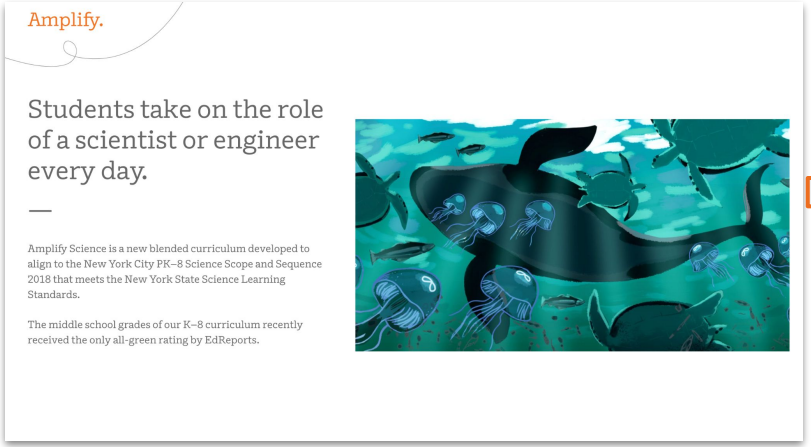
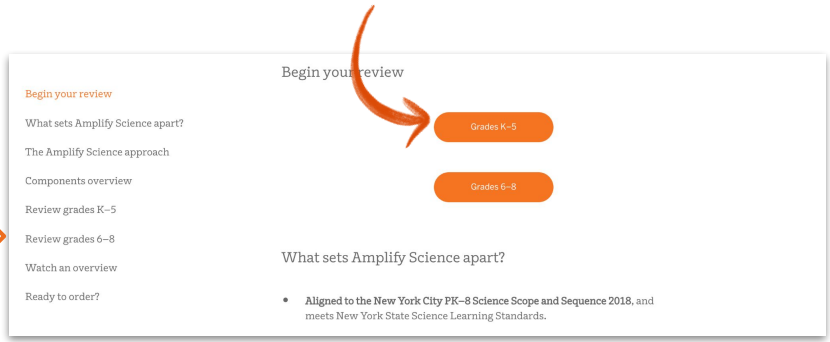
Welcome to Amplify Science!

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

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





Click your grade band & then follow prompts

Amplify Science
New York City

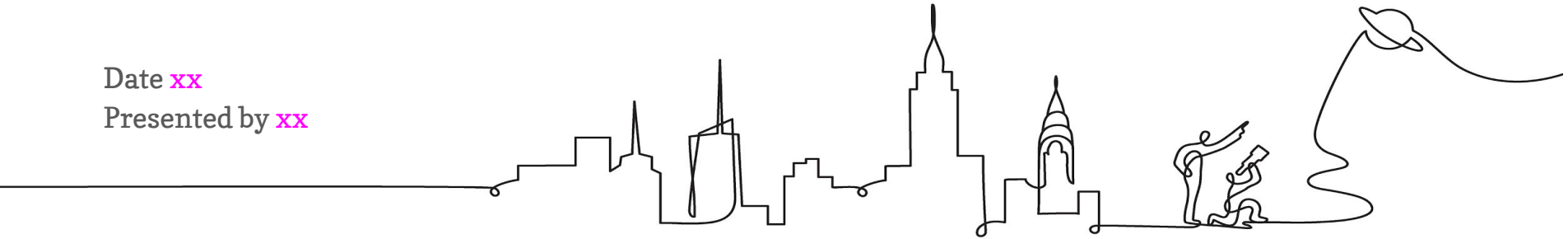
Exploring the Amplify Science Curriculum

Grades 3-5

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.

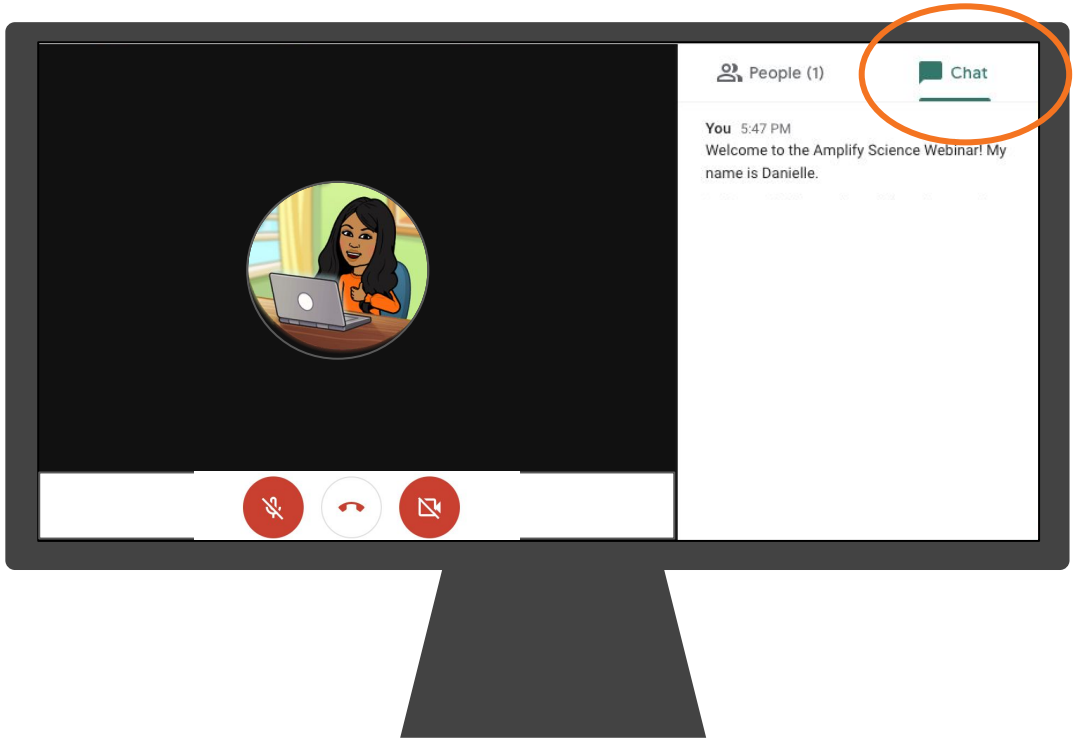
We share your goal of **inspiring all students to think deeply, creatively, and for themselves.**

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?



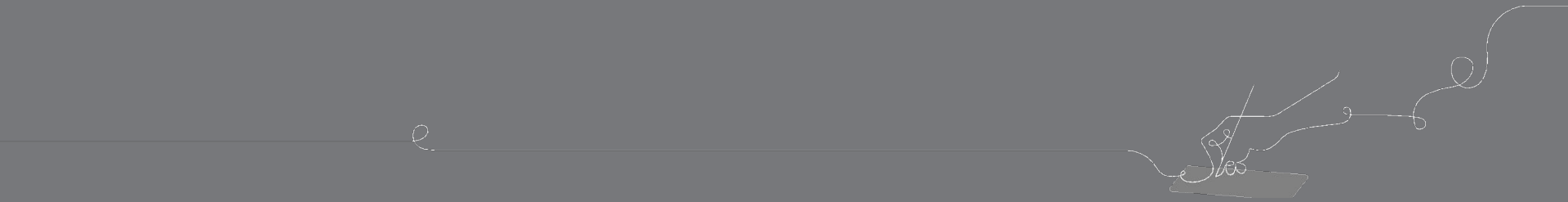
Norms: Establishing a culture of learners

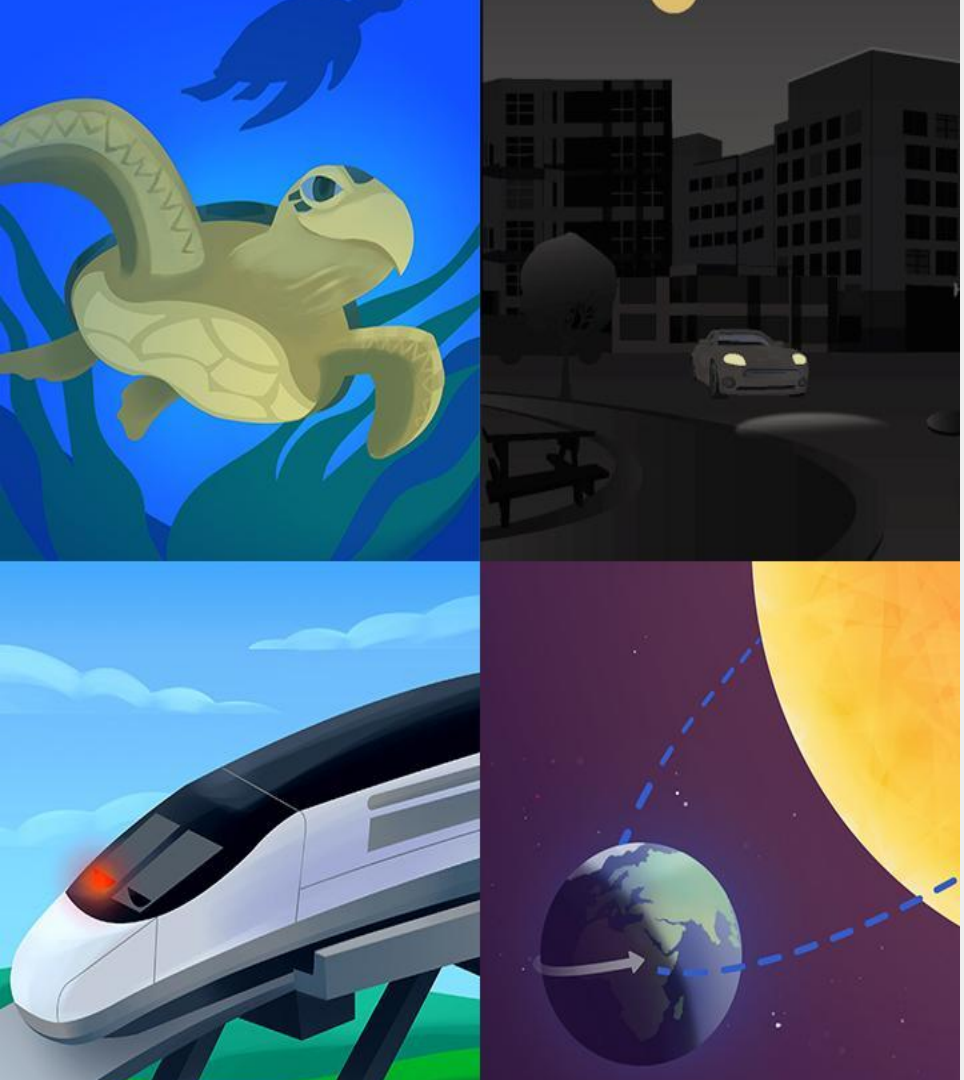
- **Take risks:** Ask any questions, provide any answers.
- **Participate:** Share your thinking, participate in discussion and reflection.
- **Be fully present:** Unplug and immerse yourself in the moment.
- **Physical needs:** Stand up, get water, take breaks.

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.

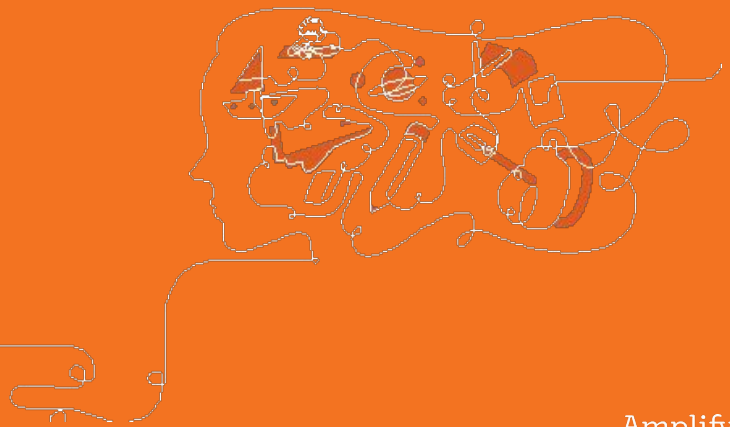




Plan for part 1

- **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

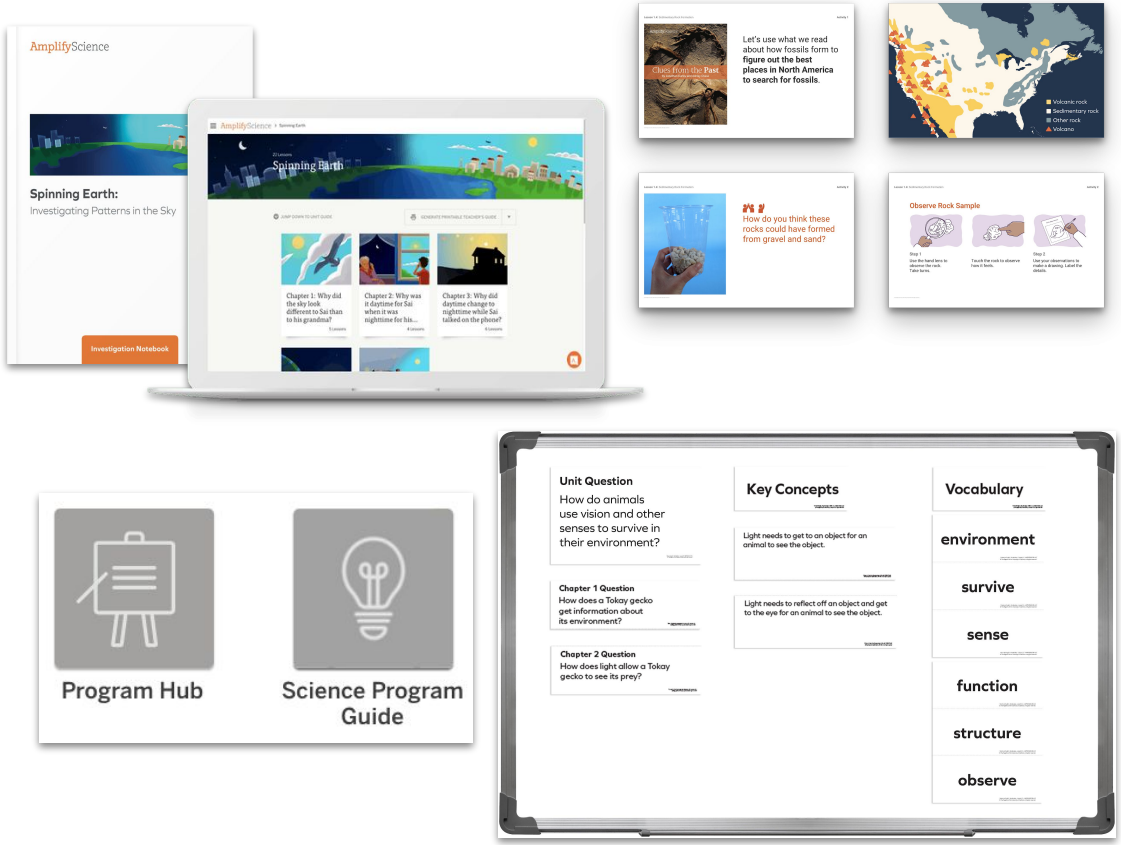
Key takeaways:

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

K-5 Program components

Teacher materials

- Teacher's Guide
- Classroom Slides
- Classroom wall materials
- Embedded assessments
- Program Guide
- Program Hub
- Amplify Help Site

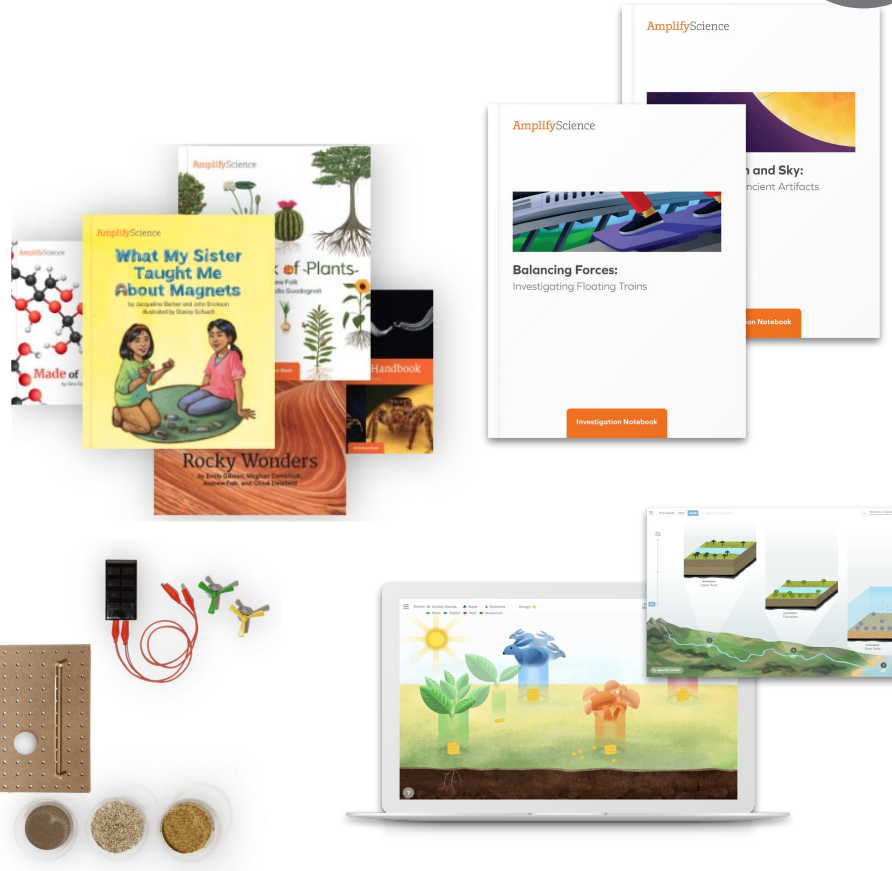


Pgs. 3-4

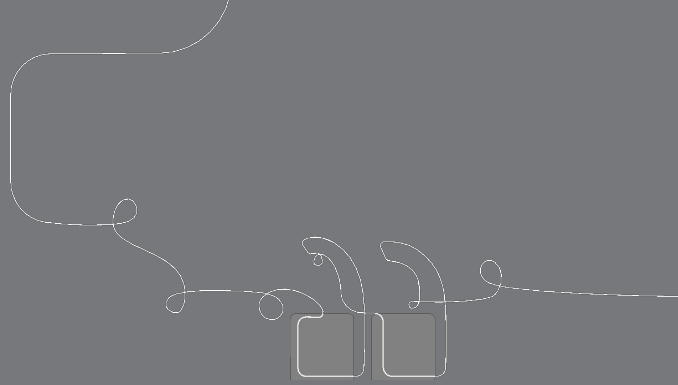
K-5 Program components

Student materials

- Hands-on materials
- Investigation Notebooks
- Student books
- Digital Applications



Questions?



