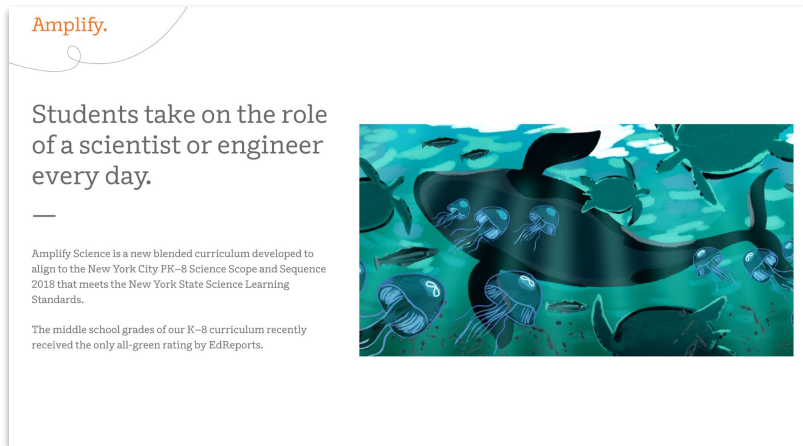


Welcome to Amplify Science!

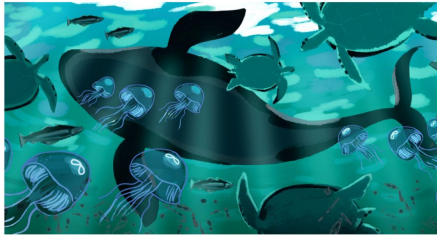
Do Now: Open auto-login site & explore as we wait to begin

Go to <https://amplify.com/amplify-science-nyc-doe-review/>



Amplify.

Students take on the role of a scientist or engineer every day.



Amplify Science is a new blended curriculum developed to align to the New York City PK–8 Science Scope and Sequence 2018 that meets the New York State Science Learning Standards.

The middle school grades of our K–8 curriculum recently received the only all-green rating by EdReports.



Begin your review

Begin your review

What sets Amplify Science apart?

The Amplify Science approach

Components overview

Review grades K–5

Review grades 6–8

Watch an overview

Ready to order?

Grades K–5

Grades 6–8

What sets Amplify Science apart?

- Aligned to the New York City PK–8 Science Scope and Sequence 2018, and meets New York State Science Learning Standards.

Click your grade band & then follow prompts

Amplify Science

New York City

Exploring the Amplify Science Curriculum

Grades K-2

Part 1

Date xx

Presented by xx



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.

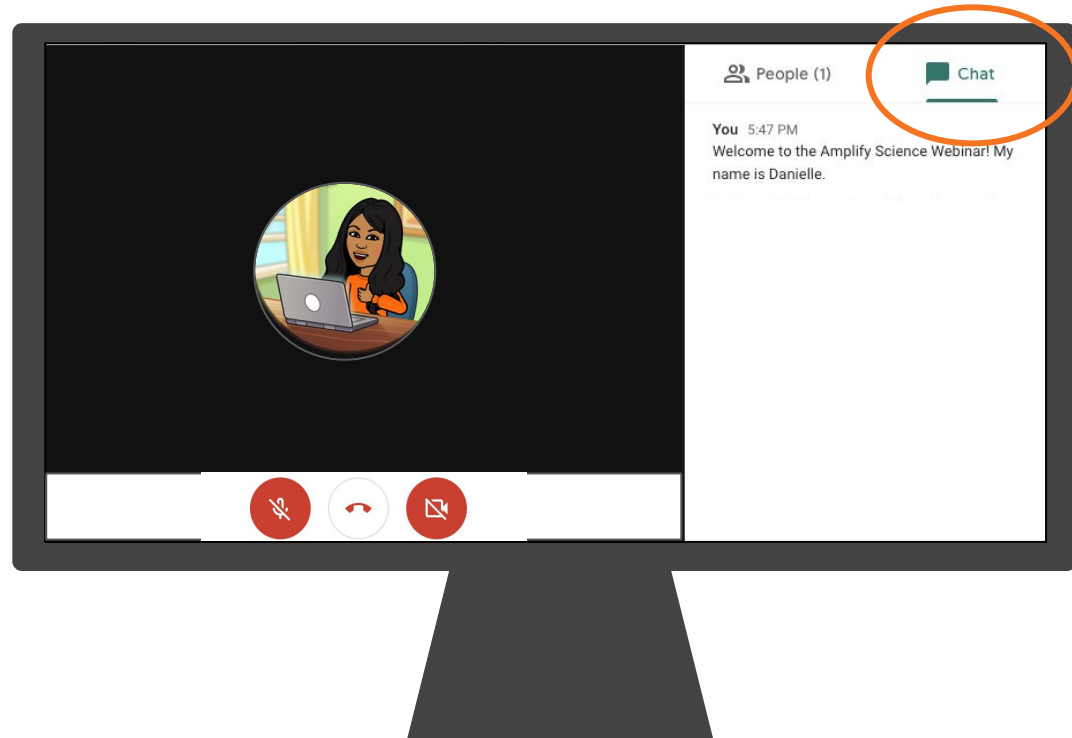
We share your goal of **inspiring all students to think deeply, creatively, and for themselves**.

Sincerely,
Amplify

Ice Breaker!

Who do we have in the room today?

- **Question 1:** Which aspects of adopting a new science curriculum are you most excited or hopeful about?
- **Question 2:** What about adopting a new science curriculum to do you feel most hesitant about?



Norms: Establishing a culture of learners

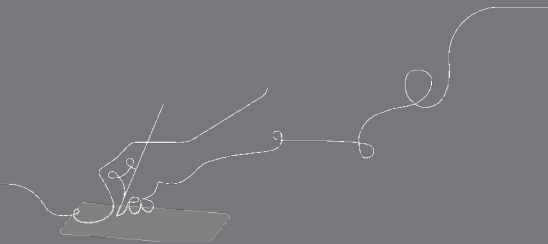
- **Take risks:** Ask any questions, provide any answers.
- **Participate:** Share your thinking, participate in discussion and reflection.
- **Be fully present:** Unplug and immerse yourself in the moment.
- **Physical needs:** Stand up, get water, take breaks.

Goals for Part 1 session

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

- ❑ Navigate the Amplify Science curriculum.
- ❑ Understand the Amplify Science approach.
- ❑ Experience & reflect on a model lesson.

e

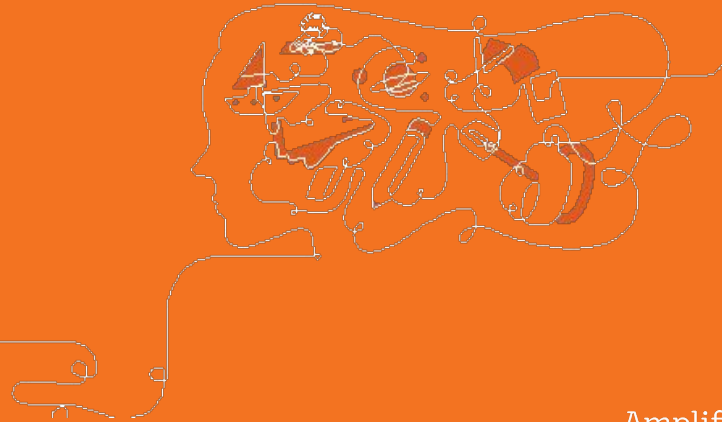




Plan for part 1

- **Framing the day**
 - Welcome
- **The Amplify Approach**
 - Multimodal learning
- **Model Lesson Experience**
 - SEL suggestions
 - Lesson reflection
- **Closing**
 - Final Questions & Feedback

Introducing Amplify Science



Course curriculum structure

Grade K

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

Grade 1

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

Grade 2

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

Grade 3

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

Grade 4

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

Grade 5

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

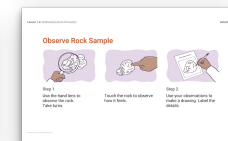
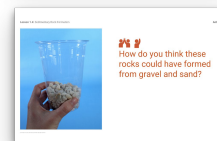
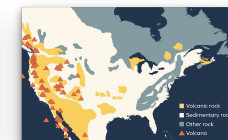
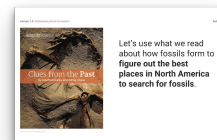
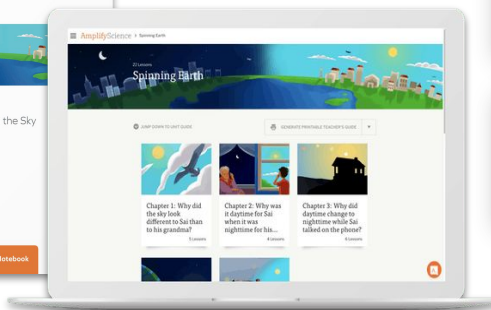
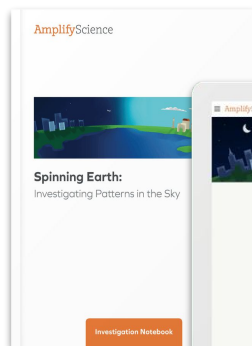
Key takeaways:

- There are 22 lessons per unit
- Lessons at grades K-1 are 45 minutes long & at grade 2 are 60 minutes long

K-2 Program components

Teacher materials

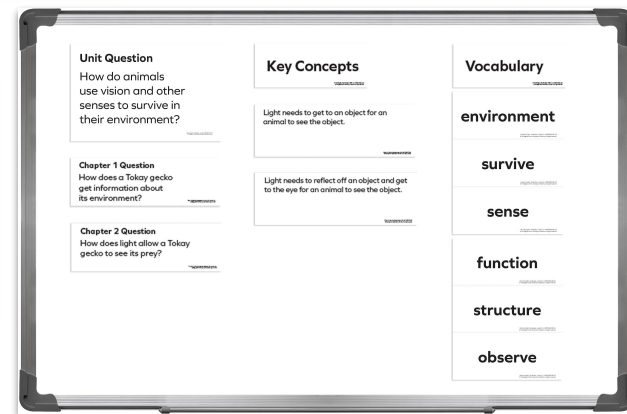
- Teacher's Guide
- Classroom Slides
- Classroom wall materials
- Big Books (K-1)
- Embedded assessments
- Program Guide
- Program Hub
- Amplify Help Site



Program Hub



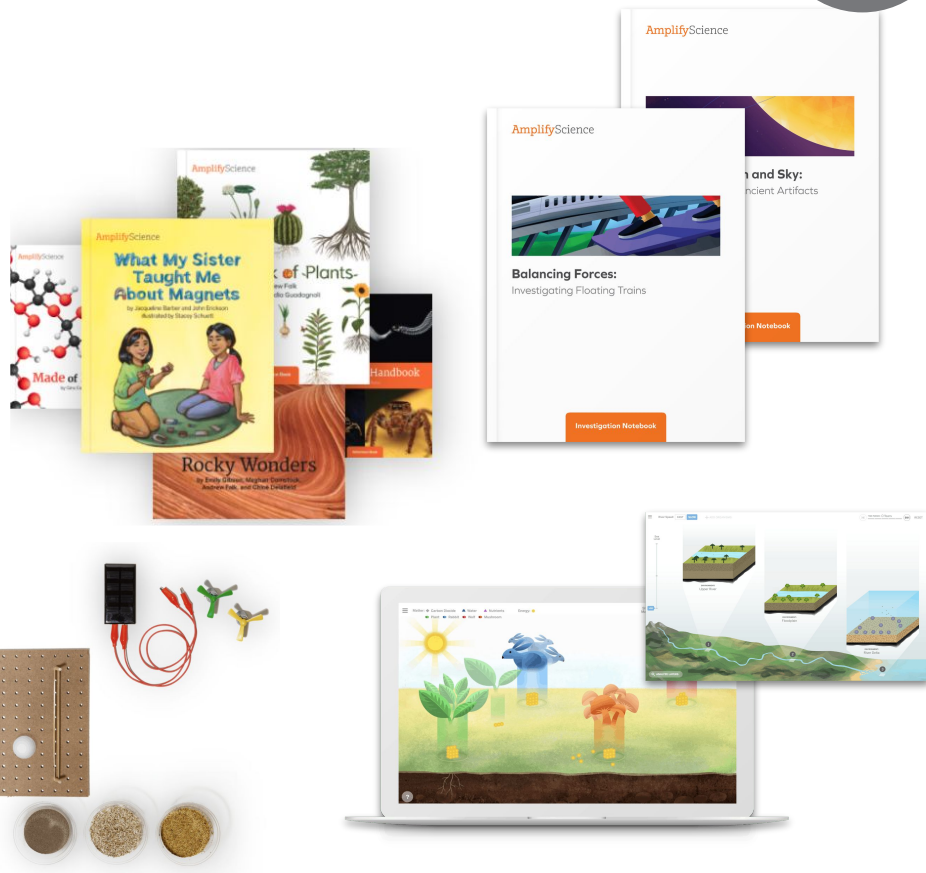
Science Program Guide



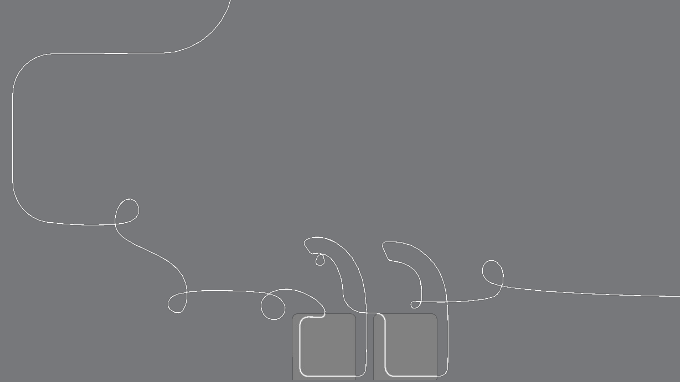
K-2 Program components

Student materials

- Hands-on materials
- Investigation Notebooks (K-2)
- Student books (digital & print)
- Digital Applications (Grade 2 only)



Questions?




Framing our reflections

Teacher lens and student lens

To synthesize our learning, we'll return to these questions throughout the session:

What is teaching like with Amplify Science?

What is learning like with Amplify Science?

