# **Amplify** Science

Unit 3: Changing Landforms (with an assessment focus)

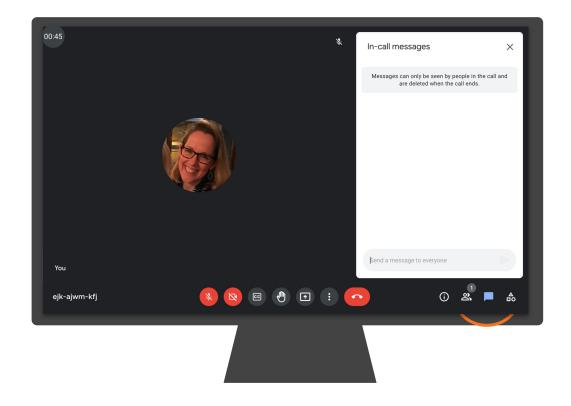
Grade 2, Part 1

School/District Name: LAUSD Date: 3/5/22 Presented by: Lisa Stark



### Ice Breaker!

• Question: In the chat, share what experience you have had with assessments in the Amplify Science curriculum.



### 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



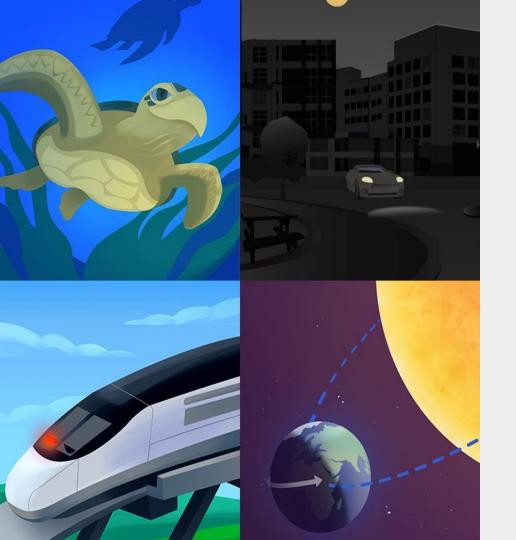
### • To join Amplify ES Group: W4PK-W466-63F5B



### Part 1







### Plan for the day: Part 1

- Introduction and Framing
- Unit Overview
- Formative Assessments
- Closing

### Overarching goals

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

- □ Internalize the unit
- Describe the overall structure of the Assessment System
- Describe the overall structure and purpose the Formative Assessments.

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### Year at a Glance: Grade 2



Plants and Animal Relationships

Domain: Life Science

Unit type: Investigation

**Student role:** Plant scientists

Domain: Physical Science

**Unit type:** Engineering

Student role: Glue

Design

engineers

**Domain**: Earth and Space Science

Unit type: Modeling

Student role: Geologists



**Properties of Matter** 

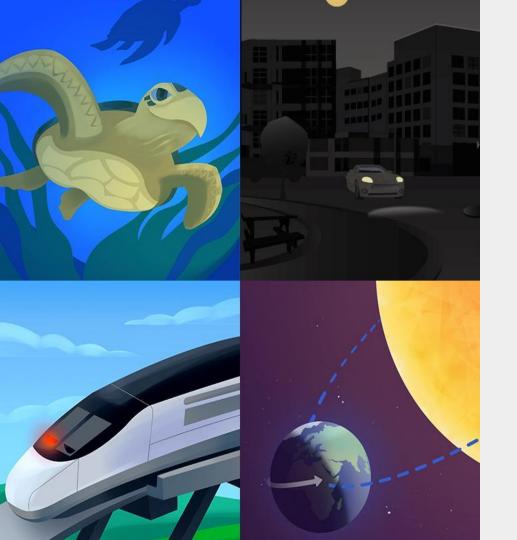


Changing Landforms

### **Amplify Science Approach**

Introduce a **phenomenon** and a related problem Collect **evidence** from multiple sources Build increasingly complex **explanations**  **Apply** knowledge to solve a different problem

S



### Plan for the day: Part 1

- Introduction and Framing
- Unit Overview
- Formative Assessments
- Closing

# **Changing Landforms**

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



# Changing Landforms

**Problem:** Why is the edge of the ocean cliff closer to the flagpole than it used to be?

Role: Geologists

The director of the Oceanside Recreation Center got a scare when a nearby cliff collapsed, and he is worried that erosion on the recreation center's ocean cliff might have safety implications for the center's visitors.By taking on the role of geologists investigating landforms and erosion, students are able to advise the director on the prudence of keeping the center open, even though its cliff is also changing.

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# Changing Landforms

#### **Coherent Storylines**



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

6 Lessons



Chapter 2: How did the recreation center's cliff change?

6 Lessons



Chapter 3: How did the recreation center's cliff erode without the directo... 5 Lessons



Chapter 4: Could the recreation center's cliff erode quickly?

5 Lessons

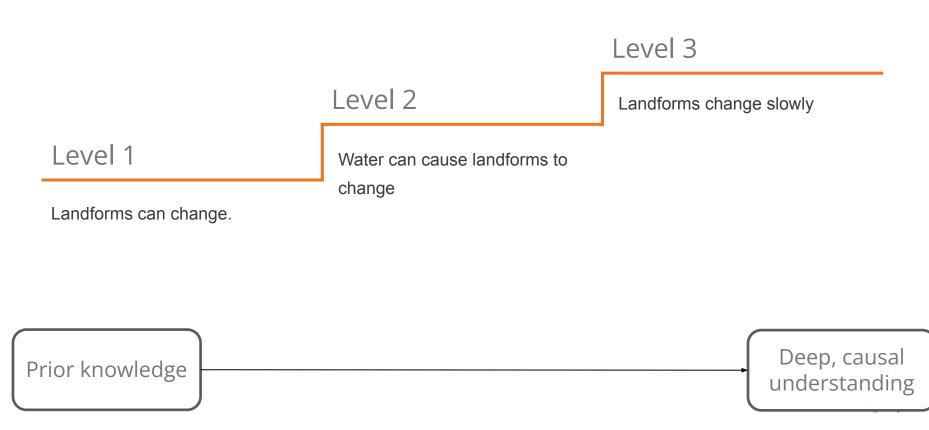
### Explaining the phenomenon: Science Concepts

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



### **Changing Landforms Progress Build**

**Assumed prior knowledge (preconceptions)**: At the start of this unit, students are expected to have had some experiences with rock and understand that rock is hard and can be different sizes and shapes.



### **Key Unit Guide Documents for Planning**

Planning for the Unit	Prir	ntable Resources
Unit Overview	► [PDF]	Coherence Flowcharts
Jnit Map	~ pr	Copymaster Compilation
Progress Build	~ [PF	Flextension Compilation
Getting Ready to Teach	~ P	Investigation Notebook
Materials and Preparation	~ P	Multi-Language Glossary
Science Background		NGSS Information for Parents and Guardians
Standards at a Glance	~	Print Materials (8.5" x 11")
Teacher References		Print Materials (11" x 17")
Lesson Overview Compilation	~	
Standards and Goals	~	Offline Preparation
3-D Statements	~	Teaching without reliable classroom internet? Prepare unit and lesson
Assessment System	~	materials for offline access.
Embedded Formative Assessments	~	Offline Guide
Books in This Unit	~	
Apps in This Unit	~	
Flextensions in This Unit	~	

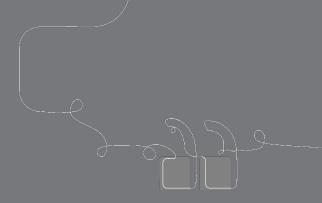
#### Core Unit Planning & Internalization

Unit Title:

#### Changing Landforms

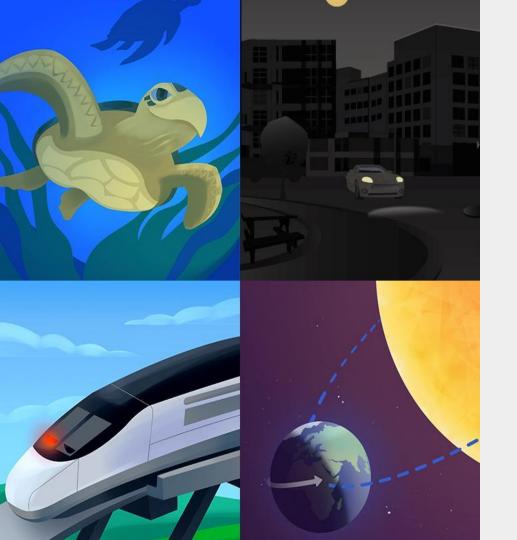
Overview Resources: Unit Overview, Teacher's Guide, Coherence Flowchart, Unit Map, 3-D Statements]	
What is the phenomenon/real-world problem students are investigating in your unit?	Student Role:
Why is the edge of the ocean cliff closer to the flagpole than it used to be?	Geologists
Unit Question:	Relationship between the Unit Phenomenon and Unit
Why is the shape of the land different than it used to be?	Understanding how the slow, incremental erosion of landforms can cause big changes over time requires students to engage with the idea of scale and with a process that is not directly observable.
By the end of the unit, students figure out The nearby cliff eroded quickly because it is made of loose mat as strong as rock. When wind or water hits the cliff, big pieces change more quickly than rock would.	erials, such as clay and dirt, which are not can break off. This causes the cliff to
How do students engage with three-dimensional learning to figure out the pl	nenomenon/real-world problem in your unit?
Students use models to investigate how wind and water effect). They figure out that erosion causes small change changes over long periods of time and that landforms m more quickly (scale, proportion, and quantity; stability an create diagram models and write explanations to show t	is to landforms, which add up to big hade of loose materials can erode much d change). Throughout the unit, students

1



# Questions?





### Plan for the day: Part 1

- Introduction and Framing
- Unit Overview
- Assessment System
- Closing

### Why do we assess our students?

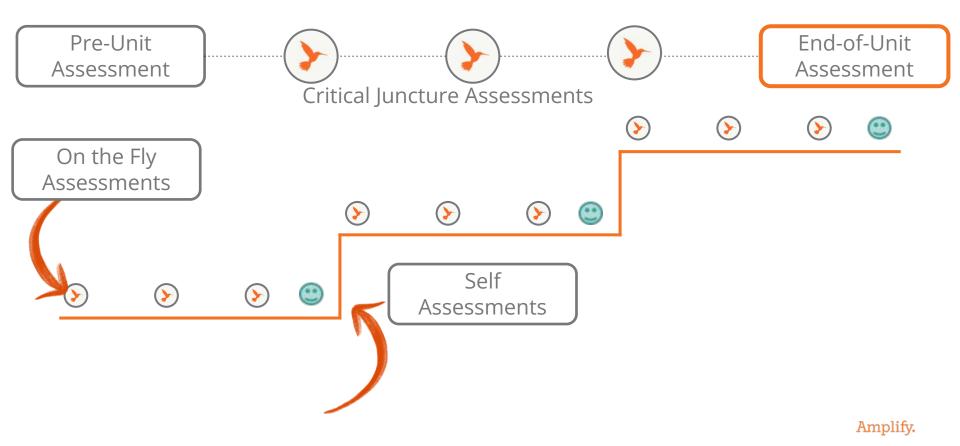
### Assessment

To monitor progress and provide timely support To evaluate students' mastery and communicate with stakeholders Why do we assess our students?

