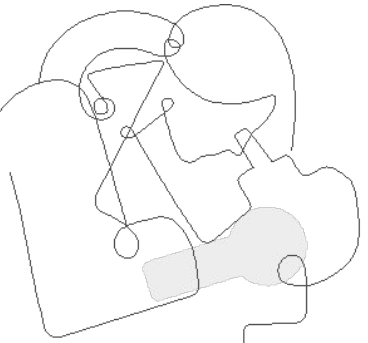
Amplify Science

Unit Internalization / Guided Planning

Grade 1, Unit 1: Animal and Plant Defenses

Part 1



School/District Name: LAUSD
Date: September, 2022
Presented by:

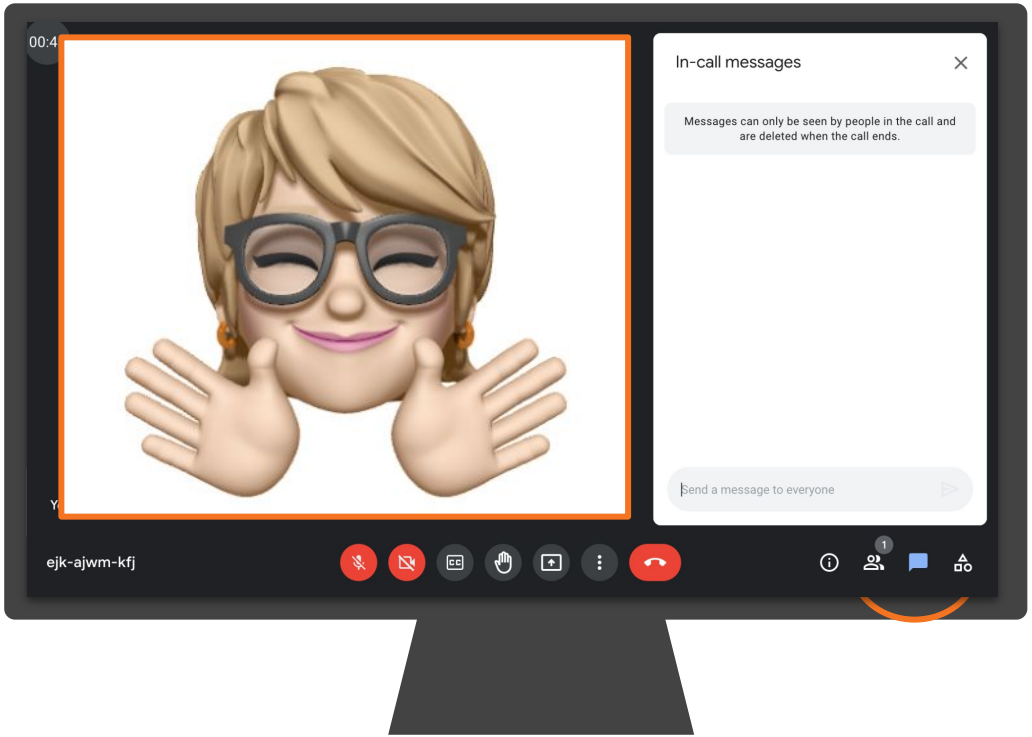
TOP RATED BY EDREPORTS

PLPG CERTIFIED PROVIDER

Ice Breaker!

Who do we have in the room today?

- **Question 1:** Which aspects of implementing the Amplify Science standard curriculum has been the most successful?
- **Question 2:** Which aspects have been the most challenging?



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.

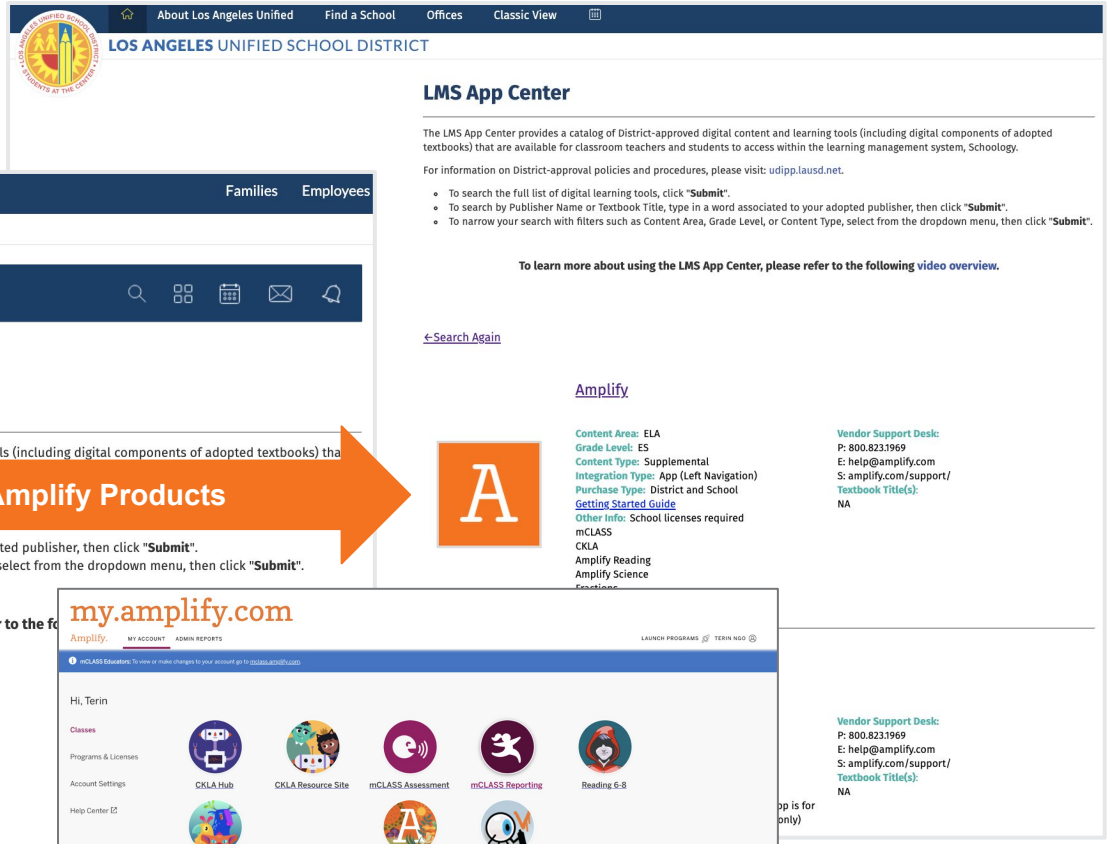
We share your goal of **inspiring all students to think deeply, creatively, and for themselves.**

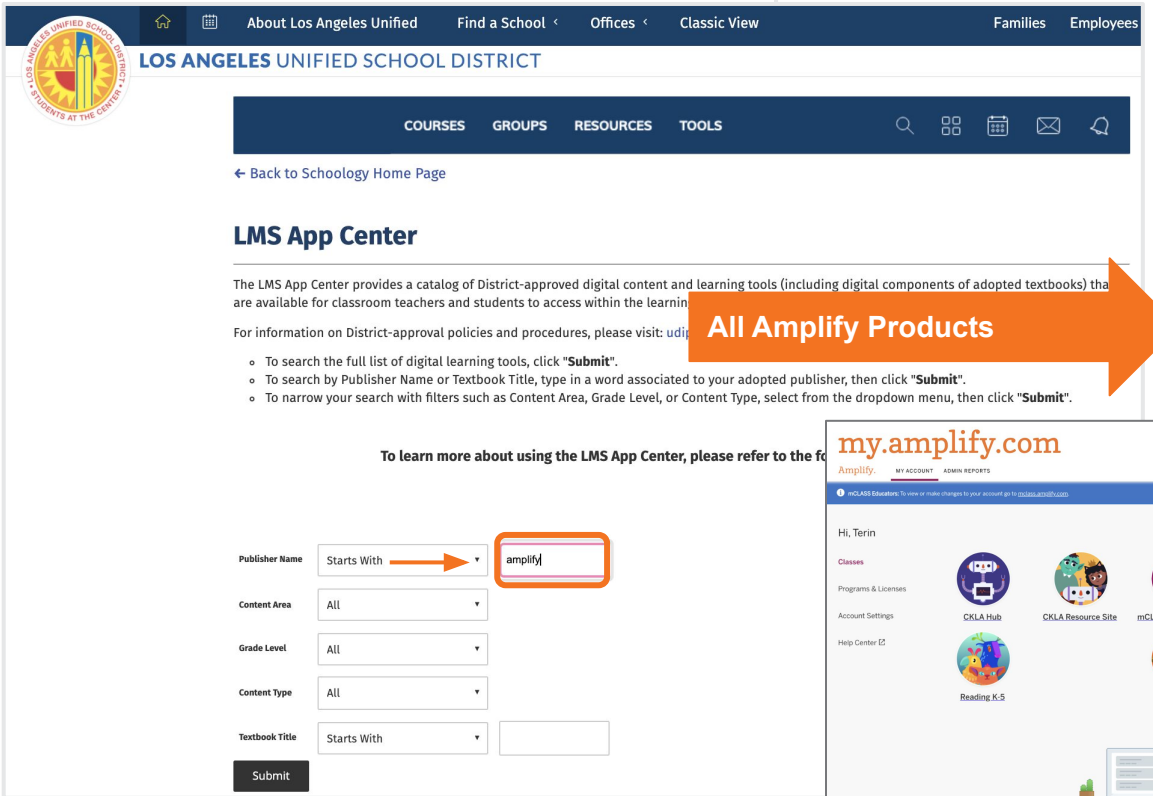
Sincerely,
Amplify

Norms: Establishing a culture of learners

- **Take risks:** Ask any questions, provide any answers.
- **Participate:** Share your thinking, participate in discussion and reflection.
- **Be fully present:** Unplug and immerse yourself in the moment.
- **Physical needs:** Stand up, get water, take breaks.

Schoology





All Amplify Products

Join Amplify Science Schoology Group

To join Amplify Science Schoology 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

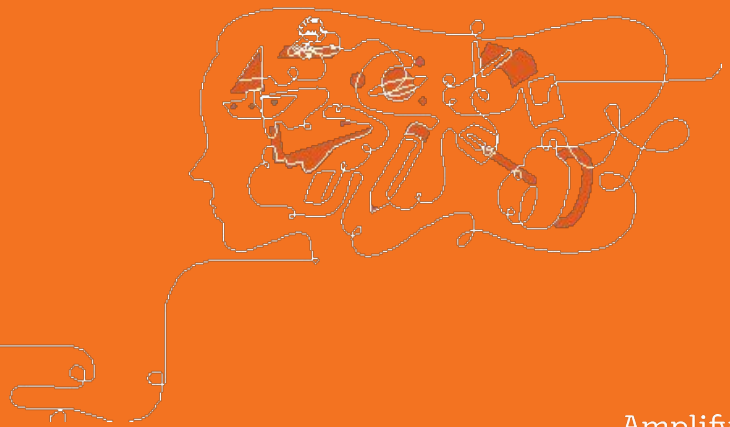
2 = Uncomfortable

3 = Mild

4 = Comfortable

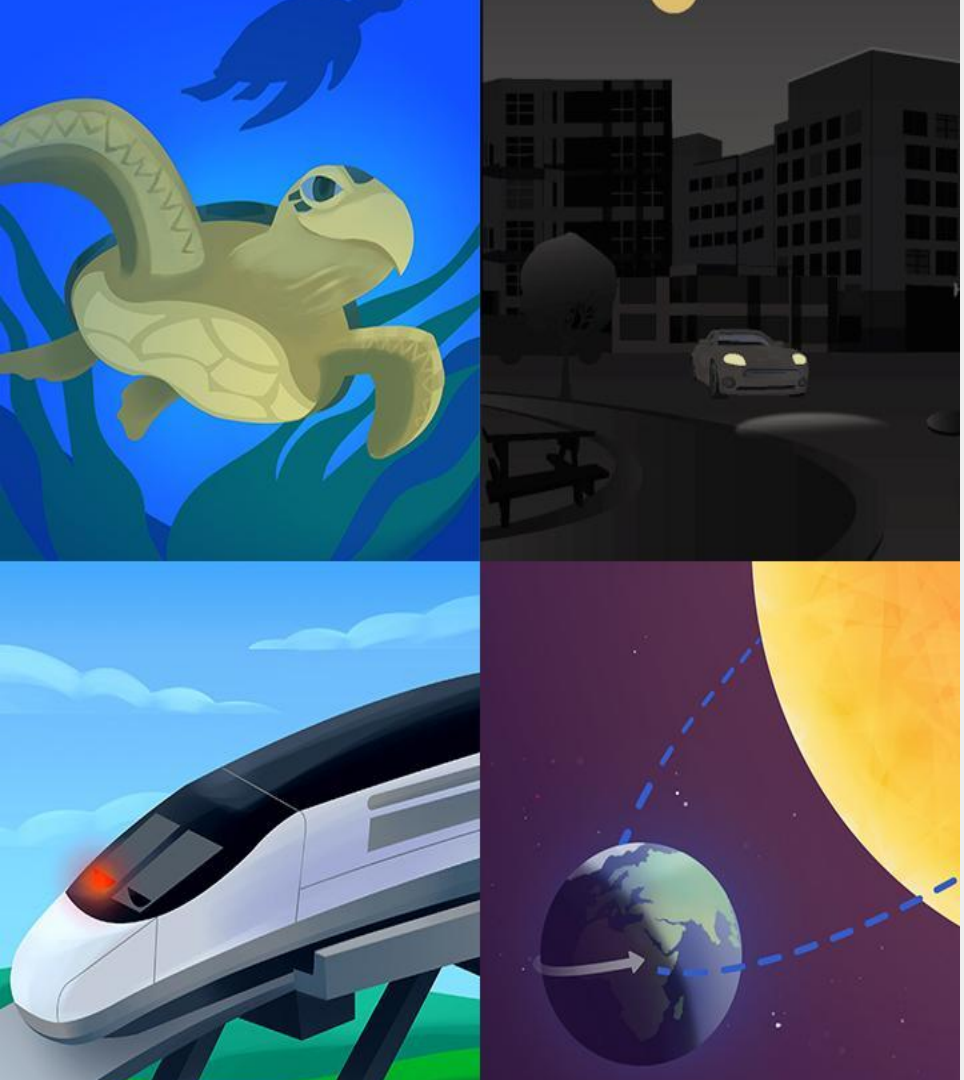
5 = Extremely Comfortable

Part 1



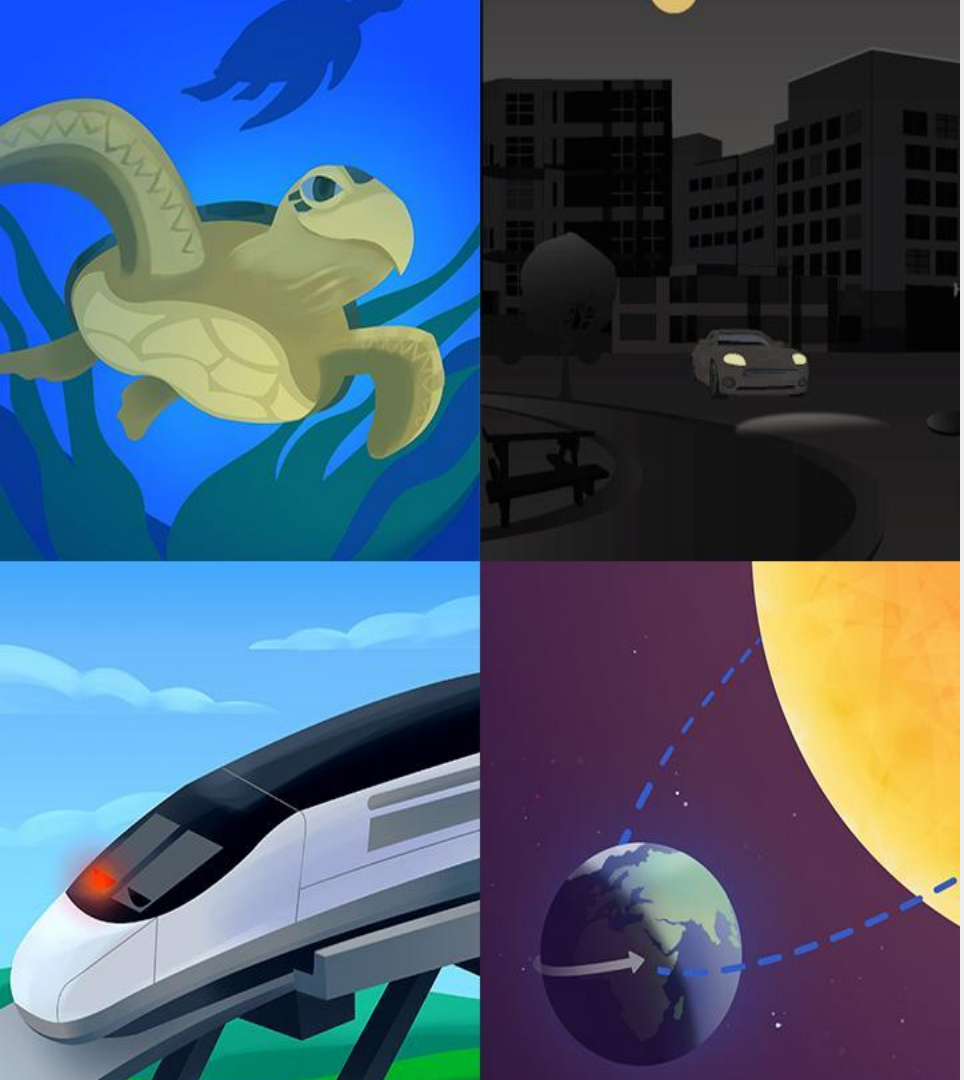
Overarching goals

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



Plan for the day: Part 1

- Introduction and Framing
- Phenomenon-based Instruction
- Unit Internalization
- Additional Resources
- Closing



Plan for the day: Part 1

- **Introduction and Framing**
- Phenomenon-based Instruction
- Unit Internalization
- Additional Resources
- Closing

THE LAWRENCE HALL OF SCIENCE
UNIVERSITY OF CALIFORNIA, BERKELEY

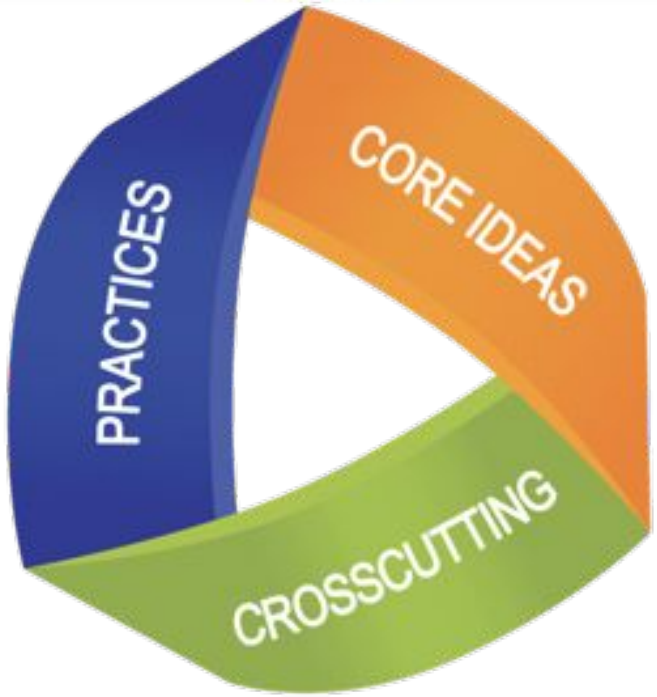
+ Amplify.

Amplify Science

Three dimensional learning

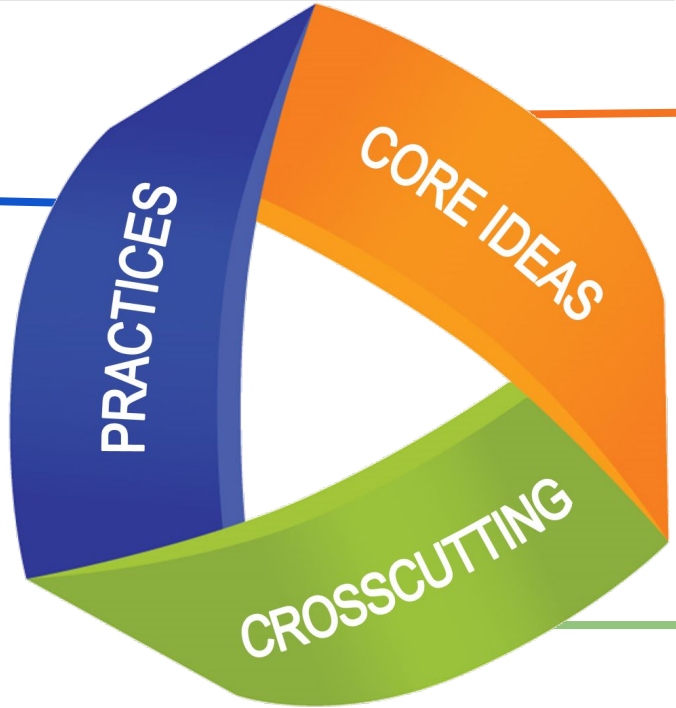
Evaluate your knowledge

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



Figuring out Phenomena

Using 3-D teaching and learning



What scientists do
Science and Engineering Practices

What scientists want to know
Disciplinary Core Ideas

How scientists think
Crosscutting Concepts

Three-dimensional learning

Reflection

In the video, how did students engage in three-dimensional learning to think like scientists?

Lesson 3.3
Students further investigate seed dispersal by analyzing the number of droppings and the number of seeds per dropping that are transported to places where seeds can get what they need to grow (scale, proportion, and quantity).

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 K-1 are 45 minutes long

Year at a Glance: Grade 1

Animal and Plant Defenses

Domain: Life Science

Unit type: Modeling

Student role: Marine Scientist

Light and Sound

Domain: Physical Science

Unit type: Engineering Design

Student role: Light and Sound Engineer

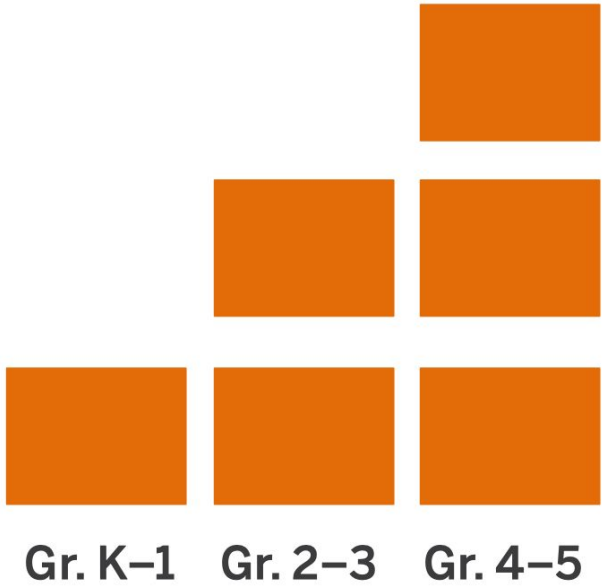
Spinning Earth

Domain: Earth and Space Science

Unit type: Investigation

Student role: Sky Scientist

What are the digital components of Amplify Science Elementary?



Student Simulations

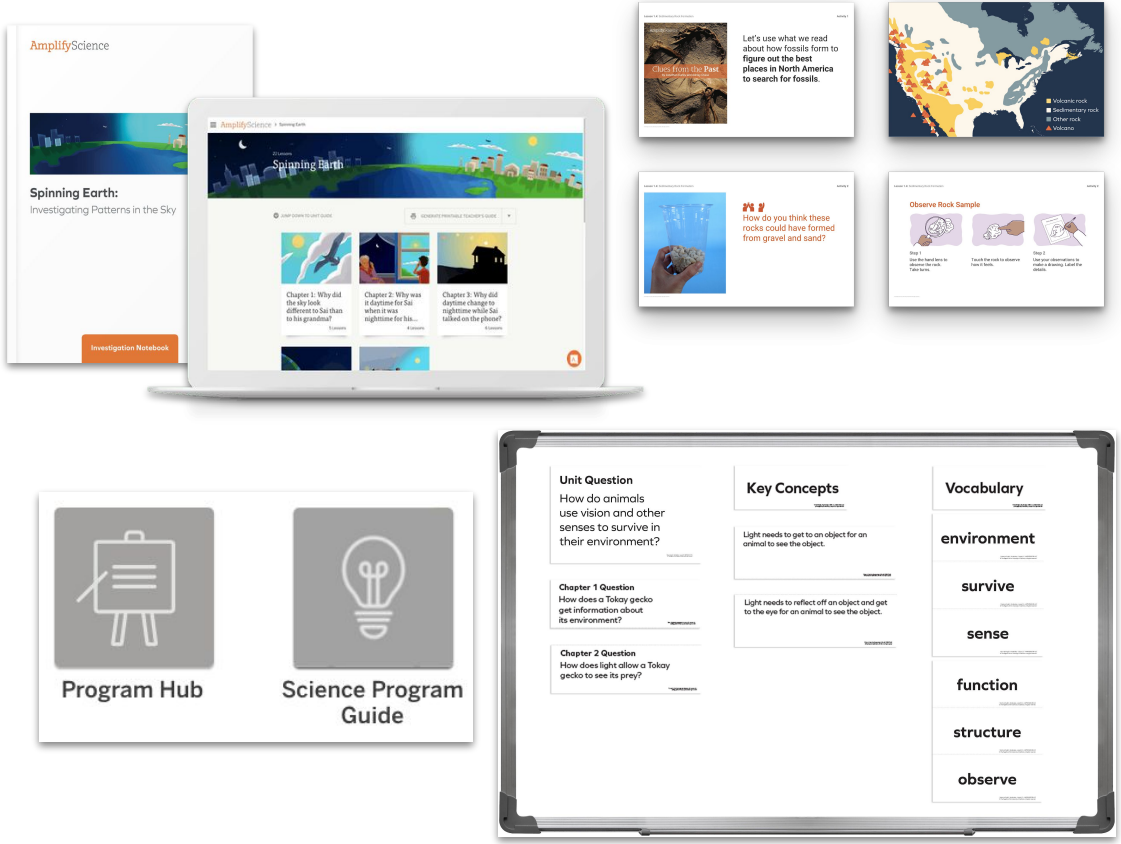
Student Science Practice Tools
(sorting tool, diagramming tool, modeling tool, data tool)

Teacher's Guide
(Online digital books for students)

K-5 Program components

Teacher materials

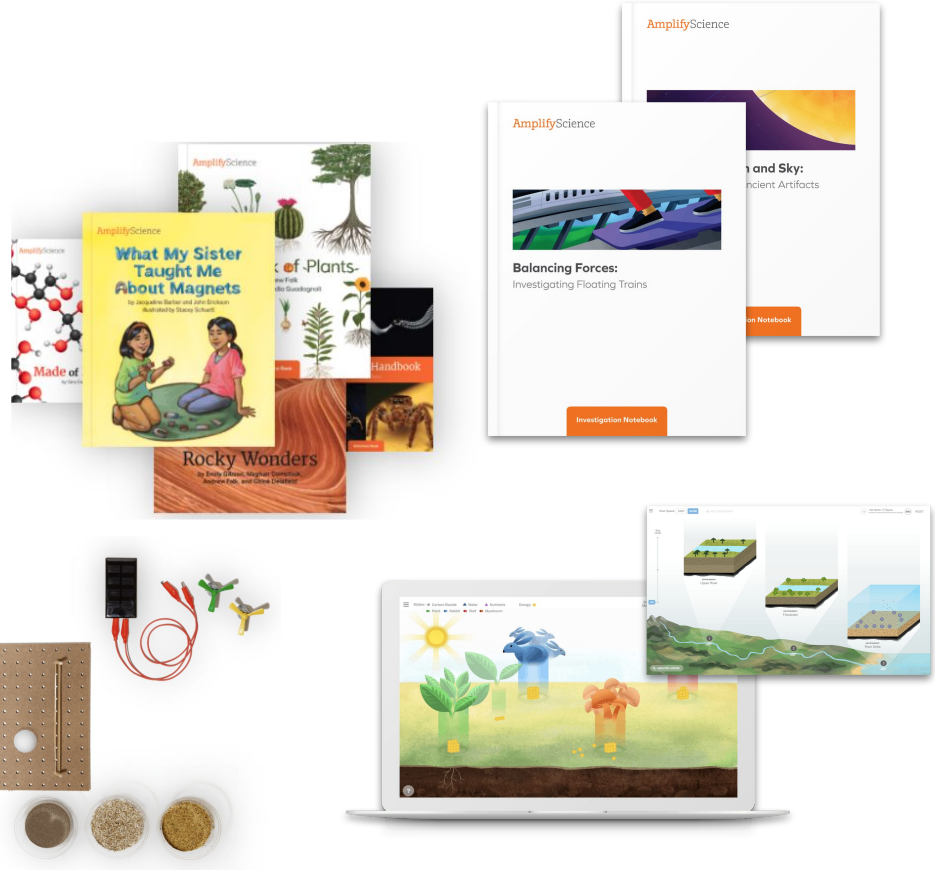
- Teacher's Guide (print and digital)
- Classroom Slides
- Classroom wall materials
- Embedded assessments
- Program Guide
- Program Hub
- Amplify Help Site



