

# Amplify Science

## New Teachers: Part 2

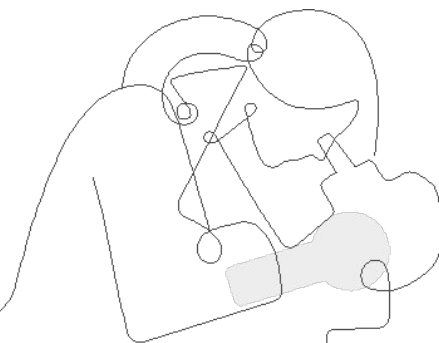
### Unit 1 - Guided Planning

#### Grade 4: Energy Conversions

School/District Name: LAUSD

Date:

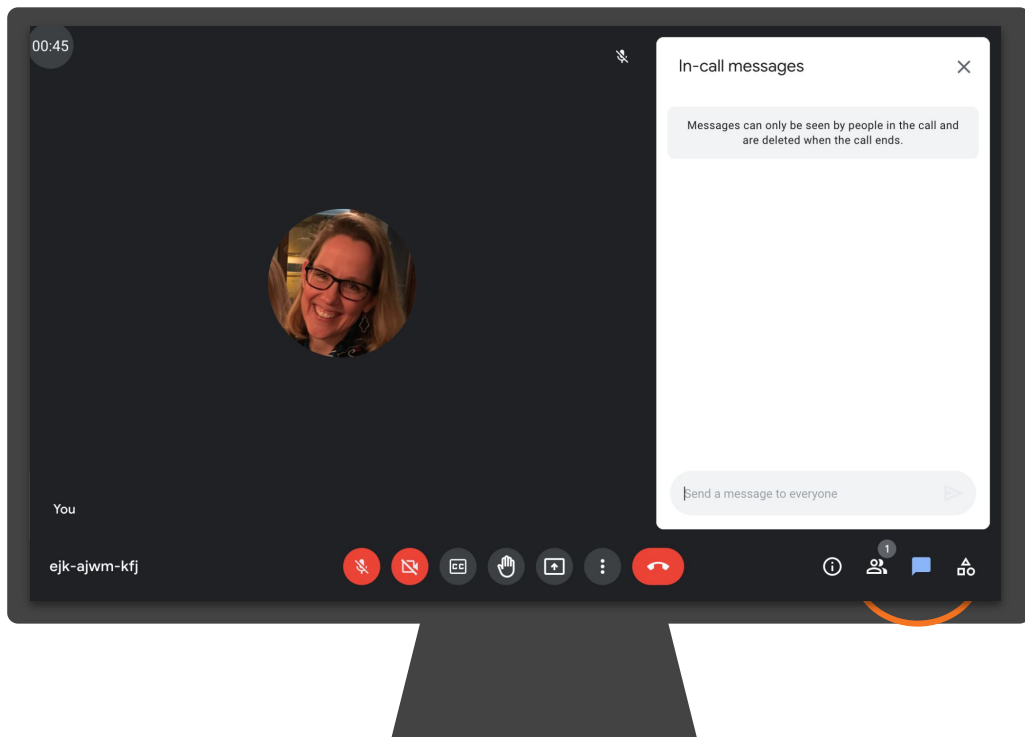
Presented by:



# Ice Breaker!

## Who do we have in the room today?

- **Question:** Now that we have gone through Part 1, which aspects of Amplify Science do you feel more comfortable with or have a greater understanding of?



# Amplify's Purpose Statement

Dear teachers,

You do a job that is nearly impossible and **utterly essential**.

**We are in your corner** – extending your reach, saving you time, and enhancing your understanding of each student.

**Thank you for working with us** to craft rigorous and riveting learning experiences for your classroom.

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


Sincerely,  
Amplify

# Norms: Establishing a culture of learners

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




# Last year's Amplify apps.



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[Classic View](#)


## LOS ANGELES UNIFIED SCHOOL DISTRICT



### [mCLASS Student](#)

**Content Area:** ELA  
**Grade Level:** ES  
**Content Type:** Assessment  
**Integration Type:** App (Left Navigation)  
**Purchase Type:** District  
[Getting Started Guide](#)  
**Other Info:** App to be installed for all course members.


**Vendor Support Desk:**  
 P: 800.823.1969  
 E: [help@amplify.com](mailto:help@amplify.com)  
 S: [amplify.com/support/](https://amplify.com/support/)  
**Textbook Title(s):**  
 NA



### [mCLASS Assessment](#)

**Content Area:** ELA  
**Grade Level:** ES  
**Content Type:** Assessment  
**Integration Type:** App (Left Navigation)  
**Purchase Type:** District  
[Getting Started Guide](#)  
**Other Info:** App to be installed for Course Admins only


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**Textbook Title(s):**  
 NA



### [mCLASS Portal](#)


**Content Area:** ELA  
**Grade Level:** ES  
**Content Type:** Assessment  
**Integration Type:** App (Left Navigation)  
**Purchase Type:** District  
[Getting Started Guide](#)  
**Other Info:** App to be installed for Course Admins only

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**Textbook Title(s):**  
 NA




## LOS ANGELES UNIFIED


## COURSES




Course Options




### Materials




### Updates




### Gradebook




### Grade Setup




### Mastery




### Amplify Reading: Teacup




### Amplify Science: Elementary



### Amplify Science: Middle School




### mCLASS Portal



### mCLASS Student




# This year's app(s).



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LOS ANGELES UNIFIED SCHOOL DISTRICT

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COURSES GROUPS RESOURCES TOOLS

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## LMS App Center

The LMS App Center provides a catalog of District-approved digital content and learning tools (including digital components of adopted textbooks) that are available for classroom teachers and students to access within the learning management system, Schoology.


For information on District-approval policies and procedures, please visit: [udpp.lausd.net](https://udpp.lausd.net).

- To search the full list of digital learning tools, click "Submit".
- To search by Publisher Name or Textbook Title, type in a word associated to your adopted publisher, then click "Submit".
- To narrow your search with filters such as Content Area, Grade Level, or Content Type, select from the dropdown menu, then click "Submit".


To learn more about using the LMS App Center, please refer to the following [video overview](#).

Search Again

### All Amplify Products



### Grade Sync for MS Science




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**Publisher Name** Starts With 

**Content Area** All

**Grade Level** All

**Content Type** All

**Textbook Title** Starts With

Submit

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To learn more about using the LMS App Center, please refer to the following [video overview](#).

[Search Again](#)


### Amplify



**Content Area:** ELA  
**Grade Level:** ES  
**Content Type:** Supplemental  
**Integration Type:** App (Left Navigation)  
**Purchase Type:** District and School  
[Getting Started Guide](#)  
**Other Info:** School licenses required  
mCLASS  
CKLA  
Amplify Reading  
Amplify Science  
Fractions

**Vendor Support Desk:**  
P: 800.823.1969  
E: [help@amplify.com](mailto:help@amplify.com)  
S: [amplify.com/support/](mailto:amplify.com/support/)  
**Textbook Title(s):**  
NA

### Amplify Classwork



**Content Area:** ELA  
**Grade Level:** ES  
**Content Type:** Supplemental  
**Integration Type:** App (Left Navigation)  
**Purchase Type:** District and School  
[Getting Started Guide](#)  
**Other Info:** School licenses required. This app is for teacher use only (install for Course Admins only)

**Vendor Support Desk:**  
P: 800.823.1969  
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S: [amplify.com/support/](mailto:amplify.com/support/)  
**Textbook Title(s):**  
NA

 mCLASS Educators: To view or make changes to your account go to [mclass.amplify.com](https://mclass.amplify.com).

Hi, Terin

## Classes

Programs & Licenses

Account Settings

Help Center 



[CKLA Hub](#)



[CKLA Resource Site](#)



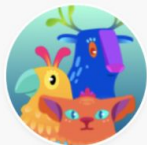
[mCLASS Assessment](#)



[mCLASS Reporting](#)



[Reading 6-8](#)



[Reading K-5](#)



[Science](#)



[Vocabulary](#)



## Amplify. on Schoology

2021-2022



# Schoology

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



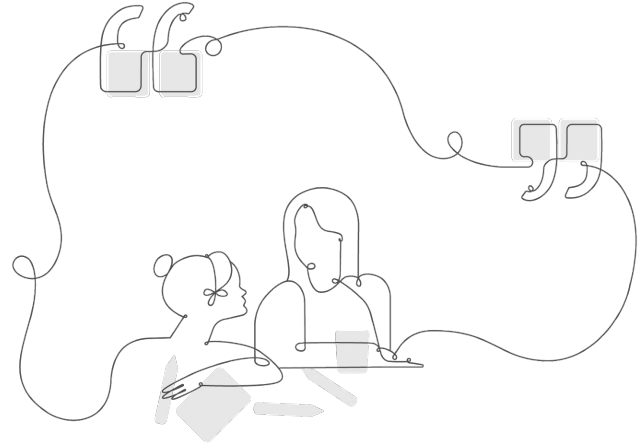
# Upcoming LAUSD Office Hours

**Last working Monday of the month**

**Next Office Hour:**

**January 31, 2022**

- Monday, (4-5pm)



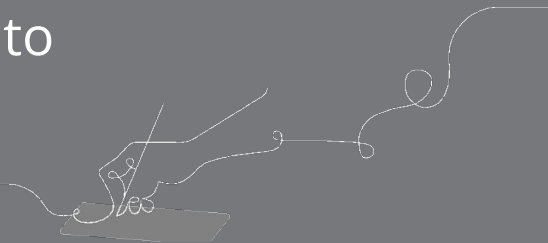
**<https://meet.google.com/uwc-uuaz-qdc?authuser=0>**