### Assessment

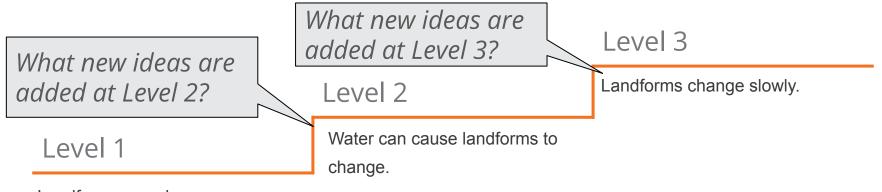
Formative assessment Summative assessment

### K-5 Assessment System



### **Changing Landforms Progress Build**

**Assumed prior knowledge (preconceptions)**: At the start of this unit, students are expected to have had some experiences with rock and understand that rock is hard and can be different sizes and shapes.



Landforms can change.

Prior knowledge

Deep, causal understanding

### Assessment System and Progress Build Work time

- Browse the Assessment System
- Read and analyze your unit's Progress Build.

	Changing Landforms
	SUMP DOWN TO UNIT GUIDE
	Forber 1: Howdig ter de of the dirig to be so close)Alter er 2: How dif the fore racing control of the fore racing
	Chapter 4: Could the recreation center's cliff erode quickly?
	SLessons
	Sussons Planning for the Unit Printable Resources
	Planning for the Unit Printable Resources
	Planning for the Unit Printable Resources Unit Overview
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	Planning for the Unit     Printable Resources       Unit Overview     Image: Comparison of the second of the seco
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	Planning for the Unit         Printable Resources           Unit Overview         © 30 Assessment Objectives           Unit Map         © Coherence Flowcharts           Progress Build         © Consorting Concept Trader           Getting Ready to Teach         © Consorting Flowcharts           Materials and Preparation         © Reservice, and Childrail
V	Planning for the Unit     Printable Resources       Unit Overview     Image: Comparison of the set of the se
V	Planning for the Unit     Printable Resources       Unit Overview     © 30 Assessment Objectives       Unit Map     © Coherence Resolutes       Vinit Map     © Coherence Resolutes       Progress Build     © Consenting Concept Trainer       Getting Ready to Teach     © Consenting Concept Trainer       Materials and Preparation     © Consenting Concept Trainer       Science Background     • Dioting and Everying Students'       Science Background     • Installer Insteaded       Standards at a Glance     • Installer Insteaded
V	Planning for the Unit     Printable Resources       Unit Overview     © 39 Assessment Ørjertles       Unit Map     © Coherence Flowchats       Progress Build     © Corescuting concept Tasker       Getting Ready to Teach     © Consoliting concept Tasker       Materials and Preparation     © Consoliting Concept Tasker       Science Background     © Biolitie and Leverging Students' in Biolities and Reverging Students' in Biolit
V	Planning for the Unit     Printable Resources       Unit Overview     © 39 A sessment Objectives       Unit Map     © Coherence Flowchats       Progress Build     © Consoliting Concept Tasker       Getting Ready to Teach     © Consoliting Concept Tasker       Materials and Preparation     © Consoliting Concept Tasker       Science Background     © Distile and Levergies Stadents' in Strategies       Science Background     © Investigation Notebook       Tascher References     © Mitch Language Giosange       Lesson Overview Compilation     ©
V	Planning for the Unit     Printable Resources       Unit Overview     © 30 Assessment Objectives       Unit Map     © Coherence Florechats       Progress Build     © Consenting Consent Florechats       Getting Ready to Teach     © Consenting Consent Florechats       Getting Ready to Teach     © Consent Florechats       Science Background     © Consent Florechats       Standards at a Glance     © Instagling Hostenski       Teacher References     © Motis regulars       Standards and Goals     © Pote Materiak (8.7 ± 11°)       Standards and Goals     © Pote Materiak (8.7 ± 11°)       Standards and Goals     © Pote Materiak (8.7 ± 11°)       Standards and Goals     © Pote Materiak (8.7 ± 11°)
	Planning for the Unit     Printable Resources       Unit Overview     Image: Comparison of Comparis



### **On-the-Fly Assessments**

- Track student progress within a Progress
   Build level
- Embedded into instruction
- Assessment resource includes "Look for" and "Now what"

Eevel 3

Level 2

Where is the first On-the-fly assessment in Changing Landforms?

Refer to the assessment documents on the unit page.

Level 1

### Leading up to Lesson 1.4

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



# Lesson 1.1: Pre-Unit Assessment Grade 2 | Changing Landforms

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# Activity 1 Introducing the Unit





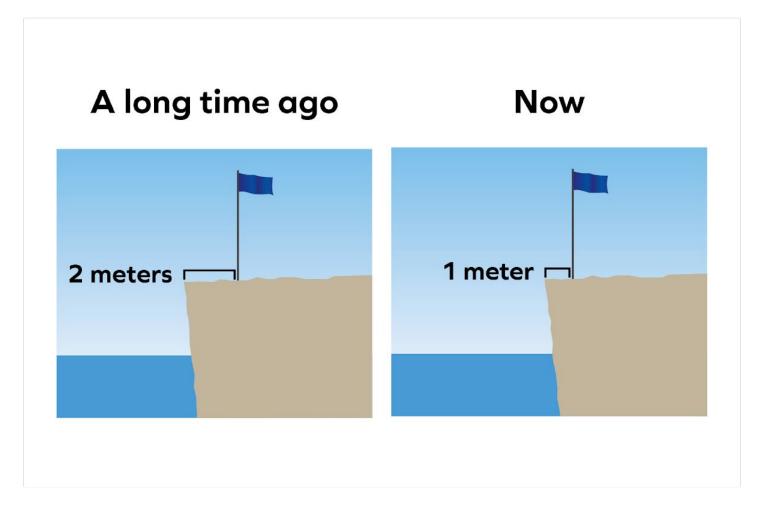
This is **Oceanside Recreation Center**, where students come to learn about leadership and teamwork. The center is on a beautiful **cliff** next to the **ocean**.



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

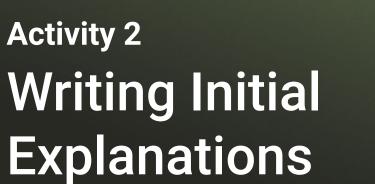
He is worried this might happen to the recreation center's cliff, putting visitors at risk. After researching the recreation center's cliff, Director Higgins found some important information.

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



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.



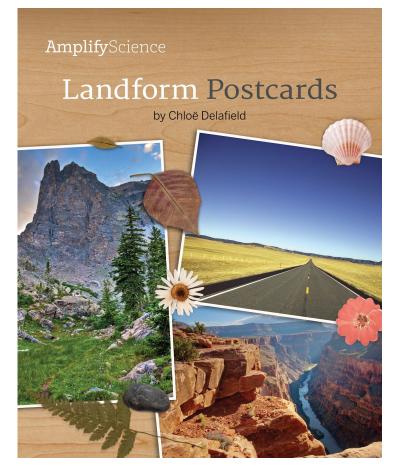






# Activity 3 Partner Reading





### Today we'll read this book to learn more about **landforms.**

This will help us as we **investigate** the cliff landform near the recreation center.

## Leading up to Lesson 1.4

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



## Lesson 1.2: Observations About Landforms Grade 2 | Changing Landforms

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## Activity 1 Activating Prior Knowledge About Landforms



15 MIN 🕒

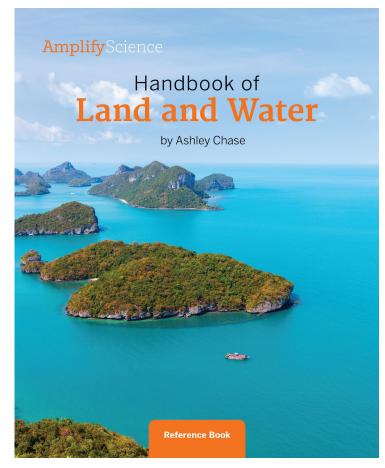
# What are landforms made of? What we know **Ouestions we have**

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









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

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

### 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 39

Bodies of Water





page 35

page 43

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

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

### Do you recognize any of these landforms?

10



## 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.

#### Lesson 1.2: Observations About Landforms

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

#### **Observations of Landforms**

Directions:

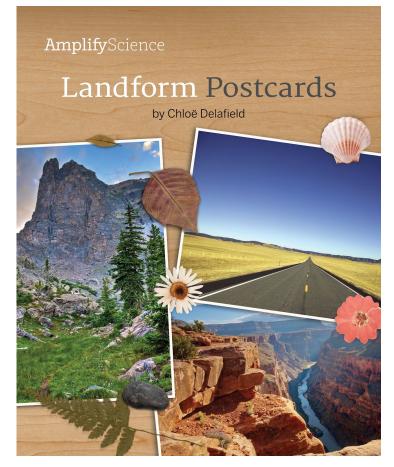
- 1. Choose at least two landforms to read about in Handbook of Land and Water.
- 2. In the "Landform" column of the table below, record the names of the landforms.
- 3. In the "Observations" column, record observations that help you figure out whether landforms are made of rock.

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

Landform	Observations
	anging Landforms—Lesson 1.2 sty of California. All rights reserved. Permission granted to photocopy for classroom use.

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.



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,

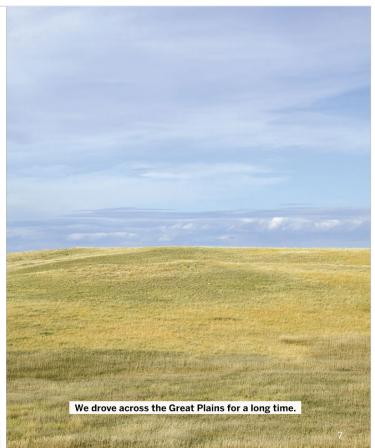
Pretty soon after we left the city, everything looked different. The land was flat all around us for miles. Some people might think it was boring, but not me! I knew that even the flat plain is a landform. I remembered that landforms are made of rock. I pictured rock under the grass. That was neat to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



Grandpa 1745 Hillvale St. Madison, WI 53705

Love, Annie





### 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.



Grandpa 1745 Hillvale St. Madison, WI 53705

Love, Annie



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

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

### Mesas

### Dear Grandpa,

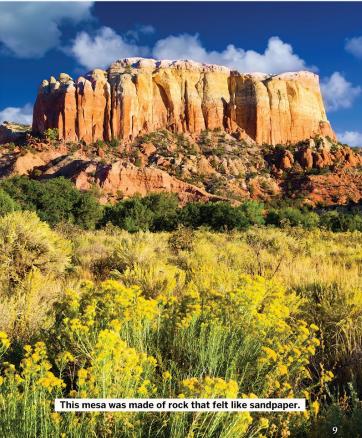
I learned that "mesa" means "table" in Spanish. That makes sense. A mesa is a landform that is flat on top like a table. Here in the Southwest the mesas are made out of red, orange, and yellow rock. This is what I picture Mars looks like!