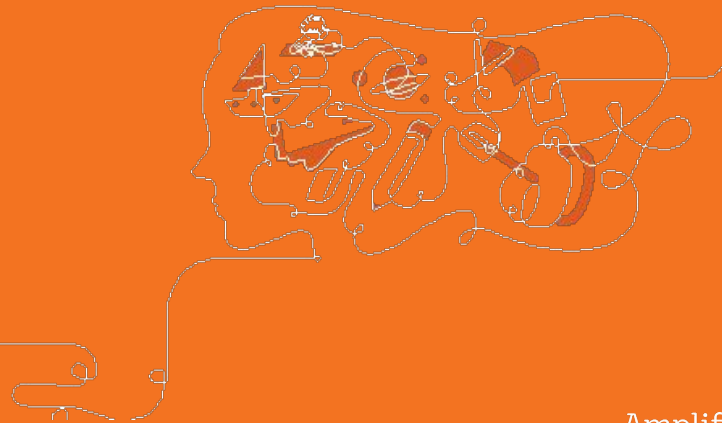
| <i>Teaching</i> | <i>Learning</i> |
|---|-----------------|
|  | |



Plan for part 1

- Framing the day
 - Welcome
- **The Amplify Approach**
 - Multimodal learning
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 - Lesson reflection
- **Closing**
 - Final Questions & Feedback

Phenomenon-based instruction



NYS Science Learning 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 |
|----------------|--|
| Ocean habitats | A sea turtle can survive in an ocean habitat where sharks live |

NYS Science Learning Standards

How might learning be different?

| Topic-based | Phenomenon-based |
|------------------------|---|
| Ocean habitats | A sea turtle can survive in an ocean habitat where sharks live. |
| Electric circuits | A flashlight won't turn on, even though it used to work. |
| Mixtures and solutions | One substance dissolved in water but another substance didn't. |

Comparing topics and phenomena

A shift in science instruction

from learning about

(like a student)

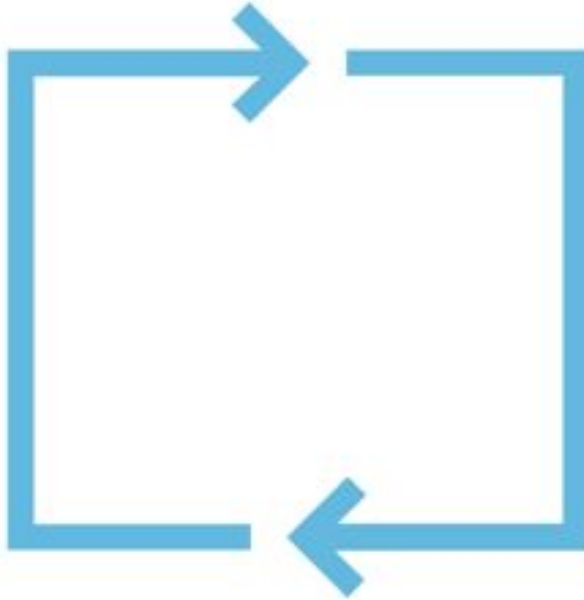


to figuring out

(like a scientist)

Multimodal learning

Gathering evidence over multiple lessons



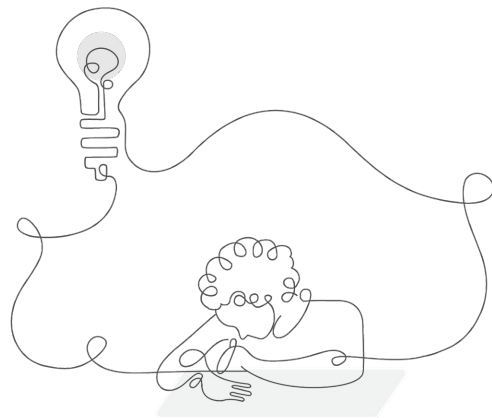
**Do,
Talk,
Read,
Write,
Visualize**

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 this 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.

Previewing the unit

Unit Map


Read the Unit Map to get more information about the student role, unit phenomenon, and what students explain throughout the unit.



Reflection

Teacher lens and student lens

Return to your reflection notes. Add any new insights about teaching or learning with Amplify Science.

| <i>Teaching</i> | <i>Learning</i> |
|---|-----------------|
|  | |

Navigation and planning

1. **Navigation:** Finding lessons and moving between lessons
2. **Classroom Slides:** Visually previewing a lesson
3. **Lesson Brief:** Preparing to teach

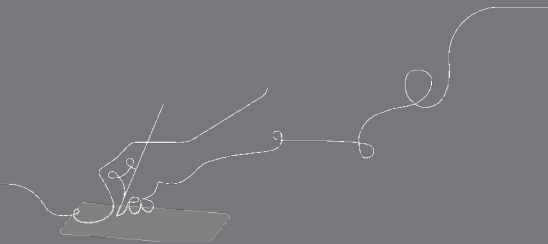


Navigation

In this section you will learn to:

- ❑ Log into the digital Teacher's Guide
- ❑ Navigate to a specific lesson
- ❑ Navigate from one lesson to another

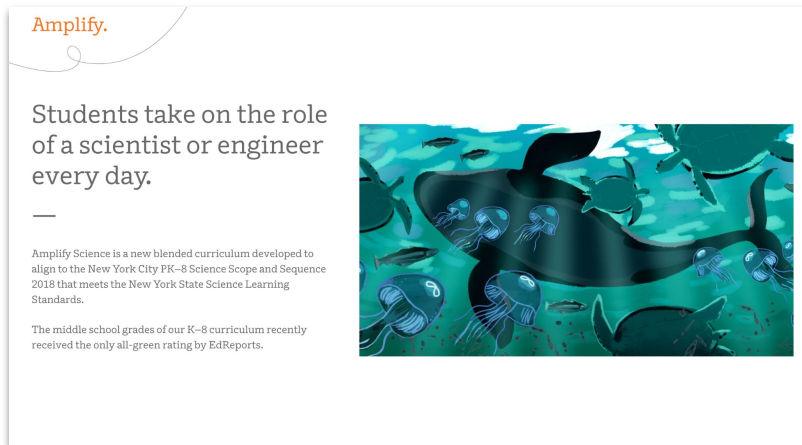
e



Logging in

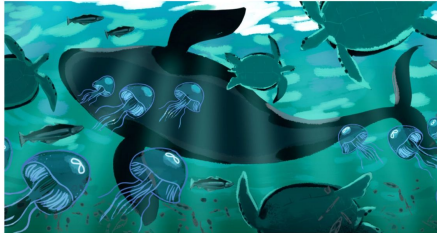
Safari or Chrome

Go to <https://amplify.com/amplify-science-nyc-doe-review/>



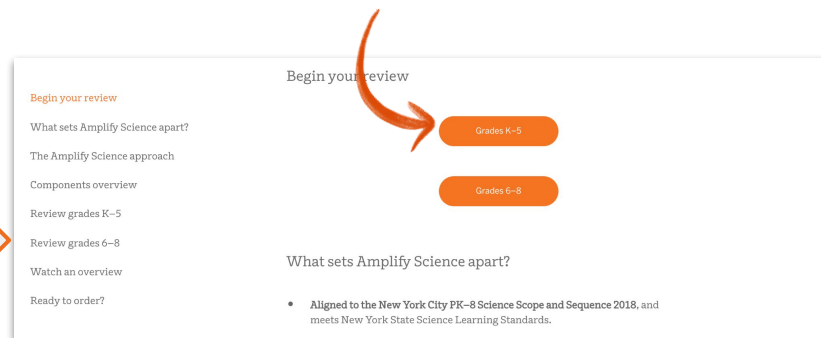
Amplify.

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Begin your review

- What sets Amplify Science apart?
- The Amplify Science approach
- Components overview
- Review grades K–5
- Review grades 6–8
- Watch an overview
- Ready to order?

Begin your review

Grades K–5

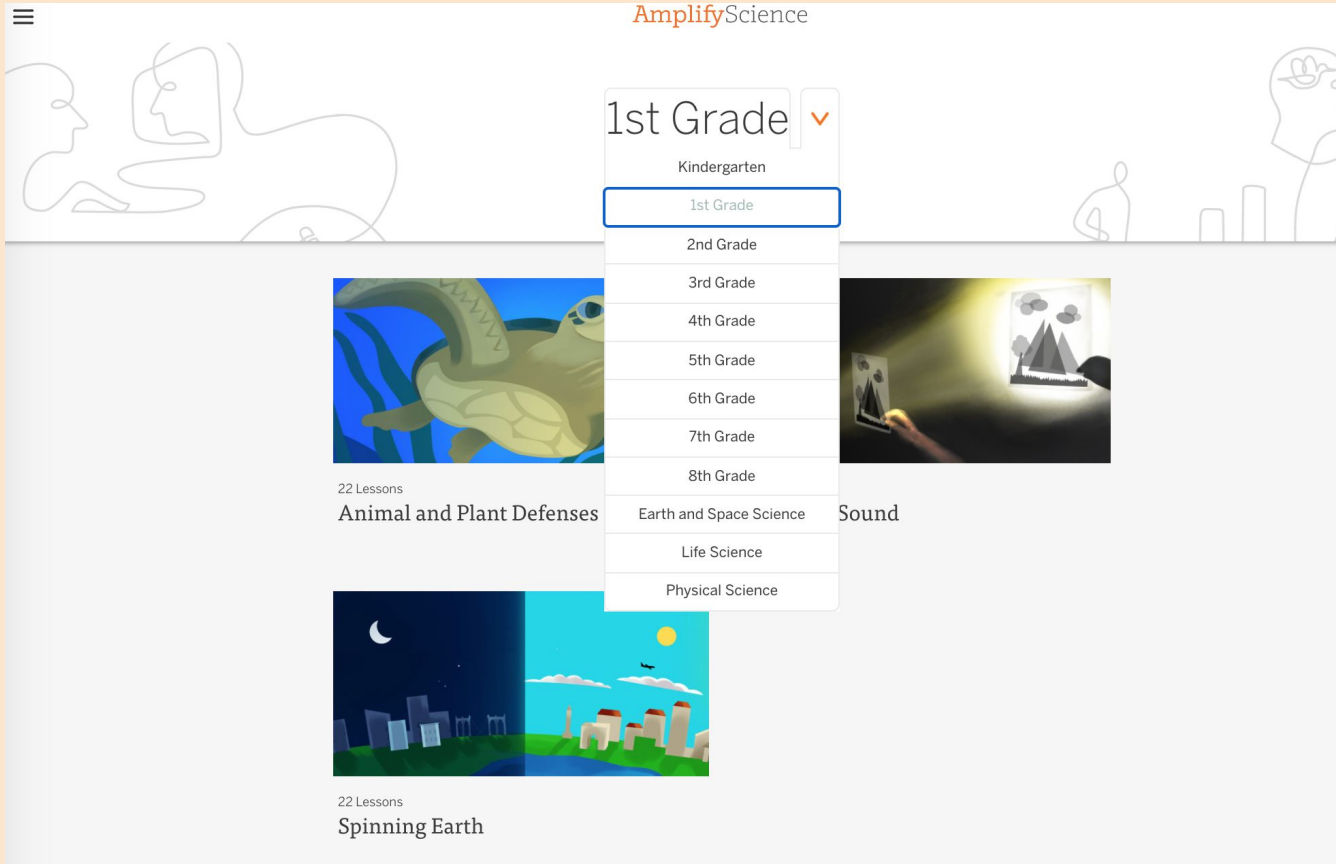
Grades 6–8

What sets Amplify Science apart?

- Aligned to the New York City PK–8 Science Scope and Sequence 2018, and meets New York State Science Learning Standards.

Click your grade band & then follow prompts

Hidden slide: Navigating to your grade level



The screenshot shows the AmplifyScience website interface. At the top, there is a hamburger menu icon on the left and the AmplifyScience logo in the center. A dropdown menu is open, displaying a list of grade levels from Kindergarten to 8th Grade. The '1st Grade' option is currently selected and highlighted with a blue border. Below the dropdown, there are two lesson cards. The first card, titled 'Animal and Plant Defenses', features an illustration of a green scorpion and is labeled '22 Lessons'. The second card, titled 'Spinning Earth', features an illustration of a city at night and day and is also labeled '22 Lessons'. To the right of the dropdown menu, there is a small image of a hand holding a card with a mountain scene, and the word 'Sound' is visible next to it.

AmplifyScience

1st Grade ▾

- Kindergarten
- 1st Grade
- 2nd Grade
- 3rd Grade
- 4th Grade
- 5th Grade
- 6th Grade
- 7th Grade
- 8th Grade

22 Lessons
Animal and Plant Defenses

22 Lessons
Spinning Earth

Sound

Hidden slide: Unit landing page

AmplifyScience > Animal and Plant Defenses

22 Lessons

Animal and Plant Defenses

✓ JUMP DOWN TO UNIT GUIDE



GENERATE PRINTABLE TEACHER'S GUIDE



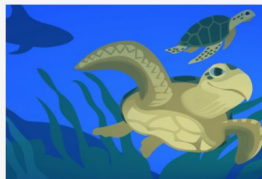
Chapter 1: How does Spruce the Sea Turtle do what she needs to do to survive?