K-5 Program components

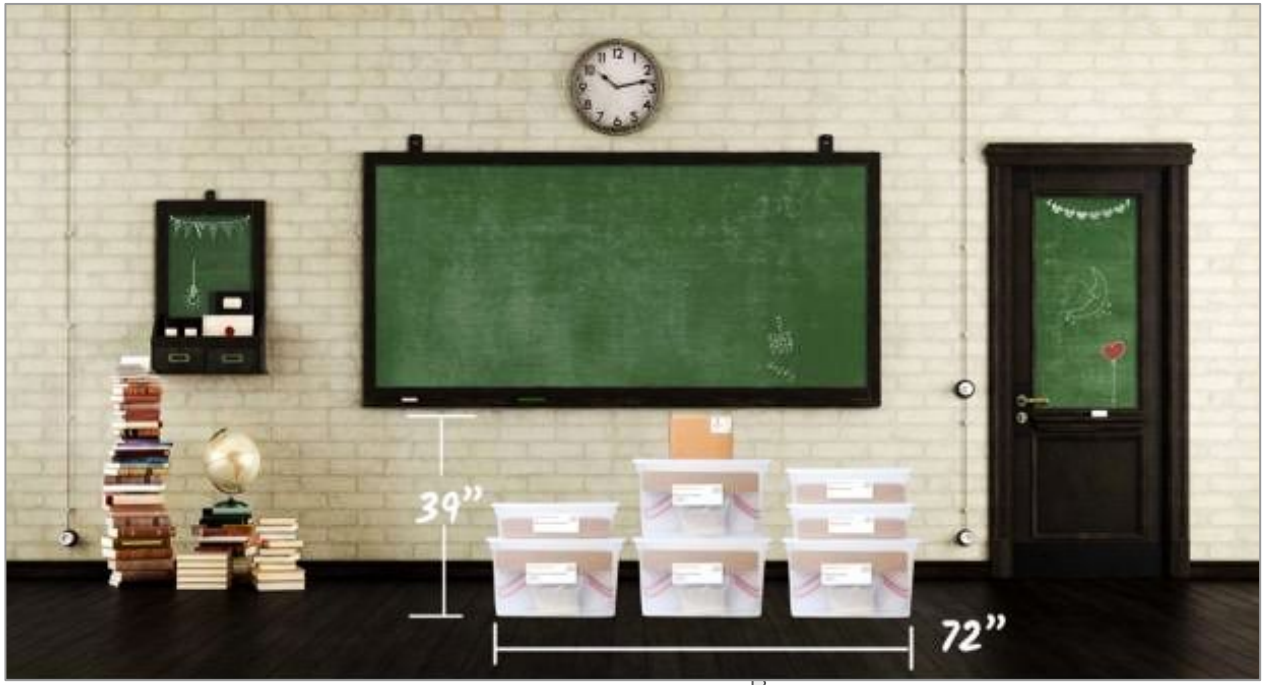
Student materials

- Hands-on materials
- Investigation Notebooks (print and digital)
- Student books
- Digital Applications



Prepping Hands-On Materials for the Unit

Microsite: Unit 1, K-2 Lesson Prep Videos



Classroom Kits

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

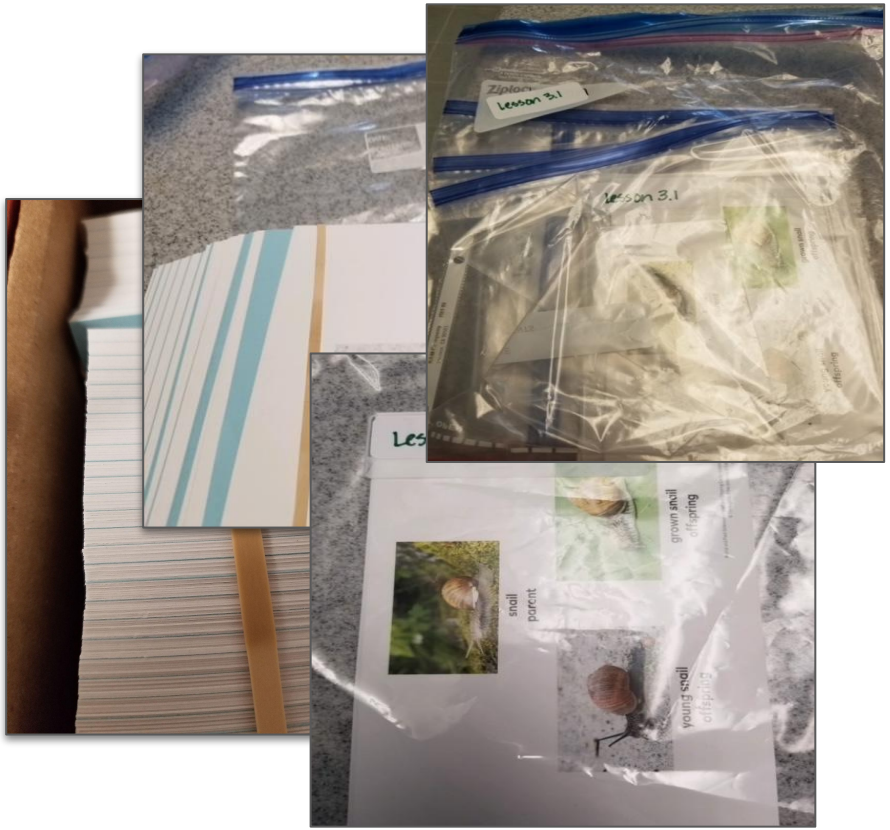
Unpacking the Kit

- Pull out the unit question, key concepts and vocabulary materials.
- Place them on the top of the table or bookcase below your science board
- Take books out of kit and place in the bookcase or on the table. (Always collect books after each 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



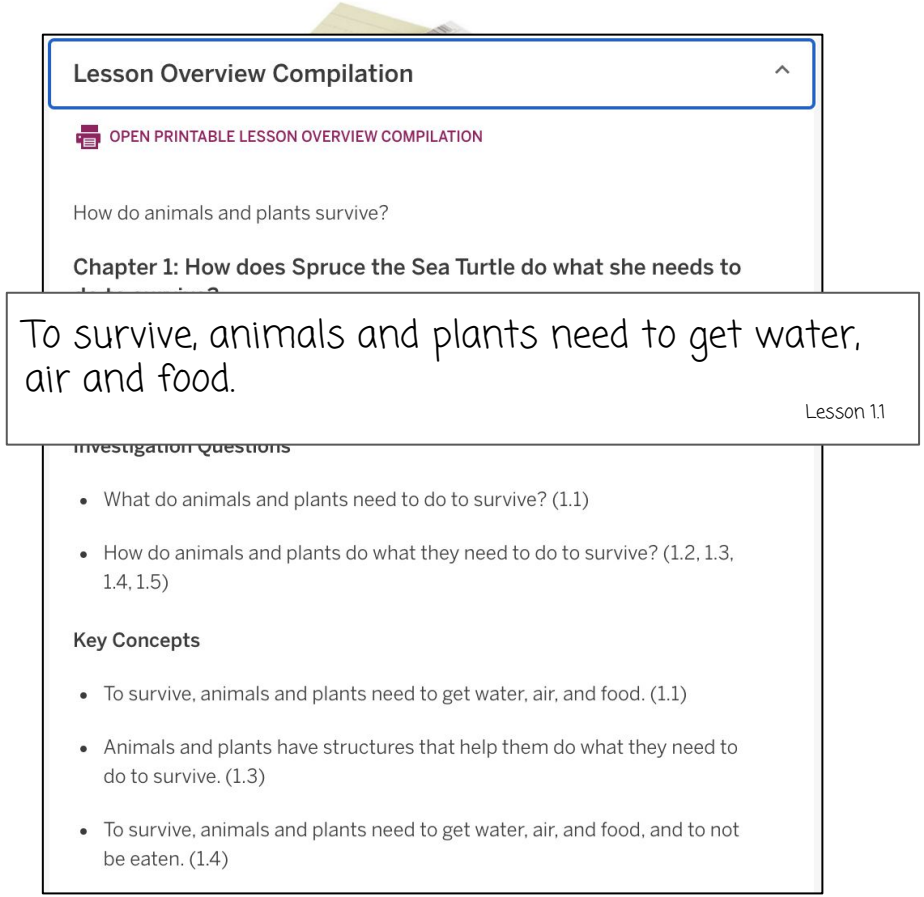
Grades K and 1

Key Concepts are not printed on card stock

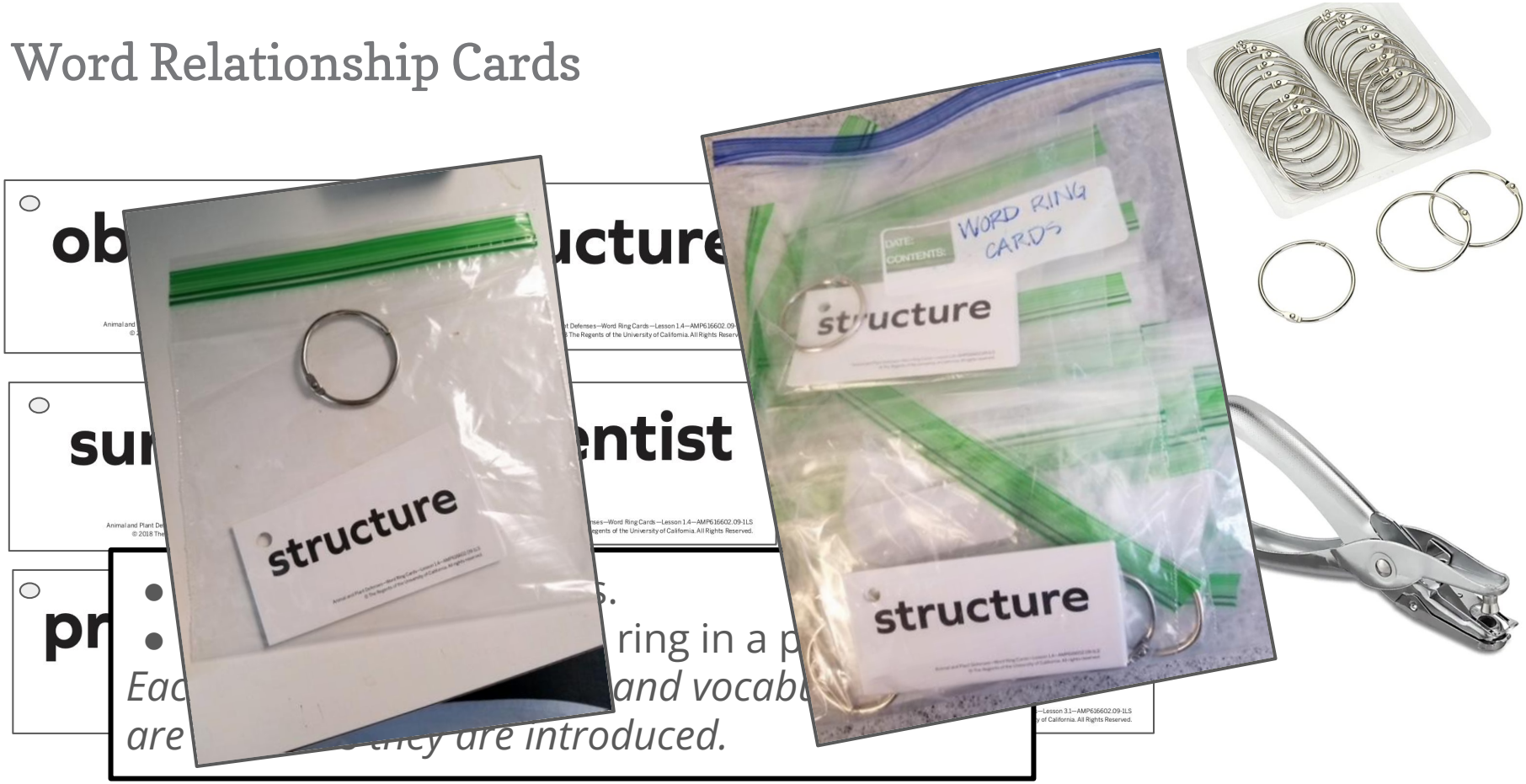
Lawrence Hall of Science felt the key understandings should be developed with students.

Two Suggestions:

1. Have blank sentence strips ready to use when developing the key concepts to add to the classroom wall
2. Write out key concepts on sentence strips. Label with the lesson and put them with the chapter questions. (*Note: they can be found in the lesson overview compilation)*



Word Relationship Cards



Amplify.

LAUSD Microsite- https://amplify.com/lausd-science

Welcome to Amplify Science!

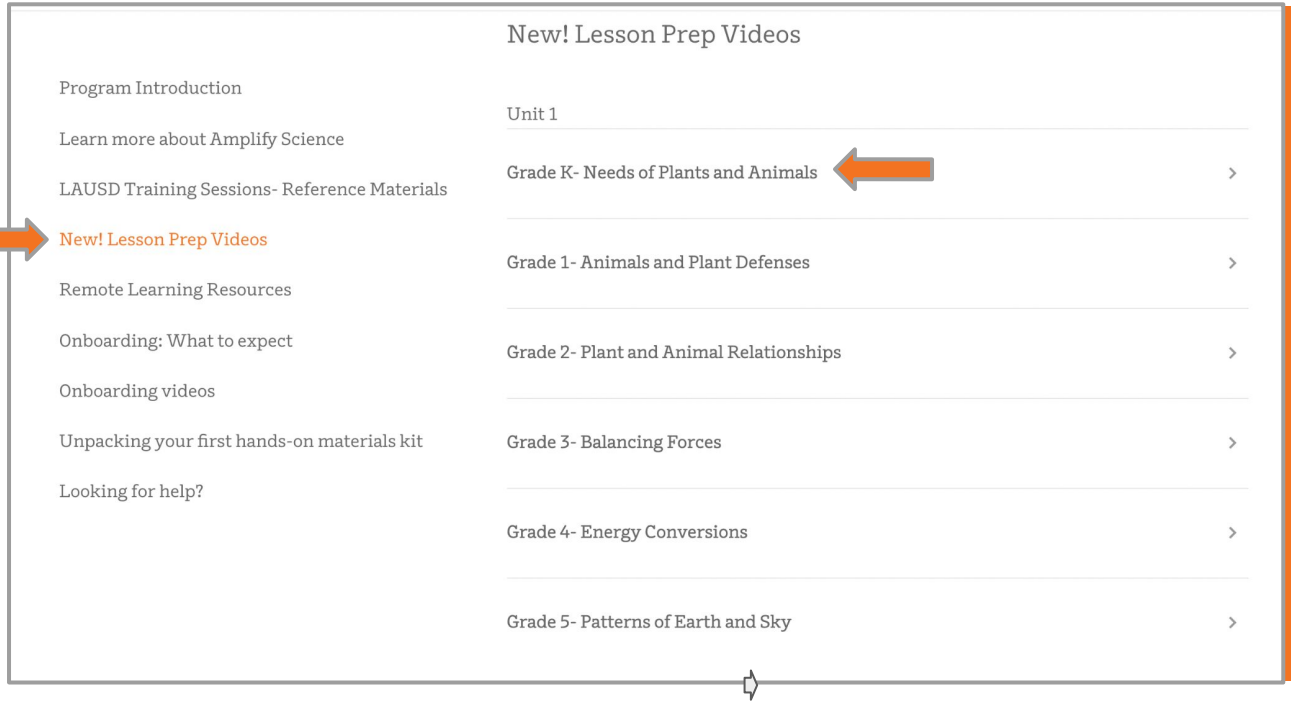
This site contains supporting resources designed for the LAUSD Amplify Science adoption for grades TK–8.

- 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!

Microsite: Unit 1, K-2 Lesson Prep Videos

Classroom kits



Classroom Kits

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

Hands On Material Organization

Directions

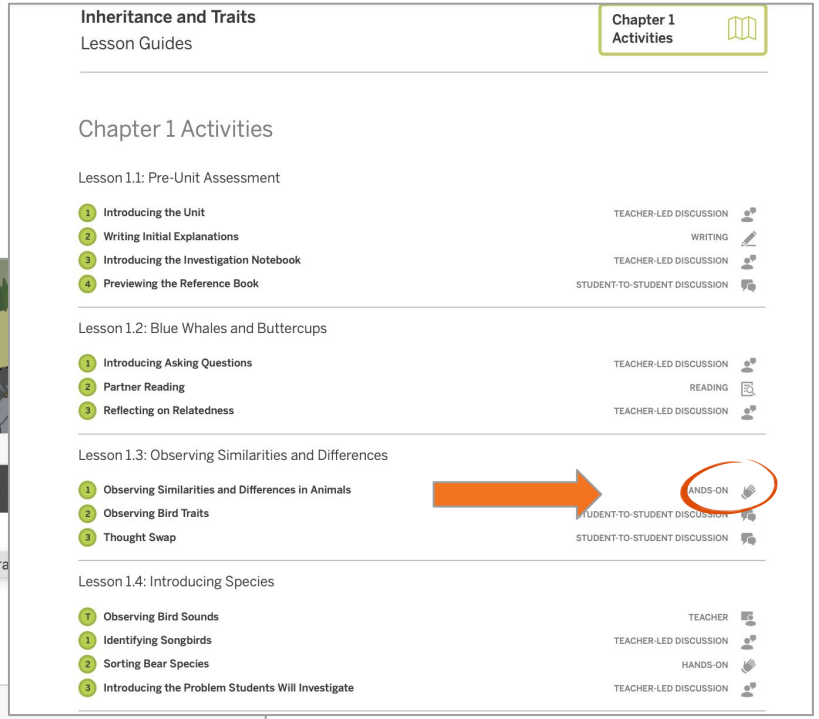
1. Open the Digital Lesson Guides Only page 7 from the Unit Landing page or go the Print TE to page 31. (Chapter 1 Activities)
2. Look for the lessons with Hands On.

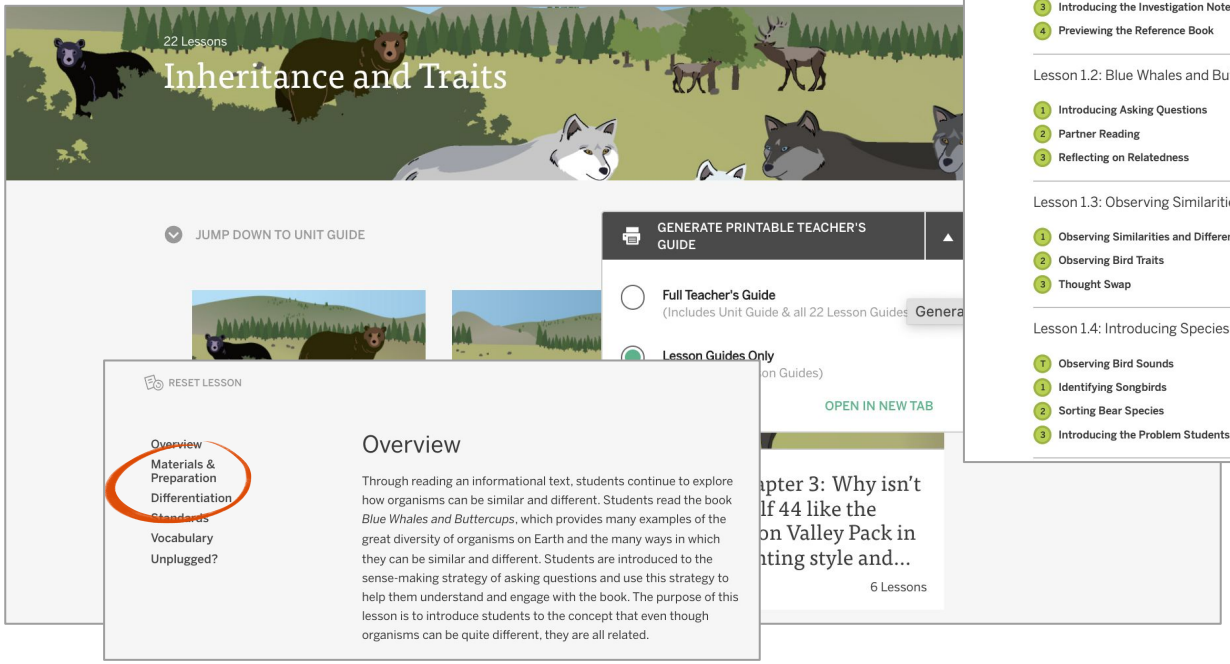
HANDS-ON

3. Note in the table below.
4. Review the materials and preparation to determine if it can be prepared prior to the lesson or on the day of the lesson.
5. Use this same procedure for each Chapter. (Go to the Chapter Activities Contents)

Chapter/Lesson	Activity	Prep Prior	Prep Day of	What to do	
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 Materials Grade 2*

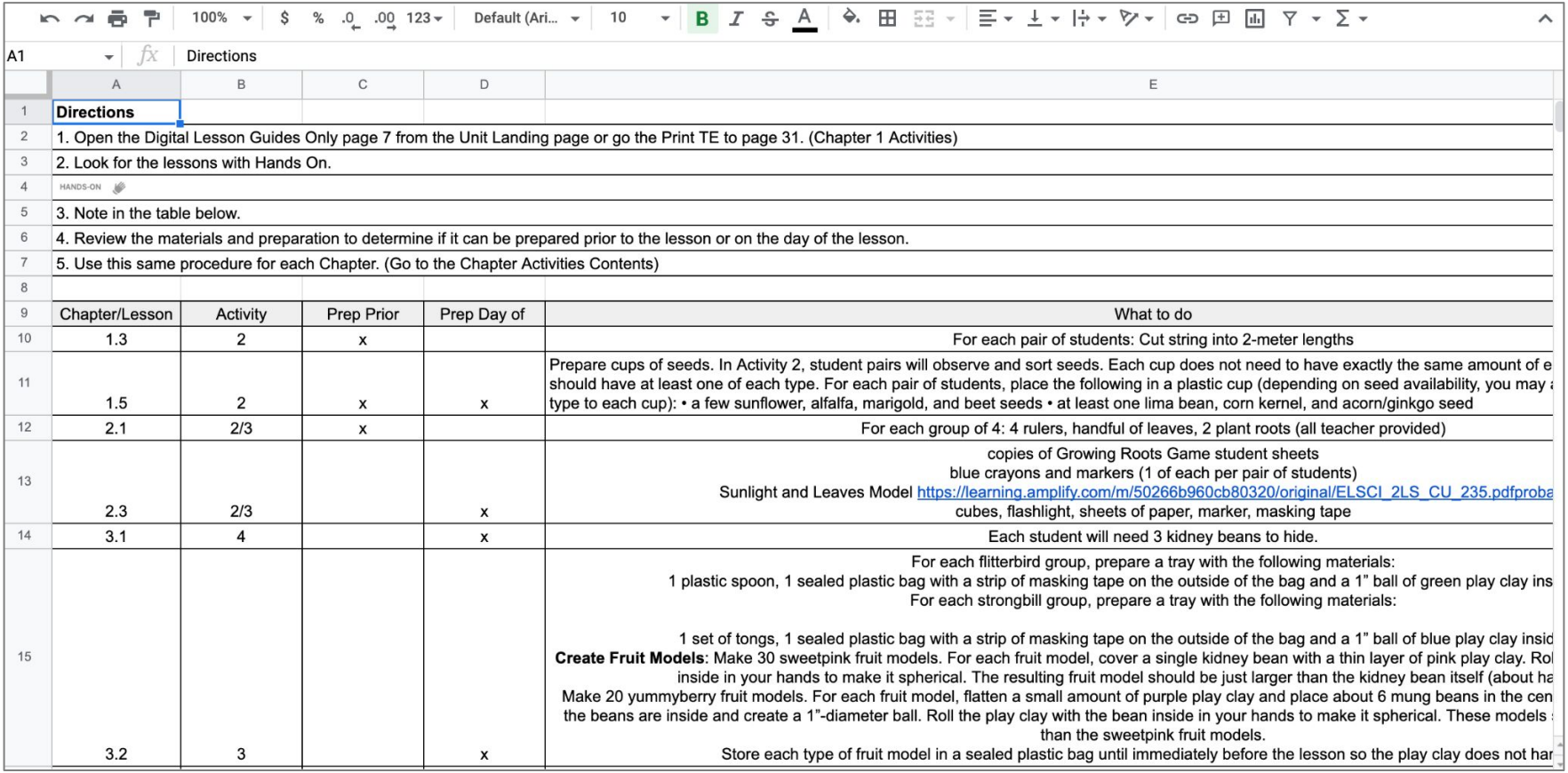
- Open Your **Lesson Guides Only**
- Start with **Chapter 1** and look for the **hands icon**
- Go into the lesson **materials and prep**





Hands On Material Organization

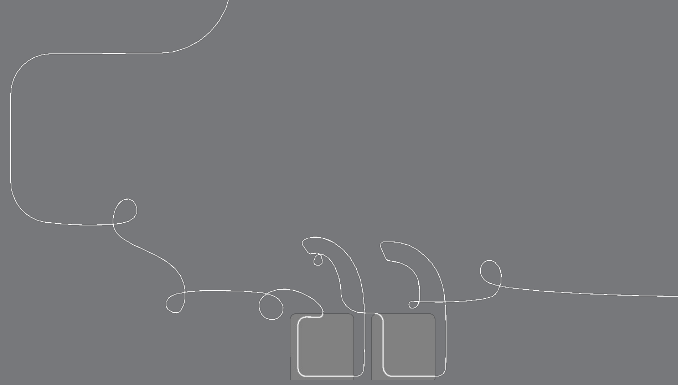
Completed for Animal and Plant Defenses

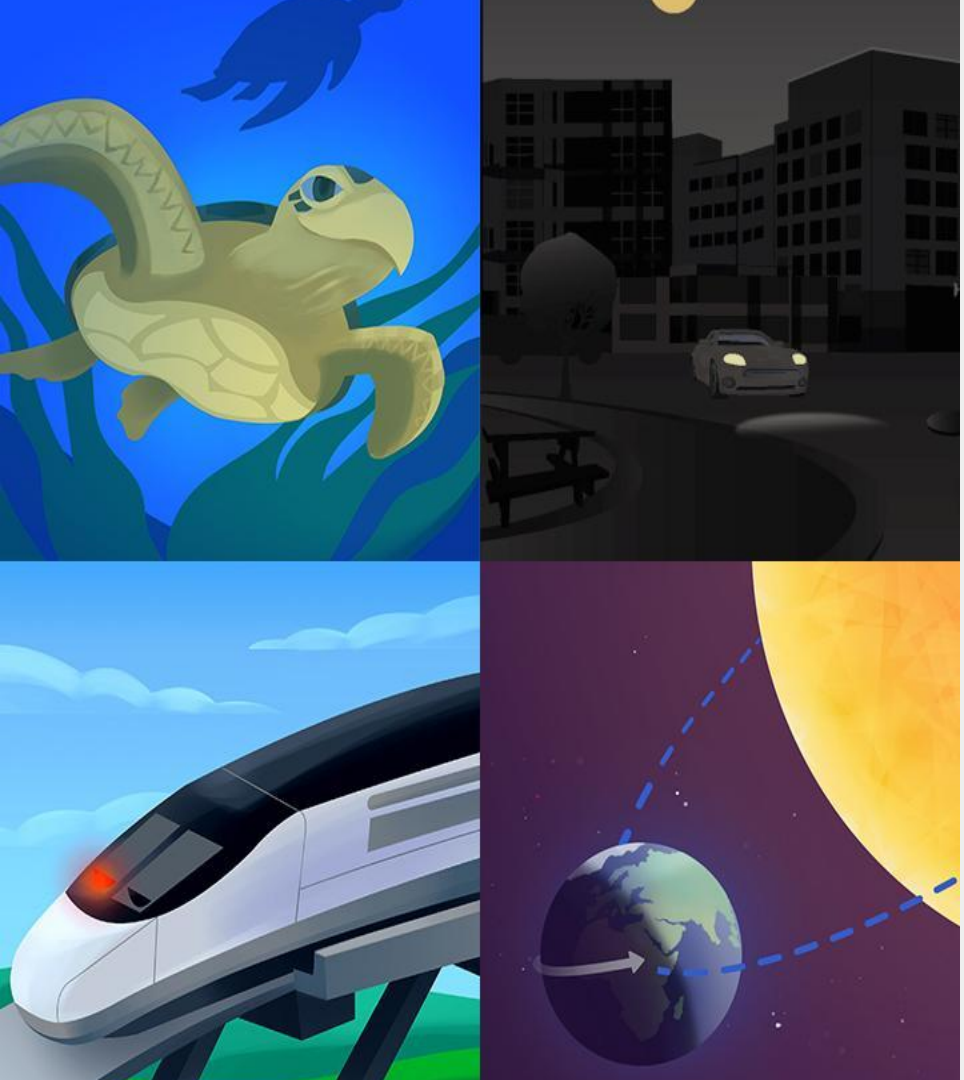


A1 | Directions

	A	B	C	D	E
1	**Directions**				
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	1.3	2	x		For each pair of students: Cut string into 2-meter lengths
11	1.5	2	x	x	Prepare cups of seeds. In Activity 2, student pairs will observe and sort seeds. Each cup does not need to have exactly the same amount of e should have at least one of each type. For each pair of students, place the following in a plastic cup (depending on seed availability, you may a type to each cup): • a few sunflower, alfalfa, marigold, and beet seeds • at least one lima bean, corn kernel, and acorn/ginkgo seed
12	2.1	2/3	x		For each group of 4: 4 rulers, handful of leaves, 2 plant roots (all teacher provided)
13	2.3	2/3		x	copies of Growing Roots Game student sheets blue crayons and markers (1 of each per pair of students) Sunlight and Leaves Model https://learning.amplify.com/m/50266b960cb80320/original/ELSCI_2LS_CU_235.pdfproba cubes, flashlight, sheets of paper, marker, masking tape
14	3.1	4		x	Each student will need 3 kidney beans to hide.
15	3.2	3		x	For each flitterbird group, prepare a tray with the following materials: 1 plastic spoon, 1 sealed plastic bag with a strip of masking tape on the outside of the bag and a 1" ball of green play clay ins For each strongbill group, prepare a tray with the following materials: 1 set of tongs, 1 sealed plastic bag with a strip of masking tape on the outside of the bag and a 1" ball of blue play clay insid **Create Fruit Models**: Make 30 sweetpink fruit models. For each fruit model, cover a single kidney bean with a thin layer of pink play clay. Rol inside in your hands to make it spherical. The resulting fruit model should be just larger than the kidney bean itself (about ha Make 20 yummyberry fruit models. For each fruit model, flatten a small amount of purple play clay and place about 6 mung beans in the cen the beans are inside and create a 1"-diameter ball. Roll the play clay with the bean inside in your hands to make it spherical. These models than the sweetpink fruit models. Store each type of fruit model in a sealed plastic bag until immediately before the lesson so the play clay does not har

Questions?