Grandpa 1745 Hillvale St. Madison, VVI 53705

Love, Annie





### 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!



Grandpa 1745 Hillvale St. Madison, WI 53705

Love, Annie



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

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

## Leading up to Lesson 1.4

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



## Grade 2 | Changing Landforms Lesson 1.3: Observing Sand Samples



## Activity 1 Exploring Sand Samples



## Today, we are going to investigate this question:

## How do geologists figure out how something changed when they can't observe it changing?

As geologists, we'll investigate **sand** to think about why the cliff looks the way it does now.

### Sand is made of **tiny pieces of rock**. Investigating sand may help us learn about how **rock** can **change**.



### We will make **observations** of **sand** using our sense of sight.

Each group will get a tray of materials with **sand samples,** hand lenses, glue, and index cards.

### **Observing Sand Samples**



Step 1

**Observe** one of the sand samples inside its bag.



Step 2

**Trade** sand samples with another group member.



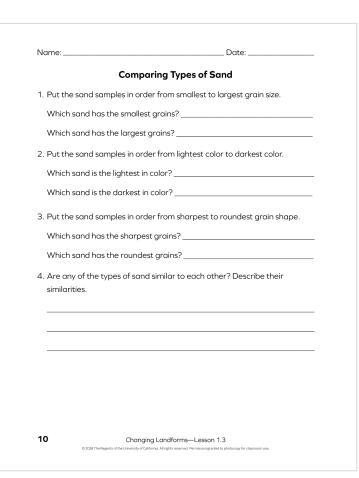
Step 3 Talk about what you notice.



## Activity 2 Comparing Sand Samples

We **observed** things like the **size**, **color**, and **shape** of the sand in the samples.

Scientists sometimes **compare** things to help them make careful observations and answer their questions.



Turn to page 10 in your notebooks.

### To **compare** means to notice how things are **similar** or **different**.

We will compare the four sand samples.

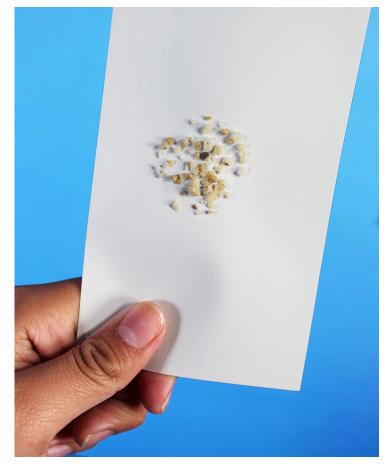


## Activity 3 Making Sand Sample Cards



# Now that we have made **observations** of different types of sand, we will each choose one type of sand we want to investigate more closely.

### We will make **Sand Sample Cards** and use them later to observe the **sand grains** more carefully.

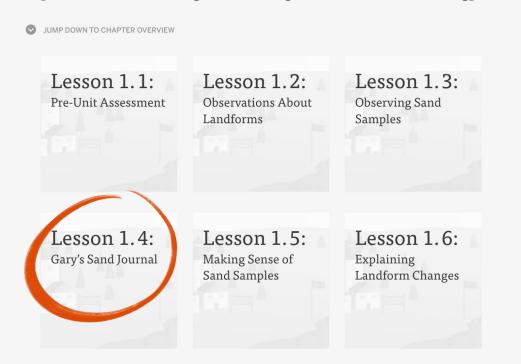


## This is a **Sand Sample Card** I made.

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## Leading up to Lesson 1.4

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



## Lesson 1.4: Gary's Sand Journal Grade 2 | Changing Landforms

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## Activity 1 Setting a Purpose for Reading

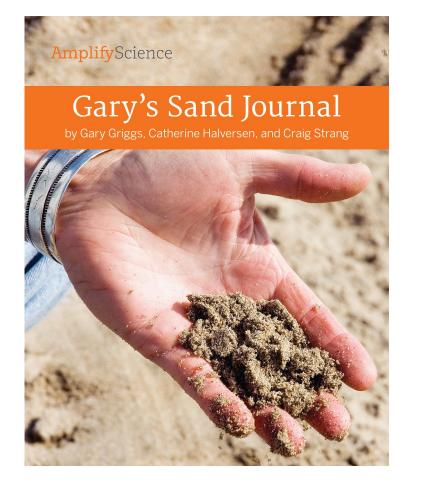




In the last lesson, we observed sand samples to learn more about sand.

## What are some observations we made about sand?

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This book is about a geologist who observes sand and visualizes how it became the way it is. Let's take a moment to make observations about the cover of the book.

**Now what?** When you hear students discussing what they visualize as they read, point out the process to other students. For example, you could say, "I heard a student describe a picture she created in her mind when she was reading about the shape of sand. This student remembered that visualizing during reading helps you better understand what you are reading." You can also ask students to share what they visualized after all students have read the book. Sharing with the class allows other students to hear examples of what it means to visualize during reading.

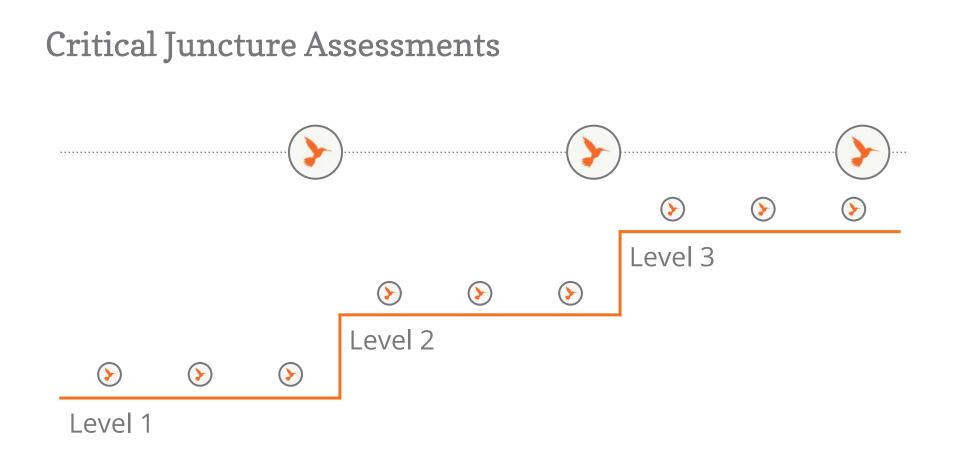
### Additional formative assessment information

### **On-the-Fly Assessments**

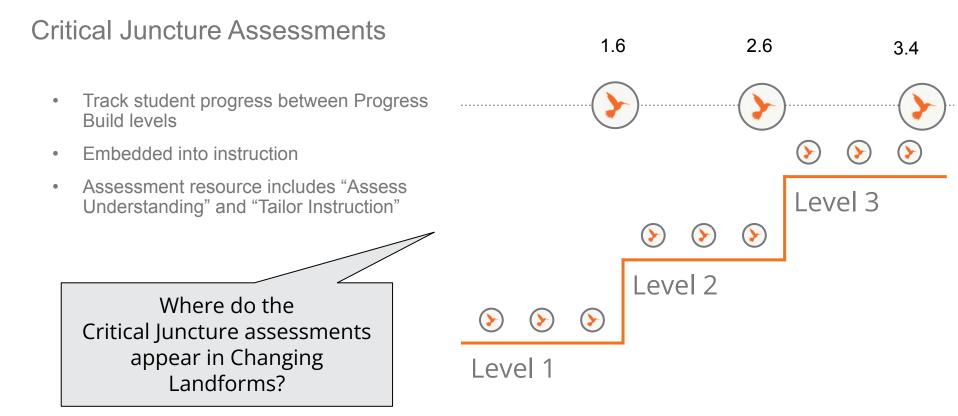
In addition to assessing concepts in the Progress Build, some On-the-Fly Assessments provide data about:

- Science and Engineering Practices
- Crosscutting Concepts
- Literacy skills
- Student collaboration





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Refer to the assessment documents on the Unit Page

# Grade 2 | Changing Landforms Lesson 1.5: Making Sense of Sand Samples

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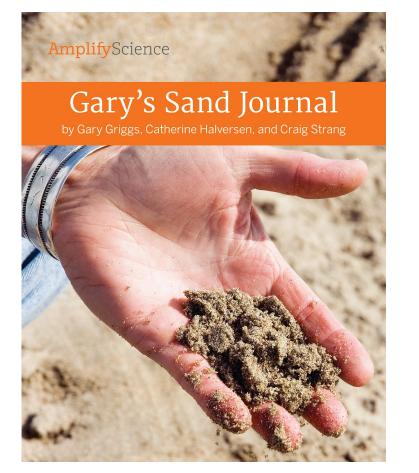
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## Activity 1 Observing Sand Samples

We have been investigating how **sand** got to be the way it is to help us think about why the edge of the **cliff** looks the way it does now.

Gary was not able to **observe** sand **changing**, and we were not able to observe the cliff changing, because these changes happened in the past.

# How do geologists figure out how something **changed** when they can't **observe** it changing?



Gary **observed** his sand samples closely to **visualize** what happened to each type of sand.

# Grade 2 | Changing Landforms Lesson 1.6: Explaining Landform Changes



## Activity 1 Gathering Evidence from a Hard Candy Model



# Remember that we are investigating this question:

### How do geologists figure out how something changed when they can't observe it changing?

## 2

# When we investigated **sand samples**, how did we figure out how the sand got to be the way it is?

# We've been making **observations** to help us **visualize** how sand got to be the way it is.

Scientists also use **models** to help them investigate things they cannot observe.

A model is something scientists make to answer questions about the real world.



## Activity 3 Critical Juncture: Writing a Scientific Explanation



Scientists often write **explanations** about how things work or why things happen.

They write explanations for other scientists and for people who are not scientists, like Director Higgins. In this way, many people can learn from scientists' investigations and thinking.

# Vocabulary explanation

### a description of how something works or why something happens

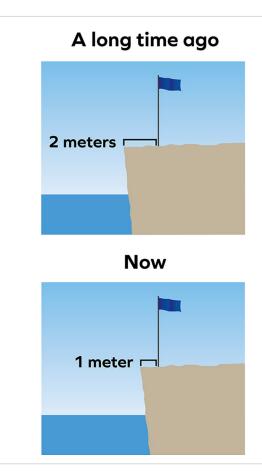
### What Is a Scientific Explanation?

- 1. It answers a question.
- 2. It is based on science ideas you have learned.
- **3.** It is shared with someone.

#### Scientific Explanation: Changes to the Cliff

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

Together, we will **write a scientific explanation** to answer the question on this chart.



**Tailor instruction:** If students do not demonstrate an understanding that rock can change shape, have students reexamine the Hard Candy Model or return to Gary's Sand Journal to read pages 8 and 9, "The Shape of Sand." If students do not demonstrate an understanding that the cliff is a landform and landforms are made of rock, have them return to Handbook of Land and Water to observe images of landforms. Students can also return to page 7, Observations of Landforms, in their Investigation Notebooks to review the evidence they collected from the reference book that supports the idea that landforms are made of rock.

