

# Amplify Science

## Unit Internalization / Guided Planning

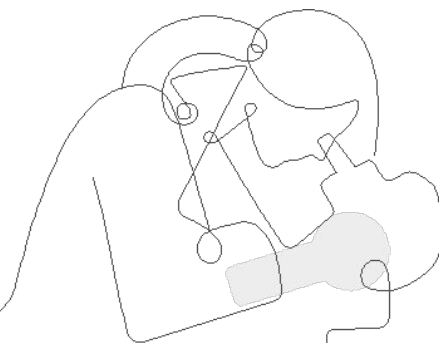
Grade 2, Unit 3: Changing Landforms

### Part 1

School/District Name: LAUSD

Date:

Presented by:



# Amplify's Purpose Statement

Dear teachers,

You do a job that is nearly impossible and **utterly essential**.

**We are in your corner** – extending your reach, saving you time, and enhancing your understanding of each student.

**Thank you for working with us** to craft rigorous and riveting learning experiences for your classroom.

We share your goal of **inspiring all students to think deeply, creatively, and for themselves**.

Sincerely,  
Amplify

# Norms: Establishing a culture of learners



Please keep your camera on, if possible.

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!

# Schoology



[← Back to Schoology Home Page](#)

## LMS App Center

The LMS App Center provides a catalog of District-approved digital content and learning tools (including digital components of adopted textbooks) that are available for classroom teachers and students to access within the learning management system, Schoology.

For information on District-approval policies and procedures, please visit: [udidp.lausd.net](#).

- To search the full list of digital learning tools, click "Submit".
- To search by Publisher Name or Textbook Title, type in a word associated to your adopted publisher, then click "Submit".
- To narrow your search with filters such as Content Area, Grade Level, or Content Type, select from the dropdown menu, then click "Submit".

To learn more about using the LMS App Center, please refer to the following video overview.

Publisher Name Starts With

Content Area All

Grade Level All

Content Type All

Textbook Title Starts With

Submit

All Amplify Products



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[← Search Again](#)

### Amplify

Content Area: ELA  
Grade Level: ES  
Content Type: Supplemental  
Integration Type: App (Left Navigation)  
Purchase Type: District and School  
[Getting Started Guide](#)  
Other Info: School licenses required  
mCLASS  
CKLA  
Amplify Reading  
Amplify Science  
Creative

Vendor Support Desk:  
P: 800.823.9969  
E: [help@amplify.com](mailto:help@amplify.com)  
S: [amplify.com/support/](https://amplify.com/support/)  
Textbook Title(s):  
NA



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P: 800.823.9969  
E: [help@amplify.com](mailto:help@amplify.com)  
S: [amplify.com/support/](https://amplify.com/support/)  
Textbook Title(s):  
NA

pp is for only)



 mCLASS Educators: To view or make changes to your account go to [mclass.amplify.com](https://mclass.amplify.com).

Hi, Terin

## Classes

Programs & Licenses

Account Settings

Help Center 



[CKLA Hub](#)



[CKLA Resource Site](#)



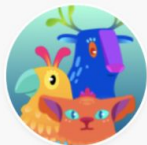
[mCLASS Assessment](#)



[mCLASS Reporting](#)



[Reading 6-8](#)



[Reading K-5](#)



[Science](#)



[Vocabulary](#)



## Amplify. on Schoology

2021-2022



# Schoology

- To join Amplify ES Group: W4PK-W466-63F5B



# Navigation Temperature Check

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

1 = Extremely Uncomfortable

2 = Uncomfortable

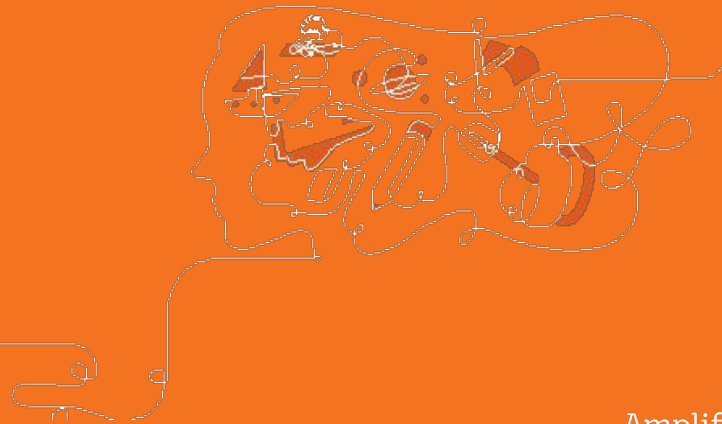
3 = Mild

4 = Comfortable

5 = Extremely Comfortable

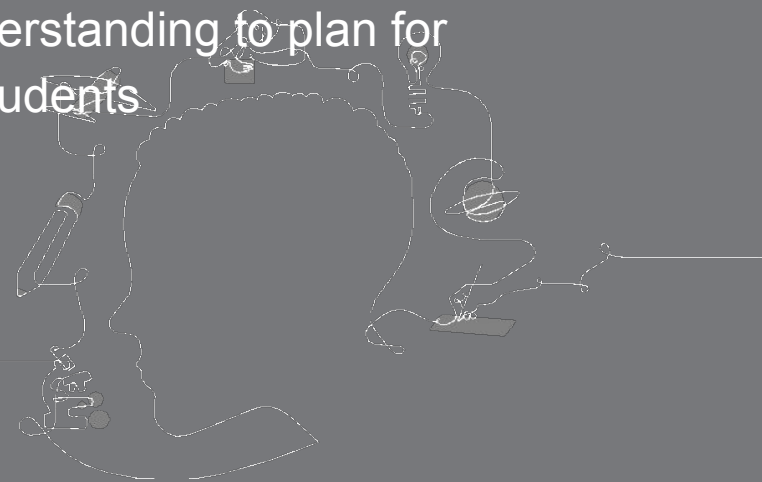


# Part 1



# Overarching goals

- ❑ Explain how students engage in phenomenon based and 3D learning to construct an understanding of the science concepts introduced in *Changing Landforms*.
- ❑ Internalize the unit and apply your new understanding to plan for the diverse needs of your classroom and students



# Opening Reflection

What are your goals  
for student outcomes?

Participant Notebook

## Reflection

Use the provided spaces as a place for reflection throughout the session.

### Session goals and student outcomes

What Connect the workshop goal(s) to an outcome you envision for your students.	Why Reflect on why you want this outcome for your students.	How How will your students achieve the outcome? Reflect on what you learned during the workshop that will impact student outcomes.



# Plan for the day: Part 1

- Introduction and Framing
- NGSS & 3D Learning
- Phenomenon-based Instruction
- Unit Internalization
- Additional Resources
- Closing





THE LAWRENCE  
HALL OF SCIENCE  
UNIVERSITY OF CALIFORNIA, BERKELEY

+

Amplify.

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Amplify Science

# Course curriculum structure

## Grade K

- Needs of Plants and Animals
- Pushes and Pulls
- Sunlight and Weather

## Grade 1

- Animal and Plant Defenses
- Light and Sound
- Spinning Earth

## Grade 2

- Plant and Animal Relationships
- Properties of Materials
- Changing Landforms

## Grade 3

- Balancing Forces
- Inheritance and Traits
- Environments and Survival
- Weather and Climate

## Grade 4

- Energy Conversions
- Vision and Light
- Earth's Features
- Waves, Energy, and Information

## Grade 5

- Patterns of Earth and Sky
- Modeling Matter
- The Earth System
- Ecosystem Restoration

## Key takeaways:

- There are 22 lessons per unit
- Lessons at grades 2-5 are 60 minutes long

# Year at a Glance: Grade 2

Pg. 3

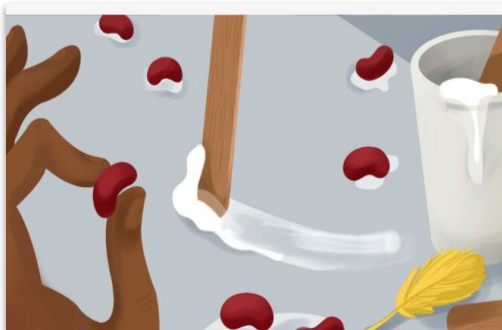


## Plant and Animal Relationships

**Domain:** Life Science

**Unit type:** Investigation

**Student role:** Plant Scientists



## Properties of Materials

**Domains:** Physical Science,  
Engineering Design

**Unit type:** Engineering  
design

**Student role:** Glue engineers



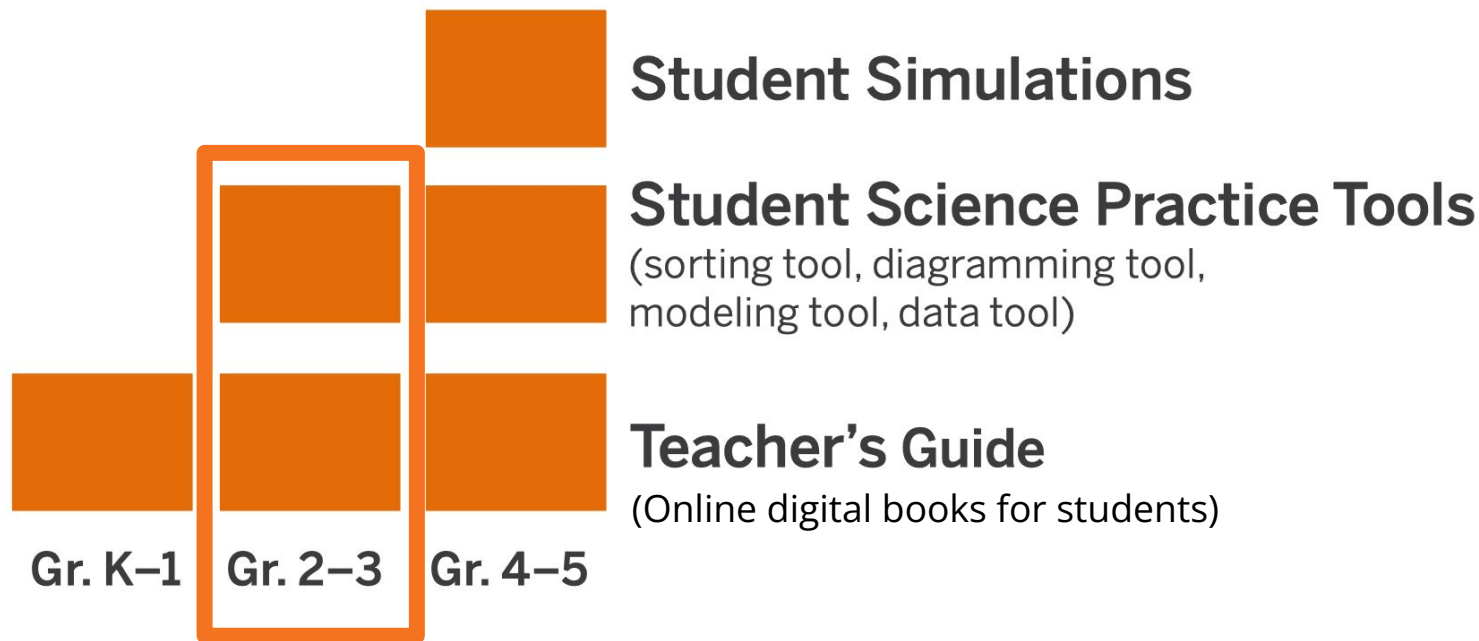
## Changing Landforms

**Domain:** Earth and Space  
Science

**Unit type:** Modeling

**Student role:** Geologists

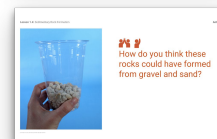
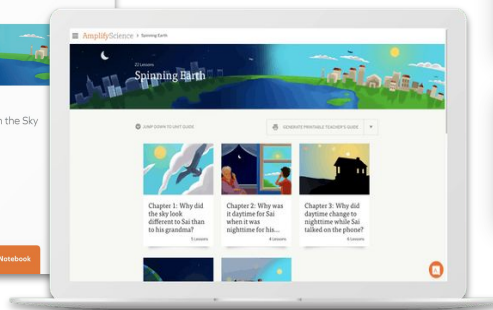
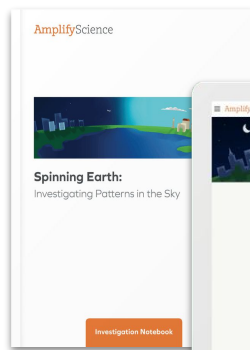
# What are the digital components of Amplify Science Elementary?



# K-5 Program components

## Teacher materials

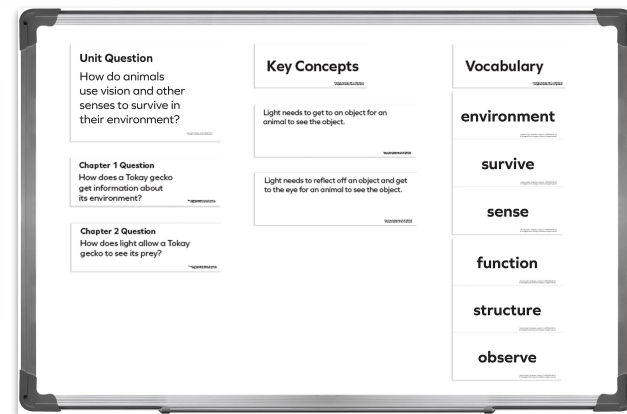
- Teacher's Guide (print and digital)
- Classroom Slides
- Classroom wall materials
- Embedded assessments
- Program Guide
- Program Hub
- Amplify Help Site



Program Hub



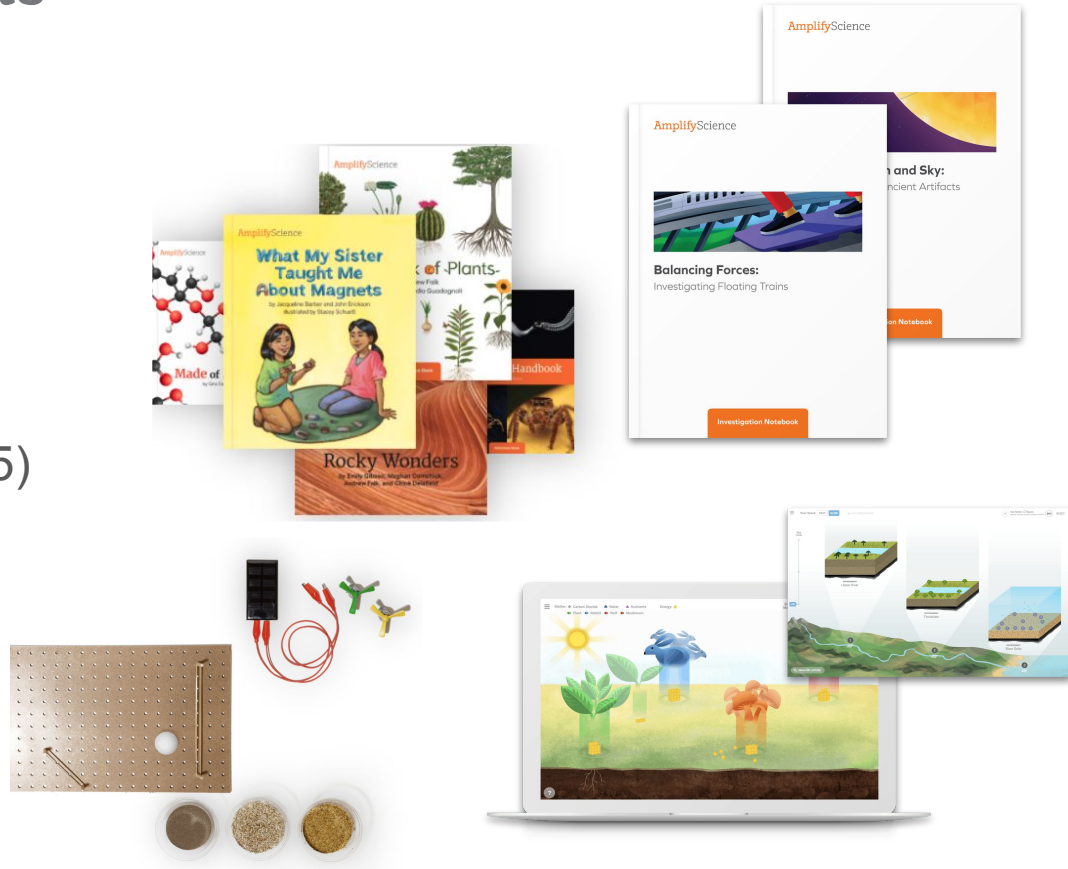
Science Program Guide



# K-5 Program components

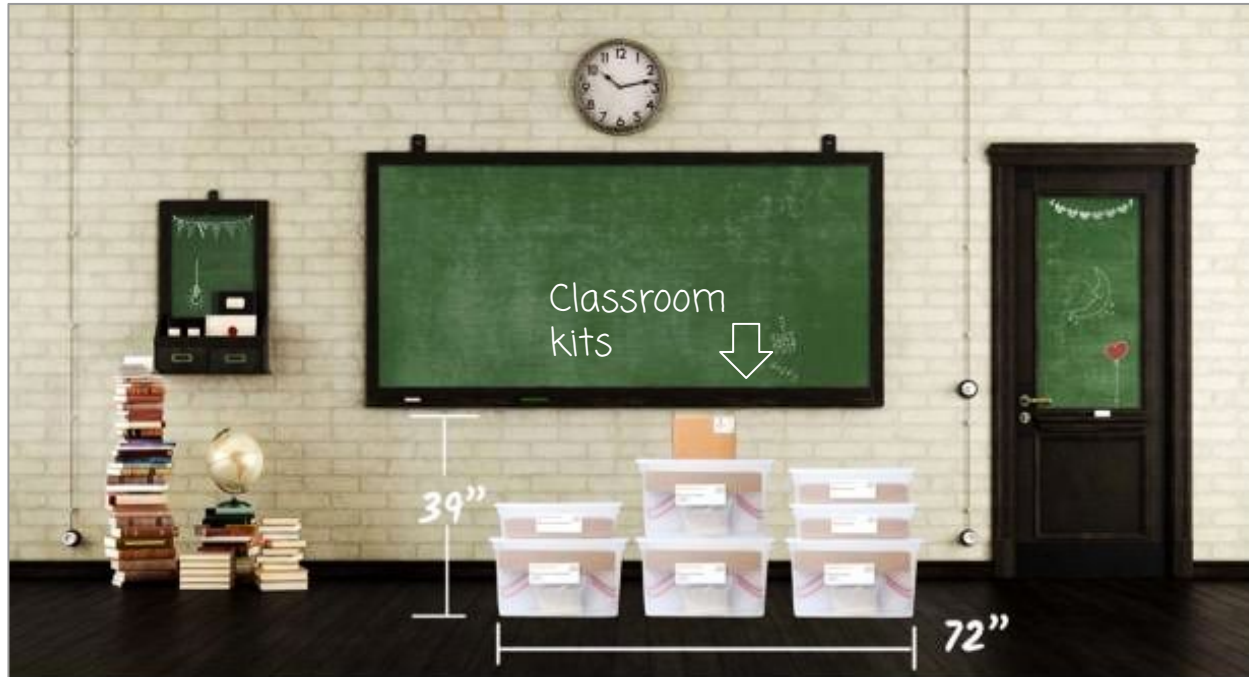
## Student materials

- Hands-on materials
- Investigation Notebooks (print and digital)
- Student books
- Digital Applications (only in 2-5)



# K-5 Program components

## Classroom kits



### Classroom kits

Built for a class of 36 students, with consumables for two years

# Chapter 1 Question

How did the edge of the cliff get to be so close to the flagpole?

Changing Landforms—Chapter 1 Question—Lesson 1.1—AMP61561703-2ES  
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lesson use. Return to bookcase so they are easily accessible.)