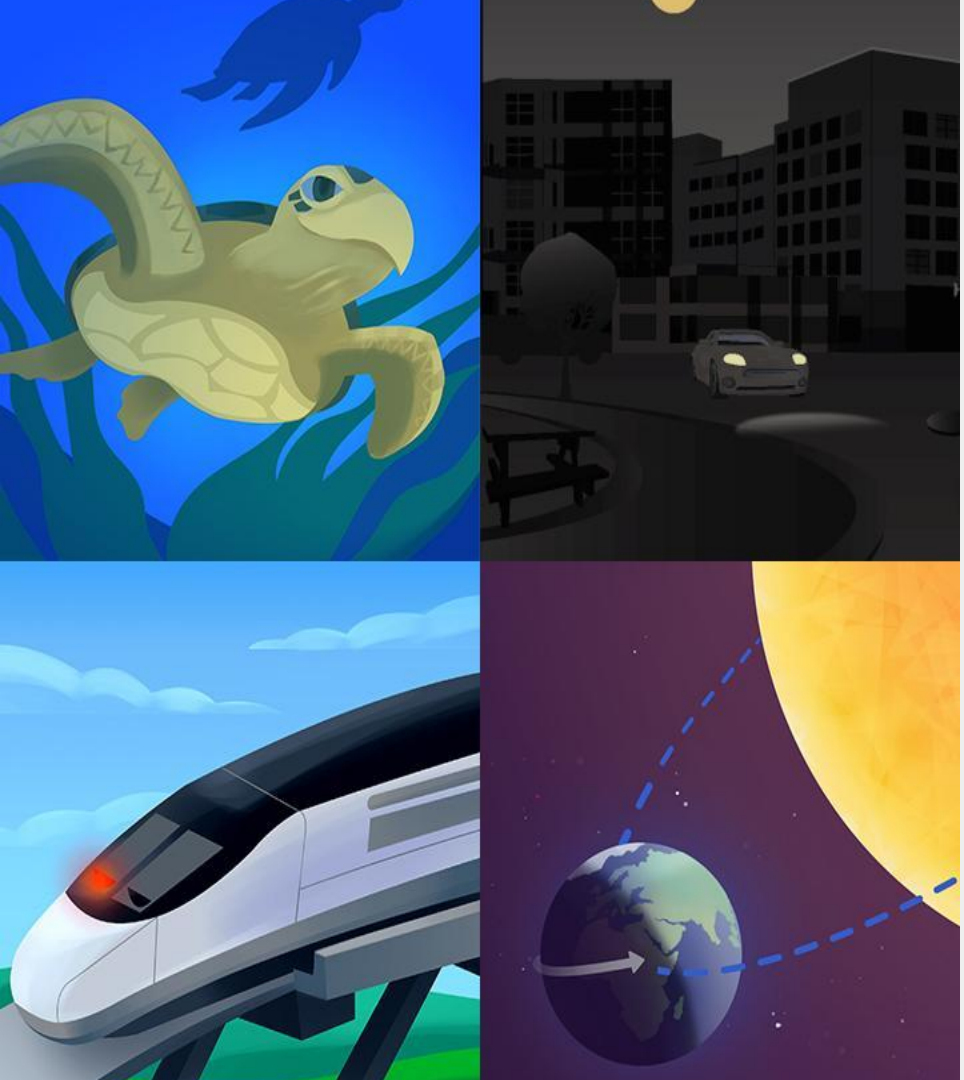
Framing our reflections

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?

Teaching	Learning
	



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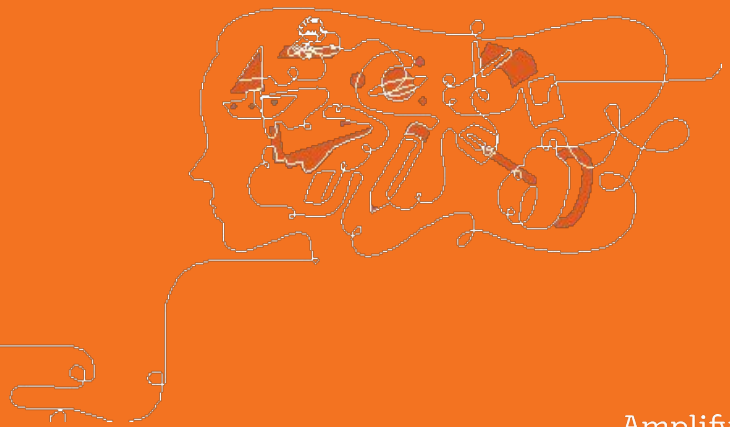
Phenomenon-based instruction



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?

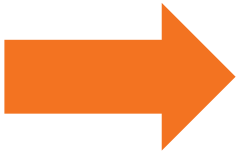
Topic-based	Phenomenon-based
Ocean habitats	A sea turtle can survive in an ocean habitat where sharks live.
Electric circuits	A flashlight won't turn on, even though it used to work.
Mixtures and solutions	One substance dissolved in water but another substance didn't.

Comparing topics and phenomena

A shift in science instruction

from learning about

(like a student)

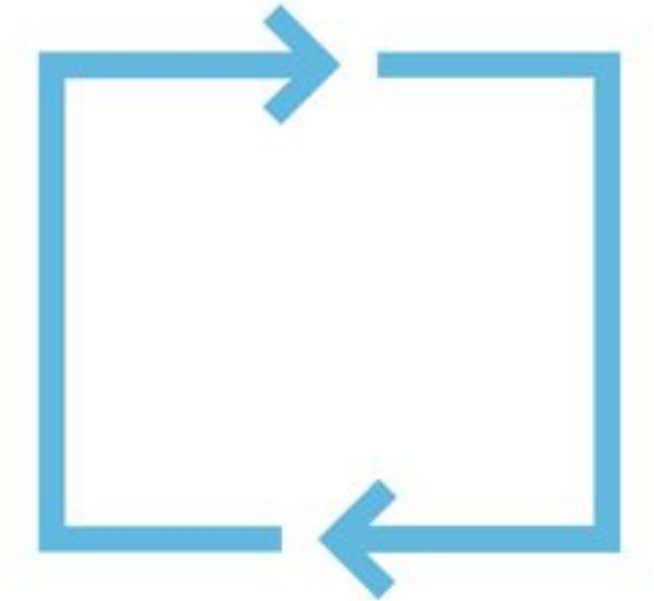


to figuring out

(like a scientist)

Multimodal learning

Gathering evidence over multiple lessons



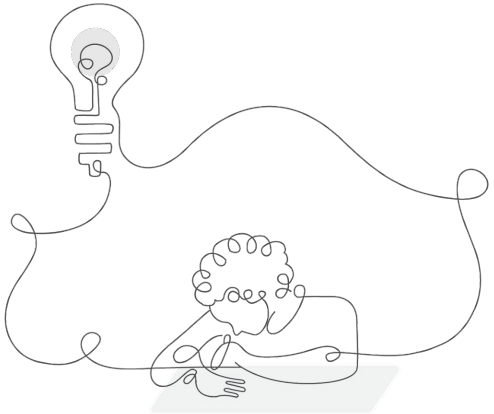
Do,
Talk,
Read,
Write,
Visualize

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.



The unit we're beginning is called *Energy Conversions: Blackout in Ergstown*.

In this unit, you will **investigate why blackouts occur and come up with solutions to prevent them**.

Ergstown

This picture shows a town we'll call Ergstown.

What do you **see** in the picture?

Ergstown: a Few Moments Later

This is an image of the same town just a few moments later.

How is this picture different?

What do you think is going on in the picture?

Ergstown: Later That Night

What do you notice in this picture?

Have you ever been in a blackout? What was it like?

Why might blackouts be a problem?

To: Systems Engineers
From: Mayor Joules, Ergstown City Hall
Subject: Improvements to the Electrical System

Recently, Ergstown has been experiencing frequent blackouts. Blackouts can be dangerous and inconvenient, so I need a team to figure out how the electrical system can be improved.

Before the team can begin to solve this problem, it will first need to figure out why the blackouts have been happening. I would like to receive updates as the team discovers possible causes of the blackouts and as the team comes up with ideas about how to improve the electrical system.

The town of Ergstown will be very grateful to anyone who can help us solve our blackout problem!

Pgs. 5-6

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.

Teaching	Learning
	

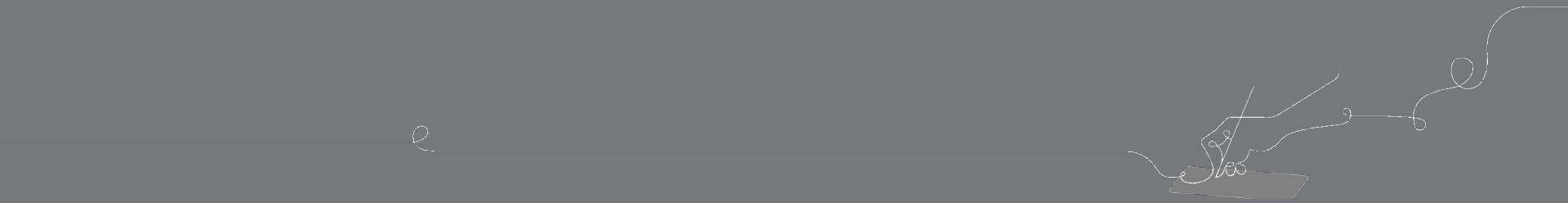
Navigation and planning

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:

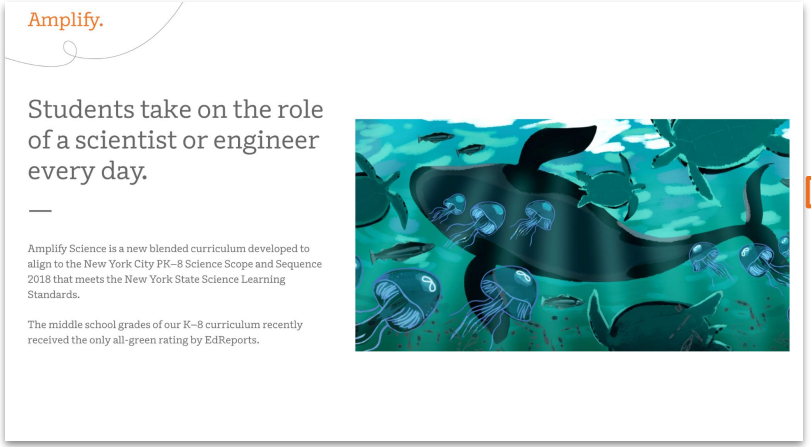
- ❑ Log into the digital Teacher's Guide
- ❑ Navigate to a specific lesson
- ❑ Navigate from one lesson to another

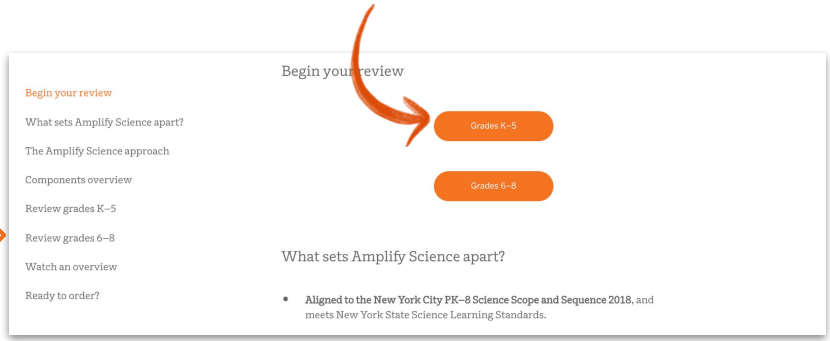


Logging in

Safari or Chrome

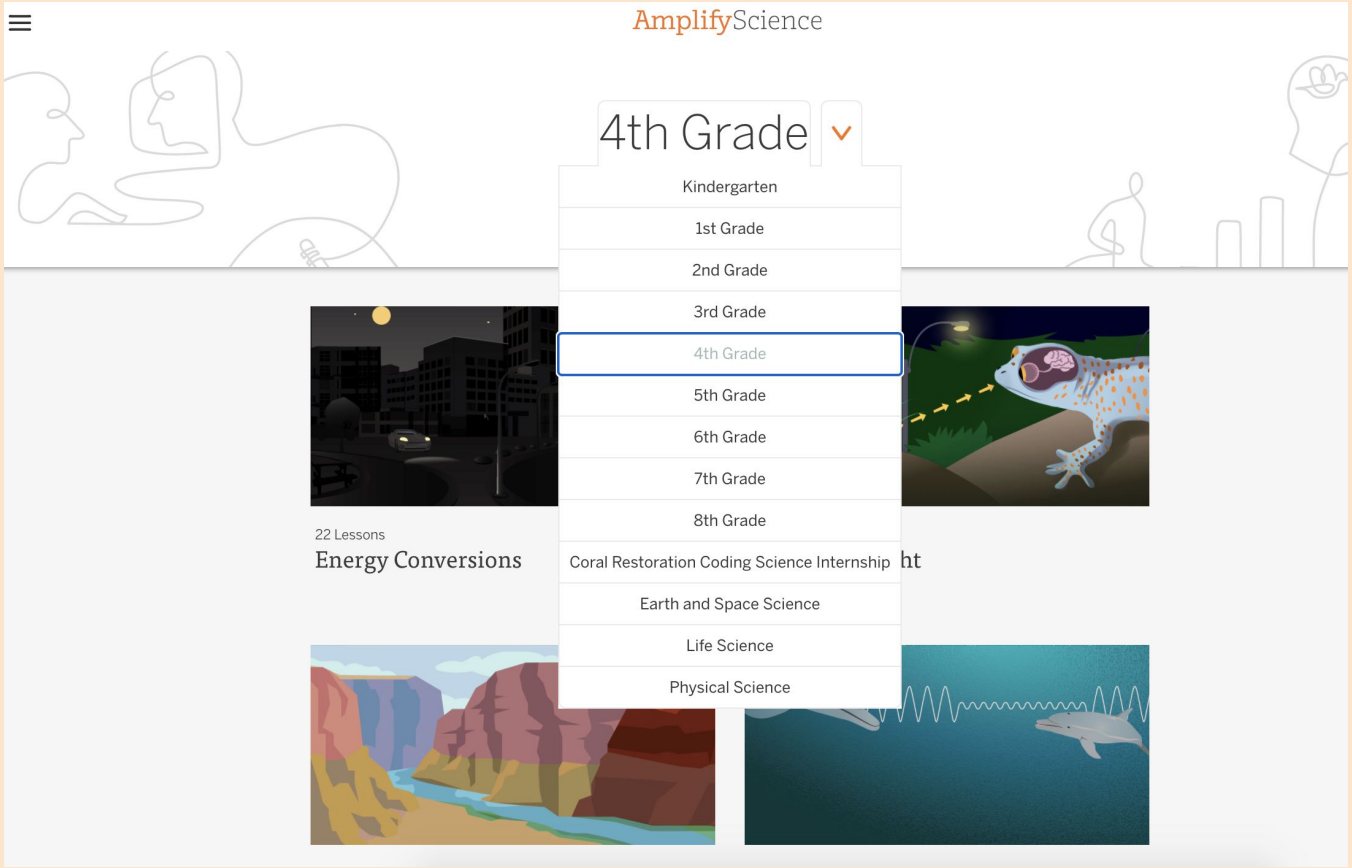
Go to https://amplify.com/amplify-science-nyc-doe-review/