#### **CRITICAL JUNCTURE**

### Formative assessment information

### Locating assessment resources

#### Full text of assessment

- Embedded Formative Assessments document
- Instructional guide
- Classroom Slides
   notes

rces	Changing Landforms Teacher References	Embedded Formative Assessments				
	Embedded Formative Assessments					
1 TEACHER-LED DISCUSSION Setting a Purpose for Partner Partner		L				
	Partner Reading					
12 Traditional vision and and all the second	Lesson 1.4: Gary's Sand Journal	Active and the second	vity 2			
13 Anima Panading	The Shape of Sand I closerve the shape of and. The shape of the sand is extended that supports my clean about how do the sand is.	Read the rest of the				
14 Provide the second s		book. Create pictures in your minds to better understand the ideas in the book, and <b>discuss</b>				
15 Constraints of the second s	Some sand grains are rounded. Rounded sand grains have rolled around and orashed together for a long time. I can visualize the sharp corriers wearing down as the grains cash against each other. This is old sand.	what you <b>visualize.</b>				
16 August as some other examples of exampl	e fa farhann a' fa Strady (fa Status, Alagina saran).	ON-TH	E-FLY			
Beginning with the read	he unit, students will employ the strategy of visualizi ling in this lesson, students will have multiple opport	ng as they read and as they engage in firsthand science inve unities to learn about and use the strategy of visualizing to su ents are using the strategy to guide their reading. Are they di	pport their			
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			Amplify.			

### Additional formative assessment information

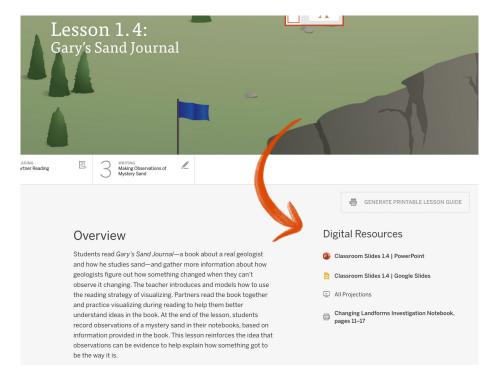
### Locating assessment resources

#### Full text of assessment

- Embedded Formative Assessments
   document
- Instructional guide
- Classroom slides notes

#### **Additional resources**

Lesson Brief: Digital Resources

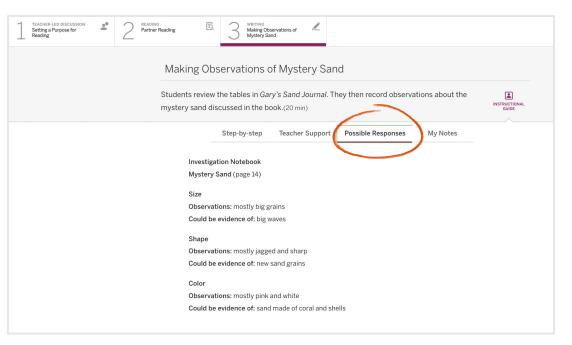


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### Additional formative assessment information

### Possible student responses

- Within assessments:
  - "Look fors" (OtF)
  - "Assess Understanding" (CJ)
- Possible responses within the Instructional Guide
- Digital resources
  - Assessment Guides
  - Teacher References



### Independent planning On-the-Fly and Critical Juncture Assessments

- 1. Use the Embedded Formative Assessments document to get familiar with On-the-Fly and Critical Juncture Assessments in your unit.
- 2. Download the classroom slides for a lesson with an On the Fly assessment or Critical Juncture.
- 3. Read through the teacher notes and make note of any possible student responses. (You can copy and paste them into your notes for that slide.)

#### Changing Landforms Teacher References



#### Embedded Formative Assessments

On the Fly Assessments and Critical Juncture Assessments (state below in lesson order) are embedded formative assessments designed to help the teacher monitor and support students' greens throughout the unit. These assessments represent the most opportune moments for a glimpse into students' developing conceptual understanding and their facility with the practices. Each assessment opportunity indicates the specific concepts and practices to look for or listen for as students engage with the learning experiences, followed by suggestions to the teacher of what to do, based on what was observed.

#### Lesson 1.4, Activity 2

#### On-the-Fly Assessment 1: Visualizing

Look for: Throughout the unit, students will employ the strategy of visualizing as they read and as they engage in firsthand science investigations. Beginning with the reading in this lesson, students will have multiple opportunities to learn about and use the strategy of visualizing to support their reading comprehension. As you circulate, make note of whether or not students are using the strategy to guide their reading. Are they discussing with their partners what they are visualizing while they read?

Now what? When you hear students discussing what they visualize as they read, point out the process to other students. For example, you could say. "I heard a student describe a picture she created in her mind when she was reading about the shape of sand. This student memembered that visualizing during reading helps you better understand what you are reading." You can also ask students to share what they visualized after all students have read the book. Sharing with the class allows other students to bare arounges of what it means to visualized caning reading reading reading reading.

NGSS connection: This formative assessment reveals student knowledge and use of Practice 8: Obtaining, Evaluating, and Communicating Information.

#### Additional 3-D Assessment Opportunities

To assess students on the idea that some events happen very slowly, over a period of time longer than one can observe (DCI ESSLC), listen as students share what they are visualizing. This is an early opportunity to hear if students are thinking about changes that can have happened in the past. Listen for students to describe changes that could have happened to the sand, and ways the sand could have been different in the past. Understanding that changes could have happened to the sait is as the Jowards understanding that some changes con happen to obvyl to observe.

To assess students on the crosscutting concept of Cause and Effect, listen as students share what they are visualizing about the shape of sand. Students should be describing that the rolling around and crashing together of sand is what causes the effect of sand grains being rounded.

Lesson 1.5, Activity 3

On-the-Fly Assessment 2: Discussing How Sand Changes

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### Additional formative assessment information

### **Student Self-Assessments**

- End of each chapter
- Grades K-1: Pair Share activity
- Grades 2-5: Independent Investigation
   Notebook activity

Chapter 4: Check Your U	nderstanding
This is a chance for you to reflect on your learn Be open and truthful when you respond.	ning so far. This is not a test.
Scientists investigate in order to figure out hor closer to figuring out how the recreation center	0 0 0
l understand what the recreation center's cliff is made of.	Yes Not yet
l understand what caused the recreation center's cliff to change.	Yes Not yet
I understand why the recreation center's cliff changed without the director noticing.	Yes Not yet
l understand why the nearby cliff changed so quickly.	Yes Not yet
I understand that science knowledge helps us know about the world.	Yes Not yet
What are you still wondering about the recrea changes to landforms?	ation center's cliff or about

Level



### Data Collection Tool

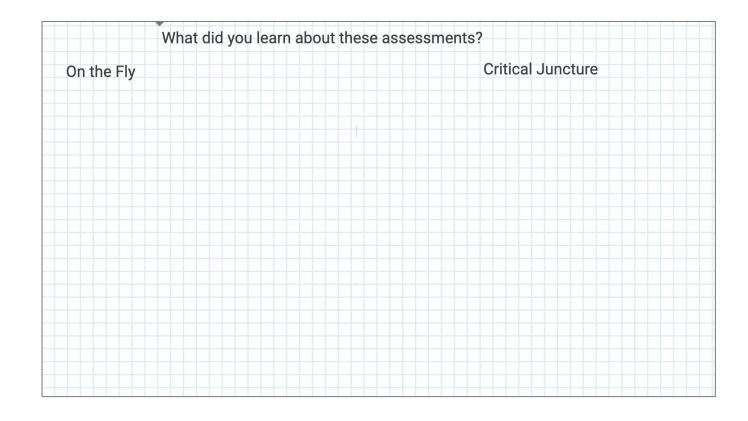
int Name:			collection tool	Student Name	Look for 1	Look for 2	Look for 3	Look for 4	Loo
<ol> <li>Navigate to the lesson.</li> <li>Select the embedded formative assessment icon and read the Look for and Now What?.</li> <li>Determine the Look for's for the embedded formative assessment opportunity below.</li> <li>a. Look for 1:</li></ol>	it Name:	Chapter:	Lesson:						
4. Use the chart below to collect student data based on the Look for evidence described above.       Image: Collect student data based on the Look for evidence described above.         5. Place a plus (+) if student demonstrates a strong understanding of the Look for, a backslash (/) if student demonstrates some understanding and a delta (A) if student demonstrates no understanding of the above Look for.       Image: Collect student demonstrates a strong understanding and a delta (A) if student demonstrates no understanding of the above Look for.         6. After data collection in the embedded formative assessment opportunity, refer to       Image: Collect student data based on the Look for.	Navigate to the lesson.     Select the embedded f What?.     Determine the Look fo below:         a. Look for 1: b. Look for 2: c. Look for 3:	ormative assessment icon	native assessment opportunity						
backslash ( / ) if student demonstrates <u>some understanding</u> and a delta (Δ) if student demonstrates <u>no understanding</u> of the above Look for.	. Use the chart below to	and the second second							
	backslash ( / ) if student demonstrates <u>some understanding</u> and a delta (Δ) if student								
									-

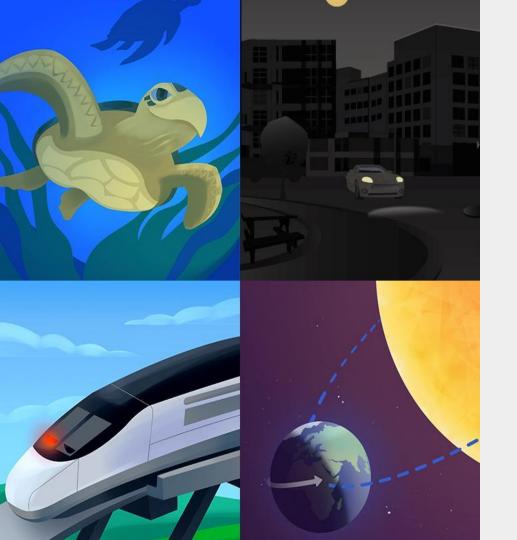
Notes

### Share Out

### Jamboard

Go to the link in the chat and share your thoughts.





### Plan for the day: Part 1

- Introduction and Framing
- Unit Overvew
- Assessment System
- Closing

### Overarching goals

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

- □ Internalize the unit
- Describe the overall structure of the Assessment System
- Describe the overall structure and purpose the Formative Assessments.

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### Additional resources

### Welcome, caregivers!

EDREPORTS A

Grades 6-8

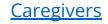




We hope you enjoy learning more about Amplify Science and what students are learning in science this year.

#### Para acceder a este sitio en español haga clic aquí.

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



### LAUSD Micrositehttps://amplify.com/lausd-science



# Welcome to Amplify Science!

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!