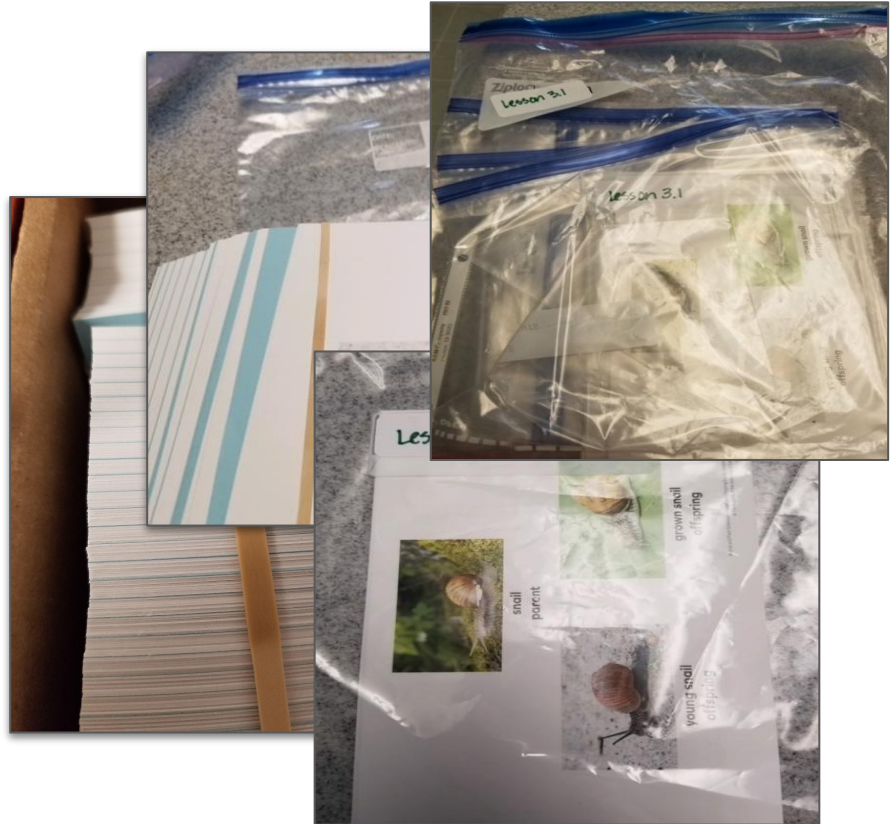




# Cards for games, sorting or matching activities

## Organization tips:

- Separate and place in envelopes or bags (or clip together)
- Label the envelopes or bags with the name and lesson # and activity # (ex. Lesson 2.4, Act. 1)
- Put each envelope or bag (1 set) into a bigger bag and label



# Grades K and 1

Key Concepts are **not** printed  
on card stock  
Lawrence Hall of Science  
understandings should be  
students.

Unit Overview

Unit Question

Chapters

Why does the sky look different at different times?

Printable Resources

Chapter 1: Why did the sky look different to Sai than to his grandma?

Planning for the Unit ^

Chapter Question

What can we see in the sky  
at different times?

Lesson 1.1-1.3

Lesson Overview  
Compilation

Standards and Goals

3-D Statements

- We can see the sun in the sky during the daytime and the stars in the sky during the nighttime. (1.3)
- Right now, the sky looks different to people in different places on Earth. (1.5)

## Two Suggestions:

1. Have blank sentence strips ready to use when developing understandings to add to the class.
2. Write out key concepts on sentence strips. Label with the chapter (e.g., "Chapter 1: Why did the sky look different to Sai than to his grandma?")

What does the sky look like  
to people in different places  
on Earth right now?

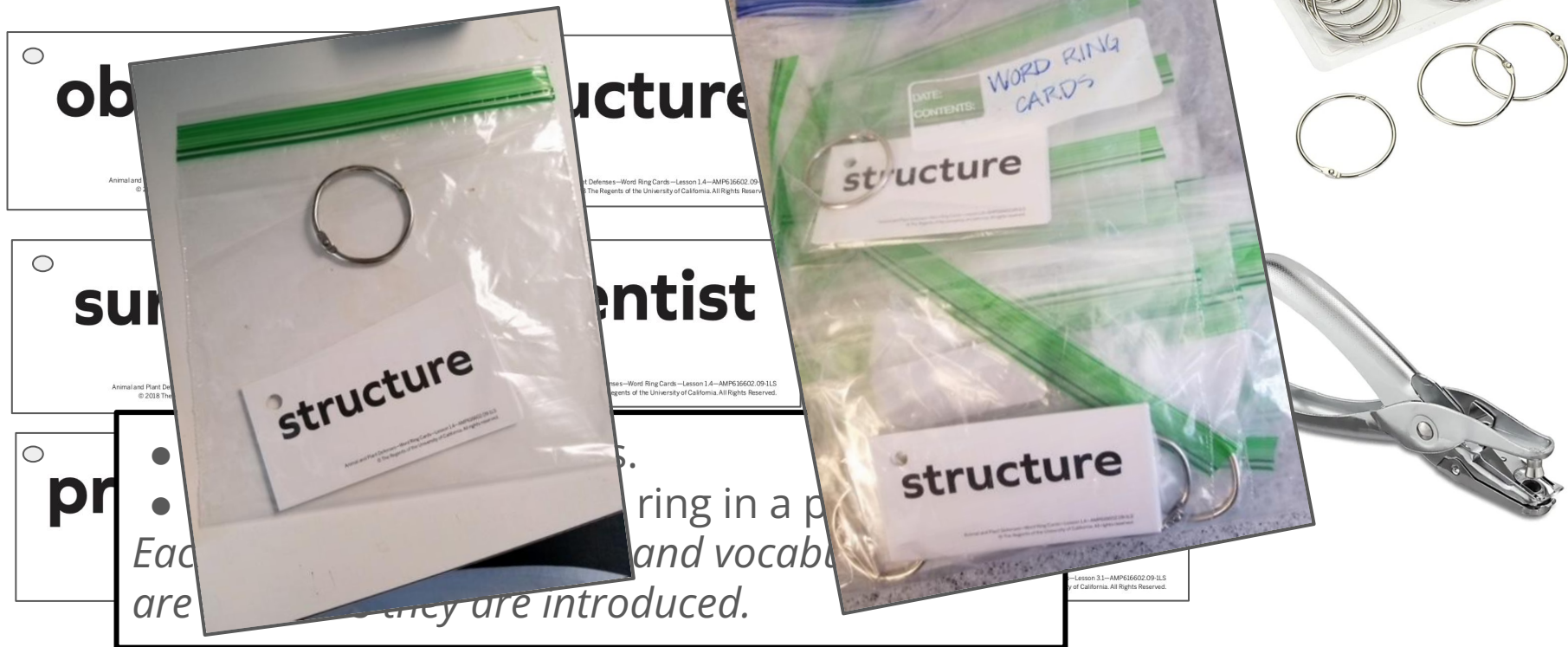
Lesson 1.4, 1.5

- It is nighttime for people in places on Earth that are not facing the sun. (2.3)

Chapter 3: Why did daytime change to nighttime while Sai talked on the phone?

# Grade 1

## Word Relationship Cards



# LAUSD Microsite-

## <https://amplify.com/lausd>



## Welcome to Amplify Science!

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This site contains supporting resources designed for the LAUSD Amplify Science adoption for grades TK–8.


- Access the [Amplify Science Program Hub](#) (To help orient you to the new design, watch this [video](#) and view this [reference guide](#).)
- Find out more about [Amplify Science@Home](#)
- Share the [Caregiver Hub](#) (Eng/Span) with your families
- For LAUSD ES Teachers- [Amplify Science & Benchmark Advance Crosswalk](#)
- Instructional guidance for a [Responsive Relaunch of Amplify Science in 21-22](#)

Click the button below to preview the digital Teacher's Guide, and check back for exciting updates to this site!

# Microsite: Unit 1, K-2 Lesson Prep Videos

## Classroom kits

Program Introduction	New! Lesson Prep Videos
Learn more about Amplify Science	Unit 1
LAUSD Training Sessions- Reference Materials	Grade K- Needs of Plants and Animals >
 New! Lesson Prep Videos	Grade 1- Animals and Plant Defenses >
Remote Learning Resources	Grade 2- Plant and Animal Relationships >
Onboarding: What to expect	Grade 3- Balancing Forces >
Onboarding videos	Grade 4- Energy Conversions >
Unpacking your first hands-on materials kit	Grade 5- Patterns of Earth and Sky >
Looking for help?	



# LAUSD Schoology: Unit 1, 3-5 Lesson Prep Videos

The screenshot shows the LAUSD Schoology interface. The top navigation bar includes 'COURSES', 'GROUPS', 'RESOURCES' (highlighted with a red circle), and 'TOOLS'. On the left sidebar, the 'Group' button (with a group of people icon) is highlighted with a red circle. The main content area is titled 'Amplify Science- Elementary' and displays a list of resources:

- Group Resources**
  - Amplify Science- Elementary
  - LAUSD Middle School Science - Di...
- School Resources**
  - LOS ANGELES USD - 9999
  - Los Angeles Unified School District

The resource list includes:

- NGSS Resources**  
Added by MARIA ARTEAGA · Jun 1, 2021
- Google Drive link for K-6 Phenomenal Notebooking Resources**  
<https://drive.google.com/drive/folders/168S5PDaAsmg6mOg7LUOIhwO8J7GnYn2G?usp=sharing>  
Here are digital resources to support the teaching and learning of the anchor phenomena for Amplify Science and FOSS.  
Subfolders for Unit 1 and Unit 2.  
Note: In the Unit 1 folder for grades 3-6, please find digital phenomenal notebooks which can be assigned to students in Schoology. For K-2, please find a suite of Seesaw activities. Teachers may add the Seesaw activities into their Seesaw accounts and assign them to students.  
Added by INYOUNG LEE · Feb 1, 2021
- Amplify\_Science\_Shared\_Logins.pdf**  
Added by Señor Fernando REYES · Aug 9, 2021
- Lesson Prep Videos** (highlighted with a red circle)  
Added by Terin Ngo · Oct 11, 2021



[illegible]

- Open Your **Lesson Guides Only**
- Start with **Chapter 1** and look for the **hands icon**
- Go into the lesson **materials and prep**

**Lesson 1.3: Observing Sand Samples**

Printable Lesson Guide

HANDS-ON  
Comparing Sand Samples

3  
HANDS-ON  
Making Sand Sample Cards

RESET LESSON

**Overview**

**Materials & Preparation**

Differentiation

Standards

Vocabulary

Unplugged?

**Overview**

This lesson expands upon the previous lesson's introduction to making observations. The teacher reminds students that the edge of the recreation center's cliff is closer to the flagpole than it used to be even though no one has observed the change happening, which prompts the new Investigation Question: *How do geologists figure out how something changed when they can't observe it changing?*

Students are introduced to the idea that sand can be an accessible way to collect evidence about landforms, since both are made of rock. After a brief exploration of sand samples, students come up

**Chapter 1 Activities**

**Changing Landforms Lesson Guides**

**Chapter 1 Activities**

**Lesson 1.1: Pre-Unit Assessment**

1 Introducing the Unit

2 Writing Initial Explanations

3 Partner Reading

TEACHER-LED DISCUSSION

WRITING

READING

**Lesson 1.2: Observations About Landforms**

Activating Prior Knowledge About Landforms

Reviewing Handbook of Land and Water

Gathering Evidence from the Book

Reflecting on Landforms

TEACHER-LED DISCUSSION

READING

READING

TEACHER-LED DISCUSSION

**Lesson 1.3: Observing Sand Samples**

Exploring Sand Samples

Comparing Sand Samples

Making Sand Sample Cards

HANDS-ON

HANDS-ON

HANDS-ON

**Lesson 1.4: Gary's Sand Journal**

Setting a Purpose for Reading

Partner Reading

Making Observations of Mystery Sand

TEACHER-LED DISCUSSION

READING

WRITING

**Lesson 1.5: Making Sense of Sand Samples**

Observing Sand Samples

Writing About Sand Samples

Sharing Sand Samples

HANDS-ON

WRITING

TEACHER-LED DISCUSSION

**Lesson 1.6: Explaining Landform Changes**

Gathering Evidence from a Hard Candy Model

Considering the Cliff

Critical Junction: Writing a Scientific Explanation

HANDS-ON

TEACHER-LED DISCUSSION

WRITING

4



# Hands On Material Organization

## Completed for Changing Landforms

1	<b>Directions</b>					
2	1. Open the Digital Lesson Guides Only page 7 from the Unit Landing page or go the Print TE to page 31. (Chapter 1 Activities)					
3	2. Look for the lessons with Hands On.					
4	HANDS ON					
5	3. Note in the table below.					
6	4. Review the materials and preparation to determine if it can be prepared prior to the lesson or on the day of the lesson.					
7	5. Use this same procedure for each Chapter. (Go to the Chapter Activities Contents)					
8						
9	Chapter/Lesson	Activity	Prep Prior	Prep Day of	What to do	
10	1.1	1	X		Prep plastic bags with labels A, B, C, D and M. Place 1 tsp of the following cinnamon, salt, flour, cornstarch in A,B,C, D. In bag M mix 1 tsp salt and 1 tsp cinnamon.	This is an example from Properties of
11	1.3	1,2	X		Each group of 4 students: label 4 self-sealing bags and label bags "Sand 1," "Sand 2," "Sand 3" and "Sand 4"-add 2 Tbs of each type of sand in the labeled bags, 4 index cards, 2 hand lenses, bottle of white glue	
12		1,2		X	Write investigation Question on board or sentence strip: How do geologists figure out how something changed when they can't observe it changing?	
13		3	X		Prepare on Sand Sample Card for Activity 3: write name on index card, spread small amount of glue, pinch sand from one sand sample bag and sprinkle on the glue on the card	
14	1.5	1	X		Need students' Sand Sample Cards from Lesson 1.3, for Pairs of students-1 hand lens, "Gary's Sand Journal"	
15	1.6	1	X		8 hard candies placed in a jar tightly sealed, 1 paper plate	
16	2.2	2	X		Each group of 4 students: 1 tray with 1 chunk of chalk in a plastic container, spray bottle filled with water, 2 hand lenses, 4 pairs of safety goggles	
17	2.5	1,2	X		Each group of 4 students: 1 tray with chunk of chalk in a plastic container, spray bottle with water, 2 hand lenses, 4 pairs of safety goggles, and two pumice rocks	
18	3.2	2	X		For the class: pom-poms-set up pom-poms in a mound shaped like a mountain-form a peak on one side of the pom-pom mountain. Each student: 1 brown marker, 1 yellow marker, 1 green marker	
19	4.2	2	X		Each group of 4 students: chalk in a plastic container, spray bottle with water, (1/2 cup of kinetic sand in a plastic container-mold sand into mound into a plastic container), 2 hand lenses, and 4 goggles. For the class: Wind Erosion Model-1 cup of fine playground sand and a plastic straw on a tray	

# Questions?





# Plan for the day: Part 1

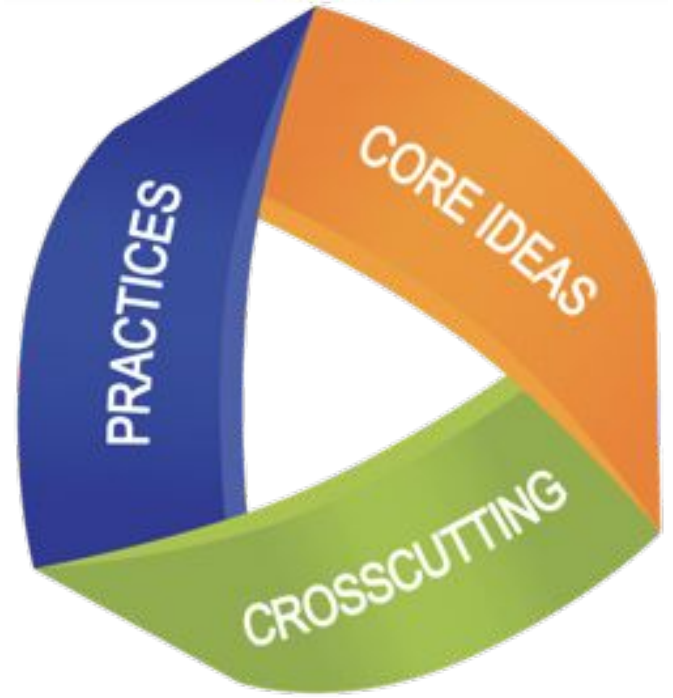
- Introduction and Framing
- **NGSS & 3D Learning**
- Phenomenon-based Instruction
- Unit Internalization
- Additional Resources
- Closing

# Next Generation Science Standards

Three dimensional learning

## Evaluate your knowledge

- On a scale of 0-5, how would you rate your familiarity with 3-D learning?



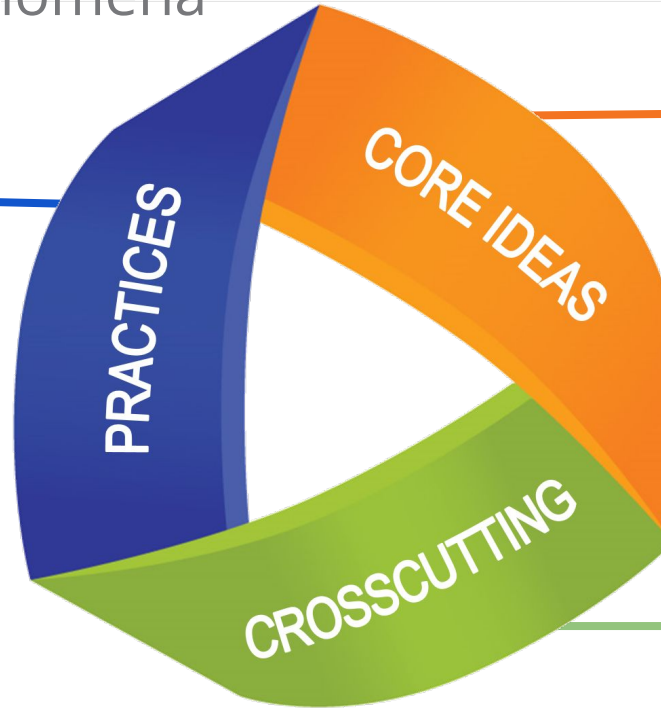
# Conceptual Shifts in NGSS

1. K-12 Science Education Should Reflect the Interconnected Nature of Science as it is Practiced and Experienced in the Real World.
2. The Next Generation Science Standards are student performance expectations – NOT curriculum.
3. The science concepts in the NGSS build coherently from K-12.
4. The NGSS Focus on Deeper Understanding of Content as well as Application of Content.
5. Science and Engineering are Integrated in the NGSS from K–12.
6. The NGSS are designed to prepare students for college, career, and citizenship.
7. The NGSS and Common Core State Standards (Mathematics and English Language Arts) are Aligned.

