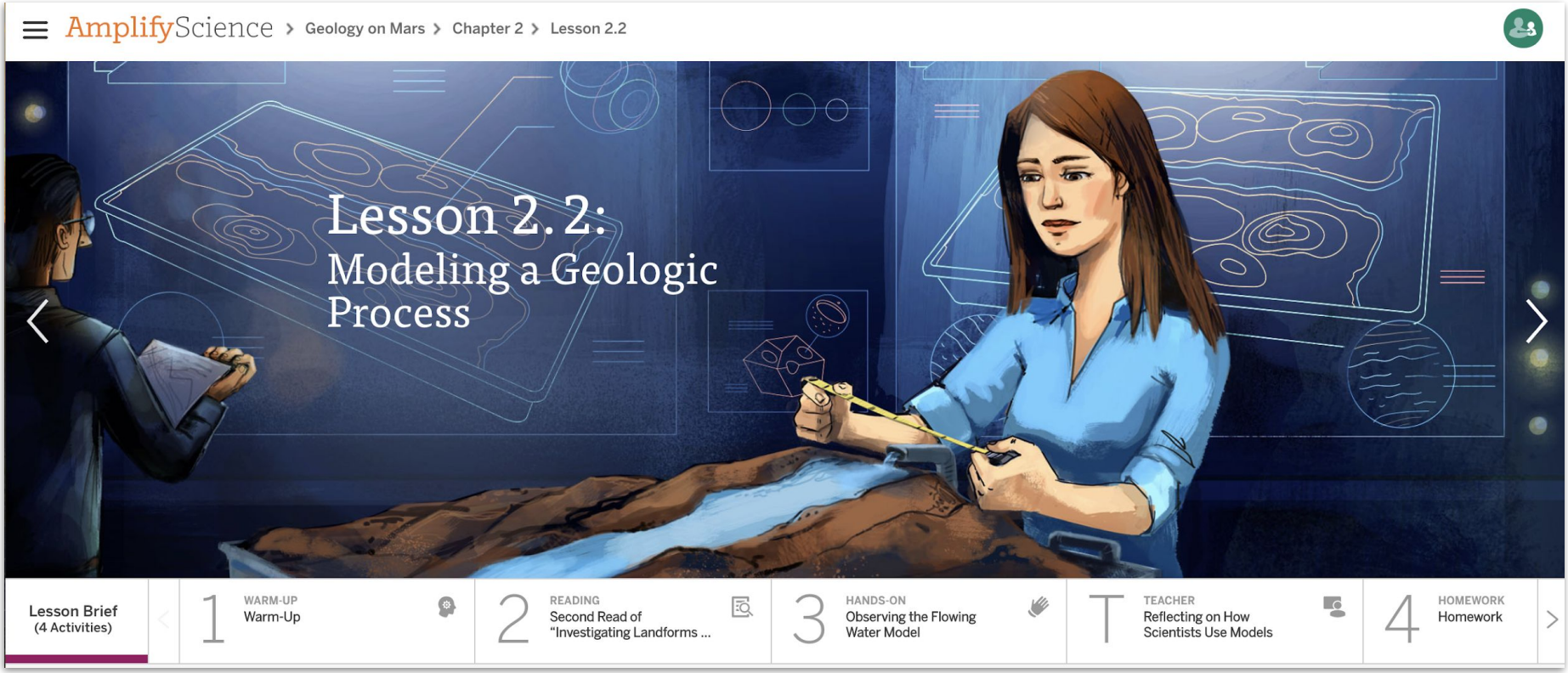




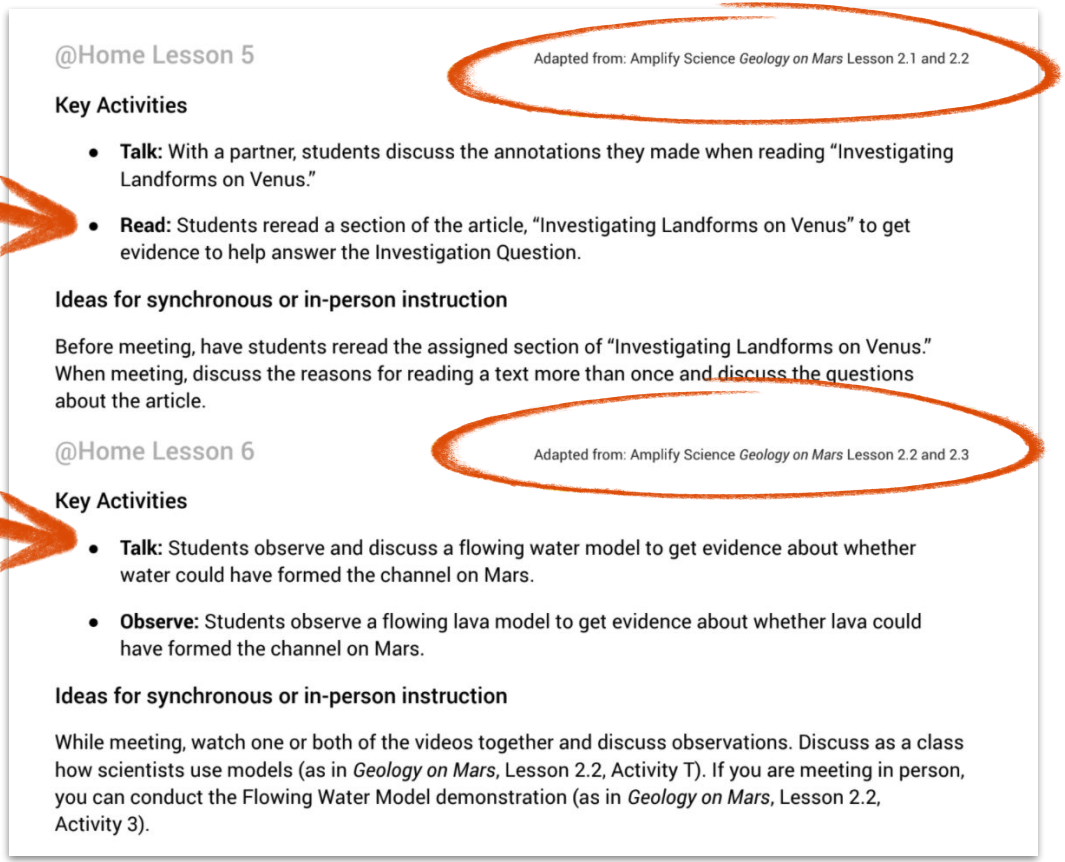
Print-based: PDFs of @Home Slides and student sheets

Digital: Google Slides @Home Slides and Google Doc student sheets

Example lesson: *Geology on Mars* 2.2



@Home Lessons 5 and 6: Include 2.2 activities



@Home Lesson 5

Adapted from: Amplify Science *Geology on Mars* Lesson 2.1 and 2.2

Key Activities

- **Talk:** With a partner, students discuss the annotations they made when reading "Investigating Landforms on Venus."
- **Read:** Students reread a section of the article, "Investigating Landforms on Venus" to get evidence to help answer the Investigation Question.

