Amplify Science
CALIFORNIA

Navigating Program Essentials

Grade 2

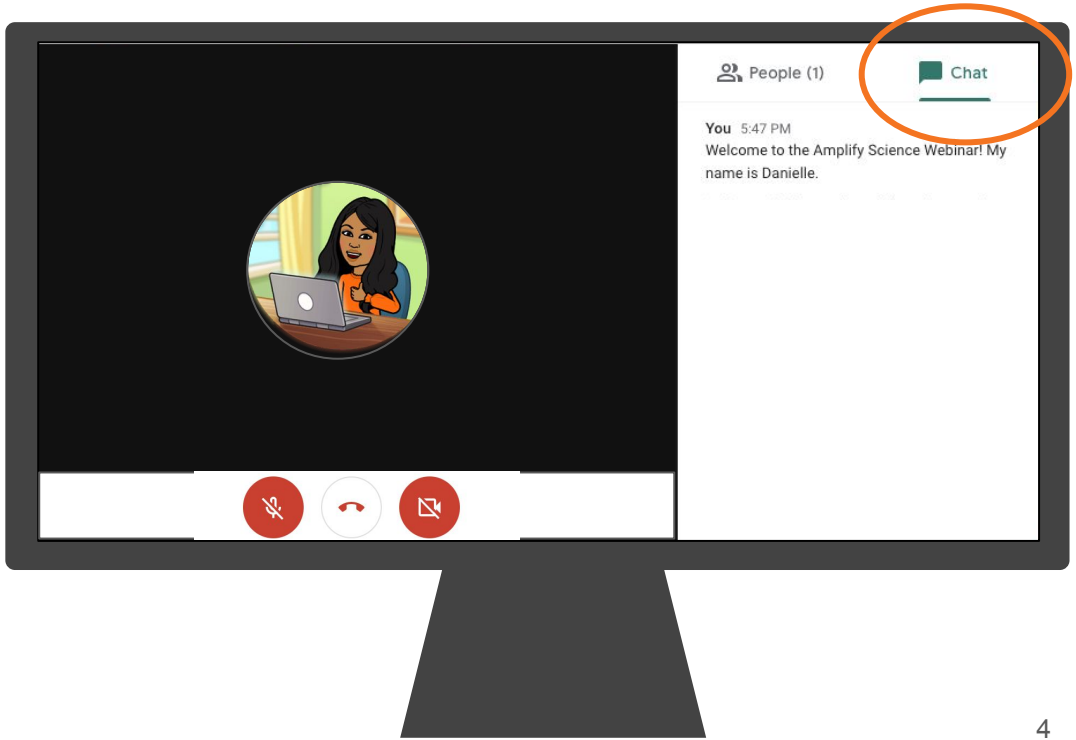
Presented by:

Date:

Introductions!

Who do we have in the room today?

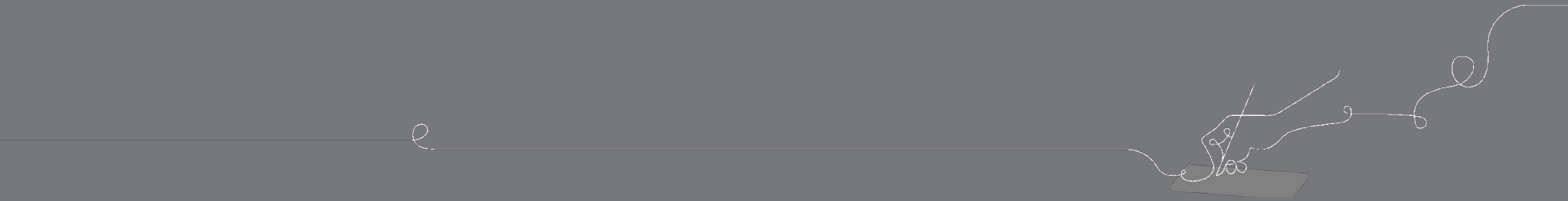
- **Question 1:** Which aspects of adopting a new science curriculum are you most excited or hopeful about?
- **Question 2:** What about adopting a new science curriculum to do you feel most hesitant about?

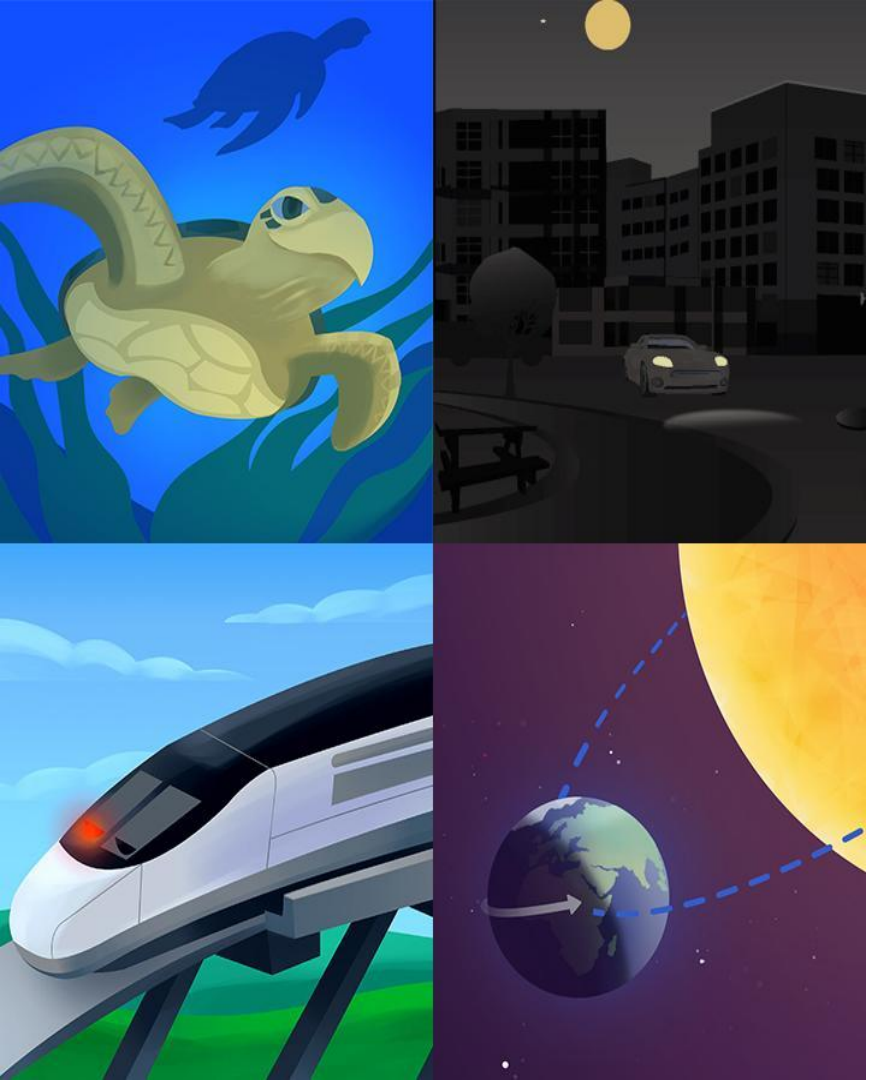


Objectives

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

- Navigate the Amplify Science curriculum.
- Navigate the Program Hub





Plan for the day

- Introducing Amplify Science
- Navigation essentials
- Assessments
- Remote/Hybrid Learning Resources
- Reflection and closing

Remote Professional Learning Norms

Take some time to orient yourself to the platform

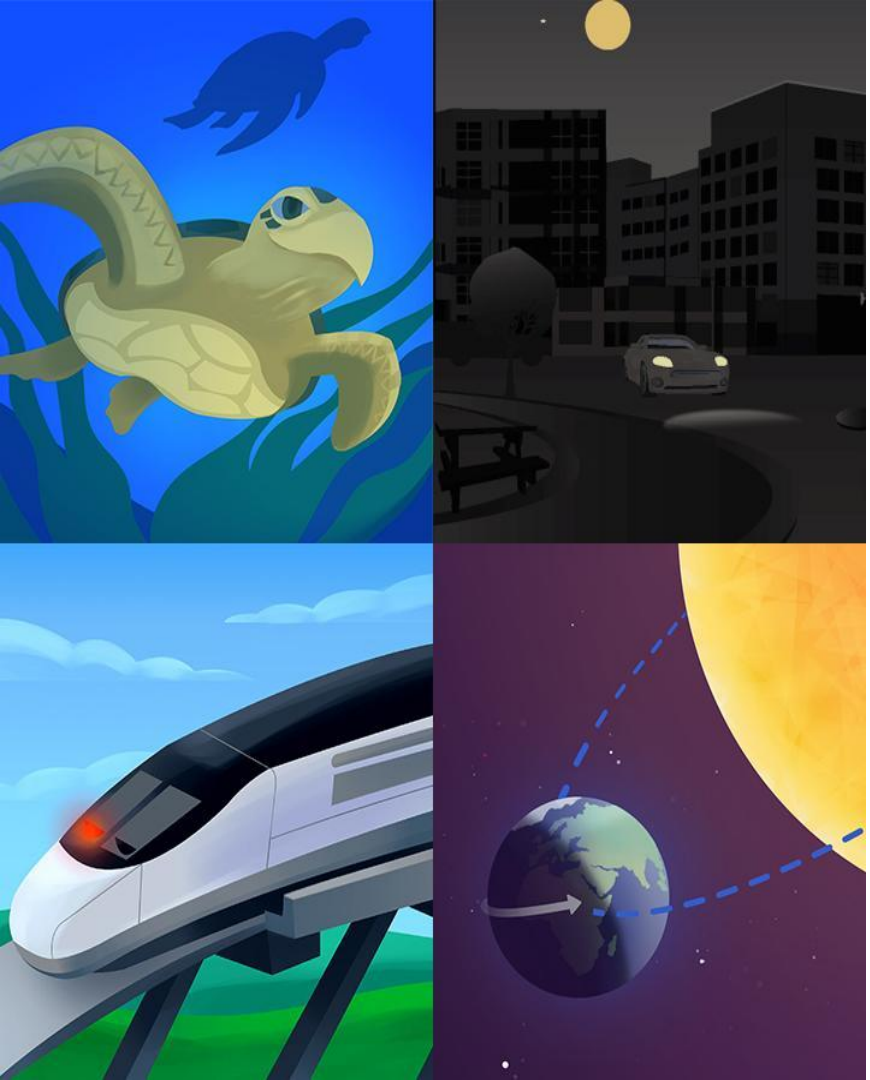
- *"Where's the chat box? What are these squares at the top of my screen?, where's the mute button?"*

Mute your microphone to reduce background noise unless sharing with the group

The chat box is available for posting questions or responses to during the training

Make sure you have a note-catcher present

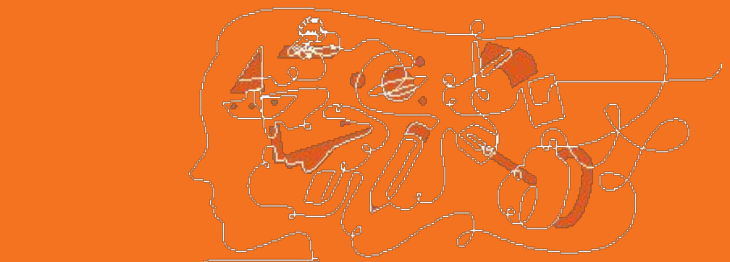
Engage at your comfort level - chat, ask questions, discuss, share!



Plan for the day

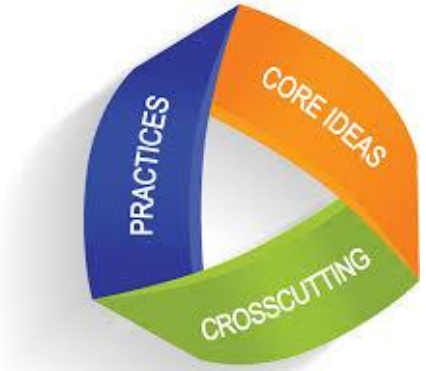
- **Introducing Amplify Science**
- Navigation Essentials
- Assessments
- Remote/Hybrid Learning Resources
- Reflection and closing

What is Amplify Science?



AmplifyScience

A new phenomena-based
core curriculum for grades K-8



THE LAWRENCE
HALL OF SCIENCE
UNIVERSITY OF CALIFORNIA, BERKELEY

Amplify.

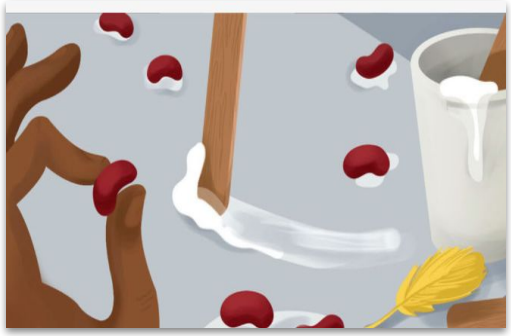
Year at a Glance: Grade 2

Plant and Animal Relationships

Domain: Life Science

Unit type: Investigation

Student role: Plant Scientists

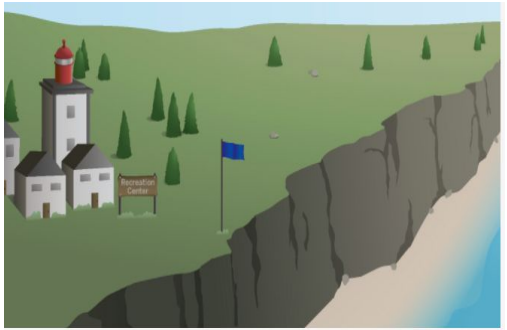


Properties of Materials

Domains: Physical Science, Engineering Design

Unit type: Engineering design

Student role: Glue engineers



Changing Landforms

Domain: Earth and Space Science

Unit type: Modeling

Student role: Geologists

Unit at a Glance: Plant and Animal Relationships

Plant and Animal Relationship

20 lessons
60 minutes each
2 assessment days

Domain: Life Science, Engineering Design

Unit type: Investigation

Student role: Plant scientists

Phenomenon: No new chalta trees are growing in the fictional Bengal Tiger Reserve in India.

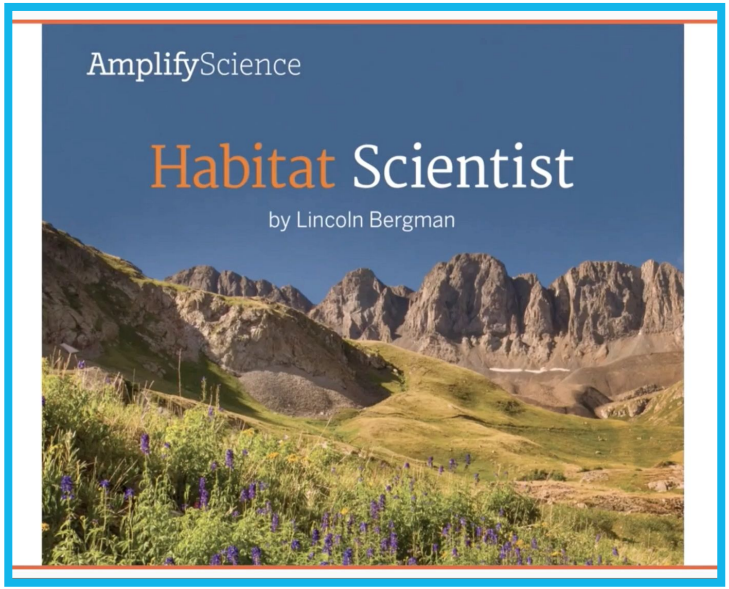
I’m a plant scientist.

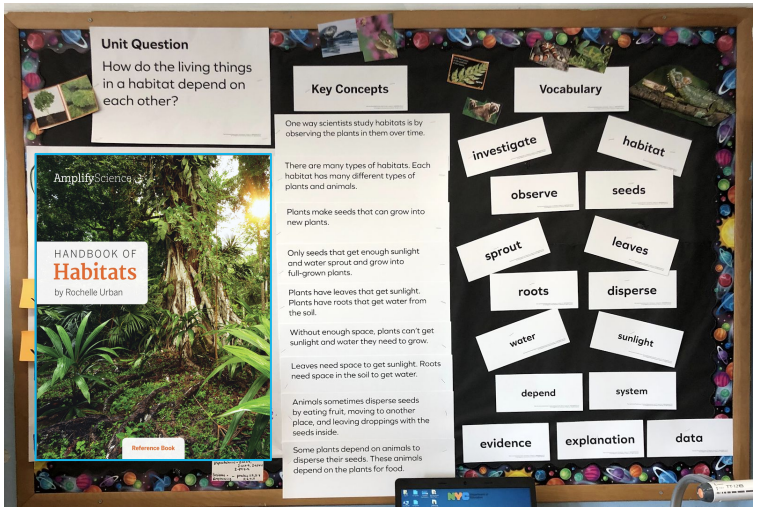
What is happening to the chalta trees in the Bengal Tiger Reserve?