# Using 3-D teaching and learning

for figuring out phenomena

**What scientists do**  
Science and  
Engineering Practices



**What scientists  
want to know**  
Disciplinary Core  
Ideas

**How scientists  
think**  
Crosscutting Concepts

# Three dimensions of NGSS (CA) at a glance

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>SEP-1. Asking questions and defining problems</p> <p>SEP-2. Developing and using models</p> <p>SEP-3. Planning and carrying out investigations</p> <p>SEP-4. Analyzing and interpreting data</p> <p>SEP-5. Using mathematics and computational thinking</p> <p>SEP-6. Constructing explanations (for science) and designing solutions (for engineering)</p> <p>SEP-7. Engaging in argument from evidence</p> <p>SEP-8. Obtaining, evaluating, and communicating information</p>	<p><b>Physical Science</b></p> <p>PS1: Matter and its interactions</p> <p>PS2: Motion and stability: Forces and interactions</p> <p>PS3: Energy</p> <p>PS4: Waves and their applications in technologies for information transfer</p> <p><b>Life Science</b></p> <p>LS1: From molecules to organisms: Structures and processes</p> <p>LS2: Ecosystems: Interactions energy, and dynamics</p> <p>LS3: Heredity: Inheritance and variation of traits</p> <p>LS4: Biological evolution: Unity and diversity</p> <p><b>Earth and Space Science</b></p> <p>ESS1: Earth's place in the universe</p> <p>ESS2: Earth's systems</p> <p>ESS3: Earth and human activity</p> <p><b>Engineering, Technology, and Applications of Science</b></p> <p>ETS1: Engineering Design</p> <p>ETS2: Links among engineering, technology, science, and society</p>	<p>CCC-1. Patterns</p> <p>CCC-2. Cause and effect: Mechanism and explanation</p> <p>CCC-3. Scale, proportion, and quantity</p> <p>CCC-4. Systems and system models</p> <p>CCC-5. Energy and matter: Flows, cycles, and conservation</p> <p>CCC-6. Structure and function</p> <p>CCC-7. Stability and Change</p>

# An Analogy between NGSS and a Cake



Baking a cake  
(performance expectations)



**Baking Tools and  
Techniques  
(Science & Engineering  
Practices)**



# Science and Engineering Practices

inquiry

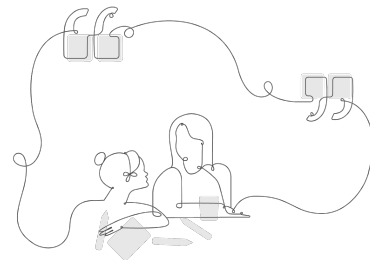
1. Asking questions (for science) and defining problems (for engineering)
2. Developing and using models
3. Planning and carrying out investigations
4. Analyzing and interpreting data

math

5. Using mathematics and computational thinking
6. Constructing explanations (for science) and designing solutions (for engineering)

language

7. Engaging in argument from evidence
8. Obtaining, evaluating, and communicating information



# An Analogy between NGSS and a Cake



Baking a cake  
(performance expectations)



**Baking Tools and  
Techniques  
(Science & Engineering  
Practices)**



**Cake  
(Disciplinary Core Ideas)**

# Disciplinary Core Ideas

Life Science	Physical Science
LS1: From Molecules to Organisms: Structures and Processes	PS1: Matter and Its Interactions
LS2: Ecosystems: Interactions, Energy, and Dynamics	PS2: Motion and Stability: Forces and Interactions
LS3: Heredity: Inheritance and Variation of Traits	PS3: Energy
LS4: Biological Evolution: Unity and Diversity	PS4: Waves and Their Applications in Technologies for Information Transfer
Earth & Space Science	Engineering & Technology
ESS1: Earth's Place in the Universe	ETS1: Engineering Design
ESS2: Earth's Systems	ETS2: Links Among Engineering, Technology, Science, and Society
ESS3: Earth and Human Activity	

# An Analogy between NGSS and a Cake



Baking a cake  
(performance expectations)



Frosting  
(Crosscutting  
Concepts)



Baking Tools and  
Techniques  
(Science & Engineering  
Practices)



Cake  
(Disciplinary Core Ideas)

# Crosscutting Concepts

## 5. Energy and Matter

Tracking energy and matter flows, into, out of, and within systems helps one understand their system's behavior.

## 6. Structure and Function

The way an object is shaped or structured determines many of its properties and functions.

## 7. Stability and Change

For both designed and natural systems, conditions that affect stability and factors that control rates of change are critical elements to consider and understand.

## 4. Systems and System Models

A system is an organized group of related objects or components; models can be used for understanding and predicting the behavior of systems.

# NGSS Standards, Grade 2

## What is Assessed

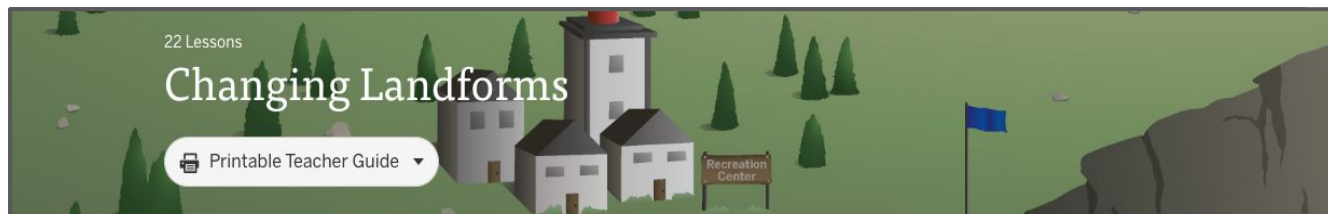
a collection of performance expectations describing what students should be able to do to master the standard



2.Earth's Systems: Processes that Shape the Earth		
<b>2.Earth's Systems: Processes that Shape the Earth</b> Students who demonstrate understanding can: <b>2-ESS1-1. Use information from several sources to provide evidence that Earth events can occur quickly or slowly.</b> <i>[Clarification Statement: Examples of events and timescales could include volcanic explosions and earthquakes, which happen quickly and erosion of rocks, which occurs slowly.] [Assessment Boundary: Assessment does not include quantitative measurements of timescales.]</i> <b>2-ESS2-1. Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.*</b> <i>[Clarification Statement: Examples of solutions could include different designs of dikes and windbreaks to hold back wind and water, and different designs for using shrubs, grass, and trees to hold back the land.]</i> <b>2-ESS2-2. Develop a model to represent the shapes and kinds of land and bodies of water in an area.</b> <i>[Assessment Boundary: Assessment does not include quantitative scaling in models.]</i> <b>2-ESS2-3. Obtain information to identify where water is found on Earth and that it can be solid or liquid.</b> <i>The performance expectations above were developed using the following elements from the NRC document A Framework for K-12 Science Education.</i>		
<b>Science and Engineering Practices</b> <b>Developing and Using Models</b> Modeling in K-2 builds on prior experiences and progresses to include using and developing models (i.e., diagram, drawing, physical replica, diorama, dramatization, or storyboard) that represent concrete events or design solutions. <ul style="list-style-type: none"> <li>Develop a model to represent patterns in the natural world. (2-ESS2-2)</li> </ul> <b>Constructing Explanations and Designing Solutions</b> Constructing explanations and designing solutions in K-2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions. <ul style="list-style-type: none"> <li>Make observations from several sources to construct an evidence-based account for natural phenomena. (2-ESS1-1)</li> <li>Compare multiple solutions to a problem. (2-ESS2-1)</li> </ul> <b>Obtaining, Evaluating, and Communicating Information</b> Obtaining, evaluating, and communicating information in K-2 builds on prior experiences and uses observations and texts to communicate new information. <ul style="list-style-type: none"> <li>Obtain information using various texts, text features (e.g., headings, tables of contents, glossaries, electronic menus, icons), and other media that will be useful in answering a scientific question. (2-ESS2-3)</li> </ul>	<b>Disciplinary Core Ideas</b> <b>ESS1.C: The History of Planet Earth</b> <ul style="list-style-type: none"> <li>Some events happen very quickly; others occur very slowly, over a time period much longer than one can observe. (2-ESS1-1)</li> </ul> <b>ESS2.A: Earth Materials and Systems</b> <ul style="list-style-type: none"> <li>Wind and water can change the shape of the land. (2-ESS2-1)</li> </ul> <b>ESS2.B: Plate Tectonics and Large-Scale System Interactions</b> <ul style="list-style-type: none"> <li>Maps show where things are located. One can map the shapes and kinds of land and water in any area. (2-ESS2-2)</li> </ul> <b>ESS2.C: The Roles of Water in Earth's Surface Processes</b> <ul style="list-style-type: none"> <li>Water is found in the ocean, rivers, lakes, and ponds. Water exists as solid ice and in liquid form. (2-ESS2-3)</li> </ul> <b>ETS1.C: Optimizing the Design Solution</b> <ul style="list-style-type: none"> <li>Because there is always more than one possible solution to a problem, it is useful to compare and test designs. (secondary to 2-ESS2-1)</li> </ul>	<b>Crosscutting Concepts</b> <b>Patterns</b> <ul style="list-style-type: none"> <li>Patterns in the natural world can be observed. (2-ESS2-2), (2-ESS2-3)</li> </ul> <b>Stability and Change</b> <ul style="list-style-type: none"> <li>Things may change slowly or rapidly. (2-ESS1-1), (2-ESS2-1)</li> </ul> <hr/> <b>Connections to Engineering, Technology, and Applications of Science</b> <b>Influence of Engineering, Technology, and Science on Society and the Natural World</b> <ul style="list-style-type: none"> <li>Developing and using technology has impacts on the natural world. (2-ESS2-1)</li> </ul> <hr/> <b>Connections to Nature of Science</b> <b>Science Addresses Questions About the Natural and Material World</b> <ul style="list-style-type: none"> <li>Scientists study the natural and material world. (2-ESS2-1)</li> </ul>
<b>Connections to other DCIs in second grade: 2.PS1.A (2-ESS2-3)</b> <b>Articulation of DCIs across grade-levels: K.ETS1.A (2-ESS2-1); 3.LS2.C (2-ESS1-1); 4.ESS1.C (2-ESS1-1); 4.ESS2.A (2-ESS1-1), (2-ESS2-1); 4.ESS2.B (2-ESS2-2); 4.ETS1.A (2-ESS2-1); 4.ETS1.B (2-ESS2-1); 4.ETS1.C (2-ESS2-1); 5.ESS2.A (2-ESS2-1); 5.ESS2.C (2-ESS2-2), (2-ESS2-3)</b> <b>Common Core State Standards Connections:</b> <b>ELA/Literacy –</b> <b>RI.2.1</b> Ask and answer such questions as <i>who</i> , <i>what</i> , <i>where</i> , <i>when</i> , <i>why</i> , and <i>how</i> to demonstrate understanding of key details in a text. (2-ESS1-1) <b>RI.2.3</b> Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text. (2-ESS1-1), (2-ESS2-1) <b>RI.2.9</b> Compare and contrast the most important points presented by two texts on the same topic. (2-ESS2-1) <b>W.2.6</b> With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers. (2-ESS1-1), (2-ESS2-3) <b>W.2.7</b> Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations). (2-ESS1-1) <b>W.2.8</b> Recall information from experiences or gather information from provided sources to answer a question. (2-ESS1-1), (2-ESS2-3) <b>SL.2.2</b> Recount or describe key ideas or details from a text read aloud or information presented orally or through other media. (2-ESS1-1) <b>SL.2.5</b> Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings. (2-ESS2-2) <b>Mathematics –</b> <b>MP.2</b> Reason abstractly and quantitatively. (2-ESS2-1), (2-ESS2-1), (2-ESS2-2) <b>MP.4</b> Model with mathematics. (2-ESS1-1), (2-ESS2-1), (2-ESS2-2) <b>MP.5</b> Use appropriate tools strategically. (2-ESS2-1) <b>2.NBT.A</b> Understand place value. (2-ESS1-1) <b>2.NBT.A.3</b> Read and write numbers to 1000 using base-ten numerals, number names, and expanded form. (2-ESS2-2) <b>2.MD.B.5</b> Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem. (2-ESS2-1)		



# Navigate to the Unit Landing Page: **Changing Landforms**



## Review the **Standard and Goals** and the **3-D Statements**

Unit Overview

Chapters

Printable Resources

Planning for the Unit ▾

Teacher References ▲

- Lesson Overview
- Compilation
- Standards and Goals
- 3-D Statements**
- Assessment System
- Embedded Formative Assessments
- Books in This Unit
- Apps in This Unit
- Opportunities for Unit Extensions

Offline Preparation

## 3-D Statements

Key

*Real-World Disciplinary Core Ideas, Crosscutting Concepts*

### Unit Level

Students **use models to investigate** how wind and water cause changes to landforms (cause and effect). They figure out that erosion causes small changes to landforms, which add up to big changes over long periods of time and that landforms made of loose materials can erode much more quickly (scale, proportion, and quantity; stability and change). Throughout the unit, students **create diagram models and write explanations** to show their developing understanding.

### Chapter Level

#### Chapter 1: How did the edge of the cliff get to be so close to the flagpole?

Students **obtain and evaluate information** about what landforms are made of—rock. They then **investigate** sand samples and **use a physical model** to begin constructing an understanding about how geologists study changes they cannot observe directly, such as how rock can change even though it is hard (stability and change).

#### Chapter Targeted 3-D Learning Objectives

*These objectives are formatively assessed across the chapter [see assessment guidance locations noted]*

# 3D Statements: Changing Landforms

## Key

Practices Disciplinary Core Ideas Crosscutting Concepts

### Unit Level

Students use models to investigate how wind and water cause changes to landforms (cause and effect). They figure out that erosion causes small changes to landforms, which add up to big changes over long periods of time and that

### Chapter Level

#### Chapter 1: How did the edge of the cliff get to be so close to the flagpole?

Students obtain and evaluate information about what landforms are made of—rock. They then investigate sand

### Lesson Level

#### Lesson 1.1: Pre-Unit Assessment

Students write initial explanations about how landforms change (cause and effect) and obtain and evaluate information about different types of landforms from the book *Landform Postcards*.





# Plan for the day: Part 1

- Introduction and Framing
- NGSS & 3D Learning
- **Phenomenon-based Instruction**
- Unit Internalization
- Additional Resources
- Closing

# Next Generation Science Standards

## Phenomenon-based learning and teaching

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

# Comparing topics and phenomena

Topic-based	Phenomenon-based
Chemical reactions	There's a reddish-brown substance in a town's tap water.

# Next Generation Science Standards

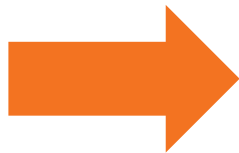
## How might learning be different?

Topic-based	Phenomenon-based
Chemical reactions	There's a reddish-brown substance in a town's tap water.
Electric circuits	A flashlight won't turn on, even though it used to work.
Natural selection	A population of newts has become more poisonous over time.

# Comparing topics and phenomena

## A shift in science instruction

from learning about  
(like a student)



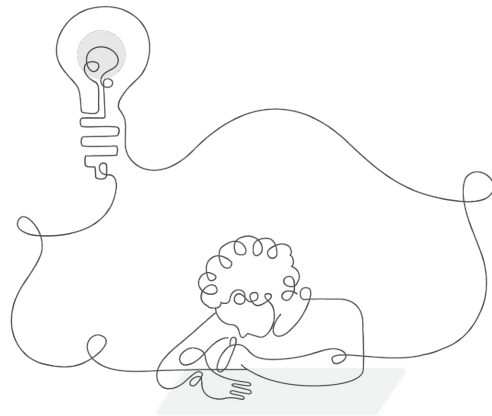
to figuring out  
(like a scientist)

# Previewing the unit

## Introducing the phenomenon

Amplify Science units are designed around complex phenomena that drives student learning through the unit.

Pay attention to the phenomenon, or observable event, students will figure out in your unit.



We're about to begin a new science unit.

We'll be learning about why the **shape** of **land** can be **different** than it used to be.



This is **Oceanside Recreation Center**, where students come to learn about leadership and teamwork. The center is on a beautiful **cliff** next to the **ocean**.





When they are at the center, students get to go on **hikes** and **observe nature**.



Sometimes they get to stay for a week and sleep in cabins overnight.



When school lets out, kids can go to **summer camp** at Oceanside Recreation Center.

They do team-building activities and learn how to be better leaders.



Has anyone been to summer camp or to a place like Oceanside Recreation Center?

One place I have been to is \_\_\_\_\_.

Nearby Cliff



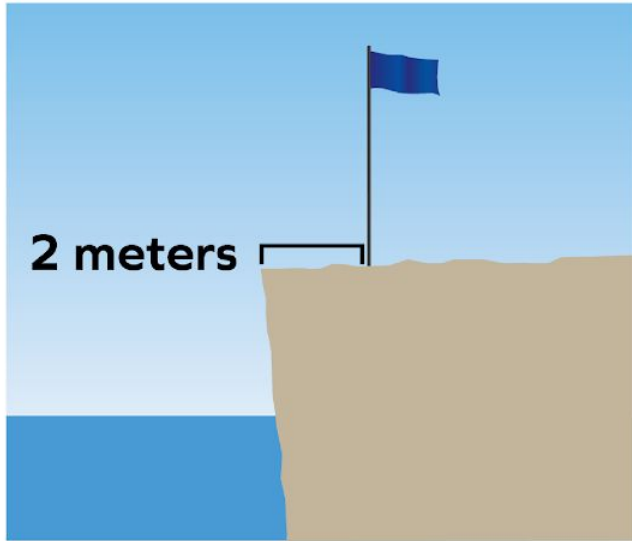
Director Higgins at Oceanside found out that a nearby cliff **collapsed**.

He is worried this might happen to the recreation center's cliff, putting visitors at risk.

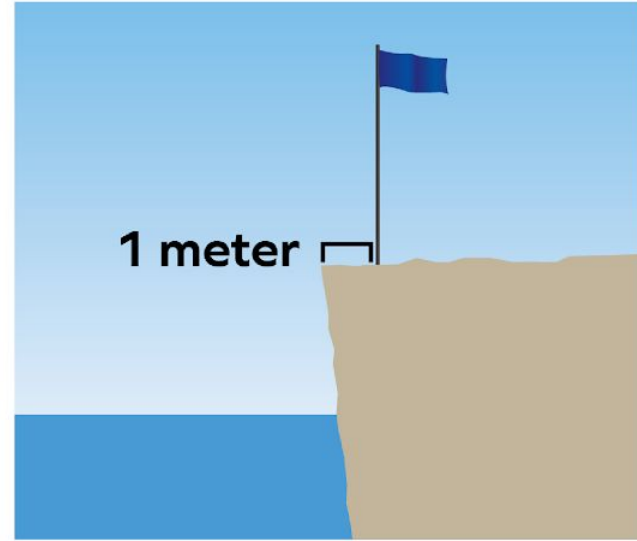
After researching the recreation center's cliff, Director Higgins found some important information.

He found that the edge of the cliff is closer to the flagpole than it used to be.

**A long time ago**



**Now**



Director Higgins has hired us as **geologists** to help decide whether the recreation center's cliff is safe.

As geologists, our role is to help Director Higgins decide if he needs to close the recreation center because visitors are in danger.

# Amplify Science

## Anchoring phenomenon

- Complex and rich
- Drives learning through a whole unit
- Specific and observable
- Relatable at students' developmental level





# K-5 Navigation structure

**Year** (each year includes 3–4 units)



**Units** (each unit includes 3–6 chapters)



**Chapters** (each chapter includes 2–10 lessons)



**Lessons** (each lesson includes 2–5 activities)



# Let's Go Live!



Unit Overview

Chapters

Printable Resources

Planning for the Unit ▾

Teacher References ▾

Offline Preparation

## Unit Overview



### What's in This Unit?

In the *Changing Landforms: The Disappearing Cliff* unit, students use models to investigate how wind and water can cause changes to landforms. They learn that landforms made of solid rock undergo small-scale changes, and that over time, these changes add up to big changes. The unit begins with an introduction to changes to the cliffs by Oceanside Recreation Center, which serves as the anchor phenomenon for the unit. A nearby cliff has collapsed, and historical information shows that where the recreation center is situated appears to be receding. Students take on the role of geologists in order to help the Oceanside

[Read more >](#)

## Chapters

Chapter 1: How did the edge of the cliff get to be so close to the flagpole? ⓘ



LESSON 1.1  
Pre-Unit Assessment



LESSON 1.2  
Observations About  
Landforms

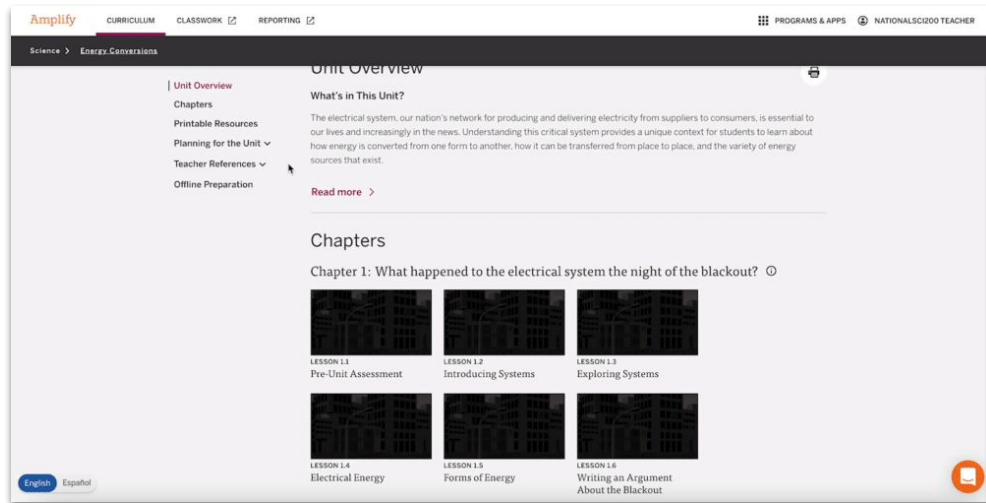


LESSON 1.3  
Observing Sand Samples

# Unit Level resources

Collection of resources to support planning and day-to-day instruction in the unit:

- Printable Resources
- “Planning for the Unit” documents
- Teacher References



# Key Unit Documents for Unit Planning

The image shows a screenshot of the 'Changing Landforms' unit overview page. The page has a header with a landscape illustration and a sidebar on the left. The main content area is titled 'Unit Overview' and includes a 'What's in This Unit?' section. A large 'Printable Resources' modal is open, displaying a list of documents. Orange arrows point to specific items in the sidebar and the modal.