Ideas for synchronous or in-person instruction

Before meeting, have students reread the assigned section of "Investigating Landforms on Venus." When meeting, discuss the reasons for reading a text more than once and discuss the questions about the article.

@Home Lesson 6

Adapted from: Amplify Science *Geology on Mars* Lesson 2.2 and 2.3

Key Activities

- **Talk:** Students observe and discuss a flowing water model to get evidence about whether water could have formed the channel on Mars.
- **Observe:** Students observe a flowing lava model to get evidence about whether lava could have formed the channel on Mars.

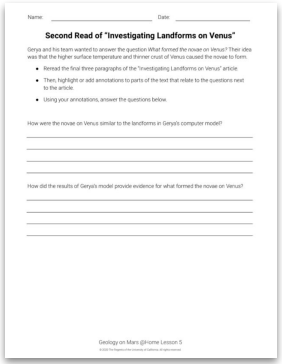
Ideas for synchronous or in-person instruction

While meeting, watch one or both of the videos together and discuss observations. Discuss as a class how scientists use models (as in *Geology on Mars*, Lesson 2.2, Activity T). If you are meeting in person, you can conduct the Flowing Water Model demonstration (as in *Geology on Mars*, Lesson 2.2, Activity 3).

@Home Units: Slides and Student Sheets

Completing written work

Written work can be submitted through the **Amplify Science student platform** or completed using Student Sheets.


Name: Date:

Second Read of "Investigating Landforms on Venus"

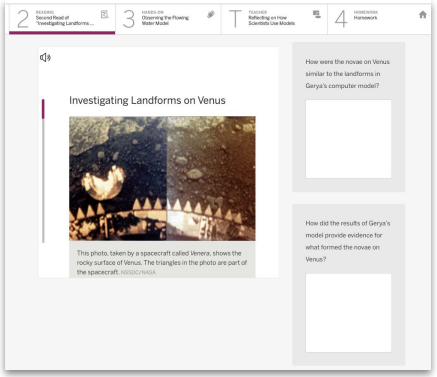
Geryo and his team wanted to answer the question *What formed the novae on Venus?* Their idea was that the higher surface temperature and thinner crust of Venus caused the novae to form.

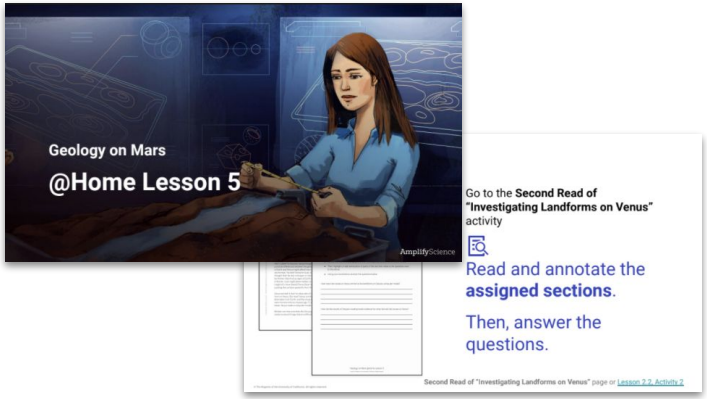
- Reread the final three paragraphs of the "Investigating Landforms on Venus" article.
- Then, highlight or add annotations to parts of the text that relate to the questions next to the article.
- Using your annotations, answer the questions below.

How were the novae on Venus similar to the landforms in Geryo's computer model?

How did the results of Geryo's model provide evidence for what formed the novae on Venus?

Geology on Mars @Home Lesson 5





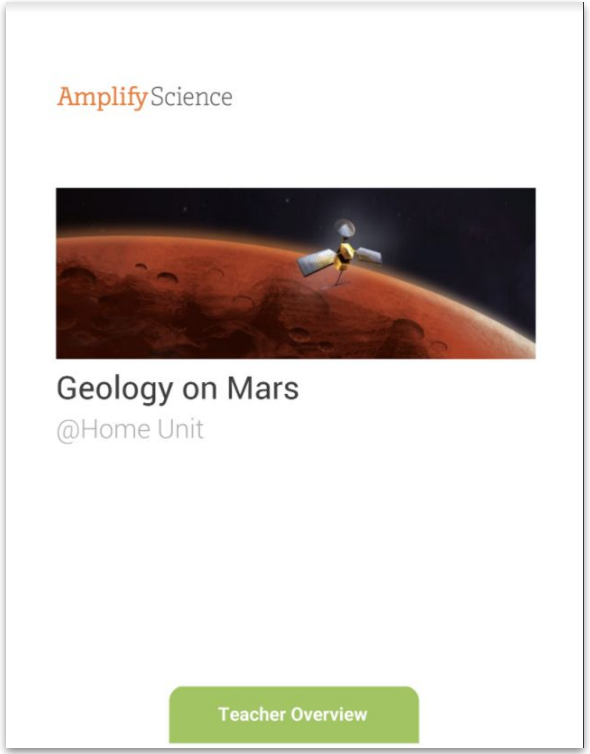
Teacher Overview

Unit-level

- Overview of resources
- Pacing
- Planning for instructional routines
- Assessment considerations