Grade 2

22 Lessons

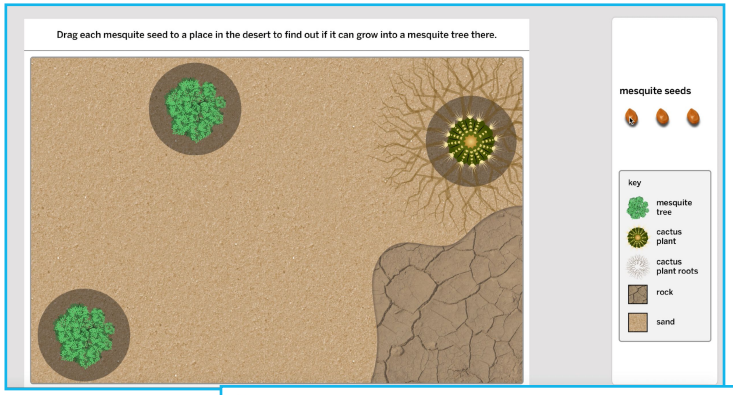
Plant and Animal Relationships

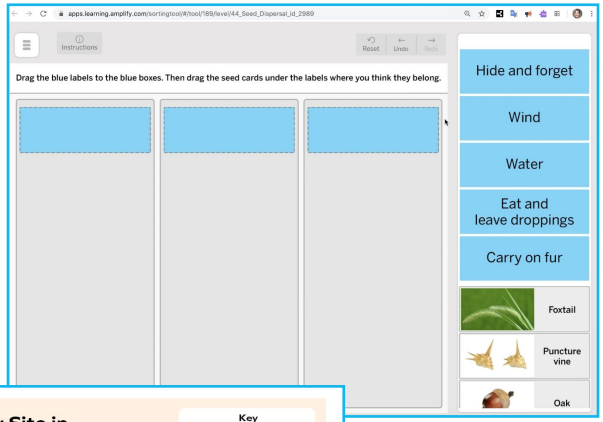


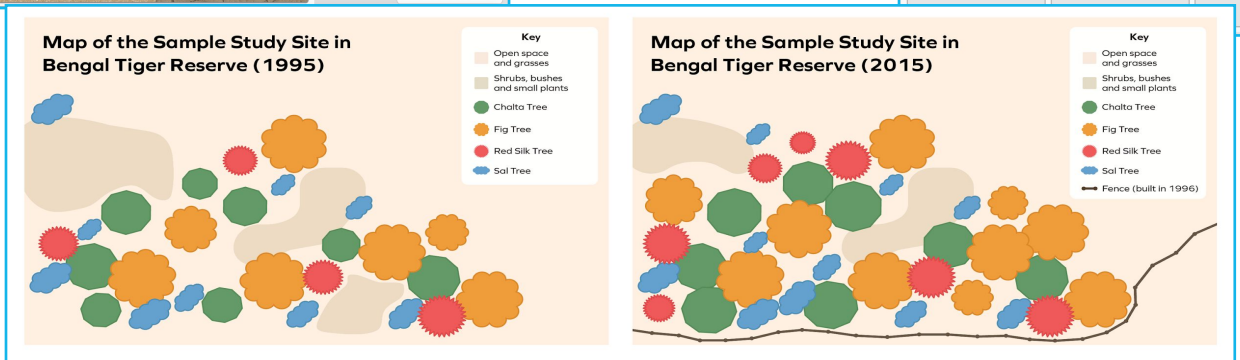


22 Lessons

Plant and Animal Relationships







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22 Lessons

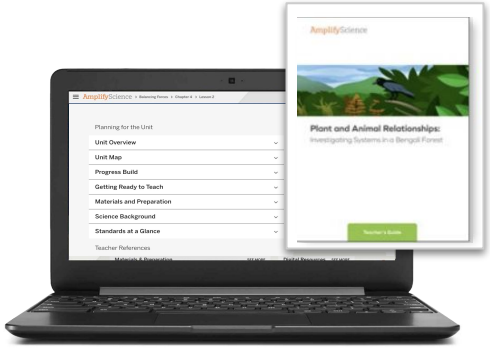
Plant and Animal Relationships

Animals sometimes disperse seeds by eating fruit, moving to another place, and leaving droppings with the seeds inside.

Elementary school components

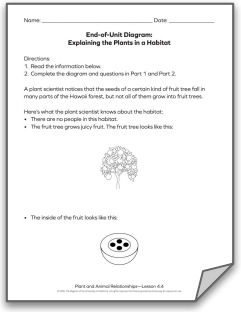
Hands-on materials

Student books

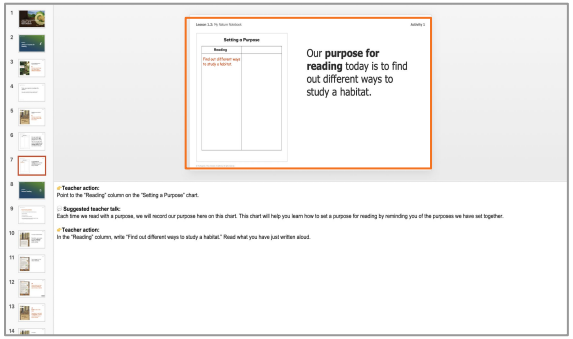


Teacher's Guide (Digital + Print)

Investigation Notebooks



Assessments



Classroom Slides

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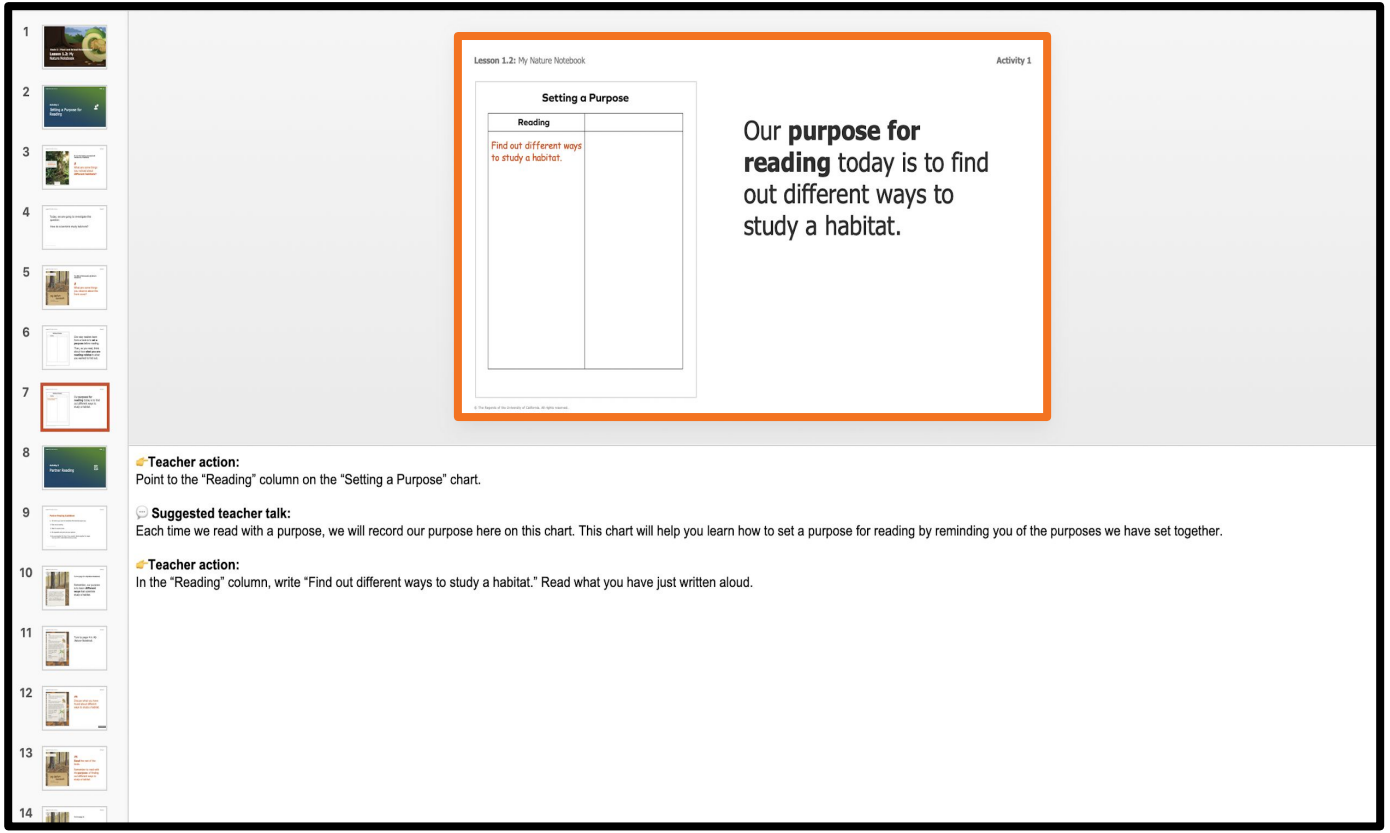
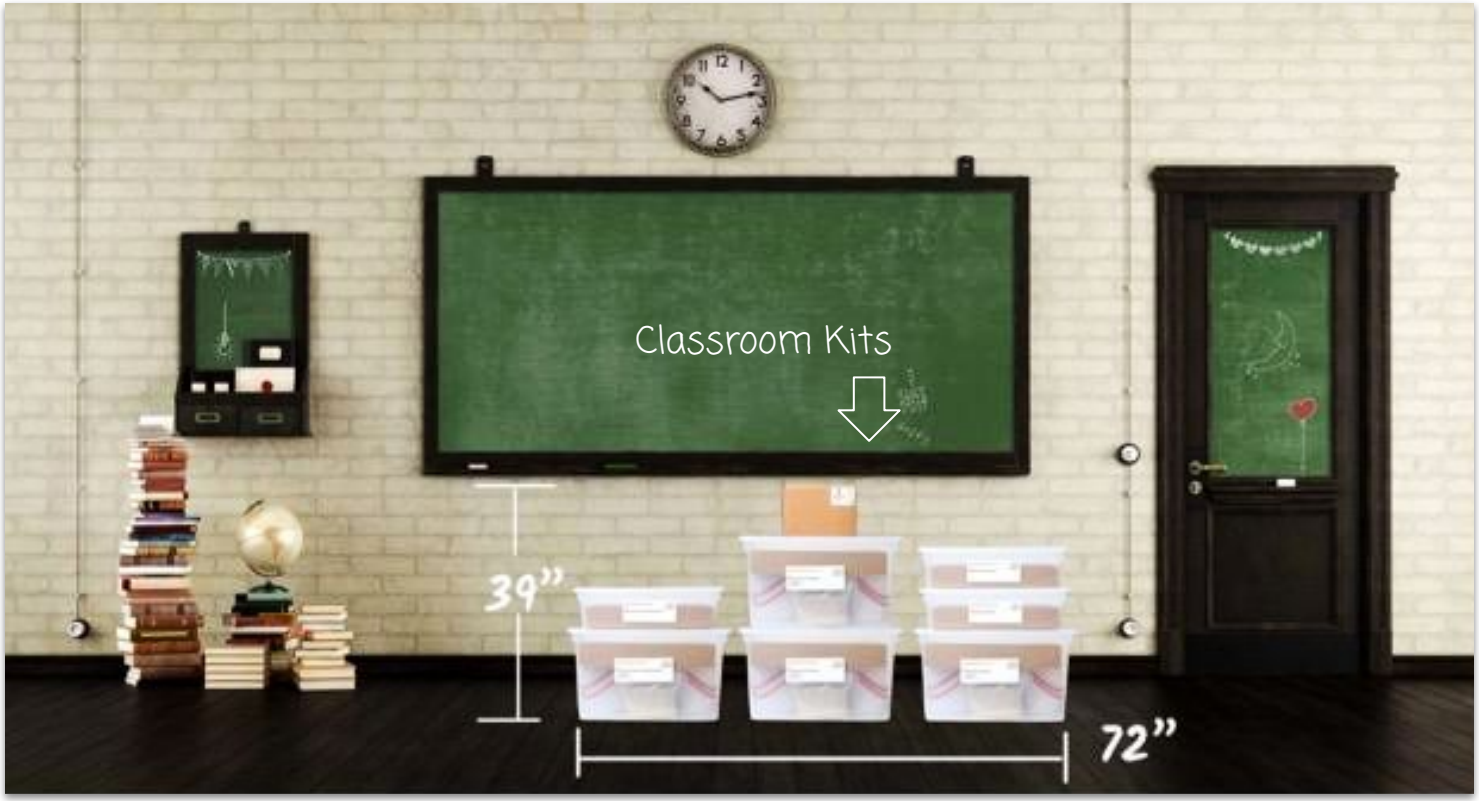
Classroom Slides

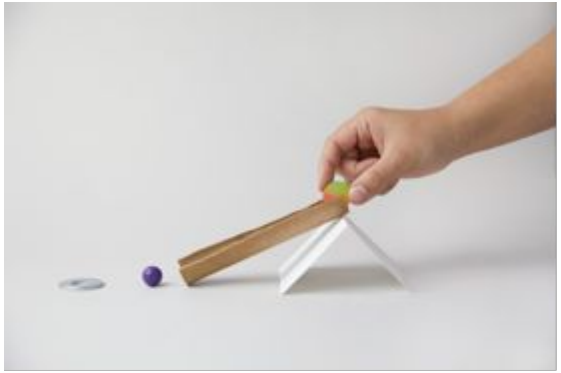
Each lesson will have a downloadable and editable PowerPoint file to help guide teachers and their students through the lesson.



Classroom Kits



Hands On Learning Materials



Plant and Animal Relationships Classroom Wall

Unit Question
How do the living things in a habitat rely on each other?

Chapter 1 Question Why aren't new chalta trees growing in the Bengal Tiger Reserve?

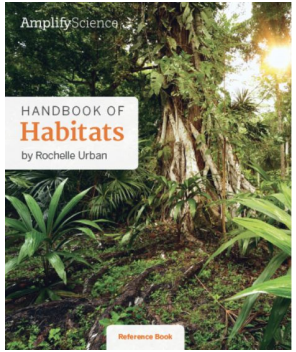
Key Concepts

Key Concept: There are many habitats. Each habitat has many types of plants and animals.

Vocabulary

- **environment**
- **survive**
- **sense**
- **scientist**

Literacy Integration



Different Habitats

Every living thing has a **habitat**. A habitat is place where a **plant** or **animal** lives and gets what it needs.

Habitats can be very different. Some habitats are hot and dry. Other habitats are wet.

In every habitat, there are many different kinds of plants and animals living together. These living things **depend on** each other to live and grow.