**Unit Overview**

22 Lessons

Printable Teacher Guide

Unit Overview

Chapters

Printable Resources

Planning for the Unit

Teacher References

Offline Preparation

Unit Map

Progress Build

Getting Ready to Teach

Materials and Preparation

Science Background

Standards at a Glance

Embedded Formative Assessments

Books in This Unit

Apps in This Unit

Opportunities for Unit Extensions

**What's in This Unit?**

In the *Changing Landforms: The Disappearing Cliff* unit, students use models to investigate how wind and water can cause

**Printable Resources**

- 3-D Assessment Objectives
- Copypmaster Compilation
- Eliciting and Leveraging Students' Prior Knowledge, Personal Experiences, and Cultural Backgrounds
- Multi-Language Glossary
- Print Materials (8.5" x 11")
- Coherence Flowcharts
- Crosscutting Concept Tracker
- Investigation Notebook
- NGSS Information for Parents and Guardians
- Print Materials (11" x 17")

**LESSON 1.1**  
Pre-Unit Assessment

**LESSON 1.2**  
Observations About Landforms

**LESSON 1.3**  
Observing Sand Samples

## Core Unit Planning & Internalization

Unit Title: <span>1</span>	
<b>Overview</b> [Resources: Unit Overview, Teacher's Guide, Coherence Flowchart, Unit Map, 3-D Statements]	
What is the phenomenon/real-world problem students are investigating in your unit? <span>2</span>	Student Role: <span>3</span>
Unit Question: <span>4</span>	Relationship between the Unit Phenomenon and Unit Question: <span>5</span>
By the end of the unit, students figure out... <span>6</span>	
How do students engage with three-dimensional learning to figure out the phenomenon/real-world problem in your unit? <span>7</span>	

### Unit Guide resources:

- Unit Overview
- Unit Map
- *Coherence Flowchart*

### Unit Guide resources:

- Lesson Overview Compilation
- Unit Overview

### Unit Guide resources:

- Unit Map

### Unit Guide resources:

- 3D Statements at the Unit Level

## Core Unit Planning & Internalization

Unit Title:

### Changing Landforms

#### Overview

[Resources: Unit Overview, Teacher's Guide, Coherence Flowchart, Unit Map, 3-D Statements]

What is the phenomenon/real-world problem students are investigating in your unit?

A nearby cliff collapsed and the director of the Oceanside Recreation Center is worried that erosion on the center's ocean cliff might have safety implications for the visitors.

Student Role:

Geologist

Unit Question:

Why is the shape of the land different than it used to be?

Relationship between the Unit Phenomenon and Unit Question:

Students figure out how land formation changes by investigating the erosion on the center's cliff.

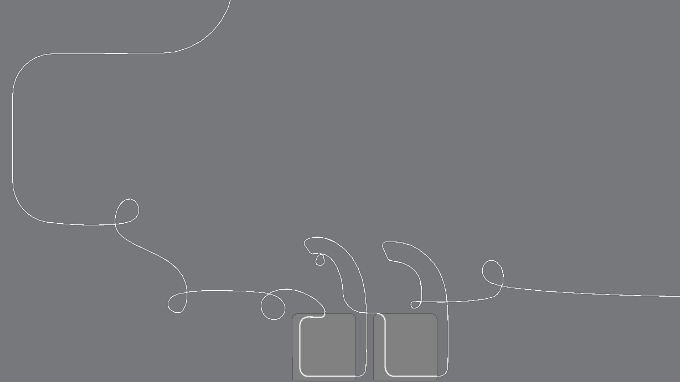
By the end of the unit, students figure out...

Students figure out how the recreation center's cliff changed by erosion without the director noticing?

How do students engage with three-dimensional learning to figure out the phenomenon/real-world problem in your unit?

Students use models to investigate how wind and water cause changes to landforms (cause and effect). They figure out that erosion causes small changes to landforms, which add up to big changes over long periods of time and that landforms made of loose materials can erode much more quickly (scale, proportion, and quantity; stability and change). Throughout the unit students create diagram models and write explanations to show their developing understanding.

Questions?





# Plan for the day: Part 1

- Introduction and Framing
- NGSS & 3D Learning
- Phenomenon-based Instruction
- Unit Internalization
- **Additional Resources**
- Closing



# Student Apps Page

Click on Programs & Apps (waffle)

Scroll down and click on the  
“Elementary Student Apps” icon

The screenshot displays the Amplify website interface. At the top, the navigation bar includes 'Amplify', 'CURRICULUM', 'CLASSWORK', 'REPORTING', and 'PROGRAMS & APPS' (highlighted with an orange circle). The user is logged in as 'NATIONALSCI200 TEACHER'. The main content area is titled 'Science' and shows a dropdown menu for 'Program: 4th Grade Science Eng/Esp'. Below this, there are two unit cards: 'Energy Conversions' (22 Lessons) and 'Vision and Light' (22 Lessons). A modal window is open, displaying a grid of icons for various tools and resources. The 'Elementary Student Apps' icon is highlighted with an orange circle. The modal window is organized into three sections: 'Tools' (including Rock Transformations Sim, Scale Tool, Sound Waves Sim, Thermal Energy Sim, Traits and Reproduction Sim, Vision and Light Sim, Weather Patterns Sim, Admin Portal, Classwork, Elementary Student Apps, Library, My Account, and Science Reporting) and 'Other Resources' (including Benchmark Assessments, CA Science Program Guide, CA Science Program Guide, Help, Science Program Guide, and Science Program Hub).

Amplify CURRICULUM CLASSWORK REPORTING PROGRAMS & APPS NATIONALSCI200 TEACHER

Science

Units Program: 4th Grade Science Eng/Esp

AmplifyScience

Units

Energy Conversions  
22 Lessons

Vision and Light  
22 Lessons

Rock Transformations Sim

Scale Tool

Sound Waves Sim

Thermal Energy Sim

Traits and Reproduction Sim

Vision and Light Sim

Weather Patterns Sim

Tools

Admin Portal

Classwork

Elementary Student Apps

Library

My Account

Science Reporting

Other Resources

Benchmark Assessments

CA Science Program Guide

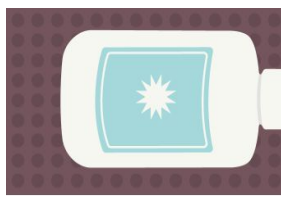
CA Science Program Guide

Help

Science Program Guide

Science Program Hub

# Student Apps page



californiasci17 Teacher

BACK

Changing Landforms

Science Practice Tools

1

3.1 Beach Map

2

3.1 Mountain Map

3

3.1 Island Map

4

3.4 Changes Over Time

5

4.4 Loose Material or Rock



Student Books

1

Gary's Sand Journal

2

Handbook of Land and Water

3

Landform Postcards

4

Making Models of Streams

5

What's Stronger? How Water Causes Erosion



# Explore the Student Apps Page

Familiarize yourself with the digital books on the Student Apps Page.

Amplify CURRICULUM CLASSWORK REPORTING PROGRAMS & APPS NATIONALSCI200 TEACHER

Science

Units Program: 4th Grade Science Eng/Esp

AmplifyScience

Units

Rock Transformations Sim

Scale Tool

Sound Waves Sim

Thermal Energy Sim

Traits and Reproduction Sim

Vision and Light Sim

Weather Patterns Sim

Tools

Admin Portal

Classwork

Elementary Student Apps

Library

My Account

Science Reporting

AmplifyScience

on and Light

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californiasci17 Teacher

BACK

Changing Landforms

Science Practice Tools

1 2 3 4 5

3.1 Beach Map 3.1 Mountain Map 3.1 Island Map 3.4 Changes Over Time 4.4 Loose Material or Rock

Student Books

1 2 3 4 5

Gary's Sand Journal Handbook of Land and Water Landform Postcards Making Models of Streams What's Stronger? How Water Causes Erosion

# Program Hub

Use the Amplify Science Program Hub to find useful resources for implementing Amplify Science, including unit overview videos and planning tools.

The screenshot shows the Amplify Science Program Hub interface. At the top, a navigation bar includes a hamburger menu icon, the text 'PROGRAMS & APPS', and a user profile icon labeled 'CALIFORNIA SCIENCE TEACHER'. The main header features a large illustration of a coastal landscape with a lighthouse and the title 'Changing Landforms' (22 Lessons). Below the header, a sidebar on the left lists navigation options: Unit Overview, Chapters, Printable Resources, Planning for the Unit, Teacher References, and Offline Preparation. The main content area is titled 'Unit Overview' and includes a section 'What's in This Unit?' with a paragraph describing the unit's focus on landforms and a 'Read more' link. Below this, a 'Chapters' section lists three lessons: Lesson 1.1 Pre-Unit Assessment, Lesson 1.2 Observations About Landforms, and Lesson 1.3 Observing Sand Samples.

This screenshot displays the 'PROGRAMS & APPS' section of the Amplify Science Program Hub. It features a grid of icons for various tools and resources. The 'Tools' section includes icons for Weather Patterns Sim, Admin Portal, Administrator Reports, Classwork, Elementary Student Apps, Library, and My Account. The 'Other Resources' section includes icons for Benchmark Assessments, CA Science Program Guide, CA Science Program Guide, Help, Science Program Guide, and Science Program Hub. The 'Science Program Hub' icon is circled in orange.

## Welcome Science Educators!

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

### On-demand resources

Learn more about how to use On-demand resources.



### Professional Learning Resources

Let's get started!



### Additional Unit Materials

Additional resources to complement the unit materials.



### PD Library

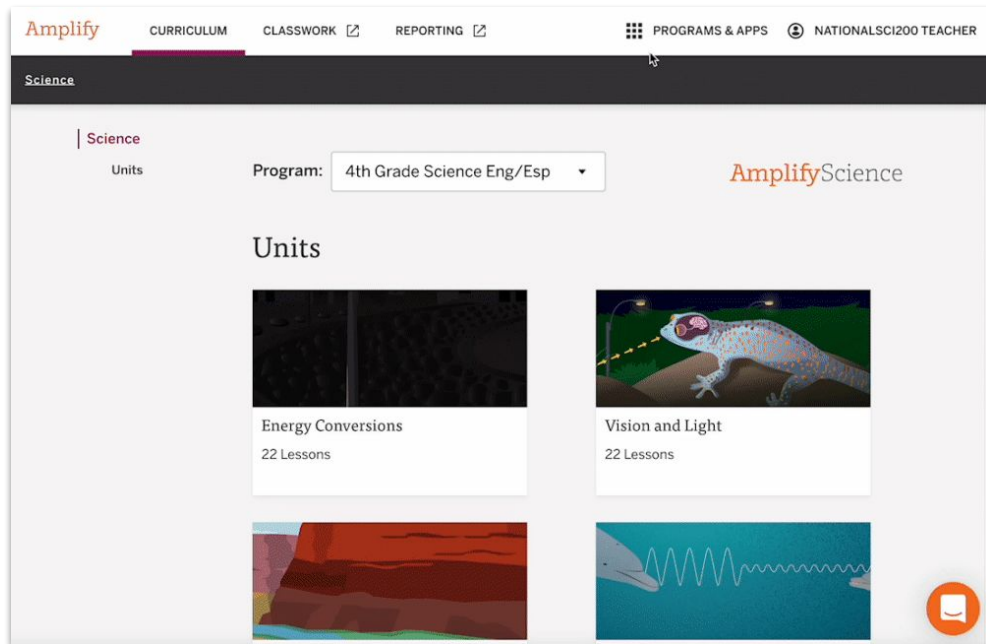
Video collection to learn about your Amplify program



# Explore the Program Hub

Familiarize yourself with the Program Hub.

Be ready to share one resource you've found that you'll use while planning and teaching.



# Additional resources

## Welcome, caregivers!

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We hope you enjoy learning more about Amplify Science and what students are learning in science this year.

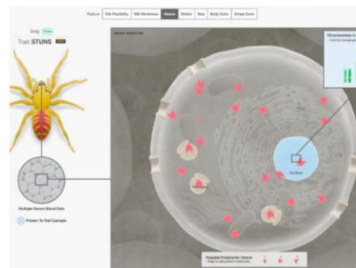
[Para acceder a este sitio en español haga clic aquí.](#)

Amplify welcomes you and your learner to the Science program for the new school year. We are very excited to provide you with exceptional learning opportunities through Science. Below are resources and helpful guides for enabling your student to have the most productive experience with our platform throughout the year.

 [Contact Us](#)



Grades 6-8





# LAUSD Microsite-

## <https://amplify.com/lausd-science>

### Welcome to Amplify Science!

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This site contains supporting resources designed for the LAUSD Amplify Science adoption for grades TK–8.

- Access the [Amplify Science Program Hub](#) (To help orient you to the new design, watch this [video](#) and view this [reference guide](#).)
- Find out more about [Amplify Science@Home](#)
- Share the [Caregiver Hub](#) (Eng/Span) with your families
- For LAUSD ES Teachers- [Amplify Science & Benchmark Advance Crosswalk](#)
- Instructional guidance for a [Responsive Relaunch of Amplify Science in 21-22](#)

Click the button below to preview the digital Teacher's Guide, and check back for exciting updates to this site!





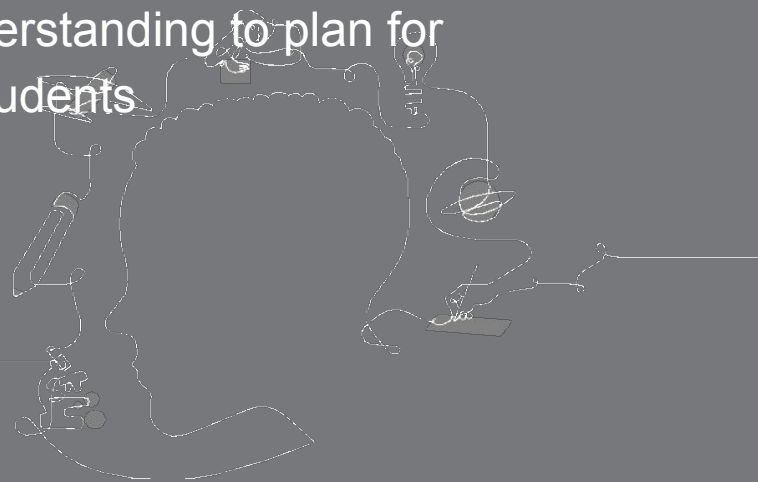
# Plan for the day: Part 1

- Introduction and Framing
- NGSS & 3D Learning
- Phenomenon-based Instruction
- Unit Internalization
- Additional Resources
- Closing



# Overarching goals

- ✓ Explain how students engage in phenomenon based and 3D learning to construct an understanding of the science concepts introduced in the unit *Changing Landforms*
- ✓ Internalize the unit and apply your new understanding to plan for the diverse needs of your classroom and students



# Closing reflection

Based on our work in Part 1, share:

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

**Heart:** something you're feeling

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

# Additional resources and ongoing support

## Customer Care

Seek information specific to enrollment and rosters, technical support, materials and kits, and teaching support, weekdays 7AM-10PM EST and weekends 10AM-6PM EST.



[help@amplify.com](mailto:help@amplify.com)



800-823-1969



Amplify Chat



# Please provide feedback!

**Presenter name:**

**Workshop title:**

Part 1: Unit 3 Internalization

Part 2: Guided Planning (Planning for a Lesson)

**Modality:**

Remote

# Welcome to Amplify Science!

or use Demo Account

1. Go to **learning.amplify.com**
2. Select **Log in with Amplify**
3. If you're already logged in with other Google accounts, click **Use another account**
4. Enter teacher demo account credentials
  - xxxxxxxx@pd.tryamplify.net
  - Password: xxxx
5. Explore as we wait to begin

**Do Now:** Log in through your Schoology account

Welcome to **Amplify**

G

Log In with Google

C

Log In with Clever

A.

Log In with Amplify



SSO login

# Amplify Science

## Unit Internalization / Guided Planning

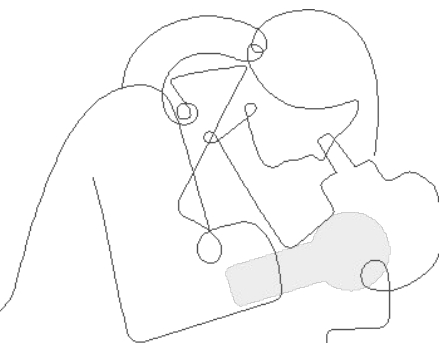
Grade 2 Unit 3: Changing Landforms

Part 2

School/District Name: LAUSD

Date:

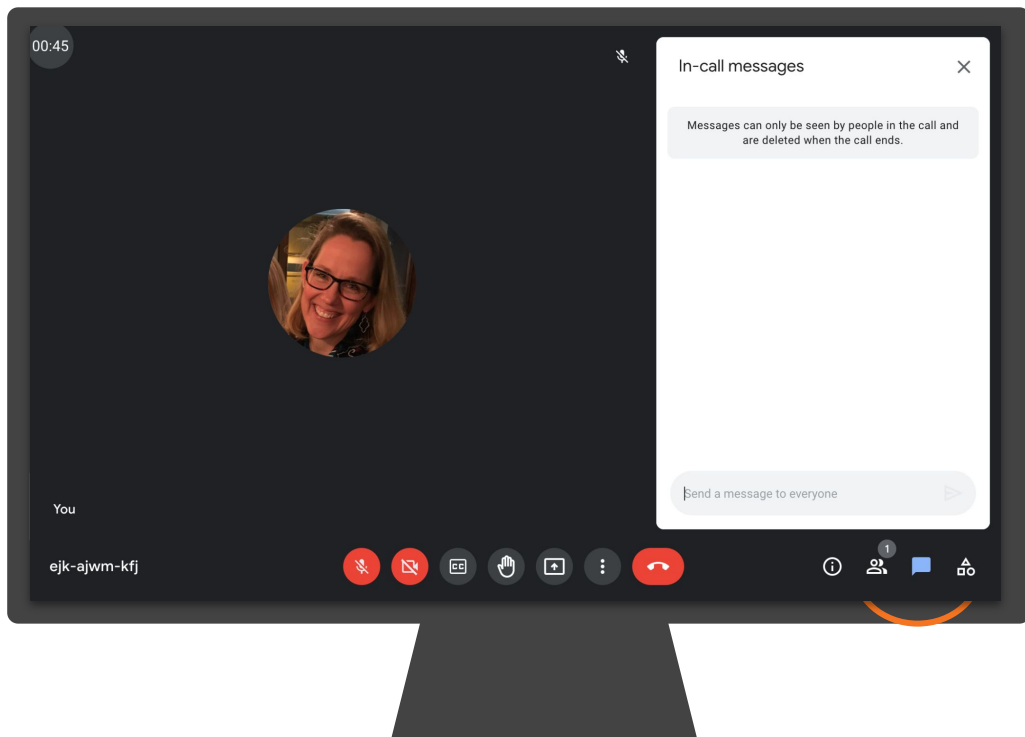
Presented by:



# Ice Breaker!

## Who do we have in the room today?

- **Question:** Now that we have gone through Part 1, which aspects of Amplify Science do you feel more comfortable with or have a greater understanding of?