Lesson-level

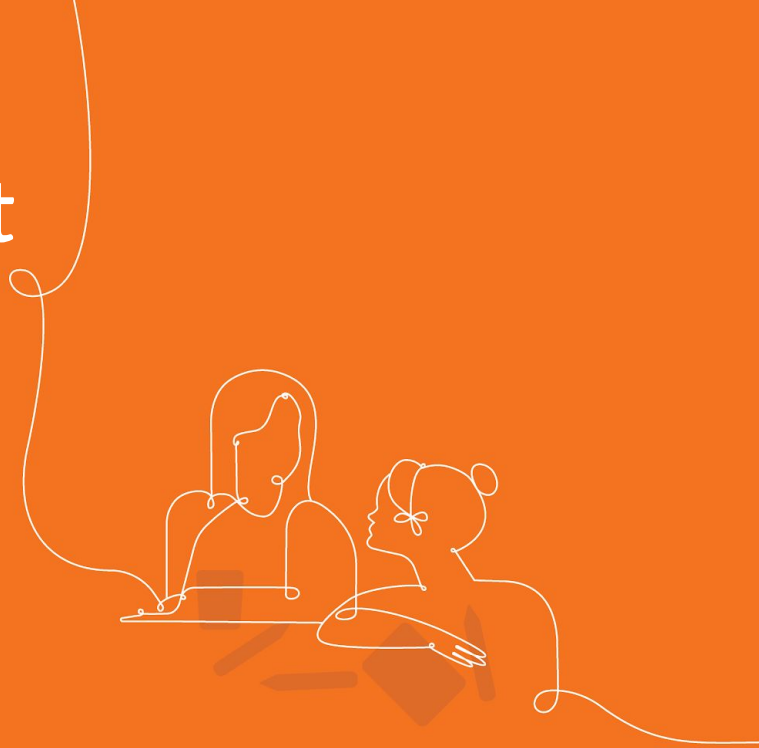
- Chapters at a glance
- Lesson outlines



Explore your @Home Unit

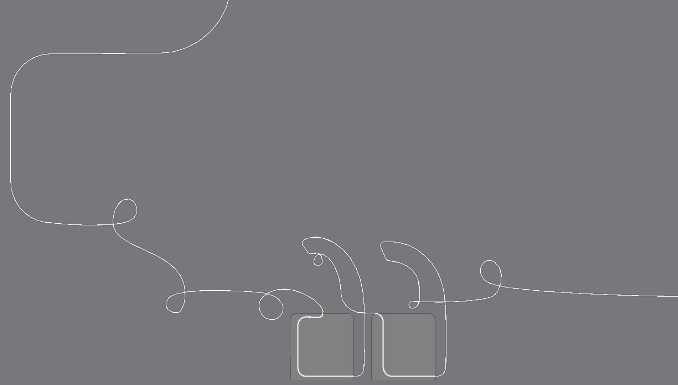
Navigate to your unit and explore. You may choose to start with the Teacher Overview, or dig into a lesson.

During your exploration, consider how this resource can help you reach the vision you set for science this year.

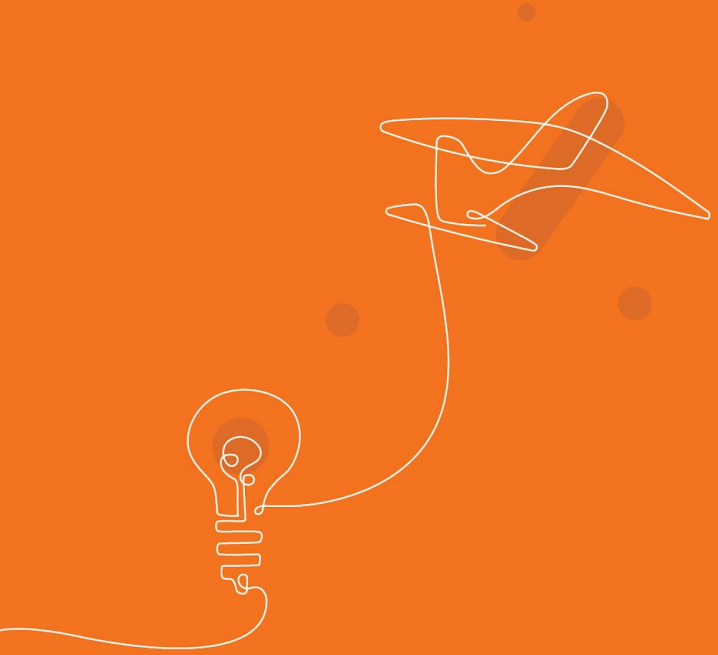


Share insights

How could @Home Units help you and your students reach the vision you set for science this school year?



Questions?

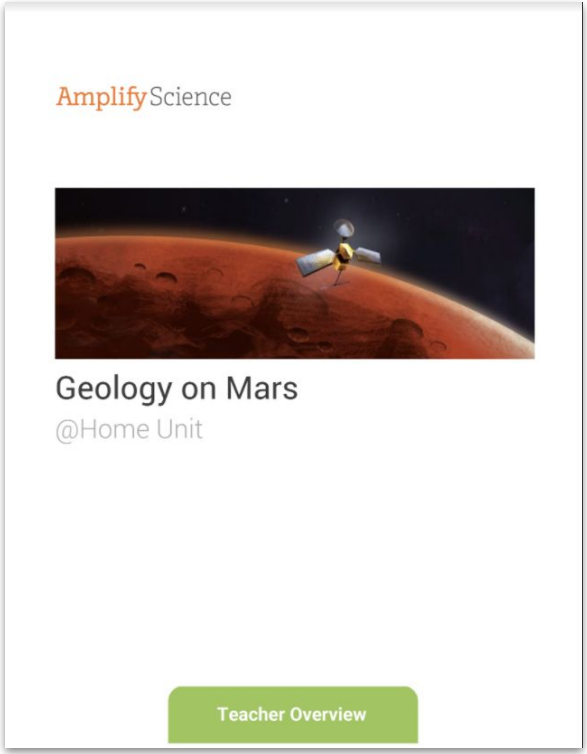


Making Modifications And Planning

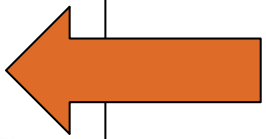
Planning suggestions: @Home Units

Read the Teacher Overview; pay particular attention to these sections:

- Overview of @Home Unit Resources
  - Heads-ups about **instructional decisions** to plan for
- Adapting the Amplify Science Approach for Remote Learning
  - Planning support for **multimodal instruction**



Teacher Overview in the Program Hub



Adapting the Amplify Science Approach for Remote Learning

In Amplify Science units, students figure out phenomena by using science and engineering practices. They gather evidence from multiple sources and make explanations and arguments through multiple modalities: doing, talking, reading, writing, and visualizing. They also make their learning visible by posting key concepts on the classroom wall. While we have retained this core approach in the @Home Lessons, enacting it at home will require adaptations.