## Part 2: Guided Planning

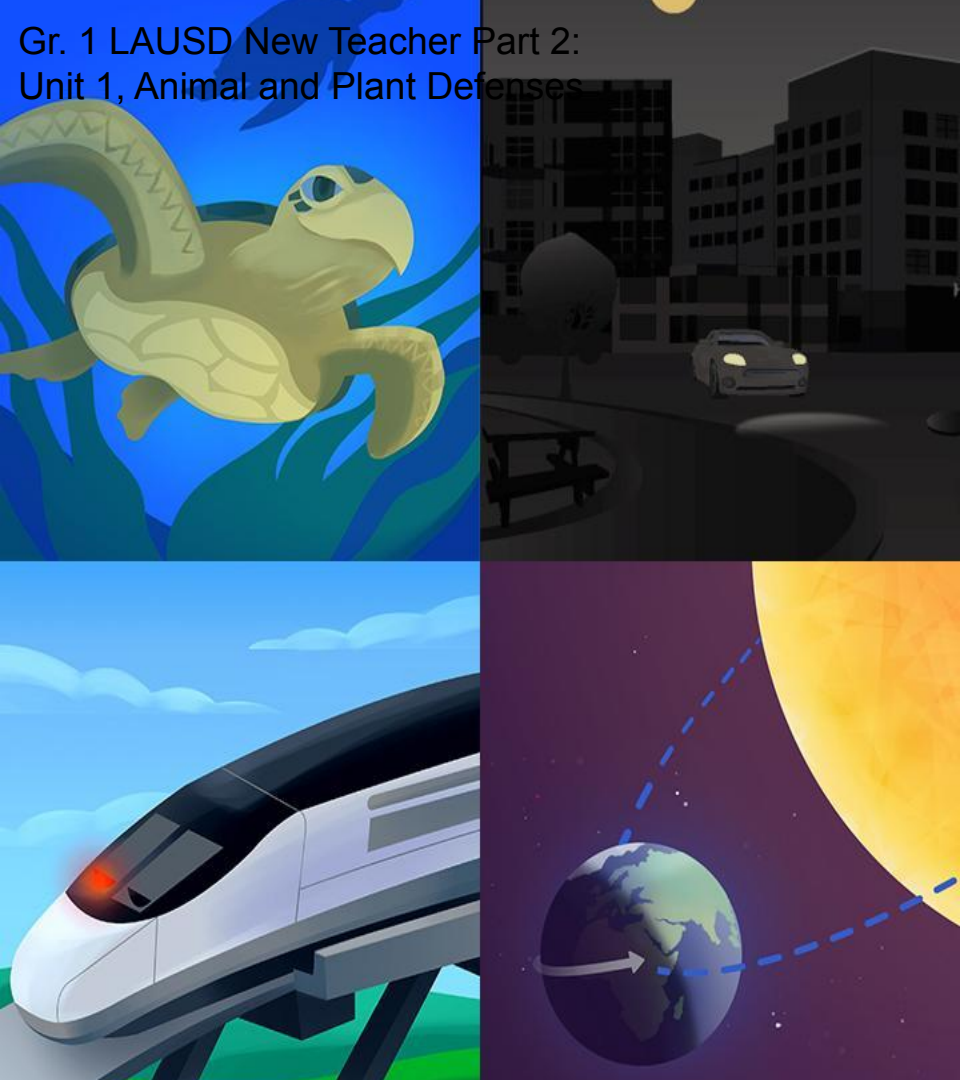
# Overarching goals

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

- ❑ Navigate the Amplify Science curriculum.
- ❑ Describe what teaching and learning look like in Amplify Science.
- ❑ Apply the program essentials to prepare to teach.

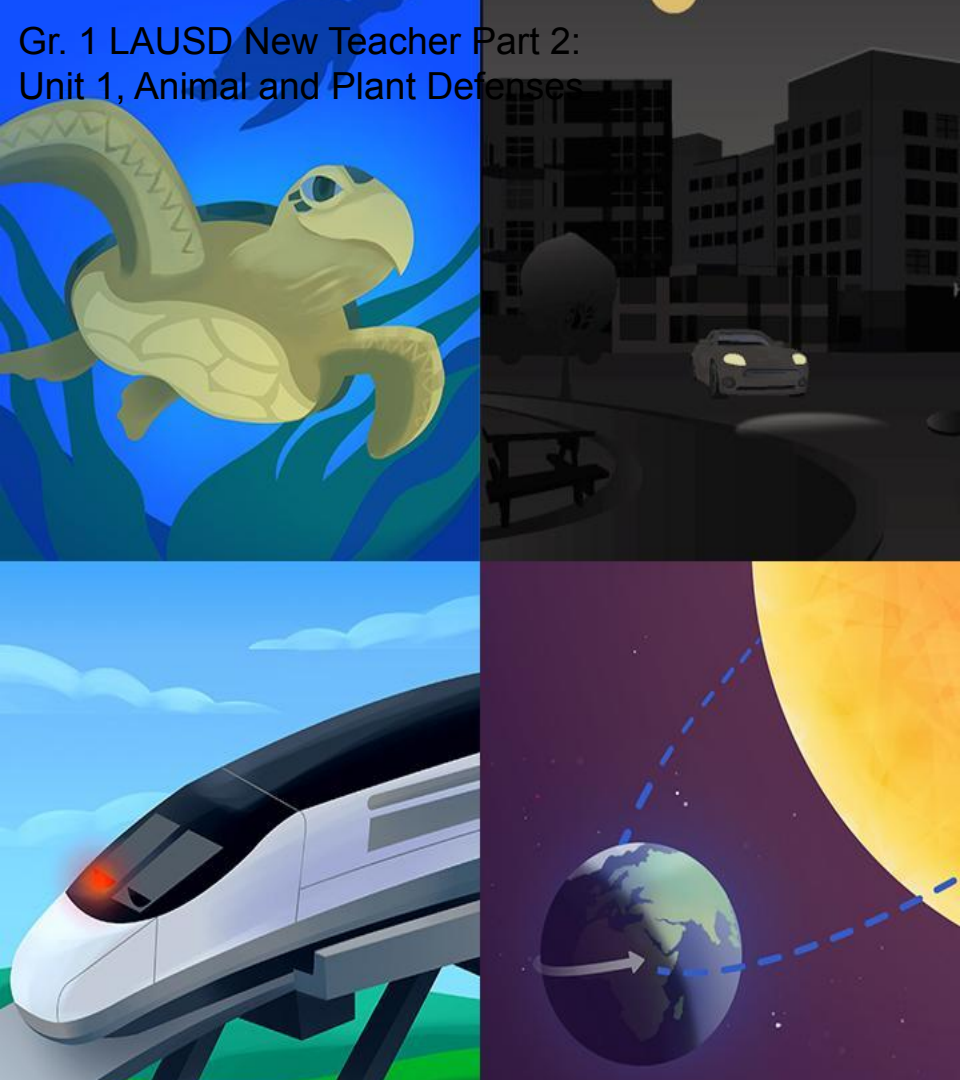






## Plan for the day: Part 2

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



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# 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

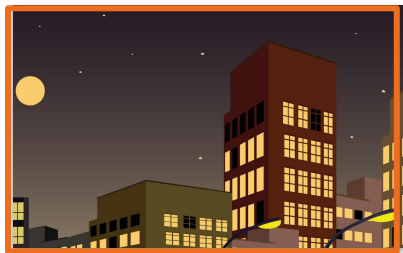
## Grade 5

- 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

# Year at a Glance: Grade 4

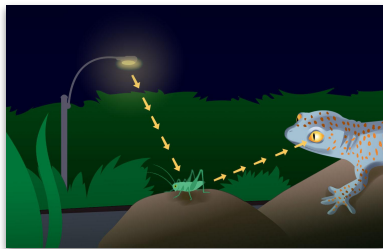


Energy Conversions

**Domain:** Physical Science

**Unit type:** Engineering Design

**Student role:** System engineers

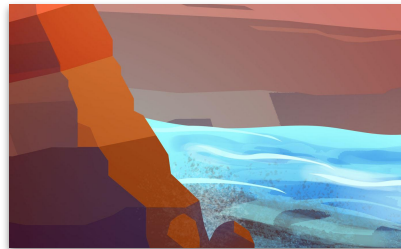


Vision and Light

**Domain:** Life Science

**Unit type:** Investigation

**Student role:** Conservation biologists

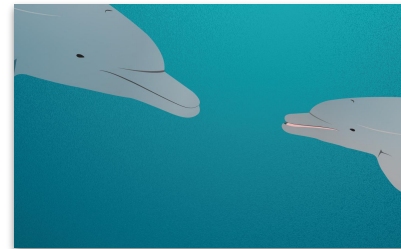


Earth's Systems

**Domain:** Earth and Space Science

**Unit type:** Argumentation

**Student role:** Geologists



Waves, Energy, and Information

**Domain:** Physical Science

**Unit type:** Modeling

**Student role:** Marine scientists

# Amplify Science Approach



# Energy Conversions



How does the electrical system work?

A power failure is a real-life lesson in how much our society relies on electrical energy. Through this unit, students will better understand the parts of the electrical system and how vital it is to modern life.

# Energy Conversions



**Problem:** Why does Ergstown keep having blackouts?

**Role:** Systems Engineers

Through firsthand experiences, discourse, reading, writing, and engaging with a digital simulation, students make discoveries about the way electrical systems work. Then, students apply what they have learned as they choose new energy sources and energy converters for the town,



# Coherent Storylines



Chapter 1: What happened to the electrical system the night of the...

6 Lessons



Chapter 2: What makes the devices in Ergstown output or fail to output...

4 Lessons



Chapter 3: Where does the electrical energy for the devices in Ergstown...

6 Lessons



Chapter 4: How does energy get to the devices all over Ergstown?

6 Lessons



# Explaining the phenomenon: Science Concepts

A stylized illustration of a city at night. In the upper left, a large yellow circle represents the sun or moon. Several small yellow stars are scattered across the dark sky. The cityscape consists of several dark grey buildings with many rectangular windows. In the foreground, a car with its headlights on is visible on the left, and a street lamp is in the center. The overall scene is dark and atmospheric.

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

# Progress Build

## Energy Conversions

**Assumed prior knowledge (preconceptions):** Students are likely to recognize that many familiar devices need electricity to function.

### Level 1

Devices work by converting electrical energy to another form.

### Level 2

Energy must be supplied from a source and converted or there is no electrical energy available for devices to convert.

### Level 3

Electrical energy can be transferred by wires connecting the source converter to the device.

# Key Unit Guide Documents for Planning

Planning for the Unit	Printable Resources
<a href="#">Unit Overview</a> ▾	<a href="#">Coherence Flowcharts</a>
<a href="#">Unit Map</a> ▾	<a href="#">Copymaster Compilation</a>
<a href="#">Progress Build</a> ▾	<a href="#">Flexextension Compilation</a>
<a href="#">Getting Ready to Teach</a> ▾	<a href="#">Investigation Notebook</a>
<a href="#">Materials and Preparation</a> ▾	<a href="#">Multi-Language Glossary</a>
<a href="#">Science Background</a> ▾	<a href="#">NGSS Information for Parents and Guardians</a>
<a href="#">Standards at a Glance</a> ▾	<a href="#">Print Materials (8.5" x 11")</a>
<a href="#">Teacher References</a>	<a href="#">Print Materials (11" x 17")</a>
<a href="#">Lesson Overview Compilation</a> ▾	
<a href="#">Standards and Goals</a> ▾	
<a href="#">3-D Statements</a> ▾	
<a href="#">Assessment System</a> ▾	
<a href="#">Embedded Formative Assessments</a> ▾	
<a href="#">Books in This Unit</a> ▾	
<a href="#">Apps in This Unit</a> ▾	
<a href="#">Flexextensions in This Unit</a> ▾	

### Offline Preparation

Teaching without reliable classroom internet? Prepare unit and lesson materials for offline access.