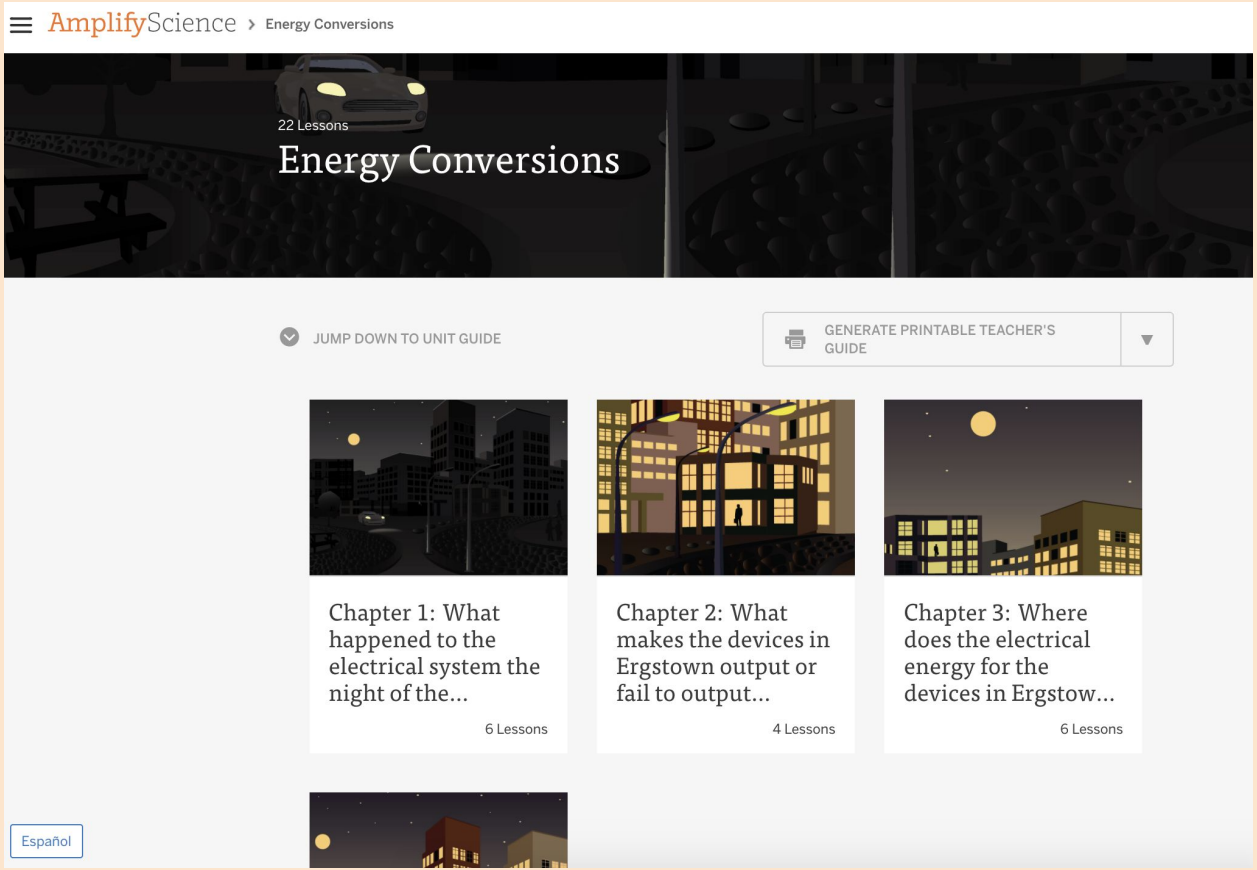


Click your grade band & then follow prompts

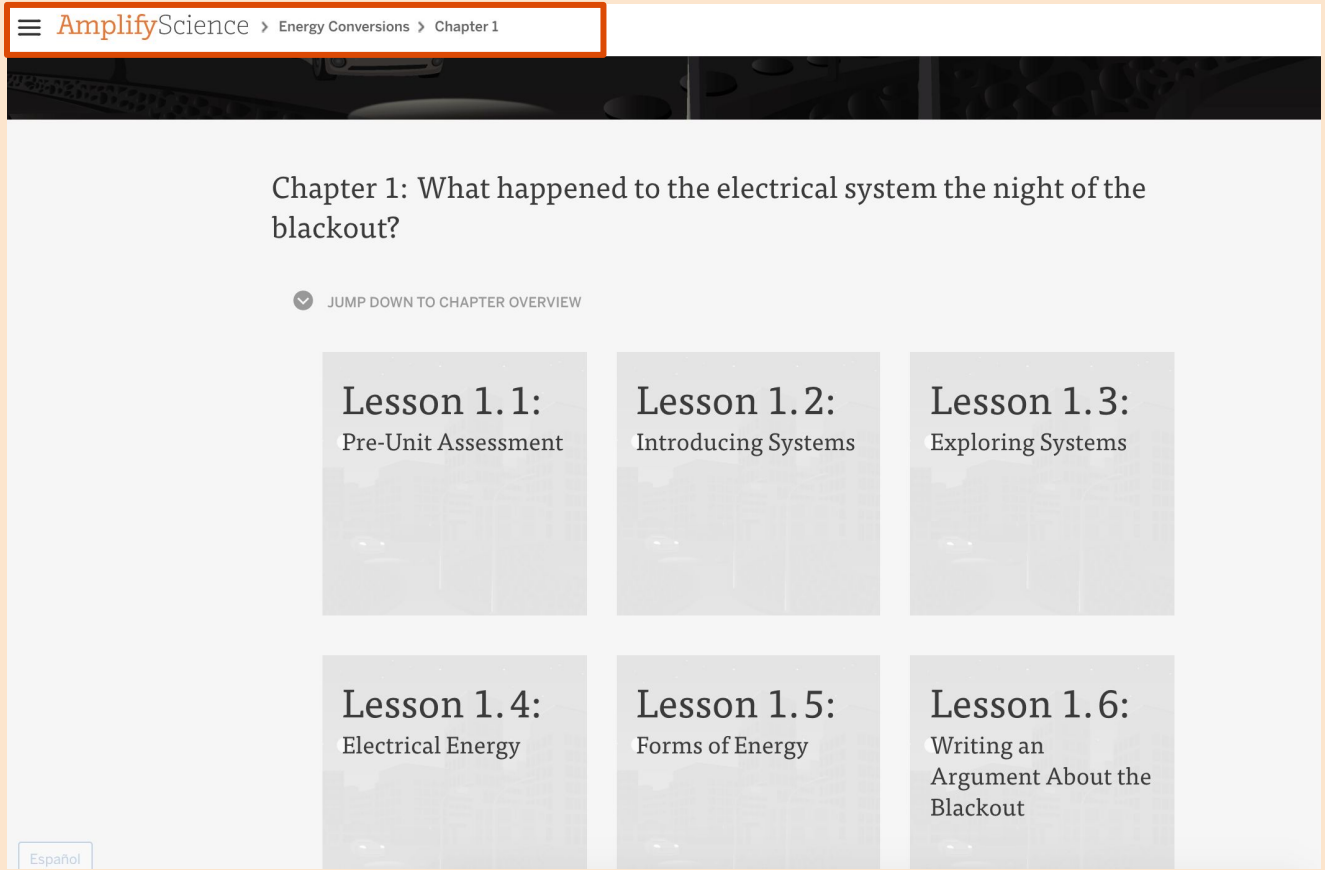
Hidden slide: Navigating to your grade level