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



Español

Hidden slide: Chapter 1 landing page

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

▼ JUMP DOWN TO CHAPTER OVERVIEW

Lesson 1.1:
Pre-Unit Assessment

Lesson 1.2:
Tortoise Parts

Lesson 1.3:
Animal and Plant
Structures

Lesson 1.4:
Surviving by Not
Being Eaten

Lesson 1.5:
Explaining Sea
Turtle Survival

Hidden slide: Lesson 1.1 Lesson Brief



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

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

Español



Hidden slide: Using arrows to navigate between lessons in order



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

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Digital Resources

Classroom Slides 1.1 | PowerPoint


Classroom Slides 1.1 | Google Slides

Español



Hidden slide: Using the breadcrumb trail to navigate to a specific lesson

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

Overview

Students' Initial Explanations

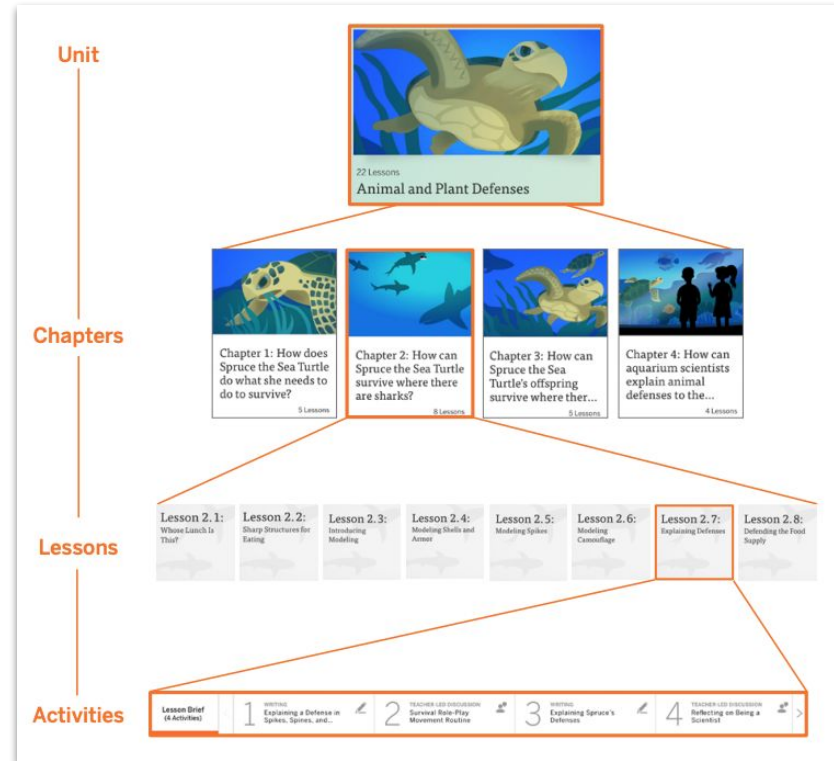
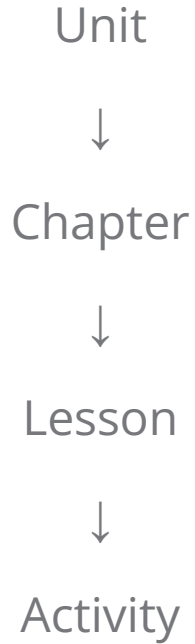
Students are introduced to the *Animal and Plant Defenses* unit. The teacher introduces students to their role as aquarium scientists and

Digital Resources

- Classroom Slides 1.1 | PowerPoint
- Classroom Slides 1.1 | Google Slides

Español

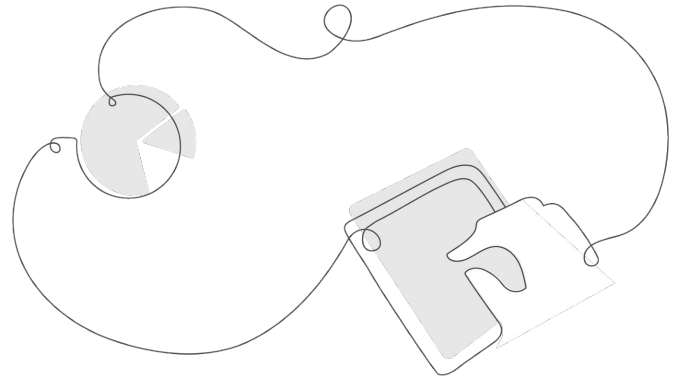
Unit structure



Practice

Spend a few minutes practicing navigating between lessons.

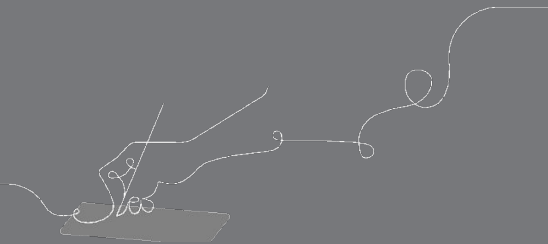
1. Try using the breadcrumb trail at the top of the Teacher's Guide to navigate to a specific lesson.
2. Try using the arrows to flip between lessons in order.



Classroom Slides

In this section you will learn to:

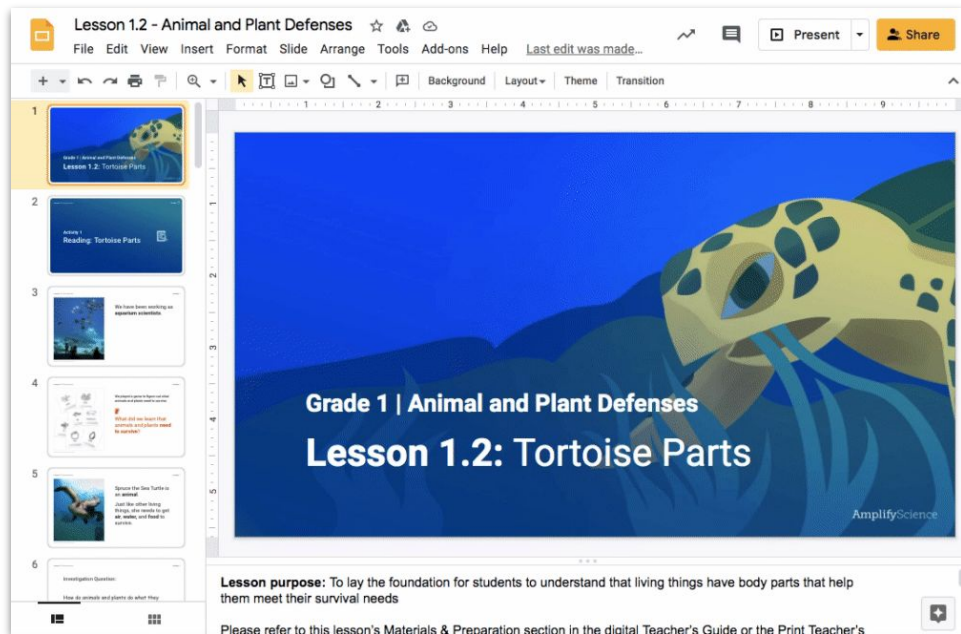
- ❑ Access and edit a lesson's Classroom Slides deck
- ❑ Interpret formatting and icons in Classroom Slides decks
- ❑ Use Classroom Slides as a planning tool



Classroom Slides

Classroom Slides are a tool for easily preparing and presenting lessons.

They are editable slide decks that include activity instructions, student prompts, and other text and visuals to guide you and your students through a lesson.



The screenshot displays the Classroom Slides application interface. The title bar reads "Lesson 1.2 - Animal and Plant Defenses" and includes a "Share" button. The menu bar contains "File", "Edit", "View", "Insert", "Format", "Slide", "Arrange", "Tools", "Add-ons", and "Help". The main workspace shows a slide deck with six slides. The first slide is the title slide, which features a large illustration of a tortoise in an underwater environment. The text on the title slide reads "Grade 1 | Animal and Plant Defenses" and "Lesson 1.2: Tortoise Parts". The AmplifyScience logo is visible in the bottom right corner of the slide. Below the slide, the "Lesson purpose" is stated: "To lay the foundation for students to understand that living things have body parts that help them meet their survival needs." At the bottom of the interface, there is a note: "Please refer to this lesson's Materials & Preparation section in the digital Teacher's Guide or the Print Teacher's Guide."

Hidden slide: locating Classroom Slides

AmplifyScience > Animal and Plant Defenses > Chapter 1 > Lesson 1.2

Lesson 1.2: Tortoise Parts

Lesson Brief (3 Activities) | 1 READING: Reading: Tortoise Parts | 2 HANDS-ON: Observing Structures Used to Eat | 3 TEACHER-LED DISCUSSION: Discussing Observations and Structures

RESET LESSON | GENERATE PRINTABLE LESSON GUIDE

Overview

Students learn about how animals use the structures on their bodies to help meet their survival needs. The teacher introduces the visualizing strategy and leads a Shared Reading of *Tortoise Parts* to provide students with examples of how an animal uses its structures to do what it needs to do to survive. Partners observe each other eating carrots to gather evidence of how another animal, a human, uses its structures to get and eat food. Students share these observations with the class and make connections to how the

Digital Resources

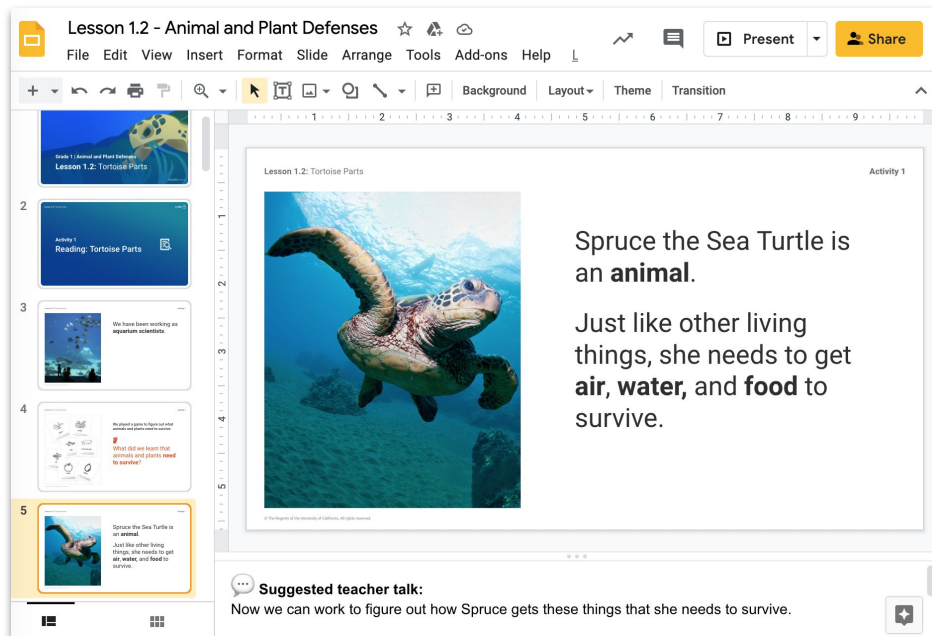
- Classroom Slides 1.2 | PowerPoint
- Classroom Slides 1.2 | Google Slides
- What Scientists Do Chart—Completed

Español

Explore the slide deck

Briefly click through the slide deck to familiarize yourself with the format.

1. Can you find the slide notes?
2. What do you think the different colors and icons mean?

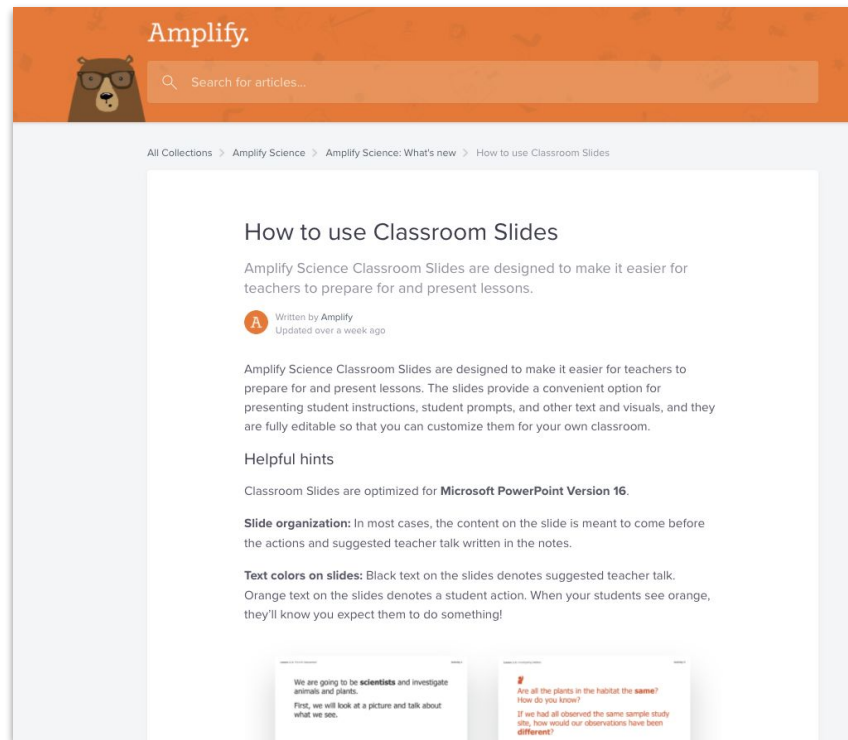


The screenshot shows a Google Slides interface. The title bar reads "Lesson 1.2 - Animal and Plant Defenses" with a star icon, a share icon, and a "Present" button. Below the title bar is a menu bar with "File", "Edit", "View", "Insert", "Format", "Slide", "Arrange", "Tools", "Add-ons", and "Help". A secondary toolbar contains icons for undo, redo, copy, paste, search, and navigation, along with dropdown menus for "Background", "Layout", "Theme", and "Transition".

The slide content includes a navigation pane on the left with five thumbnails. The current slide, "Lesson 1.2: Tortoise Parts", features a large image of a sea turtle swimming underwater. To the right of the image, the text reads: "Spruce the Sea Turtle is an **animal**. Just like other living things, she needs to get **air, water, and food** to survive." A "Suggested teacher talk" box at the bottom of the slide contains the text: "Suggested teacher talk: Now we can work to figure out how Spruce gets these things that she needs to survive." The slide is labeled "Activity 1" in the top right corner.

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.