### 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

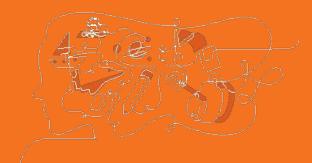




Amplify Chat



## End of Part 1





# **Amplify** Science

Unit 3: Changing Landforms (with an assessment focus)

Grade 2, Part 2

School/District Name: LAUSD Date: 3/5/22 Presented by: Lisa Stark









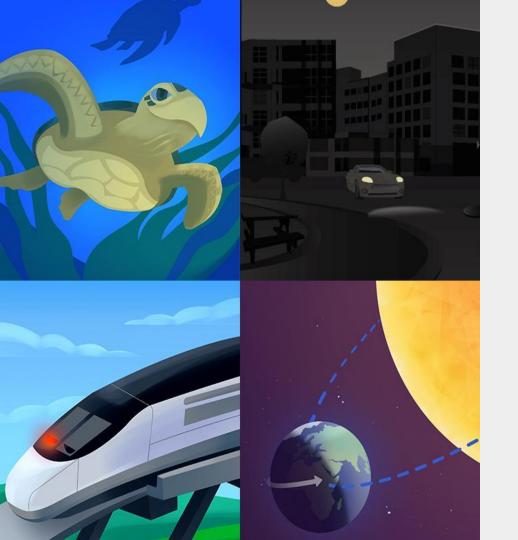
### Overarching goals

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

- Understand the pre and post assessments in this unit.
- Understand how the formative assessments build to the summative assessment.

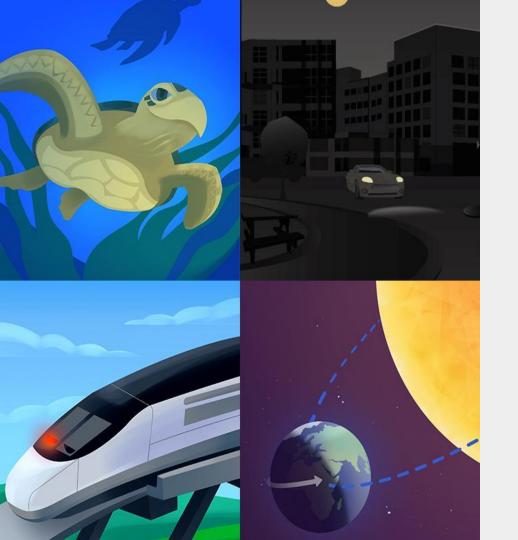






### Plan for the day: Part 2

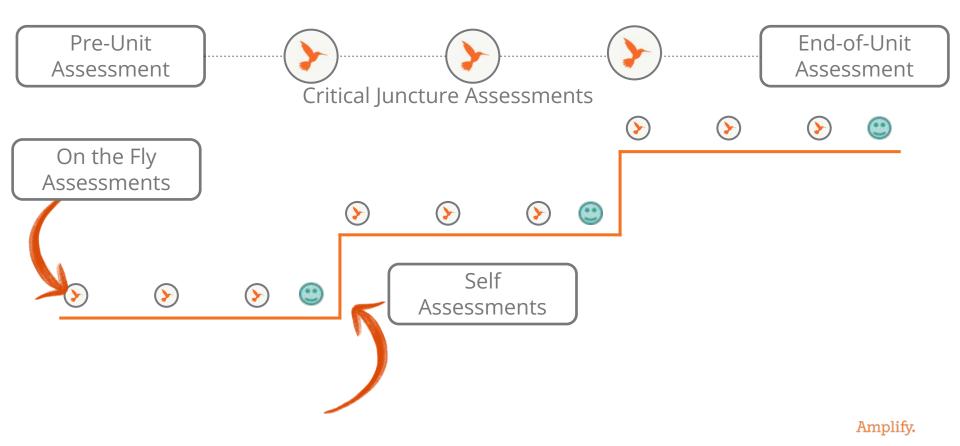
- Pre Unit Assessment
- Summative assessment
- Closing



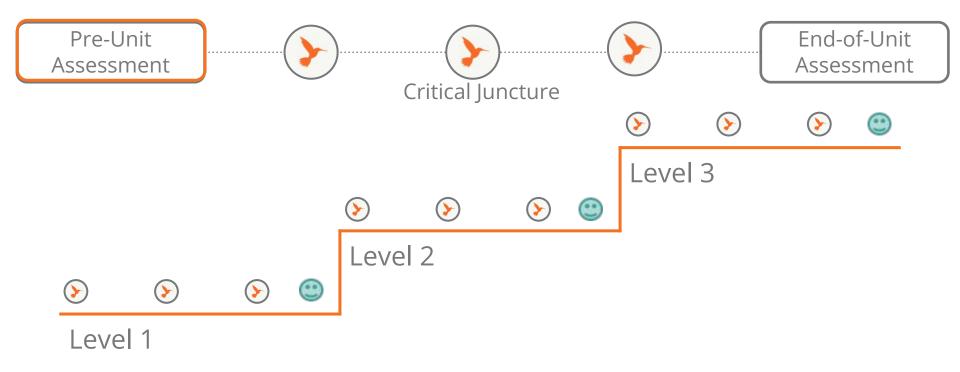
### Plan for the day: Part 2

- Pre Unit Assessment
- Summative assessment
- Closing

### K-5 Assessment System



K-5 Assessment System



# Grade 2 | Changing Landforms Lesson 1.1: Pre-Unit Assessment

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# Activity 1 Introducing the Unit

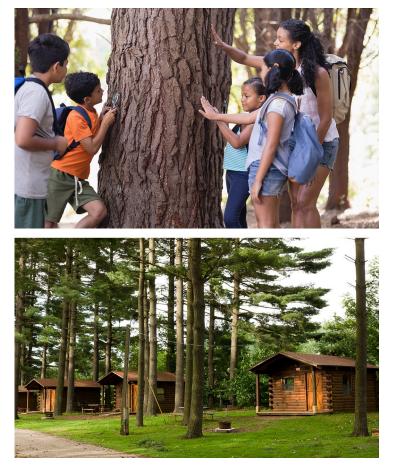


## We're about to begin a new science unit.

# 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.

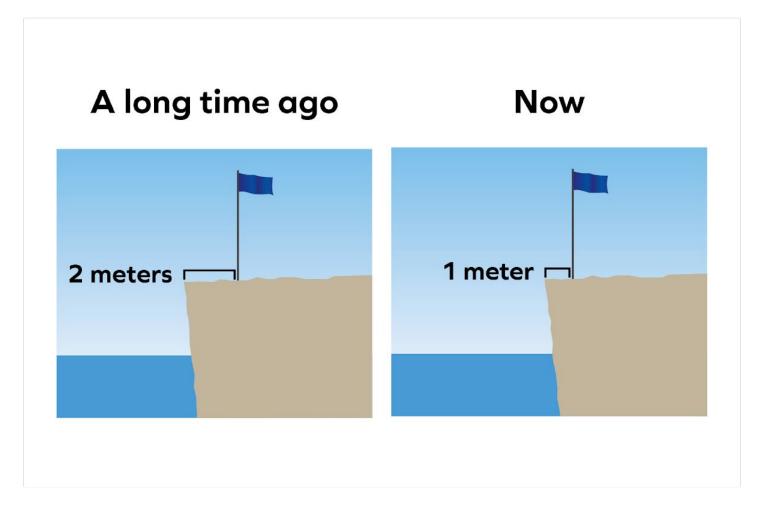
# Has anyone been to summer camp or to a place like Oceanside Recreation Center?



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.



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. A **geologist** is a scientist who studies the solid part of Earth.

Sometimes geologists use the word **landform** to describe the **parts of Earth's surface** they study. Examples of landforms are mountains, cliffs, and valleys.



### a scientist who studies the solid part of Earth

## **Unit Question**

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

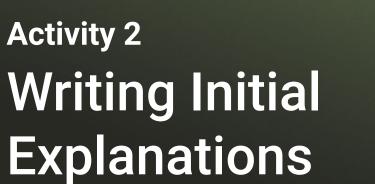


Changing Landforms: The Disappearing Cliff

# We will be using an **Investigation Notebook**.

Scientists use notebooks in many ways, including to keep track of what they **observe**.

Investigation Notebook







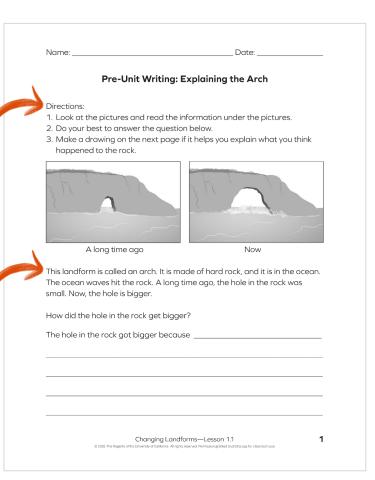
## Before we begin our work as geologists, I'd like you to **write your ideas** about a landform called an **arch**.

This is a chance for you to write your first ideas about **how landforms change**.

Name:	Date:	:
Pre	-Unit Writing: Explaining the A	rch
Directions:		
	res and read the information under th	e pictures.
<ol> <li>Do your best to a</li> <li>Make a deguing a</li> </ol>	nswer the question below.	audatuau thiak
happened t		
	N Javan av	Date:
	Name:	Date:
185	Pre-Unit Writing:	: Explaining the Arch (continued)
(	····	
		explain what you think happened to the rock.
	Label your drawing.	
A lc		
This landform		
The ocean wa		
small. Now, the		
How did the h		
The hole in the		
The hole in the		
0		

There are two pages for this writing task. There is information to read and a question to answer.

I will help you understand what to do.



## Let's **review the directions** and **read the arch information**.

#### Lesson 1.1: Pre-Unit Assessment

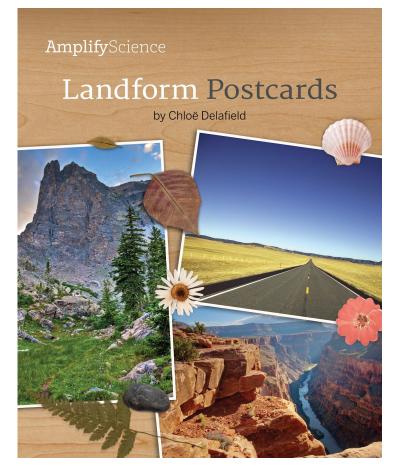
Pre	-Unit Writing: Explaining th		
Directions:		e Arch	
	res and read the information und	er the pictures.	
	nswer the question below.	alaia what you think	
happened t			
	Name:	Date:	
rh'			
8	Pre-Unit Writ	ing: Explaining the Arch (continued)	
	Make a drawing if it helps y	ou explain what you think happened to t	he roo
	Label your drawing.		
Alc			
This landform			
The ocean wa			
small. Now, the			
How did the h			
The hole in the			
	<u>.</u>		
0			
		anging Landforms—Lesson 1.1	

Write your responses and create a drawing if it helps you explain your thinking.



# Activity 3 Partner Reading





## Today we'll read this book to learn more about **landforms.**

This will help us as we **investigate** the cliff landform near the recreation center.

## **Chapter 1 Question**

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

### **Partner Reading Guidelines**

- 1. Sit next to your partner and place the book between you.
- 2. Take turns reading.
- 3. Read in a quiet voice.
- 4. Be respectful and polite to your partner.
- **5.** Ask your partner for help if you need it. Work together to make sure you both understand what you read.