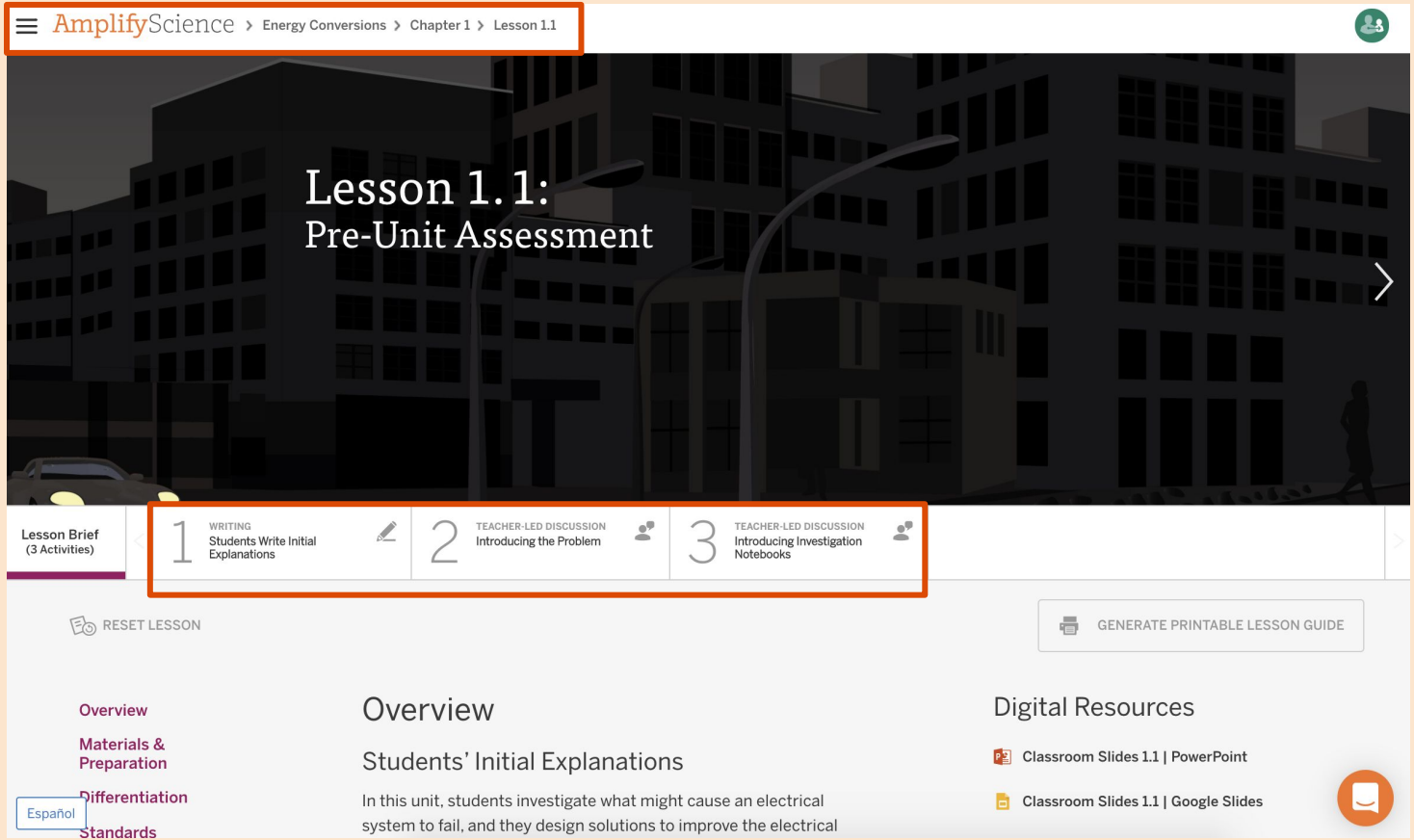
Hidden slide: Unit landing page



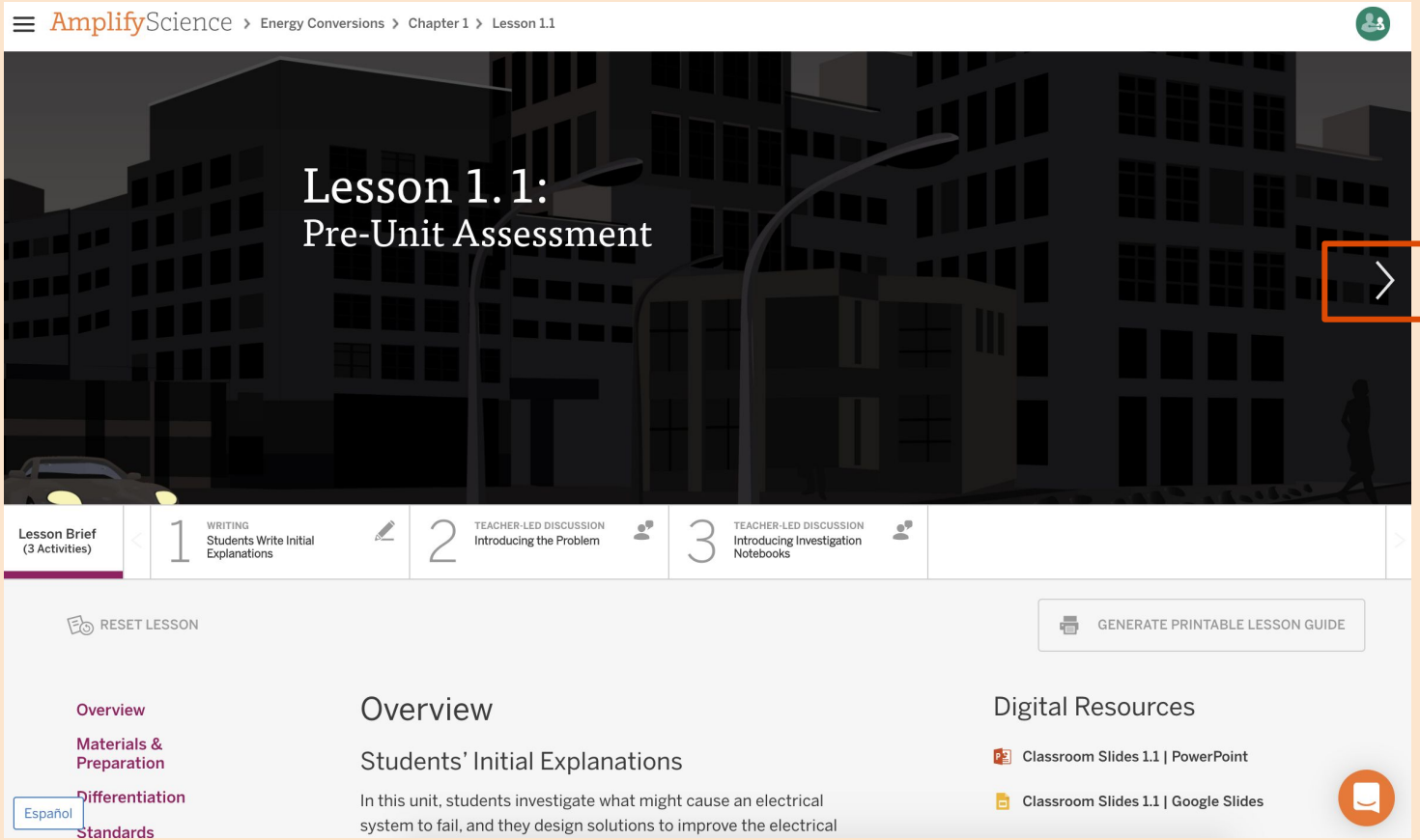
Hidden slide: Chapter 1 landing page



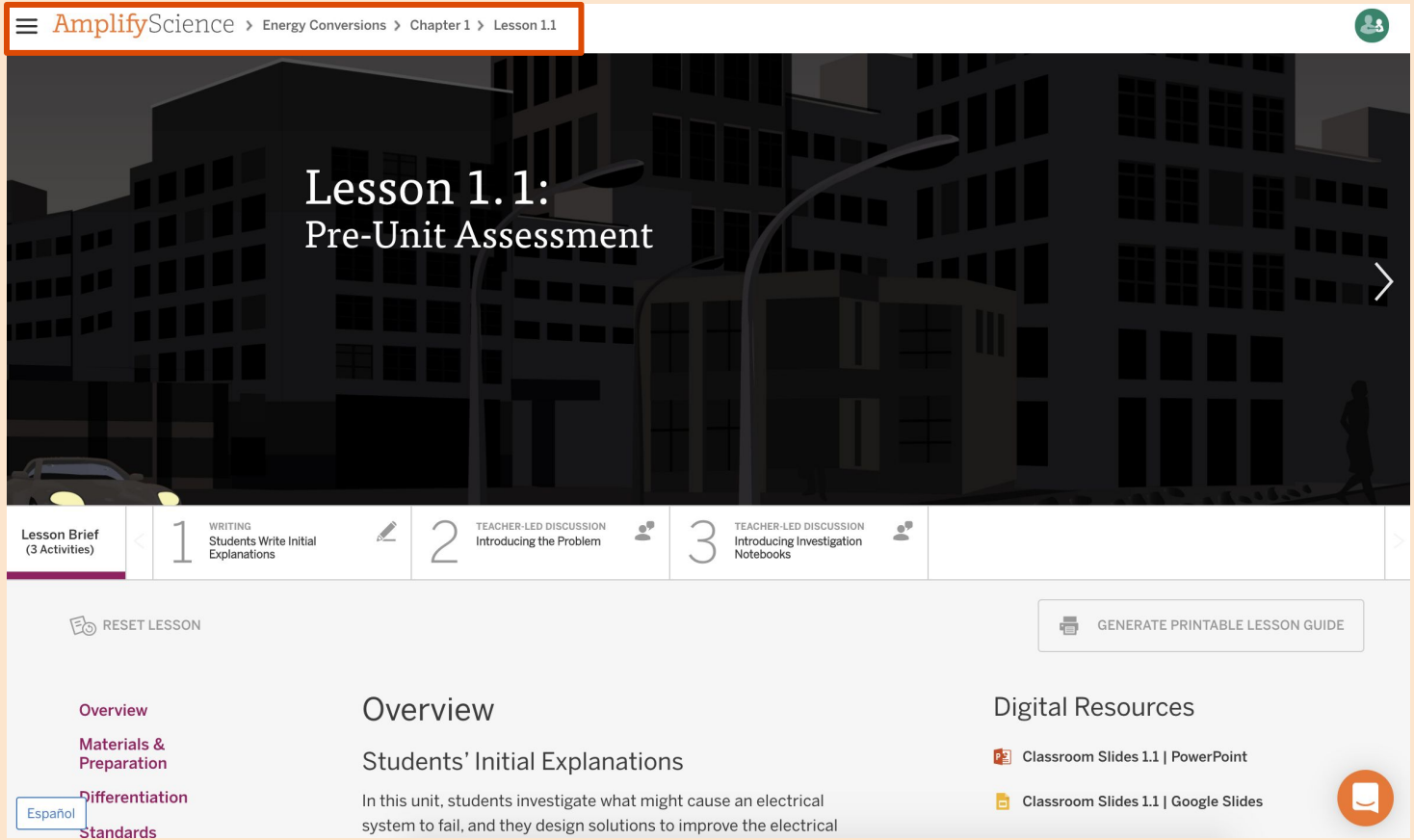
Hidden slide: Lesson 1.1 Lesson Brief



Hidden slide: Using arrows to navigate between lessons in order



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



Unit structure

Unit

↓

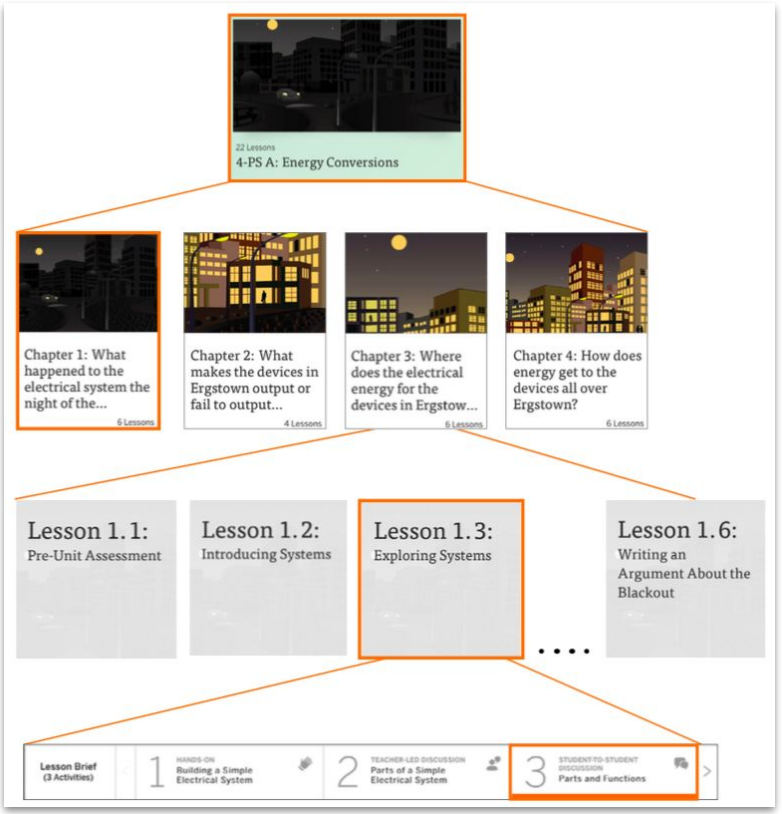
Chapter

↓

Lesson

↓

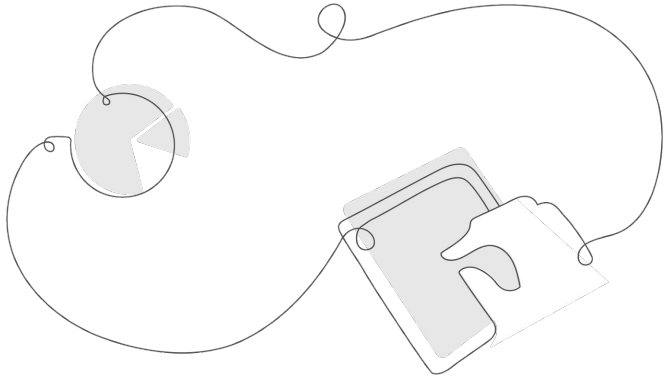
Activity



Practice

Spend a few minutes practicing navigating between lessons.

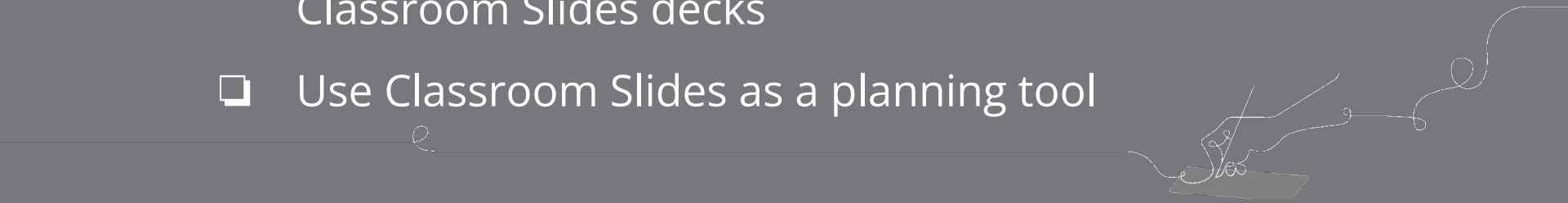
1. Try using the breadcrumb trail at the top of the Teacher's Guide to navigate to a specific lesson.
2. Try using the arrows to flip between lessons in order.



Classroom Slides

In this section you will learn to:

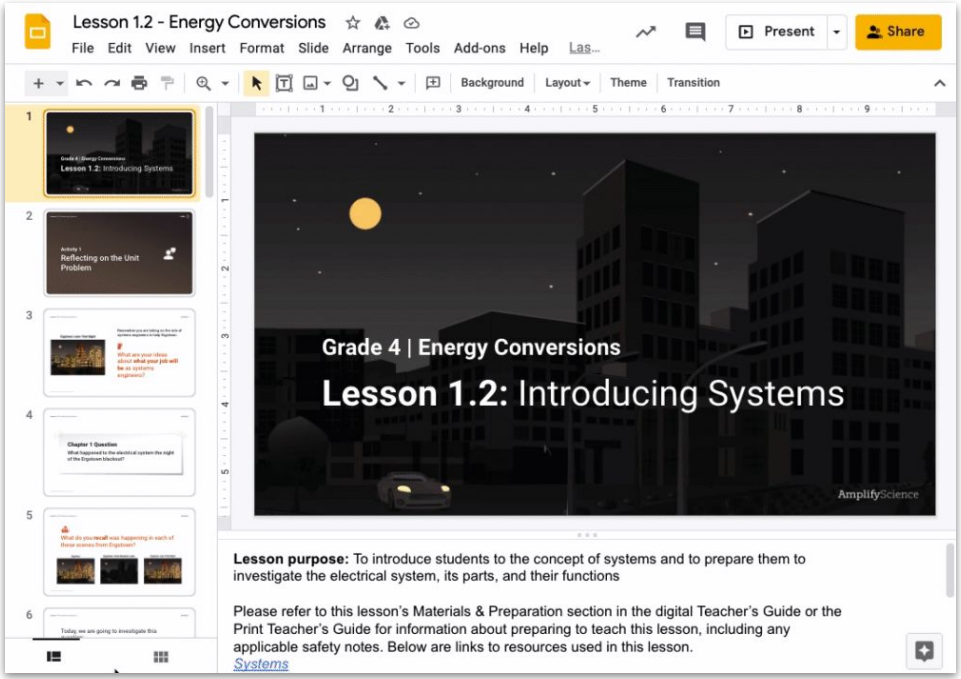
- ❏ Access and edit a lesson's Classroom Slides deck
- ❏ Interpret formatting and icons in Classroom Slides decks
- ❏ Use Classroom Slides as a planning tool



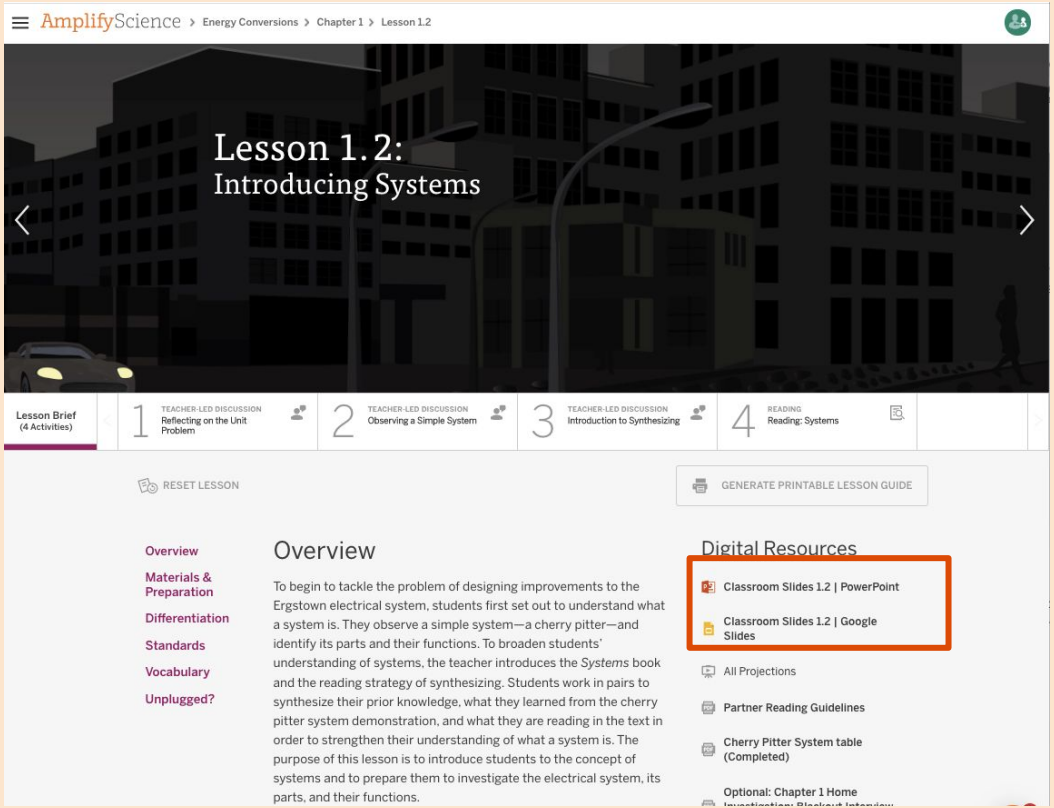
Classroom Slides

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.



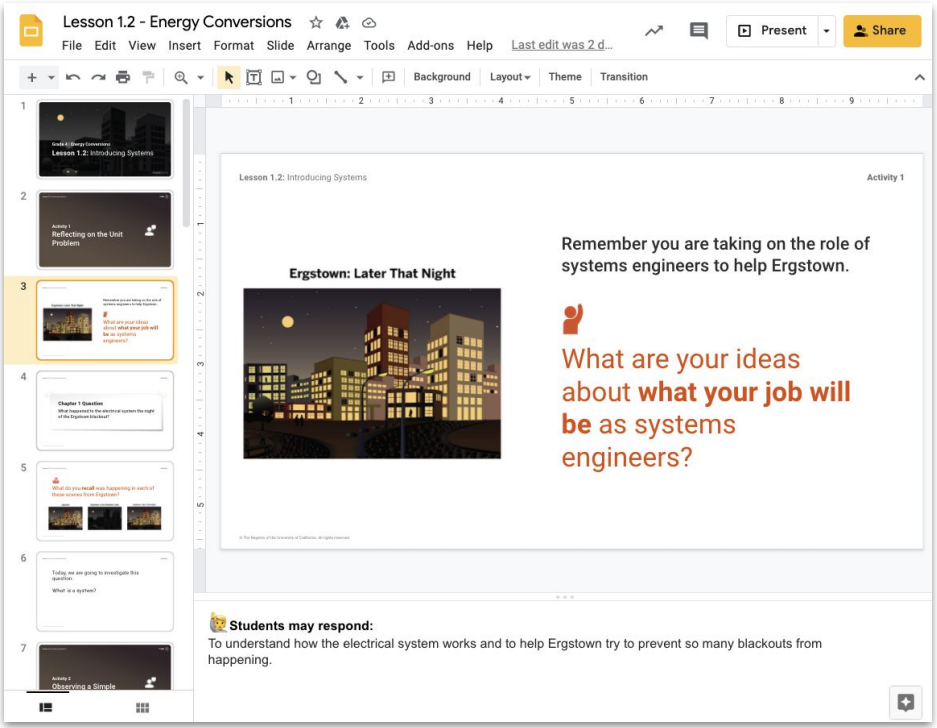
Hidden slide: locating Classroom Slides



Explore the slide deck

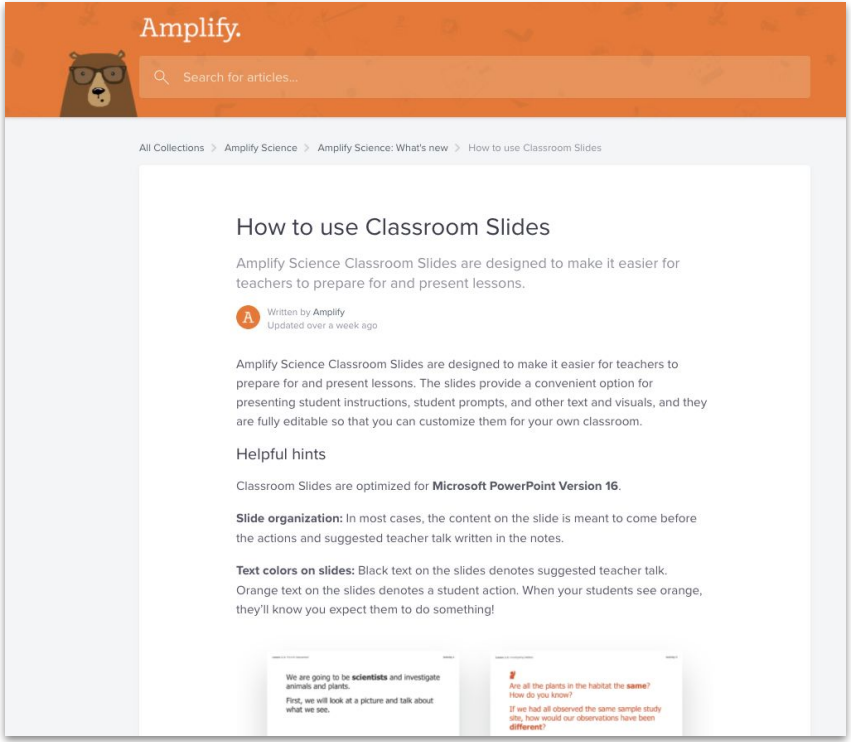
Briefly CLICK through the slide deck to familiarize yourself with the format.

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



Teaching with Classroom Slides

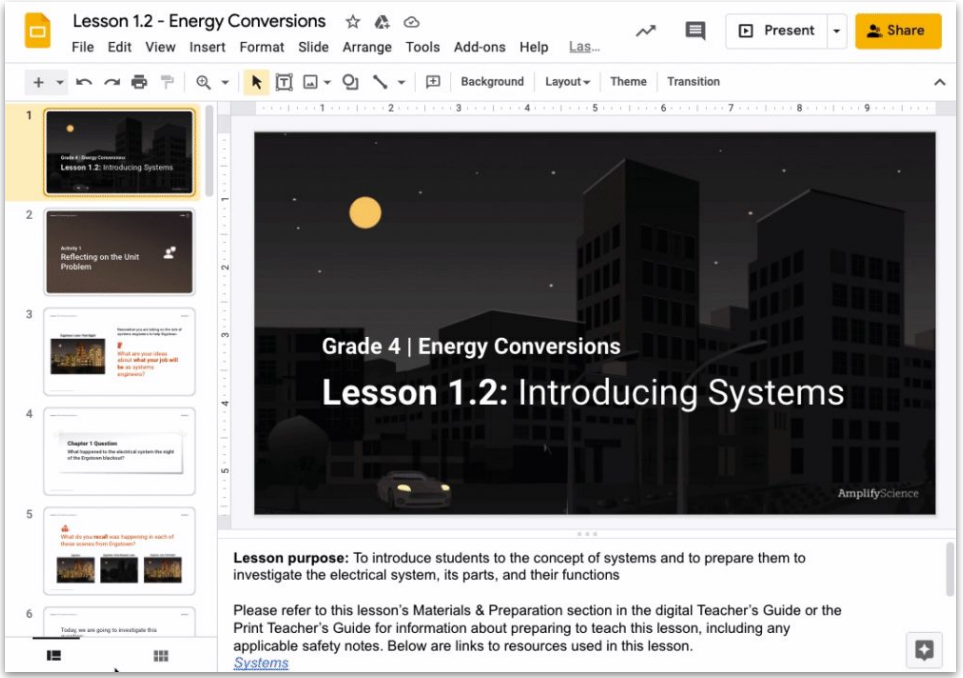
This detailed guide on the Amplify Science Help Site includes tips for teaching with Classroom Slides and information about the different symbols and activity types you'll find in the slide deck.



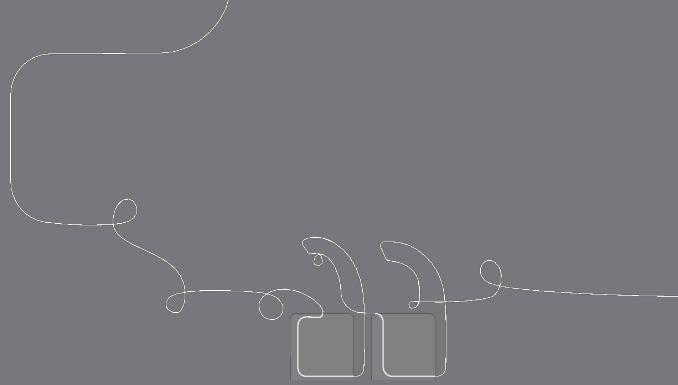
Using Classroom Slides as a planning tool

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.



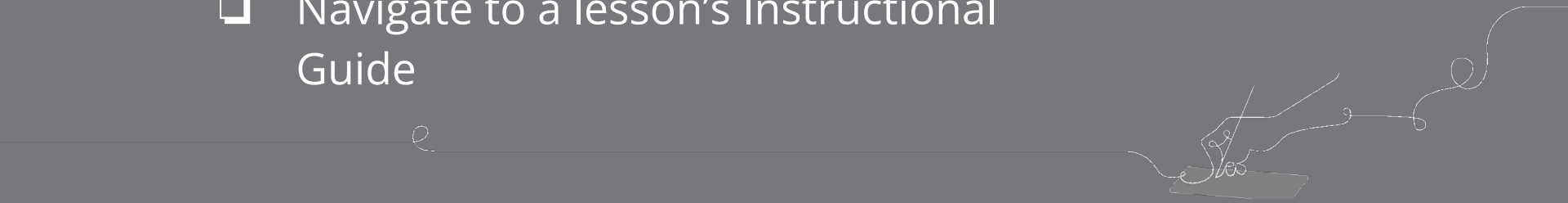
Questions?