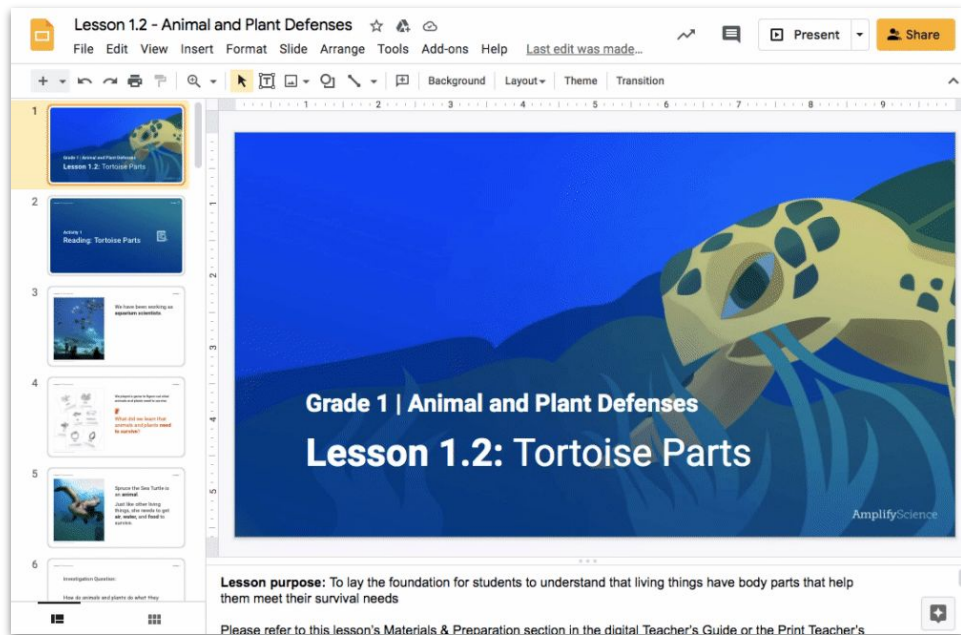


The screenshot shows the Amplify Science Help Site interface. At the top, there is an orange header with the Amplify logo (a bear wearing glasses) and a search bar. Below the header, a breadcrumb trail reads: All Collections > Amplify Science > Amplify Science: What's new > How to use Classroom Slides. The main content area features the article title "How to use Classroom Slides" in a large, bold font. Below the title, a paragraph states: "Amplify Science Classroom Slides are designed to make it easier for teachers to prepare for and present lessons." This is followed by a byline: "Written by Amplify Updated over a week ago". The article continues with a paragraph explaining that the slides are designed to make it easier for teachers to prepare for and present lessons, providing a convenient option for presenting student instructions, student prompts, and other text and visuals, and they are fully editable so that you can customize them for your own classroom. Below this, there is a section titled "Helpful hints" which includes two sub-sections: "Classroom Slides are optimized for Microsoft PowerPoint Version 16." and "Slide organization: In most cases, the content on the slide is meant to come before the actions and suggested teacher talk written in the notes." The final section is "Text colors on slides: Black text on the slides denotes suggested teacher talk. Orange text on the slides denotes a student action. When your students see orange, they'll know you expect them to do something!". At the bottom of the article, there are two small thumbnail images of classroom slides. The first slide shows black text: "We are going to be **scientists** and investigate animals and plants. First, we will look at a picture and talk about what we see." The second slide shows orange text: "Are all the plants in the habitat the **same**? How do you know? If we had all observed the same sample study site, how would our observations have been **different**?"

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.

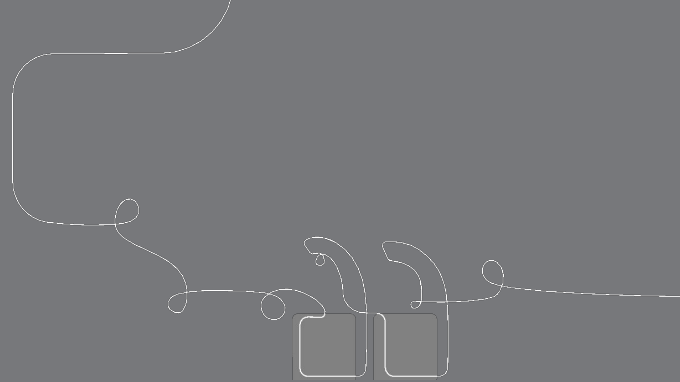


The screenshot shows a digital presentation interface for a lesson titled "Lesson 1.2 - Animal and Plant Defenses". The main slide is titled "Grade 1 | Animal and Plant Defenses" and "Lesson 1.2: Tortoise Parts". The slide features a large illustration of a sea turtle swimming in blue water. The interface includes a menu bar with options like File, Edit, View, Insert, Format, Slide, Arrange, Tools, Add-ons, and Help. A toolbar below the menu bar contains various editing tools. On the left side, there is a vertical navigation pane showing a list of slides, with slide 1 selected. The bottom of the interface displays the "Lesson purpose" and a note to refer to the lesson's Materials & Preparation section.

Lesson purpose: To lay the foundation for students to understand that living things have body parts that help them meet their survival needs

Please refer to this lesson's Materials & Preparation section in the digital Teacher's Guide or the Print Teacher's

Questions?

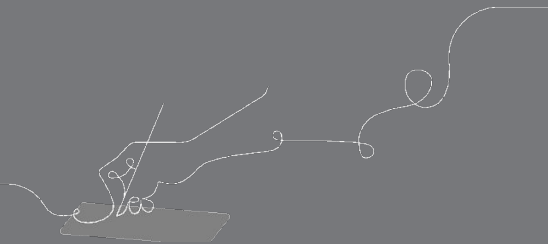


Lesson Brief and Instructional Guide

In this section you will learn to:

- ❑ Locate lesson-specific materials, preparation, and differentiation guidance
- ❑ Navigate to a lesson's Instructional Guide

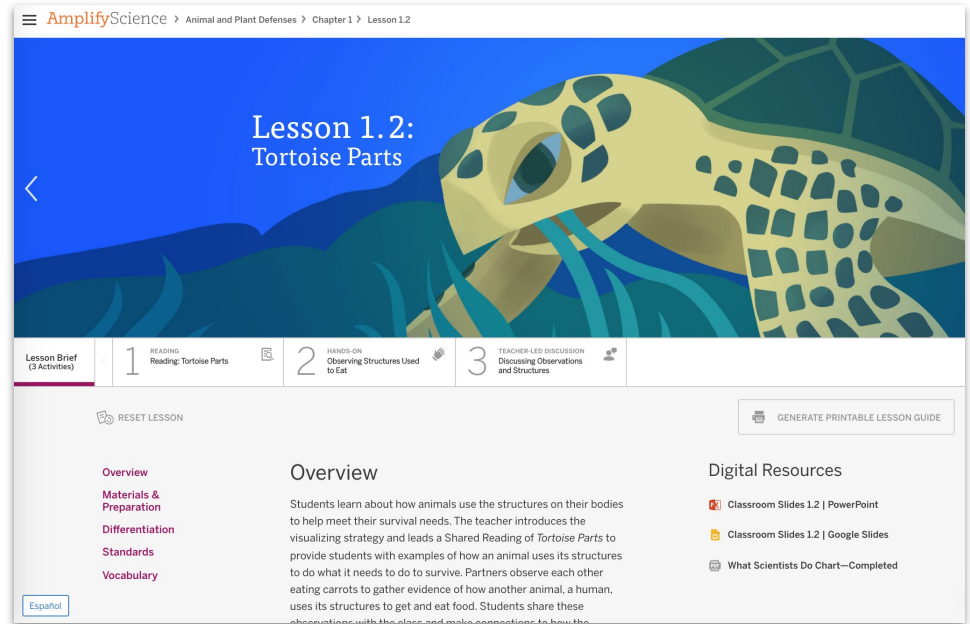
e



Preparing to teach a lesson

Lesson Brief

Use the Lesson Brief for information about lesson timing, materials and preparation, and differentiation suggestions.



The screenshot shows the AmplifyScience interface for Lesson 1.2: Tortoise Parts. The header includes the AmplifyScience logo and navigation: Animal and Plant Defenses > Chapter 1 > Lesson 1.2. The main title is "Lesson 1.2: Tortoise Parts" with a left arrow. Below the title is a navigation bar with three sections: 1. READING: Reading: Tortoise Parts (3 Activities), 2. HANDS-ON: Observing Structures Used to Eat, and 3. TEACHER-LED DISCUSSION: Discussing Observations and Structures. Below the navigation bar are buttons for "RESET LESSON" and "GENERATE PRINTABLE LESSON GUIDE". The main content area is titled "Overview" and contains the following text: "Students learn about how animals use the structures on their bodies to help meet their survival needs. The teacher introduces the visualizing strategy and leads a Shared Reading of *Tortoise Parts* to provide students with examples of how an animal uses its structures to do what it needs to do to survive. Partners observe each other eating carrots to gather evidence of how another animal, a human, uses its structures to get and eat food. Students share these observations with the class and make connections to how the...". On the right, under "Digital Resources", there are three items: "Classroom Slides 1.2 | PowerPoint", "Classroom Slides 1.2 | Google Slides", and "What Scientists Do Chart—Completed". A "Español" button is located at the bottom left.

Hidden slide: Review breadcrumb trail and digital resources

The screenshot shows the AmplifyScience interface for Lesson 1.2: Tortoise Parts. At the top, a breadcrumb trail is highlighted with an orange box: AmplifyScience > Animal and Plant Defenses > Chapter 1 > Lesson 1.2. The main header features a large illustration of a tortoise eating seaweed against a blue background, with the text 'Lesson 1.2: Tortoise Parts' and a left-pointing arrow. Below the header is a navigation bar with three activity cards: 1. READING: Reading: Tortoise Parts (with a book icon), 2. HANDS-ON: Observing Structures Used to Eat (with a hand icon), and 3. TEACHER-LED DISCUSSION: Discussing Observations and Structures (with a person icon). The first card is selected. To the left of the navigation bar is a 'RESET LESSON' button with a circular arrow icon. To the right is a 'GENERATE PRINTABLE LESSON GUIDE' button with a printer icon. On the left side of the main content area, there is a vertical menu with links: Overview (highlighted in pink), Materials & Preparation, Differentiation, Standards, and Vocabulary. At the bottom left, there is a 'Español' button. The main content area is titled 'Overview' and contains text about how animals use body structures for survival. On the right side, a box titled 'Digital Resources' is highlighted with an orange border and contains three items: Classroom Slides 1.2 | PowerPoint, Classroom Slides 1.2 | Google Slides, and What Scientists Do Chart—Completed.

AmplifyScience > Animal and Plant Defenses > Chapter 1 > Lesson 1.2

Lesson 1.2: Tortoise Parts

Lesson Brief (3 Activities)

- 1 READING
Reading: Tortoise Parts
- 2 HANDS-ON
Observing Structures Used to Eat
- 3 TEACHER-LED DISCUSSION
Discussing Observations and Structures

RESET LESSON

GENERATE PRINTABLE LESSON GUIDE

Overview


Students learn about how animals use the structures on their bodies to help meet their survival needs. The teacher introduces the visualizing strategy and leads a Shared Reading of *Tortoise Parts* to provide students with examples of how an animal uses its structures to do what it needs to do to survive. Partners observe each other eating carrots to gather evidence of how another animal, a human, uses its structures to get and eat food. Students share these observations with the class and make connections to how the

Digital Resources

- Classroom Slides 1.2 | PowerPoint
- Classroom Slides 1.2 | Google Slides
- What Scientists Do Chart—Completed

Español

Hidden slide: Overview



Lesson 1.2: Tortoise Parts

Lesson Brief (3 Activities)

- 1 READING
Reading: Tortoise Parts
- 2 HANDS-ON
Observing Structures Used to Eat
- 3 TEACHER-LED DISCUSSION
Discussing Observations and Structures

RESET LESSON

GENERATE PRINTABLE LESSON GUIDE

Overview

Materials & Preparation

Differentiation

Standards

Vocabulary

Overview

Students learn about how animals use the structures on their bodies to help meet their survival needs. The teacher introduces the visualizing strategy and leads a Shared Reading of *Tortoise Parts* to provide students with examples of how an animal uses its structures to do what it needs to do to survive. Partners observe each other eating carrots to gather evidence of how another animal, a human, uses its structures to get and eat food. Students share these observations with the class and make connections to how the tortoise uses its structures in *Tortoise Parts*. The teacher introduces the What Scientists Do chart as a place to record how students work as scientists throughout the unit. 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.

Unit Anchor Phenomenon: Spruce the Sea Turtle and her offspring survive in the ocean.

Chapter-level Anchor Phenomenon: Spruce the Sea Turtle survives in the ocean.

Investigative Phenomenon: Plants and animals get water, air, and

Digital Resources

- Classroom Slides 1.2 | PowerPoint
- Classroom Slides 1.2 | Google Slides
- What Scientists Do Chart—Completed

Hidden slide: Lesson at a Glance and floating menu

Overview

Materials & Preparation

Differentiation

Standards

Vocabulary

Lesson at a Glance

1: Reading: Tortoise Parts (20 min.)

The teacher introduces the Investigation Question that frames the work students will do in the next few lessons and leads a Shared Reading of *Tortoise Parts*. Students are introduced to the visualizing strategy to help them make sense of how tortoises do what they need to do to survive. *Tortoise Parts* introduces the idea that animals use specific body parts to meet their survival needs. Included in this activity is an On-the-Fly Assessment that provides an opportunity to assess students' initial use of the visualizing strategy.

2: Observing Structures Used to Eat (15 min.)


The teacher introduces the word observe to support students' understanding of the firsthand observations they make in this activity. Partners observe one another eating carrots to gather evidence about how animals use their structures to do what they need to do to survive.

3: Discussing Observations and Structures (10 min.)

Students share their observations from the Carrot Eating activity to identify the structures that humans use to get and eat the food they need to survive. The teacher introduces the What Scientists Do chart to help students understand the various things they are doing to answer questions in their work as scientists.

Digital Resources

 Classroom Slides 1.2 | PowerPoint

 Classroom Slides 1.2 | Google Slides

 What Scientists Do Chart—Completed

 BACK TO TOP

Español

We'd love to hear from you! Submit your feedback [here](#).

Hidden slide: Materials and preparation

AmplifyScience > Animal and Plant Defenses > Chapter 1 > Lesson 1.2

Overview

Materials & Preparation

Differentiation

Standards

Vocabulary

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*

BACK TO TOP

Español

*teacher provided

AmplifyScience > Animal and Plant Defenses > Chapter 1 > Lesson 1.2

Overview

Materials & Preparation

Differentiation

Standards

Vocabulary

Before the Day of the Lesson

- Gather the following materials for the classroom wall:**
 - 2 vocabulary cards: *observe*, *structure*
- 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
- Prepare for the Carrot Eating activity.** In Activity 2 of this lesson, students will observe one another eating baby carrots.
 - Acquire baby carrots.** You will need enough carrots so that each student gets one. (You can also substitute another small crunchy fruit or vegetable, such as apple slices or celery sticks.)
 - Prepare the carrot cups.** You will need enough small plastic cups so that each student gets one. Place one carrot in each cup.
 - Assign partners.** You may wish to assign new partners for this activity, or you may use the partners you assigned in Lesson 1.1.
- Create the What Scientists Do chart.** At the top of a sheet of chart paper, write "What Scientists Do" and underneath that write "To answer questions, scientists . . ." In Activity 3, you will begin completing this chart with students by adding the word *observe*. See the PDF file in Digital Resources for what the completed chart will look like. We recommend that you print out the PDF for this chart so that you can refer to it throughout the

BACK TO TOP

Español

Hidden slide: Differentiation



Overview

Materials & Preparation

Differentiation

Standards

Vocabulary

Unplugged?