[Offline Guide](#)

## Core Unit Planning & Internalization

Unit Title:

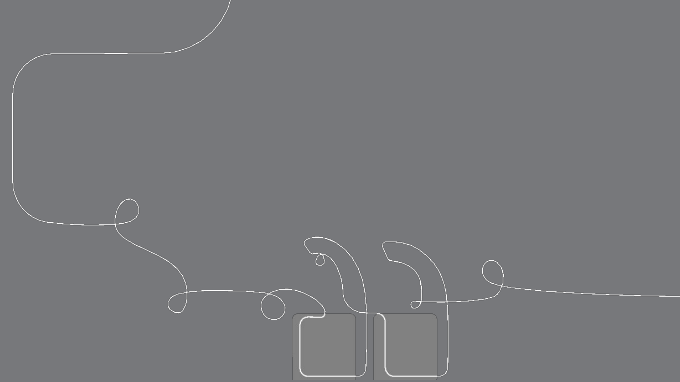
### Energy Conversions

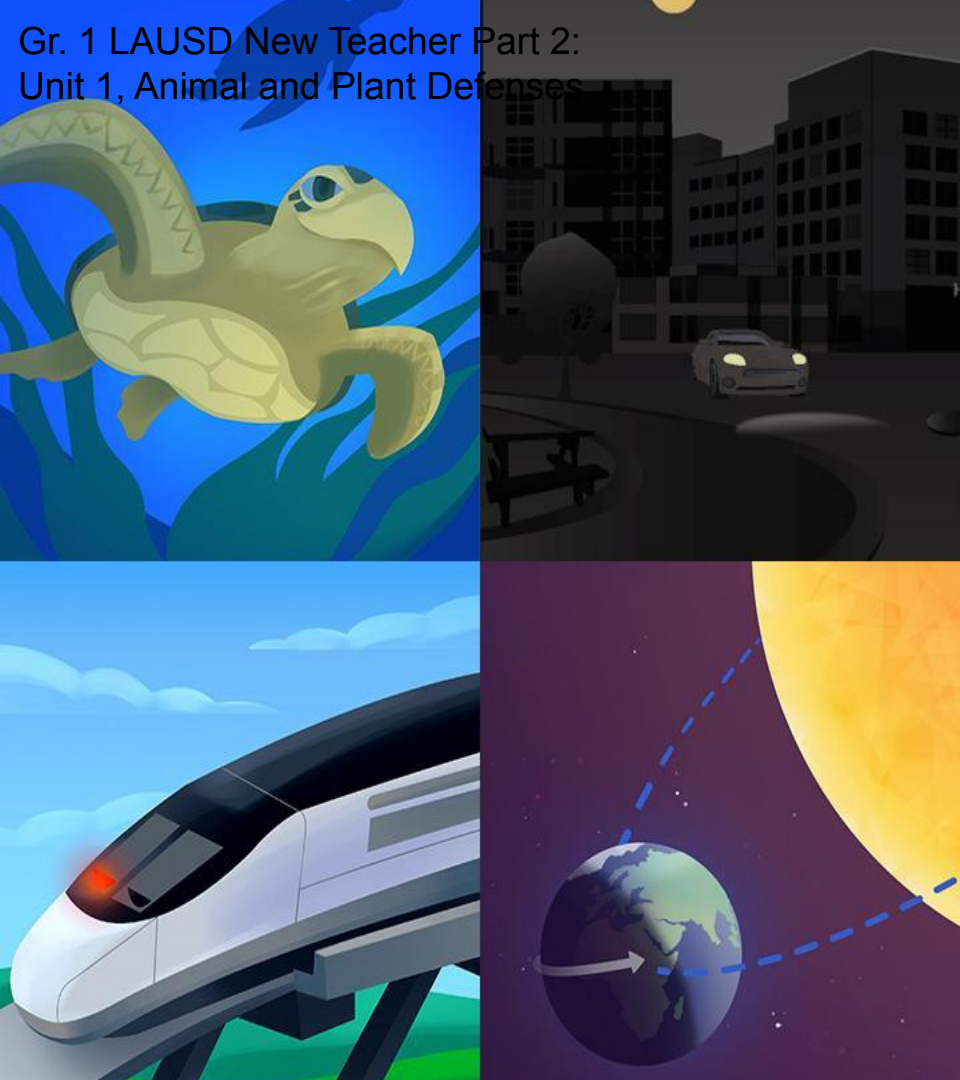
#### Overview

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

What is the phenomenon/real-world problem students are investigating in your unit?	Student Role:
Why does Ergstown keep having blackouts?	Systems Engineers
Unit Question:	Relationship between the Unit Phenomenon and Unit Question:
How does the electrical system work?	Understanding Ergstown electrical system provides a unique context for students to learn about how energy is converted from one form to another, how it can be transferred from place to place, and the variety of energy sources that exist.
By the end of the unit, students figure out...	
The devices won't function if the wires that connect the source converter and the devices are broken. The connections between the grid and the converters aren't strong enough, if the wires aren't in a secure location, or if there aren't enough backup wires.	
How do students engage with three-dimensional learning to figure out the phenomenon/real-world problem in your unit?	
Students investigate—through firsthand experiences, a digital model, and by obtaining information by reading—how electrical systems convert and transfer energy. They use what they learn to design, test, and evaluate improvements to cause the electrical system to be more reliable, even during natural hazards and to make arguments based on evidence for the best improvements (cause and effect).	

# Questions?





## Plan for the day: Part 2

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

# Beginning the Unit

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

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

✓ JUMP DOWN TO CHAPTER OVERVIEW

<b>Lesson 1.1:</b> Pre-Unit Assessment	<b>Lesson 1.2:</b> Introducing Systems	<b>Lesson 1.3:</b> Exploring Systems
<b>Lesson 1.4:</b> Electrical Energy	<b>Lesson 1.5:</b> Forms of Energy	<b>Lesson 1.6:</b> Writing an Argument About the Blackout

# Energy Conversions - Family Connection

**Lesson 1.1:**  
**Pre-Unit Assessment**

3 TEACHER-LED DISCUSSION  
Introducing Investigation Notebooks

RESET LESSON GENERATE PRINTABLE LESSON

**Overview**

**Students' Initial Explanations**

In this unit, students investigate what might cause an electrical system to fail, and they design solutions to improve the electrical system in order to reduce blackouts. In this Pre-Unit Assessment, students are presented with a simple illustration of a town and asked to explain why they think a lamp in one of the houses will not turn on. The explanations they provide in this lesson serve as a Pre-Unit Assessment for formative purposes, designed to reveal students' initial understanding of the unit's core content, both unit-specific science concepts and the crosscutting concept of Systems and System Models, prior to instruction. As such, students' explanations offer a baseline from which to measure growth of understanding over the course of the unit. These explanations can also provide the teacher with insight into students' thinking as they begin this unit of instruction. This three-dimensional assessment will allow the teacher to draw connections to students' experiences and to watch for preconceptions that might get in the way of students' understanding. In the second half of the lesson, students are introduced to their role as engineers and to the problem they will tackle in this unit: how to design improvements to an electrical system in order to prevent blackouts. Students will then receive their Investigation Notebooks and learn some of the ways that scientists use notebooks.

**Unit Anchor Phenomenon:** Ergstown has frequent blackouts.

**Digital Resources**

- Classroom Slides 1.1 | PowerPoint
- Classroom Slides 1.1 | Google Slides
- All Projections
- Pre-Unit Writing: Explaining Why The Lamp Won't Turn On copymaster
- Assessment Guide: Interpreting Student Unit Explanations About Why the Lamp Turn On
- Energy Conversions Investigation Notebook
- Questioning Strategies for Grades 2-5
- Energy Conversions Family Connection Homework**
- Eliciting and Leveraging Students' Prior Knowledge, Personal Experiences, and Background
- Crosscutting Concept Tracker

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

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

## ***Energy Conversions Family Connections Homework***

1. Choose a member of your household and tell them about what we are investigating in science class.
2. Ask them about their experiences, ideas, and questions related to our investigations.
3. Write notes about what you learn.

### **Summary of our investigation you can share:**

In science class, we are working as systems engineers to figure out how to solve Ergstown's problem with frequent blackouts. We will be answering the question, *How does the electrical system work?*

### **Ask questions such as:**

- What does our investigation make you think of?
- Do you have any memories, stories, expertise, or experiences about something like what we're investigating?
- What have you heard or learned about these topics?
- What do you wonder about what we are investigating?



# Beginning the Unit

## Model lesson 1.2

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

▼ JUMP DOWN TO CHAPTER OVERVIEW

**Lesson 1.1:**  
Pre-Unit Assessment

**Lesson 1.2:**  
Introducing Systems

**Lesson 1.3:**  
Exploring Systems

**Lesson 1.4:**  
Electrical Energy

**Lesson 1.5:**  
Forms of Energy

**Lesson 1.6:**  
Writing an  
Argument About the  
Blackout

## 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?

## Key Concepts

## Vocabulary

engineer

## Chapter 1 Question

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

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

engineer

## 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.

Cherry Pitter

System

Part				
	handle	shaft	spring	
Function				
	Used to push the shaft through the cherry	Used to push the pit out of the cherry	Used to make the handle go up and down easily	

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

engineer

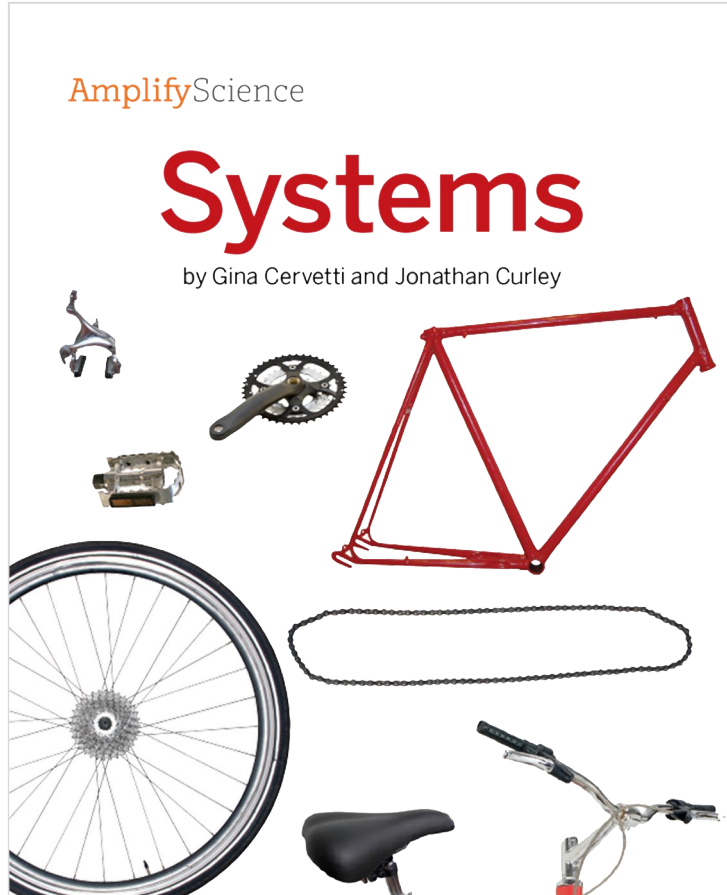
function

# Activity 3

## Introduction to Synthesizing

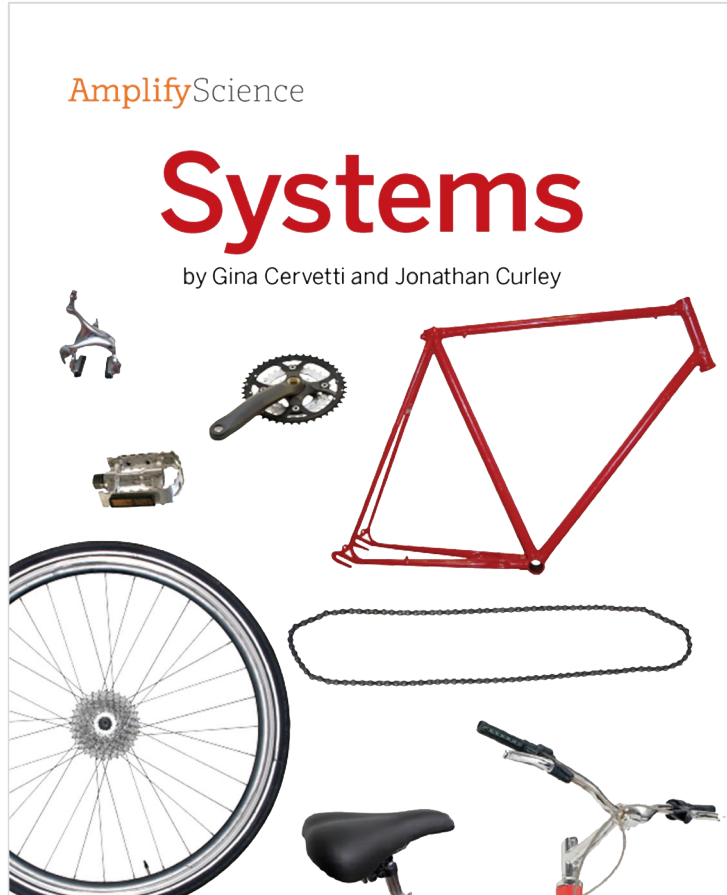






Reading this book will help us answer the Investigation Question:

**What is a system?**



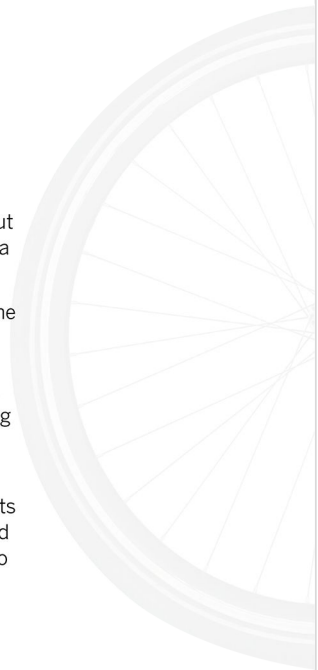
As we read, we will practice **making connections** between what we read and what we already know.

## 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.



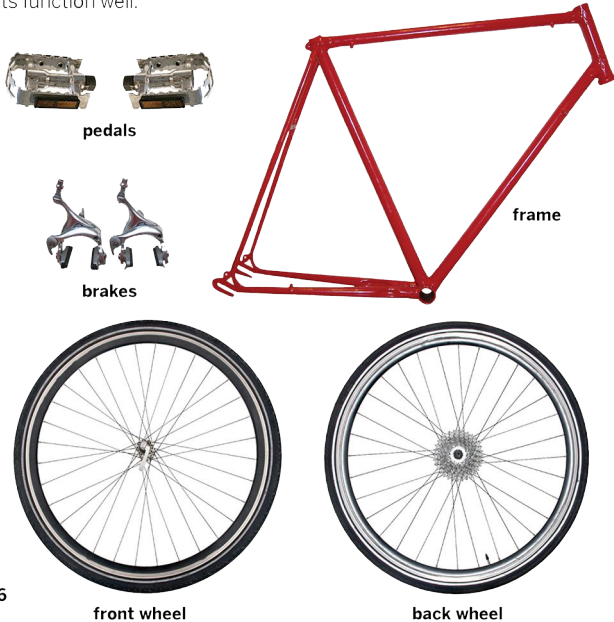
Turn to page 5.



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.



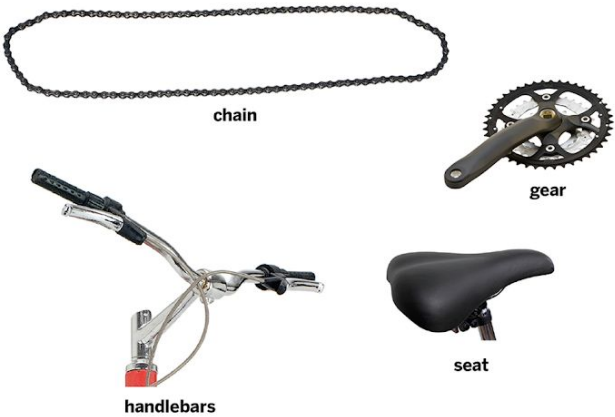
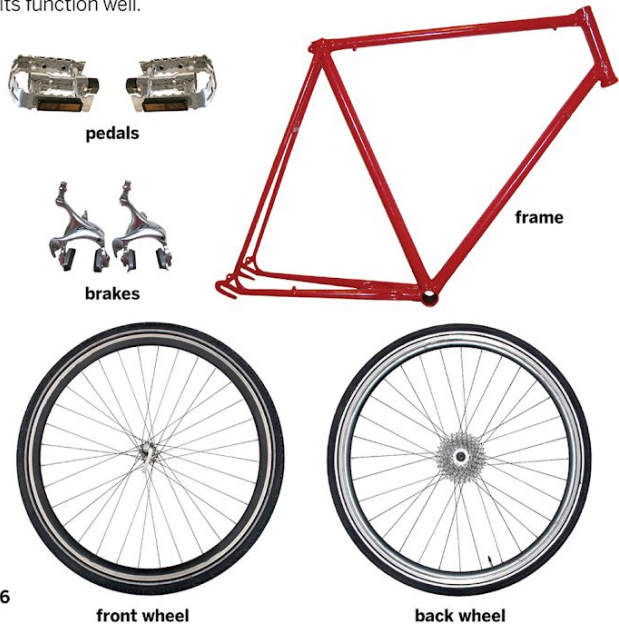
Turn to page 6.



Who would like to read this page aloud?

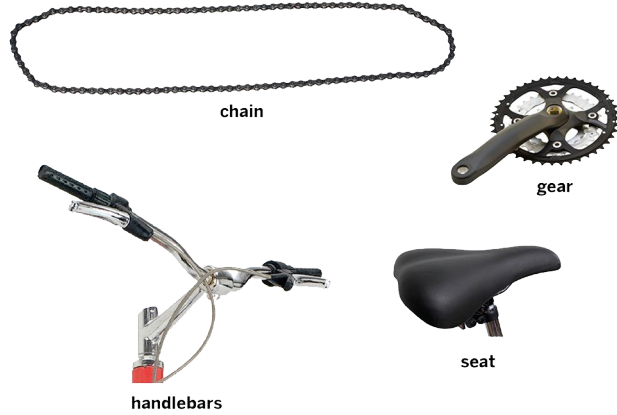
# Bicycle Parts

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.



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	<i>What is the function of the pedal?</i>

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.



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.



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

engineer

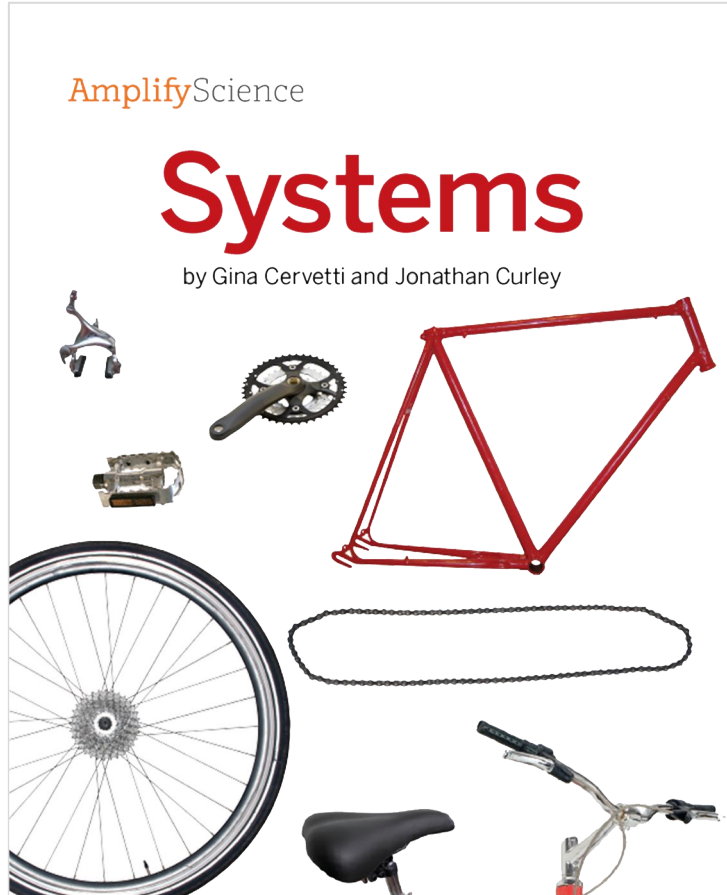
function

synthesize

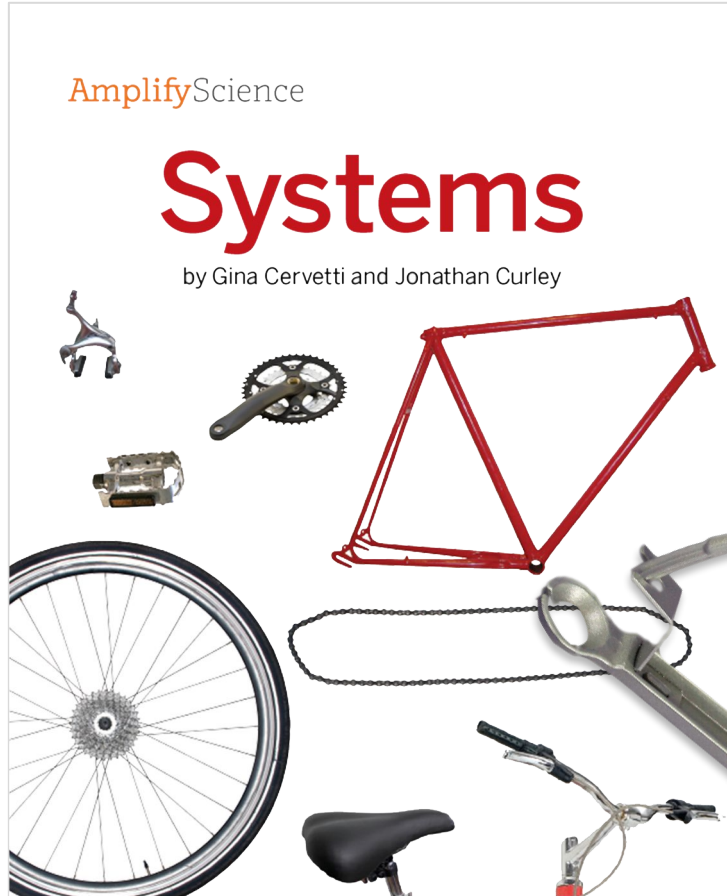
## Activity 4

# 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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## Plan for the day

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

# Gathering evidence

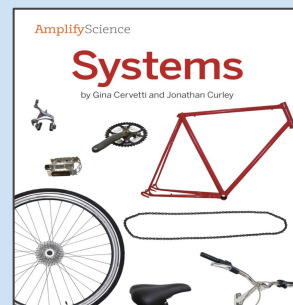
## Energy Conversions Lesson 1.2

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

Investigation Question: What is a system?