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

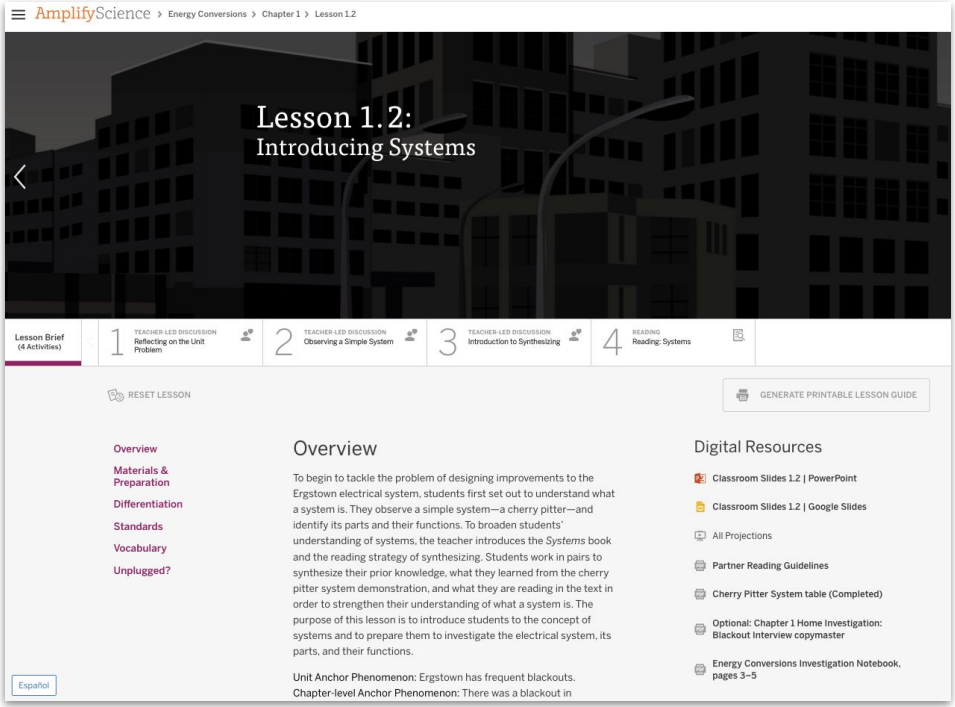


Pgs. 9-11

Preparing to teach a lesson

Lesson Brief

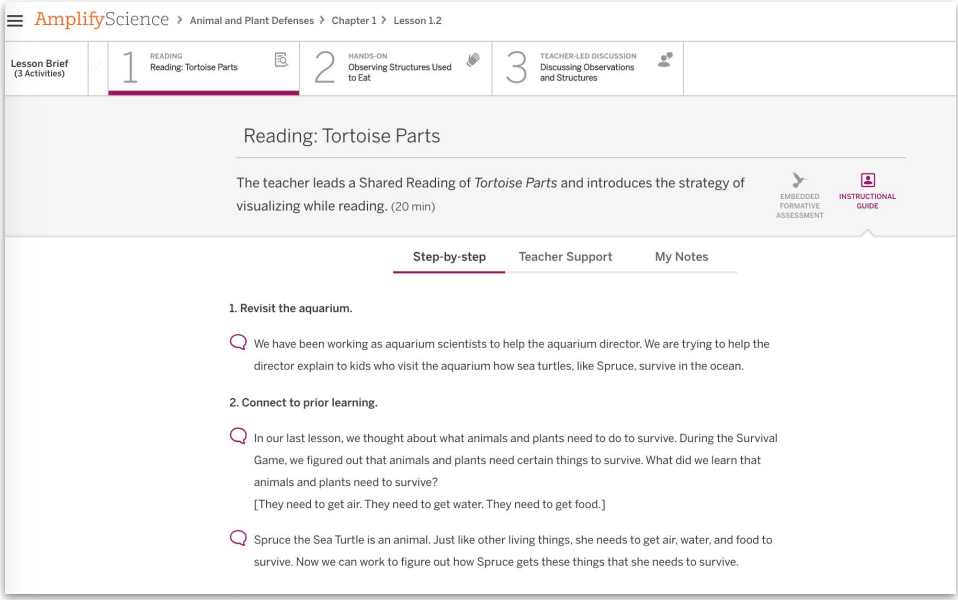
Use the Lesson Brief for information about lesson timing, materials and preparation, and differentiation suggestions.



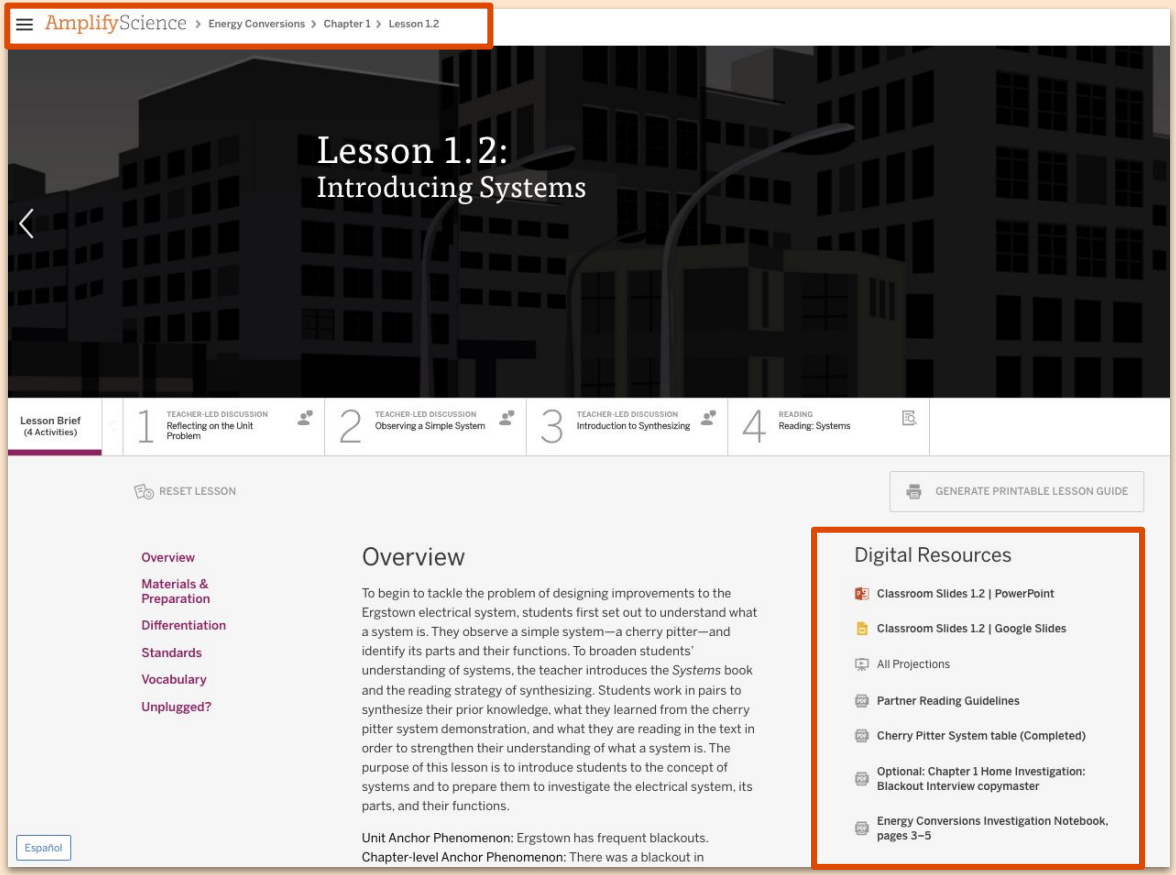
Preparing to teach a lesson

Instructional Guide

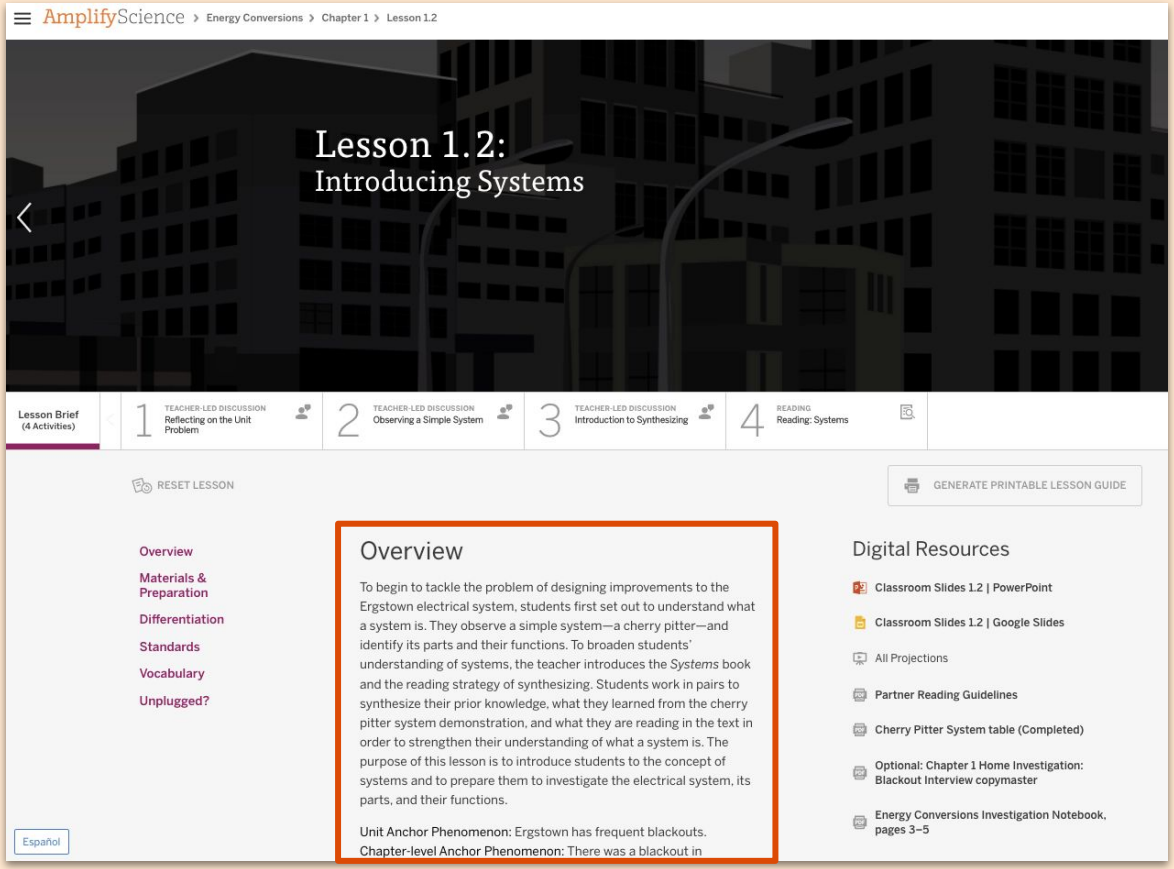
The Instructional Guide includes the steps for teaching each activity, as well as Teacher Support notes and, when applicable, Possible Responses.



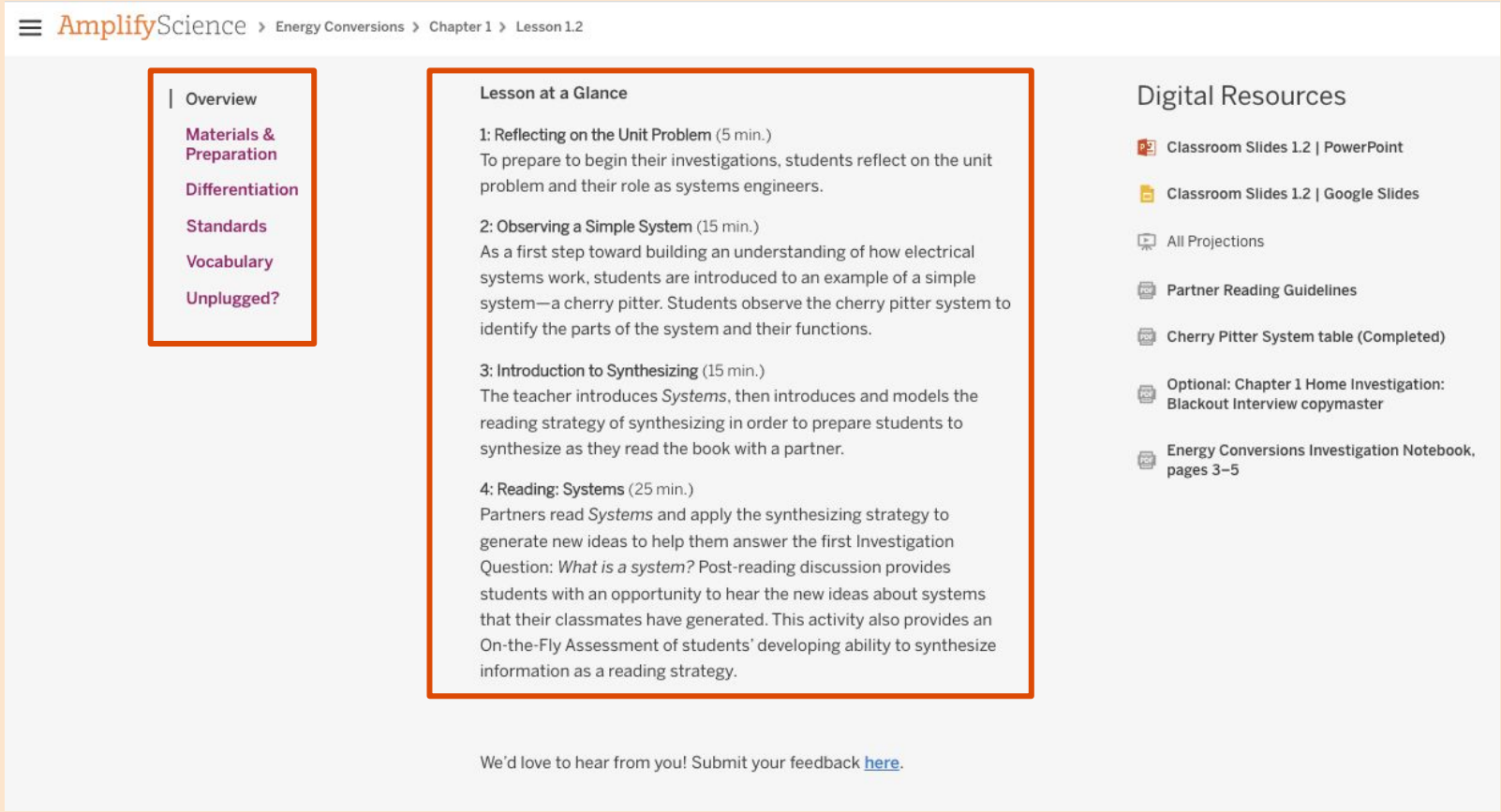
Hidden slide: Review breadcrumb trail and digital resources