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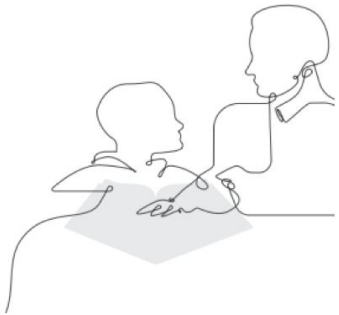
Content connections

Amplify Science CALIFORNIA

Grades K–5

Amplify Science and Benchmark Advance crosswalk

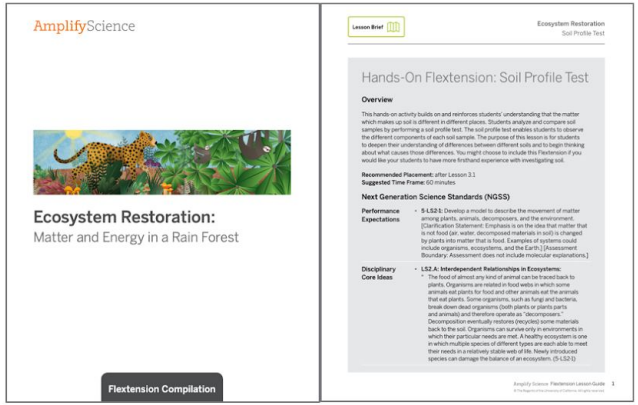
authored by THE LAWRENCE HALL OF SCIENCE



Grade K

	Benchmark unit 10	Amplify Science
Unit title	**The Power of Electricity: Where Do Scientific Discoveries Lead Us?**	**Energy Conversions: Blackout in Ergstown** Students play the role of systems engineers for Ergstown, a fictional town that experiences frequent blackouts. They explore reasons why an electrical system can fail, choose new energy sources and energy converters for the town, and use evidence to explain why their choices will make the town's electrical system more reliable.
Next Generation Science Standards	4-PS3-2: Energy can be Transferred 4-PS3-4: Design an Energy Converter 4-ESS3-1: Energy and Fuels	4-PS3-1: Relationship Between Speed and Energy 4-PS3-2: Energy can be Transferred 4-PS3-3: Collisions 4-PS3-4: Design an Energy Converter 4-ESS3-1: Energy and Fuels 3-5-ETS1-1: Defining the Problem 3-5-ETS1-2: Developing Possible Solutions Crosscutting Concepts: Systems and Systems Models; Energy and Matter; Structure and Function; Cause and Effect
ELA reading standards	• **Reading Informational Text:** RI.4.1; RI.4.2; RI.4.6; RI.4.7; RI.4.8; RI.4.9; RI.4.10 • **Writing:** W.4.1; W.4.1.A; W.4.1.B; W.4.1.C; W.4.1.D; W.4.4; W.4.5; W.4.6; W.4.7; W.4.8; W.4.9.B; W.4.10 • **Speaking and Listening:** SL.4.1; SL.4.2; SL.4.3; SL.4.4; SL.4.5; SL.4.6 • **Language:** L.4.4.A; L.4.4.C; L.4.6	• **Reading Informational Text:** RI.4.1; 4.2; 4.3; 4.4; 4.6; 4.7; 4.10 • **Writing:** W.4.1; 4.2; 4.4; 4.8; 4.9; 4.10 • **Speaking and Listening:** SL.4.1; 4.4; 4.6 • **Language:** L.4.6
Math standards		• **Math Practices:** MP1; 2; 4; 5 • **Math Content:** 4.OA.3; 4.NBT.2; 4.NBT.4; 4.MD.5.A; 4.MD.6
Foundational reading standards	• RF.4.3.A	

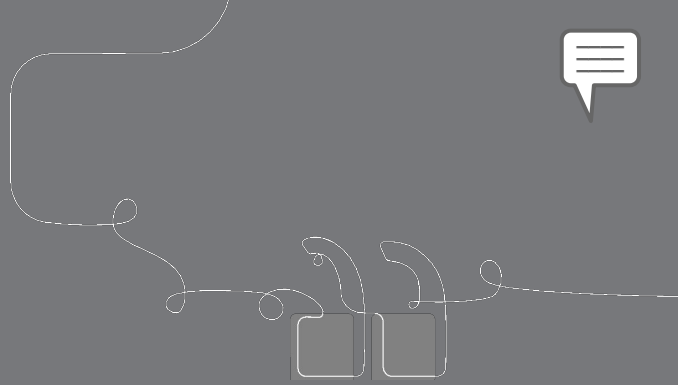
Amplify Science: Additional Resources



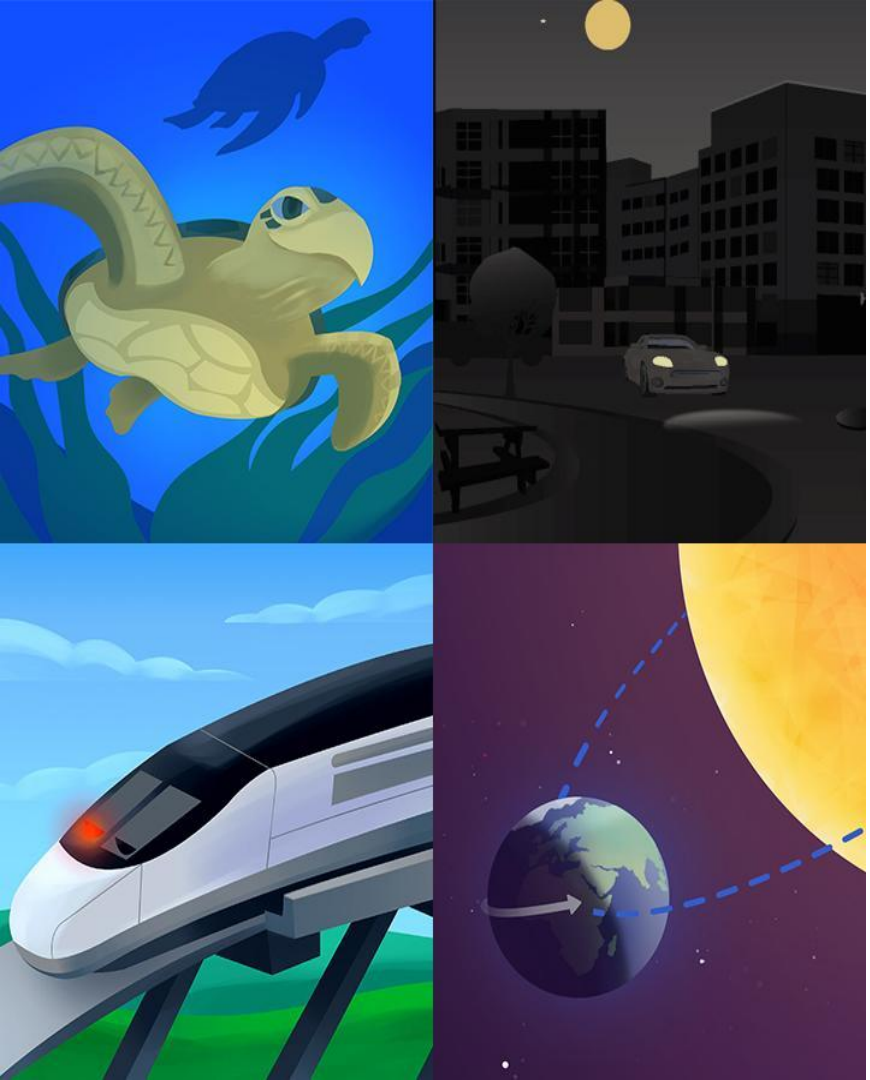
Hands-on Flextensions

New digital K–5 Student Books

MYSTERY science



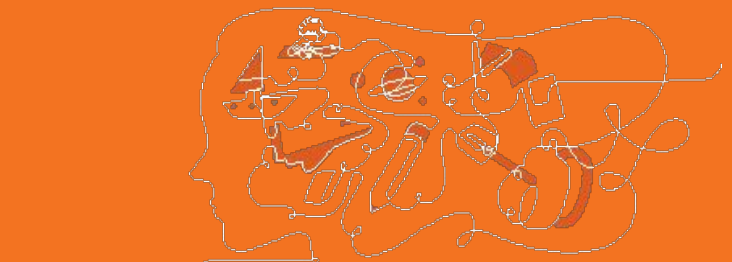
Questions?



Plan for the day

- Introducing Amplify Science
- **Navigation Essentials**
- Assessments
- Remote/Hybrid Learning Resources
- Reflection and closing

Navigation Essentials



Schoology Apps

You should have these 2 apps in schoology

1. **ES School Student Edition** - downloading this app pushes the content to students (**students DO NOT need to download anything**)

2. **Teacher Edition** - downloading this app gives full teacher access - **this is the app that teachers will ACTUALLY USE**

Schoology Apps

To join Amplify ES Group:

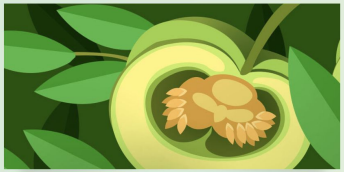
W4PK-W466-63F5B

Unit

Chapters

Lessons

Activities

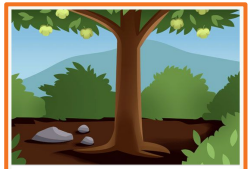


22 Lessons

Plant and Animal Relationships

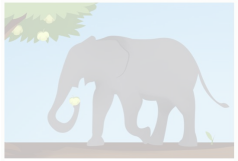
Chapter 1: Why aren't new chalta trees growing in the Bengal Tiger...

7 Lessons



Chapter 2: Why aren't the chalta seeds getting what they need to grow?

5 Lessons



Chapter 3: Why aren't the chalta seeds getting to places where they...

6 Lessons

Chapter 4: How are other seeds in the reserve able to get to places where they...

4 Lessons

Lesson 2.1:
Exploring Plant Parts

Lesson 2.2:
A Plant Is a System

Lesson 2.3:
2.3 Investigating How Roots and Leaves Grow

Lesson 2.4:
2.4 Finding a Good Place to Grow

Lesson 2.5:
Why Aren't New Chalta Trees Growing?

1 TEACHER-LED DISCUSSION
Revisiting the Bengal Tigers Reserve

2 MODELING TOOL
A Good Place to Grow in the Everglades

3 WRITING
Writing a Scientific Explanation

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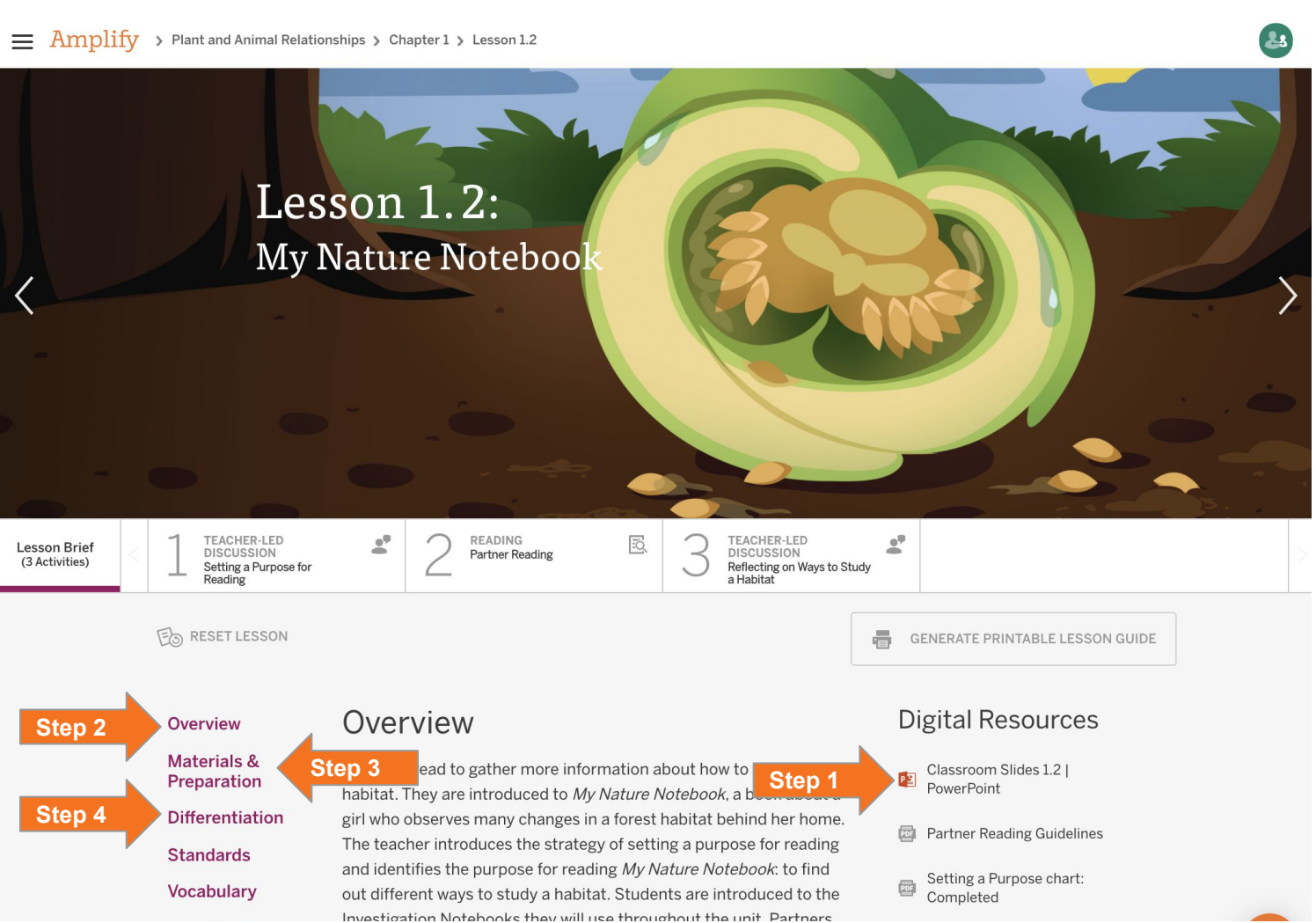


4 Steps for Preparing to Teach

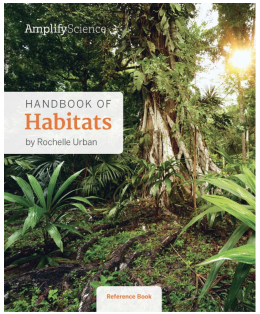
Step 1:
Download Classroom Slides
Step 2:
Read the Lesson Overview
Step 3:
Read the Materials and Preparation section
Step 4:
Read the Differentiation

Amplify.

Chapter 1: Why aren't new chalta trees growing in the Bengal Tiger Reserve?

Investigation Question:
How do scientists study habitats?

Multiple sources of evidence



What do you **observe**?

What questions do you have about the **habitats**?

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Today, we are going to investigate this question:

How do scientists study habitats?

Students read to find out how scientists study habitats.

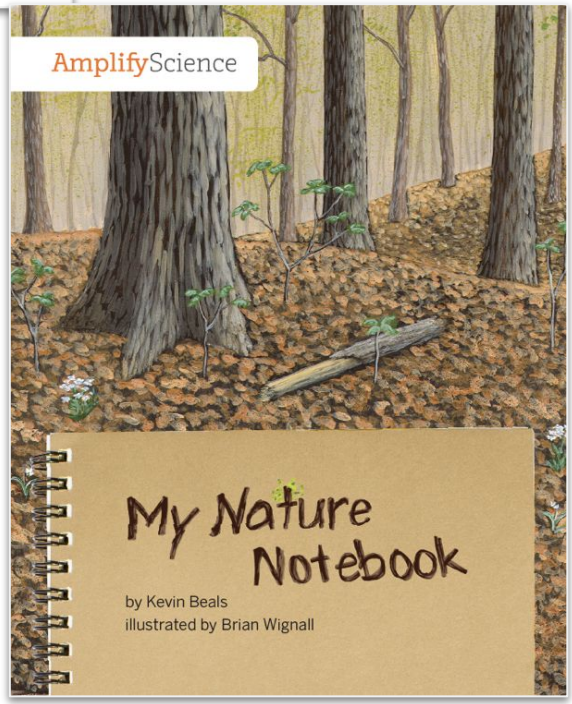
observe

Setting a Purpose

Reading	
Find out different ways to study a habitat.	

Partner Reading Guidelines

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



Name: _____ Date: _____

Ways to Study a Habitat

Directions:
1. After reading *My Nature Notebook*, think about the ways the child studied the forest habitat.
2. In each box below, write one way she studied the forest habitat.

Teacher Model

4 Plant and Animal Relationships—Lesson 1.2

Students observe a sample study site.

Setting a Purpose

Reading	Investigating
Find out different ways to study a habitat.	Observe plants that live in a habitat near our school.

Name: _____ Date: _____

Observing Plants in a Sample Study Site

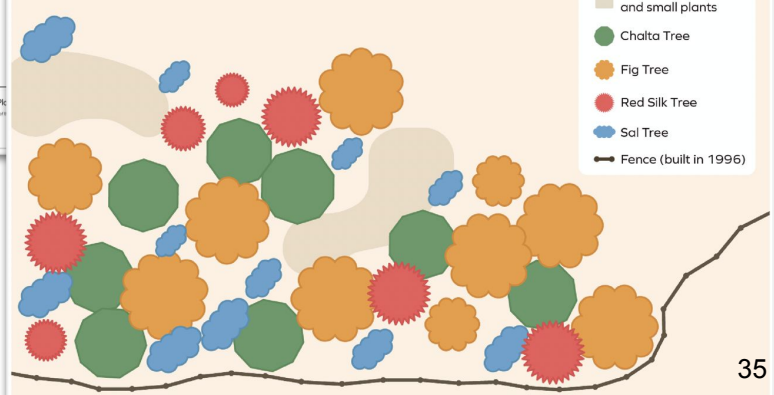
Directions:

1. With your partner, place your string around an area in the habitat. This is your sample study site.
2. Observe the plants in your sample study site.
3. Draw the plants in your sample study site. Label your drawing.