Plan for the day: Part 1

- Introduction and Framing
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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?

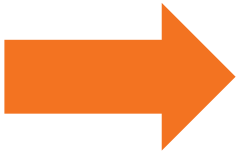
Topic-based	Phenomenon-based
Chemical reactions	There's a reddish-brown substance in a town's tap water.
Electric circuits	A flashlight won't turn on, even though it used to work.
Natural selection	A population of newts has become more poisonous over time.

Comparing topics and phenomena

A shift in science instruction

from learning about

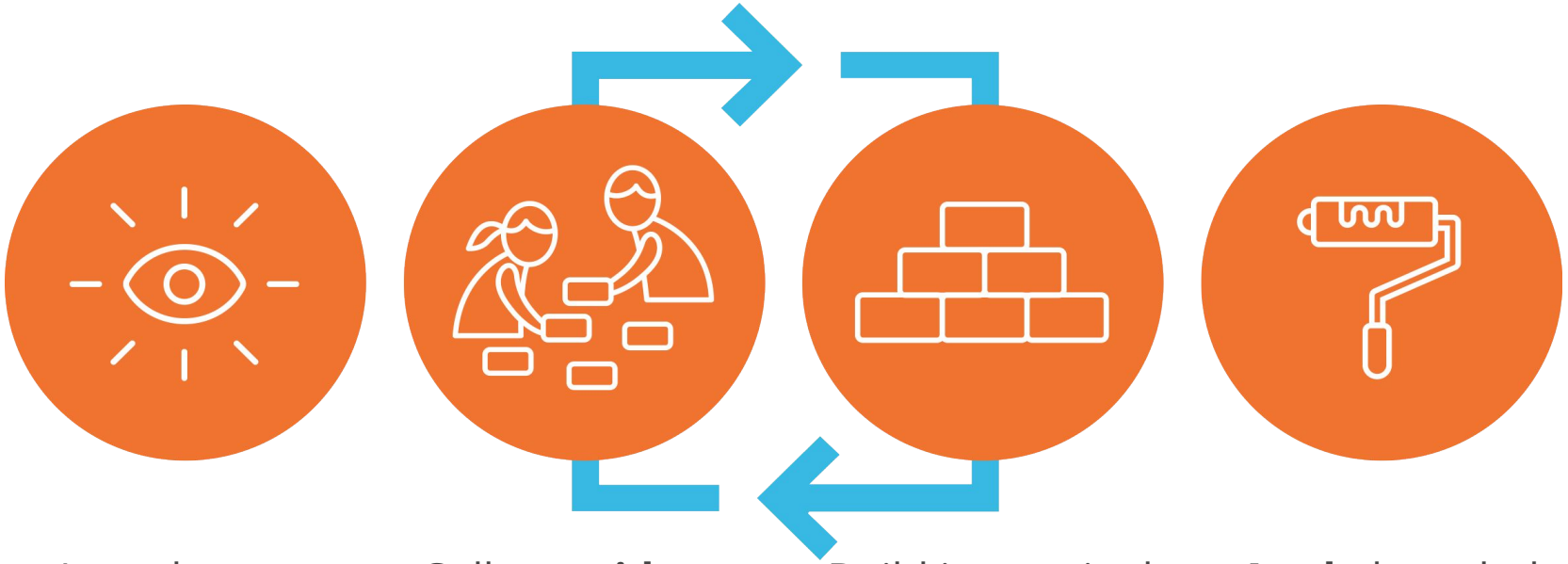
(like a student)



to figuring out

(like a scientist)

Amplify Science Approach



Introduce a **phenomenon** and a related problem

Collect **evidence** from multiple sources

Build increasingly complex **explanations**

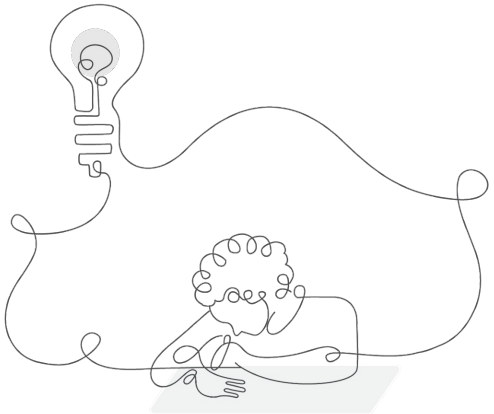
Apply knowledge to solve a different problem

Previewing the unit

Introducing the phenomenon

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

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



We are going to be **scientists** and investigate animals and plants.

First, we will look at a picture and talk about what we see.

What do you know about **aquariums**?

Scientists ask questions to learn about the world. They ask questions about animals and plants.

We will ask questions to learn more about animals and plants, too.

What **questions** do you have about the animals and plants that live in the aquarium?

Unit Question

How do animals and plants survive?

Animal and Plant Defenses Classroom Wall

Unit Question
How do animals and plants survive?

Key Concepts

Vocabulary

Vocabulary

scientist

someone who investigates the natural world

Animal and Plant Defenses Classroom Wall

Unit Question
How do animals and plants survive?

Chapter 1 Question
How does Spruce the Sea Turtle do what she needs to do to survive?

Key Concepts

Vocabulary

scientist

This animal is a **sea turtle**.

A sea turtle named **Spruce** lives at the aquarium.

Soon people from the aquarium will take Spruce **back to the ocean**.

They will let Spruce go.

We are aquarium scientists.

What kind of **questions** do you have **about Spruce living in the ocean?**

Kids who visit the aquarium are worried that Spruce might not survive in the ocean.

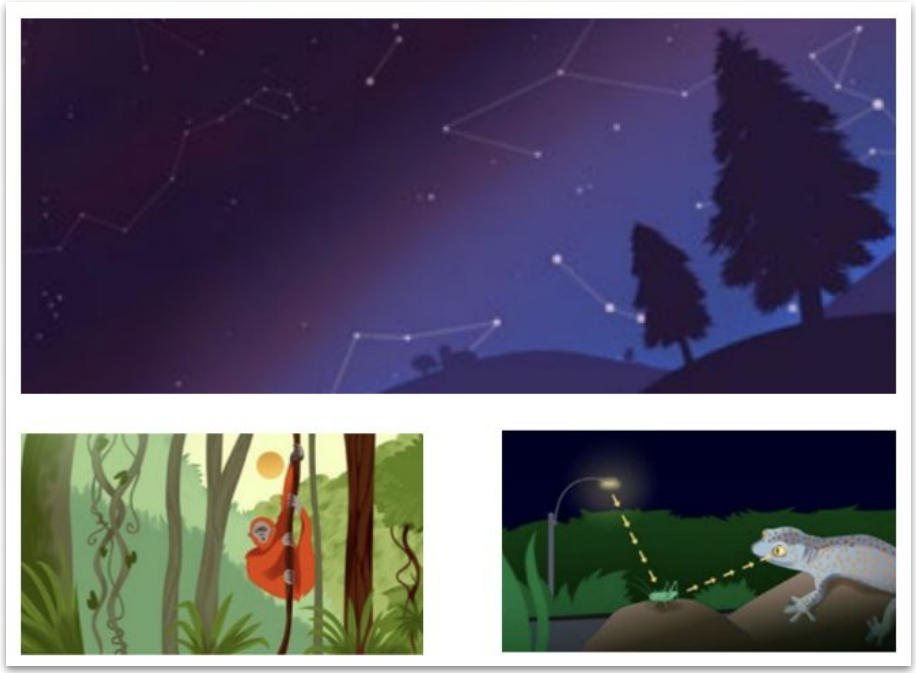
The director of the aquarium needs our help to explain to the kids **how Spruce will survive, or stay alive,** once she is back in the ocean.

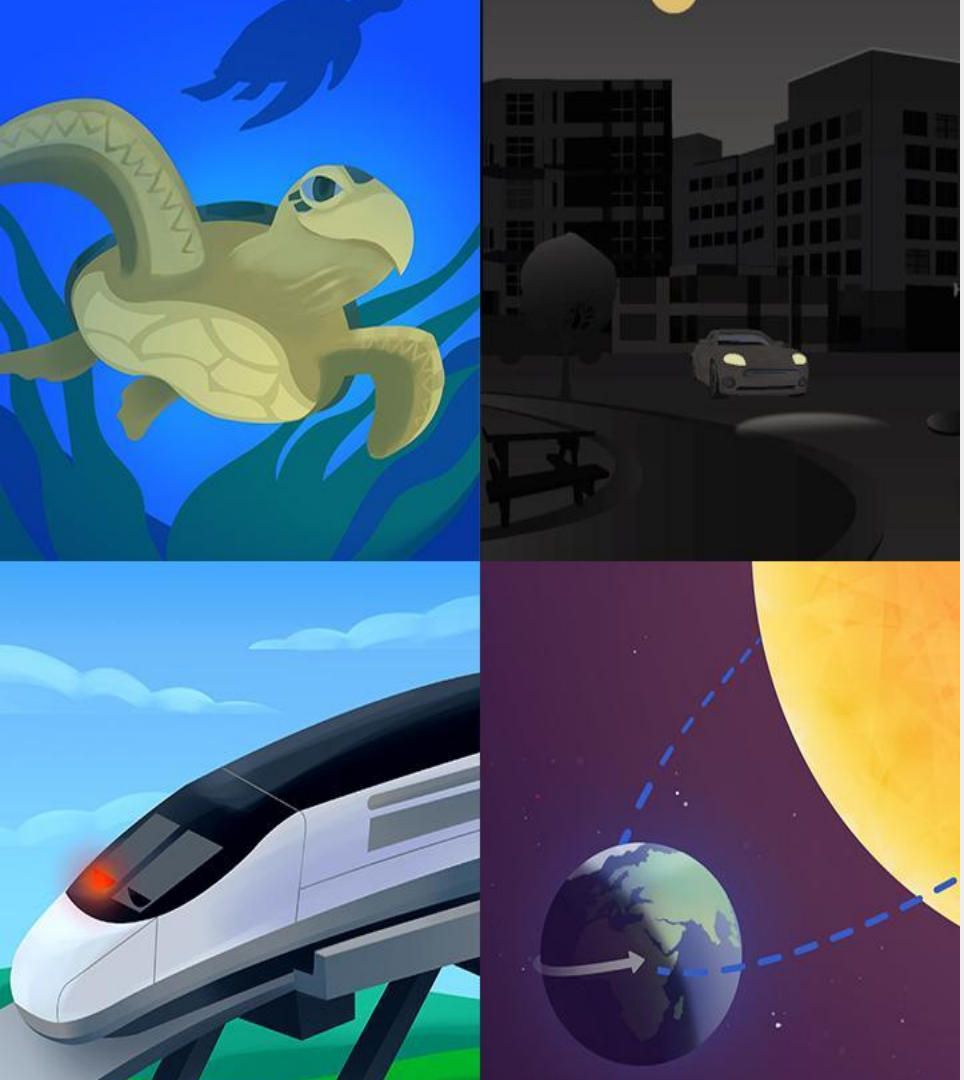
Animal and Plant Defenses phenomenon

Amplify Science

Anchoring phenomenon

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





Plan for the day: Part 1

- Introduction and Framing
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- Unit Internalization
- Addtional Resources
- Closing

Unit structure

Unit

↓

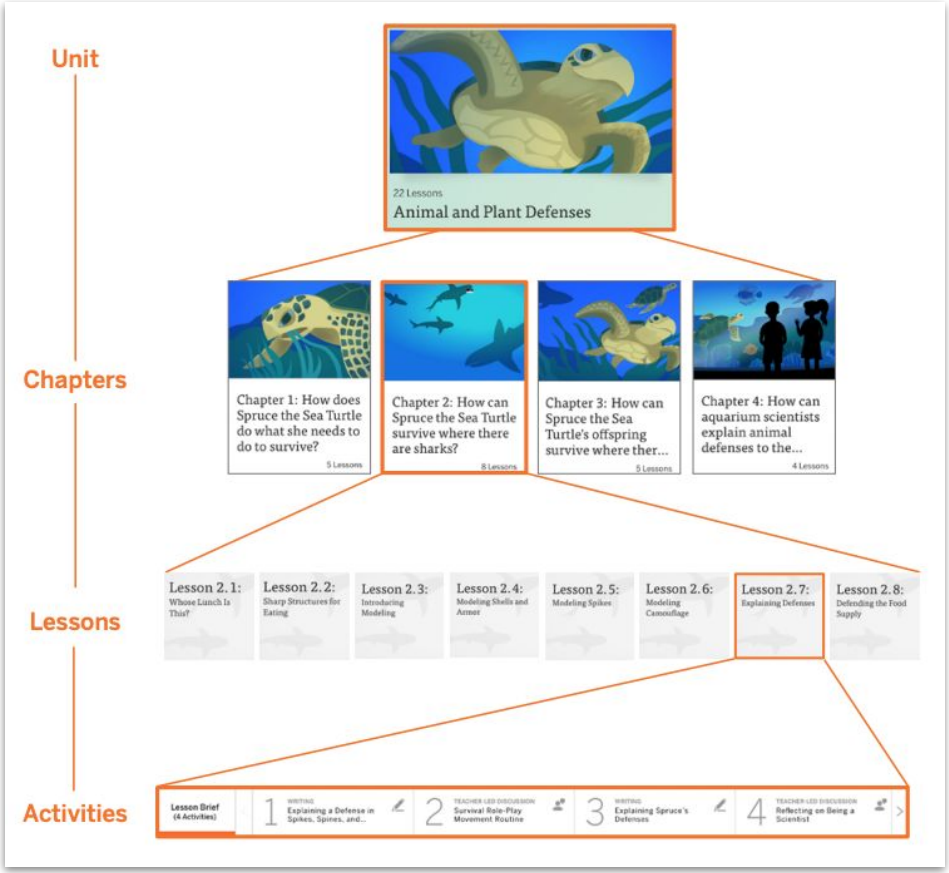
Chapter

↓

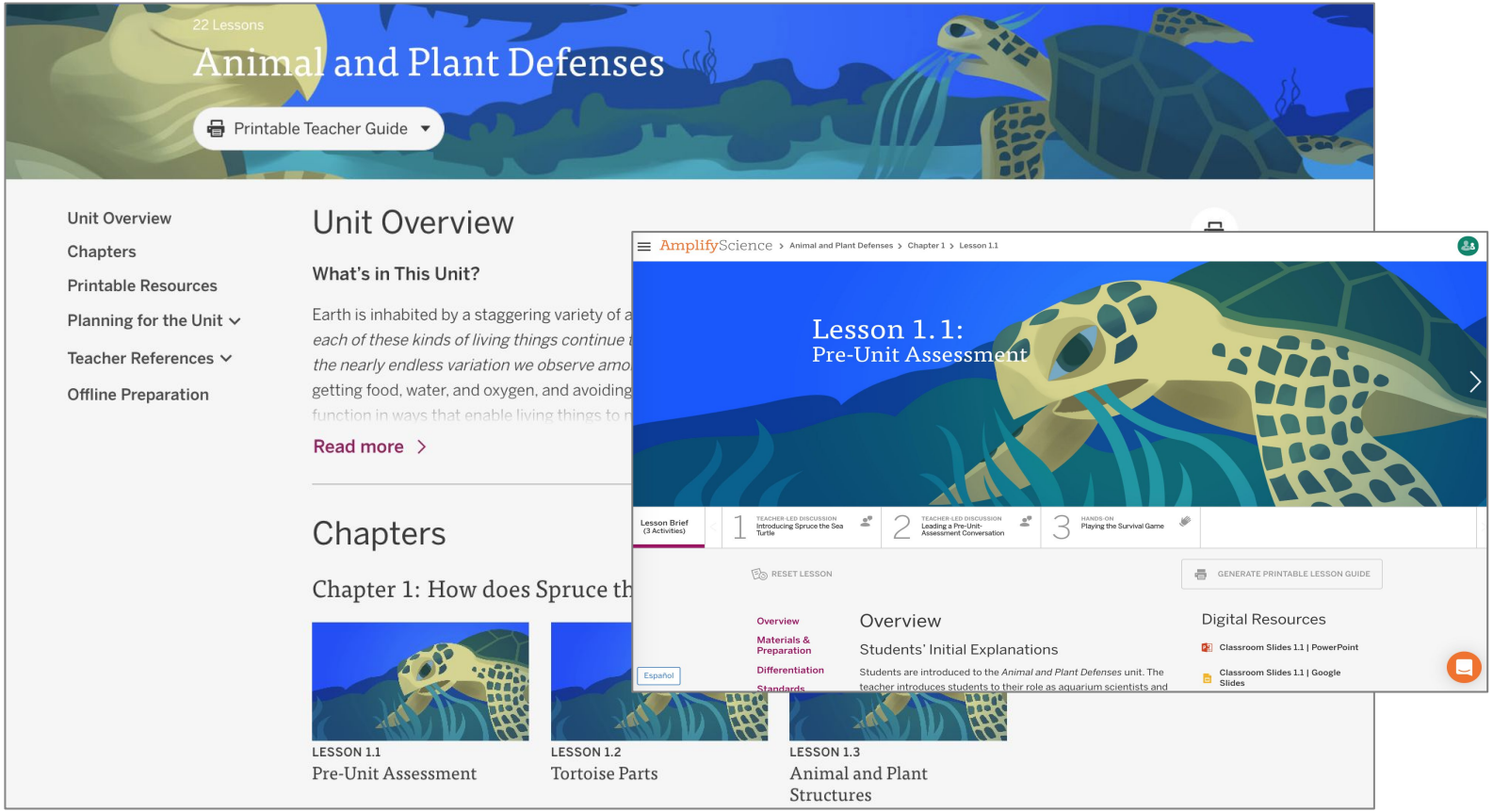
Lesson

↓

Activity



Let's Go Live!


22 Lessons
Animal and Plant Defenses
Printable Teacher Guide
Unit Overview
Chapters
Printable Resources
Planning for the Unit
Teacher References
Offline Preparation
Unit Overview
What's in This Unit?
Earth is inhabited by a staggering variety of a
each of these kinds of living things continue
the nearly endless variation we observe amo
getting food, water, and oxygen, and avoiding
Read more
Chapters
Chapter 1: How does Spruce th
LESSON 1.1
Pre-Unit Assessment
LESSON 1.2
Tortoise Parts
LESSON 1.3
Animal and Plant Structures
AmplifyScience > Animal and Plant Defenses > Chapter 1 > Lesson 1.1
Lesson 1.1:
Pre-Unit Assessment
Lesson Brief (3 Activities)
1 TEACHER-LED DISCUSSION Introducing Spruce the Sea Turtle
2 TEACHER-LED DISCUSSION Leading a Pre-Unit-Assessment Conversation
3 HANDS-ON Playing the Survival Game
RESET LESSON
GENERATE PRINTABLE LESSON GUIDE
Overview
Materials & Preparation
Differentiation
Standards
Español
Overview
Students' Initial Explanations
Students are introduced to the Animal and Plant Defenses unit. The teacher introduces students to their role as aquarium scientists and
Digital Resources
Classroom Slides 1.1 | PowerPoint
Classroom Slides 1.1 | Google Slides

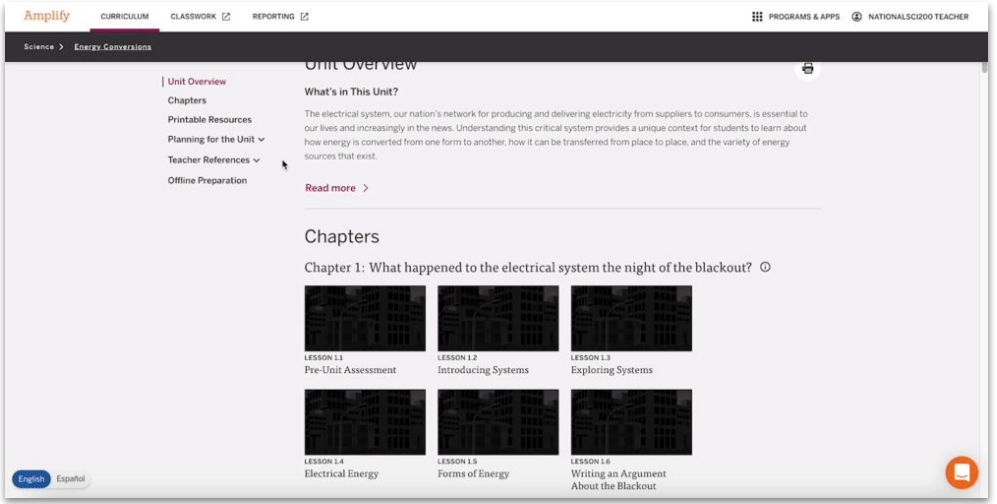
Navigation summary

1. CLICK the caret to select your grade-level.
2. Select your first unit.
    a. You are now on the Unit Landing Page.
3. Expand the **Planning for the unit** menu.
    a. Or scroll down below the lesson buttons.