Cherry Pitter System				
Part	handle	cherry cup	poker	spring
Function	to hold and squeeze	to hold the cherry in place	to push the pit out of the cherry	to open the handle after you squeeze it closed
System function: <u>To take the pits out of cherries.</u>				



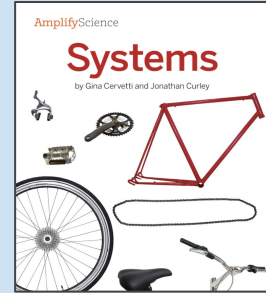


# Evidence sources work together

## Observing the cherry pitter and reading *Systems*

How do these activities  
**work together** to  
support understanding of  
what a system is?

Investigation Question: What is a system?



# Gathering evidence

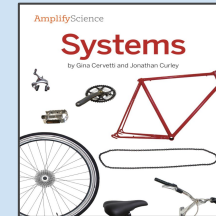
## Energy Conversions Lesson 1.2

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

Investigation Question: What is a system?



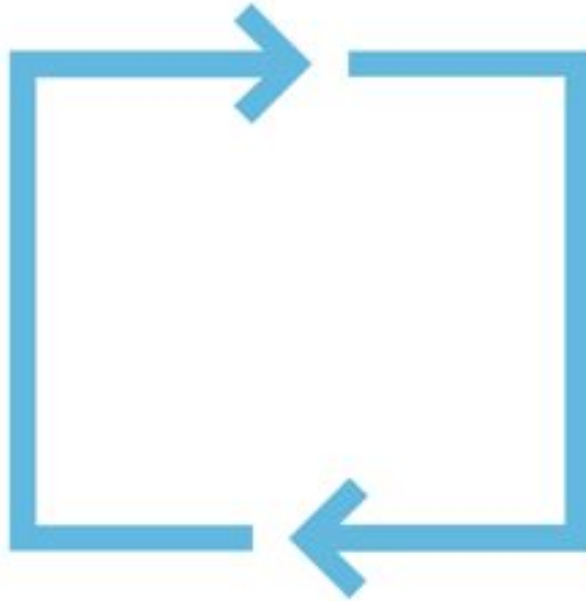
Cherry Pitter System				
Part	handle	cherry cup	poker	spring
Function	to hold and squeeze	to hold the cherry in place	to push the pit out of the cherry	to open the handle after you squeeze it closed
System function: To take the pits out of cherries.				



What have students figured out so far?

# Multimodal learning

Gathering evidence over multiple lessons



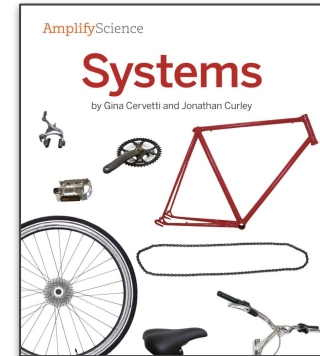
**Do,  
Talk,  
Read,  
Write,  
Visualize**

# Evidence sources work together

**Teacher tip:** Every evidence source plays an important role in student learning. Be sure to teach every activity in order!

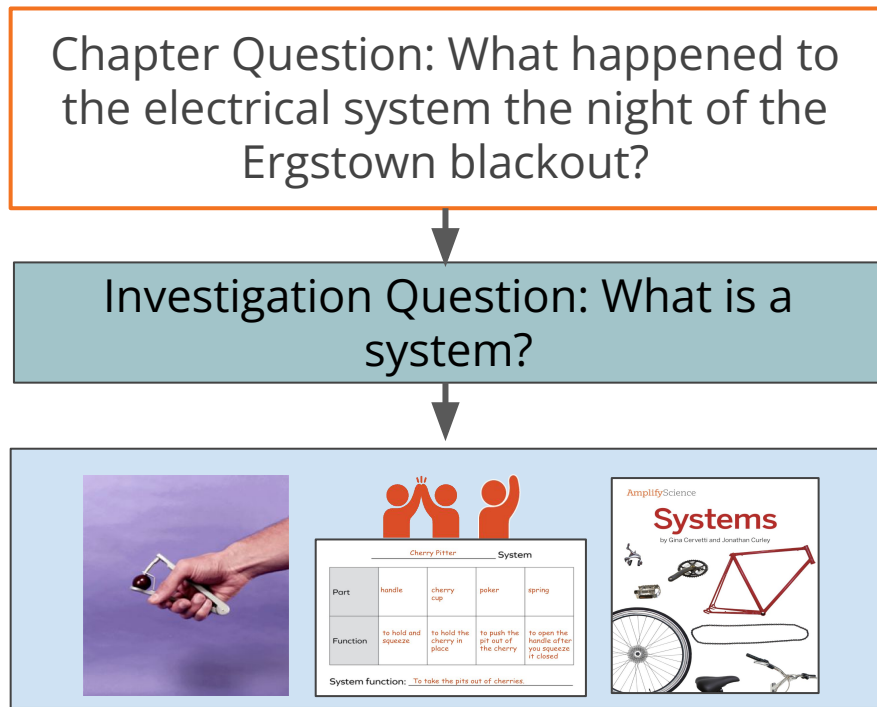
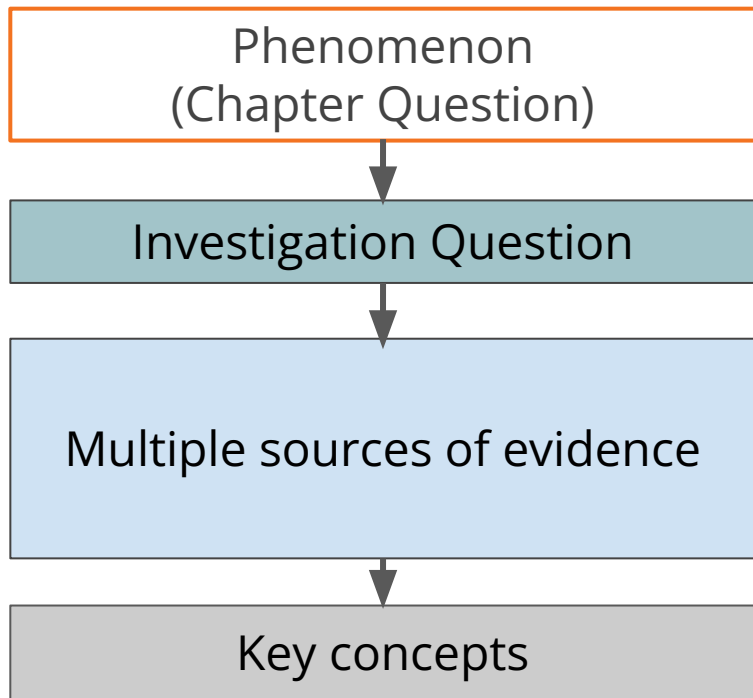


Cherry Pitter System				
Part	handle	cherry cup	poker	spring
Function	to hold and squeeze	to hold the cherry in place	to push the pit out of the cherry	to open the handle after you squeeze it closed
System function: To take the pits out of cherries.				



# Coherence Flowchart

## A diagram of student learning



# Coherence Flowchart

## Energy Conversions Lesson 1.2-1.3

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

Investigation Question: What is a system?

Evidence: Observe a simple system (cherry pitter) (1.2)

Evidence: Read *Systems* (1.2)

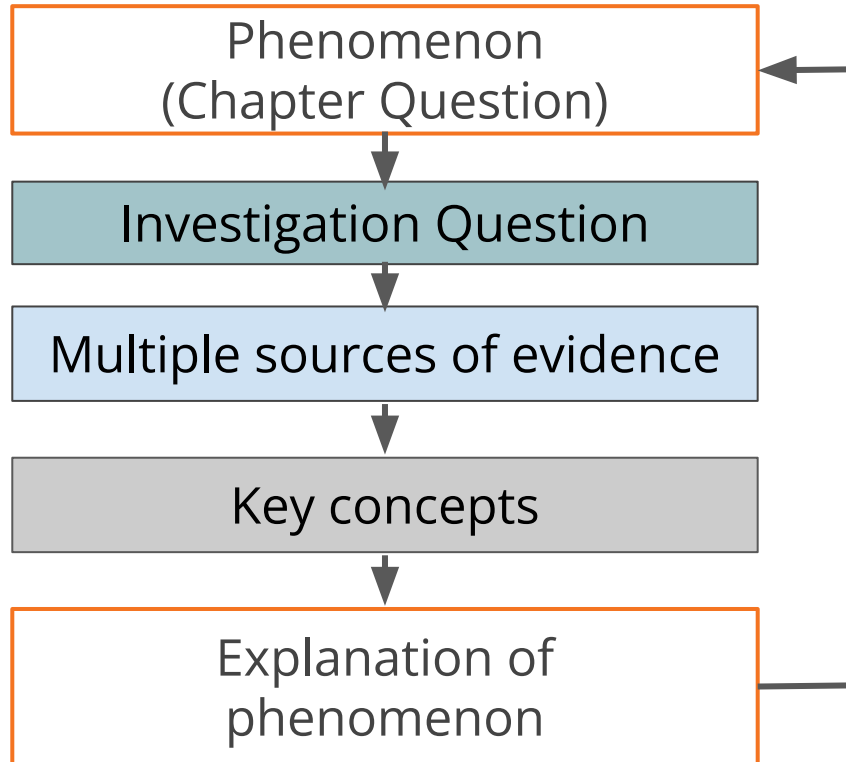
**Evidence: Build a simple electrical system (1.3)**

**Evidence: Discuss parts and functions of a system (1.3)**

Key concept: A system is a collection of interacting parts that work together.  
Each part in the system plays a role to perform an overall function. (1.3)

# Coherence Flowchart

A diagram of student learning



# Coherence Flowchart

## Energy Conversions Lesson 1.2-1.3

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

Investigation Question: What is a system?