Differentiation

Embedded Supports for Diverse Learners

Partner Reading. Reading with a partner provides opportunities for students to assist each other with reading—with using the reading strategy modeled by the teacher, with decoding, and with comprehension. Partner reading encourages discussion of the text during reading, which aids comprehension and engagement.

Supportive visuals in the book. The diagrams and tables in *Systems* are designed to clarify the meaning of the text and should support students' comprehension of concepts and ideas.

Potential Challenges in This Lesson

Reading-centered. Reading science texts is challenging, and the strategy of synthesizing may be unfamiliar to many students. Students who struggle with reading in general may struggle with the reading in this lesson.

Synthesizing across activities. Synthesizing information from a variety of sources is a complex cognitive task and can be challenging for students. The synthesizing reading comprehension strategy may be new to students. Some students may find it difficult to incorporate new information from the reading into their growing understanding of systems. Keep in mind that students will have many opportunities over the course of the unit to learn to use this complex strategy.

Specific Differentiation Strategies for English Learners

Digital Resources

Classroom Slides 1.2 | PowerPoint

Classroom Slides 1.2 | Google Slides

All Projections

Partner Reading Guidelines

Cherry Pitter System table (Completed)

Optional: Chapter 1 Home Investigation: Blackout Interview copymaster

Energy Conversions Investigation Notebook, pages 3–5



Preparing to teach a lesson

Instructional Guide

The Instructional Guide includes the steps for teaching each activity, as well as Teacher Support notes and, when applicable, Possible Responses.

AmplifyScience > Animal and Plant Defenses > Chapter 1 > Lesson 1.2

Lesson Brief (3 Activities) < 1 READING Reading: Tortoise Parts 2 HANDS-ON Observing Structures Used to Eat 3 TEACHER-LED DISCUSSION Discussing Observations and Structures

Reading: Tortoise Parts

The teacher leads a Shared Reading of *Tortoise Parts* and introduces the strategy of visualizing while reading. (20 min)

EMBEDDED FORMATIVE ASSESSMENT INSTRUCTIONAL GUIDE

Step-by-step Teacher Support My Notes

- 1. Revisit the aquarium.**
 - We have been working as aquarium scientists to help the aquarium director. We are trying to help the director explain to kids who visit the aquarium how sea turtles, like Spruce, survive in the ocean.
- 2. Connect to prior learning.**
 - In our last lesson, we thought about what animals and plants need to do to survive. During the Survival Game, we figured out that animals and plants need certain things to survive. What did we learn that animals and plants need to survive?
[They need to get air. They need to get water. They need to get food.]
 - Spruce the Sea Turtle is an animal. Just like other living things, she needs to get air, water, and food to survive. Now we can work to figure out how Spruce gets these things that she needs to survive.

Hidden Slide: Lesson Map to Instructional Guide

This screenshot shows the lesson map for Lesson 1.2: Tortoise Parts. The interface includes a navigation bar with three main sections: Lesson Brief (3 Activities), Reading: Tortoise Parts (highlighted with a red box), Observing Structures Used to Eat, and Teacher-Led Discussion: Discussing Observations and Structures. Below the navigation bar, there is an overview section with a 'RESET LESSON' button and a 'GENERATE PRINTABLE LESSON GUIDE' button. The overview text states: 'Students learn about how animals use the structures on their bodies to help meet their survival needs. The teacher introduces the visualizing strategy and leads a Shared Reading of *Tortoise Parts* to...'. There are also links for 'Classroom Slides L2 | PowerPoint' and 'Classroom Slides L2 | Google Slides'. A 'Español' button is visible in the bottom left corner.

This screenshot shows the instructional guide for the 'Reading: Tortoise Parts' activity. The page title is 'Reading: Tortoise Parts'. Below the title, it states: 'The teacher leads a Shared Reading of *Tortoise Parts* and introduces the strategy of visualizing while reading. (20 min)'. There are three tabs: 'Step-by-step' (highlighted with a red box), 'Teacher Support', and 'My Notes'. The 'Step-by-step' tab contains three numbered steps:

- 1. Revisit the aquarium.**
 - Q We have been working as aquarium scientists to help the aquarium director. We are trying to help the director explain to kids who visit the aquarium how sea turtles, like Spruce, survive in the ocean.
- 2. Connect to prior learning.**
 - Q In our last lesson, we thought about what animals and plants need to do to survive. During the Survival Game, we figured out that animals and plants need certain things to survive. What did we learn that animals and plants need to survive?
[They need to get air. They need to get water. They need to get food.]
 - Q Spruce the Sea Turtle is an animal. Just like other living things, she needs to get air, water, and food to survive. Now we can work to figure out how Spruce gets these things that she needs to survive.
- 3. Introduce the Investigation Question.** Discuss how Spruce can use the structures on her body to answer follow-up questions to help them learn about their first

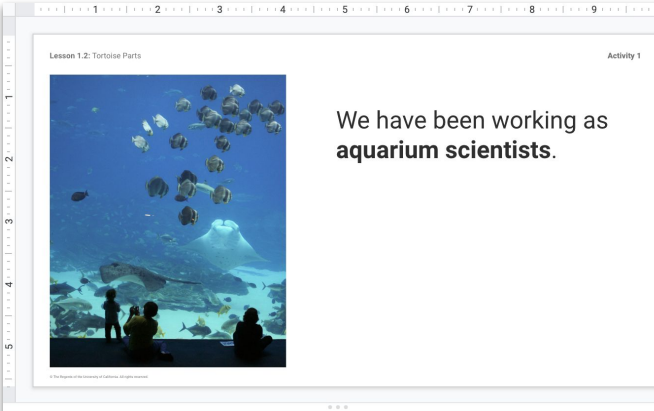
At the bottom of the page, there is a 'Next Up: 2 Observing Structures Used to Eat' button and a 'Next Activity' button. A 'Scroll for more' button is also visible at the bottom of the third step.

Preparing to teach a lesson

Instructional Guide

Remember, the steps for each activity are also embedded into the lesson's Classroom Slides.

Teacher tip: Use the Instructional Guide for a list of all the steps in an activity, for Teacher Support notes, and to find possible student responses.



Lesson 1.2: Tortoise Parts Activity 1

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

Suggested teacher talk:
In our role as aquarium scientists, we are trying to help the director explain to kids who visit the aquarium how sea turtles, like Spruce, survive in the ocean.

Reading: Tortoise Parts

The teacher leads a Shared Reading of *Tortoise Parts* and introduces the strategy of visualizing while reading. (20 min)



Step-by-step

Teacher Support

My Notes

1. Revisit the aquarium.

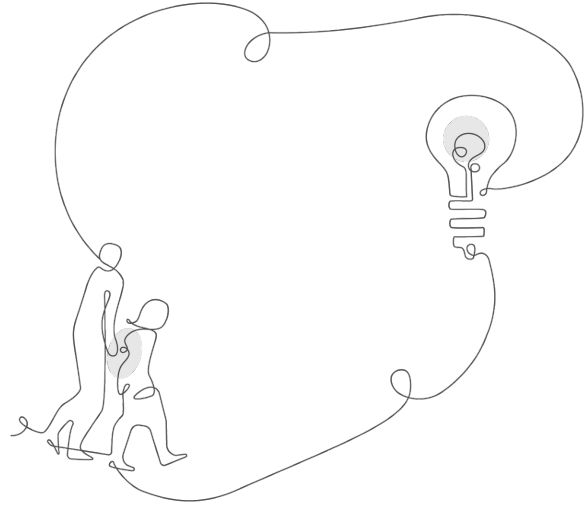
🗨 We have been working as aquarium scientists to help the aquarium director. We are trying to help the director explain to kids who visit the aquarium how sea turtles, like Spruce, survive in the ocean.

2. Connect to prior learning.

Preparing to teach a lesson

Lesson Brief and Instructional Guide

How might you use information from the Lesson Brief and Instructional Guide to prepare to teach a lesson?



Preparing to teach a lesson

Teacher tip: Follow these steps to get to know a lesson and get ready to plan and teach:

1. Navigate to the lesson and open the Classroom Slides deck.
2. Skim through the slides for a quick visual summary of the lesson.
3. Use the Lesson Brief for information about lesson timing, materials and preparation, and differentiation suggestions.
4. Return to the Classroom Slides deck and make any edits or customizations.

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

Break

During the break, you may want to add notes to your Teaching and Learning chart!





Plan for part 1

- Framing the day
 - Welcome
- The Amplify Approach
 - Multimodal learning
- **Model Lesson Experience**
 - SEL suggestions
 - Lesson reflection
- Closing
 - Final Questions & Feedback

Student apps page

To prepare for our model lesson, you'll need to open a digital student book, *Tortoise Parts*, through the Student Apps page.

BACK **Animal and Plant Defenses**

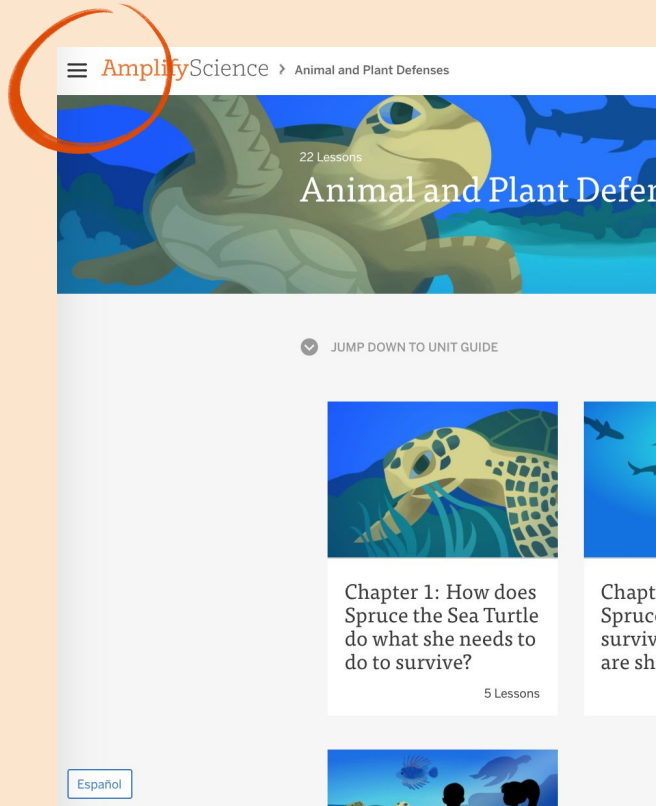
Student Books

- 1
Frog Models
- 2
Parents and Offspring
- 3
Spikes, Spines, and Shells: A Handbook of Defenses
- 4
Tortoise Parts
- 5
Whose Lunch Is This?

Libros para estudiantes

- 1
Modelos de ranas
- 2
Padres y descendencia
- 3
Púas, corazos y otras partes protectoras: un manual de defensas
- 4
Las partes de una tortuga
- 5
¿De quién es este almuerzo?