# Amplify's Purpose Statement

Dear teachers,

You do a job that is nearly impossible and **utterly essential**.

**We are in your corner** – extending your reach, saving you time, and enhancing your understanding of each student.

**Thank you for working with us** to craft rigorous and riveting learning experiences for your classroom.

We share your goal of **inspiring all students to think deeply, creatively, and for themselves**.

Sincerely,  
Amplify



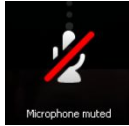
# Norms: Establishing a culture of learners



Please keep your camera on, if possible.

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

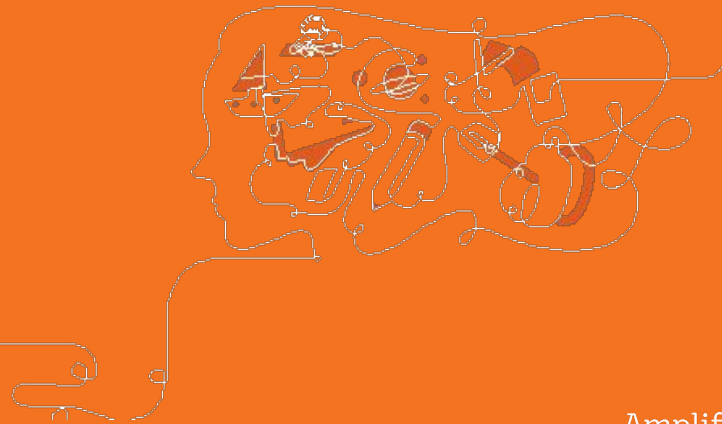


Make sure you have a note-catcher present



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

# Part 2: Guided Planning

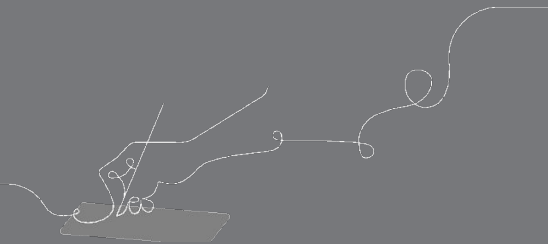


# Overarching goals

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

- ❑ Describe what teaching and learning look like in Amplify Science.
- ❑ Prepare to teach using Amplify Science resources.

e

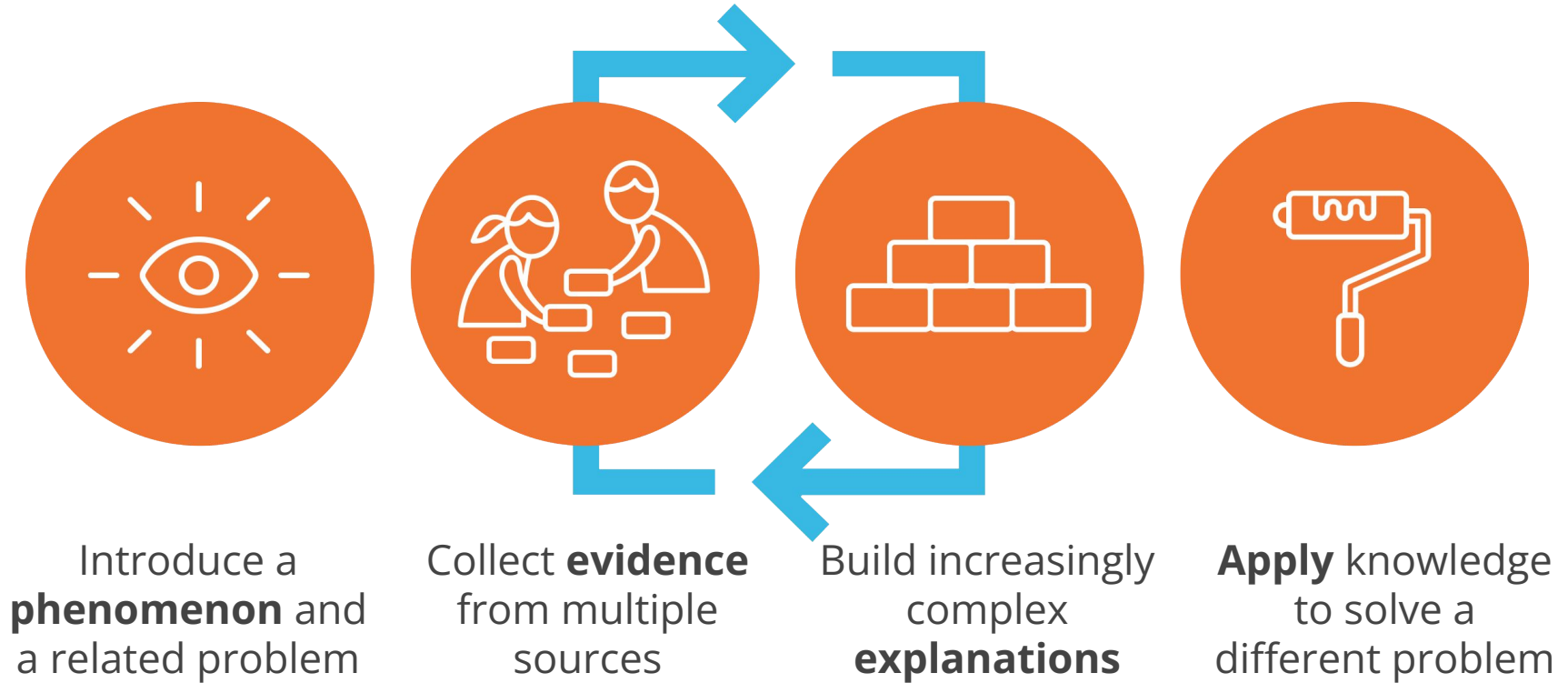




## Plan for the day: Part 2

- Teaching and Learning in an Amplify Science Lesson
- Instructional Approach Reflection
- Planning a Lesson
- Closing

# Amplify Science Approach



# Changing Landforms

The background is a stylized illustration of a coastal environment. On the right, a dark grey, craggy cliff face slopes down to a light-colored sandy beach. The beach meets a body of water on the far right. To the left of the cliff, there is a green grassy area with several dark green coniferous trees. In the lower-left corner, there are two buildings: a white house with a grey roof and a taller white building with a red roof. A brown wooden signpost with the words 'Recreation Center' stands in the grass. A blue flag on a black pole is planted in the grass near the cliff. The overall style is simple and illustrative.

**Problem:** Students help the director of the Oceanside Recreation Center determine if the center is safe after a nearby cliff collapse by investigating landforms and erosion.

**Role:** Geologist

# Changing Landforms

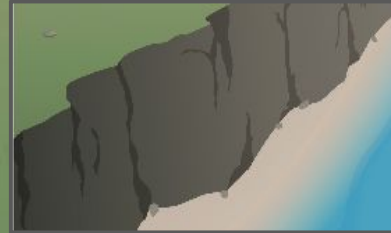
## Coherent Storylines



How did the edge of the cliff get to be so close to the flagpole?



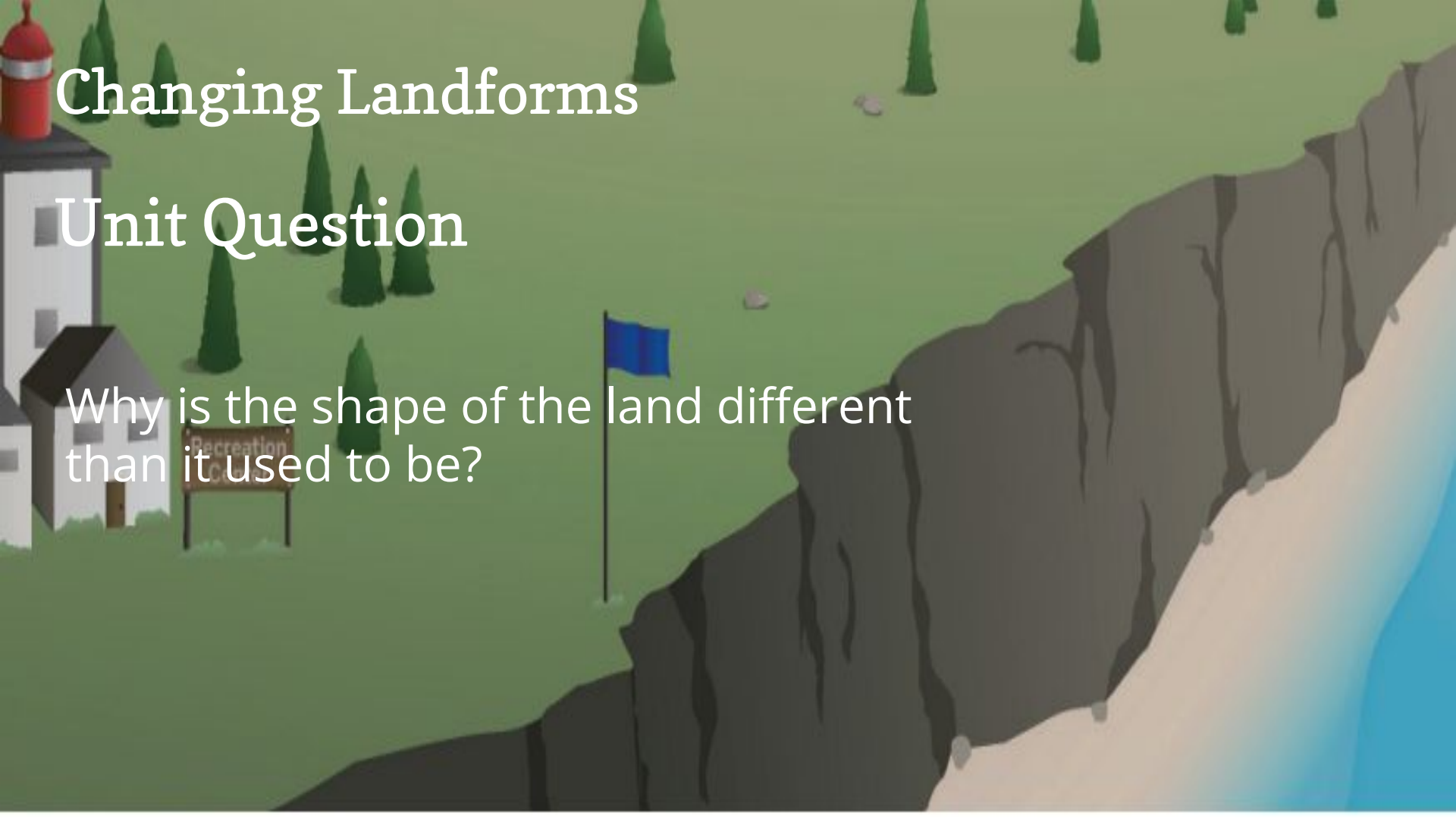
How did the recreation center's cliff change?



How did the recreation center's cliff erode without the director noticing?



Could the recreation center's cliff erode quickly?



# Changing Landforms

## Unit Question

Why is the shape of the land different than it used to be?



The background is a stylized illustration of a coastal landscape. On the left, there is a white lighthouse with a red top. Below it is a small white building with a brown roof. A brown sign with the words "Recreation Center" is visible. The middle ground features a green field with several green pine trees and a blue flag on a pole. On the right, there is a dark grey cliff face with a sandy beach at its base. The sky is a light blue gradient.

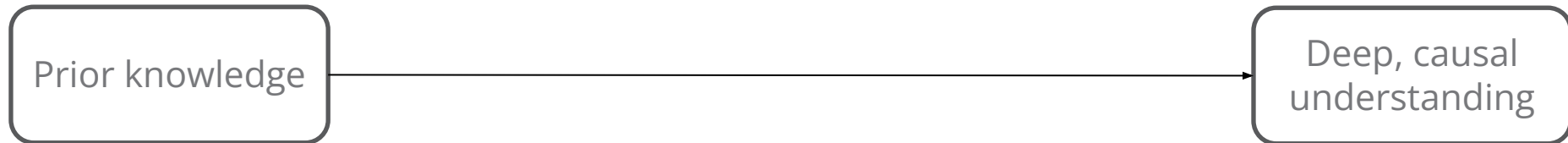
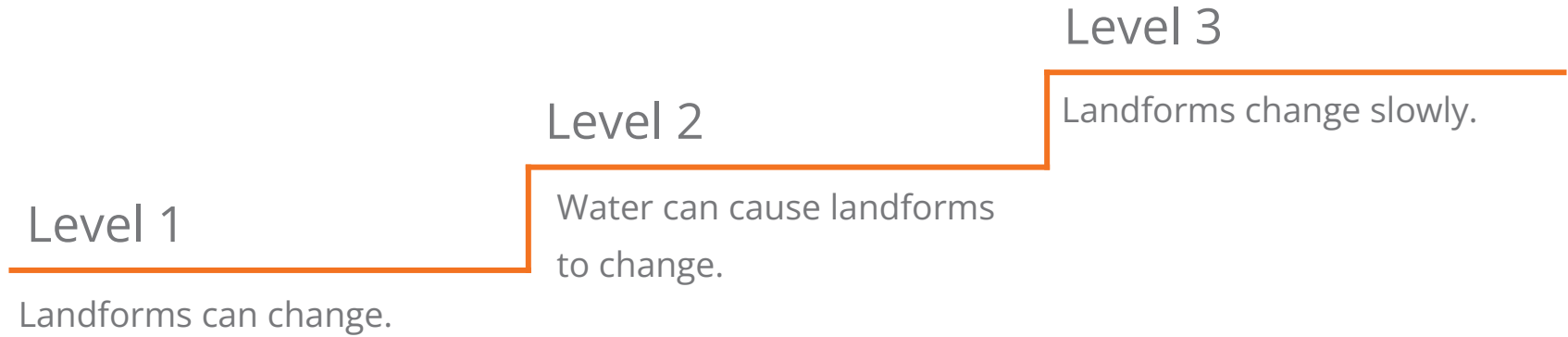
# Changing Landforms

## Explaining the phenomenon: Science Concepts

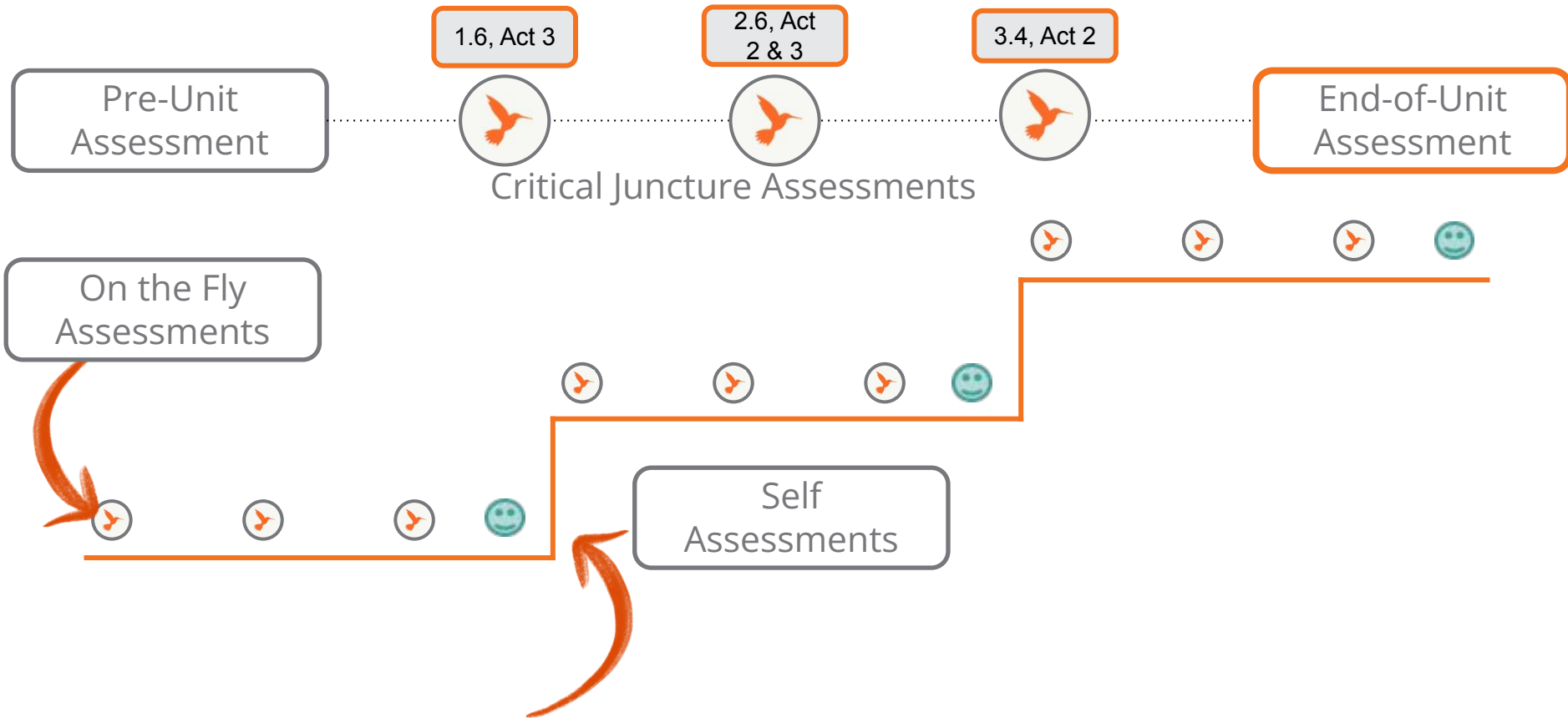
What **science concepts** do you think students need to understand in order to **explain the phenomenon**?

# Environments and Survival Progress Build

**Assumed prior knowledge (preconceptions):** Students are expected to have had some experiences with rock and understand that rock is hard and can be different sizes and shapes.



# K-5 Assessment System



# Beginning the Unit

The first lesson of every Unit is a pre-unit assessment.

22 Lessons

## Changing Landforms

Printable Teacher Guide

Unit Overview

Chapters

Printable Resources

Planning for the Unit

Teacher References

Offline Preparation

### Unit Overview

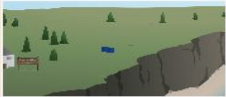
#### What's in This Unit?

In the *Changing Landforms: The Disappearing Cliff* unit, students use models to investigate how wind and water can cause changes to landforms. They learn that landforms made of solid rock undergo small-scale changes, and that over time, these changes add up to big changes. The unit begins with an introduction to changes to the cliffs by Oceanside Recreation Center, which serves as the anchor phenomenon for the unit. A nearby cliff has collapsed, and historical information shows that where the recreation center is situated appears to be receding. Students take on the role of geologists in order to help the Oceanside


[Read more >](#)

### Chapters


Chapter 1: How did the edge of the cliff get to be so close to the flagpole? ⓘ




LESSON 1.1  
Pre-Unit Assessment




LESSON 1.2  
Observations About Landforms




LESSON 1.3  
Observing Sand Samples



LESSON 1.4  
Gary's Sand Journal



LESSON 1.5  
Making Sense of Sand Samples



LESSON 1.6  
Explaining Landform Changes

# Changing Landforms Family Connections Homework

## Lesson 1.1: Pre-Unit Assessment

Printable Lesson Guide

READING  
Partner Reading

RESET LESSON

Overview  
Materials &  
Preparation  
Differentiation  
Standards  
Vocabulary  
Unplugged?