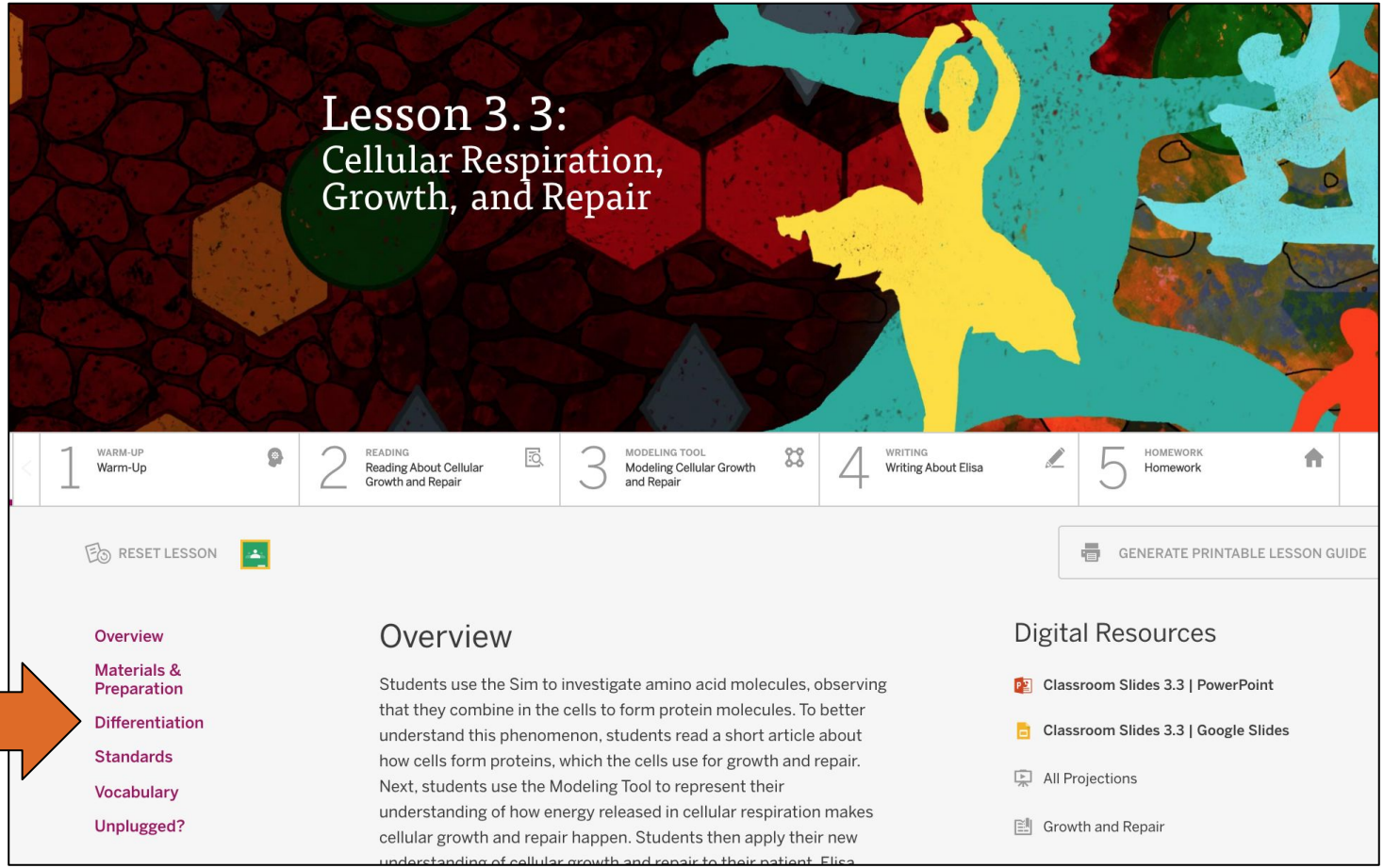
The @Home Lessons provide general guidance for these adaptations, but you may need to set up expectations for specific routines or provide additional support to your students. Below are ideas for how different aspects of the Amplify Science approach might be adapted for your learners' particular contexts.