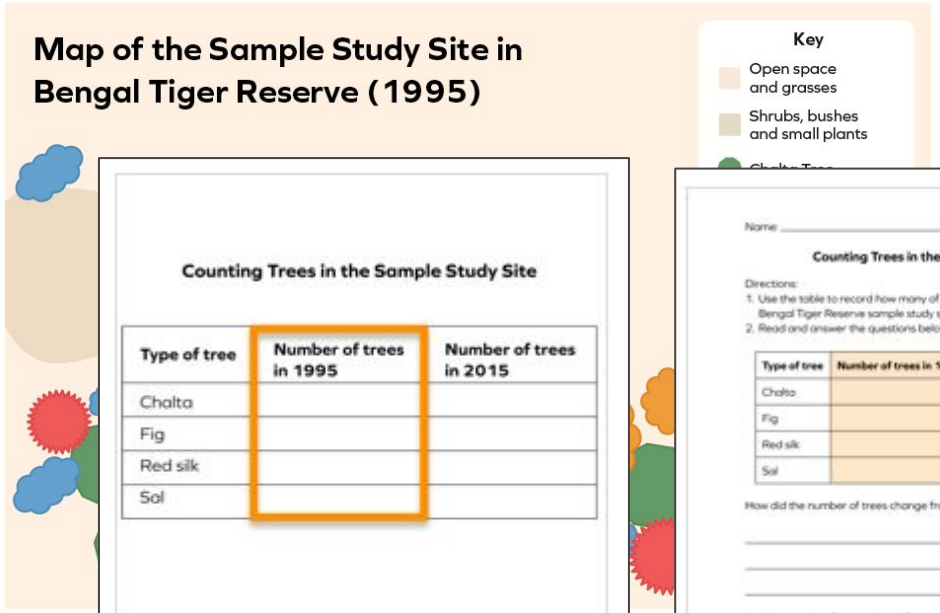
Draw and Label

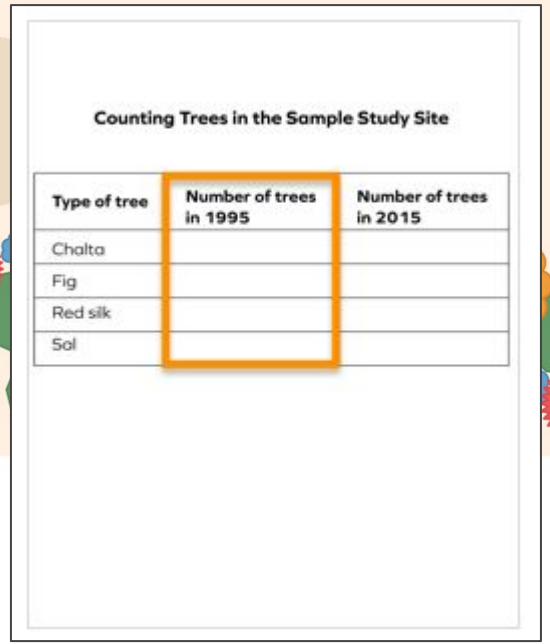
Lesson 1.3: Investigating Habitats

You'll use the string to mark your study site, and then you'll observe the plants in your study site.



Students engage in authentic work of plant scientists as they count and compare the number of different trees living in the Bengal Tiger Reserve.





Counting Trees in the Sample Study Site

Type of tree	Number of trees in 1995	Number of trees in 2015
Chalta		
Fig		
Red silk		
Sal		

Name: _____ Date: _____

Counting Trees in the Sample Study Site

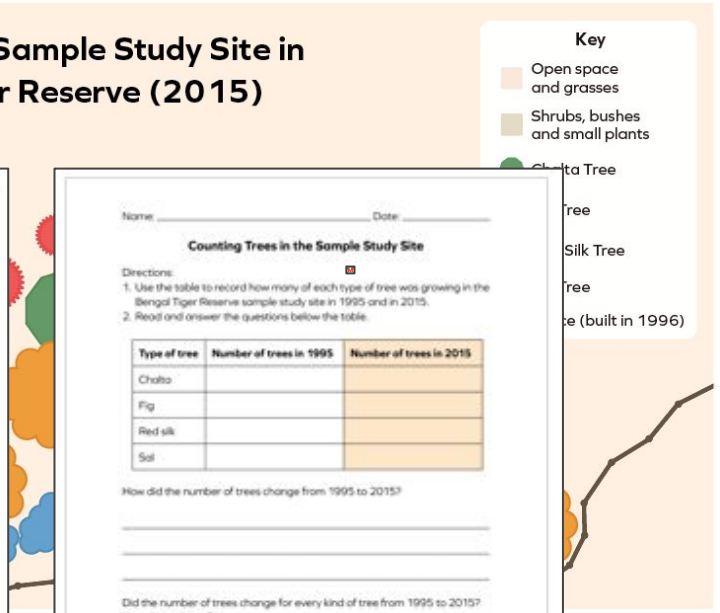
Directions:
1. Use the table to record how many of each type of tree was growing in the Bengal Tiger Reserve sample study site in 1995 and in 2015.
2. Read and answer the questions below the table.

Type of tree	Number of trees in 1995	Number of trees in 2015
Chalta		
Fig		
Red silk		
Sal		

How did the number of trees change from 1995 to 2015?

Did the number of trees change for every kind of tree from 1995 to 2015? How do you know?

Plant and Animal Relationships—Lesson 1.4 9



Name: _____ Date: _____

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Plant and Animal Relationships—Lesson 1.4 9

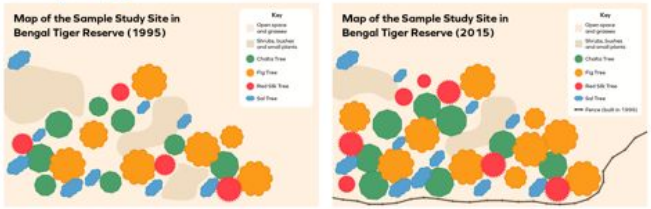
Counting Trees in the Sample Study Site

Type of tree	Number of trees in 1995	Number of trees in 2015
Chalta	8	
Fig	7	
Red silk	4	
Sal	9	

How many trees did you count on the **Bengal Tiger Reserve Sample Study Site Map in 2015?**

Students discuss the data from the sample study site.

How did we figure out that the trees in the Bengal Tiger Reserve were **changing or staying the same?**



Chapter 1 Question

Why aren't new chalta trees growing in the Bengal Tiger Reserve?

Key Concept

One way scientists study habitats is by observing the plants in them over time.

Plant and Animal Relationships Classroom Wall

Unit Question
How do the living things in a habitat rely on each other?

Chapter 1 Question Why aren't new chalta trees growing in the Bengal Tiger Reserve?

Investigation Question
How do scientists study habitats?

Key Concepts

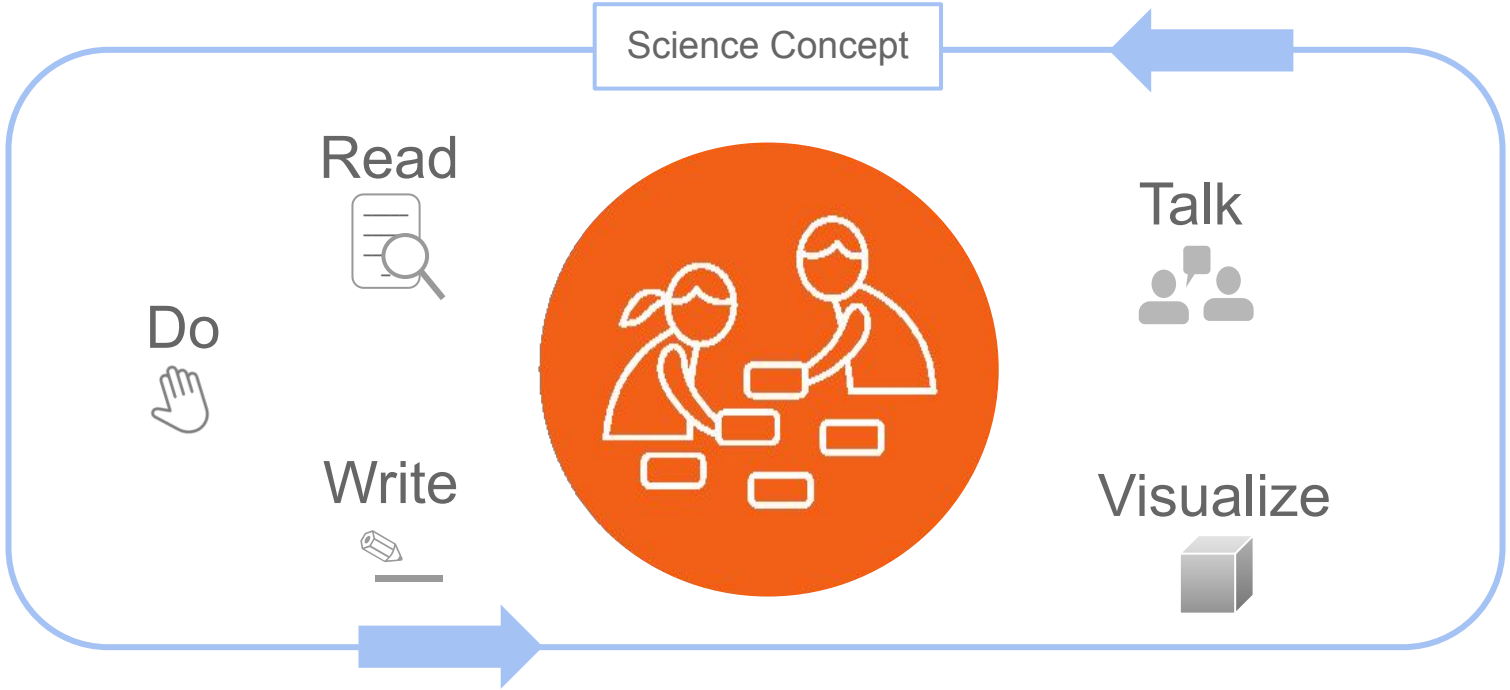
Key Concept:
One way scientists study habitats is by observing the plants in them over time.

Vocabulary

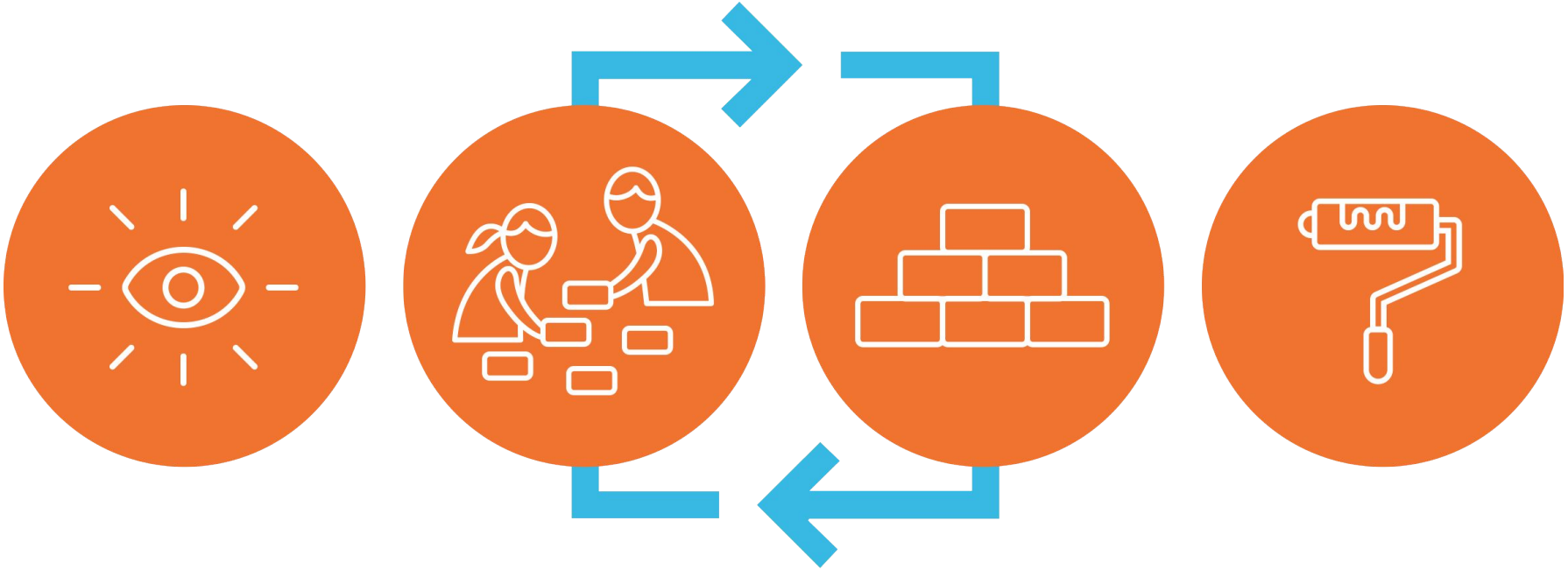
- **environment**
- **survive**
- **sense**
- **scientist**

Multimodal learning

Gathering evidence from different sources



The approach

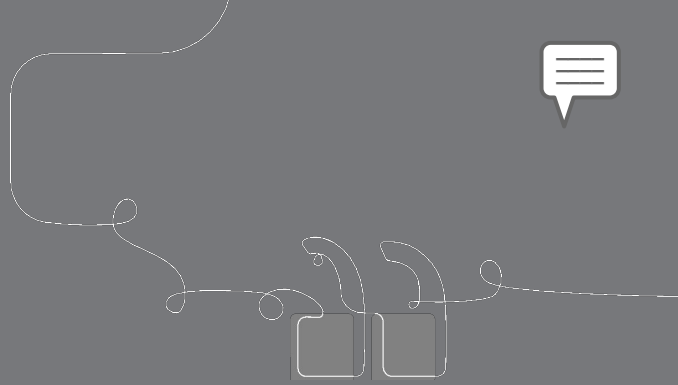


Introduce a real world problem

Collect evidence from multiple sources

Build increasingly complex explanations

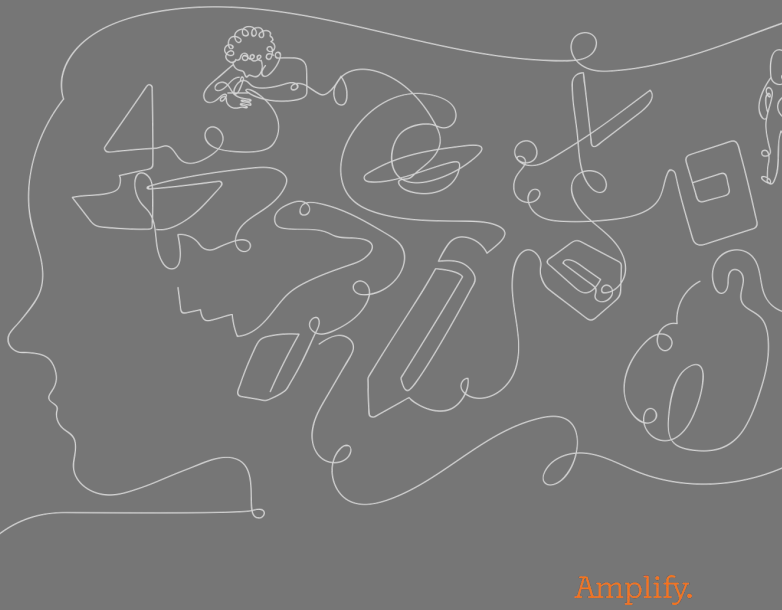
Apply knowledge to solve a different problem



Questions?

Group Chat

How do you normally prepare to teach a new lesson?