### Overview

#### Students' Initial Explanations

Students are introduced to their role as geologists and the problem they will investigate throughout the *Changing Landforms* unit: how the edge of a particular cliff got to be closer to a flagpole than it used to be. Students write initial explanations of what they think ocean waves could do to a landform over many years. Students' written explanations serve as a Pre-Unit Assessment for formative purposes, designed to reveal students' initial understanding of the unit's core content, both unit-specific science concepts and the crosscutting concept of Scale, Proportion, and Quantity, prior to instruction. As such, students' explanations offer a baseline from which to measure growth of understanding over the course of the unit. These explanations can also provide the teacher with insight into students' thinking as they begin this unit. This three-dimensional assessment will allow the teacher to draw connections to students' experiences and to watch for preconceptions that might get in the way of students' understanding. After students write their initial explanations, they read the book *Landform Postcards* to become familiar with what a landform is and to learn about different landforms. The purpose of this lesson is to introduce the unit to students to demonstrate their current understanding of how landforms change, and to provide a shared understanding of landforms.

### Digital Resources

- Classroom Slides 1.1 | PowerPoint
- Classroom Slides 1.1 | Google Slides
- All Projections
- Partner Reading Guidelines
- Pre-Unit Writing: Explaining the Arch copymaster
- Assessment Guide: Interpreting Students' Pre-Unit Explanations About the Arch
- Changing Landforms Investigation Notebook
- Questioning Strategies for Grades 2-5
- Changing Landforms Investigation Notebook, pages 3-5
- Changing Landforms Family Connections Homework
- Crosscutting Concept Tracker

Name: \_\_\_\_\_ Date: \_\_\_\_\_

### ***Changing Landforms Family Connections Homework***

1. Choose a member of your household and tell them about what we are investigating in science class.
2. Ask them about their experiences, ideas, and questions related to our investigations.
3. Write notes about what you learn.

#### **Summary of our investigation you can share:**

In science class, we are working as geologists to figure out how the edge of an ocean cliff got closer to a coastal recreation center than it used to be. We will be answering the question, *Why is the shape of the land different than it used to be?*

#### **Ask questions such as:**

- What does our investigation make you think of?
- Do you have any memories, stories, expertise, or experiences about something like what we're investigating?
- What have you heard or learned about these topics?
- What do you wonder about what we are investigating?

Write notes here about what you learn:

---

---

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---

---

# Beginning the Unit

We will be looking at Chapter 1, Lesson 2 for our model lesson.

22 Lessons

Changing Landforms

Printable Teacher Guide

Unit Overview

Chapters

Printable Resources

Planning for the Unit

Teacher References

Offline Preparation

Unit Overview

What's in This Unit?

In the *Changing Landforms: The Disappearing Cliff* unit, students use models to investigate how wind and water can cause changes to landforms. They learn that landforms made of solid rock undergo small-scale changes, and that over time, these changes add up to big changes. The unit begins with an introduction to changes to the cliffs by Oceanside Recreation Center, which serves as the anchor phenomenon for the unit. A nearby cliff has collapsed, and historical information shows that where the recreation center is situated appears to be receding. Students take on the role of geologists in order to help the Oceanside

Read more >

Chapters

Chapter 1: How did the edge of the cliff get to be so close to the flagpole? ⓘ

LESSON 1.1  
Pre-Unit Assessment

LESSON 1.2  
Observations About Landforms

LESSON 1.3  
Observing Sand Samples

LESSON 1.4  
Gary's Sand Journal

LESSON 1.5  
Making Sense of Sand Samples

LESSON 1.6  
Explaining Landform Changes



Grade 2 | Changing Landforms

# Lesson 1.2: Observations About Landforms

## Activity 1

# Activating Prior Knowledge About Landforms







What are some ideas about **landforms** you have from the last lesson?

One idea I have about landforms is \_\_\_\_\_.

What are landforms made of?


What we know	Questions we have

Thinking about ideas and questions you have **before** you start investigating can help make it easier to learn new ideas.

As geologists, we will start by investigating this question:

What are landforms made of?

What are landforms made of?


What we know	Questions we have
	



What **ideas** do you have about what landforms are made of?

I think landforms are made of \_\_\_\_\_.

What are landforms made of?

What we know	Questions we have
	



What **questions** do you have about what landforms are made of?

A question I have about what landforms are made of is \_\_\_\_\_.

What do you **wonder** about landforms?

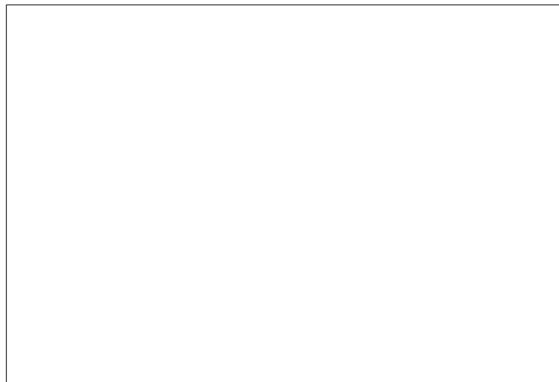
I wonder \_\_\_\_\_.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

### What Landforms Are Made Of

Directions:

1. Choose a landform to draw.
2. In the box below, draw the landform and label it.
3. Below your diagram, explain what you think the landform is made of.



This landform is made of \_\_\_\_\_

\_\_\_\_\_

Turn to page 6 in your notebooks.

We will create scientific drawings called **diagrams**.

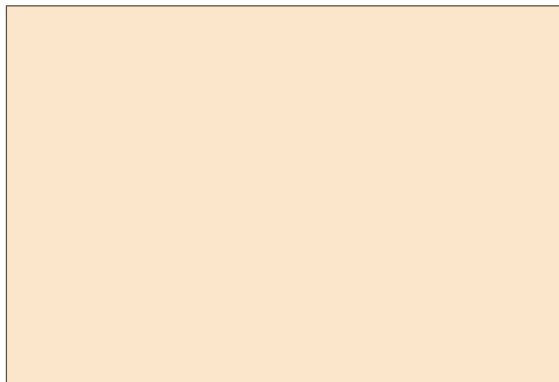
It's important to label diagrams.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**What Landforms Are Made Of**

Directions:

1. Choose a landform to draw.
2. In the box below, draw the landform and label it.
3. Below your diagram, explain what you think the landform is made of.



This landform is made of \_\_\_\_\_

\_\_\_\_\_



# Complete the diagram and the sentence.

## Activity 2

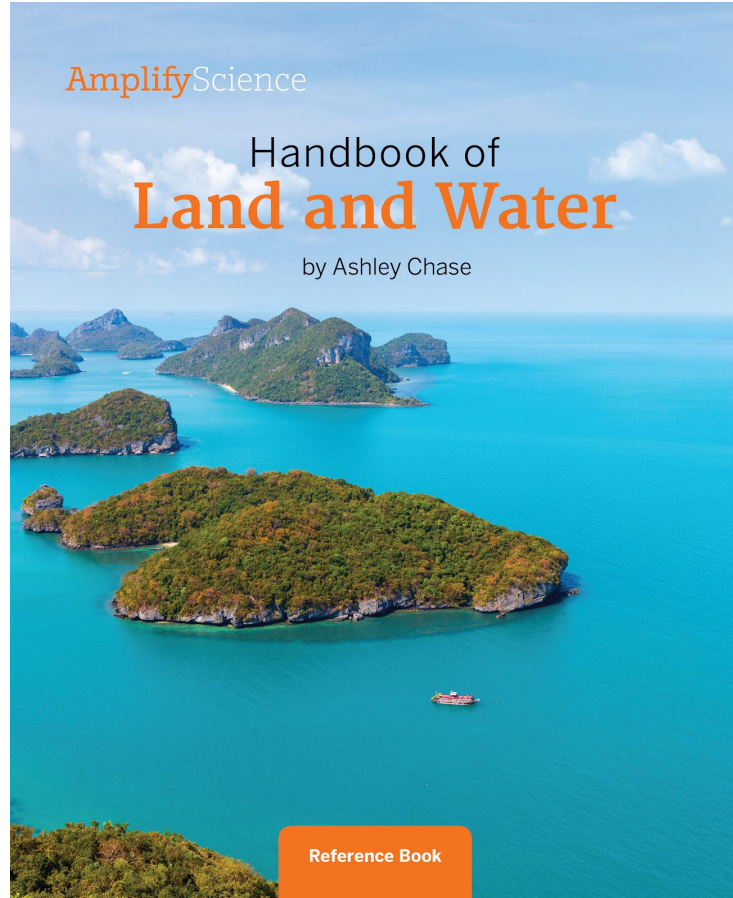
# Previewing Handbook of Land and Water





We just shared ideas about what we think **landforms** are made of.

I remember in *Landform Postcards* Annie's grandpa said that landforms are made of **rock**. Let's **investigate** this idea using something called a **reference book**.



**Reference books** are useful places to find information.

This reference book will help us investigate whether **landforms** are made of **rock**.

**Contents**

Earth’s Surface ..... 4

What Does It Look Like on a Map? ..... 5

Landforms and Bodies of Water ..... 10

Beaches ..... 11

Caves ..... 15

Islands ..... 19

Lakes and Ponds ..... 23

Mountains ..... 27

Ocean ..... 31

Rivers and Streams ..... 35

Valleys and Canyons ..... 39

Waterfalls ..... 43

Glossary ..... 47

Index ..... 48

Turn to page 3.

The **table of contents** lists landforms and bodies of water.

## Landforms and Bodies of Water

Scientists who study Earth's **surface** are called **geologists**. Earth's surface may seem **stable**, but it is actually changing all the time. The **landforms** and bodies of water on Earth's surface are always changing. Mostly these changes happen slowly, but sometimes they happen fast. The rest of this book shows examples of landforms and bodies of water.

### Landforms



page 11



page 15



page 19



page 27



page 39

### Bodies of Water



page 23



page 31



page 35



page 43

Turn to page 10. Let's read the text together.



What **bodies of water** can we read about?

We can read about \_\_\_\_\_.

Do you recognize any of these **landforms**?

### Activity 3

# Gathering Evidence from the Book



We'll use the images in *Handbook of Land and Water* to make **observations** about whether **landforms** are made of **rock**.

When scientists make observations, they use any of their five **senses** to gather information. We will use our sense of **sight** to make observations of the images in the book.

## Vocabulary



**observation**

something you notice using any of the five senses

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Observations of Landforms**

Directions:

- 1. Choose at least two landforms to read about in *Handbook of Land and Water*.
- 2. In the “Landform” column of the table below, record the names of the landforms.
- 3. In the “Observations” column, record observations that help you figure out whether landforms are made of rock.

**Idea: Landforms are made of rock.**

Landform	Observations

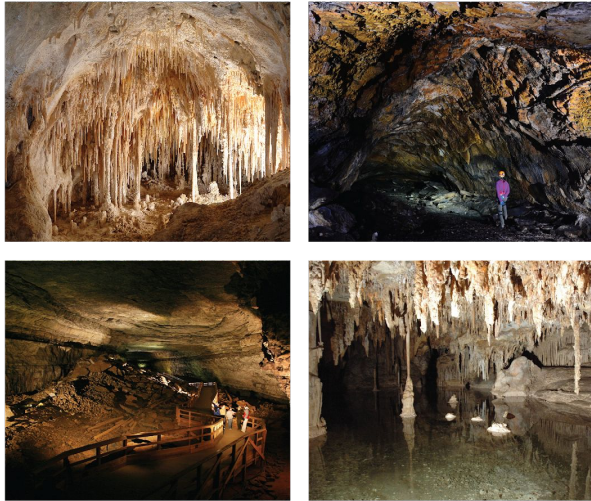
Turn to page 7 in your notebooks.

We’ll make **observations** of the images in the book that can be used as **evidence** to support the idea that landforms are made of rock.



## Caves

Caves are **landforms**, but they are not on Earth's **surface**. Caves are found underground! Caves are underground openings with walls of rock. Some caves have big spaces. Others are just narrow tunnels. Rocks in caves often have surprising shapes.



Let's look at pages 15–18 in *Handbook of Land and Water*.

When I look at the cave images, I observe rock walls, rock on the bottom of caves, and fallen rocks.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Observations of Landforms

- Directions:
- 1. Choose at least two landforms to read about in *Handbook of Land and Water*.
  - 2. In the “Landform” column of the table below, record the names of the landforms.
  - 3. In the “Observations” column, record observations that help you figure out whether landforms are made of rock.

Idea: Landforms are made of rock.

Landform	Observations
cave	rock walls, rock on bottom of the cave, fallen rock

Turn back to page 7 in your notebooks.

Let’s **record** our cave observations.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Observations of Landforms

- Directions:
- 1. Choose at least two landforms to read about in *Handbook of Land and Water*.
  - 2. In the “Landform” column of the table below, record the names of the landforms.
  - 3. In the “Observations” column, record observations that help you figure out whether landforms are made of rock.

Idea: Landforms are made of rock.

Landform	Observations



Choose at least two other landforms and then read and record observations about them.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Observations of Landforms**

Directions:

- 1. Choose at least two landforms to read about in *Handbook of Land and Water*.
- 2. In the “Landform” column of the table below, record the names of the landforms.
- 3. In the “Observations” column, record observations that help you figure out whether landforms are made of rock.

**Idea: Landforms are made of rock.**

Landform	Observations



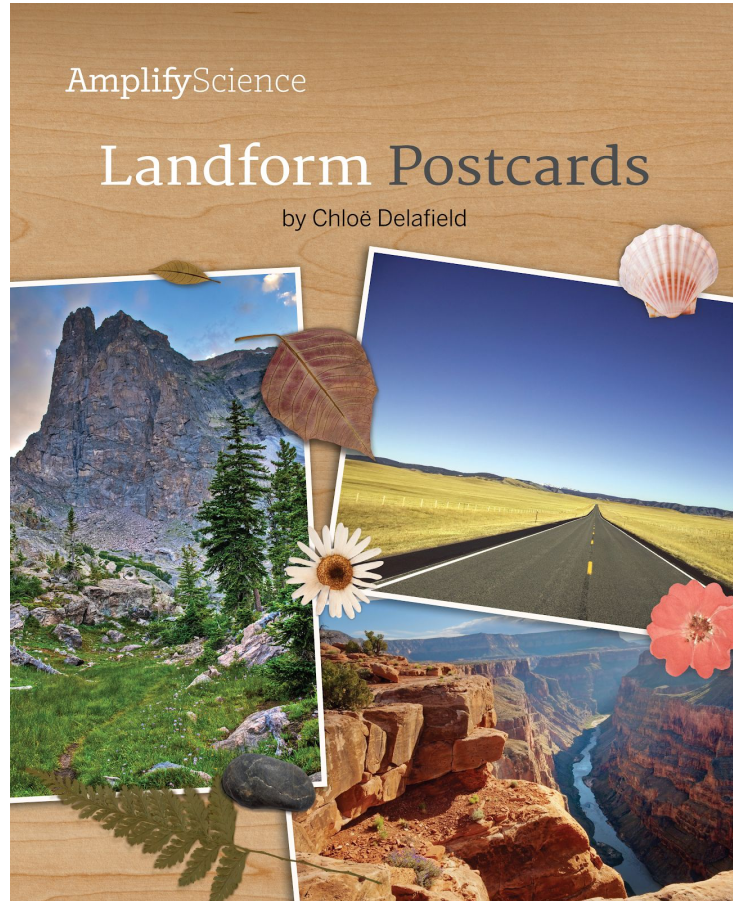
What were some of your  
observations of  
landforms from the  
images in the book?

One observation of landforms from the book I have  
is \_\_\_\_\_.



Based on our **observations** of landforms in *Handbook of Land and Water*, do we have **evidence** that supports the idea that **landforms** are made of **rock**?

One evidence we have is \_\_\_\_\_.



In *Landform Postcards*, Annie's grandpa said that **landforms** are made of **rock**. Let's see if this book gives more information about what landforms are made of.

## Plains

Dear Grandpa,

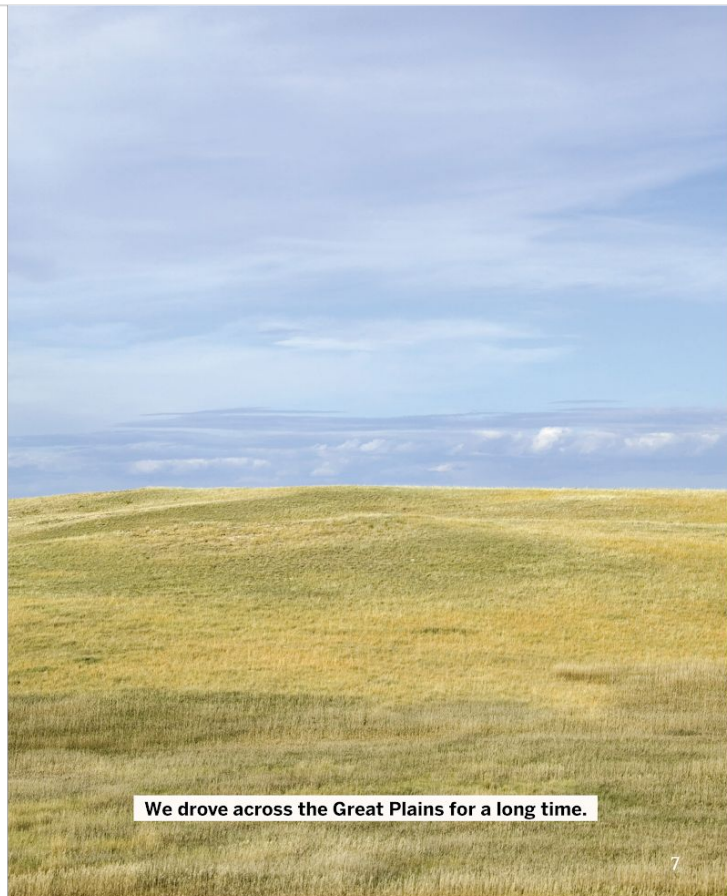
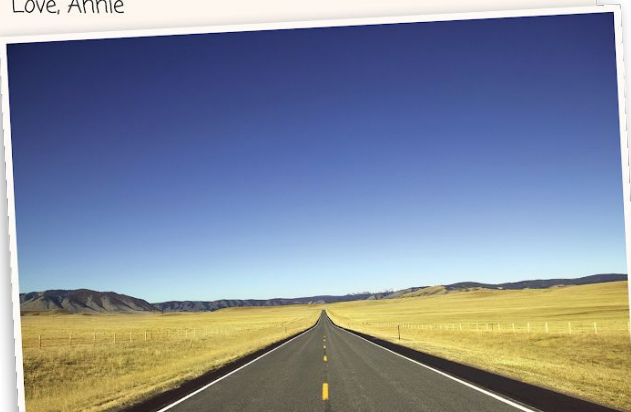
Pretty soon after we left the city, everything looked different. The land was flat all around us for miles. Some people might think it was boring, but not me! I knew that even the flat plain is a landform. I remembered that landforms are made of rock. I pictured rock under the grass. That was neat to think about.

Love, Annie



Grandpa  
1745 Hillvale St.  
Madison, WI  
53705

6



We drove across the Great Plains for a long time.

7



## Plains

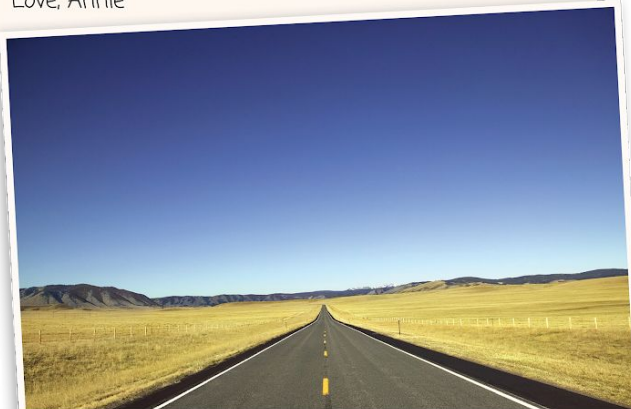
Dear Grandpa,

Pretty soon after we left the city, everything looked different. The land was flat all around us for miles. Some people might think it was boring, but not me! I knew that even the flat plain is a landform. I remembered that landforms are made of rock. I pictured rock under the grass. That was neat to think about.