Student talk options

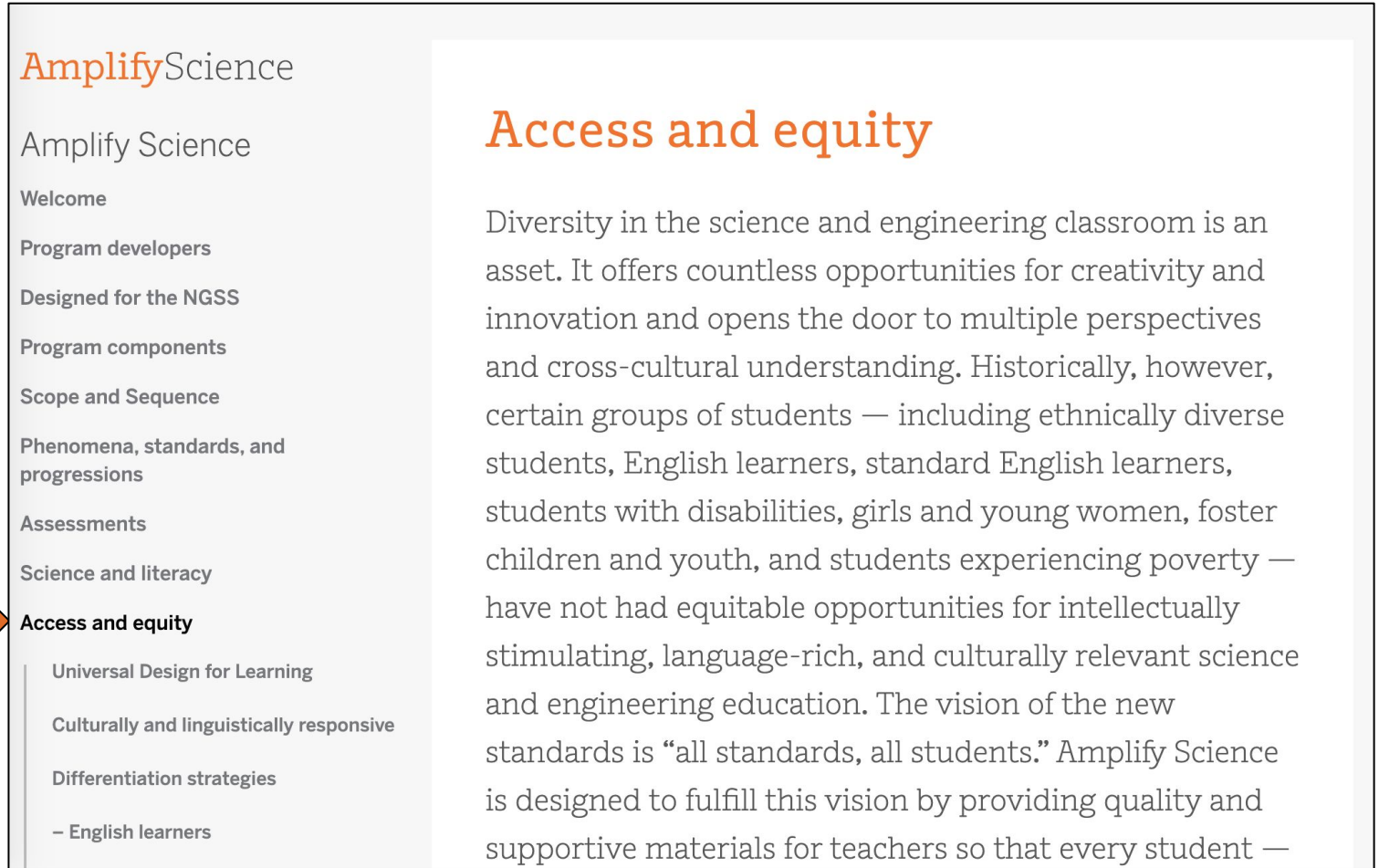
- Talk to a member of their household about their ideas.
- Call a friend or classmate and discuss their ideas.
- Talk in breakout groups in a video class meeting.
- Use asynchronous discussion options on technology platforms.