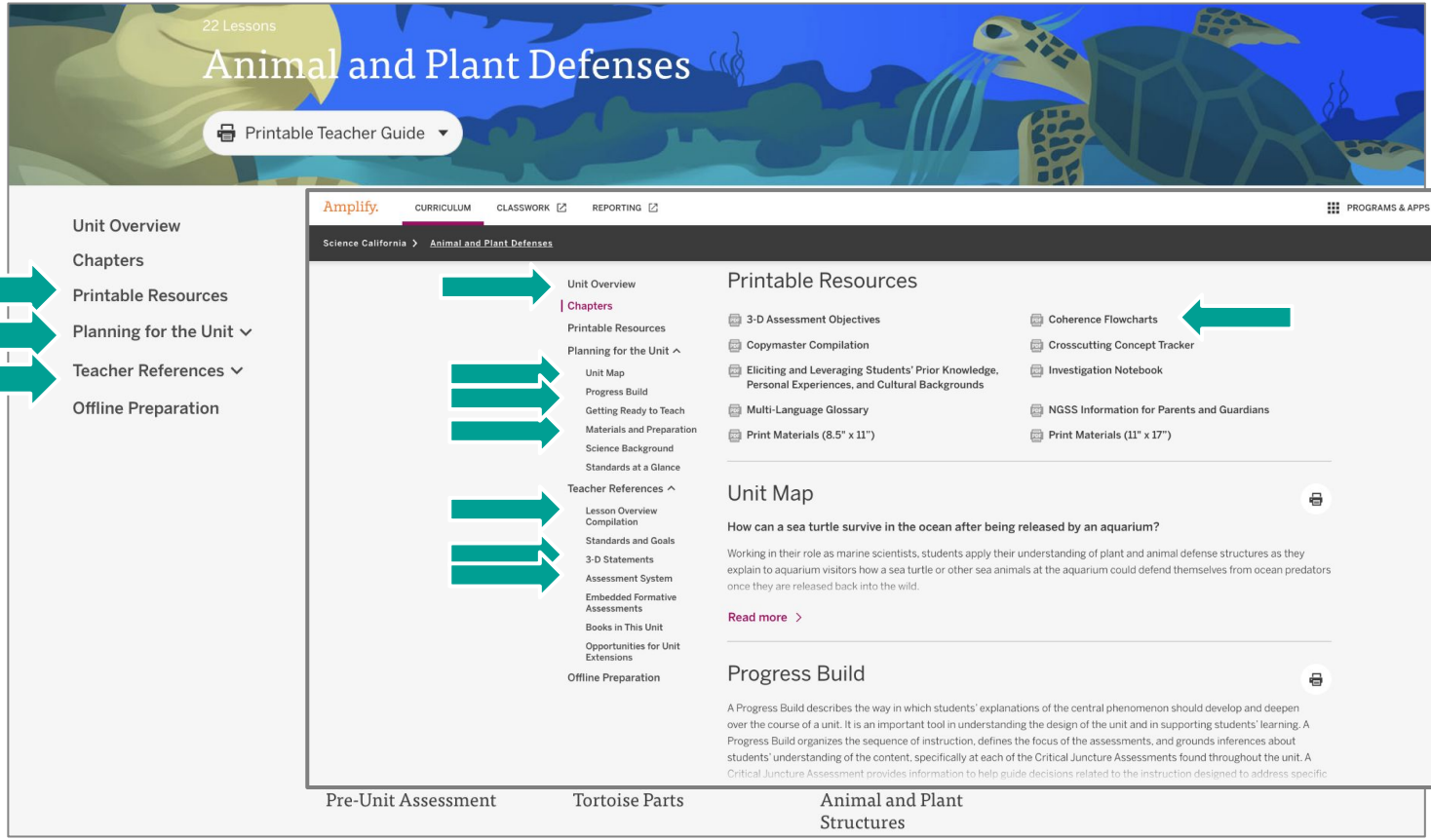
Unit Level resources

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

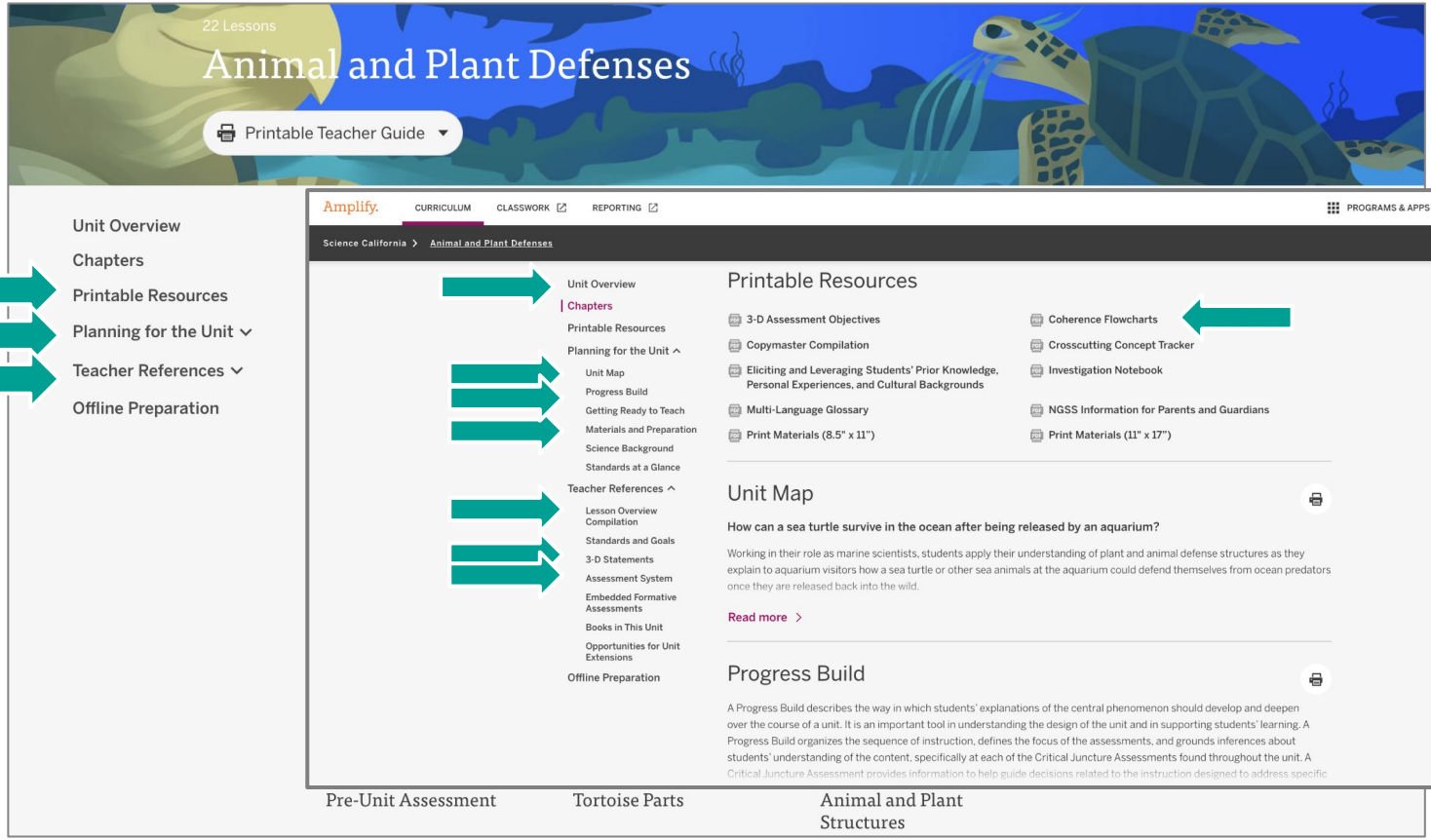
- Printable Resources
- “Planning for the Unit” documents
- Teacher References



Key Unit Documents for Unit Planning



Key Unit Documents for Unit Planning



Core Unit Planning & Internalization

Unit Title:	1

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? 2	Student Role: 3
Unit Question: 4	Relationship between the Unit Phenomenon and Unit Question: 5
By the end of the unit, students figure out... 6	
How do students engage with three-dimensional learning to figure out the phenomenon/real-world problem in your unit? 7	

1

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:	Animal and Plant Defenses

Overview

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

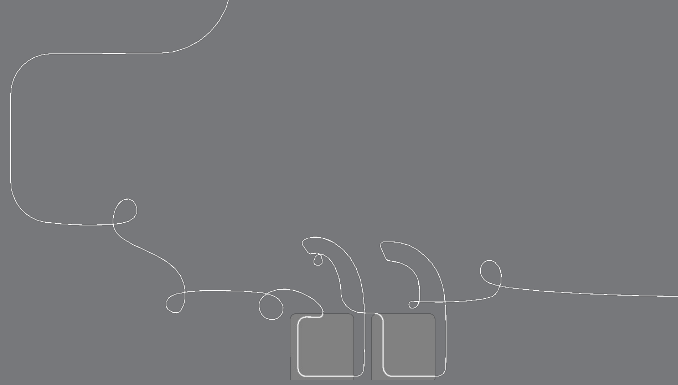
What is the phenomenon/real-world problem students are investigating in your unit?	Student Role:
How can a sea turtle survive in the ocean after being released by an aquarium?	Marine Scientists
Unit Question:	**Relationship between the Unit Phenomenon and Unit Question:**
How do animals and plants survive?	The phenomenon provides concrete examples and motivation for students to discover the core ideas of the unit about how organisms and their offspring survive, particularly how they avoid being eaten.

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

Sea Turtles have a hard shell that stops a predator from biting and eating it. Sea turtles use camouflage, which makes it difficult for predators to find and eat sea turtles.

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

Students investigate how animals and plants, as well as their offspring, use their structures meet their needs for survival. Students apply what they learn by developing models and constructing explanations to communicate their ideas



Questions?

Plan for the day: Part 1

- Introduction and Framing
- Phenomenon-based Instruction
- Unit Internalization
- Additional Resources
- Closing

Additional resources

Welcome, caregivers!

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

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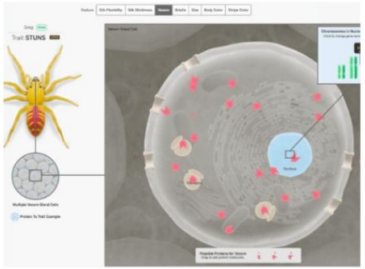
Grades 6-8



Caregivers

LAUSD Microsite- https://amplify.com/lausd-science

Welcome to Amplify Science!

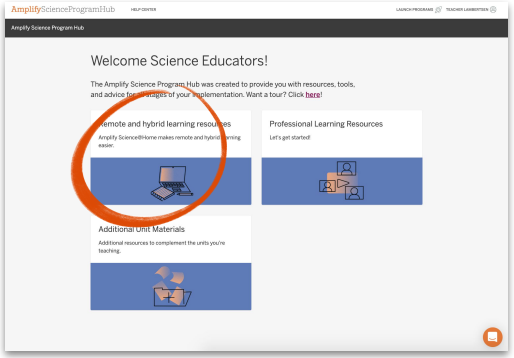
This site contains supporting resources designed for the LAUSD Amplify Science adoption for grades TK–8.

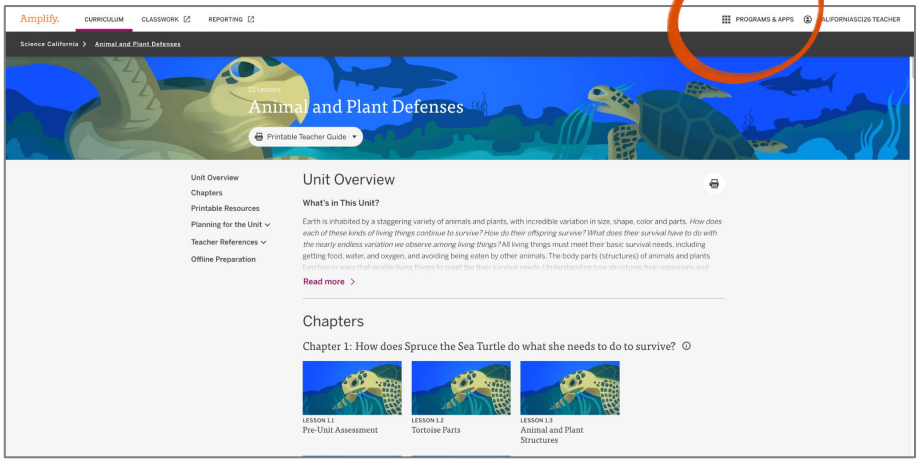
- Access the Amplify Science Program Hub (To help orient you to the new design, watch this video and view this reference guide.)
- Find out more about Amplify Science@Home
- Share the Caregiver Hub (Eng/Span) with your families
- For LAUSD ES Teachers- Amplify Science & Benchmark Advance Crosswalk
-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

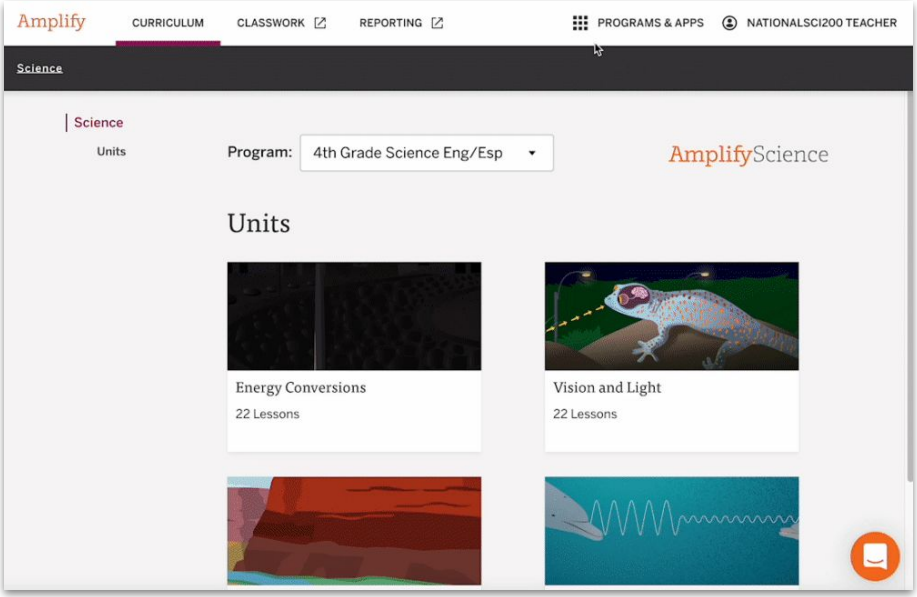
Click the button below to preview the digital Teacher's Guide, and check back for exciting updates to this site!

Program Hub

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



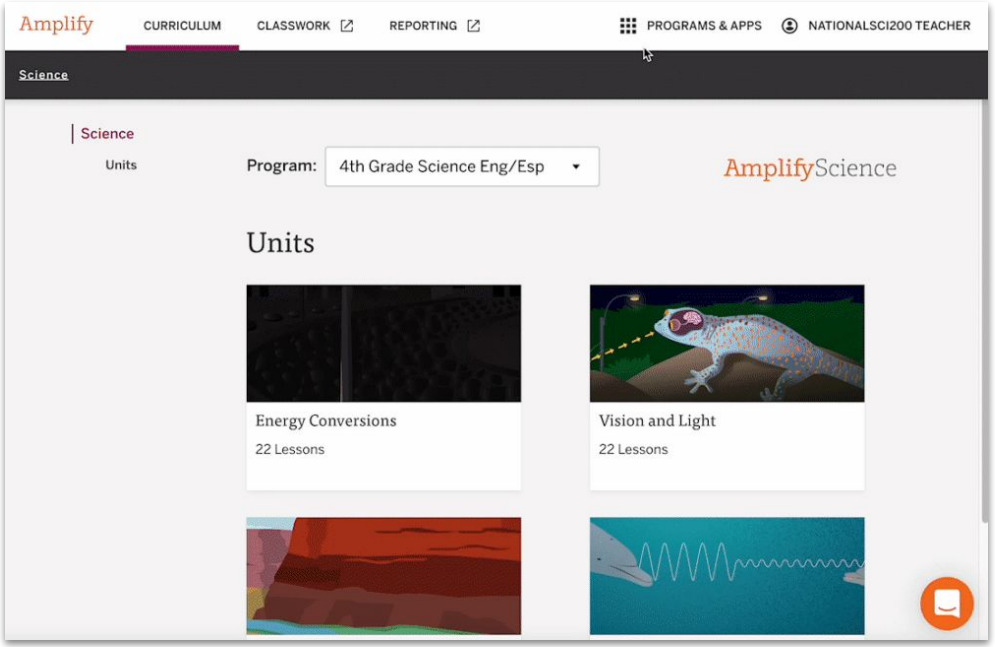


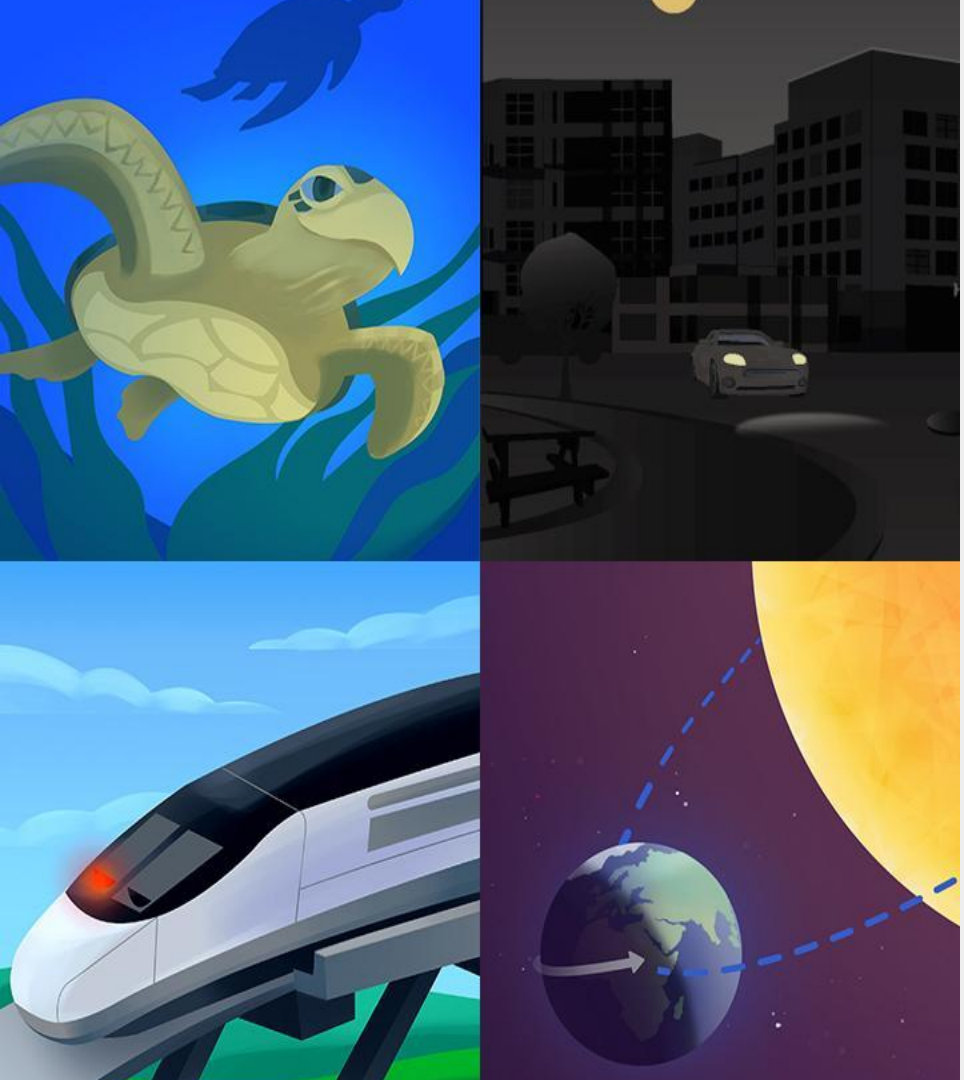


Explore the Program Hub

Familiarize yourself with the Program Hub.

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





Plan for the day: Part 1

- Introduction and Framing
- 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
- ✓ 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:

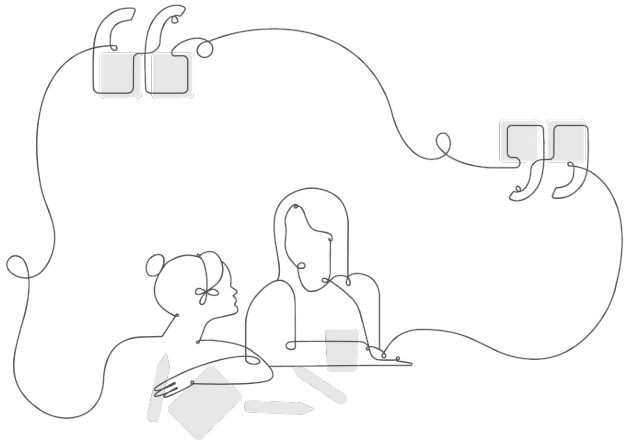
Head: something you'll keep in mind

Heart: something you're feeling

Feet: something you're planning to do

Onsite Upcoming Professional Development!

Part 3: Unit 1 - Supporting English Learners



- October 15th (Alta California ES, NW)
- October 29th (Ochoa Learning Center, East)

In this session, participants explore strategies to support English learners' ability to do, talk, read, write, visualize, and construct arguments like scientists. Participants will identify the supports and strategies embedded in Unit 1 by engaging in model activities followed by independent planning.

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

800-823-1969

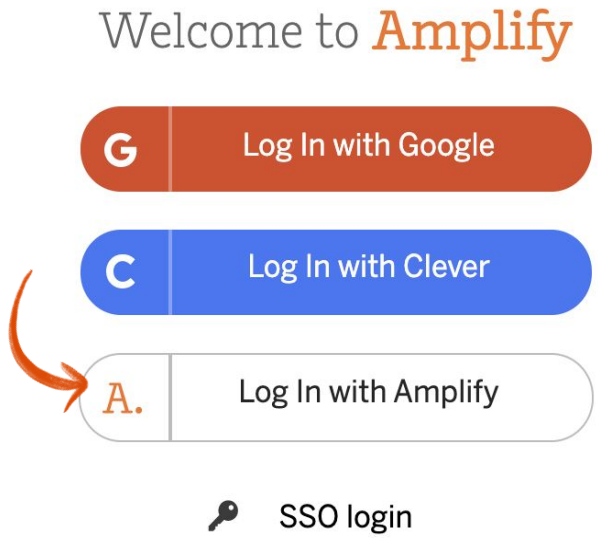
Amplify Chat

Welcome to Amplify Science!

Do Now: Log in through your Schoology account

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
   - UN: californiasci60@pd.tryamplify.net
   - PW: AmplifyNumber1
5. Explore as we wait to begin

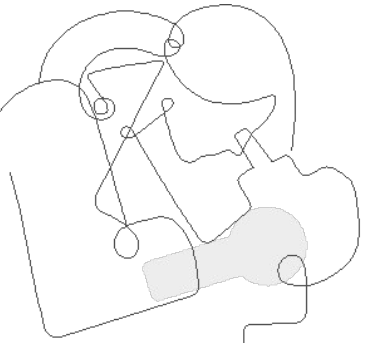


Amplify Science

Unit Internalization / Guided Planning

Grade 1, Unit 1: Animal and Plant Defenses

Part 2



School/District Name: LAUSD
Date: September, 2022
Presented by: Jolene Hori

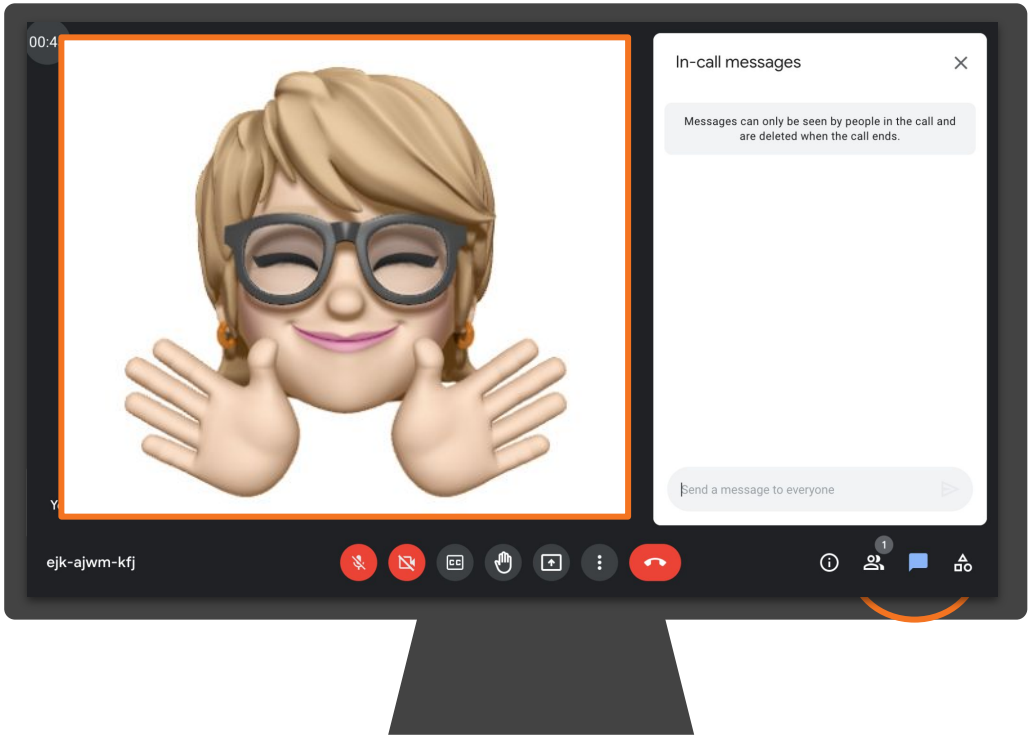
TOP RATED BY EDREPORTS

PLPG CERTIFIED PROVIDER

Ice Breaker!

Who do we have in the room today?

- **Question 1:** Which aspects of implementing the Amplify Science standard curriculum has been the most successful?
- **Question 2:** Which aspects have been the most challenging?



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.

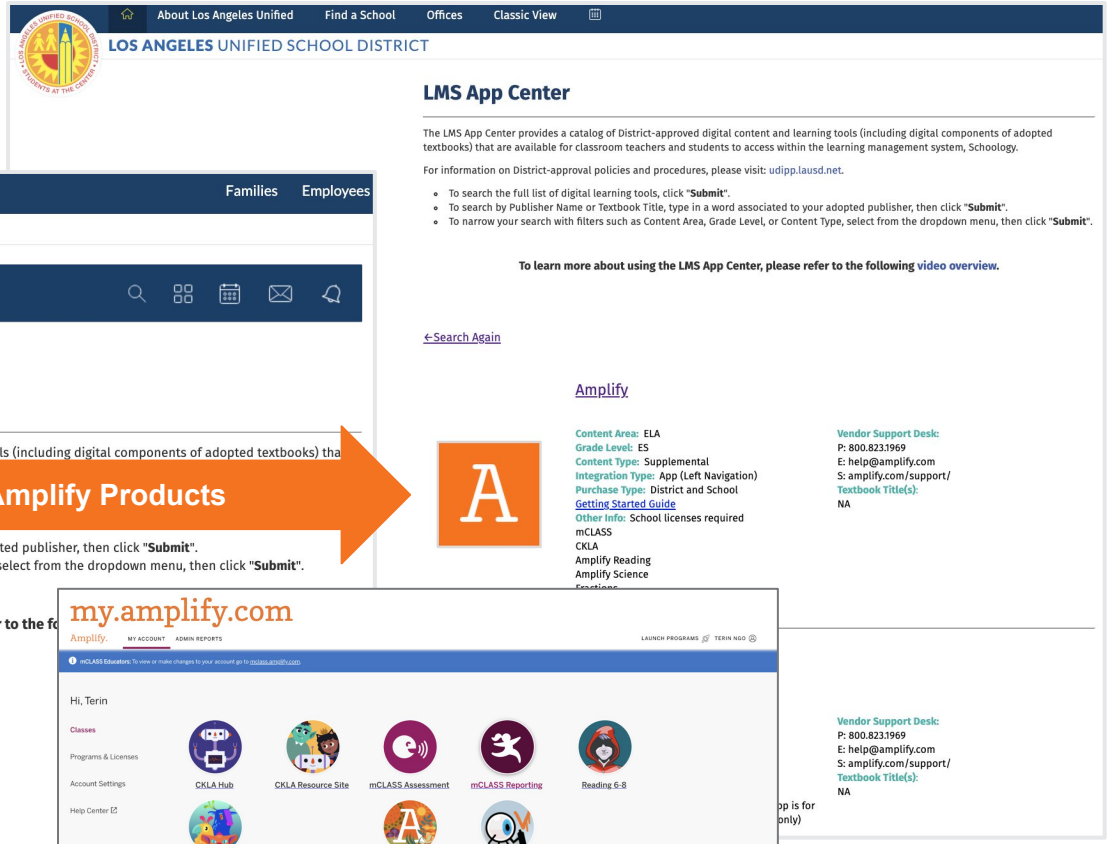
We share your goal of **inspiring all students to think deeply, creatively, and for themselves.**

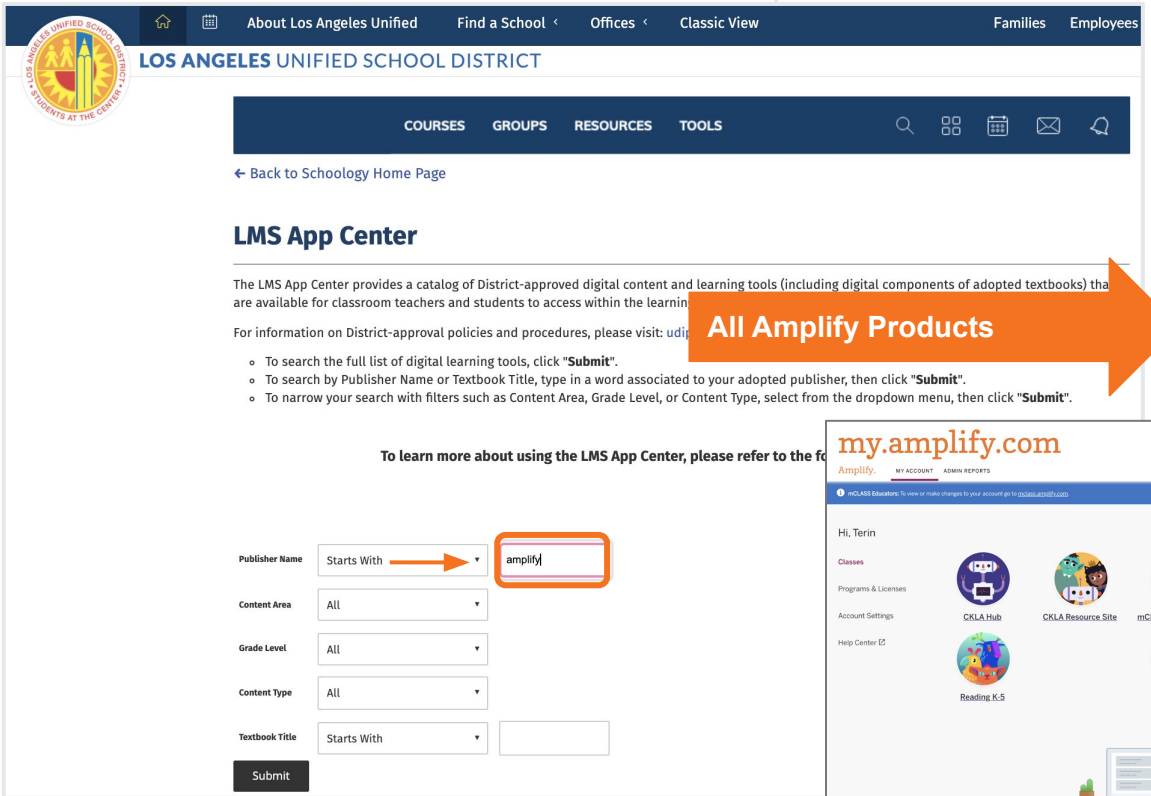
Sincerely,
Amplify

Norms: Establishing a culture of learners

- **Take risks:** Ask any questions, provide any answers.
- **Participate:** Share your thinking, participate in discussion and reflection.
- **Be fully present:** Unplug and immerse yourself in the moment.
- **Physical needs:** Stand up, get water, take breaks.