Evidence: Observe a simple system (cherry pitter) (1.2)

Evidence: Read *Systems* (1.2)

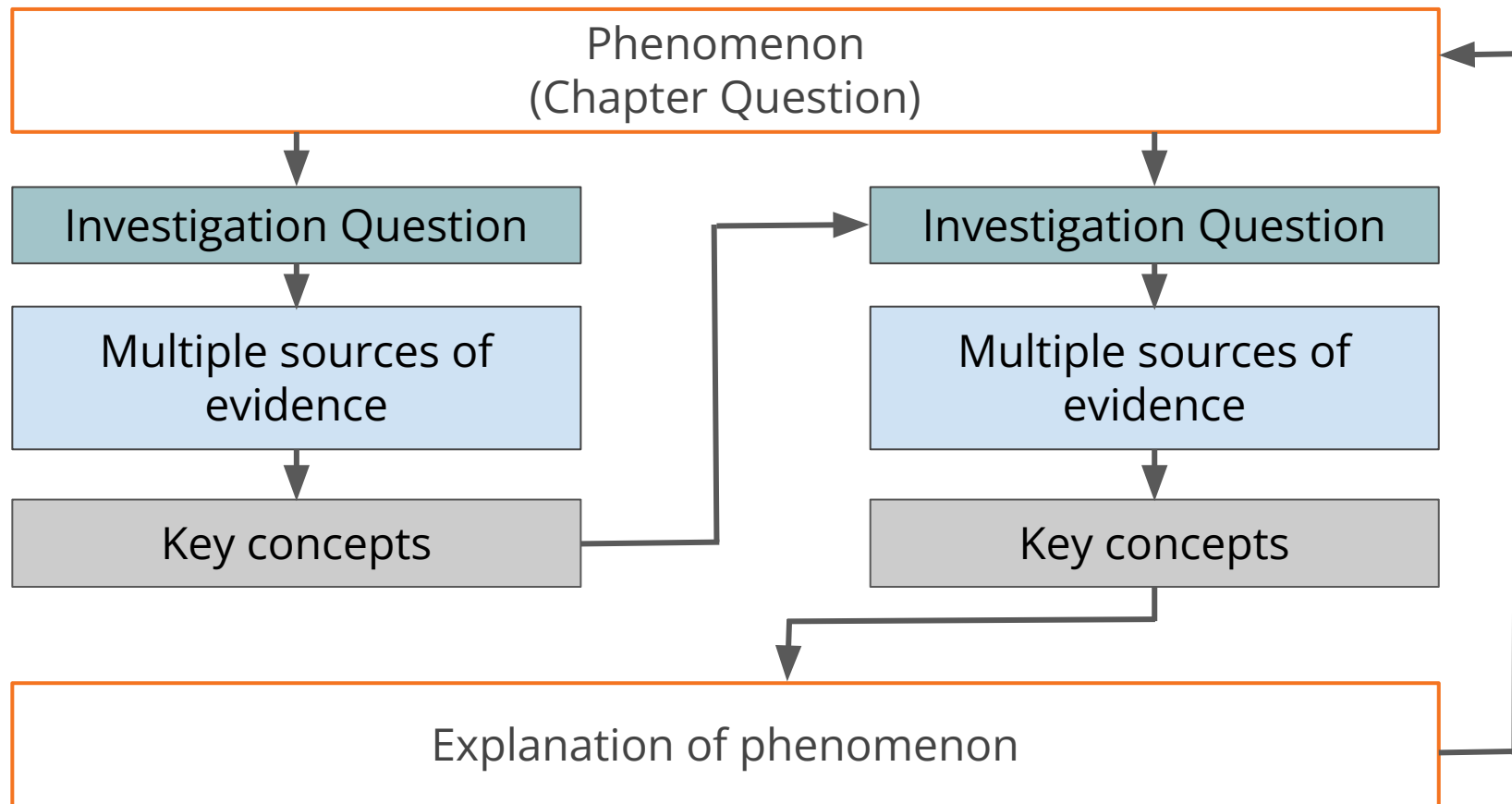
Evidence: Build a simple electrical system (1.3)

Evidence: Discuss parts and functions of a system (1.3)

Key concept: A system is a collection of interacting parts that work together. Each part in the system plays a role to perform an overall function. (1.3)



# Coherence Flowchart



## Unit Anchor Phenomenon

Problem students work to solve

## Chapter-level Anchor Phenomenon

Chapter 1 Question

## Investigative Phenomena

Investigation Questions

Evidence sources and reflection opportunities

Key concepts

Application of key concepts to the problem

Explanation that students can make to answer the Chapter 1 Question

# Energy Conversions: Blackout in Ergstown

Ergstown has frequent blackouts.  
Why does Ergstown keep having blackouts?

There was a blackout in Ergstown.  
What happened to the electrical system the night of the Ergstown blackout?

Cities have electrical systems.  
What is a system? (1.2, 1.3)

- Observe a simple system (1.2)
- Read *Systems* (1.2)
- Build a simple electrical system (1.3)
- Discuss parts and functions of a system (1.3)

• A system is a collection of interacting parts that work together. Each part in the system plays a role to perform an overall system function. (1.3)

Cities have electrical systems.  
What can electrical energy in a system be used for? (1.4, 1.5)

- Find electrical energy in the Sim (1.4)
- Build simple electrical systems and observe various types of energy outputs (1.5)
- Read about forms of energy in *It's All Energy* (1.5)
- Write about ideas from the reading and hands-on investigation (1.5)

• Light, motion, sound, and thermal energy are all forms of energy. You can observe evidence of these different forms as outputs of electrical devices. (1.5)

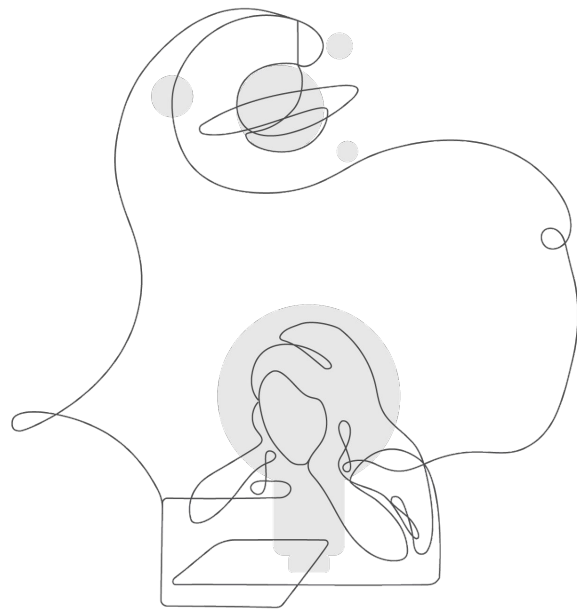
- Observe and write about forms of energy in the Ergstown subway (1.6)

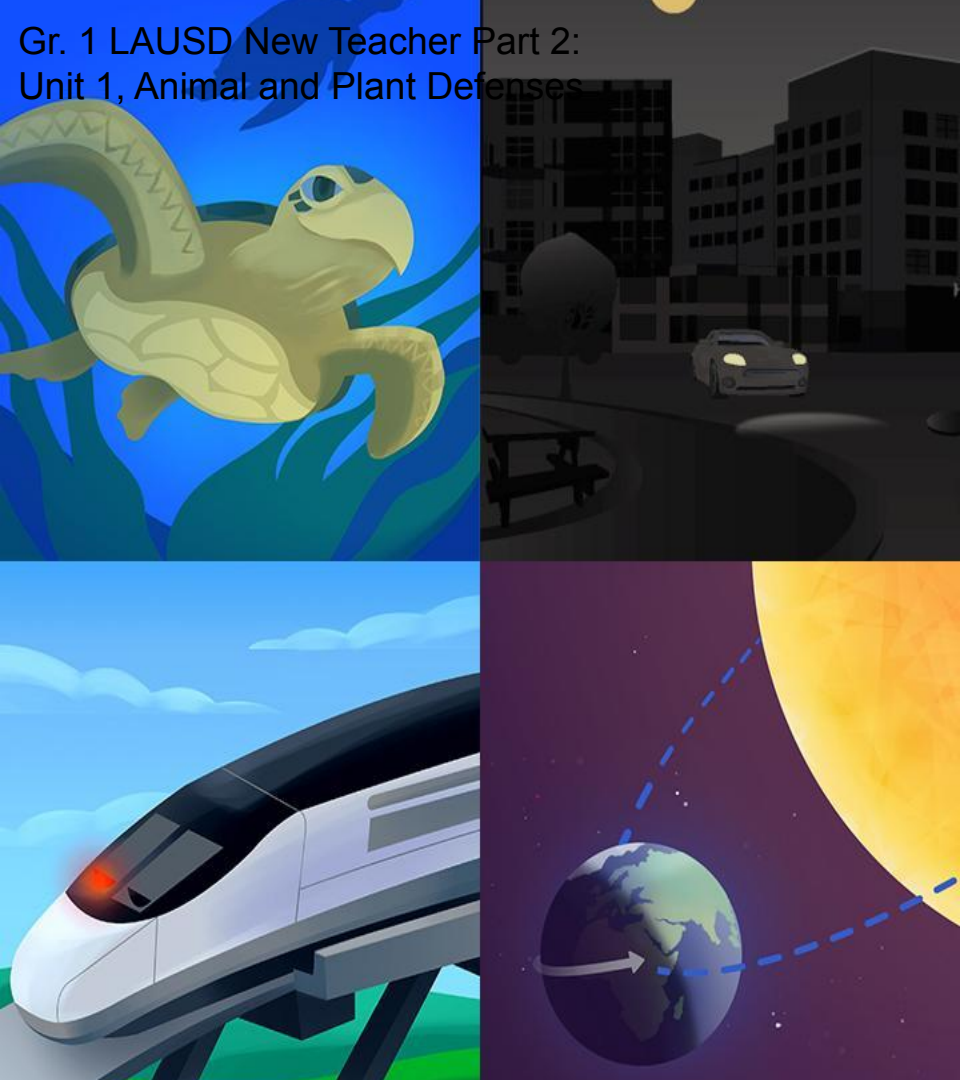
The devices stopped working in Ergstown because they weren't able to get electrical energy from the electrical system. When devices work, they output light, heat, motion, or sound. These are forms of energy. During the blackout, the devices weren't getting electrical energy.

# Explore the Coherence Flowchart

Skim the Chapter 1 Coherence Flowchart.

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





## Plan for the day: Part 2

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

# The Lesson Brief

AmplifyScience > Energy Conversions > Chapter 1 > Lesson 1.1



## Lesson 1.1: Pre-Unit Assessment



Lesson Brief  
(3 Activities)

1

WRITING  
Students Write Initial  
Explanations



2

TEACHER-LED DISCUSSION  
Introducing the Problem



3

TEACHER-LED DISCUSSION  
Introducing Investigation  
Notebooks



RESET LESSON

GENERATE PRINTABLE LESSON GUIDE

Overview

Materials &  
Preparation

Differentiation

Español

Standards

## Overview

### Students' Initial Explanations

In this unit, students investigate what might cause an electrical system to fail, and they design solutions to improve the electrical

## Digital Resources

Classroom Slides 1.1 | PowerPoint

Classroom Slides 1.1 | Google Slides



# 4 Easy Steps to Teaching a lesson

## DIRECTIONS:

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

The screenshot shows the interface for Lesson 1.1: Pre-Unit Assessment. At the top, the title "Lesson 1.1: Pre-Unit Assessment" is displayed. Below the title, there is a navigation bar with a "3" icon and the text "TEACHER-LED DISCUSSION Introducing Investigation Notebooks". A "RESET LESSON" button is visible. On the left, a sidebar menu lists: Overview, Materials & Preparation, Differentiation, Standards, Vocabulary, and Unplugged?. On the right, there is a "GENERATE PRINTABLE LESSON GUIDE" button. The main content area is titled "Overview" and "Students' Initial Explanations". It contains text about the unit's focus on electrical systems and student explanations. On the far right, a "Digital Resources" section lists: Classroom Slides 1.1 | PowerPoint, Classroom Slides 1.1 | Google Slides, All Projections, Pre-Unit Writing: Explaining Why The Lamp Won't Turn On copymaster, and Assessment Guide: Interpreting Students' Pre-Unit Explanations About Why the Lamp Won't Turn On. Four numbered orange arrows point to specific elements: Arrow 1 points to the "Classroom Slides 1.1 | PowerPoint" link. Arrow 2 points to the "Overview" section header. Arrow 3 points to the "Materials & Preparation" link in the sidebar. Arrow 4 points to the "Differentiation" link in the sidebar.