Student writing options

Lesson Differentiation on the Platform



Access and Equity in the Science Program Guide



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

Universal Design for Learning

Culturally and linguistically responsive

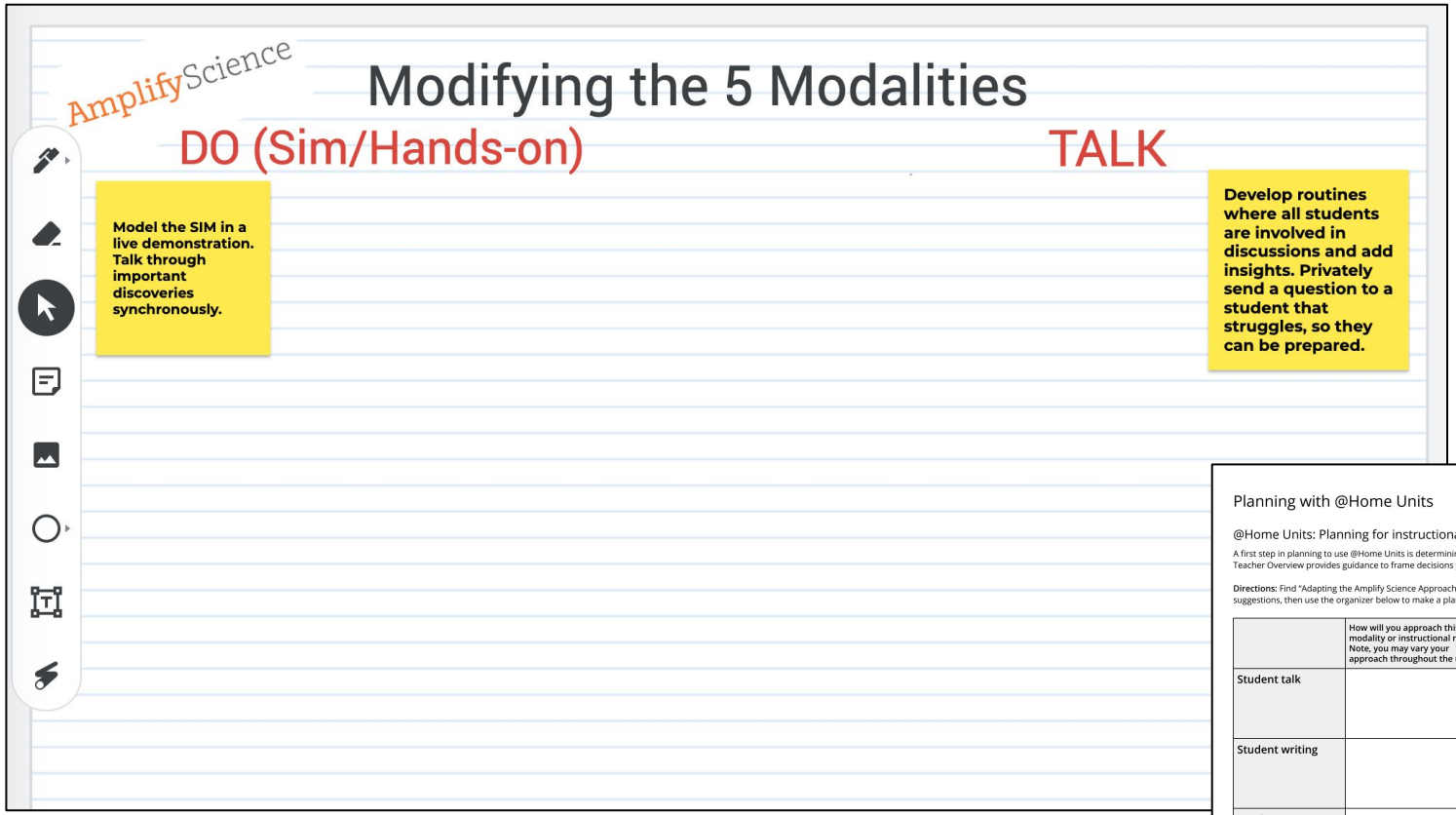
Differentiation strategies

– English learners

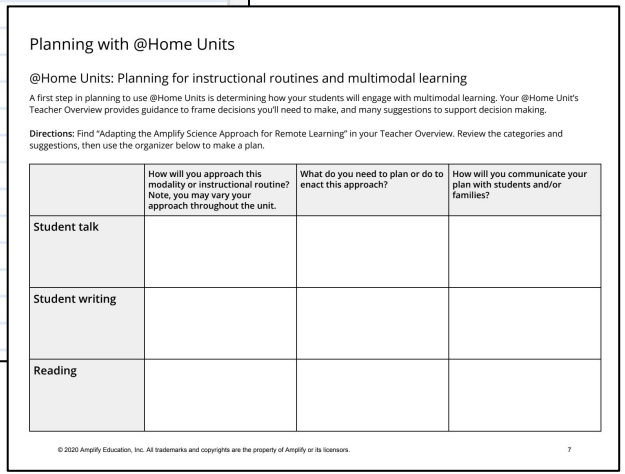
Access and equity

Diversity in the science and engineering classroom is an asset. It offers countless opportunities for creativity and innovation and opens the door to multiple perspectives and cross-cultural understanding. Historically, however, certain groups of students — including ethnically diverse students, English learners, standard English learners, students with disabilities, girls and young women, foster children and youth, and students experiencing poverty — have not had equitable opportunities for intellectually stimulating, language-rich, and culturally relevant science and engineering education. The vision of the new standards is "all standards, all students." Amplify Science is designed to fulfill this vision by providing quality and supportive materials for teachers so that every student —

Sharing Modifications on Jamboard



pages 7-8



Planning with @Home Units

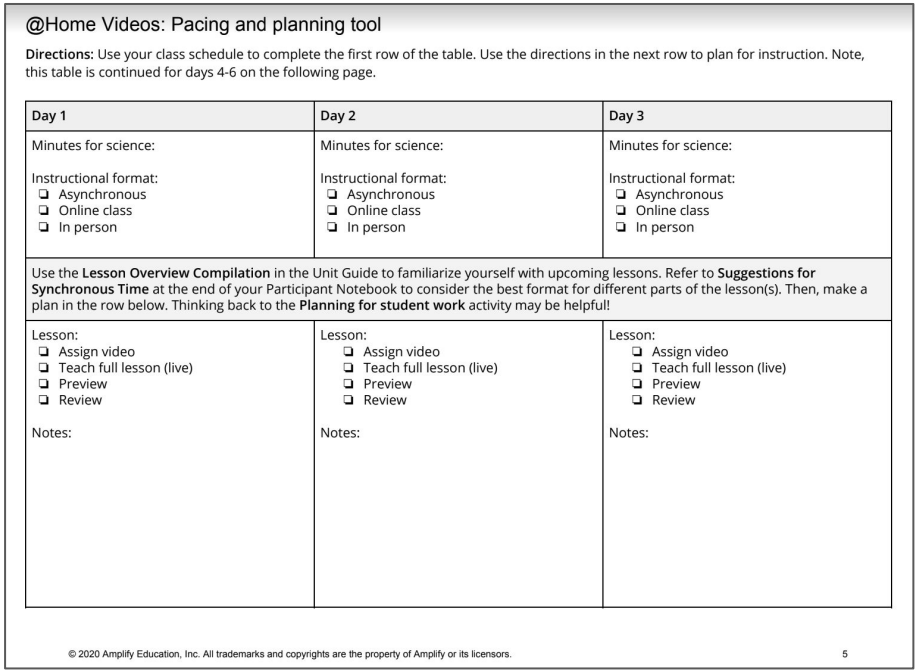
@Home Units: Planning for instructional routines and multimodal learning

A first step in planning to use @Home Units is determining how your students will engage with multimodal learning. Your @Home Unit's Teacher Overview provides guidance to frame decisions you'll need to make, and many suggestions to support decision making.

Directions: Find "Adapting the Amplify Science Approach for Remote Learning" in your Teacher Overview. Review the categories and suggestions, then use the organizer below to make a plan.

	How will you approach this modality or instructional routine? Note, you may vary your approach throughout the unit.	What do you need to plan or do to enact this approach?	How will you communicate your plan with students and/or families?
Student talk			
Student writing			
Reading			

Planning: @Home Videos / @Home Units

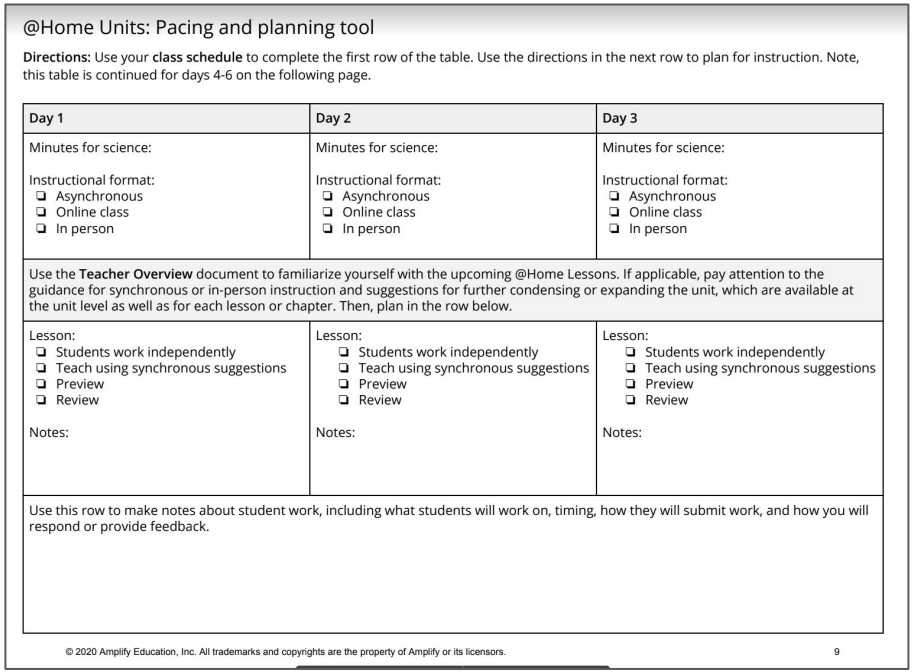


@Home Videos: Pacing and planning tool

Directions: Use your class schedule to complete the first row of the table. Use the directions in the next row to plan for instruction. Note, this table is continued for days 4-6 on the following page.