Schoology





All Amplify Products

Join Amplify Science Schoology Group

To join Amplify Science Schoology 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

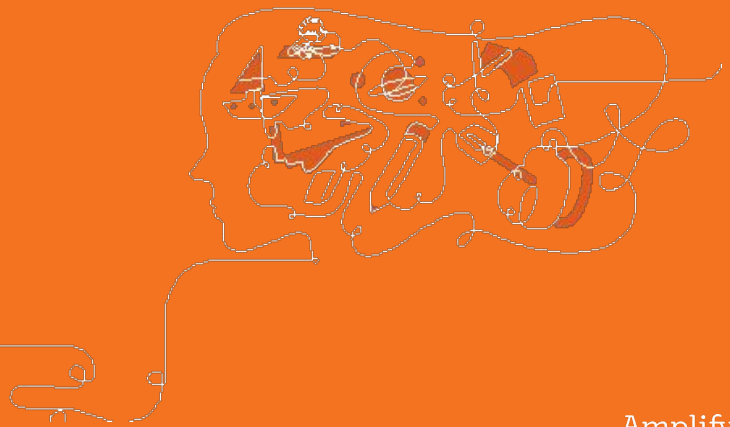
2 = Uncomfortable

3 = Mild

4 = Comfortable

5 = Extremely Comfortable

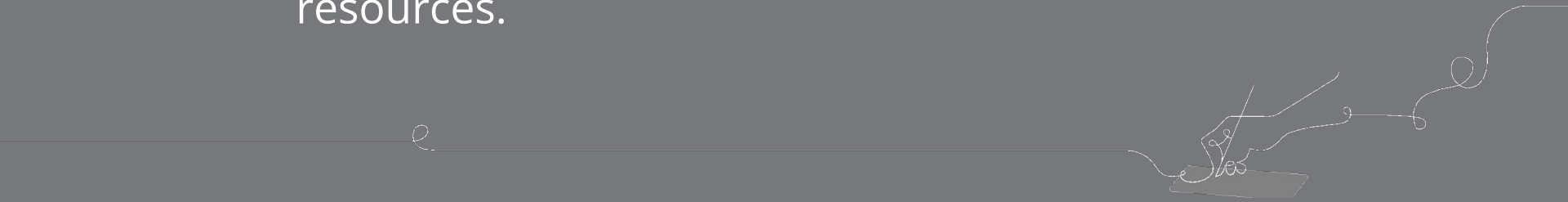
Part 2:
Guided Lesson Planning



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.

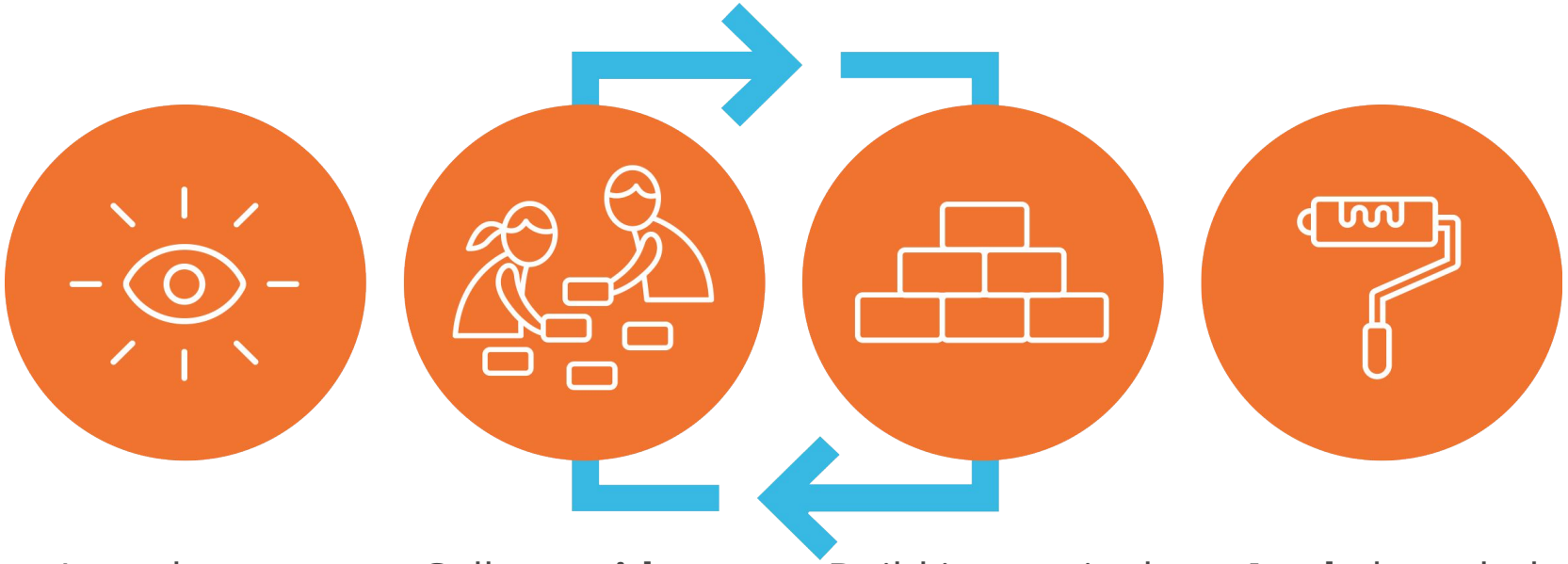


Gr. 1 LAUSD New Teacher Part 2:
Unit 1, Animal and Plant Defenses

Plan for the day: Part 2

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

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

Animal and Plant Defenses

How do animals and plants survive?

This unit presents an opportunity for students to delve deeply into understanding the structures that make up animals and plants, as well as how some of these structures can function as defenses against predators.

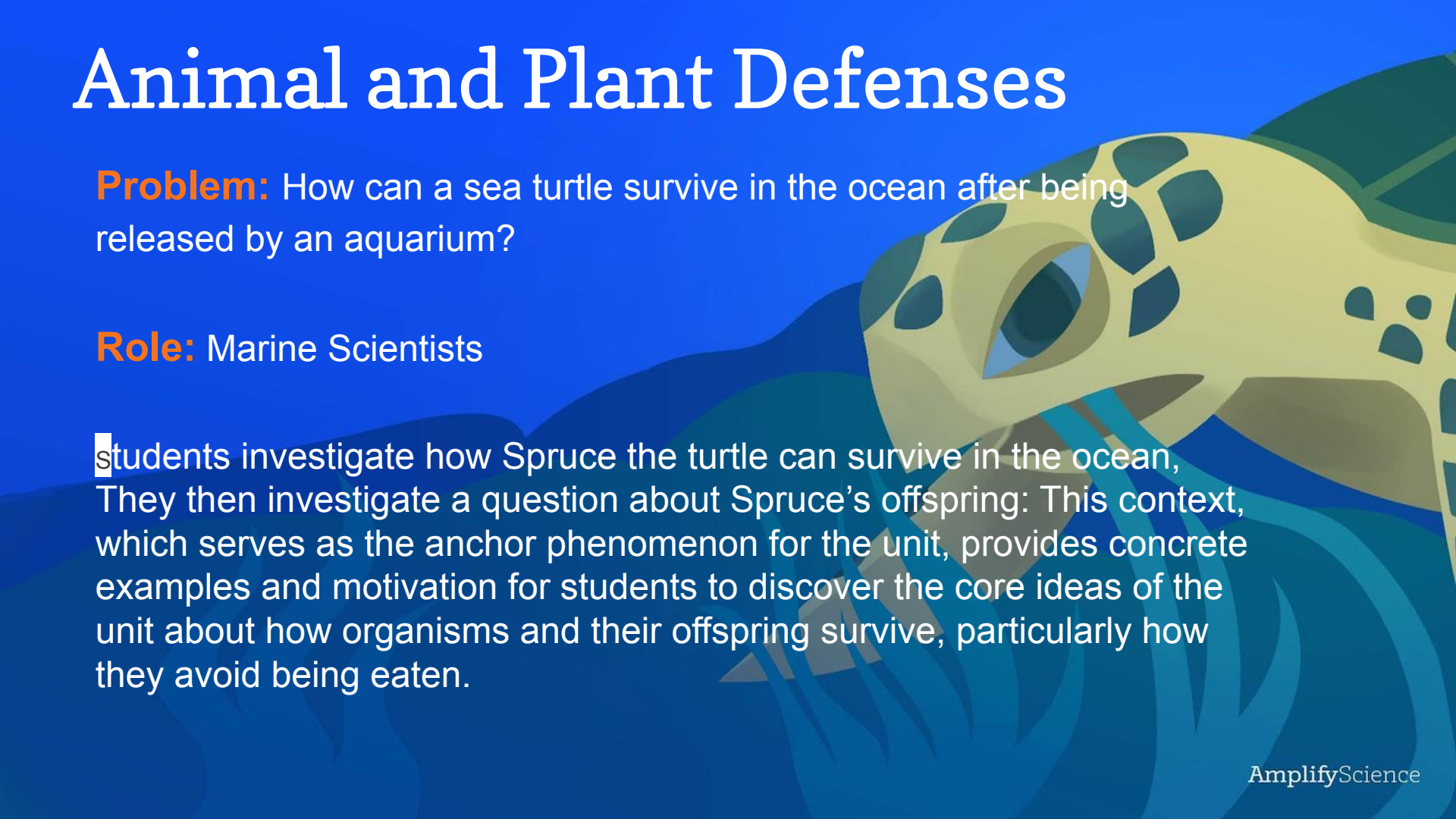
AmplifyScience

Animal and Plant Defenses

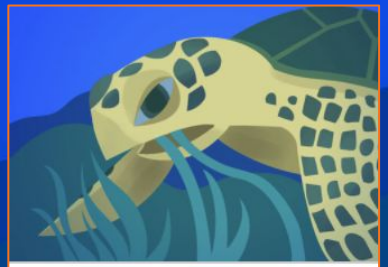
Problem: How can a sea turtle survive in the ocean after being released by an aquarium?

Role: Marine Scientists

students investigate how Spruce the turtle can survive in the ocean, They then investigate a question about Spruce's offspring: This context, which serves as the anchor phenomenon for the unit, provides concrete examples and motivation for students to discover the core ideas of the unit about how organisms and their offspring survive, particularly how they avoid being eaten.



Coherent storylines



Chapter 1: How does Spruce the Sea Turtle do what she needs to do to survive?

5 Lessons

Chapter 2: How can Spruce the Sea Turtle survive where there are sharks?

8 Lessons

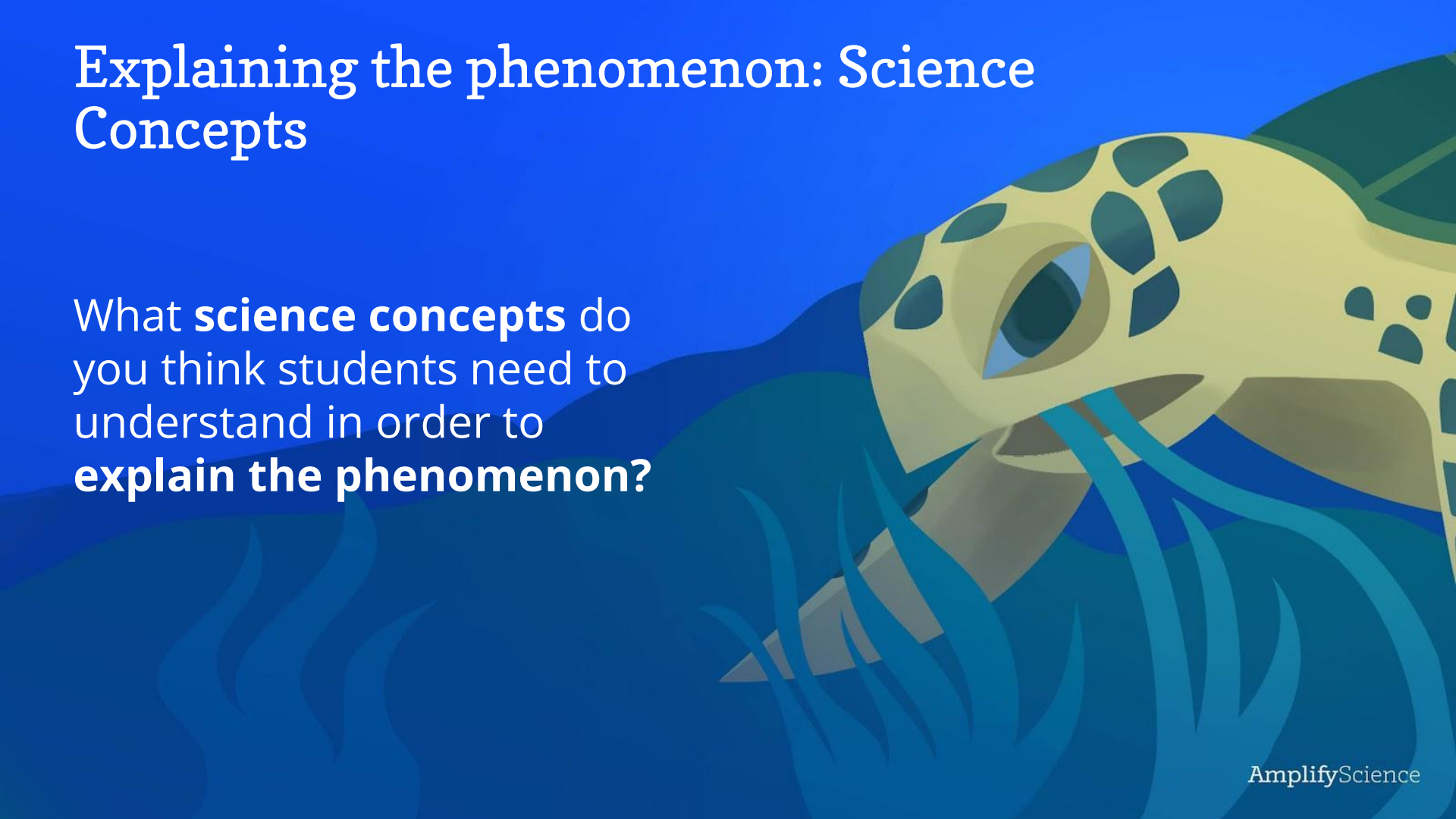
Chapter 3: How can Spruce the Sea Turtle's offspring survive where ther...

5 Lessons

AmplifyScience

Explaining the phenomenon: Science Concepts

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



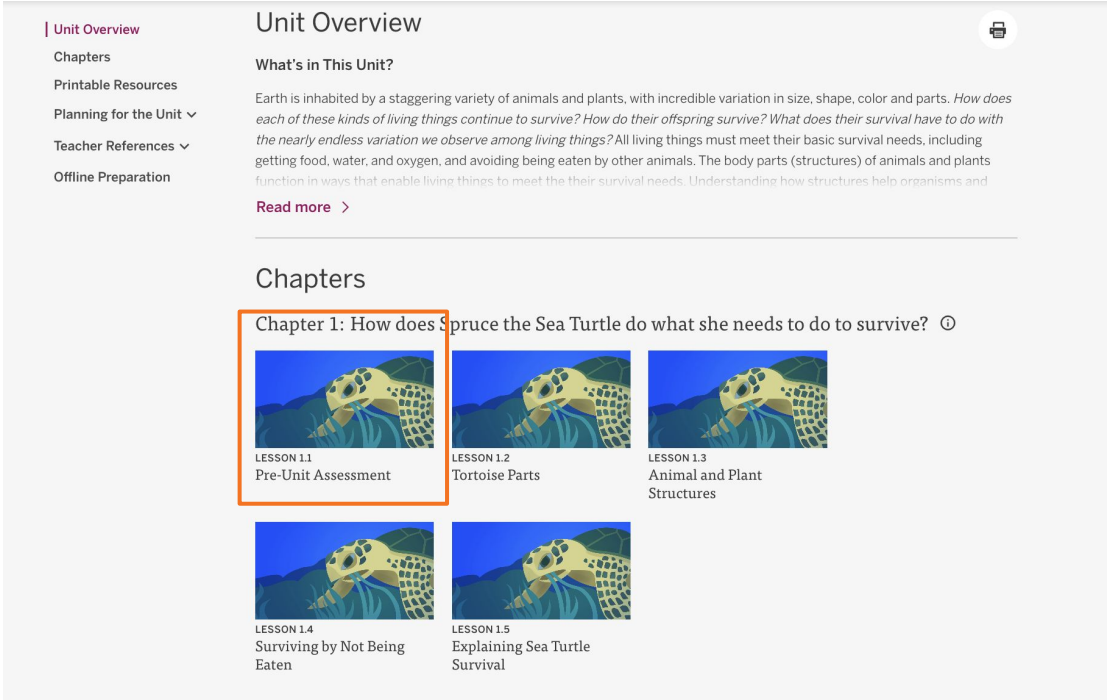
Progress Build

Animal and Plant Defenses

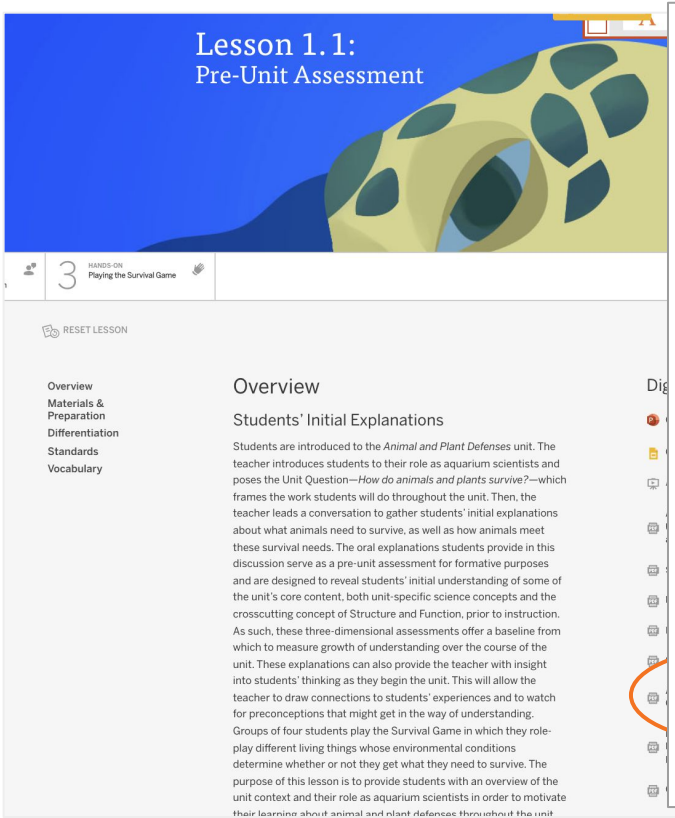
Prior knowledge (preconceptions): It is assumed students know that animals and plants are living things and can die if they do not get what they need.

Beginning the Unit

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



Animal and Plant Defenses - Family Connection



Animal and Plant Defenses Family Connections Letter

Dear Families,

In science class, we are working as aquarium scientists helping an aquarium director explain to visitors how a sea turtle can survive when she is released back into the ocean. We'll be working to answer the question, *How do animals and plants survive?*

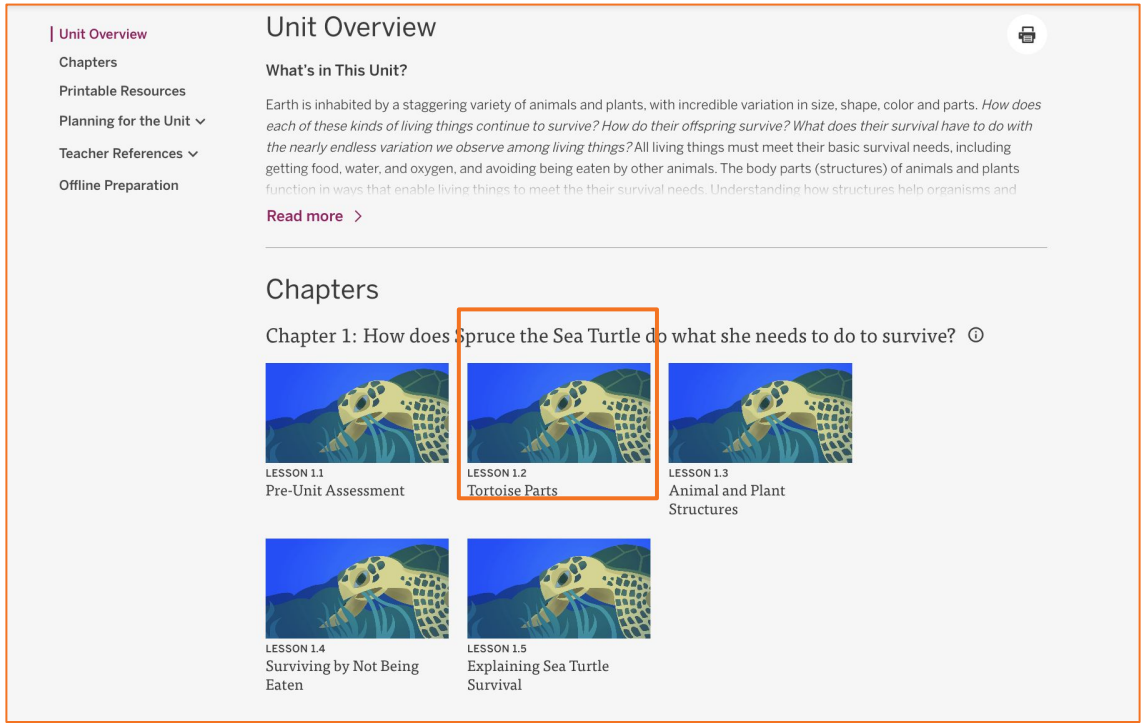
Sharing some of your own ideas, connections, expertise, or stories related to what we will be learning about can help prepare students for their work in science class. It can help students see that what we study in science is connected to their lives, families, and communities.

Use the following questions to think about your personal connections to students' science learning, then share them with your student.

- What does our work in science make you think of?
- Do you have any memories, stories, or experiences about something related to what we will be investigating?
- What have you heard or learned about these topics?
- What do you wonder?

Beginning the Unit

Model lesson 1.2



20 MIN

Activity 1

Reading: Tortoise Parts

We have been working as **aquarium scientists**.

We played a game to figure out what animals and plants need to survive.

What did we learn that animals and plants **need to survive**?

Spruce the Sea Turtle is an **animal**.

Just like other living things, she needs to get **air**, **water,** and **food** to survive.

Investigation Question:

How do animals and plants do what they need to do to survive?

Animal and Plant Defenses Classroom Wall

Unit Question
How do animals and plants survive?

Chapter 1 Question
How does Spruce the Sea Turtle do what she needs to do to survive?

Investigation Question
How do animals and plants do what they need to do to survive?

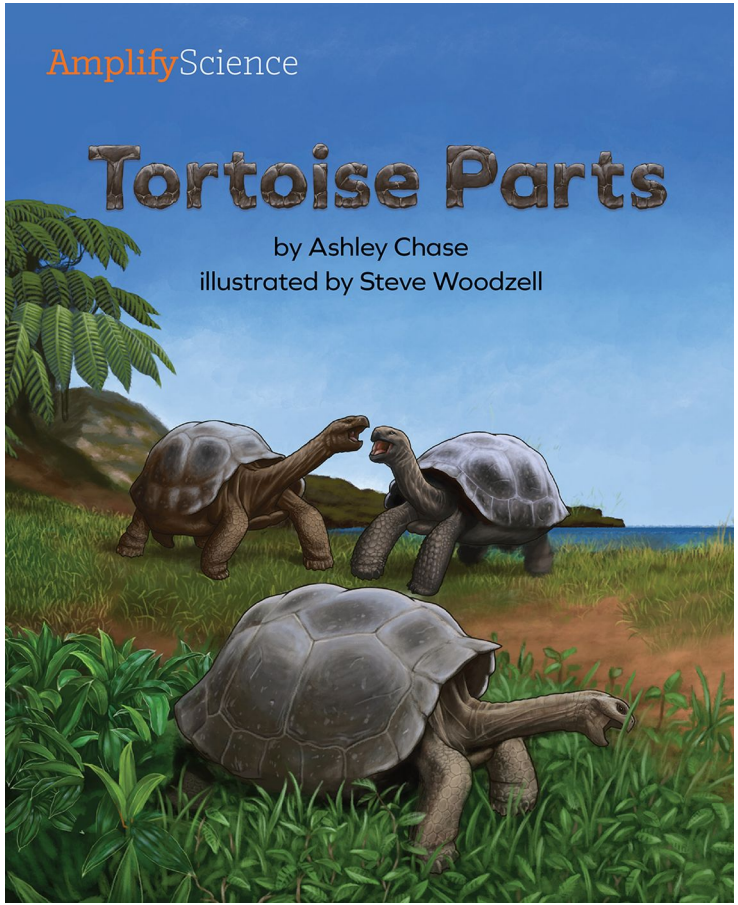
Key Concepts

To survive, animals and plants need to get water, air, and food.

Vocabulary

scientist

survive

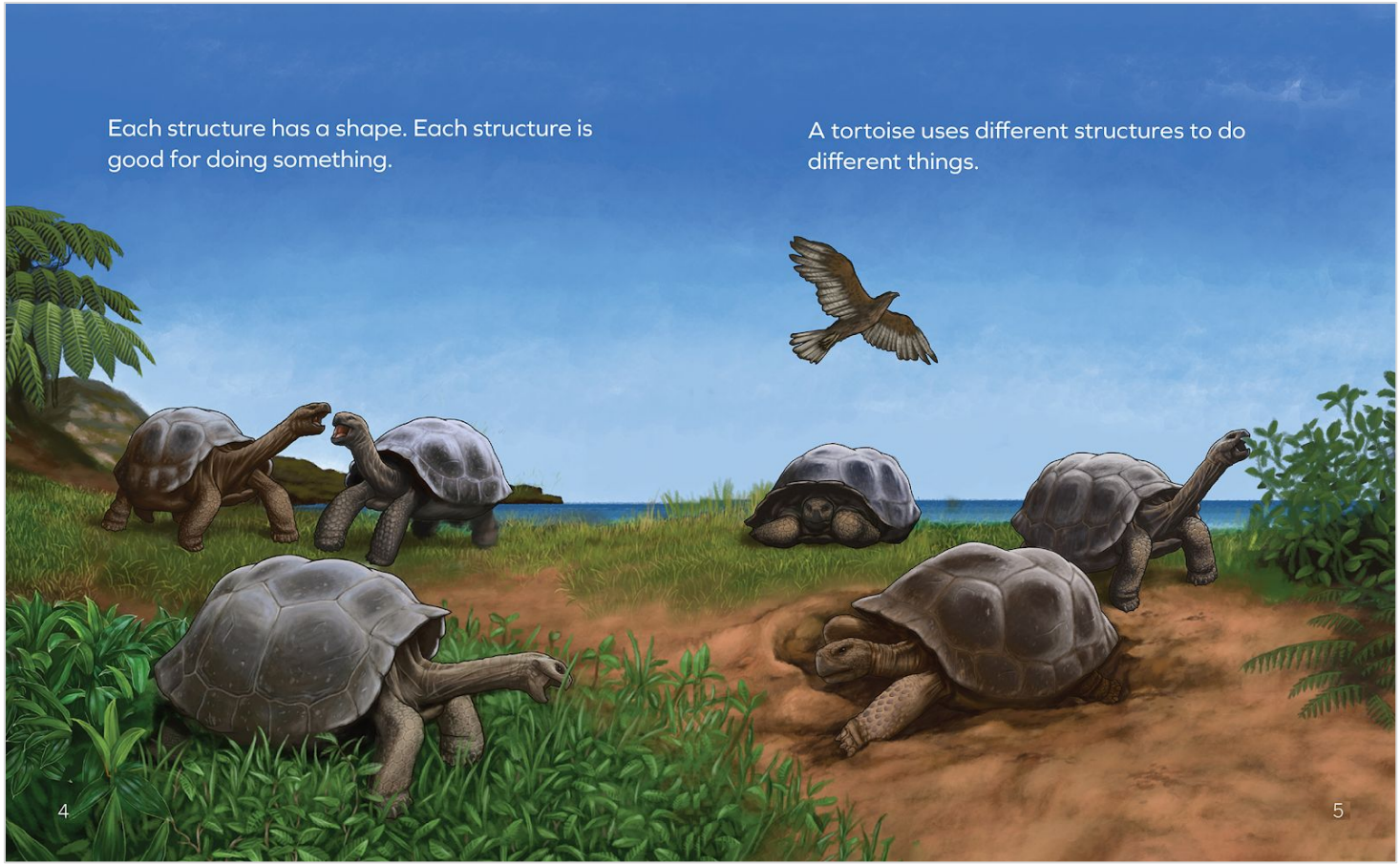


Today we will read a book about one kind of animal called a tortoise.