### Contents

About Landforms	4
Plains	
Mesas	
Canyons	
Beaches	12
Mountains	14
Peninsulas	
Landforms I Saw Around the Country	
Glossary	24

3

Turn to page 3 in *Landform Postcards*. Let's review the Contents.

# Are any of these **landforms** familiar?

Have you visited or seen pictures of any of them?

#### **About Landforms**

Hi, my name is Annie. This book is about a road trip I took this summer. We drove across the United States. My grandpa is a **geologist**. He taught me about **landforms**. Landforms are parts of Earth's **surface** like mountains, valleys, and cliffs. Grandpa thought it would be fun for me to **observe** landforms around the country. I sent him postcards of what I saw.

Here are some things Grandpa taught me about landforms: Anywhere you go on Earth, you will see landforms. Unless you are reading this book in the middle of the ocean, you can probably find a landform near you. Even in a city, you can find landforms.



This picture has lots of different landforms. It has a beach, an island, a peninsula, and some hills.



Here we are about to leave on our trip. That's me in the middle and my little sister on the right.

Grandpa also taught me that landforms are made of rock. They can have other things on top, like sand, dirt, or even ice. Some landforms may be common where you live. Others may only be found far away. Keep reading to find out what landforms I saw on my trip!



#### **About Landforms**

Hi, my name is Annie. This book is about a road trip I took this summer. We drove across the United States. My grandpa is a **geologist**. He taught me about **landforms**. Landforms are parts of Earth's **surface** like mountains, valleys, and cliffs. Grandpa thought it would be fun for me to **observe** landforms around the country. I sent him postcards of what I saw.

Here are some things Grandpa taught me about landforms: Anywhere you go on Earth, you will see landforms. Unless you are reading this book in the middle of the ocean, you can probably find a landform near you. Even in a city, you can find landforms.



This picture has lots of different landforms. It has a beach, an island, a peninsula, and some hills.

# Annie's grandpa thinks it would be fun for her to observe landforms.

### -What do you think it means to **observe** something?

4

#### 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. Safe Energy

Grandpa 1745 Hillvale St. Madison, WI 53705

Love, Annie



# Read the rest of the book.

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#### **About Landforms**

Hi, my name is Annie. This book is about a road trip I took this summer. We drove across the United States. My grandpa is a **geologist**. He taught me about **landforms**. Landforms are parts of Earth's **surface** like mountains, valleys, and cliffs. Grandpa thought it would be fun for me to **observe** landforms around the country. I sent him postcards of what I saw.

Here are some things Grandpa taught me about landforms: Anywhere you go on Earth, you will see landforms. Unless you are reading this book in the middle of the ocean, you can probably find a landform near you. Even in a city, you can find landforms.



This picture has lots of different landforms. It has a beach, an island, a peninsula, and some hills. Turn back to page 4 in your books.

## Let's read the first paragraph and talk about the meaning of the word **landform**.



### a feature of Earth's surface, such as a mountain, a cliff, or a valley

# 2

Based on what you read about **landforms**, do you have any new ideas about how the **edge** of the **cliff** got to be so close to the **flagpole**? Lesson 1.1: Pre-Unit Assessment

# **End of Lesson**





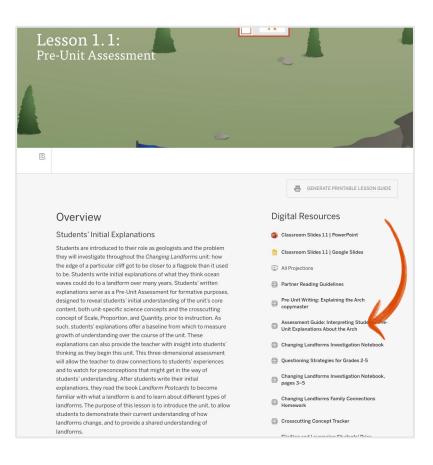
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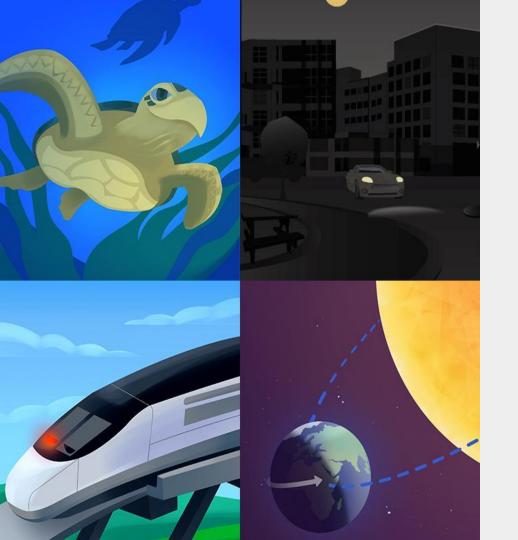
### **Pre-Unit Assessment**

### Lesson 1.1

Locate the Assessment Guide in Lesson 1.1 of your unit and read it.



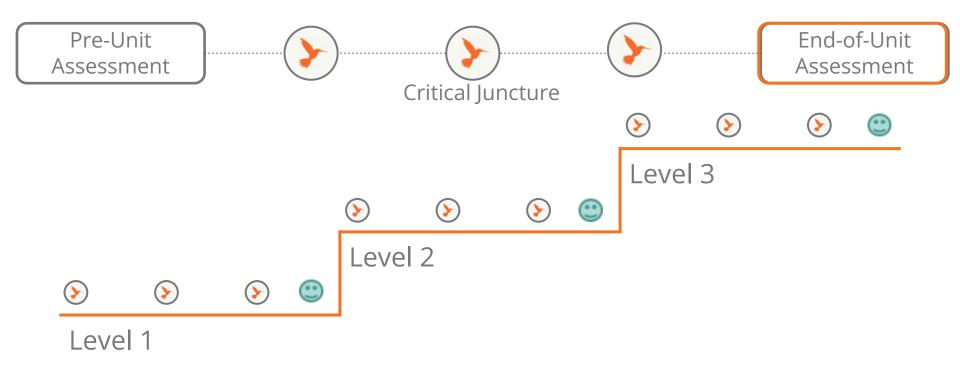




## Plan for the day: Part 2

- Pre Unit Assessment
- Summative assessment
- Closing

K-5 Assessment System





### End-of-Unit Assessment

3-dimensional assessment opportunity

- Summative assessment of mastery of science concepts
- Formative assessment of Science and Engineering Practices

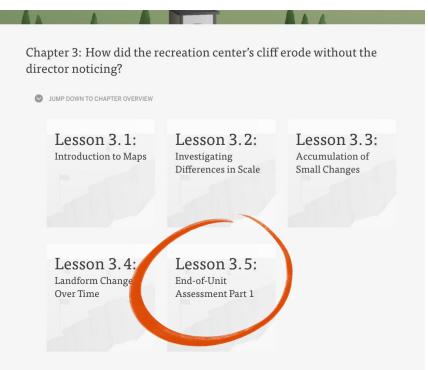


End of Unit Assessment for Changing Landforms There are 2 parts to this summative assessment.

Name:Date:	
End-of-Unit Writing: Explaining a Big Change to the Cliff	
Directions: Write a scientific explanation that answers the question below.	lappen to the
Question: How did the recreation center's cliff erode without the director	s caption.
noticing? The cliff eroded without the director noticing because	te the caption to draw the cliff
	the caption to sure to draw the
	ater.
	⊯ to the edge ong time ago.
	iff will look
	w, the cliff will
Chryster Longforms-Lasson 3.5. 1	
0.2501 The Tegenity of Deliterative Along the Second American graded liquidations for distances and	
Changing Landforms—Lesson 3.5 1 8200 Te Repti Unit America display waves Pressange and Substance of Lances and	

Nome: Date:	
End-of-Unit Writing: Explaining the Nearby Cliff	
Directions: Write a scientific explanation that answers the question below.	
Question: Why did the nearby cliff erode overnight?	
The nearby cliff eroded overnight because	
Changing Landforms—Lesson 4.5 79	
0.2020 The Expected FeeD-mends of California All-splits searced Protocology article is splitsbarray for classroomers.	

### End of Unit Assessment for Changing Landforms (Part 1) Summative assessment.





## Grade 2 | Changing Landforms Lesson 3.5: End-of-Unit Assessment Part 1

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 $\nabla$ 

## Activity 1 Making Sense of Landform Change Over Time



We've been investigating how **erosion** could cause a **big change** to the cliff without people noticing.

Today, we'll **write explanations** about erosion.

Activity 1

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

#### Evidence for How Small Changes Become Bigger Changes Chart

Directions:

- 1. Review the list of activities on the left side of the chart.
- On the right side of the chart, record the evidence that each activity gave you to support how small changes add up to bigger changes over a long time.

#### Idea: Small changes add up to bigger changes over a long time.

Activity	Evidence that supports the idea that small changes add up to bigger changes over a long time	
Reading Handbook of Land and Water		
Discussing Rocky Shore Island maps		
Investigating the Mountain Model		
	Changing Landforms—Lesson 3.5	5

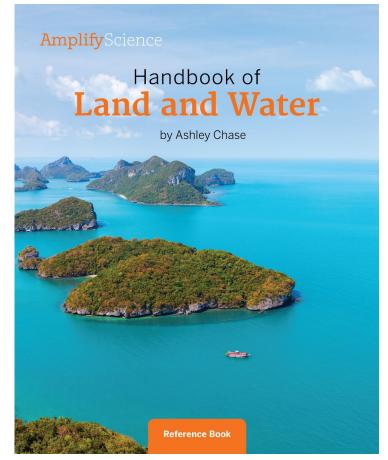
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Turn to page 57 in your notebooks.

# This chart is similar to one we completed at the end of Chapter 2.

Let's review the directions and activities.





One row of the chart asks for **evidence** from Handbook of Land and Water.

You will use the book to complete that row.



#### Evidence for How Small Changes Become Bigger Changes Chart

Directions:

- 1. Review the list of activities on the left side of the chart.
- On the right side of the chart, record the evidence that each activity gave you to support how small changes add up to bigger changes over a long time.

#### Idea: Small changes add up to bigger changes over a long time.

Activity	Evidence that supports the idea that small changes add up to bigger changes over a long time
Reading Handbook of Land and Water	
Discussing Rocky Shore Island maps	
Investigating the Mountain Model	
	Changing Landforms—Lesson 3.5 57

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# **Complete** the chart by recording the evidence we've gathered.

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

#### Evidence for How Small Changes Become Bigger Changes Chart

Directions:

- 1. Review the list of activities on the left side of the chart.
- On the right side of the chart, record the evidence that each activity gave you to support how small changes add up to bigger changes over a long time.

#### Idea: Small changes add up to bigger changes over a long time.

Activity	Evidence that supports the idea that small changes add up to bigger changes over a long time	
Reading Handbook of Land and Water		
Discussing Rocky Shore Island maps		
Investigating the Mountain Model		
	Changing Landforms—Lesson 3.5	

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## 2

Have your **ideas** about how **landforms erode** changed since the beginning of the unit? **Share** how the evidence changed your ideas.