# 4 Easy Steps to Teaching a lesson

## DIRECTIONS:

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

Lesson 1.1:  
Pre-Unit Assessment

3 TEACHER-LED DISCUSSION  
Introducing Investigation  
Notebooks

RESET LESSON

GENERATE PRINTABLE LESSON GUIDE

Overview  
Materials & Preparation  
Differentiation  
Standards  
Vocabulary  
Unplugged?

Overview

Students' Initial Explanations

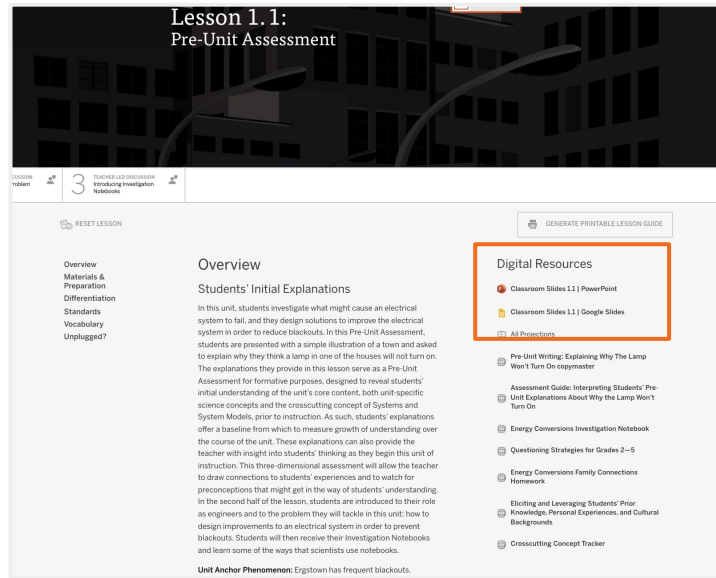
In this unit, students investigate what might cause an electrical system to fail, and they design solutions to improve the electrical system in order to reduce blackouts. In this Pre-Unit Assessment, students are presented with a simple illustration of a town and asked to explain why they think a lamp in one of the houses will not turn on. The explanations they provide in this lesson serve as a Pre-Unit Assessment for formative purposes, designed to reveal students' initial understanding of the unit's core content, both unit-specific science concepts and the crosscutting concept of Systems and Custom Models, which is introduced. As such, students' explanations

Digital Resources

- Classroom Slides 1.1 | PowerPoint
- Classroom Slides 1.1 | Google Slides
- All Projections
- Pre-Unit Writing: Explaining Why The Lamp Won't Turn On copymaster
- Assessment Guide: Interpreting Students' Pre-Unit Explanations About Why the Lamp Won't Turn On

# Preparing to teach Classroom Slides

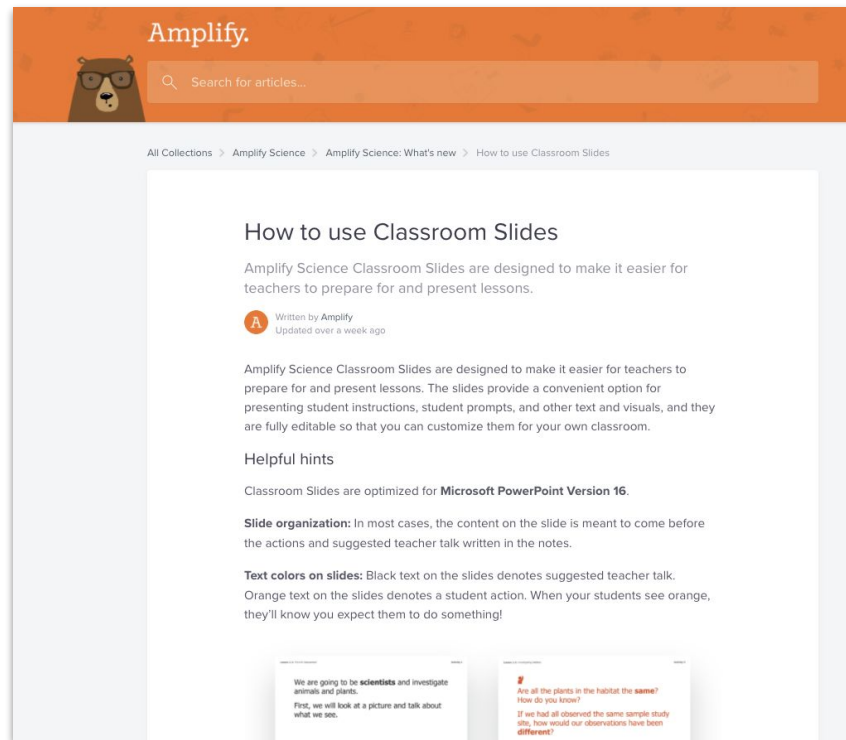
1. Open the Classroom Slides under the Digital Resources (a lesson of your choice)
2. Read through the Classroom Slides including the **presenter notes** to gain a better understanding of the lesson.
3. Consider:
  - What features of the Classroom Slides will support you in teaching this lesson?





# Teaching with Classroom Slides

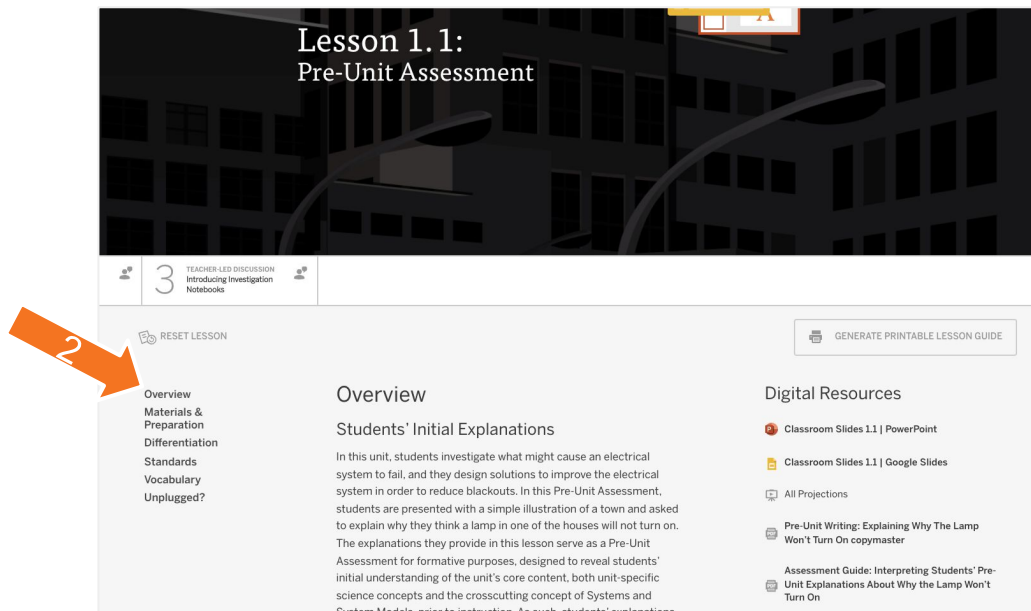
This detailed guide on the Amplify Science Help Site includes tips for teaching with Classroom Slides and information about the different symbols and activity types you'll find in the slide deck.



# 4 Easy Steps to Teaching a lesson

## DIRECTIONS:

1. Download the **Classroom Slides** for **Lesson 1.2** and review them.
2. Read the **Overview**.
3. Explore the **Materials & Preparation** document.
4. Read the **Differentiation** document.



The screenshot shows a digital interface for 'Lesson 1.1: Pre-Unit Assessment'. At the top, the title 'Lesson 1.1: Pre-Unit Assessment' is displayed against a dark background with a cityscape illustration. Below the title, there is a navigation bar with a '3' icon and the text 'TEACHER-LED DISCUSSION Introducing Investigation Notebooks'. A sidebar on the left contains a 'RESET LESSON' button and a list of links: 'Overview', 'Materials & Preparation', 'Differentiation', 'Standards', 'Vocabulary', and 'Unplugged?'. An orange arrow with the number '2' points to the 'Overview' link. The main content area is titled 'Overview' and 'Students' Initial Explanations'. It contains a paragraph about the unit's focus on electrical systems and blackouts. On the right side, there is a 'GENERATE PRINTABLE LESSON GUIDE' button and a 'Digital Resources' section listing various materials like 'Classroom Slides 1.1 | PowerPoint', 'Classroom Slides 1.1 | Google Slides', 'All Projections', 'Pre-Unit Writing: Explaining Why The Lamp Won't Turn On copymaster', and 'Assessment Guide: Interpreting Students' Pre-Unit Explanations About Why the Lamp Won't Turn On'.

# Preparing to teach

## The Overview

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

**Lesson 1.1:**  
Pre-Unit Assessment

TEACHER LED DISCUSSION  
Introducing Investigation Notebooks

RESET LESSON

Overview  
Materials & Preparation  
Differentiation  
Standards  
Vocabulary  
Unplugged?

**Overview**

**Students' Initial Explanations**

In this unit, students investigate what might cause an electrical system to fail, and they design solutions to improve the electrical system in order to reduce blackouts. In this Pre-Unit Assessment, students are presented with a simple illustration of a town and asked to explain why they think a lamp in one of the houses will not turn on. The explanations they provide in this lesson serve as a Pre-Unit Assessment for formative purposes, designed to reveal students' initial understanding of the unit's core content, both unit-specific science concepts and the crosscutting concept of Systems and System Models, prior to instruction. As such, students' explanations offer a baseline from which to measure growth of understanding over the course of the unit. These explanations can also provide the teacher with insight into students' thinking as they begin this unit of instruction. This three-dimensional assessment will allow the teacher to draw connections to students' experiences and to watch for preconceptions that might get in the way of students' understanding. In the second half of the lesson, students are introduced to their role as engineers and to the problem they will tackle in this unit: how to design improvements to an electrical system in order to prevent blackouts. Students will then receive their Investigation Notebooks and learn some of the ways that scientists use notebooks.

**Unit Anchor Phenomenon:** Ergstown has frequent blackouts.

**Digital Resources**

- Classroom Slides 1.1 | PowerPoint
- Classroom Slides 1.1 | Google Slides
- All Projections
- Pre-Unit Writing: Explaining Why The Lamp Won't Turn On copymaster
- Assessment Guide: Interpreting Students' Pre-Unit Explanations About Why the Lamp Won't Turn On
- Energy Conversions Investigation Notebook
- Questioning Strategies for Grades 2–5
- Energy Conversions Family Connections Homework
- Eliciting and Leveraging Students' Prior Knowledge, Personal Experiences, and Cultural Backgrounds
- Crosscutting Concept Tracker

# 4 Easy Steps to Teaching a lesson

## DIRECTIONS:

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



Lesson 1.1:  
Pre-Unit Assessment

3 TEACHER-LED DISCUSSION  
Introducing Investigation  
Notebooks

RESET LESSON

GENERATE PRINTABLE LESSON GUIDE

Overview

Materials & Preparation

Differentiation

Standards

Vocabulary

Unplugged?