What do you notice on the **cover** of the book?

Look at the body of a tortoise. (The word *tortoise* sounds like "TOR-tuss.")

You will see lots of different parts. These parts are called **structures**.


Each structure has a shape. Each structure is good for doing something.
A tortoise uses different structures to do different things.
4
5

Structure:
A tortoise has a beaky mouth.

6

What the structure can do:
The beaky mouth is good for biting leaves.

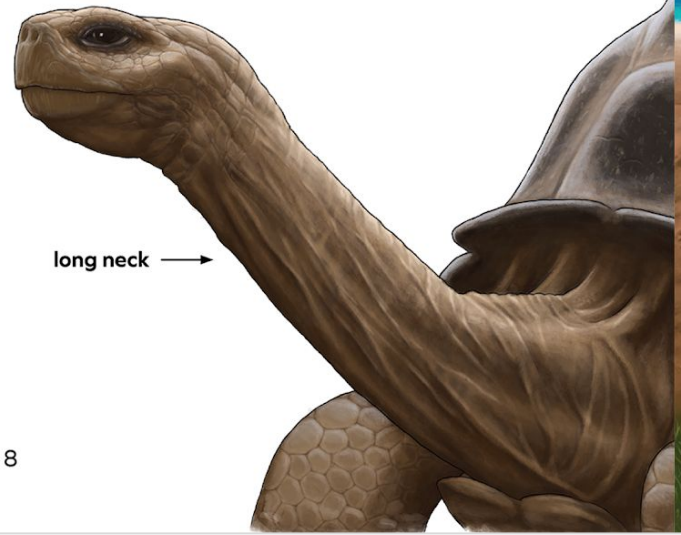
7

Let’s stop and **visualize** the mouth on a tortoise.

When you visualize, you make a picture or movie in your mind.

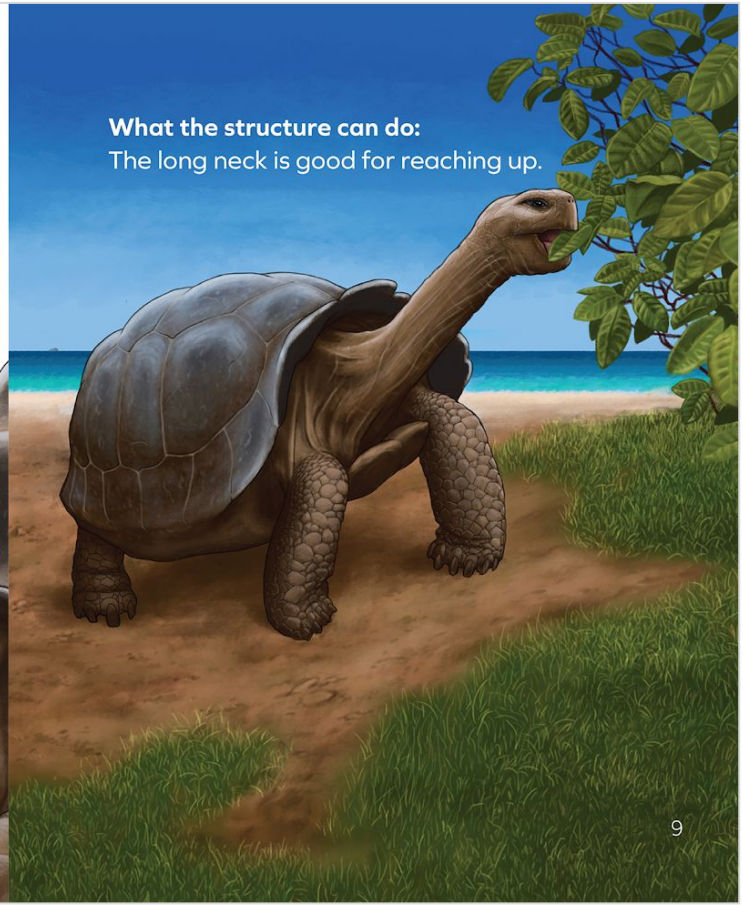
Close your eyes and **visualize** the tortoise using its beaky mouth to eat leaves.

Structure:
A tortoise has a long neck.



8

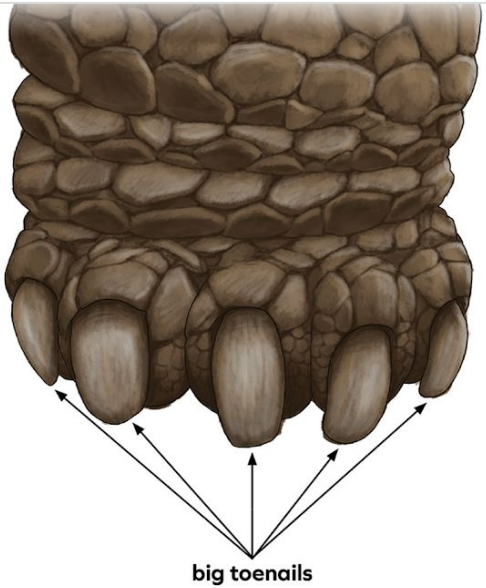
What the structure can do:
The long neck is good for reaching up.



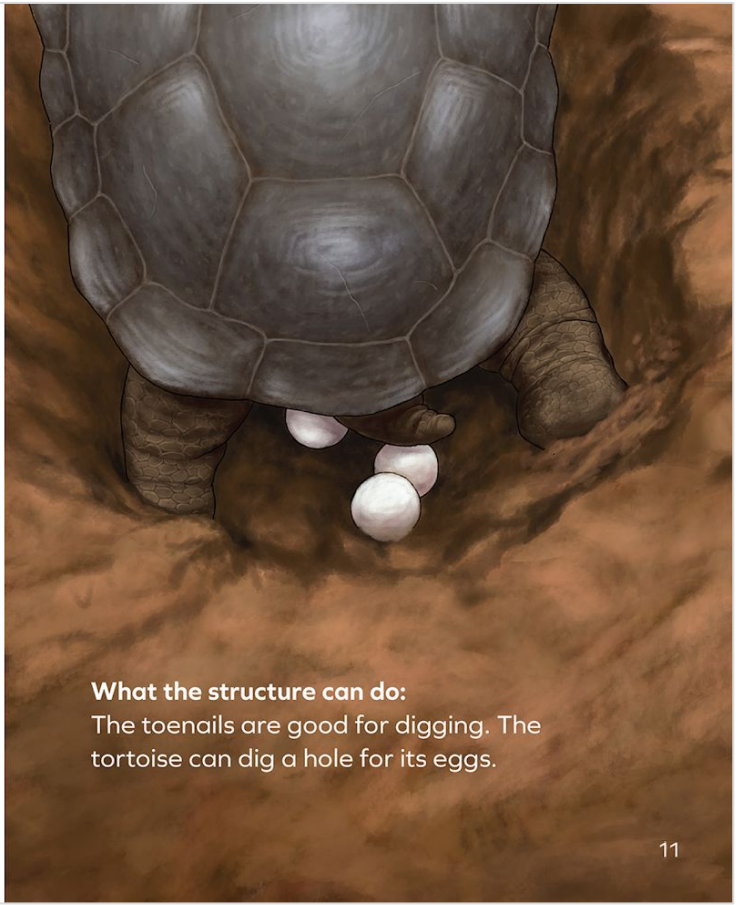
9

Close your eyes and visualize the tortoise using its long neck to reach up to get leaves.

What did you see when you visualized the tortoise using its long neck?

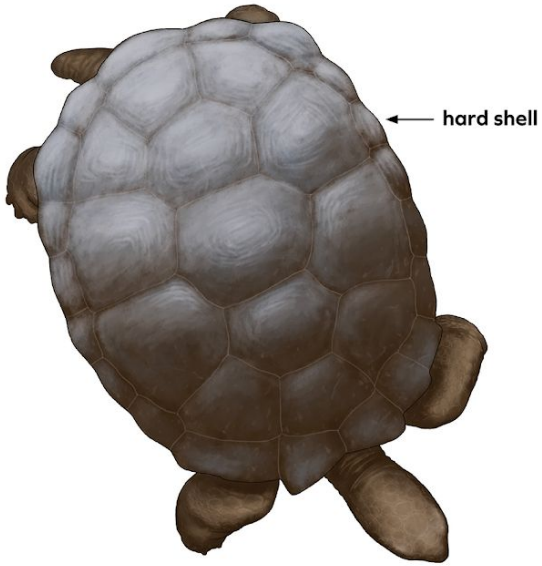


Structure:
A tortoise has big toenails on each foot.



What the structure can do:
The toenails are good for digging. The tortoise can dig a hole for its eggs.

Structure:
A tortoise has a hard shell.

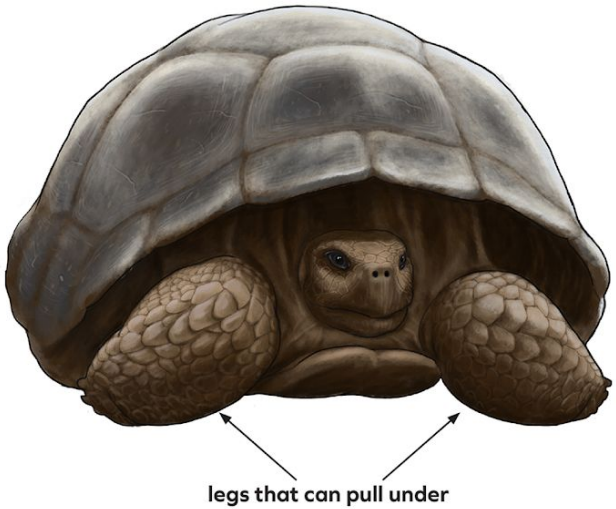


12

What the structure can do:
The hard shell is good for stopping **predators**.
It is a **defense**.

13

Structure:
A tortoise has legs that can pull under its shell.



What the structure can do:
Legs that can pull under are good for staying safe. They are a defense.

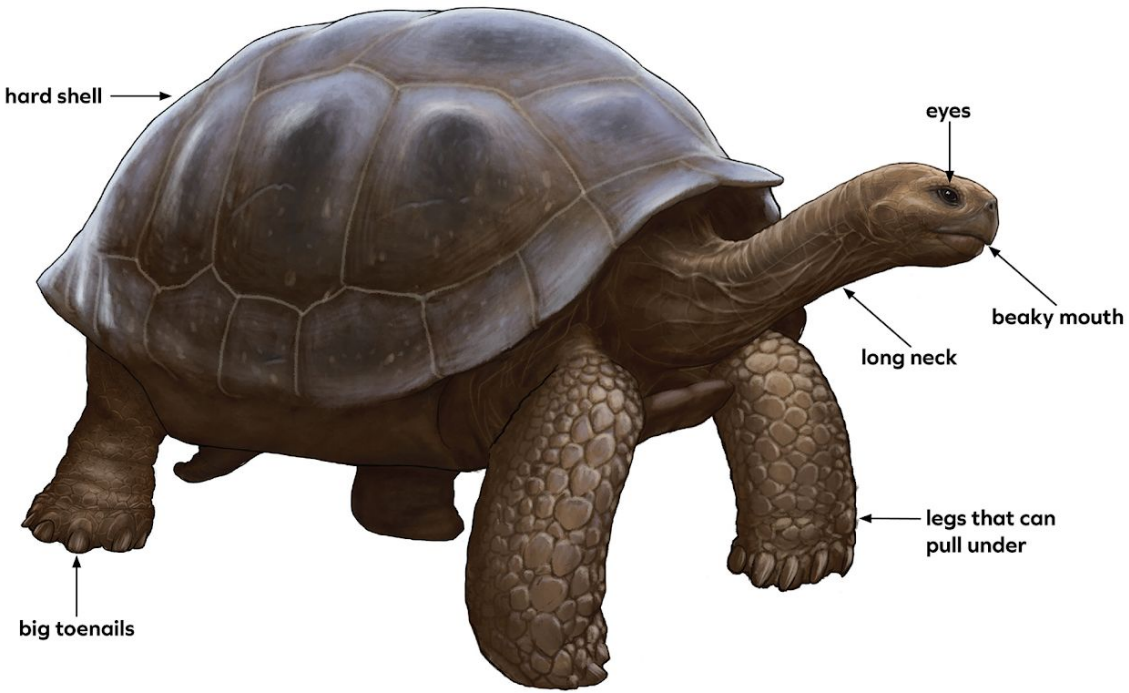
Structure:
A tortoise has eyes.

16

What the structure can do:
What do you think the eyes are good for?

17

Tortoise Parts



Vocabulary

structure

a part of an object or a living thing that does something

Animal and Plant Defenses Classroom Wall

Unit Question
How do animals and plants survive?

Chapter 1 Question
How does Spruce the Sea Turtle do what she needs to do to survive?

Investigation Question
How do animals and plants do what they need to do to survive?

Key Concepts

To survive, animals and plants need to get water, air, and food.

Vocabulary

- scientist
- survive
- structure

15 MIN

Activity 2

Observing Structures Used to Eat

Just like tortoises, **humans** need to get water, air, and food to survive.

Now we will **investigate** how humans get the food we need to survive.

Vocabulary

observe

to use any of the five senses (sight, hearing, smell, taste, touch) to learn more about something

Animal and Plant Defenses Classroom Wall

Unit Question
How do animals and plants survive?

Chapter 1 Question
How does Spruce the Sea Turtle do what she needs to do to survive?

Investigation Question
How do animals and plants do what they need to do to survive?

Key Concepts

To survive, animals and plants need to get water, air, and food.

Vocabulary

- scientist
- survive
- structure
- observe

I’ll show you how I might use my senses of sight, touch, and hearing to **observe** a pencil.

You will take turns **observing** each other eating a carrot.

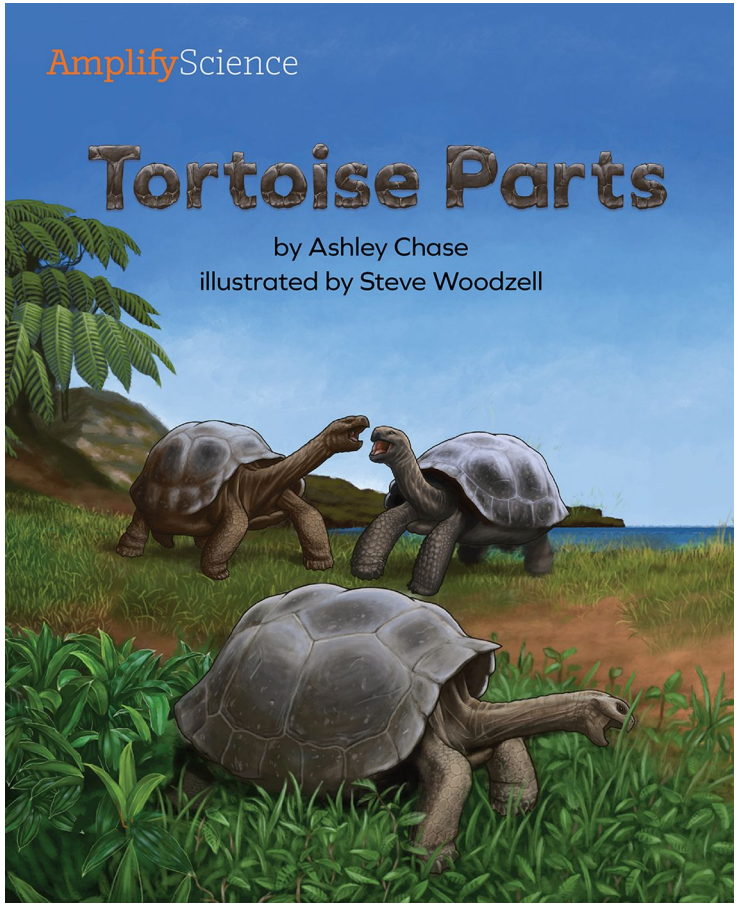
Watch how your partner gets the carrot and eats the carrot.

10 MIN

Activity 3

Discussing Observations and Structures

What did you observe when the person in the video was eating a carrot?



You just observed someone using **structures** on their body to eat.

We read about how a tortoise uses **structures** on its body to do what it needs to do to survive.

What is **the same** about how you and a tortoise do what you need to do to survive?

What is **different** about how you and a tortoise do what you need to do to survive?

What Scientists Do

To answer questions, scientists . . .

We are scientists.

This chart will help us think about the things that **scientists do** when they work.

What Scientists Do

To answer questions, scientists . . .

When scientists wonder about something in the world around them, **they ask a question.**

Investigation Question:

How do animals and plants do what they need to do to survive?

Animal and Plant Defenses Classroom Wall

Unit Question
How do animals and plants survive?

Chapter 1 Question
How does Spruce the Sea Turtle do what she needs to do to survive?

Investigation Question
How do animals and plants do what they need to do to survive?

Key Concepts

To survive, animals and plants need to get water, air, and food.

Vocabulary

- scientist
- survive
- structure
- observe

What Scientists Do

To answer questions, scientists . . .

Today we learned that **scientists observe**.

Let’s add that to our chart.

What Scientists Do

To answer questions, scientists . . .

How did we **observe** like scientists today?

End of Lesson

THE LAWRENCE HALL OF SCIENCE
UNIVERSITY OF CALIFORNIA, BERKELEY

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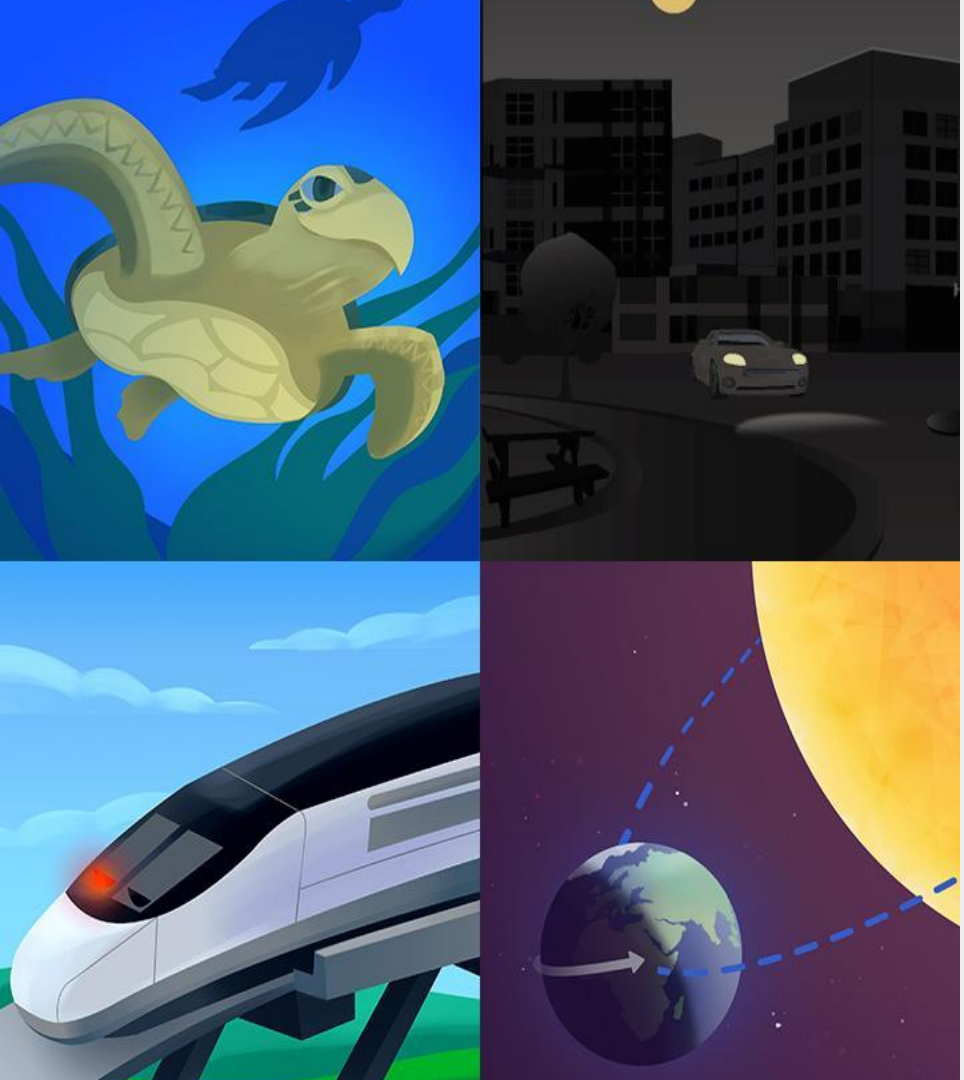


Plan for the day

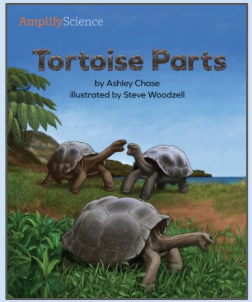
- Introduction and framing
- Navigation and planning
- Teaching and learning in an Amplify Science lesson
- **Instructional approach reflection**
- Additional program resources
- Closing

Gathering evidence

Animal and Plant Defenses Lesson 1.2

Chapter Question: How does Spruce the Sea Turtle do what she needs to do to survive?

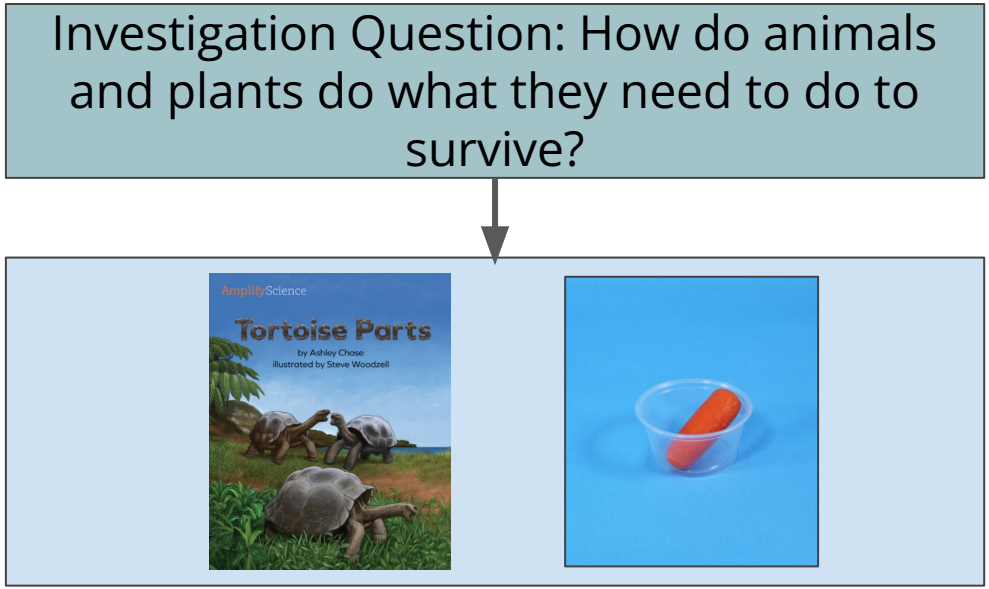
Investigation Question: How do animals and plants do what they need to do to survive?



Evidence sources work together

Reading *Tortoise Parts* and observing carrot eating

How do these activities **work together** to support understanding of how animals and plants do what they need to do to survive?

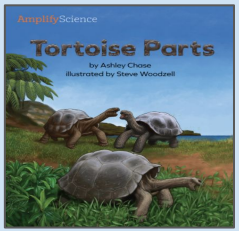


Gathering evidence

Animal and Plant Defenses Lesson 1.2

Chapter Question: How does Spruce the Sea Turtle do what she needs to do to survive?

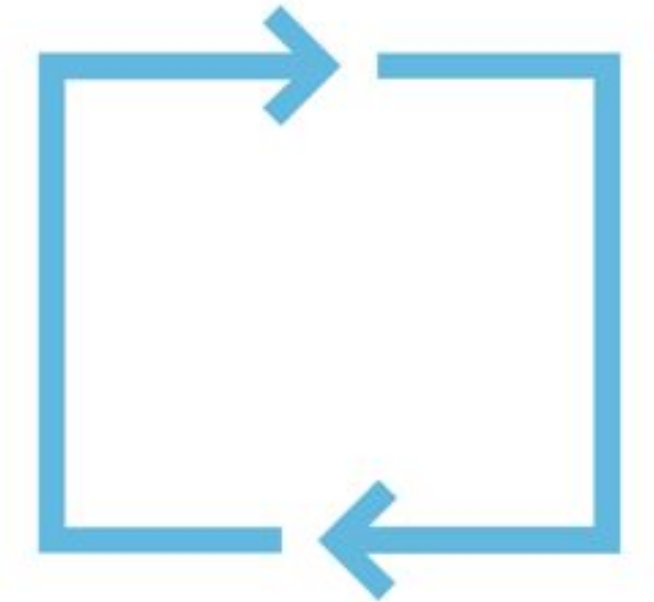
Investigation Question: How do animals and plants do what they need to do to survive?



What have students figured out so far?

Multimodal learning

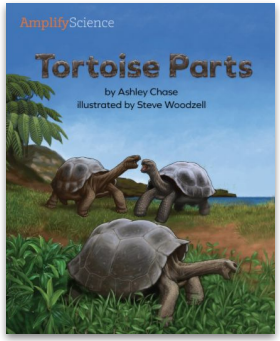
Gathering evidence over multiple lessons



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!



Coherence Flowchart

A diagram of student learning

Phenomenon
(Chapter Question)

↓

Investigation Question

↓

Multiple sources of evidence

↓

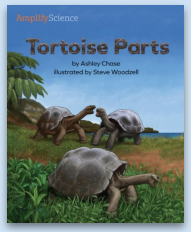
Key concepts

Chapter Question: How does Spruce the Sea Turtle do what she needs to do to survive?

↓

Investigation Question: How do animals and plants do what they need to do to survive?

↓



Coherence Flowchart

Animal and Plant Defenses Lesson 1.2-1.3

Chapter Question: How does Spruce the Sea Turtle do what she needs to do to survive?

↓

Investigation Question: How do animals and plants do what they need to do to survive?