Hidden slide: Navigating to the Student Apps page



AmplifyScience > Animal and Plant Defenses

22 Lessons

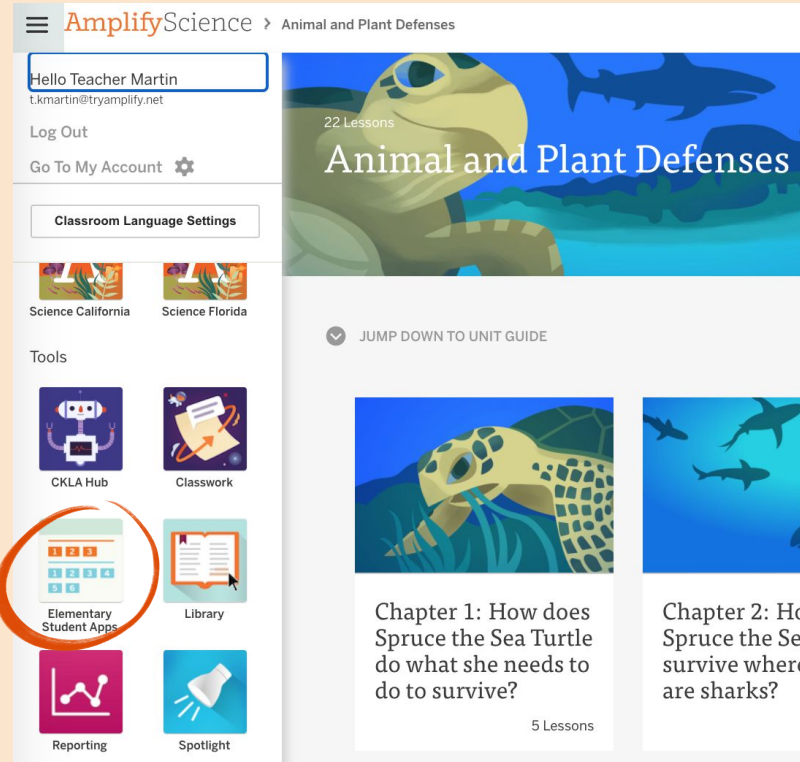
Animal and Plant Defenses

▼ JUMP DOWN TO UNIT GUIDE

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

Chapter 2: How does Spruce the Sea Turtle survive where are sharks?
5 Lessons

Español



AmplifyScience > Animal and Plant Defenses

Hello Teacher Martin
tkmartin@tryamplify.net

Log Out

Go To My Account ⚙

Classroom Language Settings

Science California Science Florida

Tools

CKLA Hub Classwork

Elementary Student Apps Library

Reporting Spotlight

22 Lessons

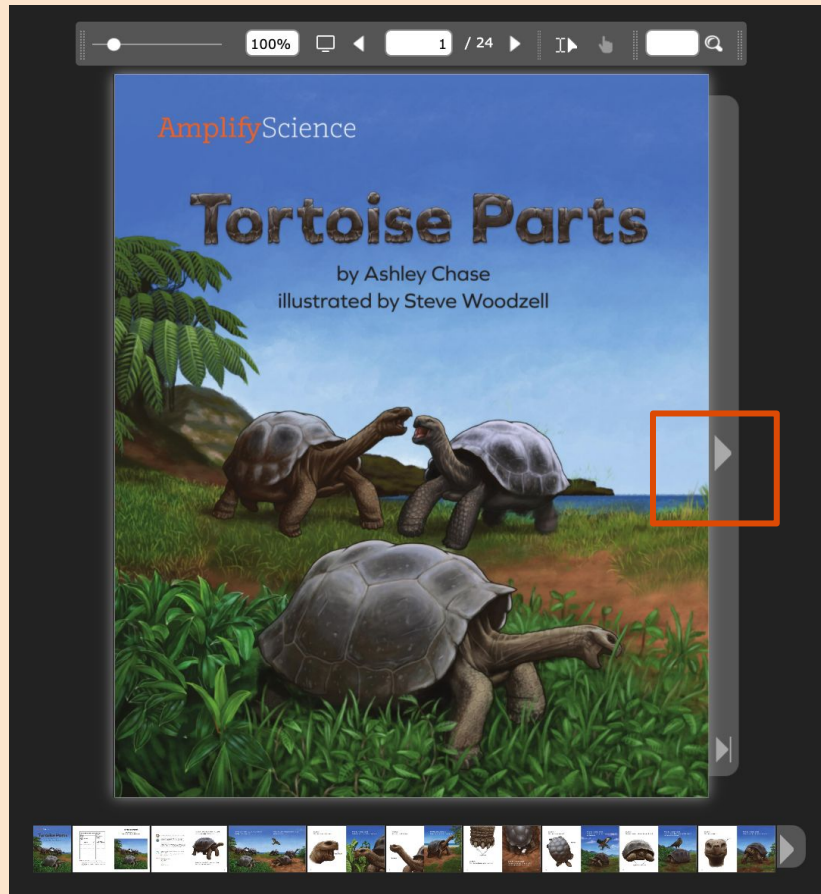
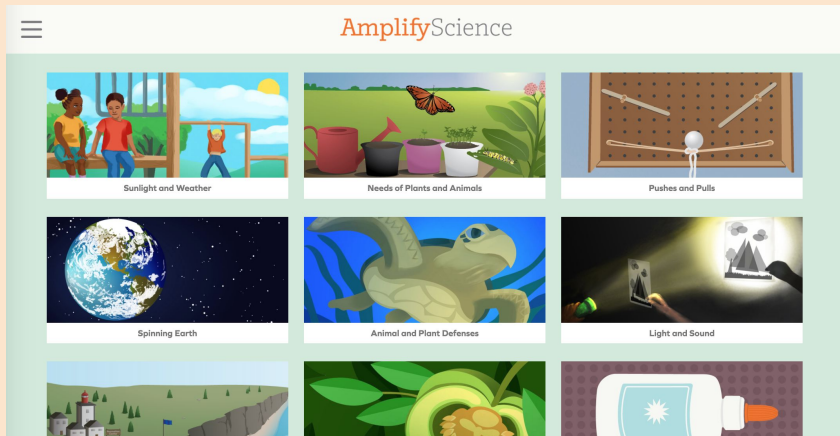
Animal and Plant Defenses

▼ JUMP DOWN TO UNIT GUIDE

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

Chapter 2: How does Spruce the Sea Turtle survive where are sharks?
5 Lessons

Hidden slide: Student Apps page and accessing the book

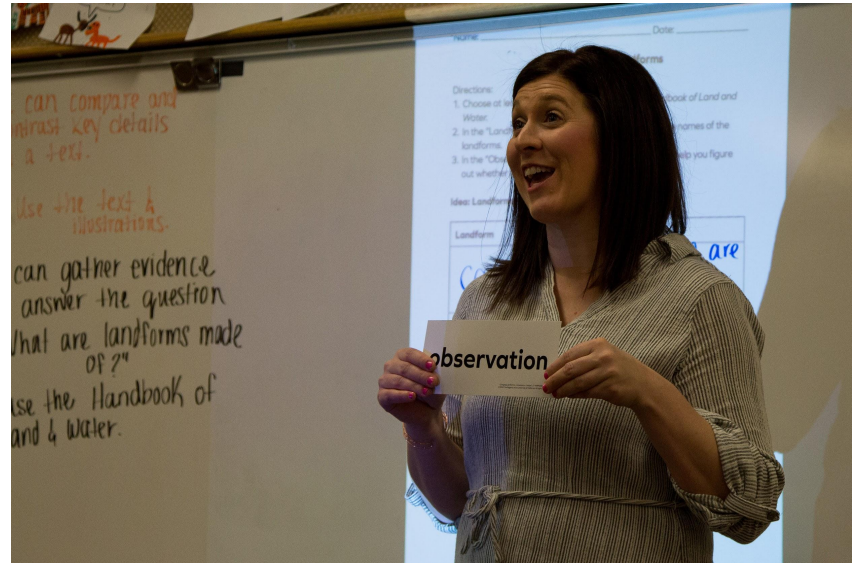


Model lesson

Experiencing instruction as a student

During the model lesson, you'll take on the role of a student.

However, we'll pause a few times to share insights about teaching the lesson.



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?

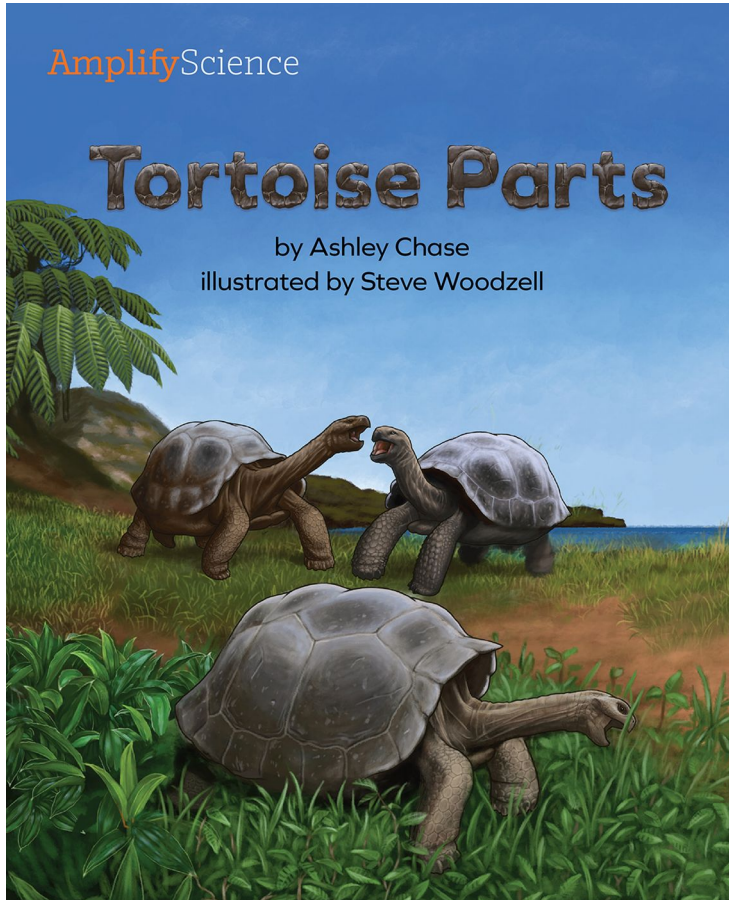
Key Concepts

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?

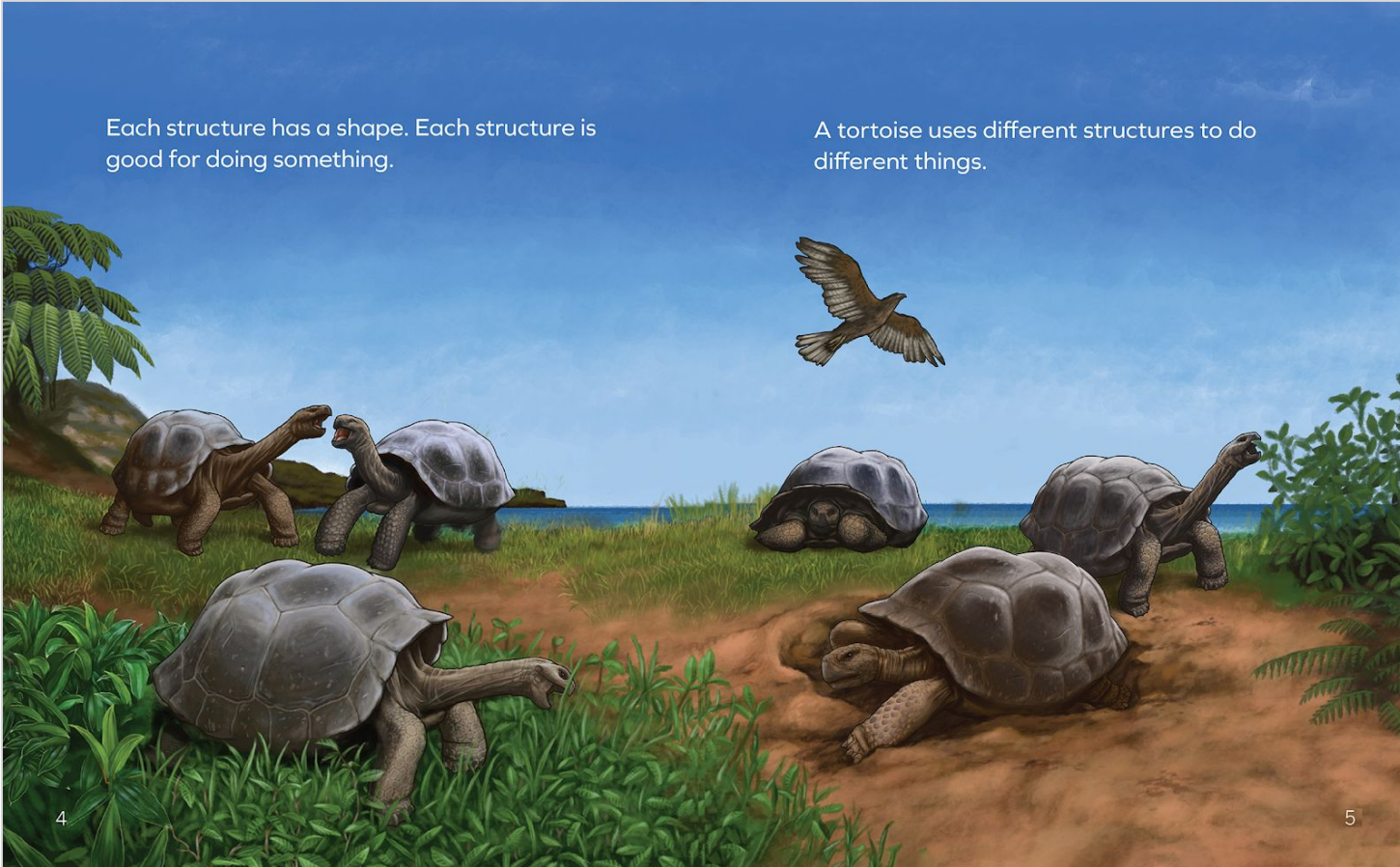
Look at the body of a tortoise. (The word *tortoise* sounds like "TOR-tuss.")



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.



Structure:

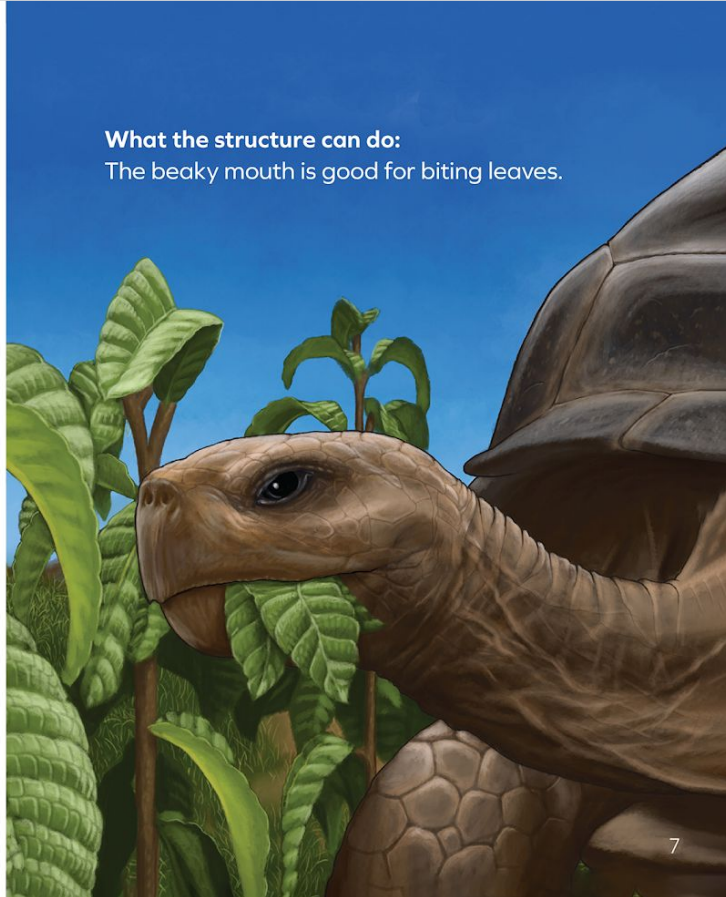
A tortoise has a beaky mouth.



beaky mouth

What the structure can do:

The beaky mouth is good for biting leaves.





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

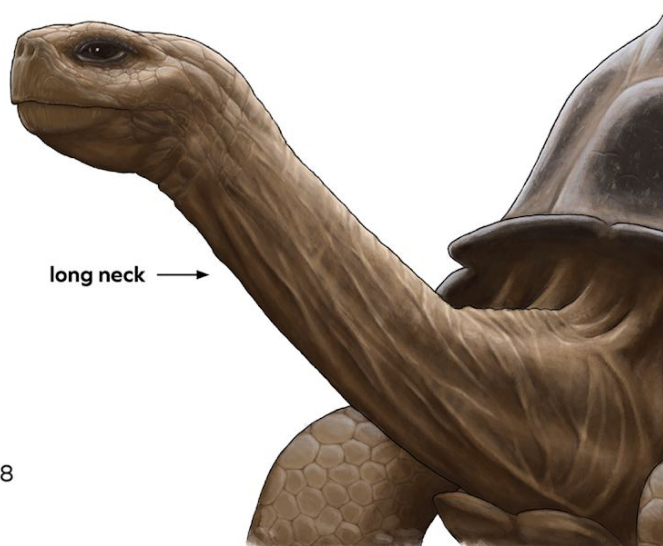
When you visualize, you make a picture or movie in your mind.