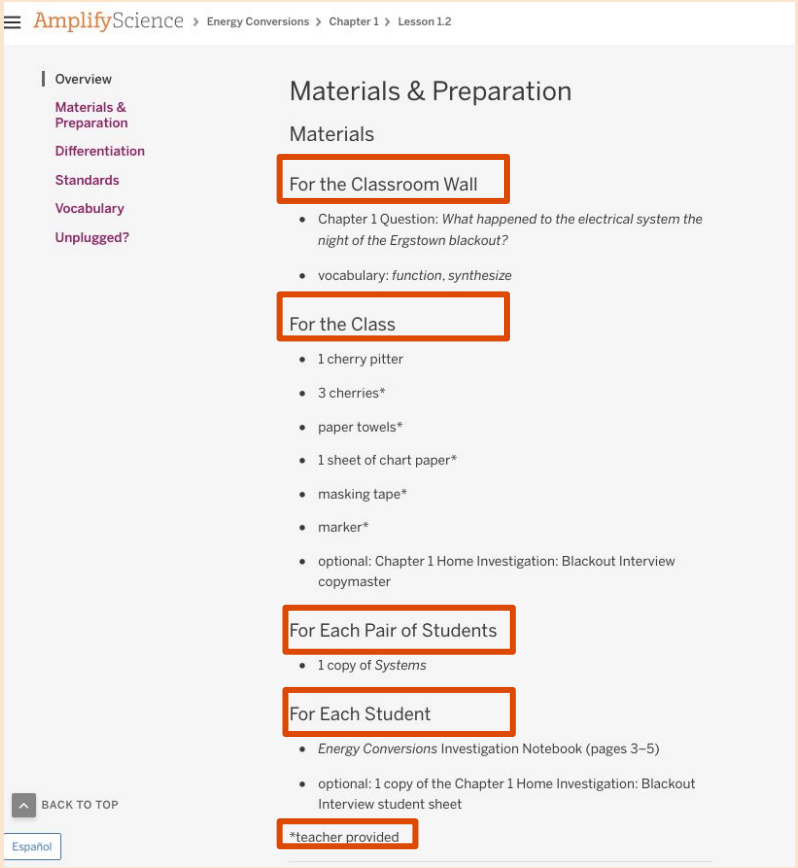
Hidden slide: Overview

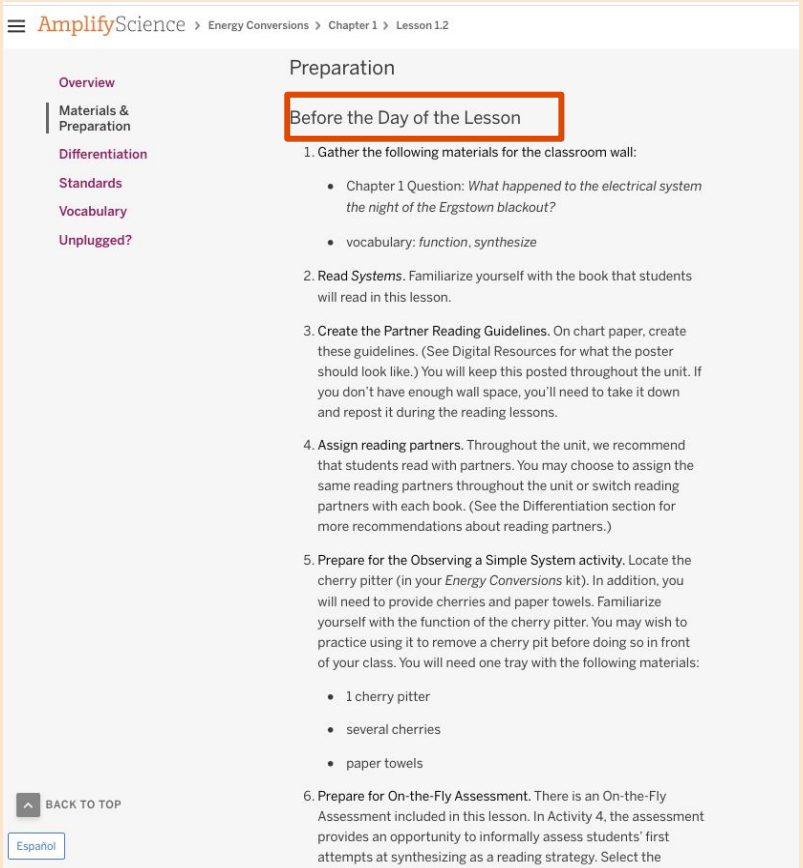


Hidden slide: Lesson at a Glance and floating menu

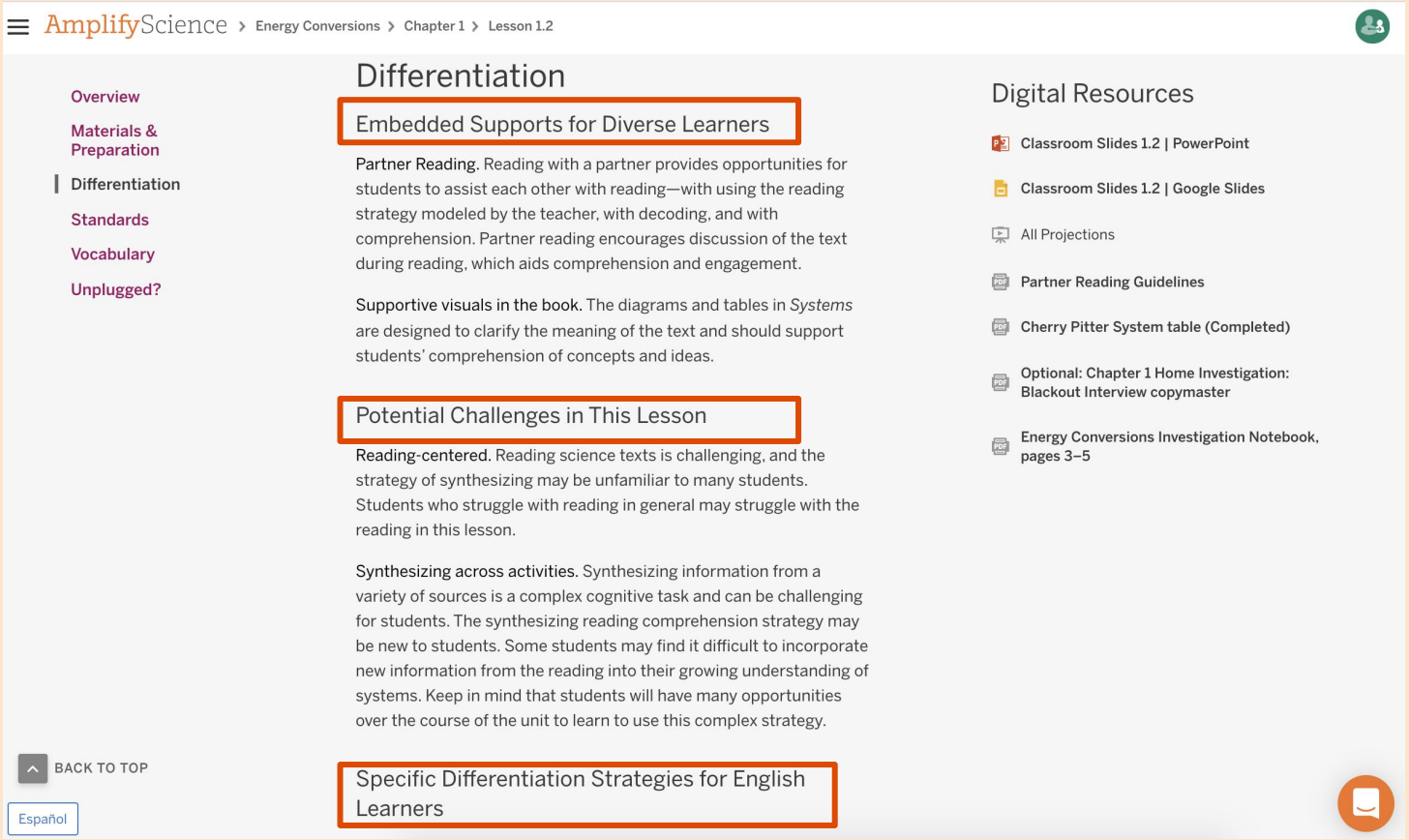


Hidden slide: Materials and preparation





Hidden slide: Differentiation



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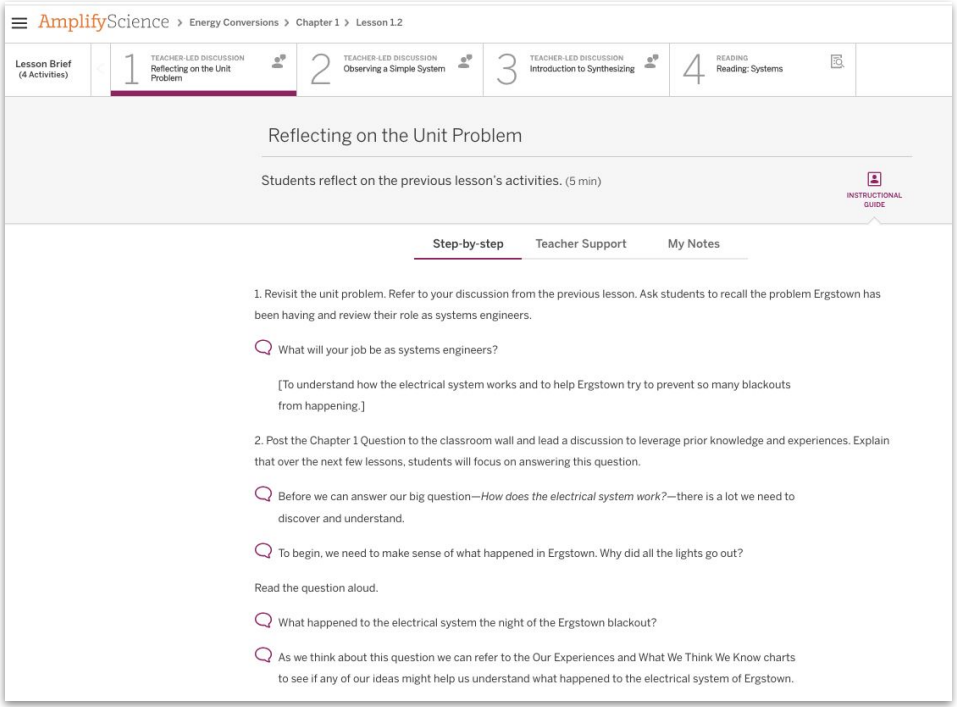
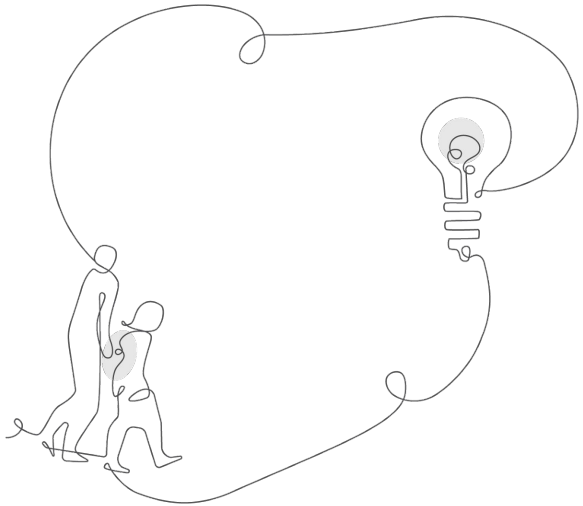


Preparing to teach a lesson

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

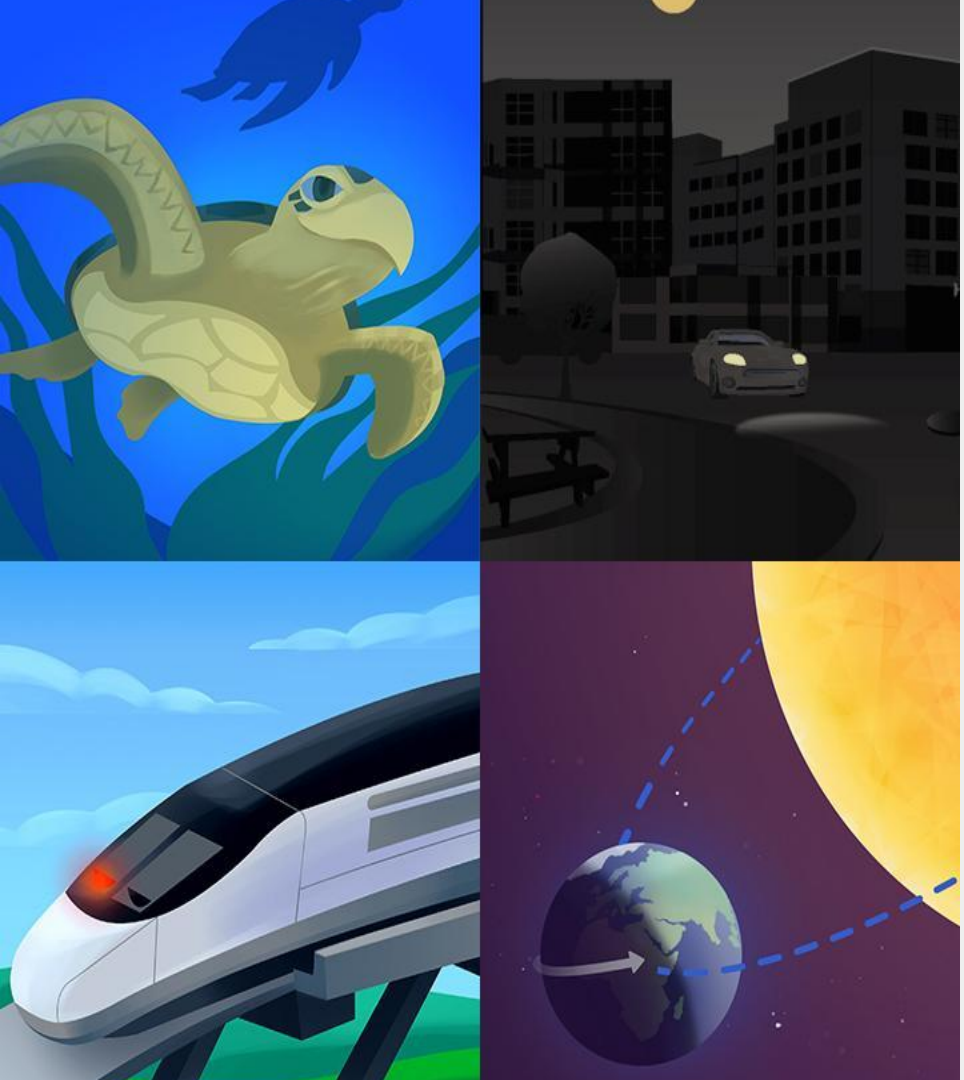
3 = Mild

4 = Comfortable

5 = Extremely Comfortable

Break

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

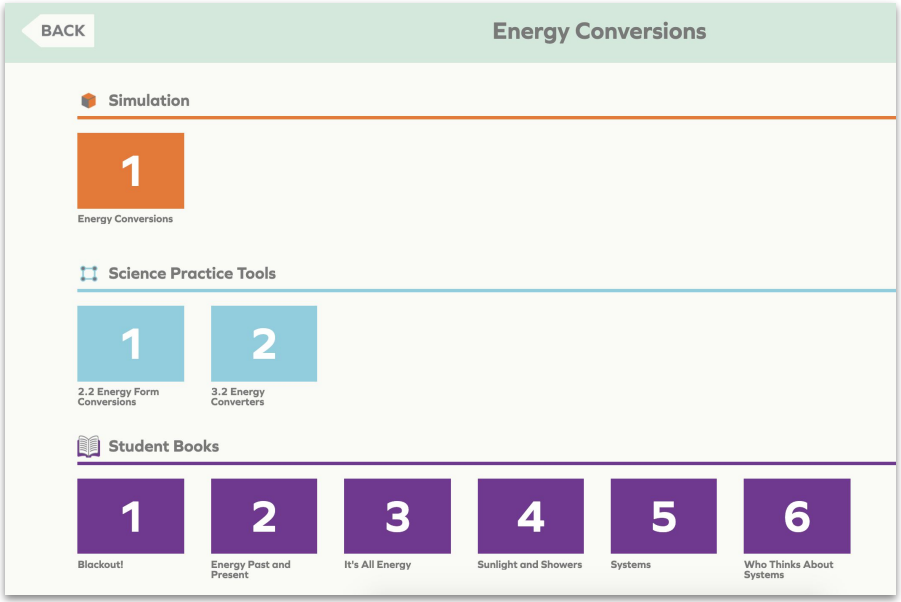


Plan for part 1

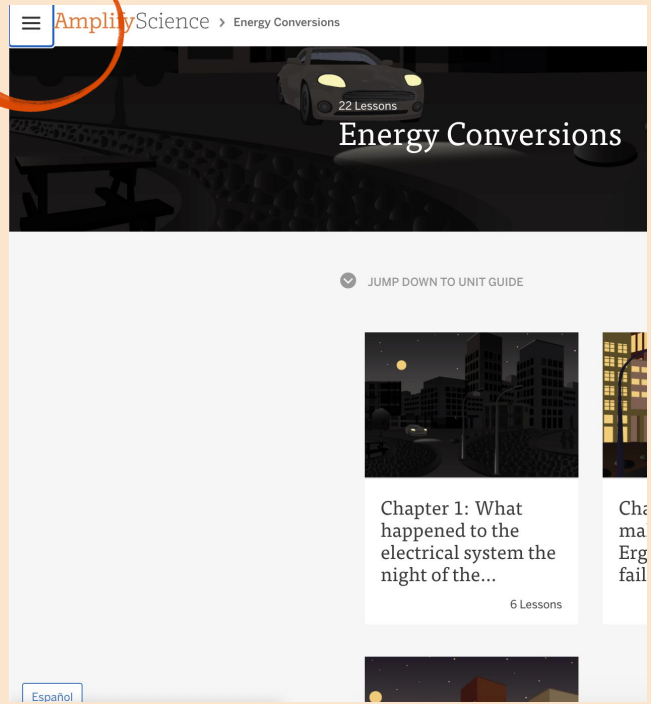
- **Framing the day**
  - Welcome
- **The Amplify Approach**
  - Multimodal learning
- **Model Lesson Experience**
  - SEL suggestions
  - Lesson reflection
- **Closing**
  - Final Questions & Feedback