↓

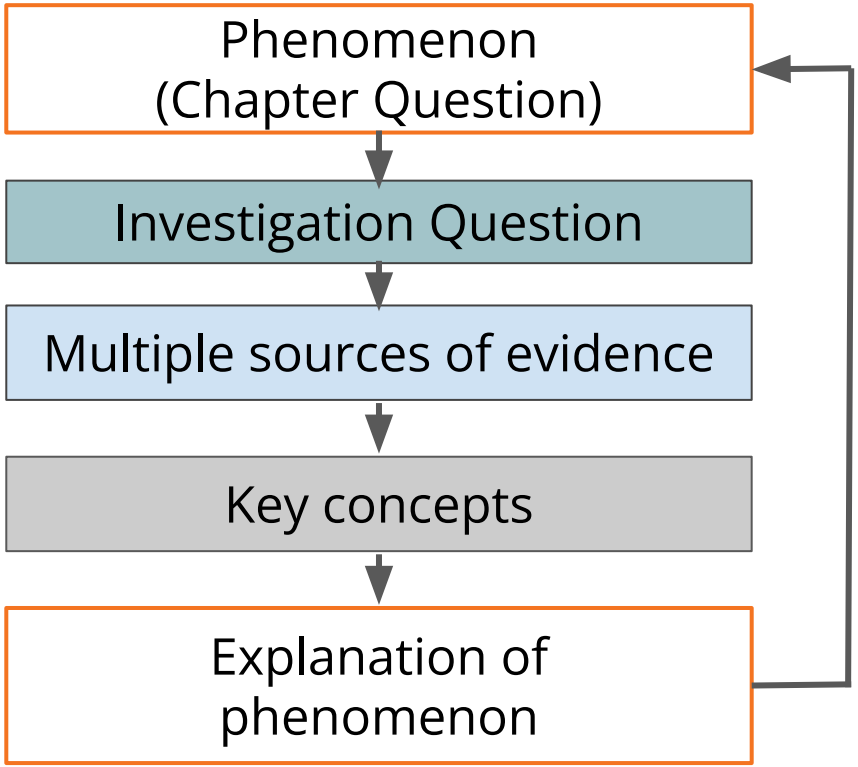
Evidence: Read *Tortoise Parts* (1.2)
Evidence: Observe students eating (1.2)
Evidence: Describe structures in *Tortoise Parts* (1.3)
Evidence: Watch videos of plant and animal structures (1.3)
Evidence: Read *Spikes, Spines, and Shells* (1.3)

↓

Key concept: Animals and plants have structures that help them do what they need to do to survive. (1.3)

Coherence Flowchart

A diagram of student learning



Coherence Flowchart

Animal and Plant Defenses Lesson 1.2-1.3

Chapter Question: How does Spruce the Sea Turtle do what she needs to do to survive?

↓

Investigation Question: How do animals and plants do what they need to do to survive?

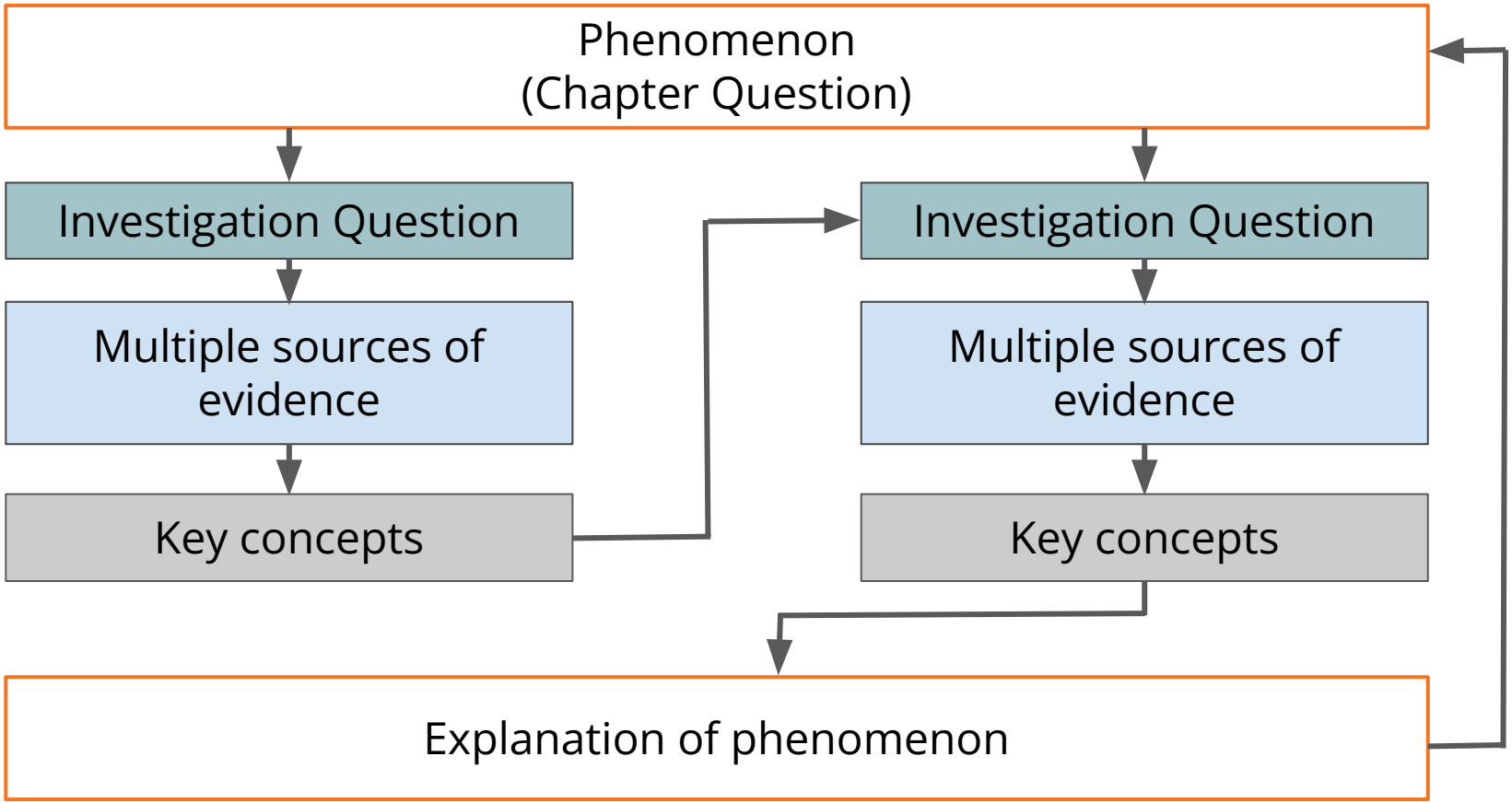
↓

Evidence: Read *Tortoise Parts* (1.2)
Evidence: Observe students eating (1.2)
Evidence: Describe structures in *Tortoise Parts* (1.3)
Evidence: Watch videos of plant and animal structures (1.3)
Evidence: Read *Spikes, Spines, and Shells* (1.3)

↓

Key concept: Animals and plants have structures that help them do what they need to do to survive. (1.3)

Coherence Flowchart



Animal and Plant Defenses: Spikes, Shells, and Camouflage

Unit Anchor Phenomenon

Problem students work to solve

Spruce the Sea Turtle and her offspring survive in the ocean.
How can a sea turtle survive in the ocean after being released by an aquarium?

Chapter-level Anchor Phenomenon
Chapter 1 Question

Spruce the Sea Turtle survives in the ocean.
How does Spruce the Sea Turtle do what she needs to do to survive?

Investigative Phenomena
Investigation Questions

Sometimes plants and animals survive.
What do animals and plants need to do to survive? (1.1)

Plants and animals get water, air, and food.
How do animals and plants do what they need to do to survive? (1.2, 1.3, 1.4, 1.5)

Evidence sources and reflection opportunities

- Play the Survival Game (1.1)

- Read *Tortoise Parts* (1.2)
- Observe students eating (1.2)
- Describe structures in *Tortoise Parts* (1.3)
- Watch videos of plant and animal structures (1.3)
- Read *Spikes, Spines, and Shells* (1.3)
- Revisit the Survival Game (1.4)
- Write about how animals do what they need to do to survive. (1.4)

Key concepts

- To survive, animals and plants need to get water, air, and food. (1.1)

- Animals and plants have structures that help them do what they need to do to survive. (1.3)
- To survive, animals and plants need to get water, air, and food, and to not be eaten. (1.4)

Application of key concepts to problem

- Gather evidence about sea turtle structures and explain how they use those structures to survive (1.5)
- Write about how Spruce does what she needs to do to survive in the ocean (1.5)

Explanation that students can make to answer the Chapter 1 Question

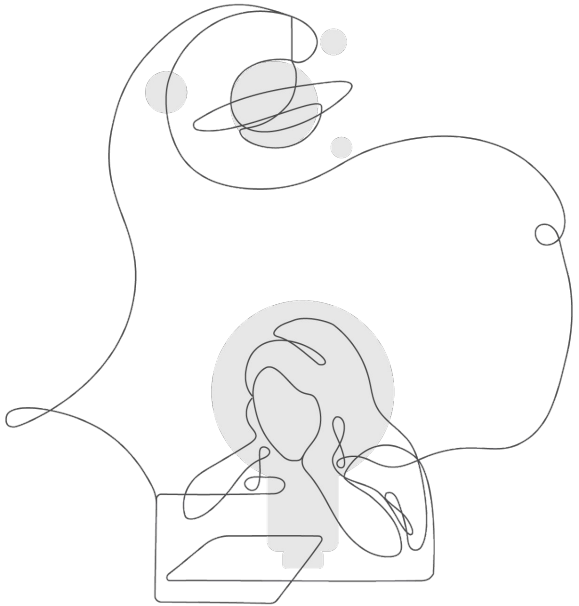
Sea turtles have body parts that help them get food, air, and water. In the ocean, there are predators that might try to eat the sea turtle. To survive in the ocean, she needs to avoid being eaten by predators.

Amplify.

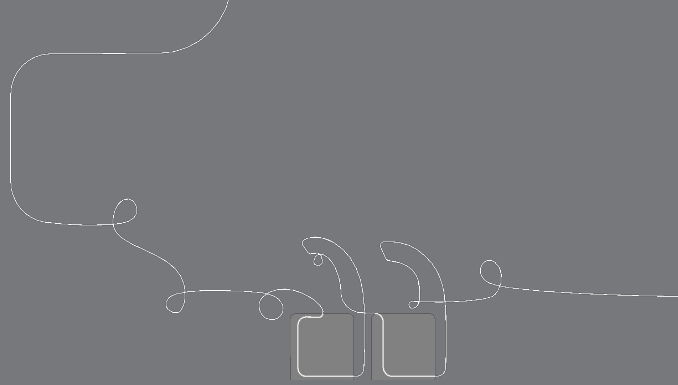
Explore the Coherence Flowchart

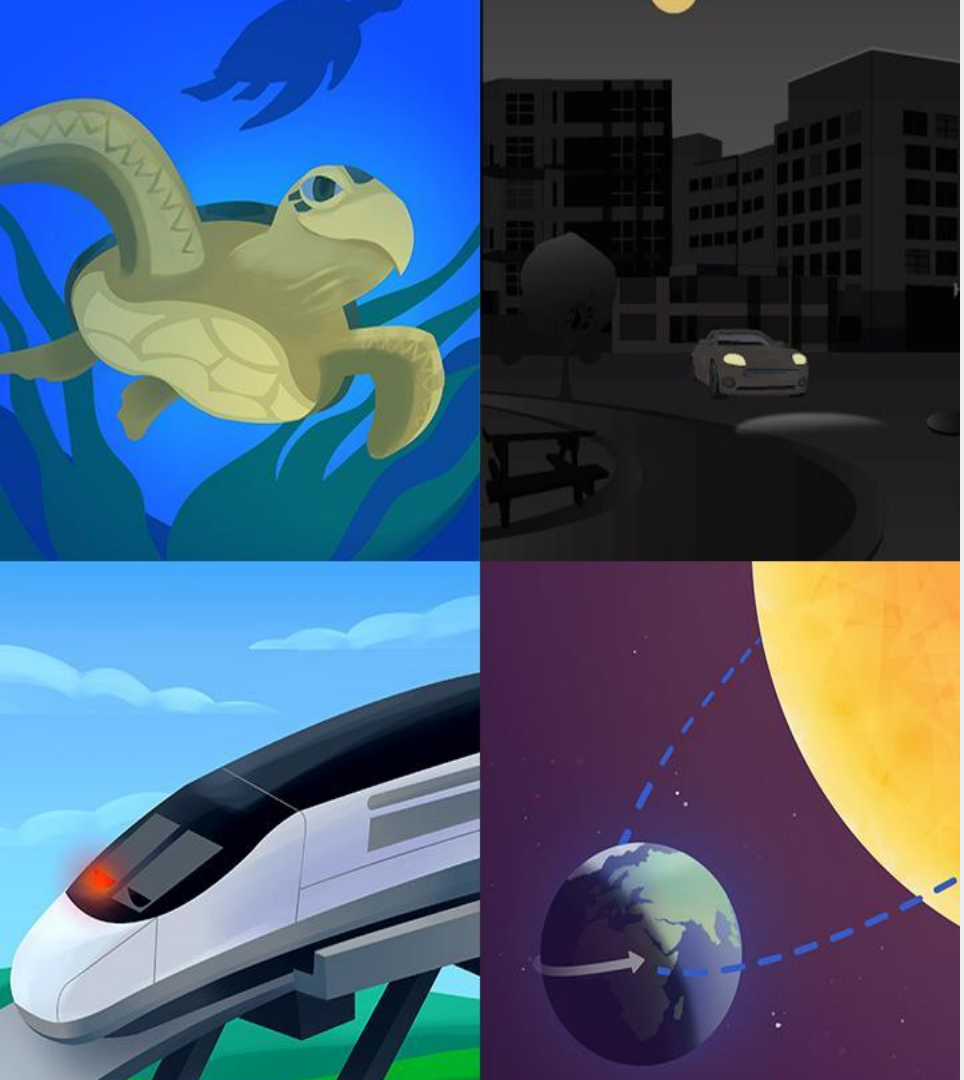
Skim the Chapter 1 Coherence Flowchart.

Think about how you might use the Coherence Flowchart to summarize learning throughout Chapter 1.



Questions?

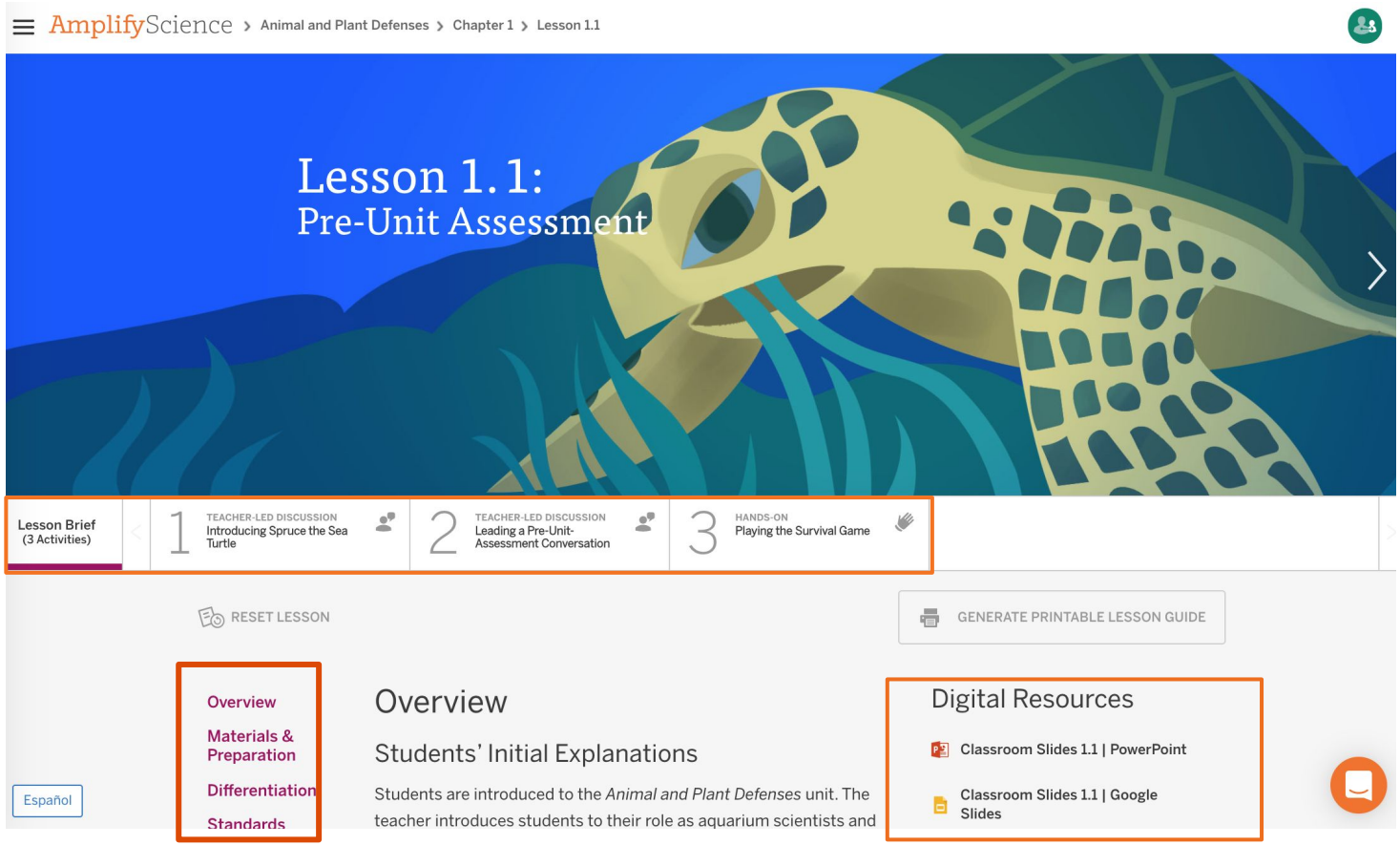




Plan for the day: Part 2

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

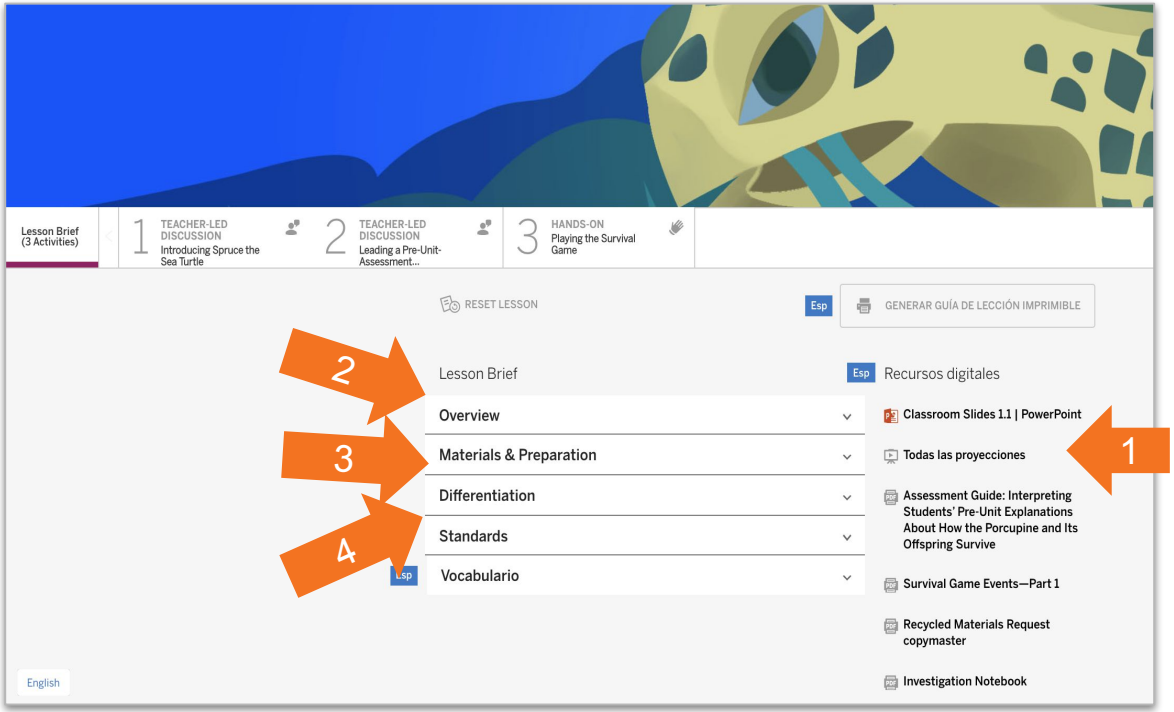
Navigate to a lesson page



4 Easy Steps to Teaching a lesson

DIRECTIONS:

1. Download the **Classroom Slides** for **Lesson 1.1** and review them.
2. Read the **Overview**.
3. Explore the **Materials & Preparation** document.
4. Read the **Differentiation** document.



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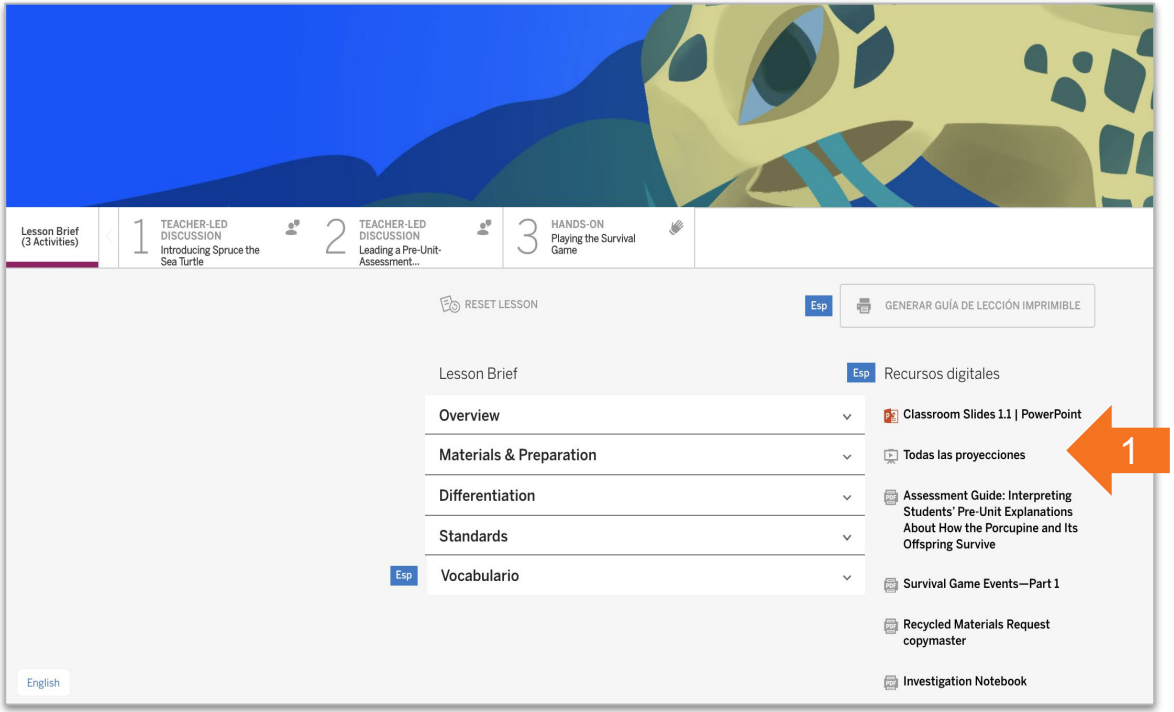
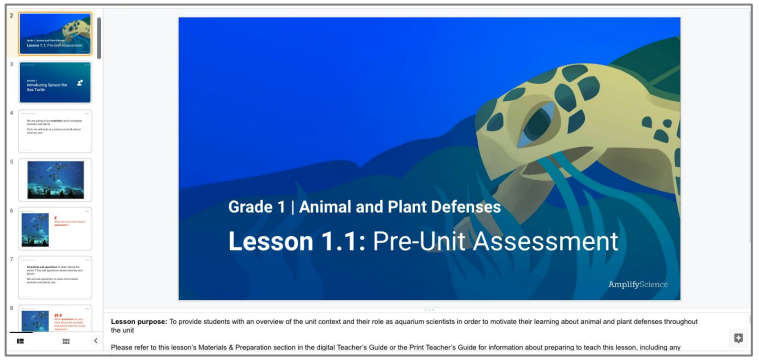


Preparing to teach

Classroom Slides

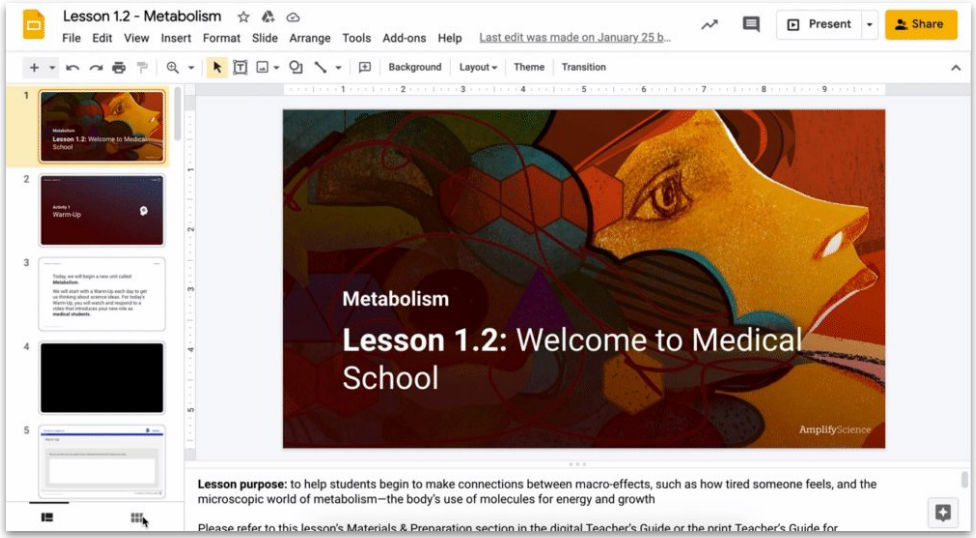
1. Open the **Classroom Slides** under the **Digital Resources**.
2. Read through the Classroom Slides including the **presenter notes** to gain a better understanding of the lesson.
3. **Consider:**
    - Why do some slides have scripting in black while others have scripting in orange?
    - What features of the Classroom Slides will support you in teaching this lesson?



Using Classroom Slides as a planning tool

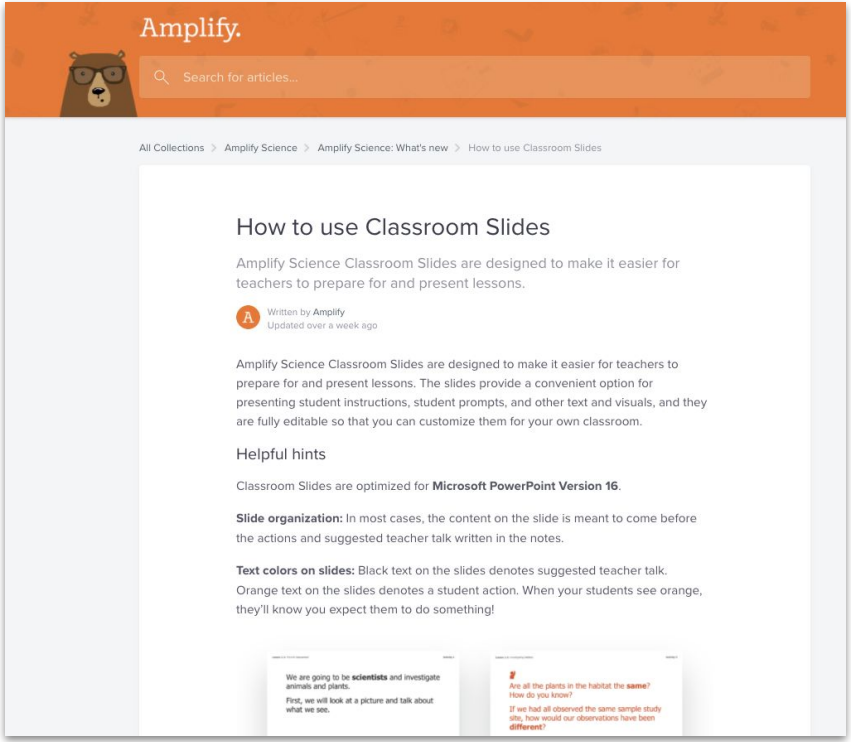
Teacher tip: Classroom Slides are a great visual summary of a lesson. Many teachers download and flip through a lesson's Classroom Slides deck to preview what happens in the lesson.

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.