Day 1	Day 2	Day 3
Minutes for science: Instructional format: ❑ Asynchronous ❑ Online class ❑ In person	Minutes for science: Instructional format: ❑ Asynchronous ❑ Online class ❑ In person	Minutes for science: Instructional format: ❑ Asynchronous ❑ Online class ❑ In person
Use the **Lesson Overview Compilation** in the Unit Guide to familiarize yourself with upcoming lessons. Refer to **Suggestions for Synchronous Time** at the end of your Participant Notebook to consider the best format for different parts of the lesson(s). Then, make a plan in the row below. Thinking back to the **Planning for student work** activity may be helpful!		
Lesson: ❑ Assign video ❑ Teach full lesson (live) ❑ Preview ❑ Review Notes:	Lesson: ❑ Assign video ❑ Teach full lesson (live) ❑ Preview ❑ Review Notes:	Lesson: ❑ Assign video ❑ Teach full lesson (live) ❑ Preview ❑ Review Notes:

pages 5-6

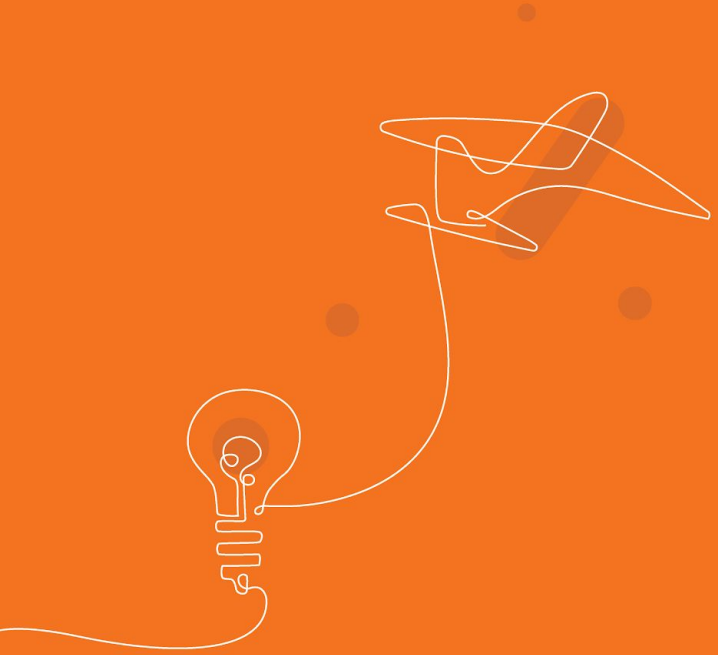


@Home Units: Pacing and planning tool

Directions: Use your **class schedule** to complete the first row of the table. Use the directions in the next row to plan for instruction. Note, this table is continued for days 4-6 on the following page.

Day 1	Day 2	Day 3
Minutes for science: Instructional format: ❑ Asynchronous ❑ Online class ❑ In person	Minutes for science: Instructional format: ❑ Asynchronous ❑ Online class ❑ In person	Minutes for science: Instructional format: ❑ Asynchronous ❑ Online class ❑ In person
Use the **Teacher Overview** document to familiarize yourself with the upcoming @Home Lessons. If applicable, pay attention to the guidance for synchronous or in-person instruction and suggestions for further condensing or expanding the unit, which are available at the unit level as well as for each lesson or chapter. Then, plan in the row below.		
Lesson: ❑ Students work independently ❑ Teach using synchronous suggestions ❑ Preview ❑ Review Notes:	Lesson: ❑ Students work independently ❑ Teach using synchronous suggestions ❑ Preview ❑ Review Notes:	Lesson: ❑ Students work independently ❑ Teach using synchronous suggestions ❑ Preview ❑ Review Notes:
Use this row to make notes about student work, including what students will work on, timing, how they will submit work, and how you will respond or provide feedback.		