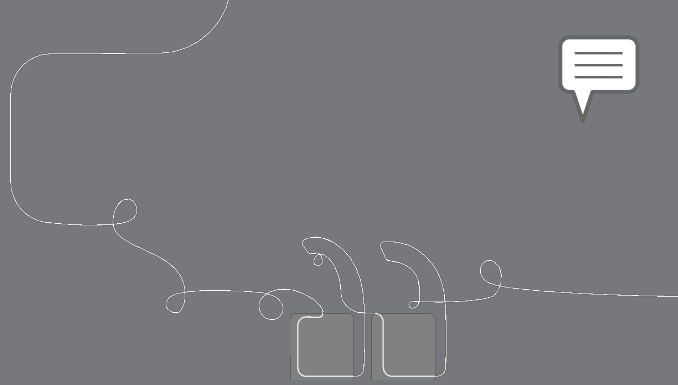


First Days of Teaching

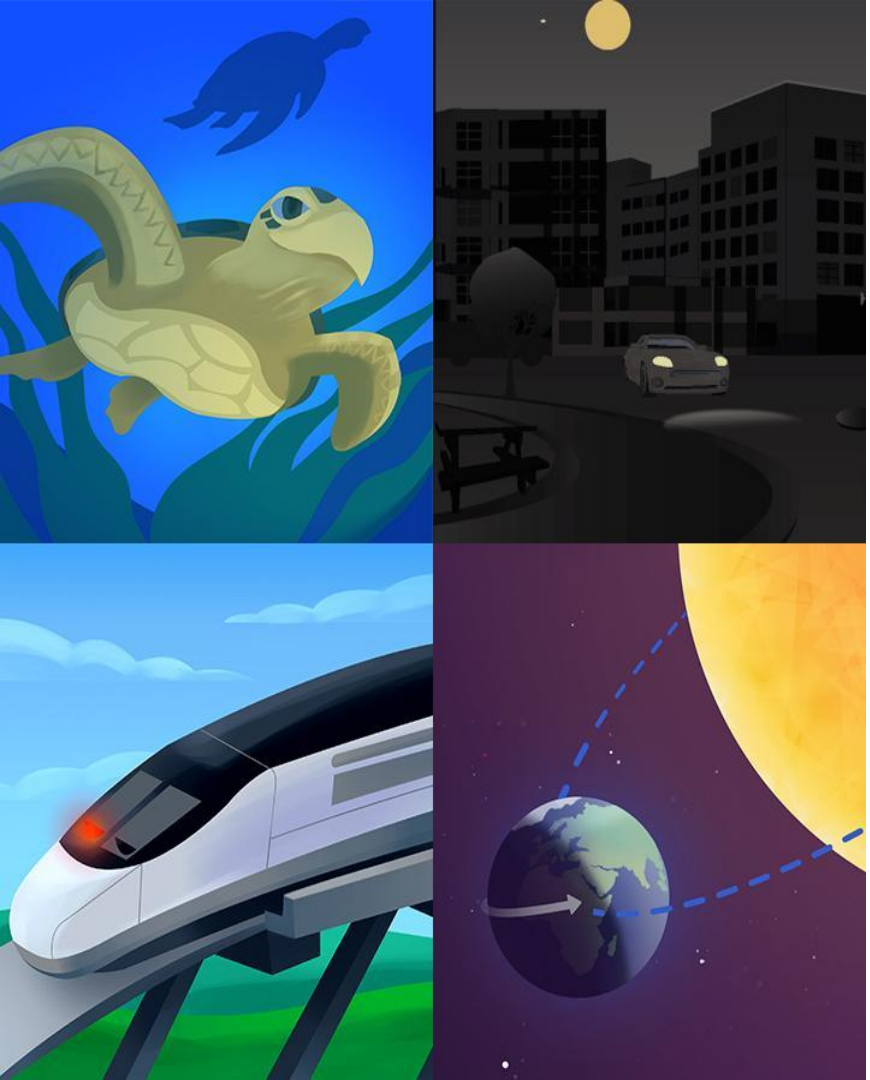
Day 1	Day 2	Day 3	Day 4	Day 5
1.1: Pre-Unit Assessment Prep: 30-60 min ---------- 1: Introducing the Context of the unit (10 min) 2: Introducing the Reference Book (20 min.) 3:Diagramming the Initial Explanations (30 min.)	**1.2: My Nature Notebook** Prep: 15 min ---------- 1: Setting a Purpose for Reading (10 min.) 2: Partner Reading: (25 min.) 3: Reflecting on Ways to Study a Habitat (20 min.)	**1.3: Investigating Habitats** Prep: 10 min ---------- 1: Preparing to Investigate a Habitat (15 min.) 2. Investigating a Sample Study Site (30 min.) 3. The Sample Study Site in the Bengal Reserve (15 min.)	**1.4: Discovering the Problem in the Reserve** Prep: 10 min ---------- 1: Counting Trees in the Sample Study Site (20 min.) 2: Discussing the Data from the Sample Study (10 min.) 3: Reading About the Broadleaf Forest (15 min.) 4: Investigating Different Habitats (15 min)	**1.5: What are Seeds?** Prep:15 min ---------- 1.New Trees in the Bengal Reserve (10 min.) 2: Observing Seeds (25 min.) 3: Reading About Seeds (15 min.) 4: Sequencing Plant Growth (10 min.)

How are students thinking and solving problems like a scientist?

What might your students be challenged by?



Questions?

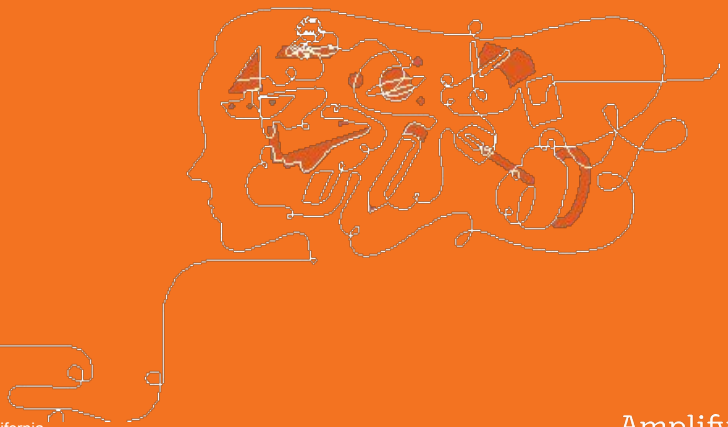


Plan for the day

- Introducing Amplify Science
- Navigation Essentials
- **Assessments**
- Remote/Hybrid Learning Resources
- Reflection and closing

Assessments

How do students show you what they know?



Amplify Science Assessment System

Credible

- Assessments provide reliable information about student learning

Actionable

- Assessments provide actionable suggestions

Timely

- Assessments are embedded into instruction

Types of Assessments

Formative Assessments

Used to guide instruction

Pre-Unit
Designed to gauge students' initial understanding and pre-conceptions about core ideas in the unit.

On-the-Fly
Quick check for understanding designed to help monitor and support student progress throughout the unit.

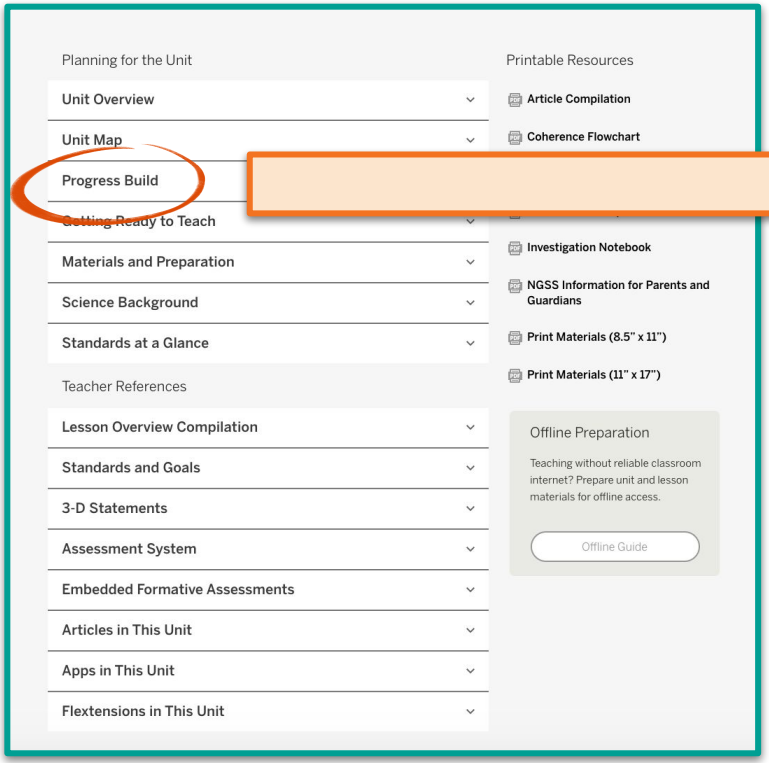
Critical Juncture
Designed to occur at points in the unit in which it is especially important that students understand the content before continuing.

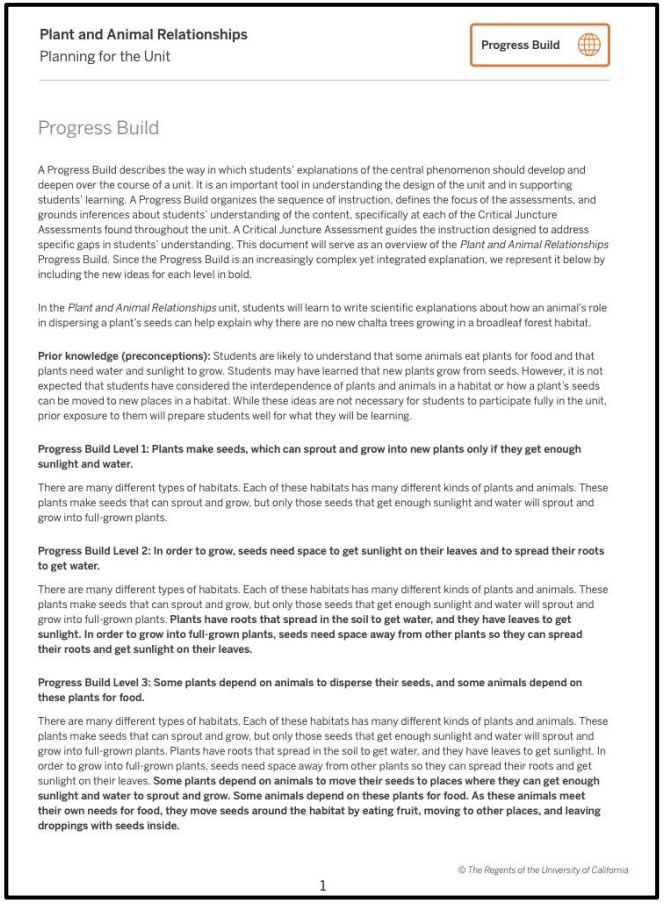
Summative Assessments

Used to measure student learning at the end of instruction

End-of-Unit
Final evaluation of students' understanding of core ideas in the unit.

Progress Build





Plant and Animal Relationships
Planning for the Unit

Progress Build

Progress Build

A Progress Build describes the way in which students' explanations of the central phenomenon should develop and deepen over the course of a unit. It is an important tool in understanding the design of the unit and in supporting students' learning. A Progress Build organizes the sequence of instruction, defines the focus of the assessments, and grounds inferences about students' understanding of the content, specifically at each of the Critical Juncture Assessments found throughout the unit. A Critical Juncture Assessment guides the instruction designed to address specific gaps in students' understanding. This document will serve as an overview of the *Plant and Animal Relationships* Progress Build. Since the Progress Build is an increasingly complex yet integrated explanation, we represent it below by including the new ideas for each level in bold.

In the *Plant and Animal Relationships* unit, students will learn to write scientific explanations about how an animal's role in dispersing a plant's seeds can help explain why there are no new chalta trees growing in a broadleaf forest habitat.

Prior knowledge (preconceptions): Students are likely to understand that some animals eat plants for food and that plants need water and sunlight to grow. Students may have learned that new plants grow from seeds. However, it is not expected that students have considered the interdependence of plants and animals in a habitat or how a plant's seeds can be moved to new places in a habitat. While these ideas are not necessary for students to participate fully in the unit, prior exposure to them will prepare students well for what they will be learning.

Progress Build Level 1: Plants make seeds, which can sprout and grow into new plants only if they get enough sunlight and water.

There are many different types of habitats. Each of these habitats has many different kinds of plants and animals. These plants make seeds that can sprout and grow, but only those seeds that get enough sunlight and water will sprout and grow into full-grown plants.

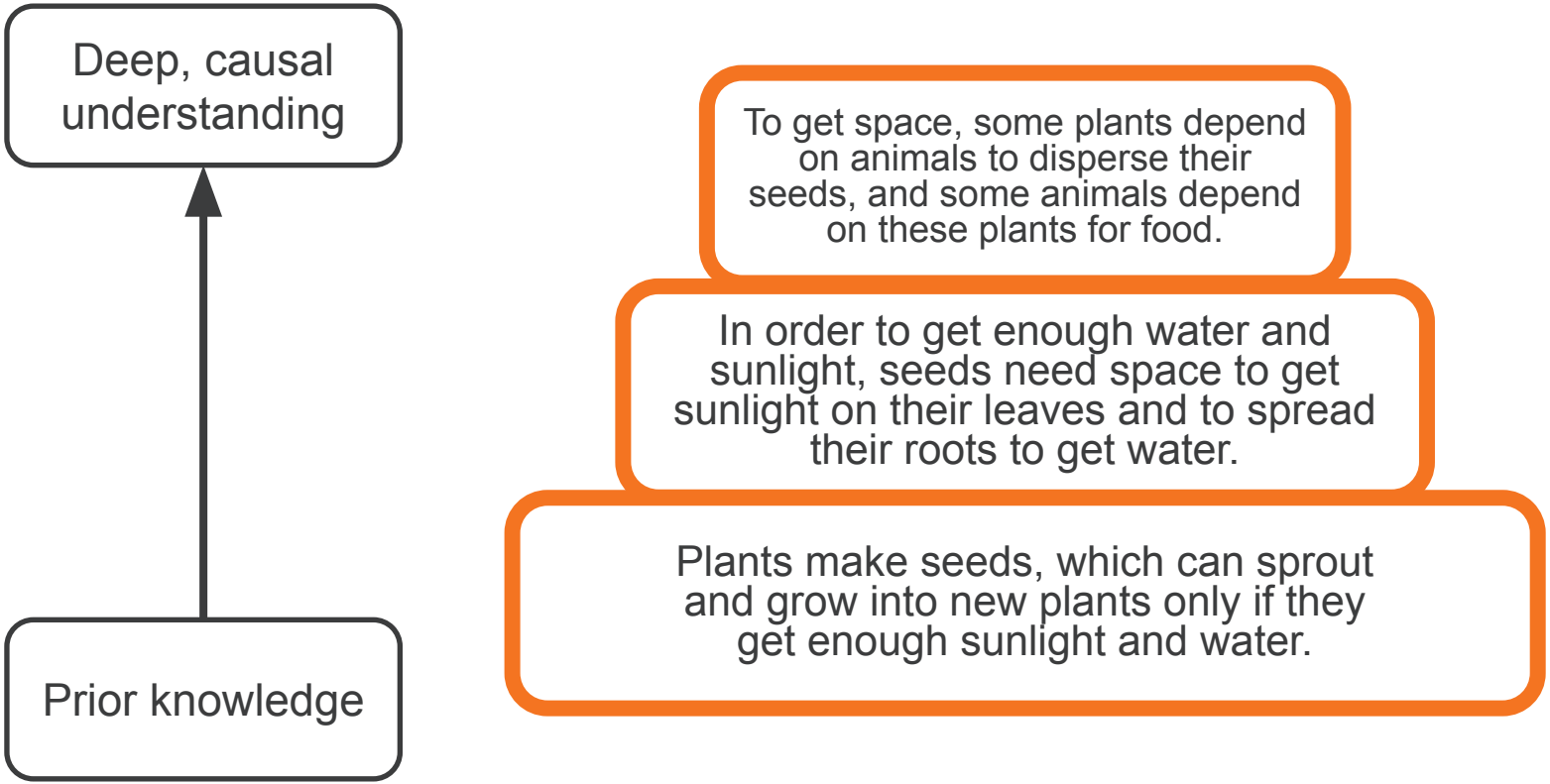
Progress Build Level 2: In order to grow, seeds need space to get sunlight on their leaves and to spread their roots to get water.

There are many different types of habitats. Each of these habitats has many different kinds of plants and animals. These plants make seeds that can sprout and grow, but only those seeds that get enough sunlight and water will sprout and grow into full-grown plants. **Plants have roots that spread in the soil to get water, and they have leaves to get sunlight. In order to grow into full-grown plants, seeds need space away from other plants so they can spread their roots and get sunlight on their leaves.**

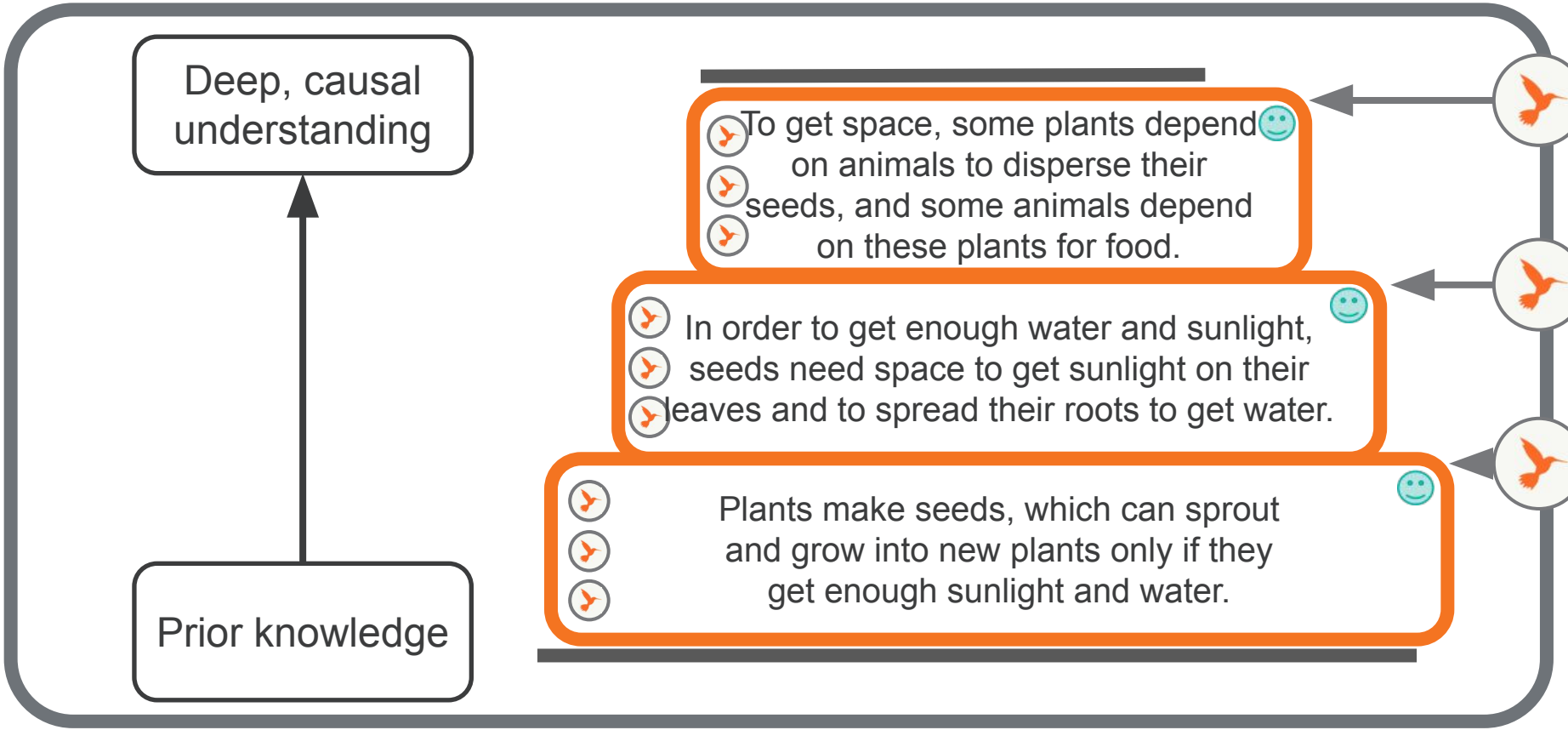
Progress Build Level 3: Some plants depend on animals to disperse their seeds, and some animals depend on these plants for food.