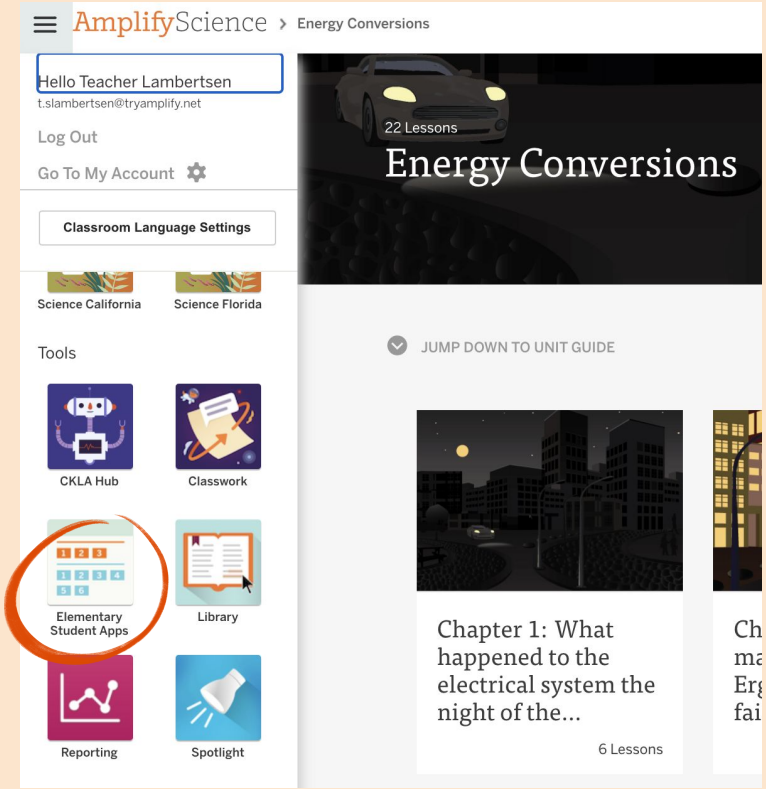
Student apps page

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

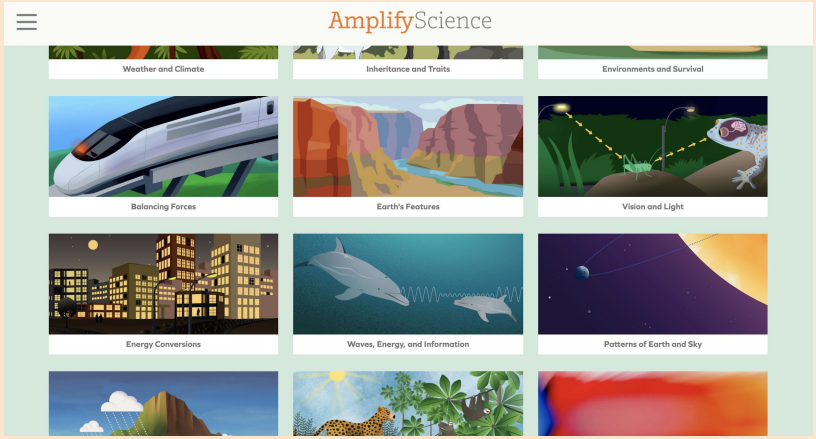


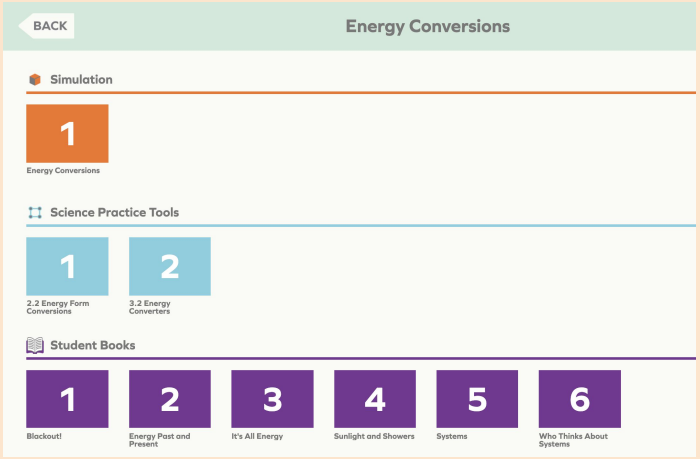
Hidden slide: Navigating to the Student Apps page

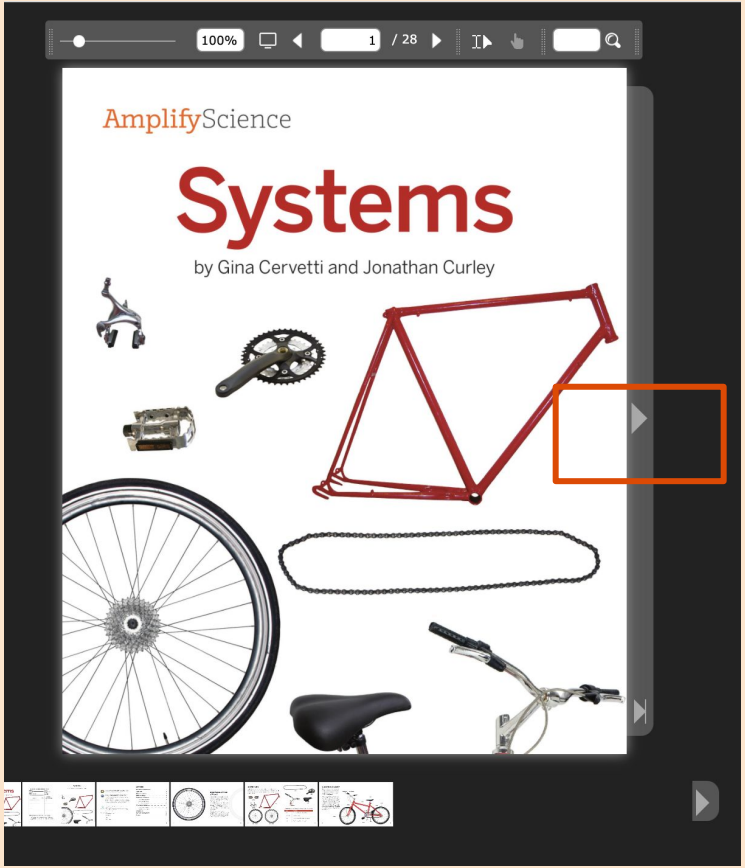




Hidden slide: Student Apps page and accessing the book





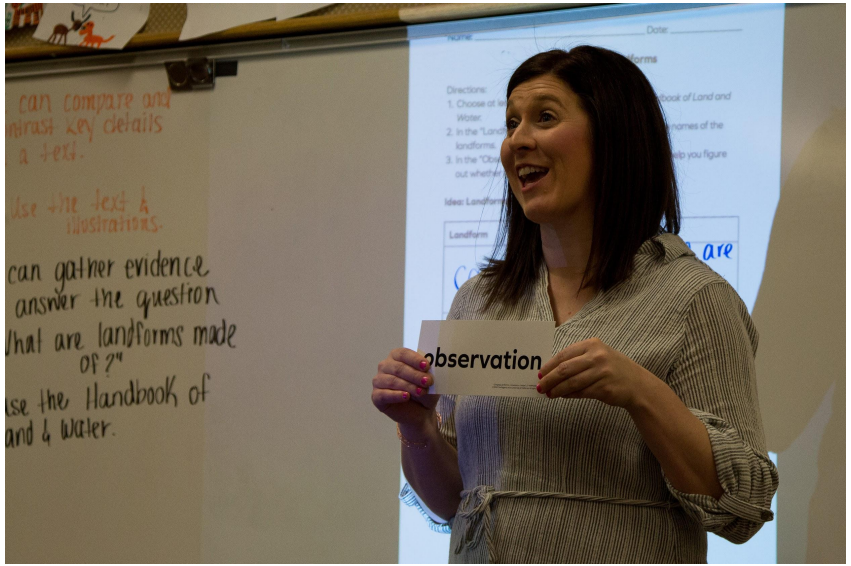


Model lesson

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

Reflecting on the Unit Problem

Ergstown: Later That Night

Remember you are taking on the role of systems engineers to help Ergstown.

What are your ideas about **what your job will be** as systems engineers?

Chapter 1 Question

What happened to the electrical system the night of the Ergstown blackout?

Energy Conversions Classroom Wall

Unit Question
How does the electrical system work?

Chapter 1 Question
What happened to the electrical system the night of the Ergstown blackout?

Key Concepts

Vocabulary

Today, we are going to investigate this question:

What is a system?

Energy Conversions Classroom Wall

Unit Question
How does the electrical system work?

Chapter 1 Question
What happened to the electrical system the night of the Ergstown blackout?

Investigation Question
What is a system?

Key Concepts

Vocabulary

Activity 2

Observing a Simple System

What are some **systems** you have heard of before?

We will use this **mystery system** as an example for you to begin understanding what a system is.

What do you observe about how the mystery system works?

What do you think the mystery system might be used for?

Observe the system carefully to see how it works.

_____ System

Part				
Function				

System function: _____

Vocabulary

function

what something can do

Energy Conversions Classroom Wall

Unit Question
How does the electrical system work?

Chapter 1 Question
What happened to the electrical system the night of the Ergstown blackout?

Investigation Question
What is a system?

Key Concepts

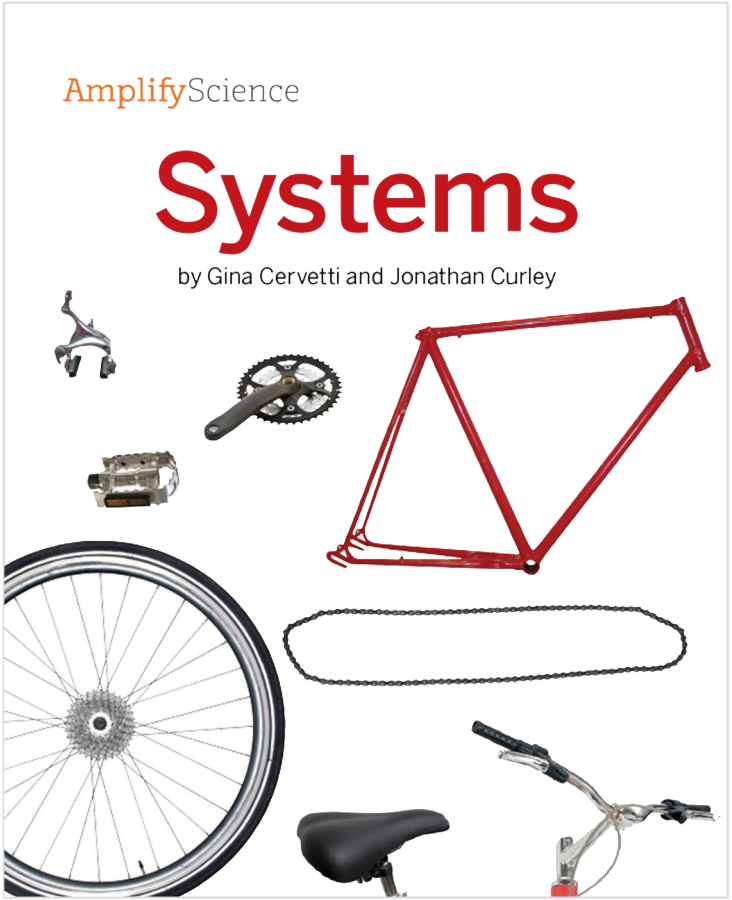
Vocabulary

function

15 MIN

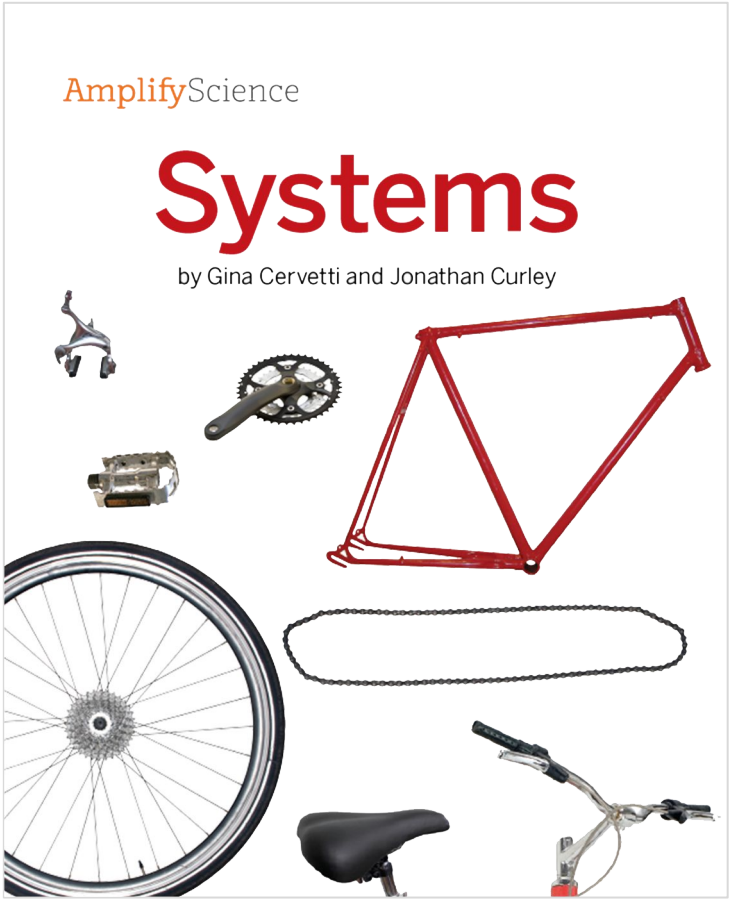
Activity 3

Introduction to Synthesizing



Reading this book will help us answer the Investigation Question:

What is a system?



As we read, we will practice **making connections** between what we read and what we already know.

What Makes a Wheel a Wheel?

This is a wheel from a bicycle. You have probably seen a bicycle wheel before, but have you ever really thought about why a wheel is the way it is?

It's the **structure** of a wheel—the way the wheel is shaped and built—that makes it a wheel. This wheel is round and has long, thin spokes crossing in the middle. The spokes keep the wheel from bending out of shape.

Why is the structure of the wheel important? Its structure has to do with its **function**—what it does or what it is used for. The function of this wheel is to roll so that the bicycle can move forward.

Turn to page 5.

Who would like to read this page aloud?

Bicycle Parts

A wheel is just one part of a bicycle. A bicycle is made of lots of parts. One bike can have more than 100 different parts. Each part of a bicycle has a function and a structure that helps the part perform its function well.

pedals

brakes

frame

front wheel

back wheel

6

Turn to page 6.

Who would like to read this page aloud?

Bicycle Parts

A wheel is just one part of a bicycle. A bicycle is made of lots of parts. One bike can have more than 100 different parts. Each part of a bicycle has a function and a structure that helps the part perform its function well.

pedals

brakes

frame

front wheel

back wheel

chain

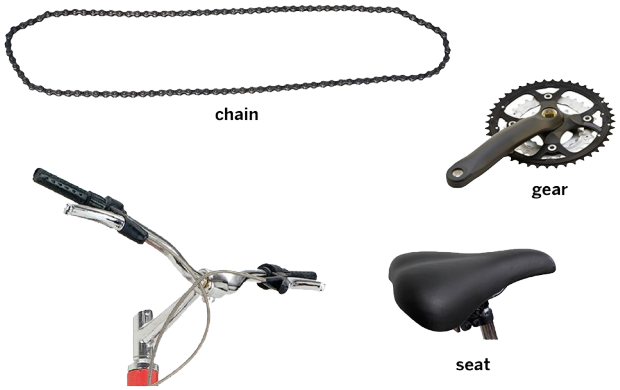
gear

handlebars

seat

This **table** lists some bicycle parts and the function of each part.

Part	Function
seat	holding up the person who is riding the bike
handlebars	steering the bike
frame	holding the other parts of the bike together
pedal	*What is the function of the pedal?*



This **table** lists some bicycle parts and the function of each part.

Part	Function
seat	holding up the person who is riding the bike
handlebars	steering the bike
frame	holding the other parts of the bike together
pedal	*What is the function of the pedal?*

7

This **table** provides more information about the bicycle.

It lists bicycle **parts** and the **function** of each part.

A Bicycle Is a System

Of course, bike parts don't do much good unless they are all put together to make a bicycle. You can't ride just a wheel! A bicycle with all its parts connected is a **system**.

A system is a group of parts that work together. When the pedals on a bicycle move, they turn the gear. When the gear turns, it moves the chain. The moving chain makes the back wheel turn—and that pushes the bicycle forward. The handlebars are connected to the frame. The handlebars, frame, and front wheel work together for steering. All the parts of a bicycle have to work together for the bicycle to work.

8

Turn to page 8.

Who would like to **read** the first paragraph?

A Bicycle Is a System

Of course, bike parts don't do much good unless they are all put together to make a bicycle. You can't ride just a wheel! A bicycle with all its parts connected is a **system**.

A system is a group of parts that work together. When the pedals on a bicycle move, they turn the gear. When the gear turns, it moves the chain. The moving chain makes the back wheel turn—and that pushes the bicycle forward. The handlebars are connected to the frame. The handlebars, frame, and front wheel work together for steering. All the parts of a bicycle have to work together for the bicycle to work.

8

A bicycle is a **system** and a cherry pitter is a **system**.

Vocabulary

synthesize

to put together multiple pieces of information in order to understand something

Energy Conversions Classroom Wall

Unit Question
How does the electrical system work?

Chapter 1 Question
What happened to the electrical system the night of the Ergstown blackout?

Investigation Question
What is a system?