## **Revising** ideas based on **evidence** from investigations is an important part of how scientists learn about the world. It helps them come to better understand how things work and happen in the world.



## Activity 2 Writing Scientific Explanations



### What Is a Scientific Explanation?

1. It answers a question.

2. It is based on science ideas you have learned.

**3.** It is shared with someone.

4. It uses science words.



**Activity 2** 

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

End-of-Unit Writing: Explaining a Big Change to the Cliff

Directions: Write a scientific explanation that answers the question below.

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

The cliff eroded without the director noticing because \_\_\_\_\_

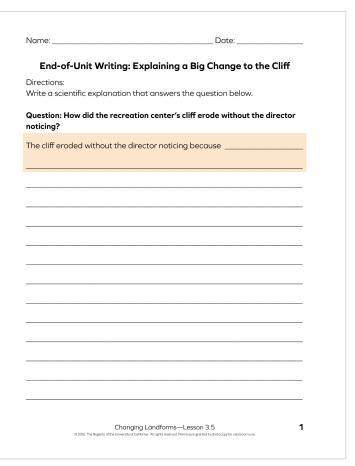
## First, we will **write scientific explanations**.

Let's review the directions and the question.

Changing Landforms—Lesson 3.5
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1

#### Lesson 3.5: End-of-Unit Assessment Part 1





## Write the first sentence of your explanations.

# When scientists write explanations to answer questions, they **support their answers** with **ideas** they learned while **reading** and **investigating**.

There are many places to look for ideas to help you complete your explanations.

Name: \_

#### Evidence for How Small Changes Become Bigger Changes Chart

Date:

Directions:

- 1. Review the list of activities on the left side of the chart.
- On the right side of the chart, record the evidence that each activity gave you to support how small changes add up to bigger changes over a long time.

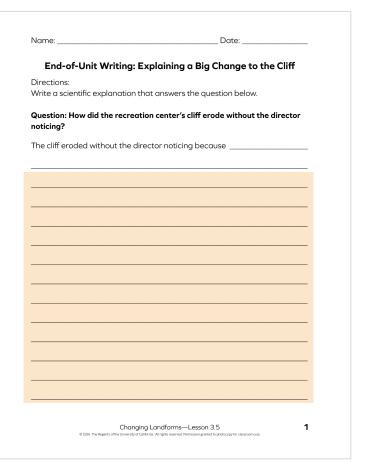
#### Idea: Small changes add up to bigger changes over a long time.

Activity	Evidence that supports the idea that small changes add up to bigger changes over a long time	
Reading Handbook of Land and Water		
Discussing Rocky Shore Island maps		
Investigating the Mountain Model		
	Changing Landforms—Lesson 3.5	

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You can add **supporting ideas** from page 57 of your notebooks as well as from our key concepts on our science wall.

#### Lesson 3.5: End-of-Unit Assessment Part 1





## **Complete** your explanations.

## **Refer** to the guidelines as needed.



### What Is a Scientific Explanation?

- 1. It answers a question.
- 2. It is based on science ideas you have learned.
- 3. It is shared with someone.
- 4. It uses science words.

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## End-of-Unit Assessment

### Work time

Open and skim your End-of-Unit Assessment Guide for lesson 3.5

#### Assessment Guide: Assessing Students' End-of-Unit Explanations and Diagrams About a Big Change to the Cliff

This document provides rubrics for the End-of-Unit Assessment Part 1.

This End-of-Unit Assessment is an opportunity for students to show their growth over the course of the unit. See the 3-D Assessment Objectives (under Printable Resources) for a summary of how summative and formative assessments across the unit, grade and grade band reveal student knowledge and use of the three dimensions to support progress toward the focal Performance Expectations for this unit.

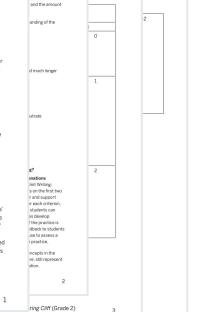
Explanation is an important practice in science—explanations are the accounts that scientists construct for the things that we can observe in the natural world. There are three core criteria for scientific explanations that we use to assess their quality: causal and explanatory. Clear and wellorganized, and grounded in evidence (described below). To support students' understanding of the criteria by which they will be evaluated, the projection and notebook page (page 2) for What Is a Scientific Explanation? provide a list of features of a scientific explanation to which students can refer when constructing explanations and to which you can refer when reviewing explanations. In order to support students in working toward higher-quality explanations, the features presented to students are a ligned with the three criteria that you will use to review students' explanations in this lesson

- Causal and explanatory: Explanations should describe how or why something happens as it does (e.g., why the cliff is smaller than it was before) and should go beyond what is immediately observable (e.g., describing how water breaks off small pieces of rock from the cliff over time).
   Clear and well-oreanized: Explanations should be written with a structure that makes them
- easy to understand and with a level of detail that is a good match for what the expected audience knows.
- Grounded in evidence: Explanations should be consistent with available evidence from investigations and reliable texts, although they do not need to explicitly refer to that evidence.

To assess students' written explanations—as a performance of the practice of constructing explanations and of their understanding of the concepts being explained—we have provided three rubrics. Rubric 1 focuses on the first two criteria (causal and explanatory, clear and well-organized) and is designed to formatively assess the practice of constructing explanations. Rubrics 2 and 3 focus on the third criterion (grounded in evidence) and are designed to summatively assess students' conceptual understanding. The three rubrics include guidance for numeric scoring. Rubric 1 provides guidance for formative feedback to students. Rubric 2 may be used summatively to assess students' understanding of the science ideas encountered in the unit. Rubric 3 may be used summatively to assess students' application of the crosscutting concept of Scale, Proportion, and Quantity as applied to a specific phenomenon. Relevant to all three rubrics. we have provided possible student responses that illustrate how a student's written response to each prompt may meet all three criteria or meet some criteria but not others.

Changing Landforms: The Disappearing Cliff (Grade 2)

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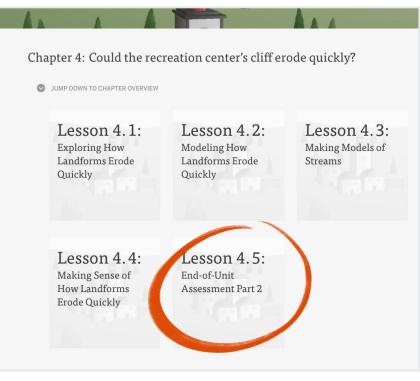
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Amplify

## End of Unit Assessment for Changing Landforms (Part 2) Summative assessment.



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**Grade 2 | Changing Landforms** 

**Lesson 4.5:** End-of-Unit Assessment Part 2

**Amplify**Science

Recreatio Center





15 MIN 🕒



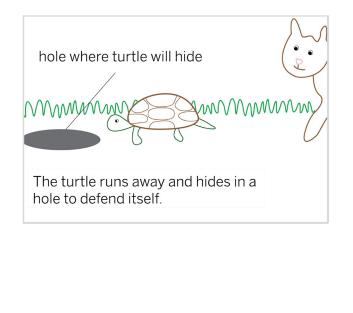
Our ideas about **how landforms erode quickly** have **changed** as we've learned through reading books and investigating with models. The **information** we gathered from models and text can be used as **evidence** to support our ideas and explanations.

When scientists gather more evidence, they often **revise** their ideas based on the new evidence. This means they also revise their diagrams to help **explain** their new ideas.

We're going to look at an example about turtles. This is not to learn about turtles, but to learn about how to **revise ideas** and **diagrams** based on new **evidence**.

We can then revise our ideas about the nearby cliff and decide if what happened there could happen to the recreation center's cliff.

## Question: How does a turtle defend itself against other animals?



This is a **diagram** two students made about how they thought a turtle defends itself against other animals.

Gathering Evidence About Turtles Chart		
Activity	Evidence about how a turtle defends itself	
Reading All About Turtles book	<ul> <li>Turtles have hard shells.</li> <li>Turtles are very slow.</li> <li>Other animals use their sharp teeth and claws to catch turtles.</li> </ul>	
Using a plastic bowl to model a turtle shell	I could not poke a hole through the hard plastic bowl.	
Using a piece of clay	I could poke a hole through the soft clay bowl.	

Changing Landforms—Lesson 4.5

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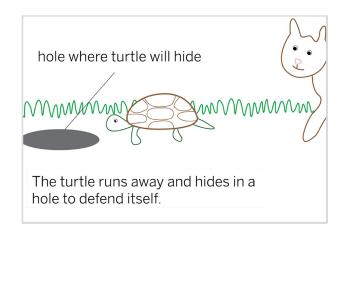
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Turn to page 77 in your notebooks.

The chart on this page is similar to charts we have used to record evidence about landforms, but it's about turtles.

Read it carefully and see which information you would use as evidence.

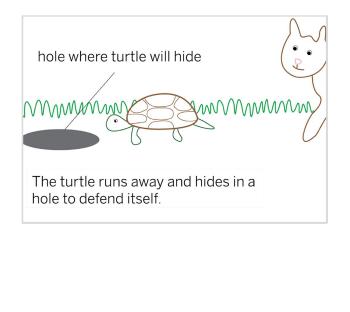
## Question: How does a turtle defend itself against other animals?





**Review** the information on page 77 and **discuss** how you would **revise** this diagram based on the information in the chart.

## Question: How does a turtle defend itself against other animals?

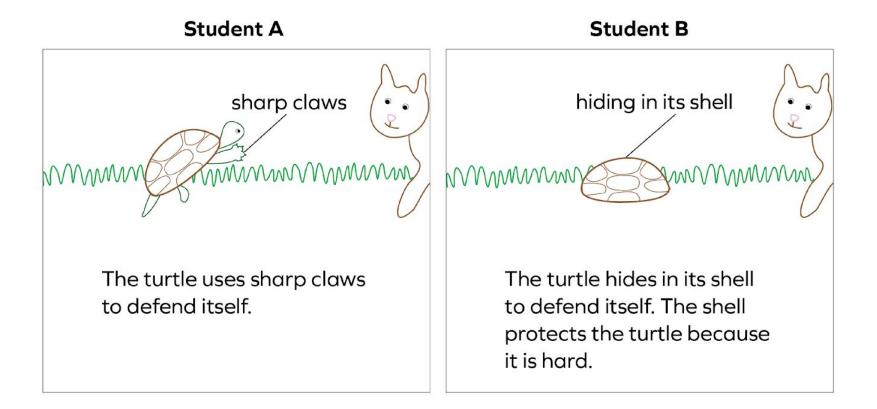


## How would you **revise the diagram**, based on the turtle evidence you just discussed?

## The two students who made the first diagram, Student A and Student B, were asked to make their own diagrams after collecting **evidence** about **turtles**.

## Let's look at and discuss the two new diagrams.

### Question: How does a turtle defend itself against other animals?



## 9

## Why is it important for scientists to **revise their ideas** based on evidence?









We created diagrams of how this cliff could have eroded overnight, but now we have **new ideas** about how this could have happened.

# We now have more information about the **nearby cliff** that might help us think about how it **eroded quickly.**

Some of this information might be useful, and some of it might not be. Our first job will be to see which information is **useful** for explaining why the nearby cliff eroded so quickly.