Love, Annie



Grandpa  
1745 Hillvale St.  
Madison, WI  
53705



Based on what we just read, what are **plains** made of?

Based on what we read, plains are made of \_\_\_\_\_.

What **information** in the text supports your ideas?

The information that supports my idea is \_\_\_\_\_.



## Mesas

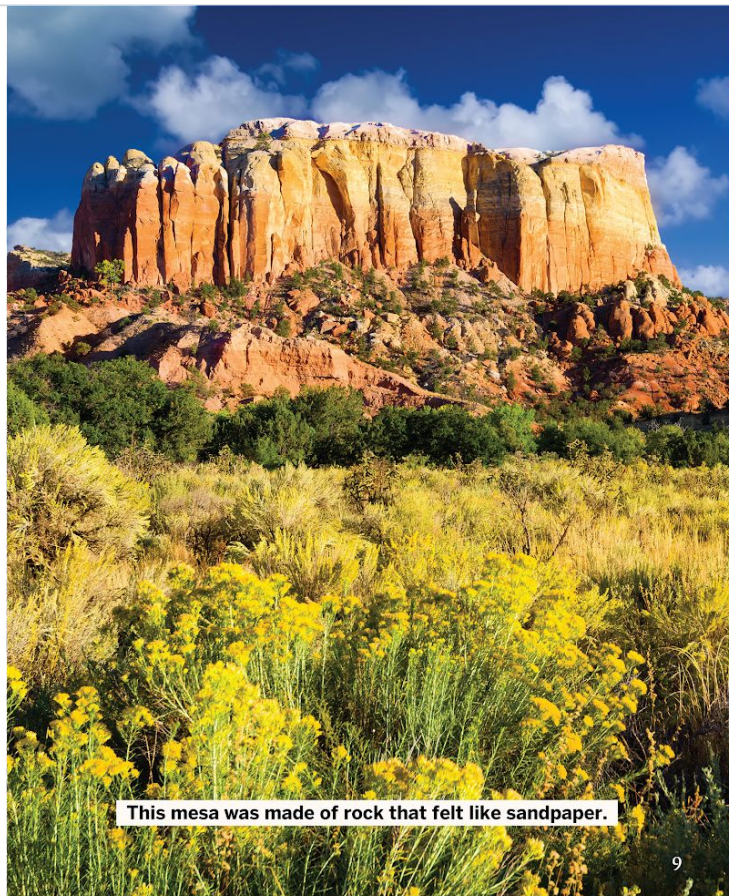
Dear Grandpa,

I learned that "mesa" means "table" in Spanish. That makes sense. A mesa is a landform that is flat on top like a table. Here in the Southwest the mesas are made out of red, orange, and yellow rock. This is what I picture Mars looks like!

Love, Annie



Grandpa  
1745 Hillvale St.  
Madison, WI  
53705



This mesa was made of rock that felt like sandpaper.

## Mesas

Dear Grandpa,

I learned that "mesa" means "table" in Spanish. That makes sense. A mesa is a landform that is flat on top like a table. Here in the Southwest the mesas are made out of red, orange, and yellow rock. This is what I picture Mars looks like!

Love, Annie



Grandpa  
1745 Hillvale St.  
Madison, WI  
53705



Based on what we just read, what are **mesas** made of?

Based on what we read, mesas are made of \_\_\_\_\_.

What **information** in the text supports your ideas?


The information that supports my idea is \_\_\_\_\_.

## Activity 4

# Reflecting on Landforms



What are landforms made of?

What we know	Questions we have
	



Would anyone like to **revise** their ideas or **add** new ideas to answer the question: **What are landforms made of?**

I would like to revise my ideas. Landforms are made of \_\_\_\_\_.

I would like to add that landforms are made of \_\_\_\_\_.

Our new ideas about what landforms are made of are **evidence**. Evidence is information that supports an answer to a question. The question we are investigating is: **What are landforms made of?**

Based on our evidence, we can conclude that **landforms** are made of **rock**.

# Vocabulary



**evidence**

information that supports an answer to a question

## Key Concept

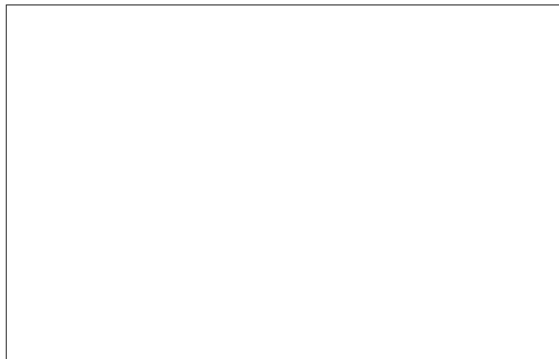
**Landforms are made of rock.**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Revising What Landforms Are Made Of**

Directions:

1. In the box below, draw the same landform that you drew on page 6.
2. Label the landform.
3. Below your diagram, explain what you think the landform is made of, based on the evidence you gathered from *Handbook of Land and Water*.



This landform is made of \_\_\_\_\_

\_\_\_\_\_

Turn to page 8 in your notebooks.

If scientists gather new **evidence** that makes them change their ideas, they **revise** their **diagrams** to show their new ideas.

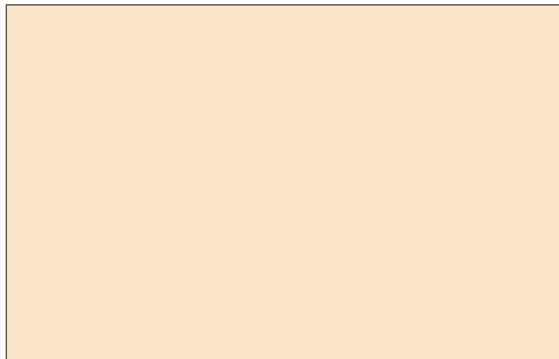


Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Revising What Landforms Are Made Of**

Directions:

1. In the box below, draw the same landform that you drew on page 6.
2. Label the landform.
3. Below your diagram, explain what you think the landform is made of, based on the evidence you gathered from *Handbook of Land and Water*.



This landform is made of \_\_\_\_\_

\_\_\_\_\_



**Create** a new diagram  
using evidence from  
the books.

# End of Lesson



THE LAWRENCE  
HALL OF SCIENCE  
UNIVERSITY OF CALIFORNIA, BERKELEY

Amplify.

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# Gathering evidence

## Changing Landforms, 1.2

Why is the shape of the land different than it used to be?

What are landforms made of?

What are landforms made of?

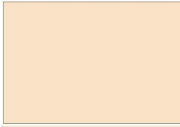
What we know	Questions we have

Name: \_\_\_\_\_ Date: \_\_\_\_\_

**What Landforms Are Made Of**

Directions:

1. Choose a landform to draw.
2. In the box below, draw the landform and label it.
3. Below your drawing, explain what you think the landform is made of.



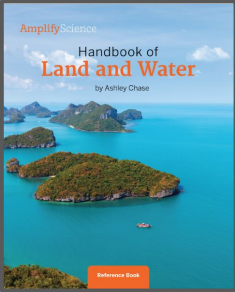
This landform is made of \_\_\_\_\_

6 Changing Landforms - Lesson 1.2


AmplifyScience

Handbook of  
**Land and Water**

by Ashley Chase



Reference Book



Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Observations of Landforms**

Directions:

1. Choose at least two landforms to read about in Handbook of Land and Water.
2. In the "Landform" column of the table below, record the names of the landforms.
3. In the "Observations" column, record observations that help you figure out what the landforms are made of.

Most Landforms are made of rock.

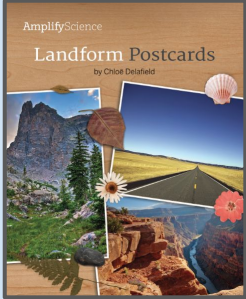
Landform	Observations

7 Changing Landforms - Lesson 1.2

AmplifyScience

**Landform Postcards**

by Choiel Delafield




Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Reviewing What Landforms Are Made Of**

Directions:

1. In the box below, draw the same landform that you drew on page 6.
2. Label the landform.
3. Below your drawing, explain what you think the landform is made of.

Based on the evidence you gathered from Handbook of Land and Water



This landform is made of \_\_\_\_\_

8 Changing Landforms - Lesson 1.2

What have students figured out so far?

# Evidence sources work together

## Investigating and discussing observations

How do these activities  
**work together** to  
support understanding of  
what we can see in the  
sky at different times?

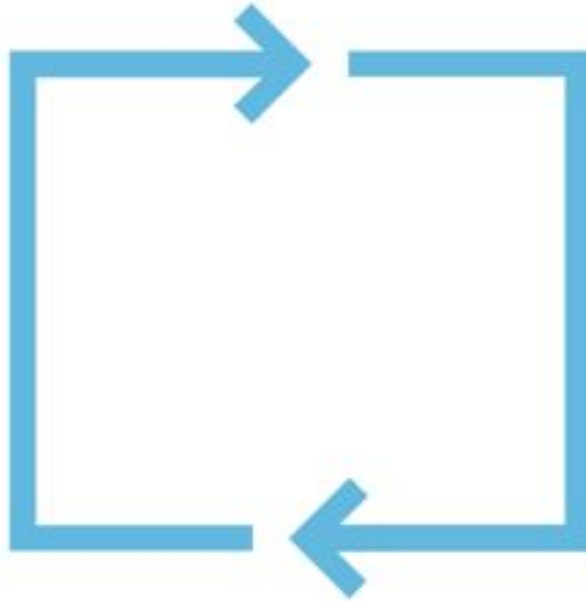
Investigation Question: What are landforms made of?

The image displays a collection of educational materials related to landforms, arranged in a collage. The materials include:

- What are landforms made of?**: A worksheet with a table for recording observations and a section for drawing and labeling landforms.
- What Landforms Are Made Of**: A worksheet with a large orange box for drawing and a section for labeling landforms.
- Handbook of Land and Water**: A colorful book cover featuring a tropical island scene.
- Observations of Landforms**: A worksheet with a table for recording observations and a section for drawing and labeling landforms.
- Referring What Landforms Are Made Of**: A worksheet with a large orange box for drawing and a section for labeling landforms.
- Landform Postcard**: A poster featuring a landscape with mountains, a river, and a flower.

# Multimodal learning

Gathering evidence over multiple lessons



**Do,  
Talk,  
Read,  
Write,  
Visualize**

# Evidence sources work together

**Teacher tip:** Every evidence source plays an important role in student learning. Be sure to teach every activity in order!

**What are landforms made of?**

What we know	Questions we have

Name: \_\_\_\_\_ Date: \_\_\_\_\_

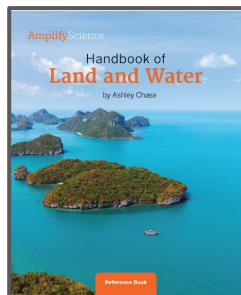
**What Landforms Are Made Of**

Directions:

1. Choose a landform to draw.
2. In the box below, draw the landform and label it.
3. Below your diagram, explain what you think the landform is made of.

This landform is made of \_\_\_\_\_

6 Orange, uniform Lesson 1.2



Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Observations of Landform**

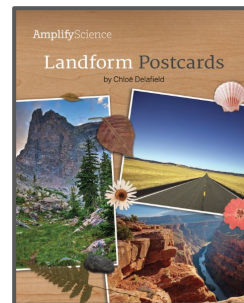
Directions:

1. Choose at least two landforms to read about in Handbook of Land and Water.
2. In the "Landform" column of the table below, record the names of the landforms.
3. In the "Observations" column, record observations that help you figure out whether landforms are made of rock.

**What Landforms are made of rock.**

Landform	Observations

Orange, uniform Lesson 1.2



Name: \_\_\_\_\_ Date: \_\_\_\_\_

**Review What Landforms Are Made Of**

Directions:

1. In the box below, draw the same landform that you drew on page 6.
2. Label the landform.
3. Below your diagram, explain what you think the landform is made of.

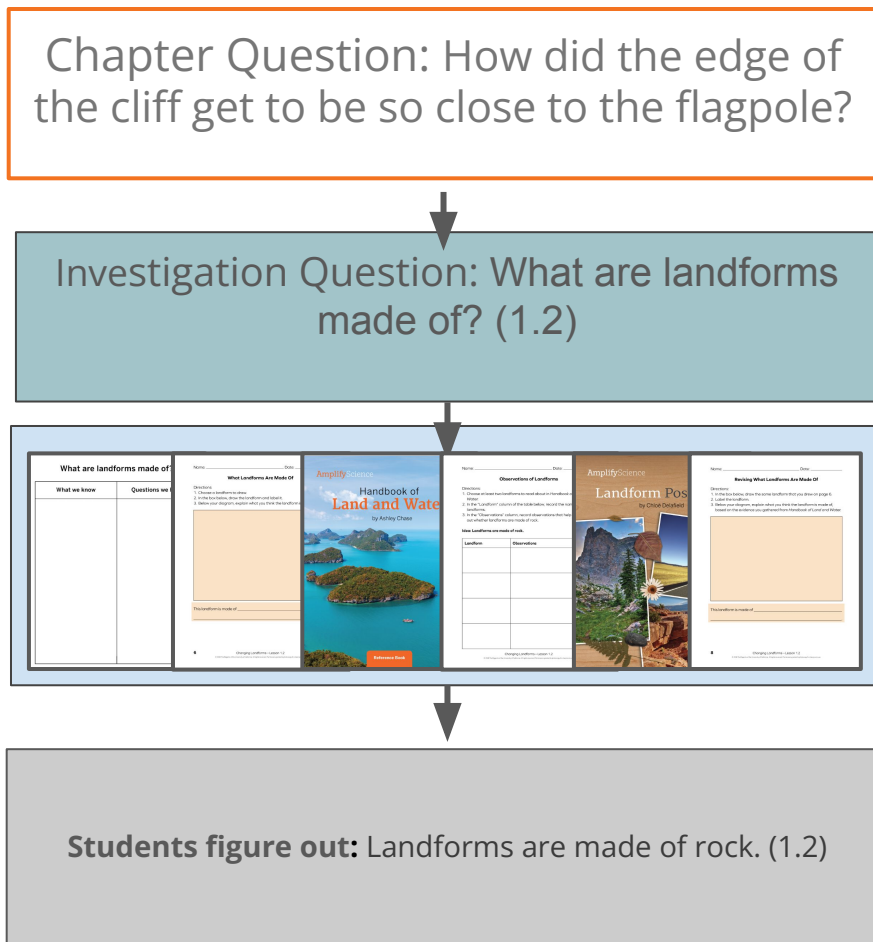
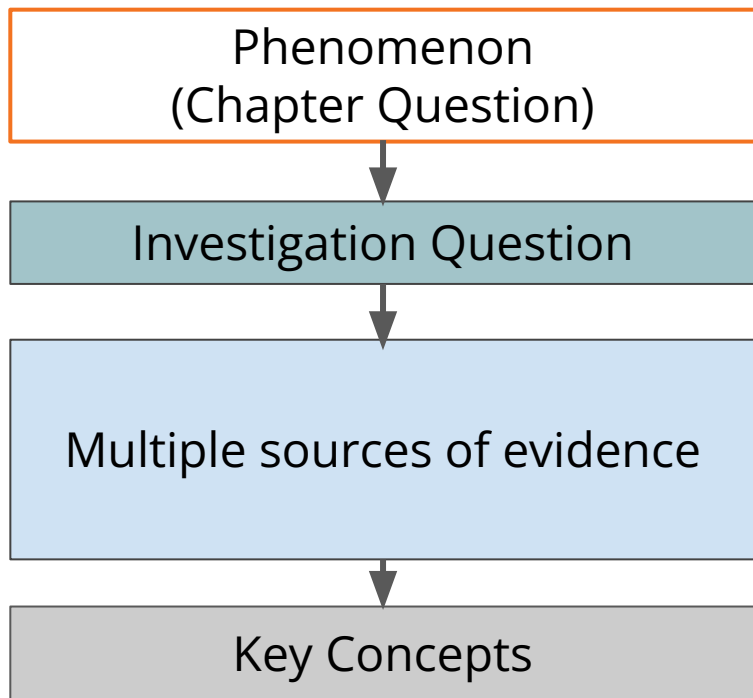
Based on the evidence you gathered from Handbook of Land and Water

This landform is made of \_\_\_\_\_

Orange, uniform Lesson 1.2

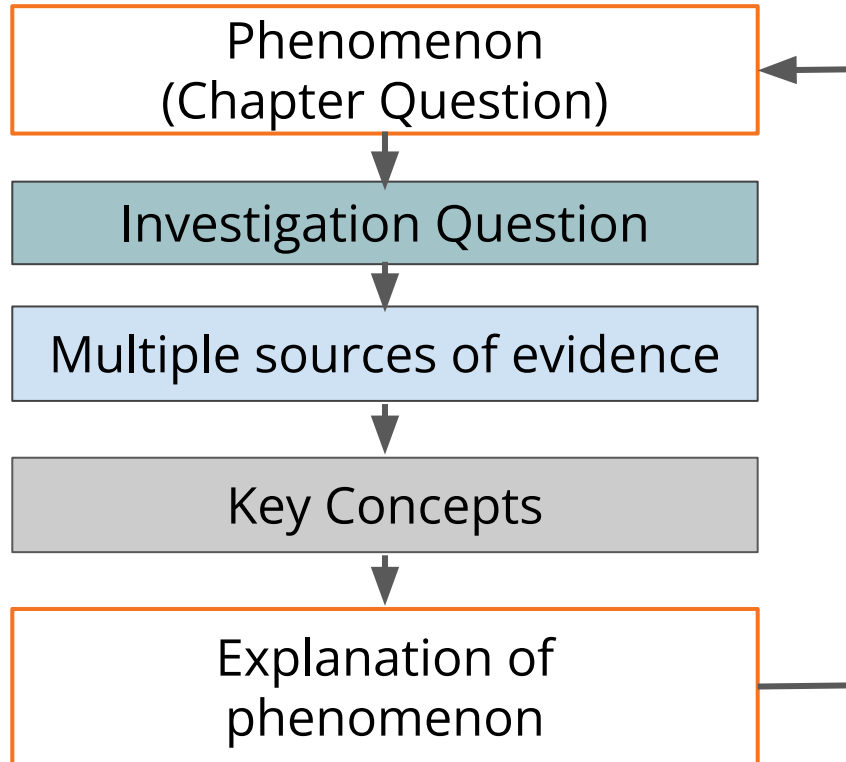
# Coherence Flowchart

## A diagram of student learning



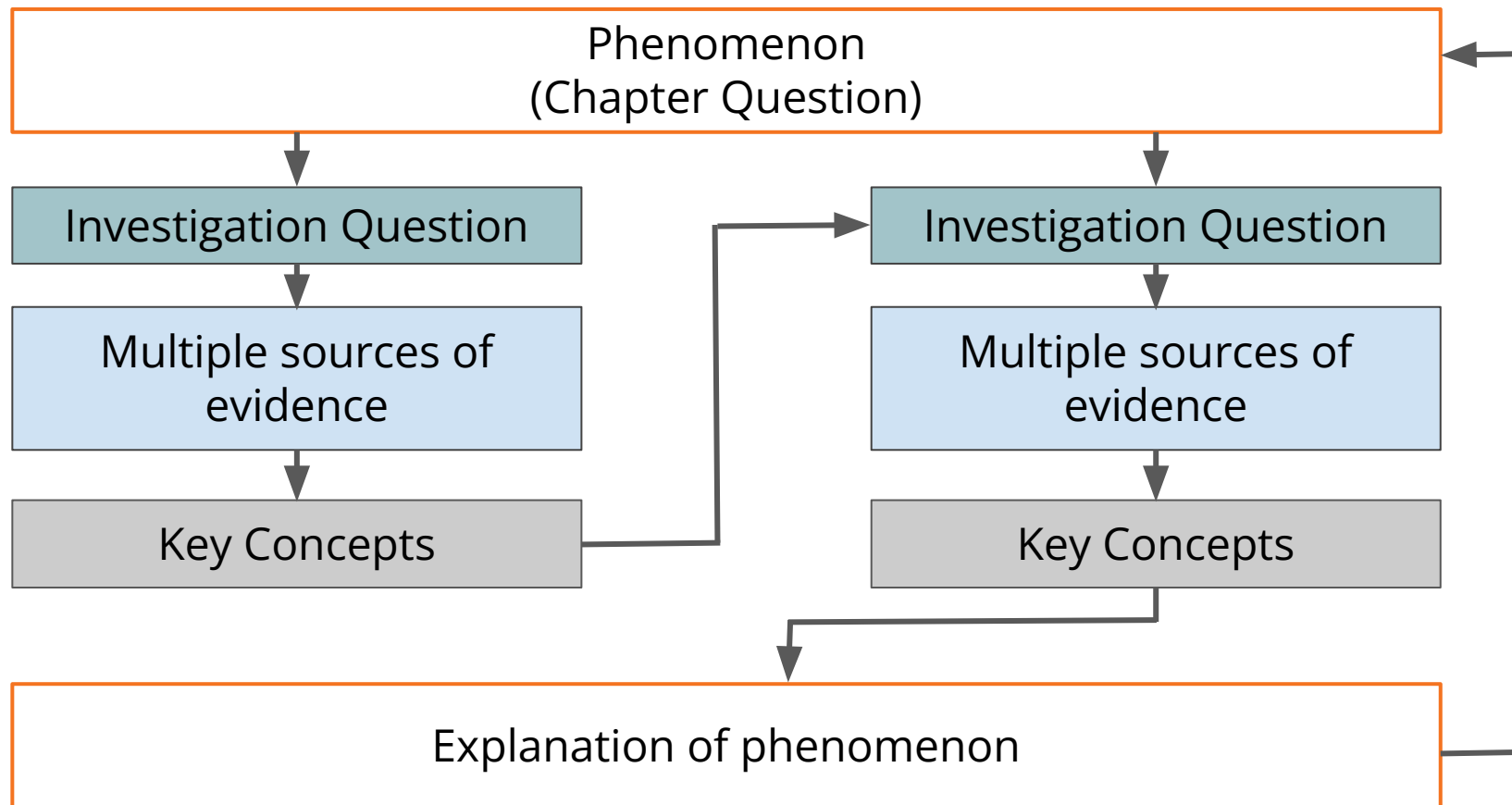
# Coherence Flowchart

A diagram of student learning





# Coherence Flowchart



**Unit Anchor  
Phenomenon***Problem students  
work to solve***Chapter-level Anchor  
Phenomenon  
Chapter 1 Question****Investigation  
Questions****Evidence  
sources and  
reflection  
opportunities****Key concepts****Application of key  
concepts to problem****Explanation that  
students can make  
to answer the  
Chapter 1 Question**