There are many different types of habitats. Each of these habitats has many different kinds of plants and animals. These plants make seeds that can sprout and grow, but only those seeds that get enough sunlight and water will sprout and grow into full-grown plants. Plants have roots that spread in the soil to get water, and they have leaves to get sunlight. In order to grow into full-grown plants, seeds need space away from other plants so they can spread their roots and get sunlight on their leaves. **Some plants depend on animals to move their seeds to places where they can get enough sunlight and water to sprout and grow. Some animals depend on these plants for food. As these animals meet their own needs for food, they move seeds around the habitat by eating fruit, moving to other places, and leaving droppings with seeds inside.**

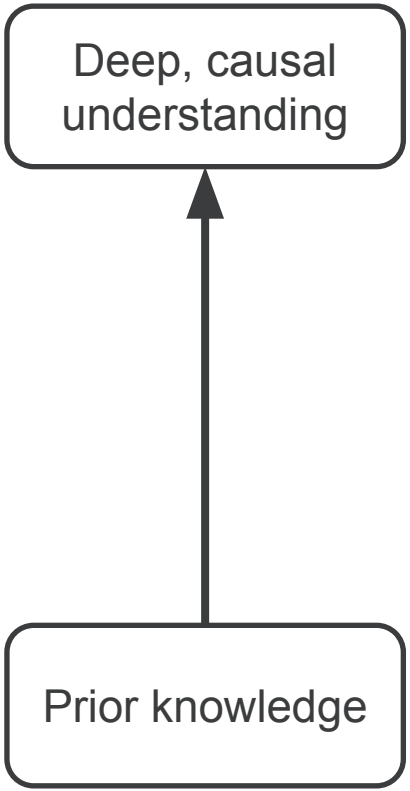
Plant and Animal Relationships Progress Build



Assessment System



Pre- and End-of-Unit Assessments

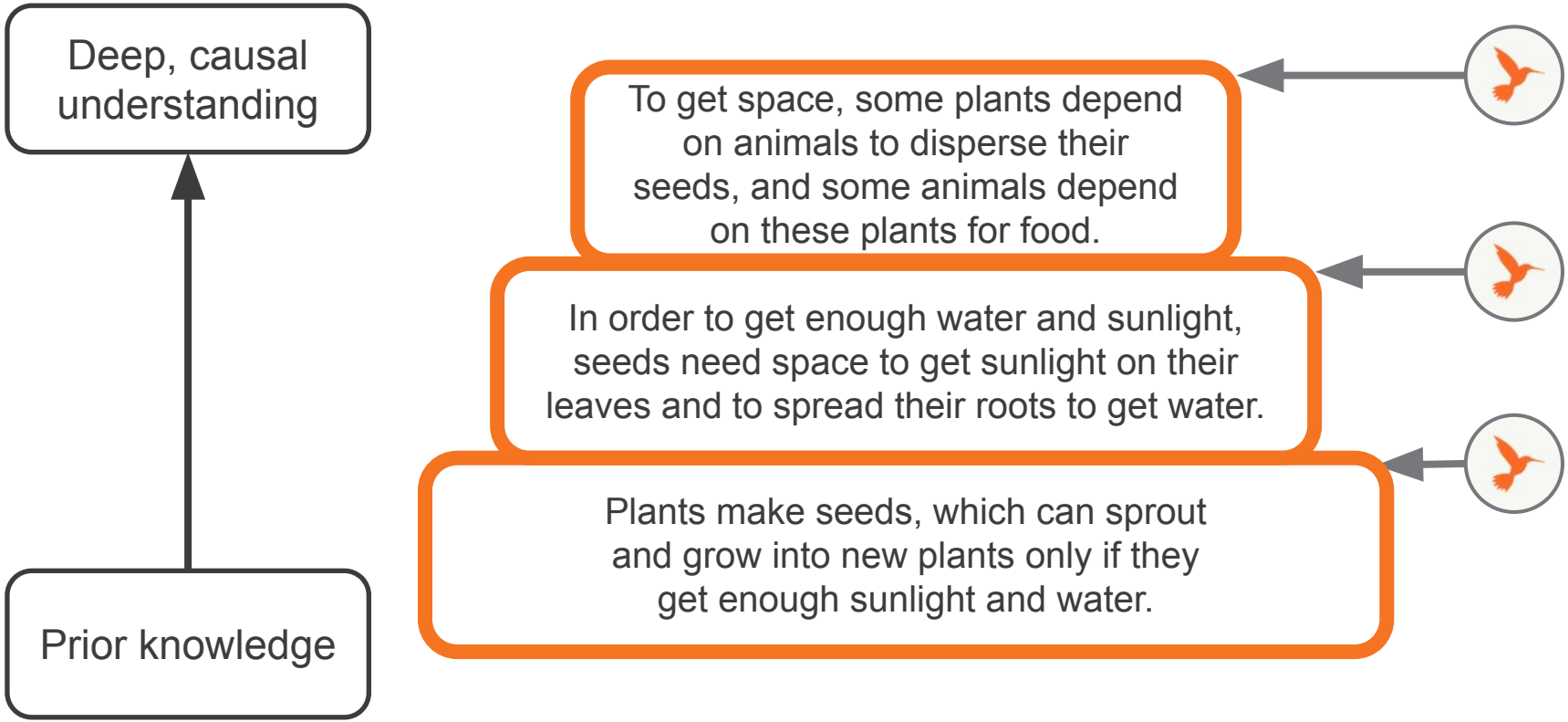


To get space, some plants depend on animals to disperse their seeds, and some animals depend on these plants for food.

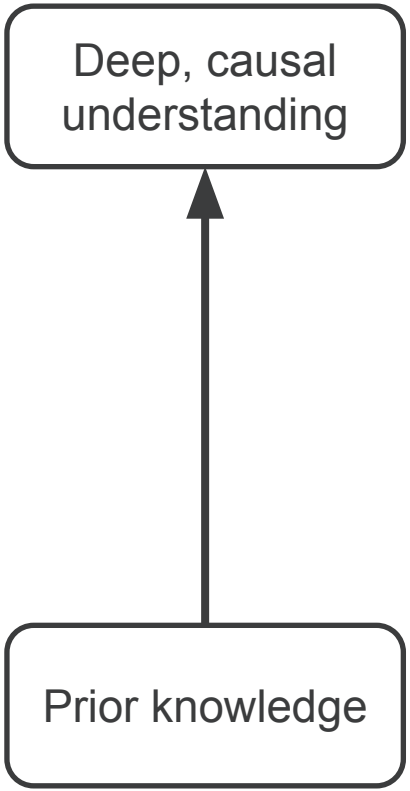
In order to get enough water and sunlight, seeds need space to get sunlight on their leaves and to spread their roots to get water..

Plants make seeds, which can sprout and grow into new plants only if they get enough sunlight and water.

Critical Juncture Assessments



On-the-Fly Assessments



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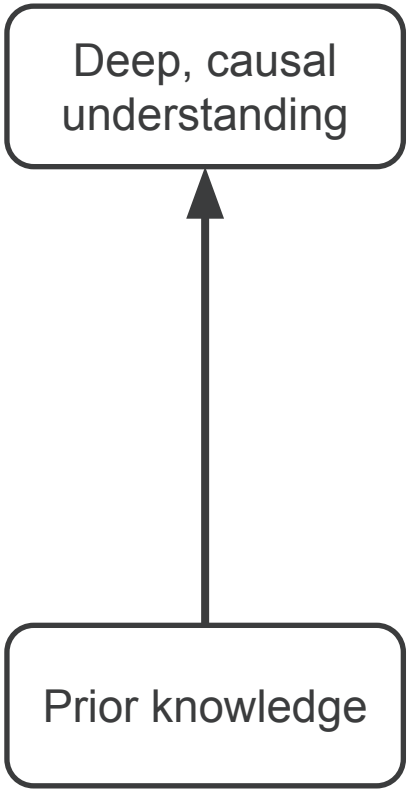
Plants make seeds, which can sprout and grow into new plants only if they get enough sunlight and water.

Self-Assessments



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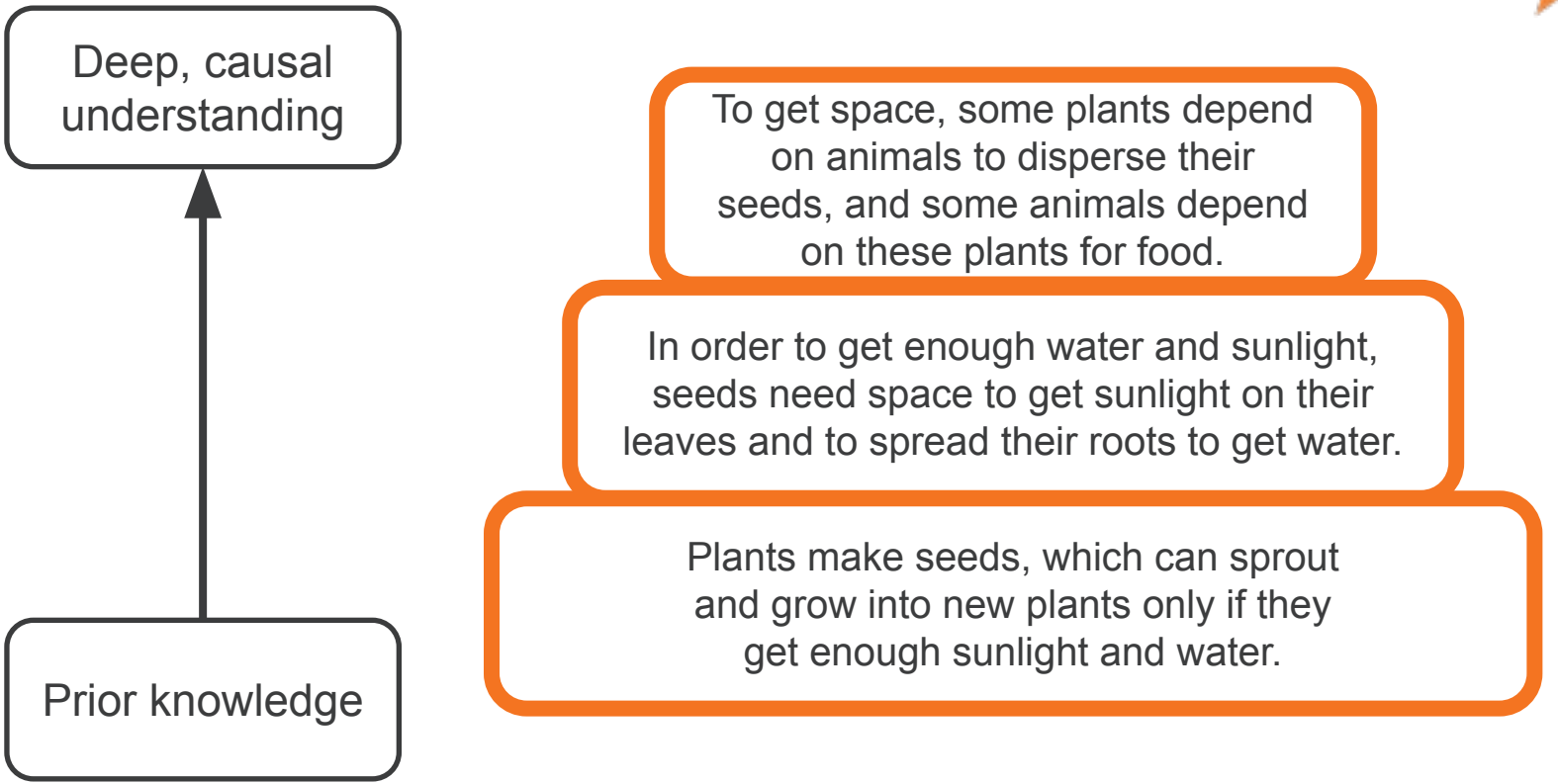
In order to get enough water and sunlight, seeds need space to get sunlight on their leaves and to spread their roots to get water.

Plants make seeds, which can sprout and grow into new plants only if they get enough sunlight and water.