## New information about the nearby cliff:

- There is a walking path nearby.
- Plants are growing in the area.
- The ocean is at the bottom of the cliff.
- The cliff is made of loose soil and clay.
- The color of the cliff is brown.
- When a person picked up some small pieces of the cliff, the pieces crumbled in the person's hand.

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**Discuss** each piece of information to decide whether it helps us explain how the nearby cliff could erode overnight.

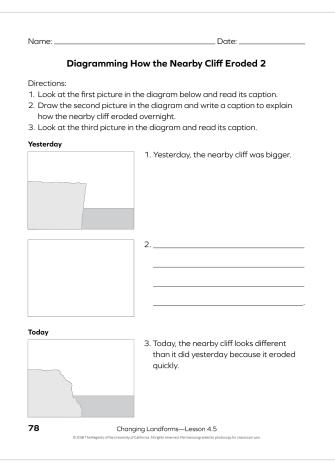
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What **ideas** do you have about the new information?

Support your ideas with what you know about erosion.

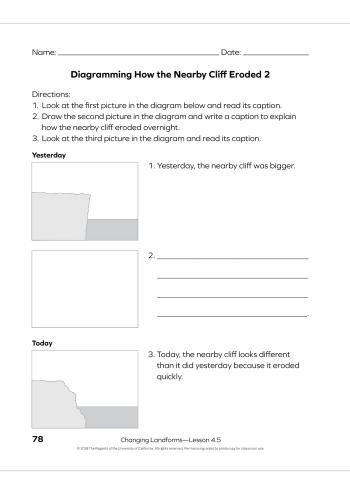
#### Lesson 4.5: End-of-Unit Assessment Part 2



### Turn to page 78 in your notebooks.

# Let's review the directions.

#### Lesson 4.5: End-of-Unit Assessment Part 2

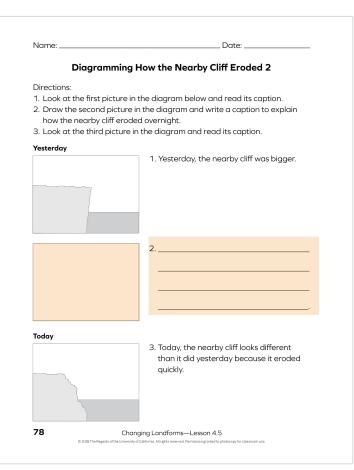


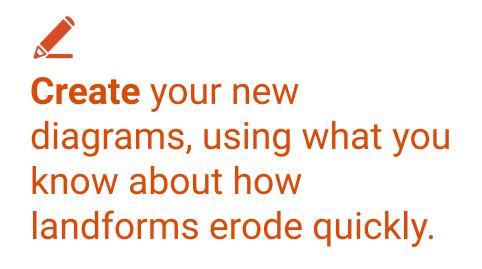


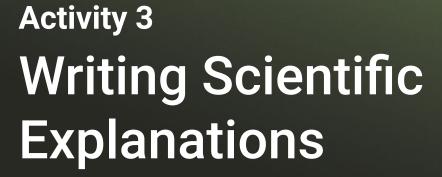
### First, **visualize** how the nearby cliff could erode quickly, based on the evidence we have.

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#### Lesson 4.5: End-of-Unit Assessment Part 2











# We've just discussed and diagrammed ideas about what caused the **nearby cliff** to **erode quickly.**

It is now time to explain to Director Higgins why this happened to the nearby cliff.

Activity	3
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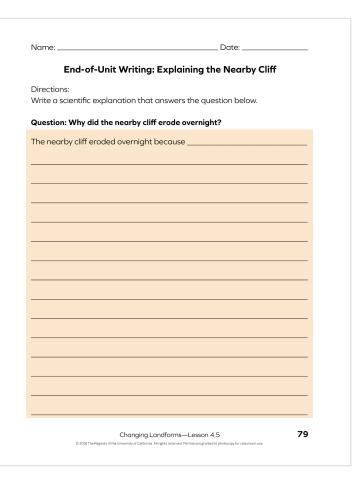
Name:	Date:						
End-of-Unit Writing: Explaining the Nearby Cliff							
Direction							
Write a so	cientific explanation that answers the question below.						
Question	: Why did the nearby cliff erode overnight?						
The near	by cliff eroded overnight because						
	Changing Landforms—Lesson 4.5	79					
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Turn to page 79 in your notebooks.

### Before we begin writing, let's review what a **scientific explanation** is.

### What Is a Scientific Explanation?

- 1. It answers a question.
- 2. It is based on science ideas you have learned.
- **3.** It is shared with someone.
- 4. It uses science words.



Write your explanations. **Use** key concepts, vocabulary, evidence charts, and diagrams to help guide your writing.

We have now explained why the nearby cliff eroded overnight.

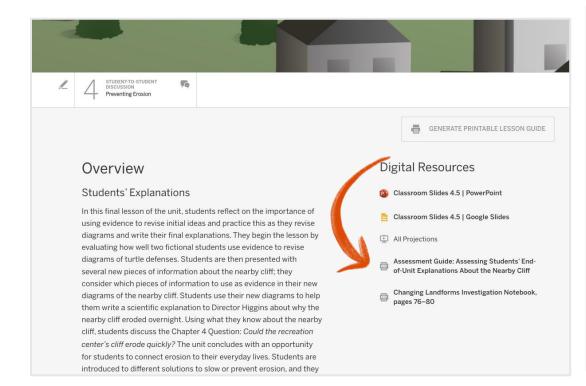
# Do you think the **same thing will happen** to the recreation center's cliff? Why or why not?





10 MIN 🕒

### Locate End of Unit Assessment





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## End-of-Unit Assessment Guide

Work time

Open and skim your End-of-Unit Assessment Guide for lesson 4.5

(-11100)			Recoonce	Who did the nearby cliff ends overnight?	
Guide		For numeric scoring of students' written explanations, a 5 point scale (0–4) is recommended. An explanation that provides an accurate and sufficient response to each of the builted questions in the nuber showld scores 4. A resplantation that does not provide an accurate response to any of			f loose materials such as so when wind or water hit e off, the shape of the cliff f loose materials such as so when wind or water hit
Assessment Guide: Assessing Stude Diagrams About a Big Change to the This document provides rubrics for the End-of-Unit A This End-J Unit Assessment is an opportunity for at the unit. See the 3 O assessment Diocletors (unit how summative and formative assessments across be nowidege and use of the three dimensions to suppo	e Cliff Assessment Part 1. students to show their growth over the course der Partable Resources) for a summary of the unit, grade and grade band reveal student		explanation that does not pro- monstrate	watern accurate response to any of seasonse to any	is when wind or water hit ke off, the shape of the cilif the pieces that ended, ended. Either emphasizes in our off or why toose materials are water, at loose materials are water, that loose materials are expected boose materials and rock we genorest of Stability and foose materials such as her hits them. Not of water
Expectations for this unit. Explanation is an important practice in science—expl construct for the things that we can observe in the ner- scientific explanations that we use to assess their qu comparized, and grounded in evidence (discribed belic criteria by which they will be evaluated, the projection Scientific Explanation Provide a list of teatures of a when constructing explanations and to which you ca- support students in working toward higher-quality qs are aligned with the three criteria that you will use to	tural world. There are three core criteria for ality: causal and explanatory, clear and well- w). To support students' understanding of the and notebook page (page 2) for What is a cientific explanation to which students can refer refer when reviewing explanations, in order to planations, the features presented to students	g of the Practice of Constructing rd, or add to, what was observed yond describing that the nearby changed so quickly? way that will allow the audience b	to explain how the	provides two possible student tory, clear, and grounded. Also s. Specifically the response in the webping fluency with the practice of many is still energing. The response sacribe observations without going arby cliff eroded overright.	e unter the responses of the understanding of erospin of the understanding of erospin of the undforms made of loose
<ul> <li>Causal and explanatory: Explanations should de does (e.g., why the cill is smaller than it was before observable (e.g., describing how water breaks off Olear and well-organized: Explanations should be easy to understand and with a level of detail that knows.</li> <li>Grounded in evidence: Explanations should be investigations and reliable texts, although they do</li> </ul>	re) and should go beyond what is immediately small pieces of rock from the cliff over time), e written with a structure that makes them is a good match for what the expected audience onsistent with available evidence from	with a sentence that answers th describe how he tried to make hi e (Director Higgins)? organized in an appropriate stru ppropriate science vocabulary fr ty describe the phenomenon of e	s explanation cture? om the unit		de 2)
To assess students' written explanations—as a perform explanations and of their understanding of the conce- mbers. Ruber: Loues on the first two or theirs (aura- and is designed to formatively assess the practice of the conceptual understanding of the concerning and conceptual understanding the theory of the concerning understanding of the science ideas anountered in it assess student's application of the crosscutter groun that illustrate how a student's written response to ea- sone criteria but or others.	pts being explained—we have provided three as and explanators (clear and weid-regarated) constructing explanations. Ruhoris 2 and 3 d are designed to summatively assess students' agained for numer scoring. Ruhor 1 provides 2 may be used summatively to assess students unit. Ruhor 3 may be used summatively to expt of Scale. Proportion, and Quantity as applied explores the summatively to possible student responses	I Science Concepts w consistent students' written ex brier may be ued summatively -both disciplinary core ideas and -bith disciplinary core ideas and -bithappearing Citt/ (Grade 2) =theoretay Caterons	o assess students'	817 (Grade 2) 3	

Criteria

Possible student responses

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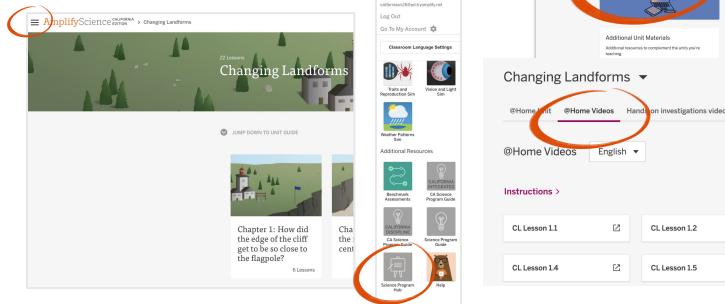
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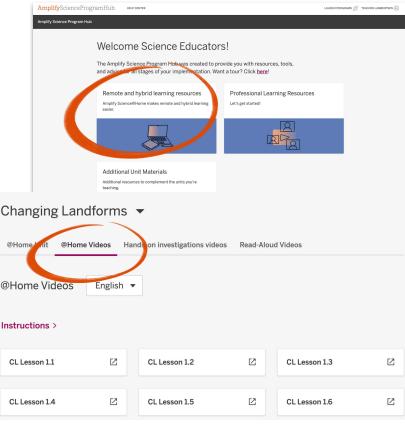
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### Program Hub

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





### LAUSD Micrositehttps://amplify.com/lausd-science



# Welcome to Amplify Science!

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!

### Additional resources

### Welcome, caregivers!

EDREPORTS A

Grades 6-8





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 vear. We are verv excited to





### 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





Amplify Chat



## End of Part 2