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

Structure:

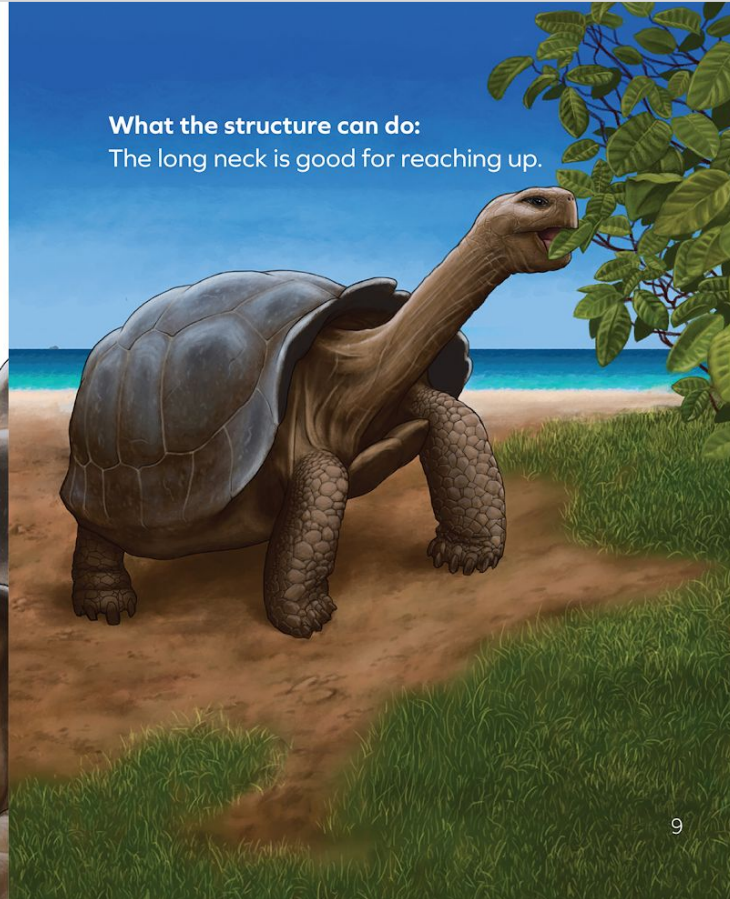
A tortoise has a long neck.



long neck →

What the structure can do:

The long neck is good for reaching up.



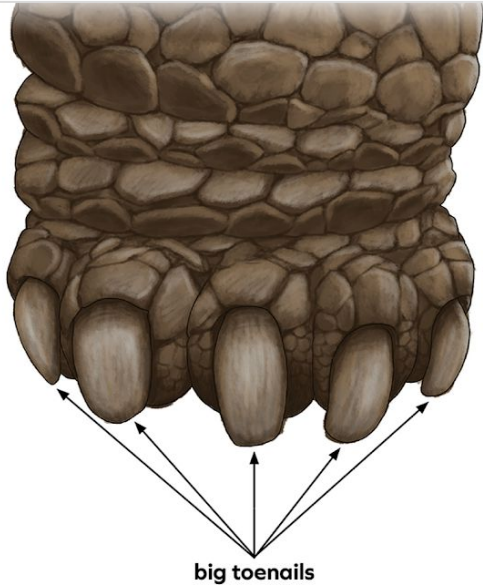


Close your eyes and visualize the tortoise using its long neck to reach up to get leaves.



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

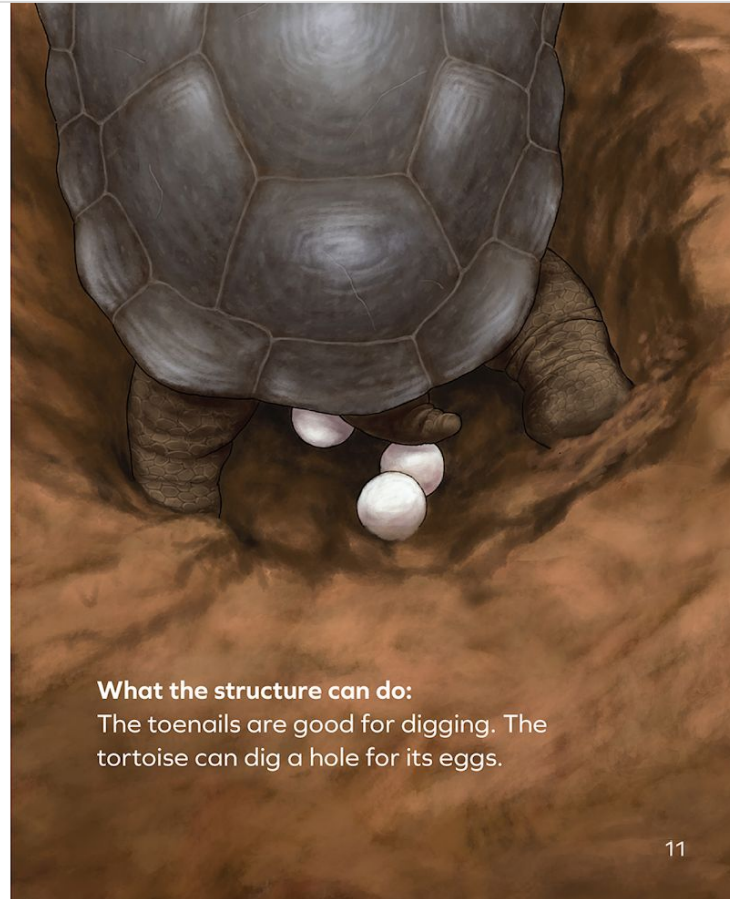




big toenails

Structure:

A tortoise has big toenails on each foot.

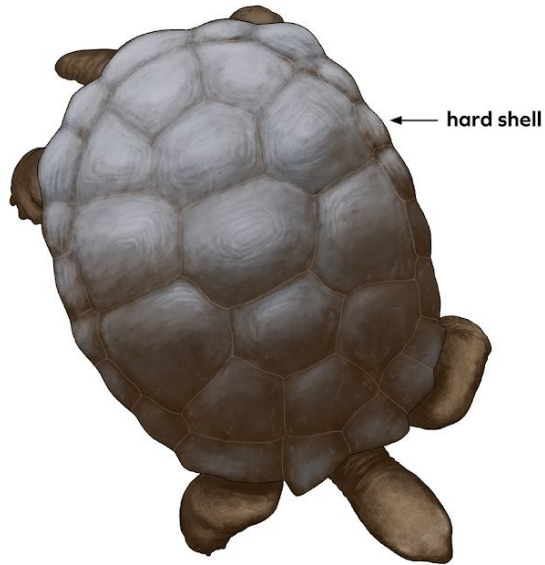


What the structure can do:

The toenails are good for digging. The tortoise can dig a hole for its eggs.

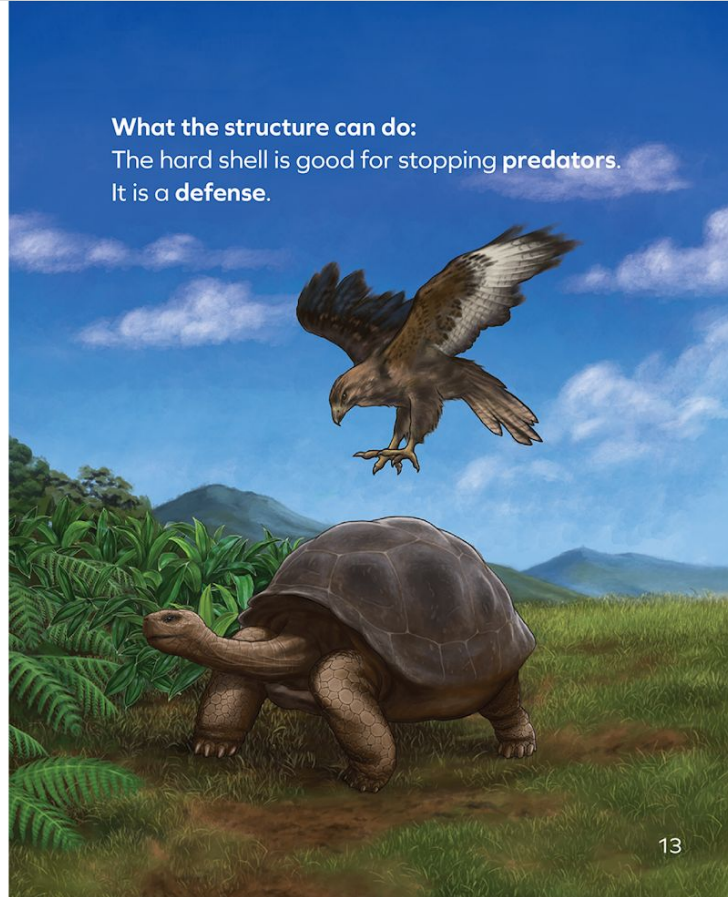
Structure:

A tortoise has a hard shell.



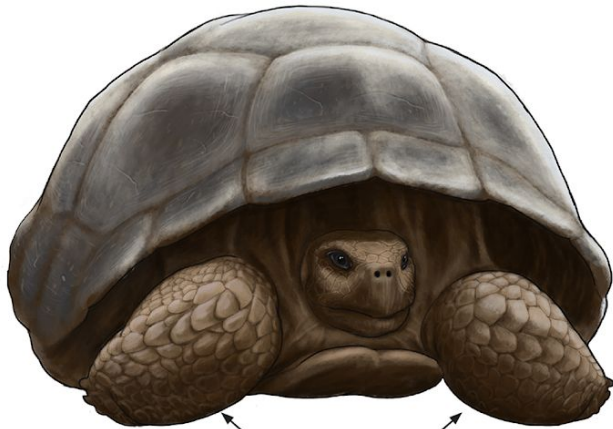
What the structure can do:

The hard shell is good for stopping predators.
It is a defense.



Structure:

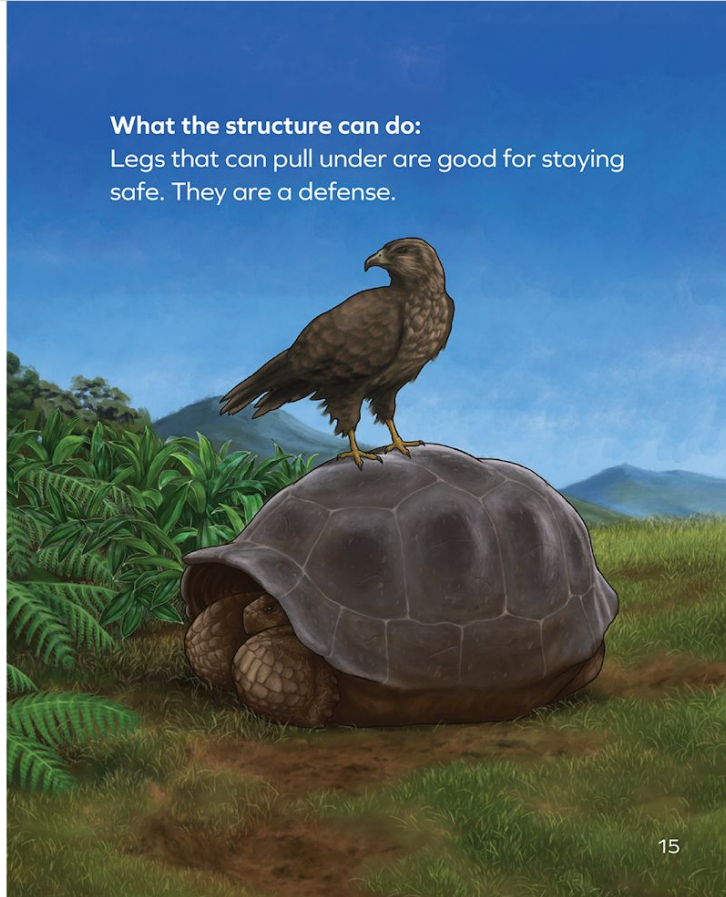
A tortoise has legs that can pull under its shell.



legs that can pull under

What the structure can do:

Legs that can pull under are good for staying safe. They are a defense.



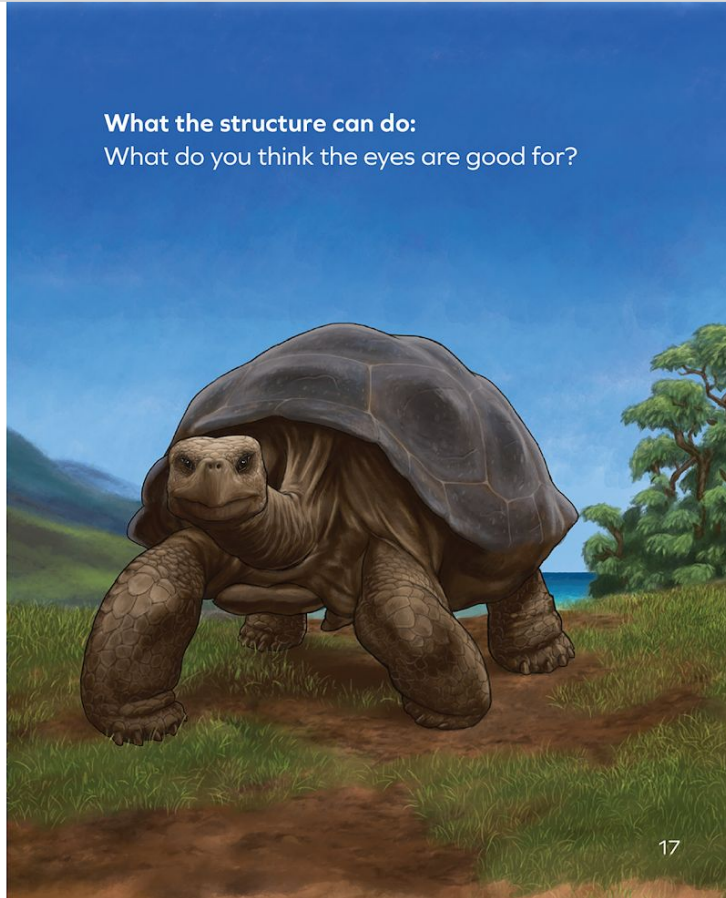
Structure:

A tortoise has eyes.