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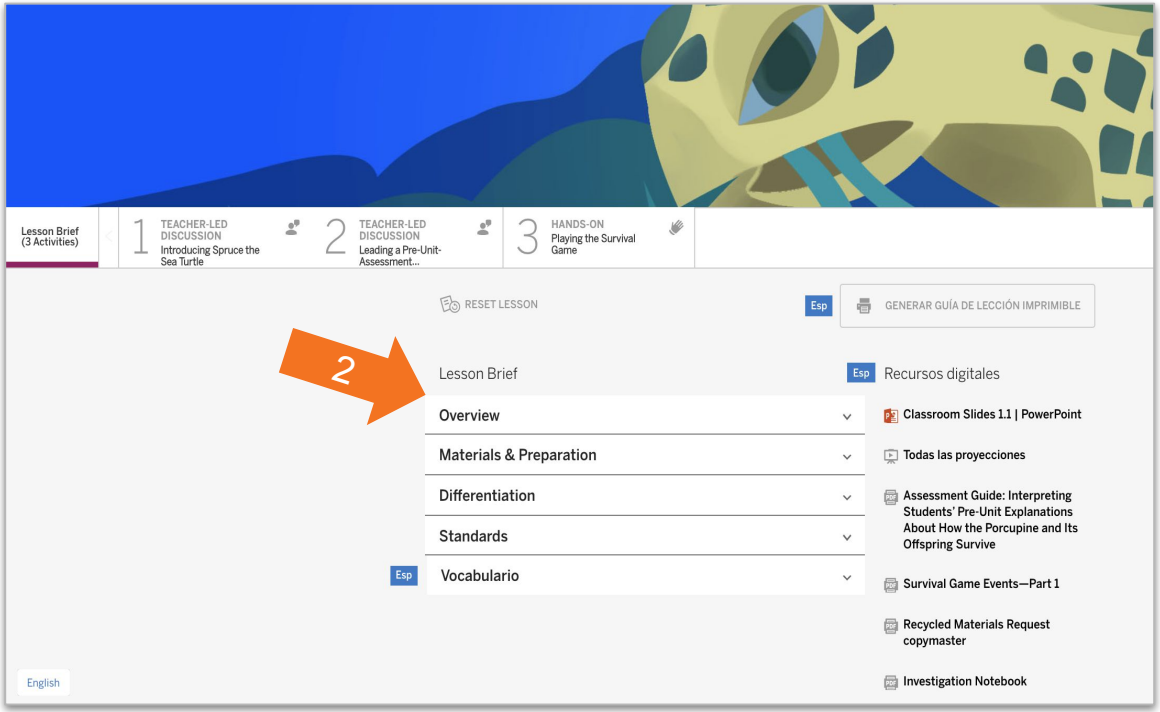
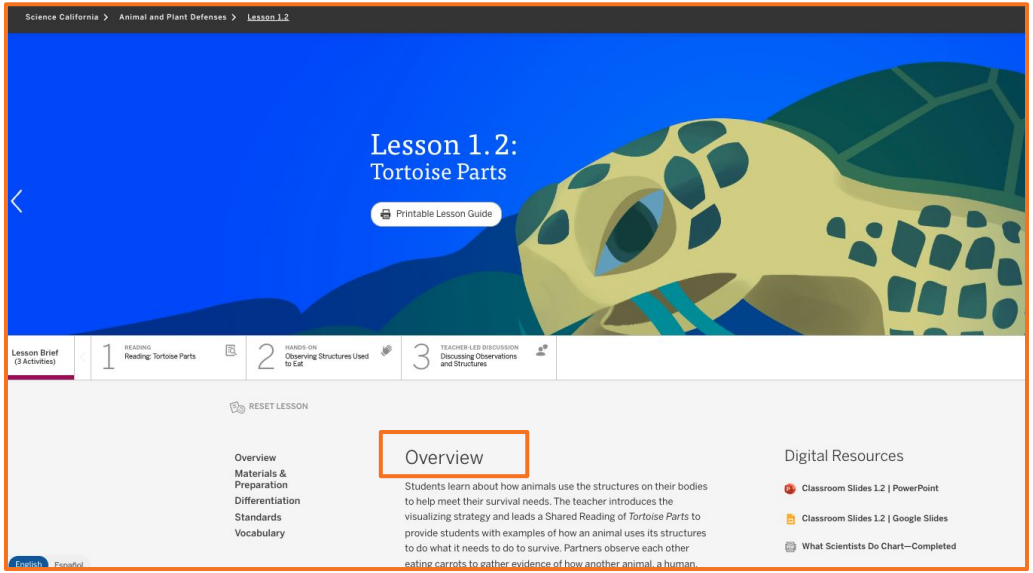


Preparing to teach

The Overview

- Read through the lesson overview.
- Find the purpose of the lesson.



4 Easy Steps to Teaching a lesson

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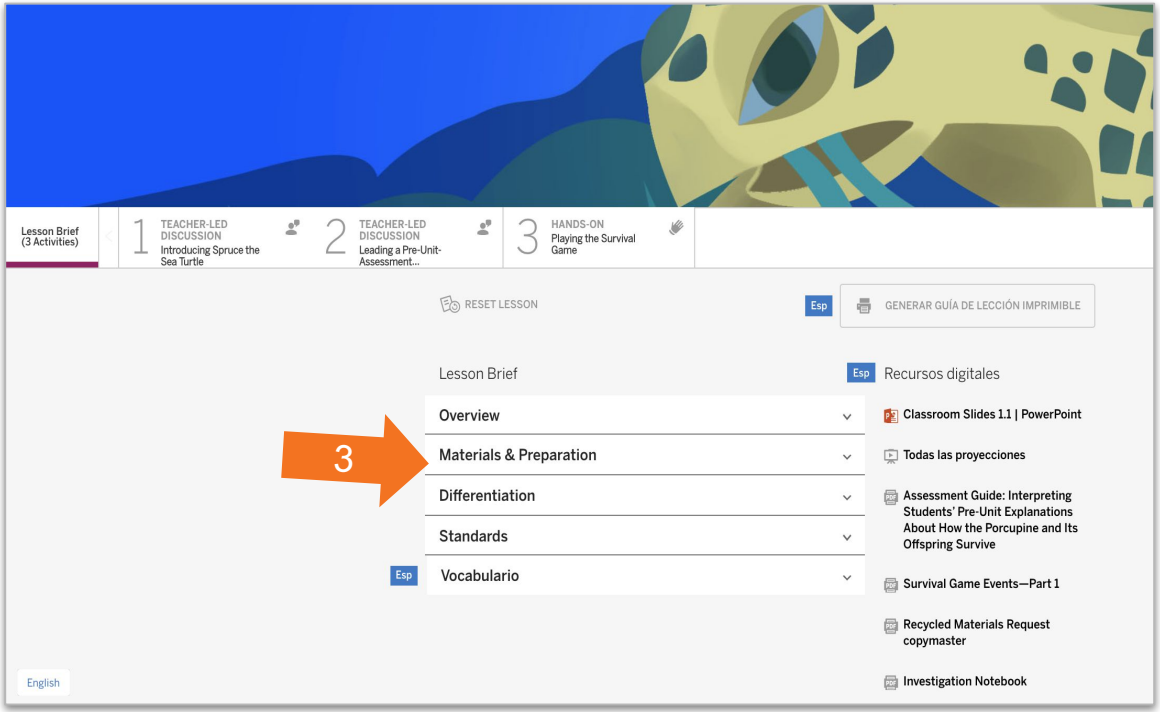
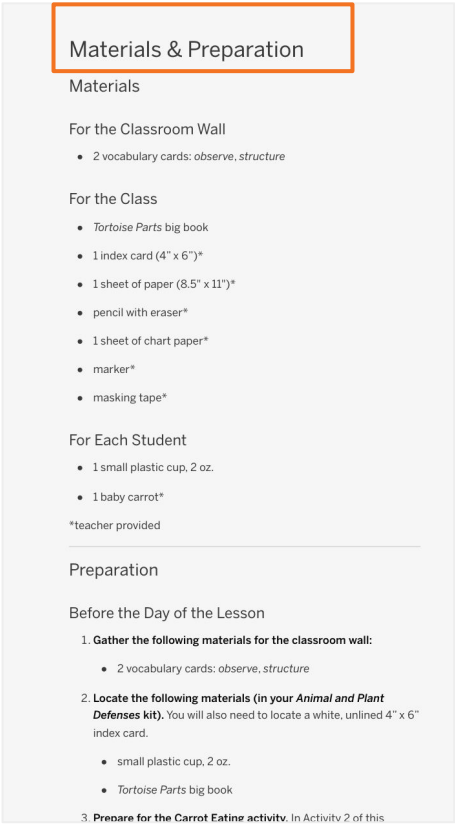


Preparing to teach

Materials and Prep

Review the materials needed for:

- The Classroom Wall
- For the Class
- For each pair of students (if applicable)
- Preparation



Materials & Preparation

Materials

For the Classroom Wall

- 2 vocabulary cards: *observe*, *structure*

For the Class

- *Tortoise Parts* big book
- 1 index card (4" x 6")*
- 1 sheet of paper (8.5" x 11")*
- pencil with eraser*
- 1 sheet of chart paper*
- marker*
- masking tape*

For Each Student

- 1 small plastic cup, 2 oz.
- 1 baby carrot*

*teacher provided

Preparation

Before the Day of the Lesson

1. **Gather the following materials for the classroom wall:**
   - 2 vocabulary cards: *observe*, *structure*
2. **Locate the following materials (in your *Animal and Plant Defenses* kit).** You will also need to locate a white, unlined 4" x 6" index card.
   - small plastic cup, 2 oz.
   - *Tortoise Parts* big book
3. **Prepare for the Carrot Eating activity.** In Activity 2 of this

4 Easy Steps to Teaching a lesson

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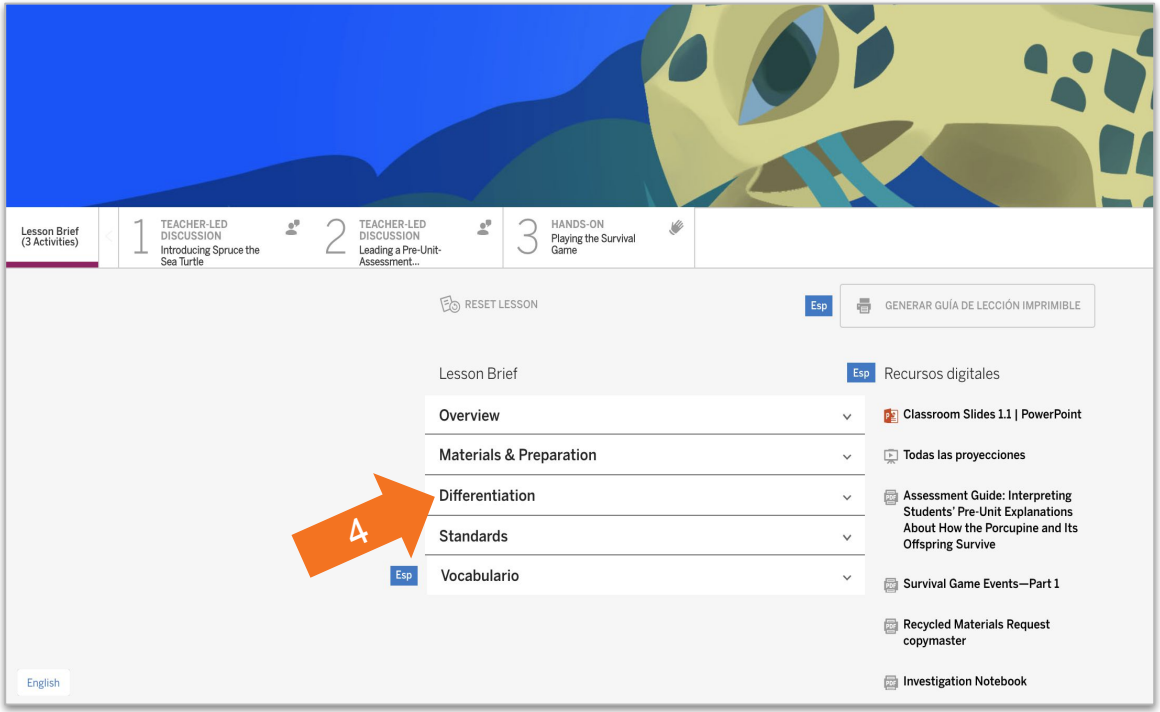
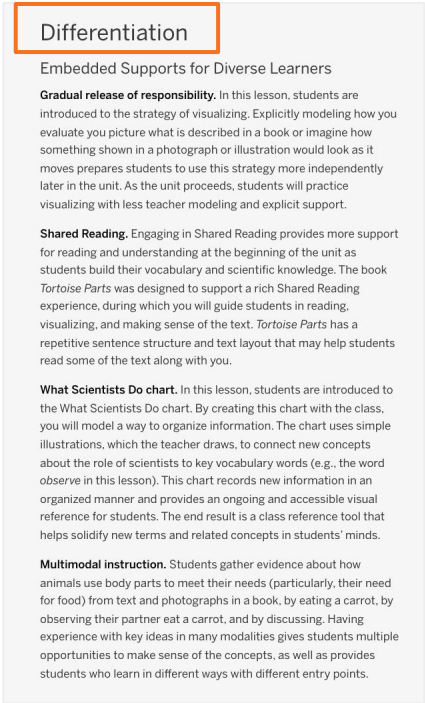


Preparing to Teach

Lesson-specific differentiation

- Embedded supports
- Potential challenges
- Strategies for:
  - English Learners
  - Students who need more support
  - Students who need more challenge



Differentiation

Embedded Supports for Diverse Learners

Gradual release of responsibility. In this lesson, students are introduced to the strategy of visualizing. Explicitly modeling how you evaluate you picture what is described in a book or imagine how something shown in a photograph or illustration would look as it moves prepares students to use this strategy more independently later in the unit. As the unit proceeds, students will practice visualizing with less teacher modeling and explicit support.

Shared Reading. Engaging in Shared Reading provides more support for reading and understanding at the beginning of the unit as students build their vocabulary and scientific knowledge. The book *Tortoise Parts* was designed to support a rich Shared Reading experience, during which you will guide students in reading, visualizing, and making sense of the text. *Tortoise Parts* has a repetitive sentence structure and text layout that may help students read some of the text along with you.

What Scientists Do chart. In this lesson, students are introduced to the What Scientists Do chart. By creating this chart with the class, you will model a way to organize information. The chart uses simple illustrations, which the teacher draws, to connect new concepts about the role of scientists to key vocabulary words (e.g., the word *observe* in this lesson). This chart records new information in an organized manner and provides an ongoing and accessible visual reference for students. The end result is a class reference tool that helps solidify new terms and related concepts in students' minds.

Multimodal instruction. Students gather evidence about how animals use body parts to meet their needs (particularly, their need for food) from text and photographs in a book, by eating a carrot, by observing their partner eat a carrot, and by discussing. Having experience with key ideas in many modalities gives students multiple opportunities to make sense of the concepts, as well as provides students who learn in different ways with different entry points.

4 Easy Steps to Teaching a lesson

DIRECTIONS:

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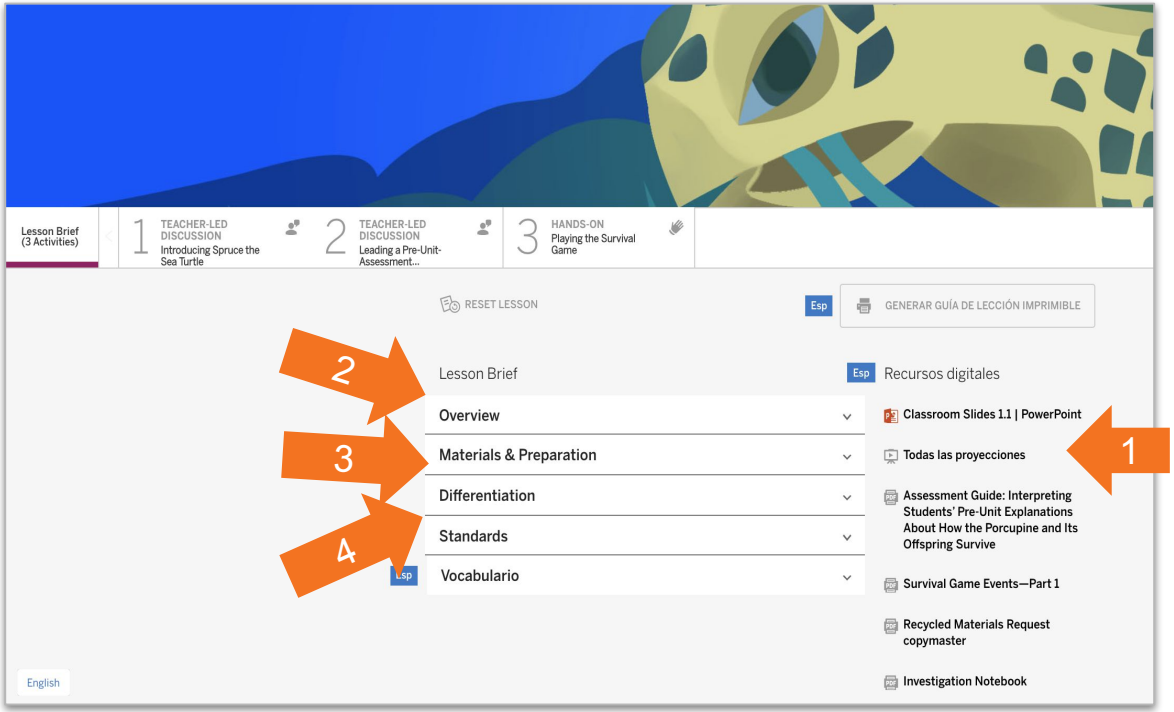
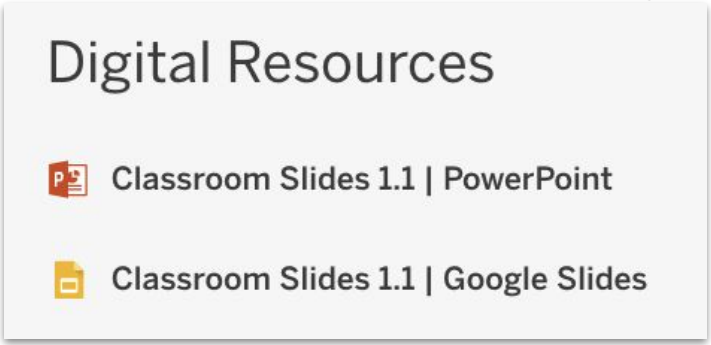


Lesson __	Activity Overview	From the Lesson at a glance in the overview
What is the purpose of this lesson? From the lesson overview	**Activity 1 (##min)**	
What will students learn?	**Activity 2 (##min)**	
3-D Statement (identify SEP, CCC, and DCI): From the lesson standards	**Activity 3 (##min)**	
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)**	

Directions for Planning Time

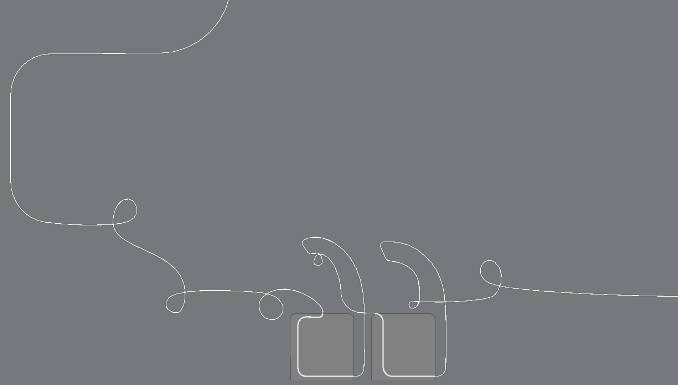
(Make your own copy first before planning)

1. Make a copy of this planning slide.
2. Download the classroom slides for the lesson you would like to plan
3. Insert the planning slide at the front of the classroom slide deck
4. Navigate at the lesson level to answer the questions on this slide
5. Make edits directly on your side deck to meet the needs of your students



Lesson _1.2_	Activity Overview	
What is the purpose of this lesson? The purpose of this lesson is to lay the foundation for students to understand that living things have body parts that help them meet their survival needs	**Activity 1 (20 min)**	Reading: Tortoise Parts
What will students learn? Visualizing how something happens can help scientists understand pictures and words as they read. Observing animals and plants helps scientists understand how living things survive. Animals have structures with functions that help them get and eat their food. Scientists start with questions and conduct investigations to find answers.	**Activity 2 (15 min)**	Observing Structures Used to Eat
3-D Statement (identify SEP, CCC, and DCI): Students read the book *Tortoise Parts* and observe one another eating carrots in order to obtain and evaluate information about structures (body parts) that animals use to meet specific survival needs (structure and function).	**Activity 3 (10 min)**	Discussing Observations and Structures
Student Resources: 1 small plastic cup, 2 oz. 1 baby carrot*	**Activity 4 (xx min)**	
Assessment Opportunities: Activity 1	**Activity 5 (xx min)**	

Questions?



Gr. 1 LAUSD New Teacher Part 2:
Unit 1, Animal and Plant Defenses

Plan for the day: Part 2

- Part 1 Review
- Teaching and Learning in an Amplify Science Lesson
- Instructional Approach Reflection
- Planning a Lesson
- Closing

Additional resources

Welcome, caregivers!

—

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

TOP RATED BY EDREPORTS

Grades 6-8

[Caregivers]

LAUSD Microsite- https://amplify.com/lausd-science

Welcome to Amplify Science!

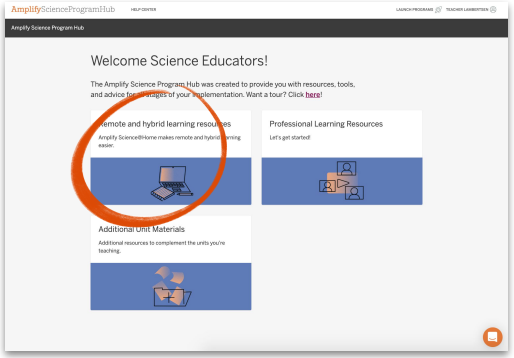
This site contains supporting resources designed for the LAUSD Amplify Science adoption for grades TK–8.

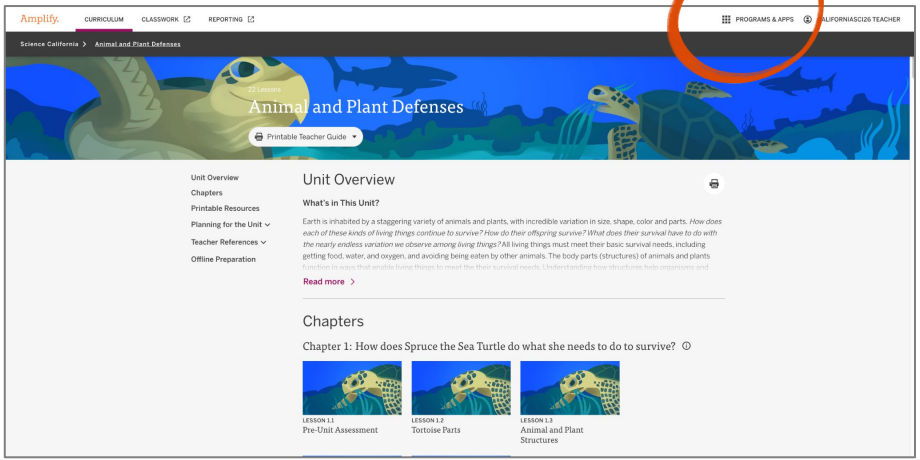
- Access the Amplify Science Program Hub (To help orient you to the new design, watch this video and view this reference guide.)
- Find out more about Amplify Science@Home
- Share the Caregiver Hub (Eng/Span) with your families
- For LAUSD ES Teachers- Amplify Science & Benchmark Advance Crosswalk
-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

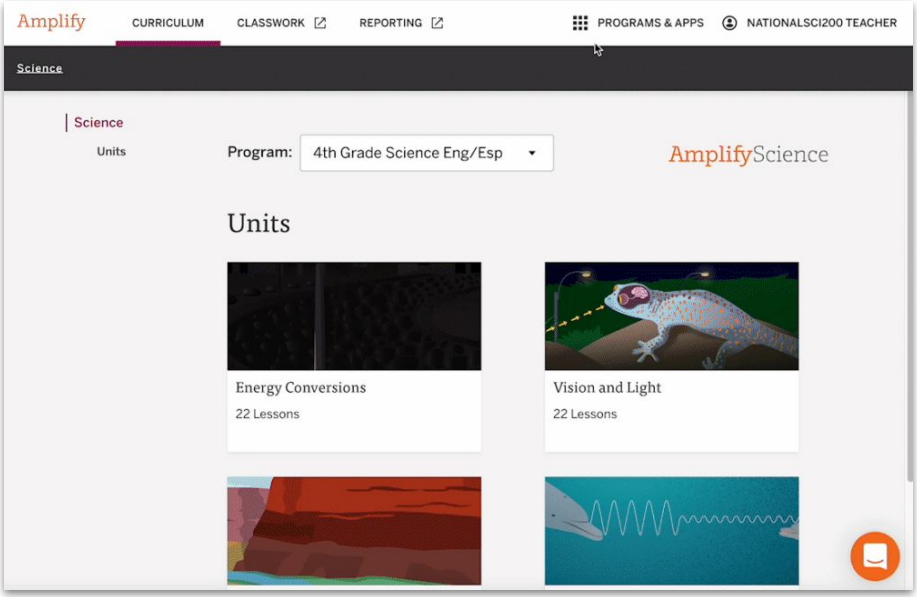
Click the button below to preview the digital Teacher's Guide, and check back for exciting updates to this site!

Program Hub

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



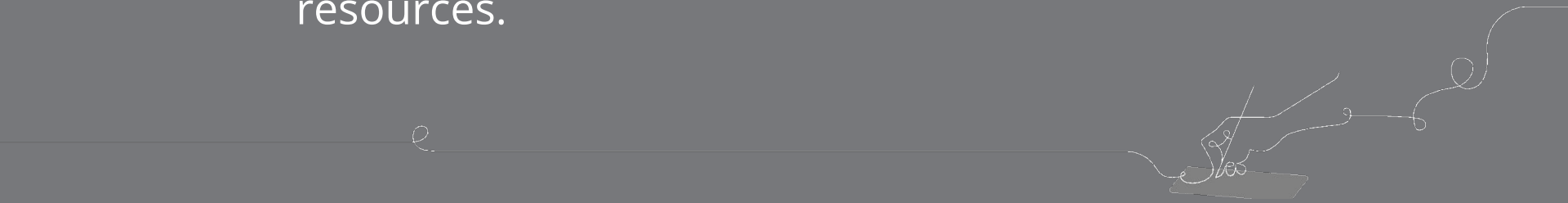




Overarching goals

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.



Closing reflection

Based on our work today in Part 2, share:

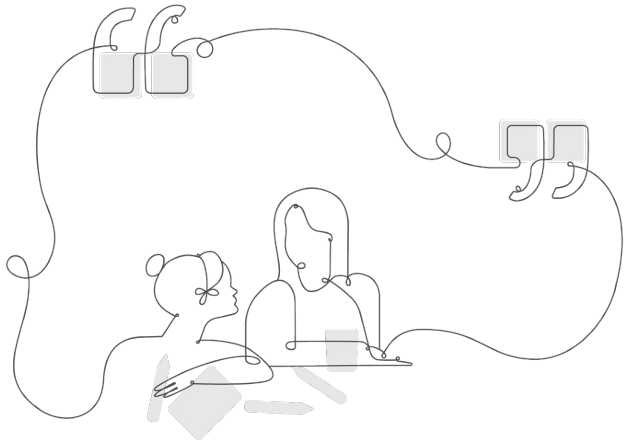
Head: something you'll keep in mind

Heart: something you're feeling

Feet: something you're planning to do

Onsite Upcoming Professional Development!

Part 3: Unit 1 - Supporting English Learners



- October 15th (Alta California ES, NW)
- October 29th (Ochoa Learning Center, East)

In this session, participants explore strategies to support English learners' ability to do, talk, read, write, visualize, and construct arguments like scientists. Participants will identify the supports and strategies embedded in Unit 1 by engaging in model activities followed by independent planning.

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

800-823-1969

Amplify Chat

Please provide feedback!

Type:

Strengthen

Session title:

Unit Internalization / Guided Planning

(Part 2)

Professional Learning Specialist name:

Insert name

(insert email, if you would like)