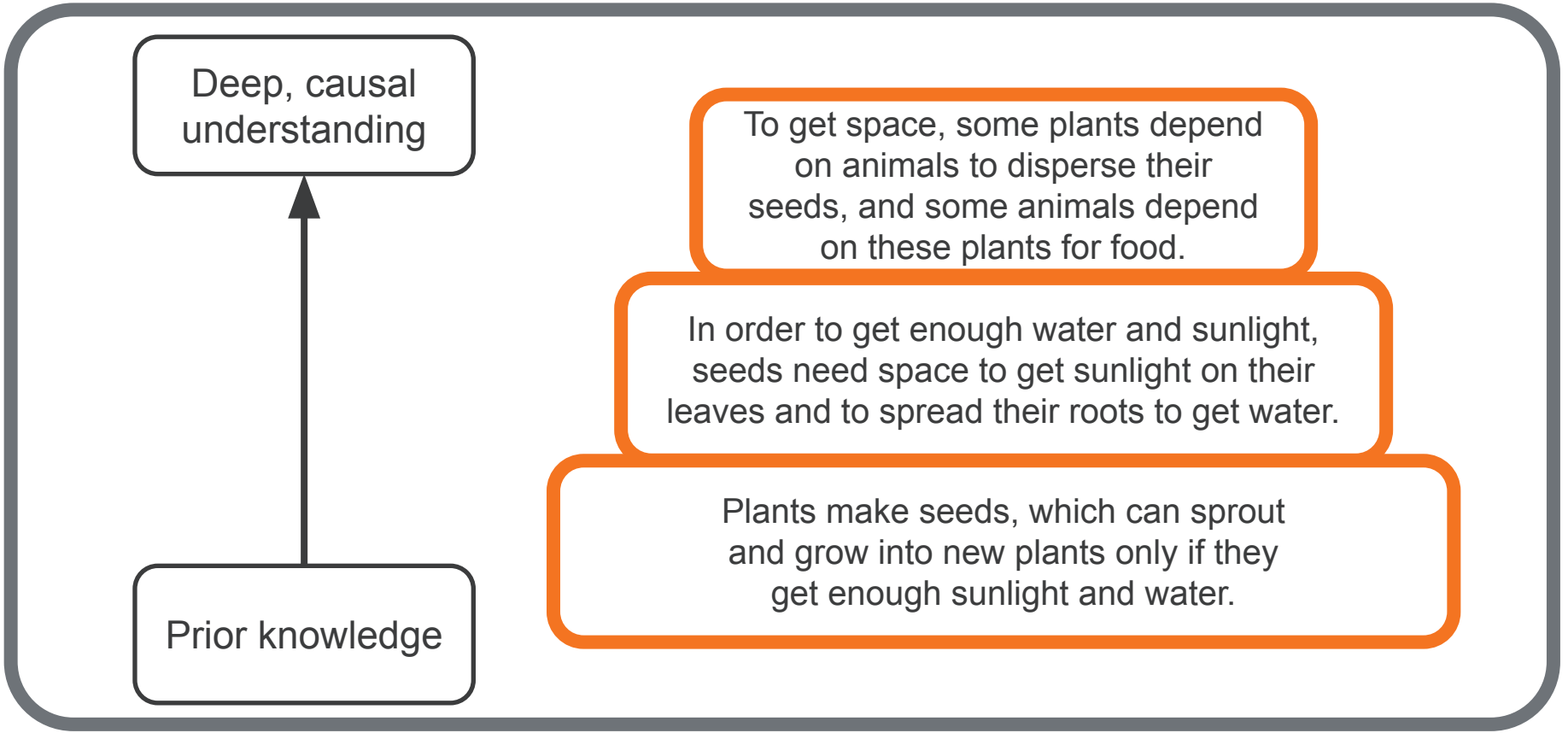
Investigation Assessment



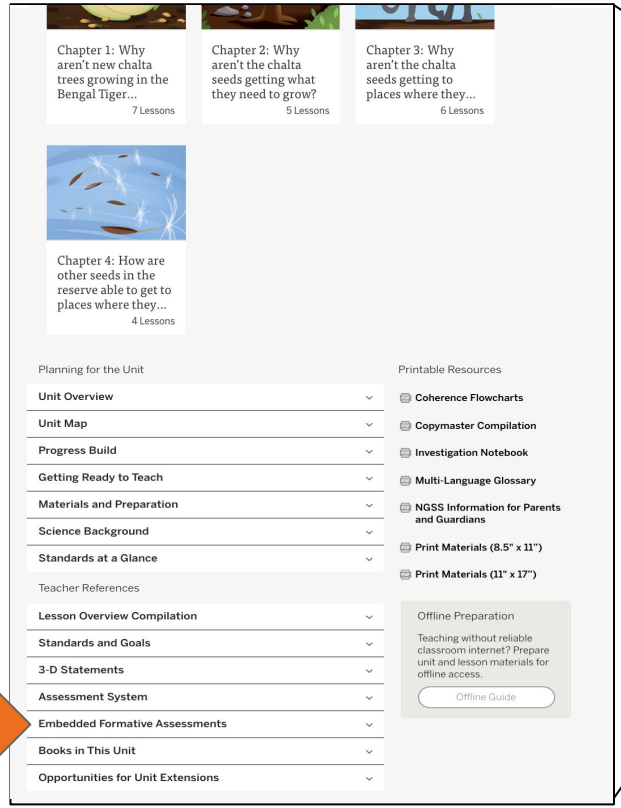
Investigation Assessments

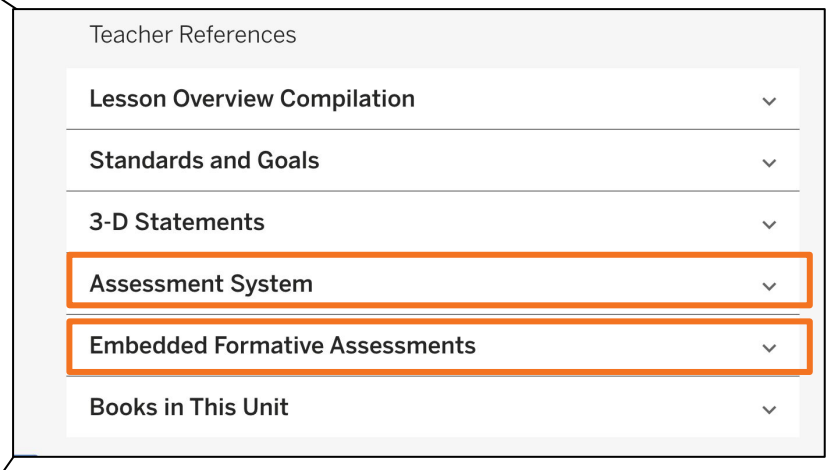
Grade	Unit Title
Kindergarten	Sunlight and Weather
First Grade	Light and Sound
Second Grade	Plant and Animal Relationships
Third Grade	Balancing Forces
Fourth Grade	Vision and Light
Fifth Grade	Patterns of Earth and Sky

Portfolio Assessment



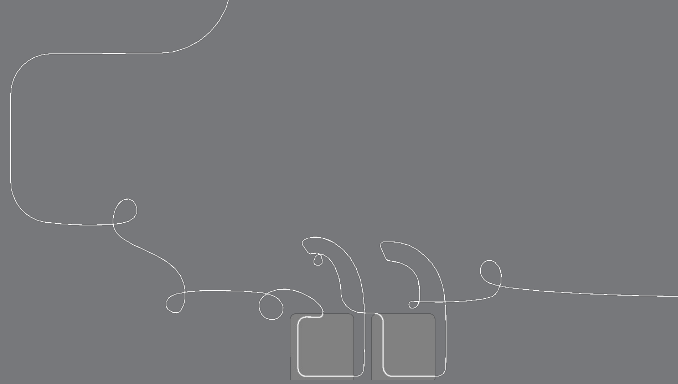
Locating Assessment Resources



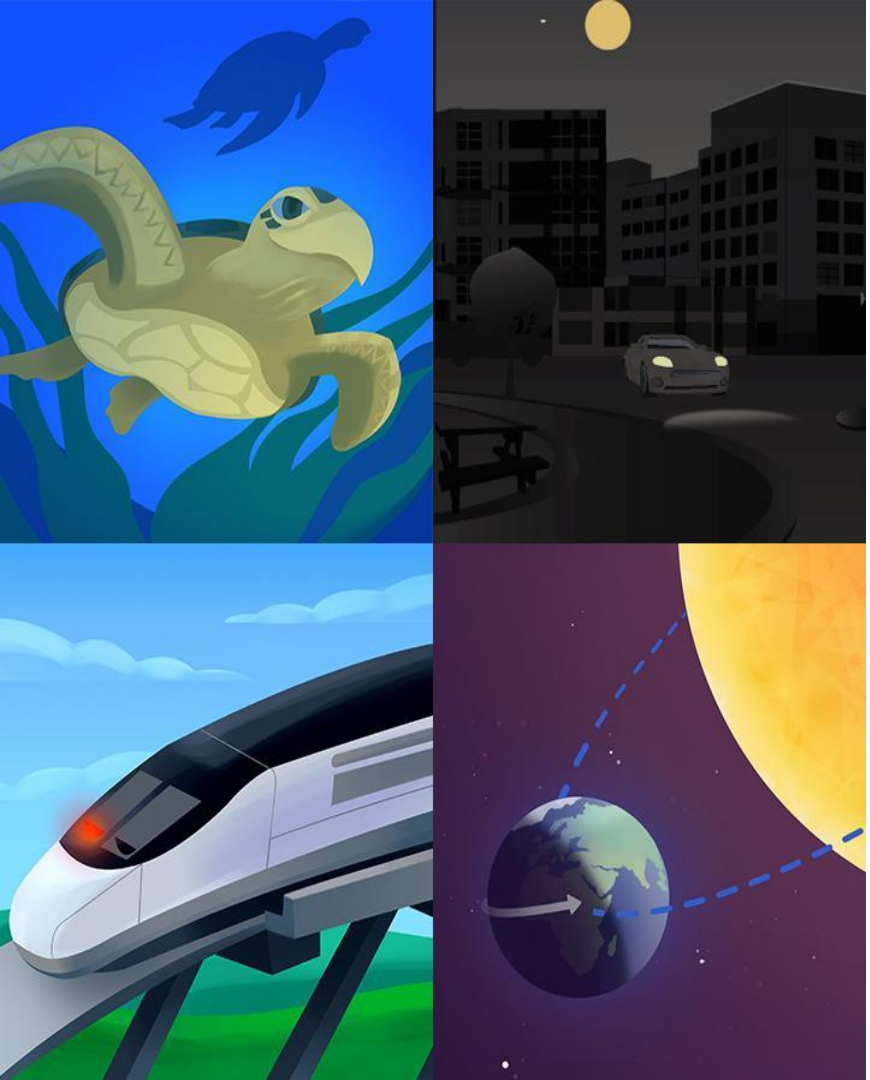


Amplify.

Self-Assessment



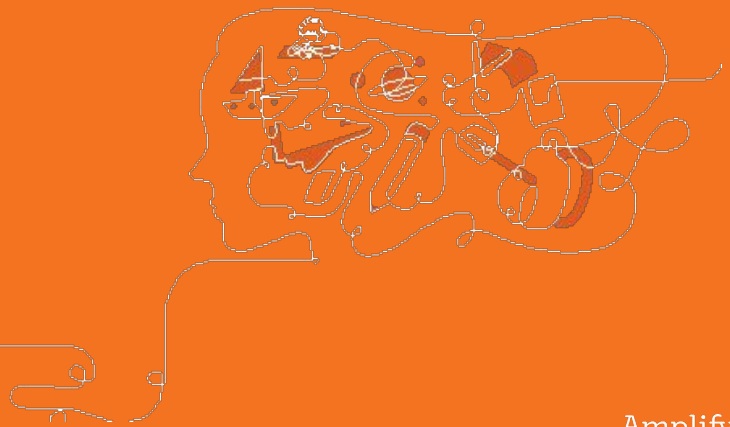
- Which questions have we answered?
- What new questions do you have?



Plan for the day

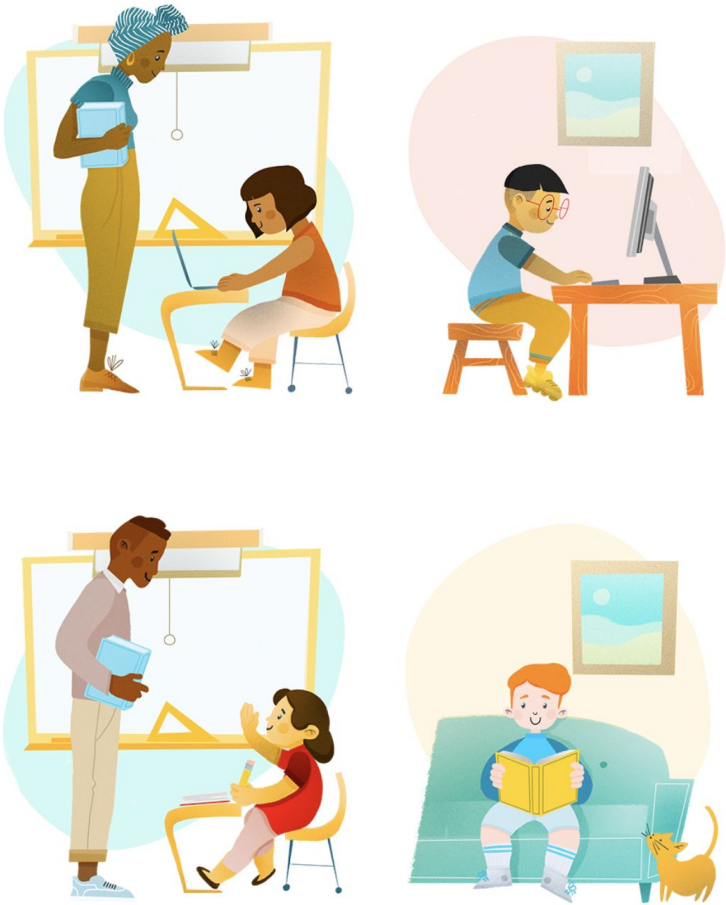
- Introducing Amplify Science
- Navigation Essentials
- Assessments
- **Remote/Hybrid Learning Resources**
- Reflection and closing

Remote/Hybrid Learning Resources



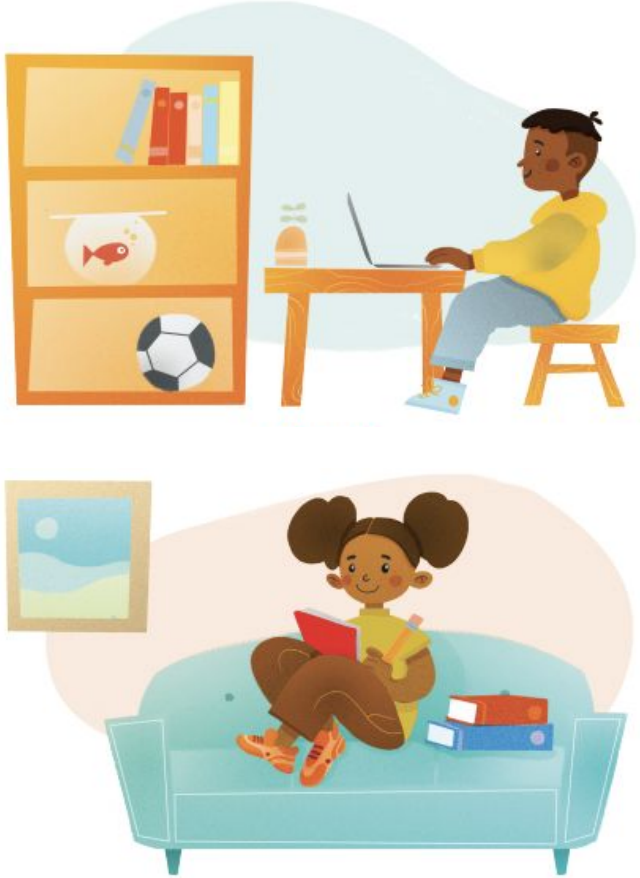
AmplifyScience@Home

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



AmplifyScience@Home

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



AmplifyScience@Home

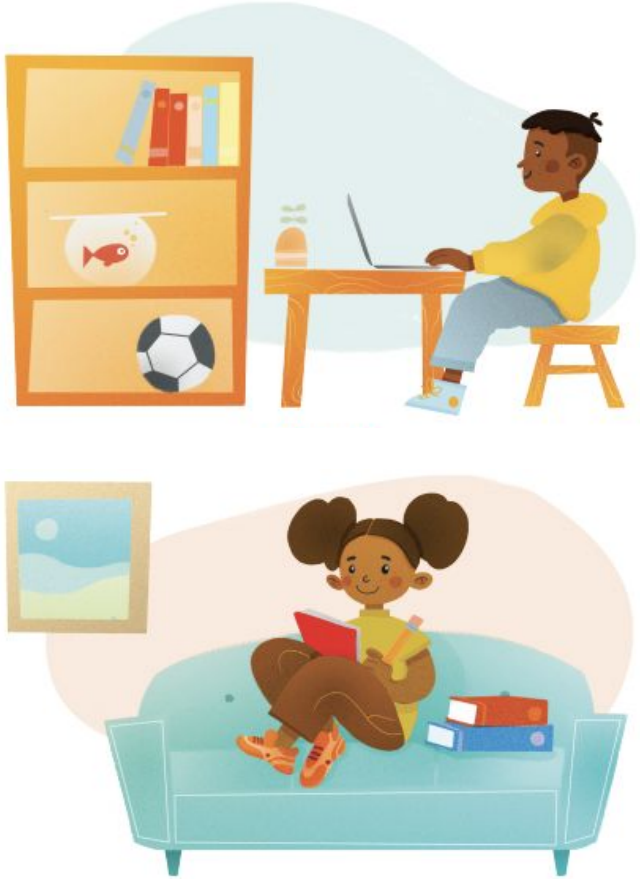
Two different options:

@Home Units

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

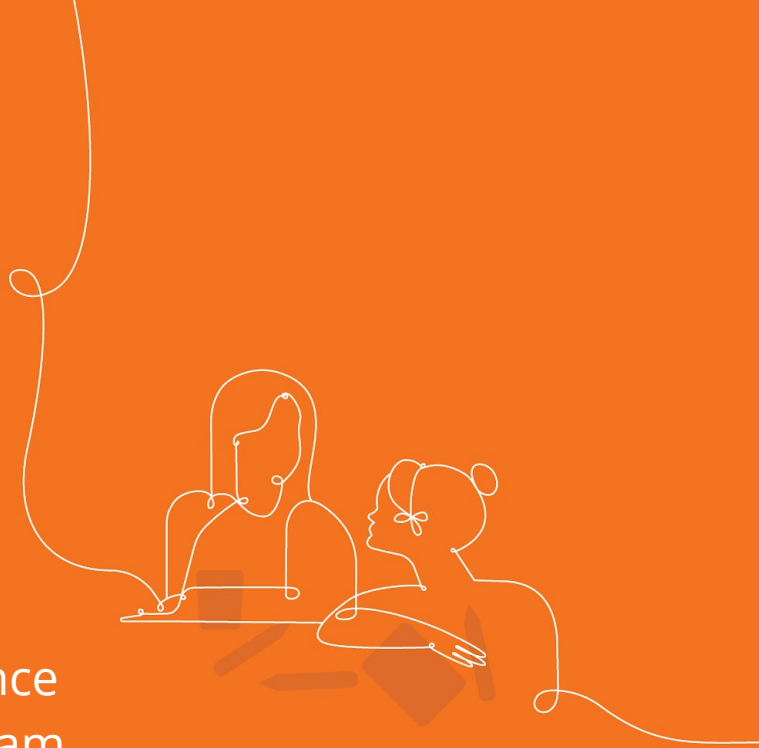
@Home Videos

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



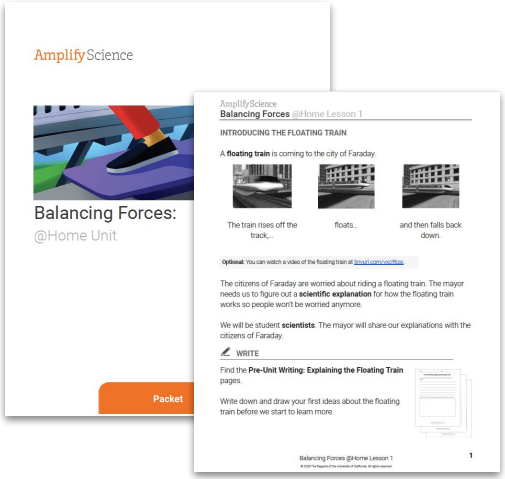
@Home Units

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

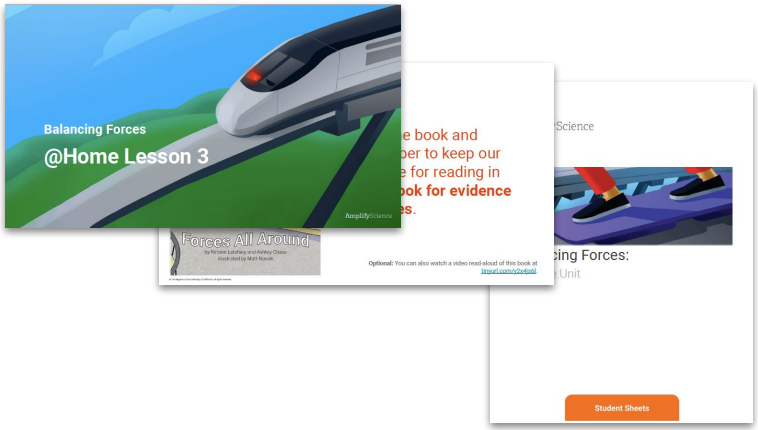


@Home Units

- Solution for **reduced instructional time**
- Two options for student access

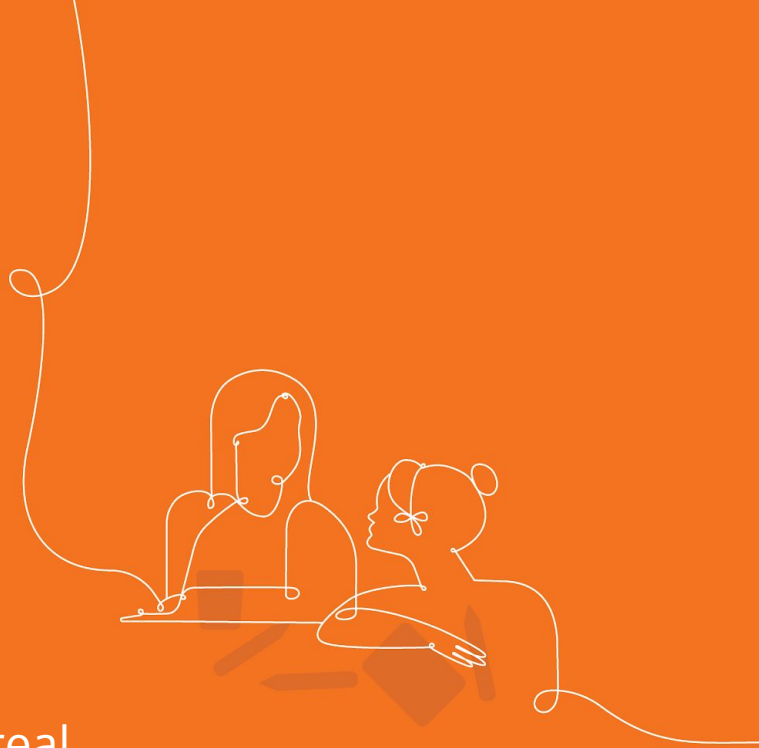


@Home Packets: print-based



@Home Slides and Student Sheets: tech-based

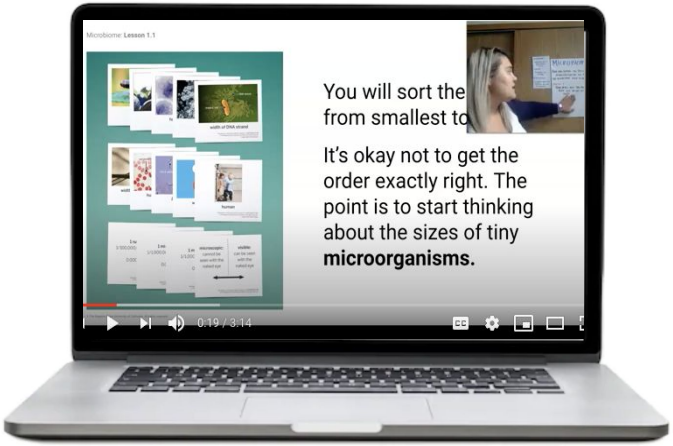
@Home Videos



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

@Home Videos

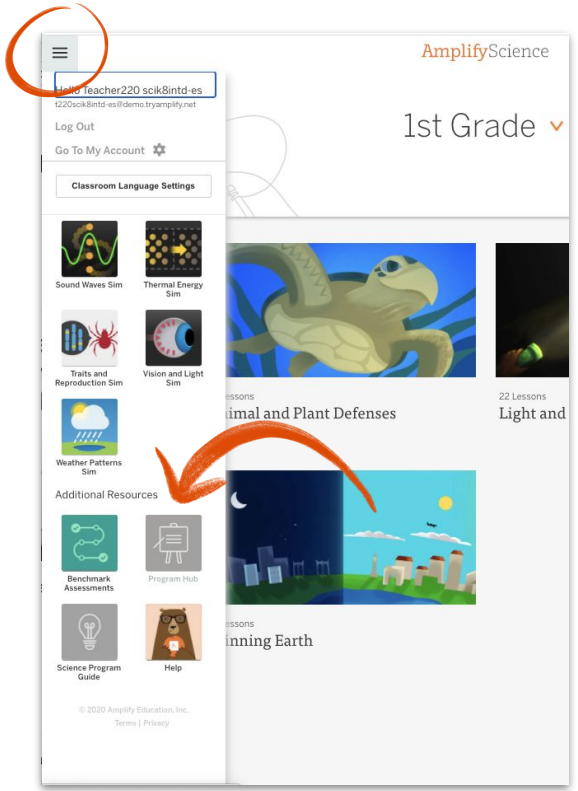
- Lesson playlists include **all activities** from original units
- Great option if have the **same amount of instructional time** as you typically would for science
- Requires **tech access** at home
- Can be used as models for **creating your own videos**



Accessing Amplify Science@Home

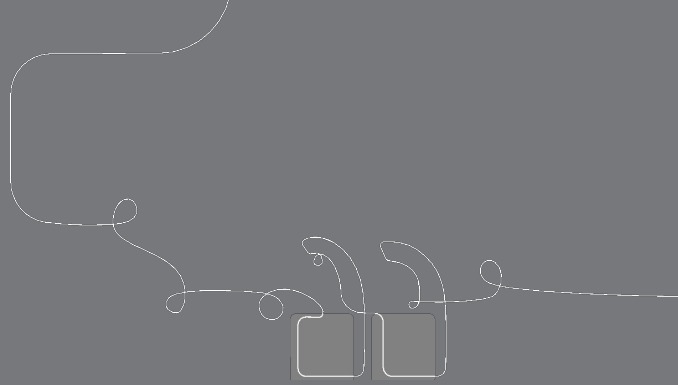
Amplify Science Program Hub

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

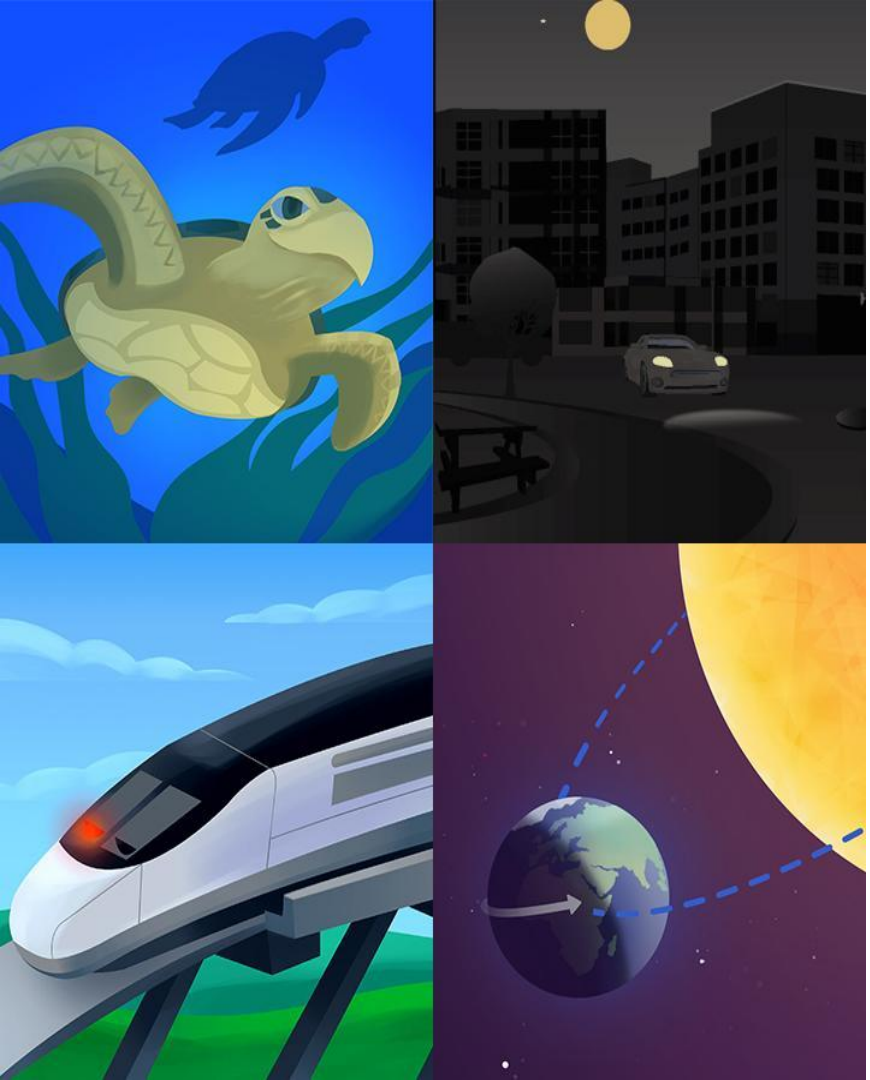


Which resource should I choose?

Use @Home Units if...	Use @Home Videos if...
• You have reduced instructional time for science • You need a print-based solution for some or all of your students	• You have about the same amount of instructional time for science
As you explore the resources, you may decide to use both!	



Questions?



Plan for the day

- Introducing Amplify Science
- Navigation Essentials
- Assessments
- Remote/Hybrid Learning Resources
- **Reflection and closing**

Navigation Temperature Check

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

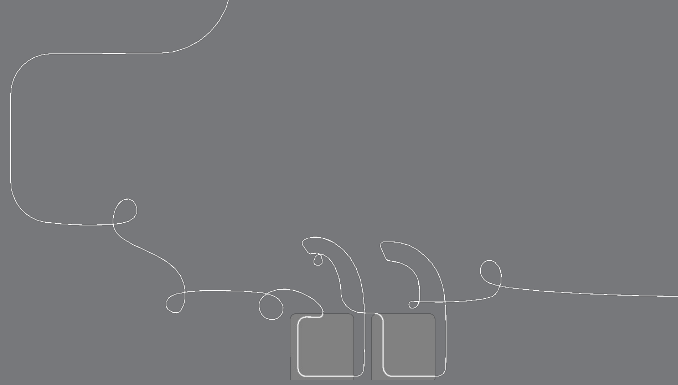
1 = Extremely Uncomfortable

2 = Uncomfortable

3 = Mild

4 = Comfortable

5 = Extremely Comfortable

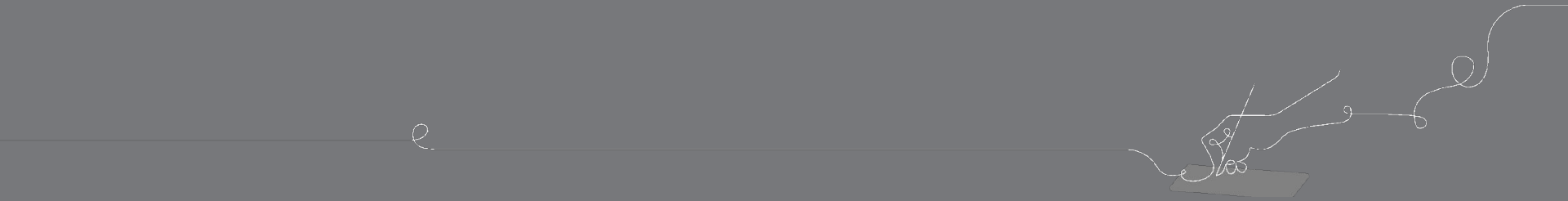


Questions?

Objectives

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

- Navigate the Amplify Science curriculum.
- Navigate the Program Hub



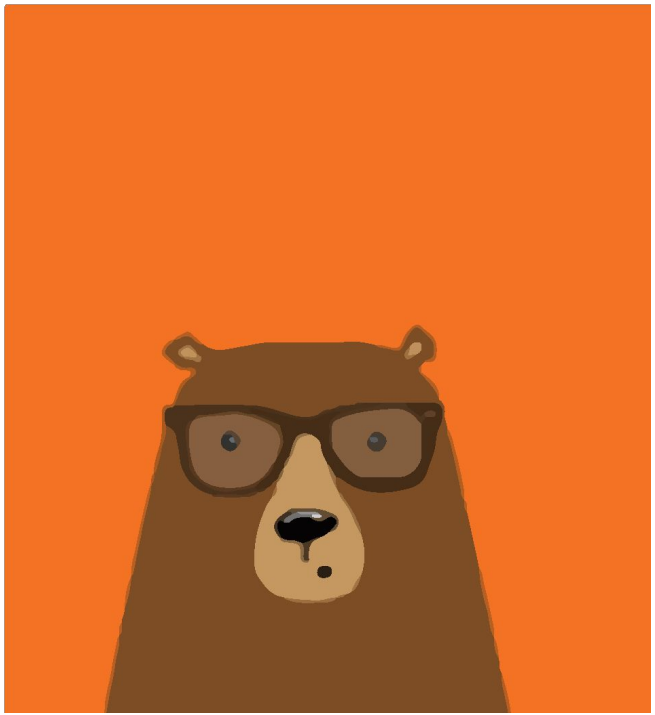
LAUSD Amplify resources

Amplify Science for LAUSD

Glean additional insight into the program's structure, intent, philosophies, supports, and flexibility. Review previous trainings and access materials from the trainings.

https://amplify.com/lausd-science

Additional Amplify resources



Program Guide

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

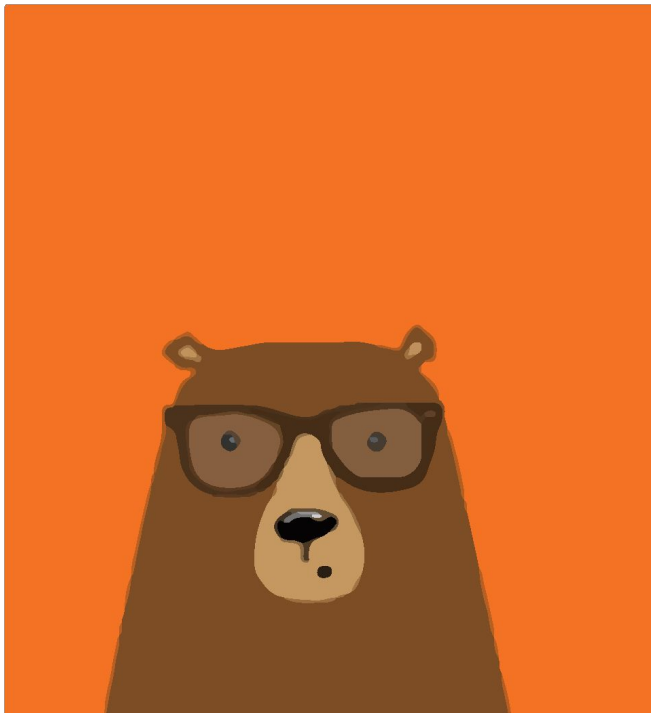
https://my.amplify.com/programguide/content/national/welcome/science/

Amplify Help

Find lots of advice and answers from the Amplify team.

my.amplify.com/help

Additional Amplify resources



Caregivers site

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

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

Additional Amplify Support

Customer Care

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

scihelp@amplify.com

800-823-1969

Amplify Chat

When contacting the customer care team:

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