pages 9-10

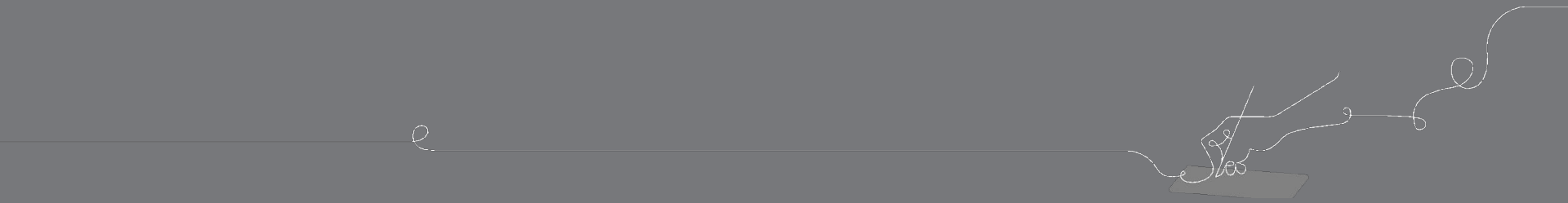


Questions

Reflection

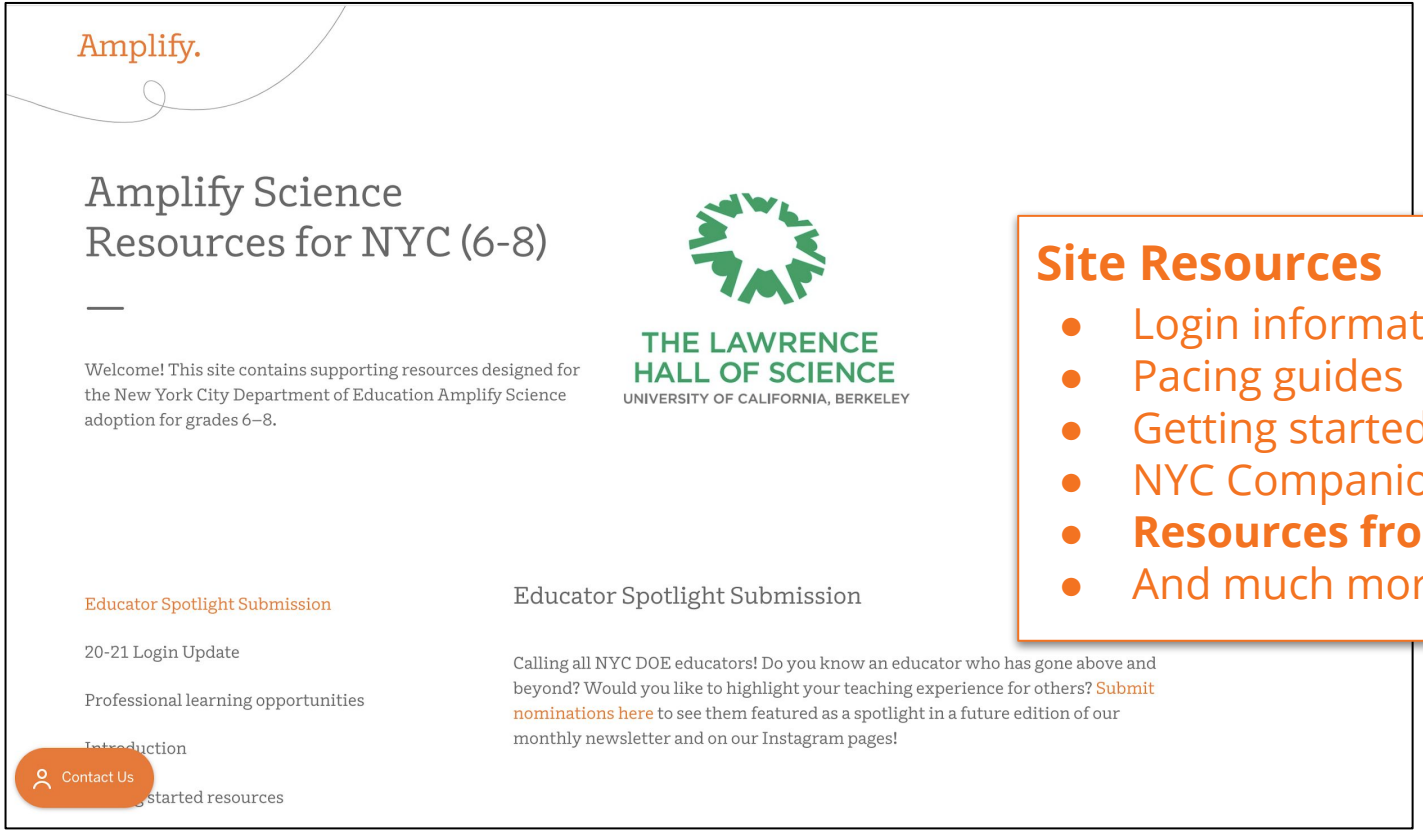
Revisit the vision you set for your students at the beginning of this consultation.

How will the Amplify Science@Home help you reach that goal?



New York City Resources Site

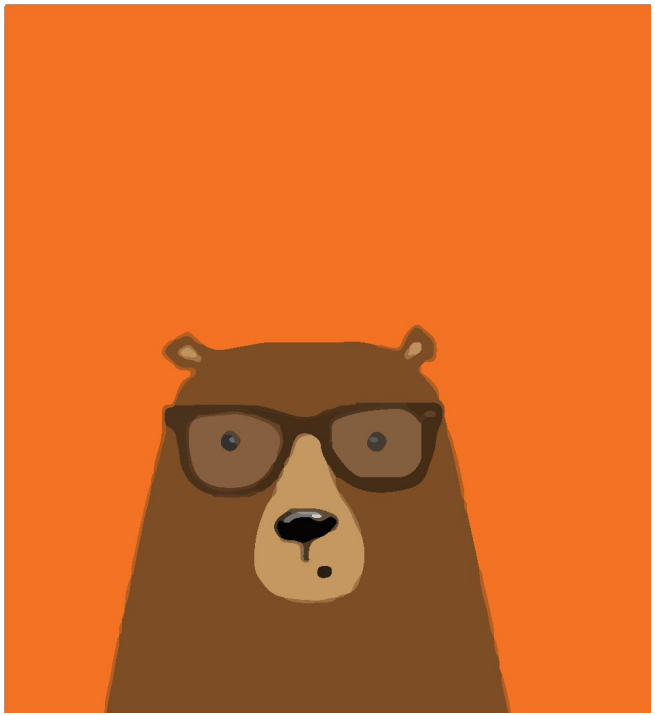
https://amplify.com/resources-page-for-nyc-6-8/



Site Resources

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

Additional Amplify resources



Program Guide

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

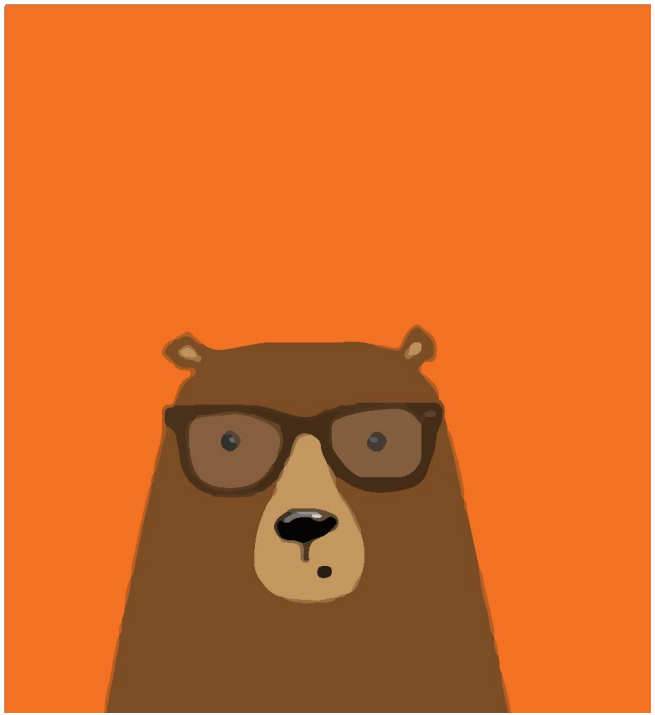
my.amplify.com/programguide

Amplify Help

Find lots of advice and answers from the Amplify team.

my.amplify.com/help

Additional Amplify resources



Caregivers site

Provide your students' families information about Amplify Science and what students are learning

amplify.com/amplify-science-family-resource-intro/

Additional Amplify Support

Customer Care

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

scihelp@amplify.com

800-823-1969

Amplify Chat

When contacting the customer care team:

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

Please provide us feedback!

URL: https://www.surveymonkey.com/r/7XD8JYF

Presenter name: Kira Martin