## Changing Landforms: The Disappearing Cliff

The cliff where Oceanside Recreation Center is situated appears to be receding.  
*Why is the edge of the ocean cliff closer to the flagpole than it used to be?*

The flagpole is closer to the edge of the ocean cliff than it used to be.  
*How did the edge of the cliff get to be so close to the flagpole?*

*What are landforms made of? (1.2)*  
(Note: See Lesson Overviews for lesson-level Investigative Phenomena)

- Read *Landform Postcards* (1.1)
- Discuss and record ideas about landforms on Anticipatory Chart (1.2)
- Observe landforms in *Handbook of Land and Water* (1.2)
- Return to Anticipatory Chart and revise ideas (1.2)

- Landforms are made of rock. (1.2)

*How do geologists figure out how something changed when they can't observe it changing? (1.3-1.6)*  
(Note: See Lesson Overviews for lesson-level Investigative Phenomena)

- Observe sand samples and generate questions about sand (1.3)
- Compare sand samples (1.3)
- Read *Gary's Sand Journal* (1.4)
- Observe a mystery sand (1.4)
- Use evidence from observations of sand samples as evidence for how the sand got to be the way it is (1.5)
- Write and share explanations about sand samples (1.5)
- Use Hard Candy Model to gather evidence that sand and rock can change shape (1.6)

- Even if geologists can't see a change happening, they can use models to visualize how it may have happened. (1.6)
- Even though rock is hard, it can change shape. (1.6)

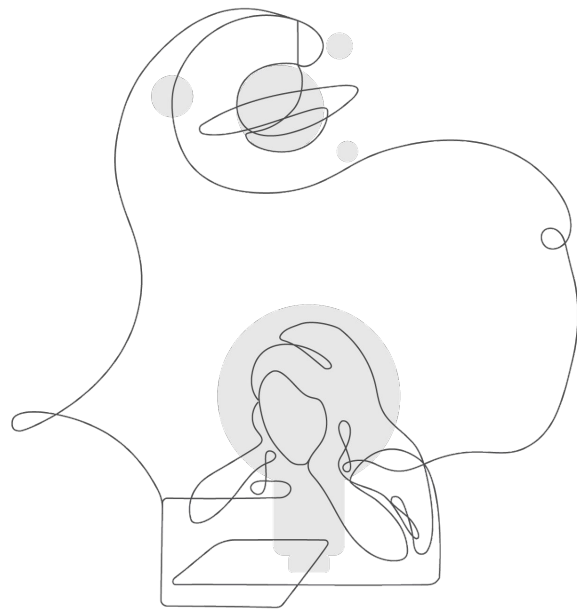
- Write an explanation as a class to answer the Chapter 1 Question (1.6)

The shape of the cliff changed when the rock it is made of changed.

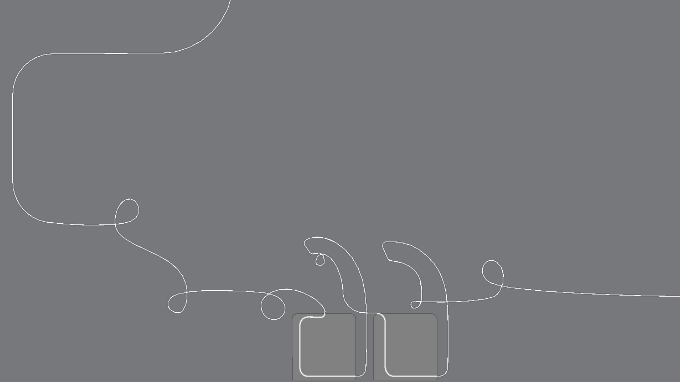
# Explore the Coherence Flowchart

Skim the Chapter 1 Coherence Flowchart of your first unit.

How can the Coherence Flowchart serve you as a planning tool as you begin teaching Amplify Science?



# Questions?






## Plan for the day: Part 2

- Teaching and Learning in an Amplify Science Lesson
- Instructional Approach Reflection
- **Planning a Lesson**
- Closing

# Navigate to the Lesson Brief

## Lesson 1.2: Observations About Landforms

 Printable Lesson Guide


book of

3

READING  
Gathering Evidence from  
the Book

4

TEACHER-LED DISCUSSION  
Reflecting on Landforms

 RESET LESSON

Overview

Materials & Preparation

Differentiation

Standards







Vocabulary

Unplugged?

### Overview

In order to understand how it's possible for a landform such as the cliff to change, students must first gain a solid understanding of what landforms are and what they are made of. Students begin the lesson using an Anticipatory Chart to explore ideas and questions they have about what landforms are made of. Students use their initial ideas to create a diagram of a landform. They are then introduced to the unit's reference book, *Handbook of Land and Water*, and preview the landforms and bodies of water included in the book. Students also use the reference book to gather evidence to support the idea that landforms are made of rock. At the end of the lesson, students return to the Anticipatory Chart and their diagrams to discuss how their ideas about landforms have changed based on evidence. The purpose of this lesson is for students to learn that landforms are made of

### Digital Resources

-  Classroom Slides 1.2 | PowerPoint
-  Classroom Slides 1.2 | Google Slides
-  All Projections
-  Landform Anticipatory Chart
-  Landform Postcards
-  Changing Landforms Investigation Notebook, pages 6–8

# 4 Steps for Planning Your Lesson

1. Download **Classroom Slides** and review them.
2. Read the **Overview**.
3. Review the **Materials & Preparation** document.
4. Read the **Differentiation** document.

Lesson 1.2:  
Observations About  
Landforms

Printable Lesson Guide

book of 3 READING Gathering Evidence from the Book 4 TEACHER-LED DISCUSSION Reflecting on Landforms

RESET LESSON

Overview

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Digital Resources

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- Classroom Slides 1.2 | Google Slides
- All Projections
- Landform Anticipatory Chart
- Landform Postcards
- Changing Landforms Investigation Notebook, pages 6–8

# Preparing to teach

## Classroom Slides

1. Open the **Classroom Slides** under the **Digital Resources**.
2. Read through the Classroom Slides including the **presenter notes** to gain a better understanding of the lesson.
3. **Consider:**
  - What features of the Classroom Slides will support you in teaching this lesson?

Lesson 1.2:  
Observations About  
Landforms

Printable Lesson Guide

book of 3 READING: Gathering Evidence from the Book 4 TEACHER-LED DISCUSSION: Reflecting on Landforms

RESET LESSON

Overview  
Materials & Preparation  
Differentiation  
Standards  
Vocabulary  
Unplugged?

Overview

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Digital Resources

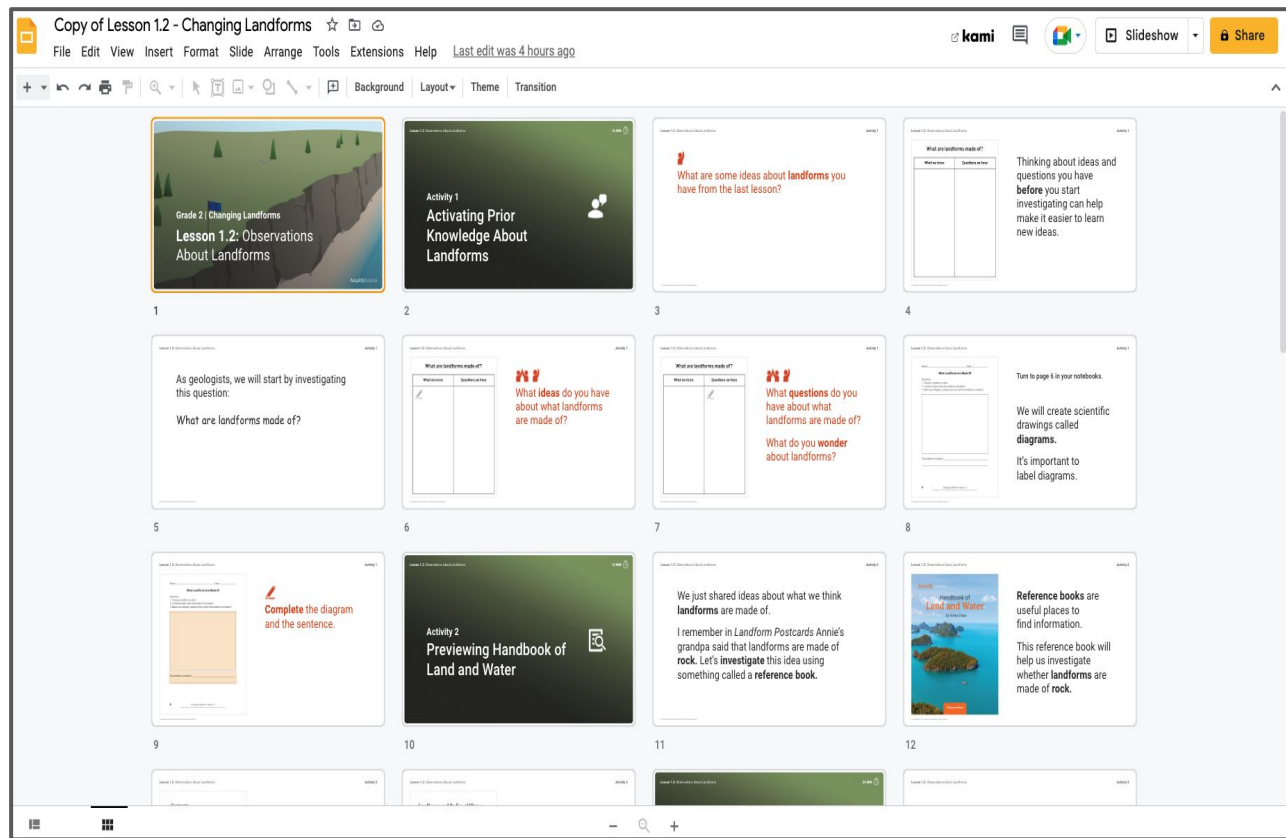
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- Classroom Slides 1.2 | Google Slides
- All Projections
- Landform Anticipatory Chart
- Landform Postcards
- Changing Landforms Investigation Notebook, pages 6-8



# Using Classroom Slides as a planning tool

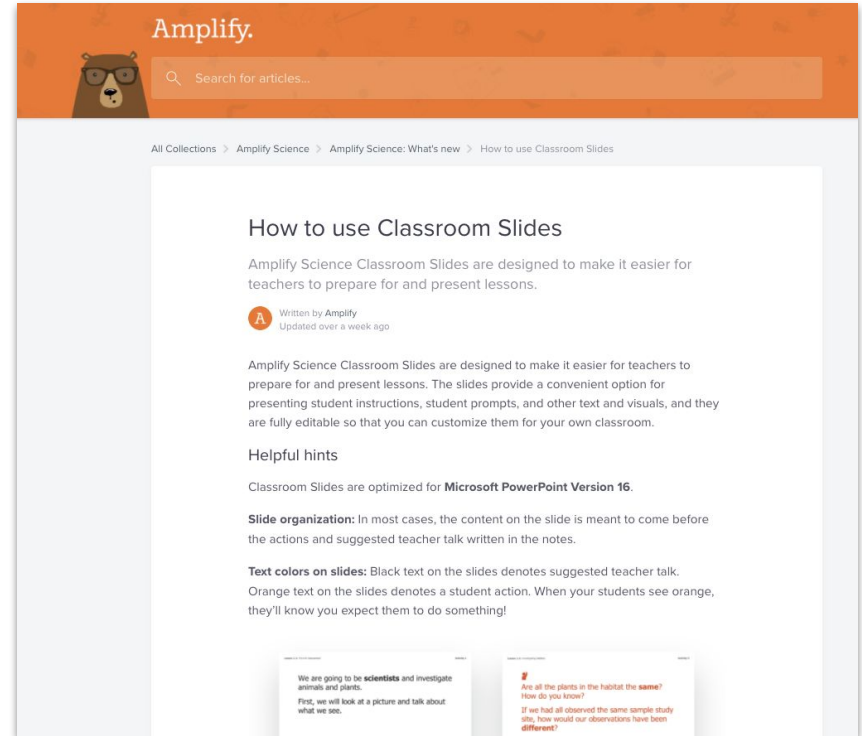
**Teacher tip:** Classroom Slides are a great visual summary of a lesson. Many teachers download and flip through a lesson's Classroom Slides deck to preview what happens in the lesson.

This is a useful first step for preparing to teach the lesson.



# Teaching with Classroom Slides

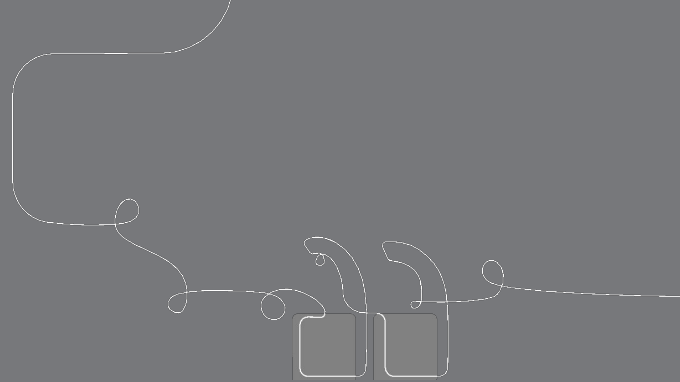
This detailed guide on the Amplify Science Help Site includes tips for teaching with Classroom Slides and information about the different symbols and activity types you'll find in the slide deck.



Lesson ____		Activity Overview		From the Lesson at a glance in the overview
What is the purpose of this lesson?		Activity 1 (##min)		
	From the lesson overview			
What will students learn?		Activity 2 (##min)		
3-D Statement (identify SEP, CCC, and DCI):	From the lesson standards	Activity 3 (##min)		
Student Resources:	From the lesson materials and preparation	Activity 4 (##min)		
Assessment Opportunities:	From the lesson at a glance in the overview or classroom slides	Activity 5 (##min)		

Lesson 1.2	Activity Overview	
<b>What is the purpose of this lesson?</b> For students to learn that landforms are made of rock.	<b>Activity 1</b> <b>(15 min)</b>	Activating Prior Knowledge About Landforms
<b>What will students learn?</b> Landforms are made of rock. Water can be found in the ocean, rivers, lakes, and ponds. Evidence is information that supports an answer to a question. Observations can be used as evidence to answer a question.	<b>Activity 2</b> <b>(10 min)</b>	Previewing Handbook of Land and Water
<b>3-D Statement (identify SEP, CCC, and DCI):</b> Students obtain and evaluate information from the reference book, <i>Handbook of Land and Water</i> , about bodies of water and landforms. They create diagram models of what landforms are made of and then, based on new evidence they find, students modify their diagrams to show that landforms are made of rock. This prepares them to understand the slow timescale at which landforms change (stability and change).	<b>Activity 3</b> <b>(20 min)</b>	Gathering Evidence from the Book
<b>Student Resources:</b> Pair of Students: Copy of <i>Handbook of Land and Water</i> , copy of <i>Landform Postcards</i> .	<b>Activity 4</b> <b>(15 min)</b>	Reflecting on Landforms
<b>Assessment Opportunities:</b> N/A	<b>Activity 5</b> <b>(##min)</b>	

# Questions?





## Plan for the day: Part 2

- Teaching and Learning in an Amplify Science Lesson
- Instructional Approach Reflection
- Planning a Lesson
- Closing

# Additional resources

## Welcome, caregivers!

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We hope you enjoy learning more about Amplify Science and what students are learning in science this year.

[Para acceder a este sitio en español haga clic aquí.](#)

Amplify welcomes you and your learner to the Science program for the new school year. We are very excited to



Grades 6-8



[Caregivers](#)

# LAUSD Microsite-

## <https://amplify.com/lausd-science>

### Welcome to Amplify Science!

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This site contains supporting resources designed for the LAUSD Amplify Science adoption for grades TK–8.

- Access the [Amplify Science Program Hub](#) (To help orient you to the new design, watch this [video](#) and view this [reference guide](#).)
- Find out more about [Amplify Science@Home](#)
- Share the [Caregiver Hub](#) (Eng/Span) with your families
- For LAUSD ES Teachers- [Amplify Science & Benchmark Advance Crosswalk](#)
- Instructional guidance for a [Responsive Relaunch of Amplify Science in 21-22](#)

Click the button below to preview the digital Teacher's Guide, and check back for exciting updates to this site!



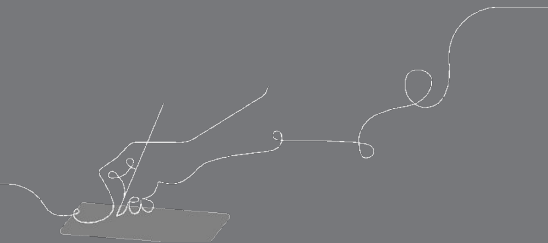


# Overarching goals

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

- ❑ Describe what teaching and learning look like in Amplify Science.
- ❑ Prepare to teach using Amplify Science resources.

e



# Closing reflection

Based on our work today in Part 2, share:

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

**Heart:** something you're feeling

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

# Additional resources and ongoing support

## Customer Care

Seek information specific to enrollment and rosters, technical support, materials and kits, and teaching support, weekdays 7AM-10PM EST and weekends 10AM-6PM EST.



[help@amplify.com](mailto:help@amplify.com)



800-823-1969



Amplify Chat