Key Concepts

Vocabulary

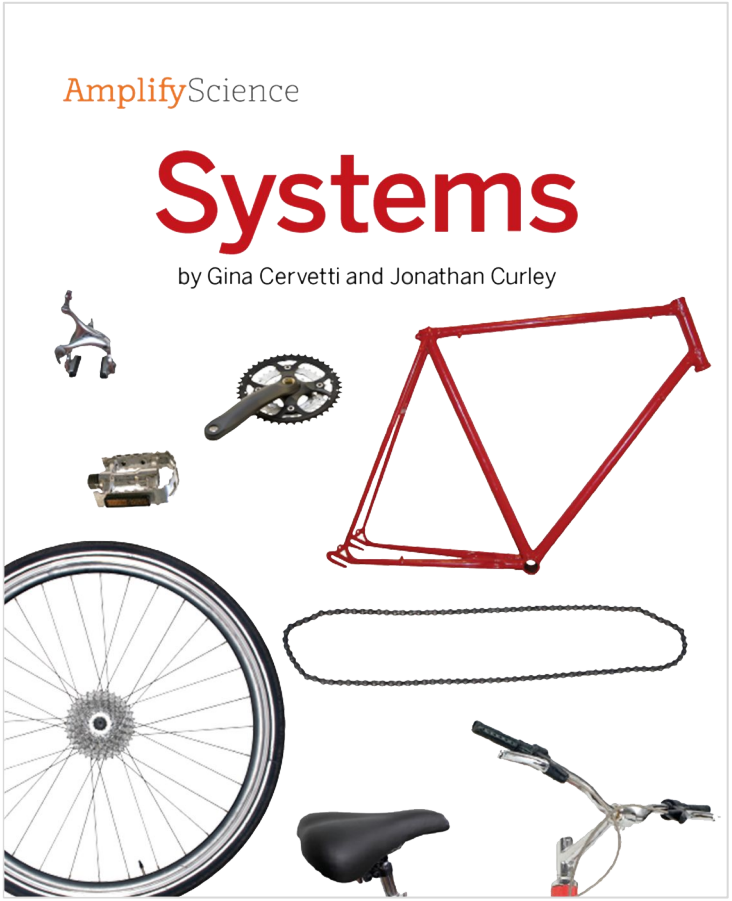
function

synthesize

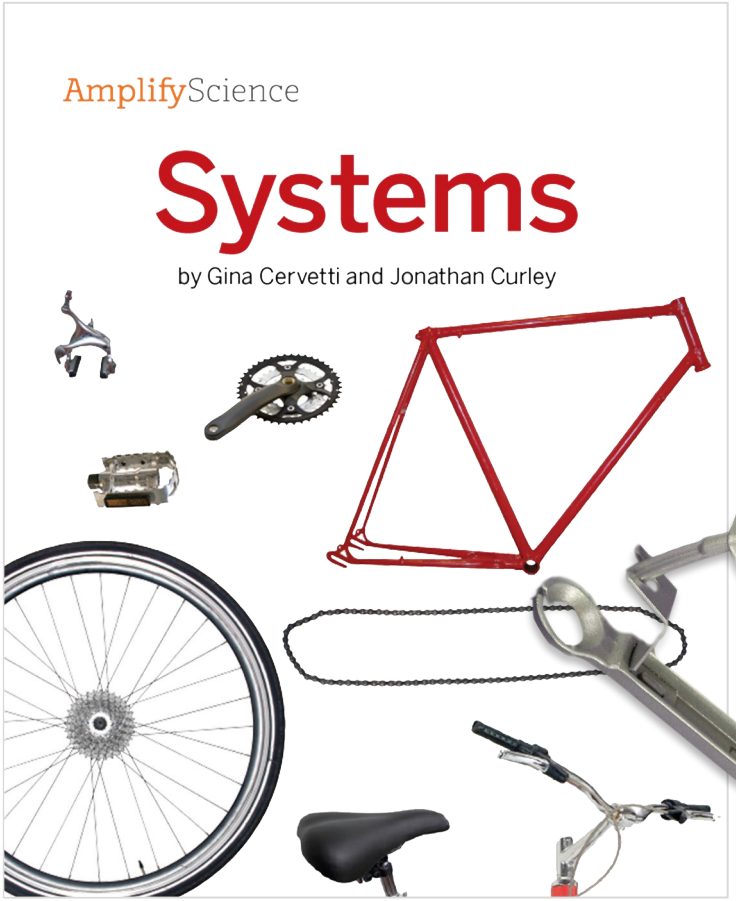
25 MIN

Activity 4

Reading: Systems



As you read, **make connections** and discuss your new ideas about systems with your partners.



You have just observed a cherry pitter system and read about systems.

What new understandings do you have about systems?

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.

Teaching	Learning
	

Social Emotional Learning

5 Core Competencies

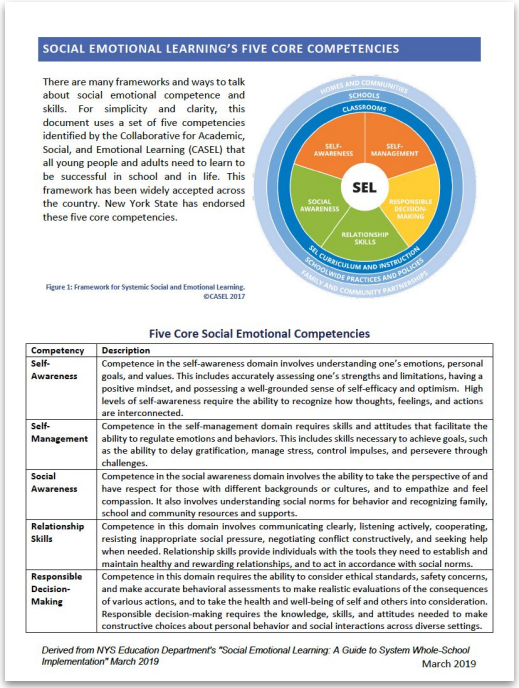
- Identified by the Collaborative for Academic, Social, & Emotional Learning (CASEL)
- Widely accepted across the country & adopted by NYS

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

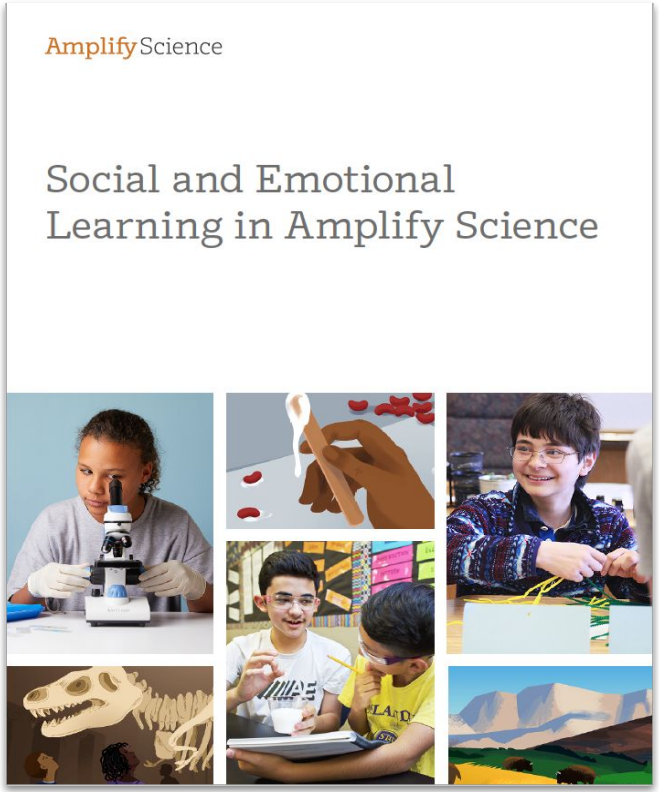
March 2019

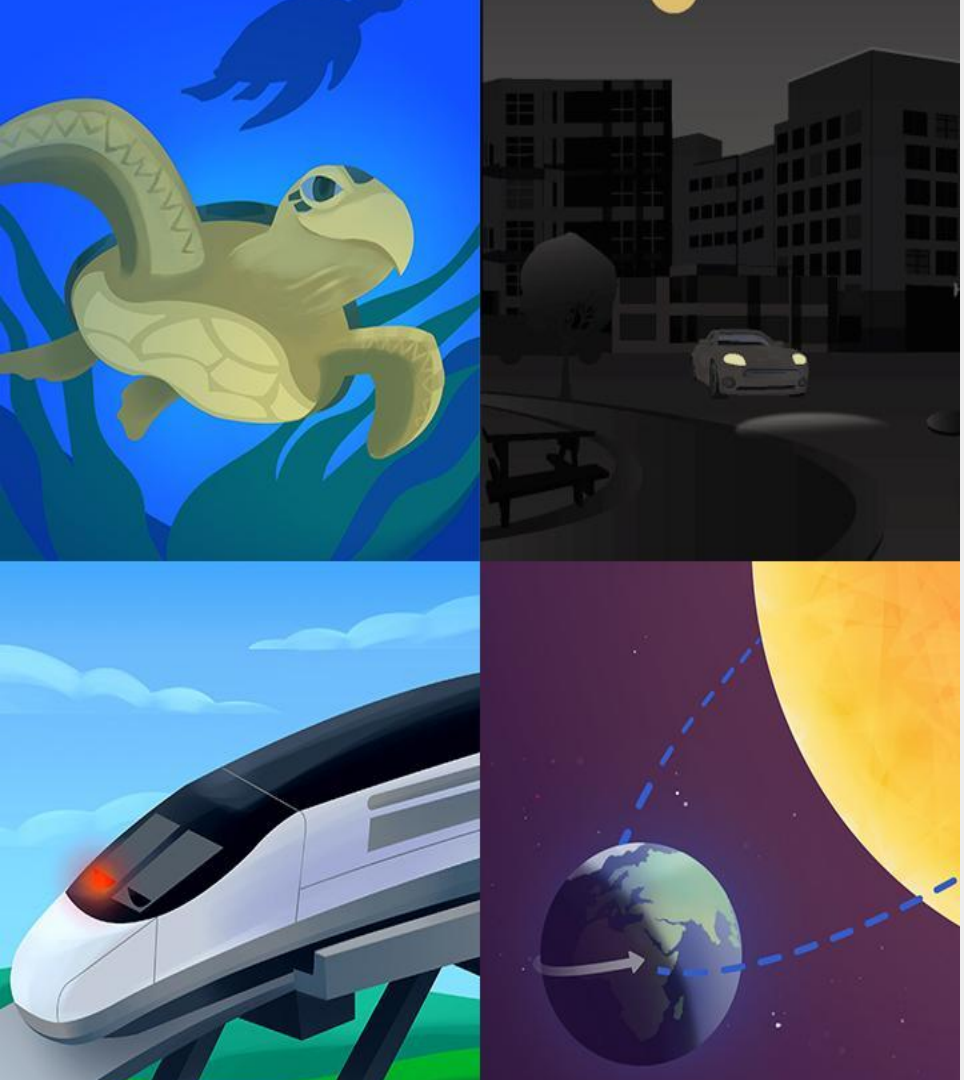
Social & Emotional Learning in Amplify Science

Pgs. 13-17

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:

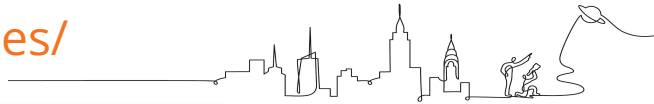
Head: something you'll keep in mind

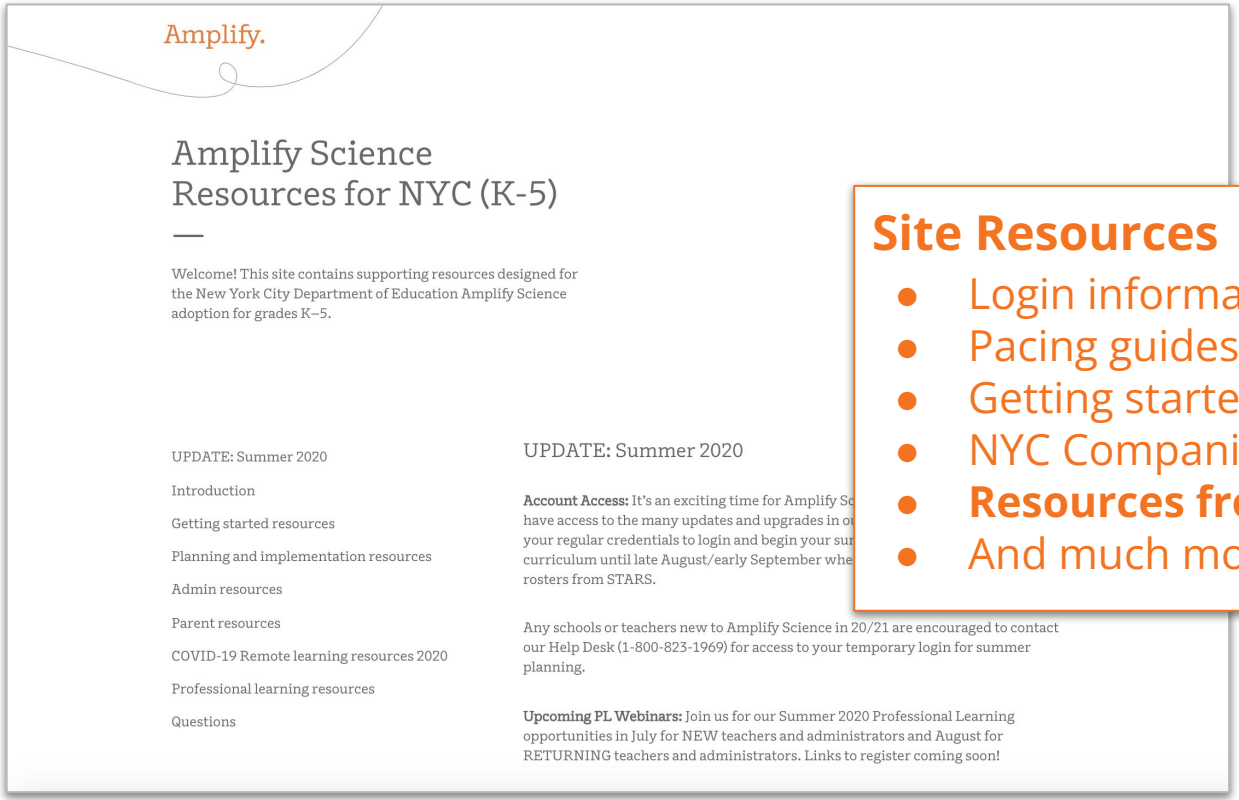
Heart: something you're feeling

Feet: something you're planning to do

New York City Resources Site

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





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

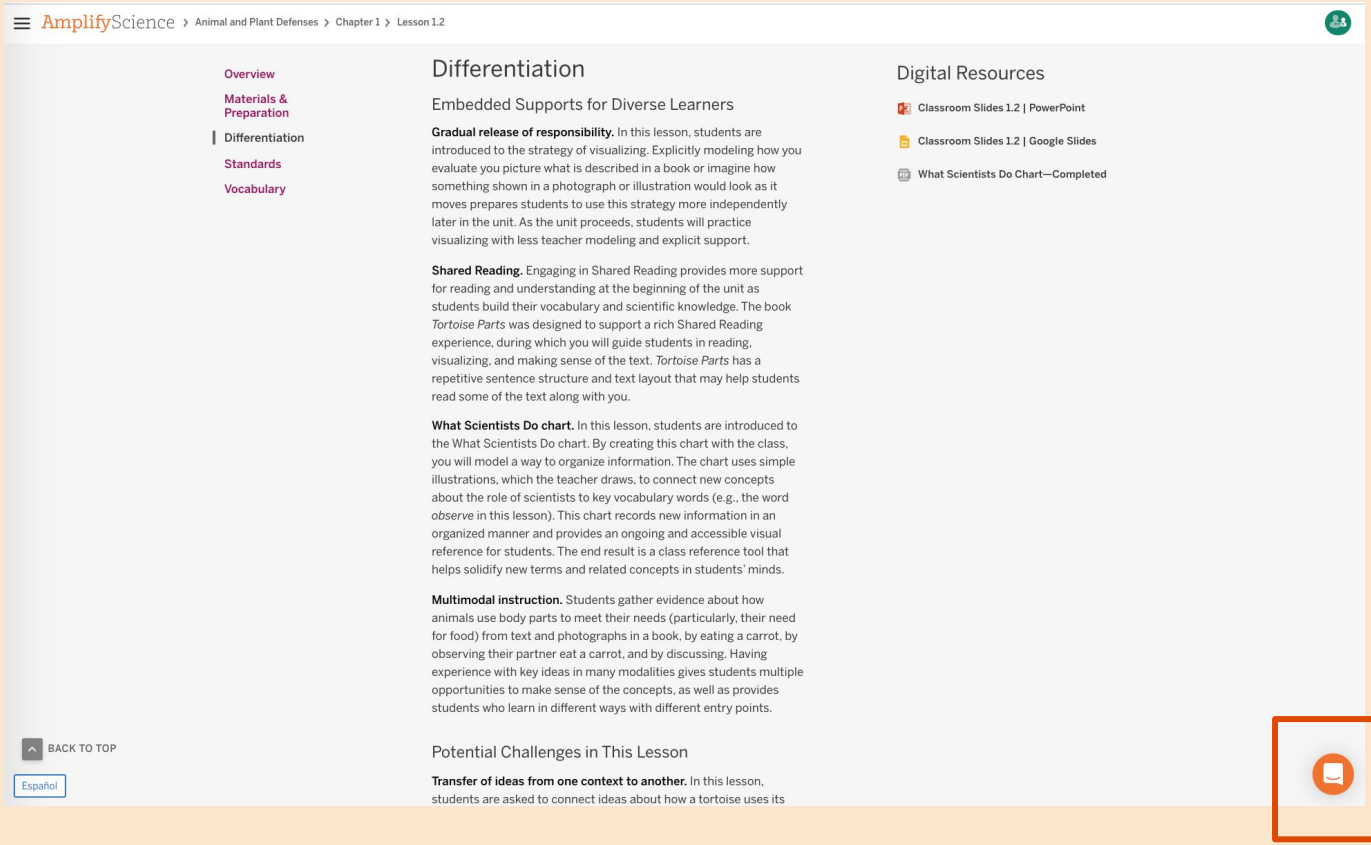
Seek information specific to enrollment and rosters, technical support, materials and kits, and teaching support, weekdays 7AM-10PM EST and weekends 10AM-6PM EST.

help@amplify.com

800-823-1969

Amplify Chat

Hidden slide: Amplify Chat

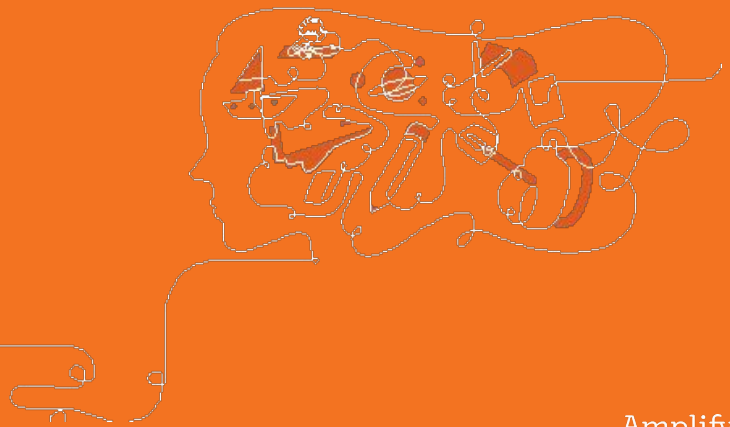



Final Questions?

Please provide us feedback!

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

Presenter name:



Amplify.

Thank you & be well!