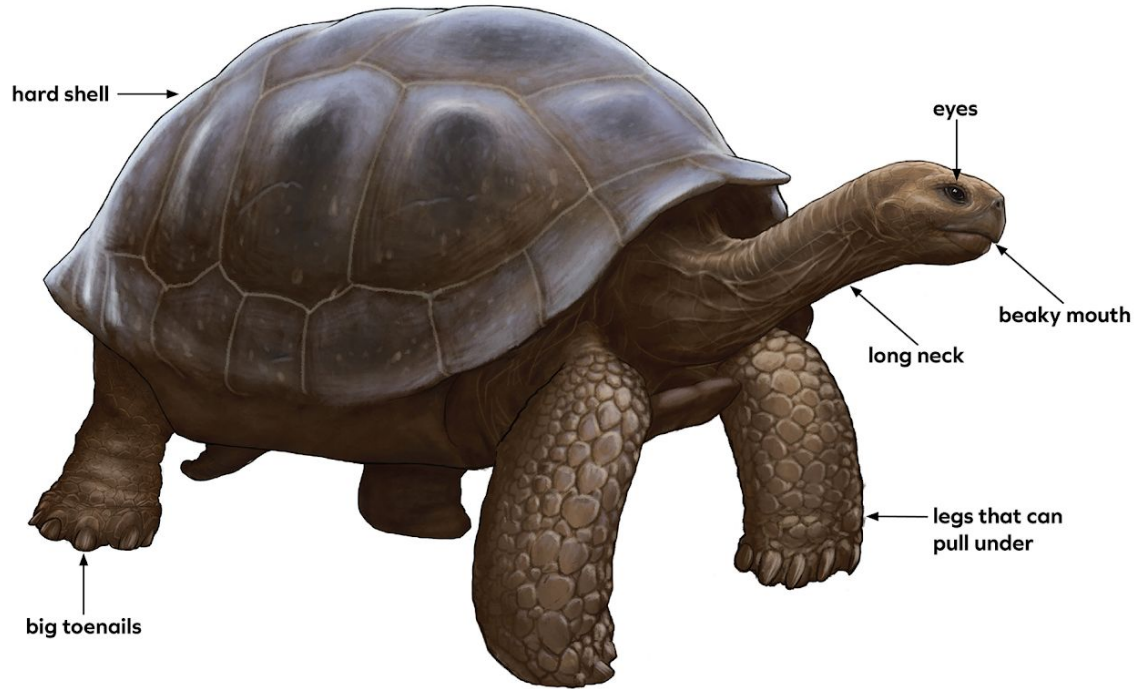


What the structure can do:

What do you think the eyes are good for?



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

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.

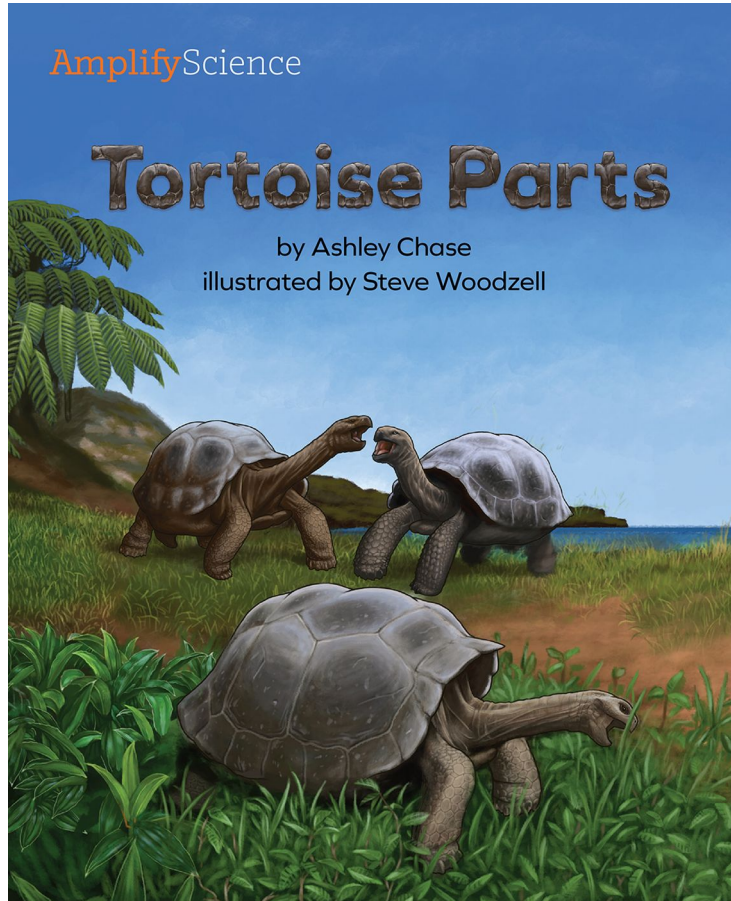
Activity 3

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


Amplify.

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Reflection

Small group discussion

After experiencing the model lesson, share your new ideas about teaching and learning with Amplify Science.

| <i>Teaching</i> | <i>Learning</i> |
|---|-----------------|
|  | |

Social Emotional Learning

5 Core Competencies

- Identified by the Collaborative for Academic, Social, & Emotional Learning (CASEL)
- Widely accepted across the country & adopted by NYS



Figure 1: Framework for Systemic Social and Emotional Learning.
©CASEL 2017

Read, reflect, & discuss

5 competencies of SEL

- ❏ Take a few moments to review these competencies.
- ❏ Reflect on how you already incorporate these competencies & skills into your instruction.
- ❏ Share in the chat!

SOCIAL EMOTIONAL LEARNING'S FIVE CORE COMPETENCIES

There are many frameworks and ways to talk about social emotional competence and skills. For simplicity and clarity, this document uses a set of five competencies identified by the Collaborative for Academic, Social, and Emotional Learning (CASEL) that all young people and adults need to learn to be successful in school and in life. This framework has been widely accepted across the country. New York State has endorsed these five core competencies.

Figure 1: Framework for Systemic Social and Emotional Learning. ©CASEL 2017

Five Core Social Emotional Competencies

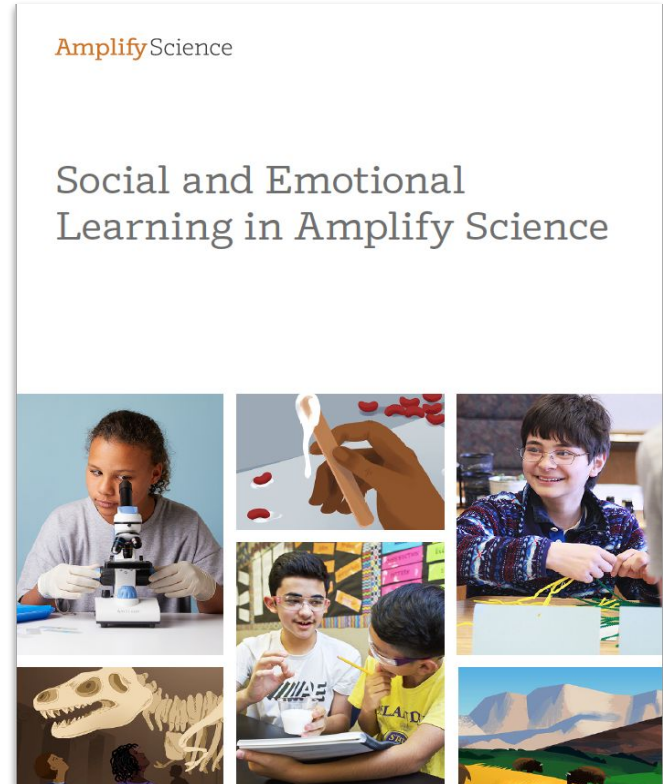
| Competency | Description |
|------------------------------------|---|
| Self-Awareness | Competence in the self-awareness domain involves understanding one's emotions, personal goals, and values. This includes accurately assessing one's strengths and limitations, having a positive mindset, and possessing a well-grounded sense of self-efficacy and optimism. High levels of self-awareness require the ability to recognize how thoughts, feelings, and actions are interconnected. |
| Self-Management | Competence in the self-management domain requires skills and attitudes that facilitate the ability to regulate emotions and behaviors. This includes skills necessary to achieve goals, such as the ability to delay gratification, manage stress, control impulses, and persevere through challenges. |
| Social Awareness | Competence in the social awareness domain involves the ability to take the perspective of and have respect for those with different backgrounds or cultures, and to empathize and feel compassion. It also involves understanding social norms for behavior and recognizing family, school and community resources and supports. |
| Relationship Skills | Competence in this domain involves communicating clearly, listening actively, cooperating, resisting inappropriate social pressure, negotiating conflict constructively, and seeking help when needed. Relationship skills provide individuals with the tools they need to establish and maintain healthy and rewarding relationships, and to act in accordance with social norms. |
| Responsible Decision-Making | Competence in this domain requires the ability to consider ethical standards, safety concerns, and make accurate behavioral assessments to make realistic evaluations of the consequences of various actions, and to take the health and well-being of self and others into consideration. Responsible decision-making requires the knowledge, skills, and attitudes needed to make constructive choices about personal behavior and social interactions across diverse settings. |

Derived from NYS Education Department's "Social Emotional Learning: A Guide to System Whole-School Implementation" March 2019

Social & Emotional Learning in Amplify Science

Collaborate in break-out rooms

- ❑ Each group will be randomly assigned 1 competency.
- ❑ Read respective blurb.
- ❑ Prepare a slide with words & images that describes how Amplify Science supports each competency. Be creative!





Plan for part 1

- **Framing the day**
 - Welcome
- **The Amplify Approach**
 - Multimodal learning
- **Model Lesson Experience**
 - SEL suggestions
 - Lesson reflection
- **Closing**
 - Final Questions & Feedback

Closing reflection

Based on our work today, share:

Head: something you'll keep in mind

Heart: something you're feeling

Feet: something you're planning to do

New York City Resources Site

<https://amplify.com/amplify-science-nyc-doe-resources/>



Amplify.

Amplify Science Resources for NYC (K-5)

Welcome! This site contains supporting resources designed for the New York City Department of Education Amplify Science adoption for grades K-5.

UPDATE: Summer 2020

Introduction

Getting started resources

Planning and implementation resources

Admin resources

Parent resources

COVID-19 Remote learning resources 2020

Professional learning resources

Questions

UPDATE: Summer 2020

Account Access: It's an exciting time for Amplify Science! We have access to the many updates and upgrades in our curriculum until late August/early September when we will update our rosters from STARS.

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

Upcoming PL Webinars: Join us for our Summer 2020 Professional Learning opportunities in July for NEW teachers and administrators and August for RETURNING teachers and administrators. Links to register coming soon!

Site Resources

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

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.



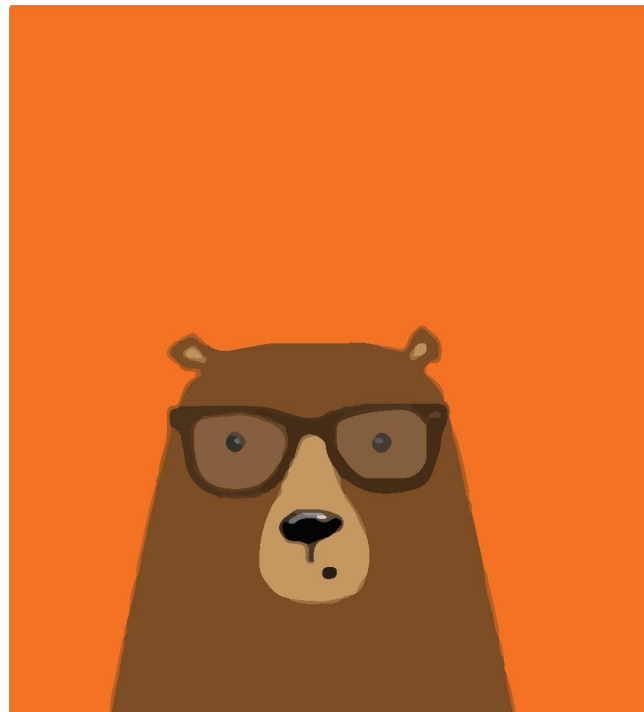
help@amplify.com



800-823-1969



Amplify Chat



Hidden slide: Amplify Chat



Overview

Materials & Preparation

Differentiation

Standards

Vocabulary

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.

Potential Challenges in This Lesson

Transfer of ideas from one context to another. In this lesson, students are asked to connect ideas about how a tortoise uses its

Digital Resources

Classroom Slides 1.2 | PowerPoint

Classroom Slides 1.2 | Google Slides

What Scientists Do Chart—Completed

BACK TO TOP

Español



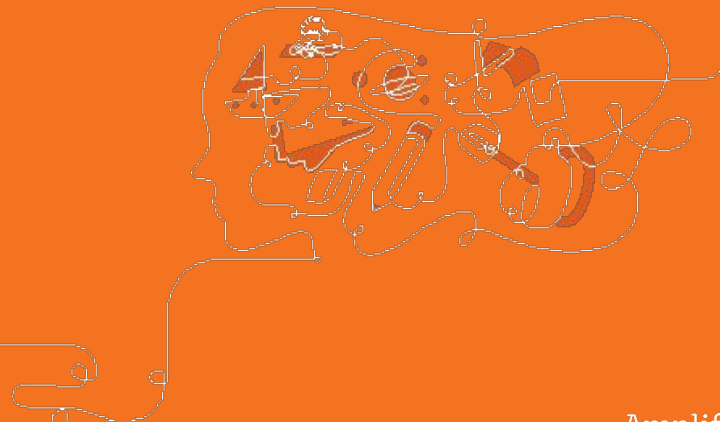


Final Questions?

Please provide us feedback!

URL: <https://www.surveymonkey.com/r/5DQW2T6>

Presenter name:



Amplify.

Thank you & be well!