Overview

Students' Initial Explanations

In this unit, students investigate what might cause an electrical system to fail, and they design solutions to improve the electrical system in order to reduce blackouts. In this Pre-Unit Assessment, students are presented with a simple illustration of a town and asked to explain why they think a lamp in one of the houses will not turn on. The explanations they provide in this lesson serve as a Pre-Unit Assessment for formative purposes, designed to reveal students' initial understanding of the unit's core content, both unit-specific science concepts and the crosscutting concept of Systems and Custom Models, which is introduced. As such, students' explanations

Digital Resources

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- All Projections
- Pre-Unit Writing: Explaining Why The Lamp Won't Turn On copymaster
- Assessment Guide: Interpreting Students' Pre-Unit Explanations About Why the Lamp Won't Turn On

# Preparing to teach

## Materials and Prep

Review the materials needed for:

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

### Materials & Preparation

#### Materials

##### For the Classroom Wall

- Unit Question: *What can make an object move or not move?*
- Chapter 1 Question: *Why does the train rise?*
- section headers: Key Concepts, Vocabulary
- vocabulary: force

##### For the Class

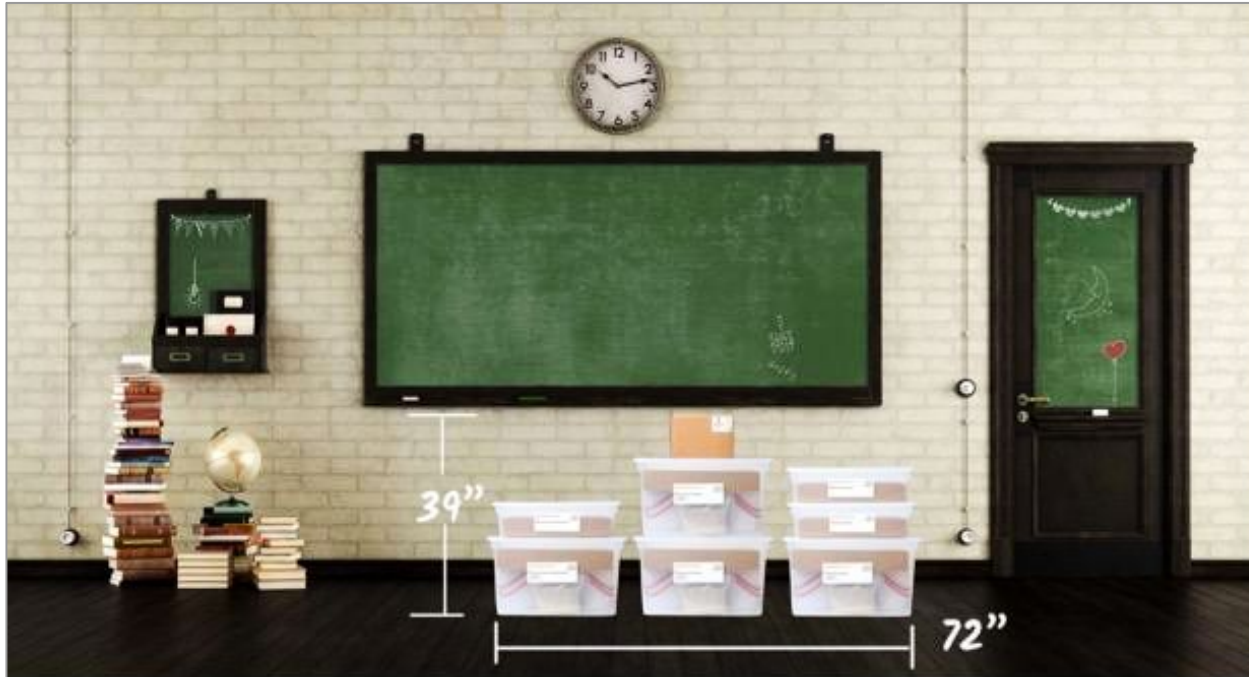
- 1 bag, plastic, gallon, self-sealing
- 2 wooden blocks with hooks
- 1 balloon
- 1 paper clip
- 1 domino
- 1 clothespin
- 1 index card
- 1 rubber band\*
- 1 sheet of chart paper\*
- masking tape\*
- marker\*
- scissors\*

##### For Each Pair of Students

- 1 bag, plastic, gallon, self-sealing
- 2 wooden blocks, with hooks
- 1 balloon

# Prepping Hands-On Materials for the Unit

## Microsite: Unit 1, K-2 Lesson Prep Videos



### Classroom Kits

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

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



# Welcome to Amplify Science!

---

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

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

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

# Microsite: Unit 1, K-2 Lesson Prep Videos

## Classroom kits

Program Introduction	New! Lesson Prep Videos
Learn more about Amplify Science	Unit 1
LAUSD Training Sessions- Reference Materials	Grade K- Needs of Plants and Animals >
<b>New! Lesson Prep Videos</b>	Grade 1- Animals and Plant Defenses >
Remote Learning Resources	Grade 2- Plant and Animal Relationships >
Onboarding: What to expect	Grade 3- Balancing Forces >
Onboarding videos	Grade 4- Energy Conversions >
Unpacking your first hands-on materials kit	Grade 5- Patterns of Earth and Sky >
Looking for help?	

## Classroom Kits

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



# LAUSD Schoology: Unit 1, 3-5 Lesson Prep Videos

The screenshot shows the LAUSD Schoology interface. The top navigation bar is dark blue with the LAUSD logo on the left and icons for search, grid, calendar, and email on the right. The main navigation menu on the left includes 'Home', 'COURSES', 'GROUPS', 'RESOURCES' (circled in orange), and 'TOOLS'. Under 'RESOURCES', there are two sections: 'Group Resources' and 'School Resources'. The 'Group Resources' section is expanded, showing 'Amplify Science- Elementary' (circled in orange) and 'LAUSD Middle School Science - Di...'. The 'School Resources' section shows 'LOS ANGELES USD - 9999' and 'Los Angeles Unified School District'. The 'Group' link in the left sidebar is also circled in orange. The main content area displays the 'Amplify Science- Elementary' resource page. It has a 'Title' section and a list of resources. The first resource is a folder icon labeled 'NGSS Resources' added by MARIA ARTEAGA on Jun 1, 2021. The second resource is a red folder icon labeled 'Google Drive link for K-6 Phenomenal Notebooking Resources' with a URL and a note about digital phenomenal notebooks. The third resource is a PDF icon labeled 'Amplify\_Science\_Shared\_Logins.pdf' added by Señor Fernando REYES on Aug 9, 2021. The fourth resource is a green folder icon labeled 'Lesson Prep Videos' (circled in orange) added by Terin Ngo on Oct 11, 2021.

LOS ANGELES USD

Home

COURSES GROUPS **RESOURCES** TOOLS

Search

Personal

Public

Group

Group Resources

Amplify Science- Elementary

LAUSD Middle School Science - Di...

School Resources

LOS ANGELES USD - 9999

Los Angeles Unified School District

Amplify Science- Elementary

Title

NGSS Resources

Added by MARIA ARTEAGA · Jun 1, 2021

Google Drive link for K-6 Phenomenal Notebooking Resources

<https://drive.google.com/drive/folders/168S5PDaAsmg6mOg7LUOIhwO8J7GnYn2G?usp=sharing>

Here are digital resources to support the teaching and learning of the anchor phenomena for Amplify Science and FOSS.

Subfolders for Unit 1 and Unit 2.

Note: In the Unit 1 folder for grades 3-6, please find digital phenomenal notebooks which can be assigned to students in Schoology. For K-2, please find a suite of Seesaw activities. Teachers may add the Seesaw activities into their Seesaw accounts and assign them to students.

Added by INYOUNG LEE · Feb 1, 2021

Amplify\_Science\_Shared\_Logins.pdf

Added by Señor Fernando REYES · Aug 9, 2021

Lesson Prep Videos

Added by Terin Ngo · Oct 11, 2021

# Hands On Material Organization

## Directions

1. Open the Digital Lesson Guides Only page 7 from the Unit Landing page or go the Print TE to page 31. (Chapter 1 Activities)

2. Look for the lessons with Hands On.

HANDS-ON 

3. Note in the table below.

4. Review the materials and preparation to determine if it can be prepared prior to the lesson or on the day of the lesson.

5. Use this same procedure for each Chapter. (Go to the Chapter Activities Contents)

Chapter/Lesson	Activity	Prep Prior	Prep Day of	What to do	
1.1	1	X		Prep plastic bags with labels A, B, C, D and M. Place 1 tsp of the following cinnamon, salt, flour, cornstarch in A,B,C, D. In bag M mix 1 tsp salt and 1 tsp cinnamon.	<i>This is an example from Properties of Materials Grade 2</i>

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



JUMP DOWN TO UNIT GUIDE

GENERATE PRINTABLE TEACHER'S GUIDE

Full Teacher's Guide  
(Includes Unit Guide & all 22 Lesson Guides)

Lesson Guides Only  
(Includes Unit Guide & all 22 Lesson Guides)

OPEN IN NEW TAB

RESET LESSON

Overview  
Materials & Preparation  
Differentiation  
Standards  
Vocabulary  
Unplugged?

## Overview

Through reading an informational text, students continue to explore how organisms can be similar and different. Students read the book *Blue Whales and Buttercups*, which provides many examples of the great diversity of organisms on Earth and the many ways in which they can be similar and different. Students are introduced to the sense-making strategy of asking questions and use this strategy to help them understand and engage with the book. The purpose of this lesson is to introduce students to the concept that even though organisms can be quite different, they are all related.

Chapter 3: Why isn't  
lf 44 like the  
on Valley Pack in  
ting style and...

6 Lessons

## Inheritance and Traits Lesson Guides

Chapter 1  
Activities



### Chapter 1 Activities

#### Lesson 1.1: Pre-Unit Assessment

- 1 Introducing the Unit
- 2 Writing Initial Explanations
- 3 Introducing the Investigation Notebook
- 4 Previewing the Reference Book

TEACHER-LED DISCUSSION  
WRITING  
TEACHER-LED DISCUSSION  
STUDENT-TO-STUDENT DISCUSSION

#### Lesson 1.2: Blue Whales and Buttercups

- 1 Introducing Asking Questions
- 2 Partner Reading
- 3 Reflecting on Relatedness

TEACHER-LED DISCUSSION  
READING  
TEACHER-LED DISCUSSION

#### Lesson 1.3: Observing Similarities and Differences

- 1 Observing Similarities and Differences in Animals
- 2 Observing Bird Traits
- 3 Thought Swap

STUDENT-TO-STUDENT DISCUSSION  
STUDENT-TO-STUDENT DISCUSSION



HANDS-ON

#### Lesson 1.4: Introducing Species

- 1 Observing Bird Sounds
- 1 Identifying Songbirds
- 2 Sorting Bear Species
- 3 Introducing the Problem Students Will Investigate

TEACHER  
TEACHER-LED DISCUSSION  
HANDS-ON  
TEACHER-LED DISCUSSION

# Hands On Material Organization

Completed for Inheritance  
and Traits

Chapter/Lesson	Activity	Prep Prior	Prep Day of	What to do
1.3	1	X		<b>Prep Prior:</b> For each group of 4: • 1 set of Animal Cards, clipped together (10 cards/set), I put them in envelopes and label them. For each group of 2: 1 set of Bird Cards, clipped together (8 cards/set)
1.4	2	X		<b>Prep Prior:</b> Bird cards from prior lesson, locate the Bear cards. Each pair of students will receive 1 bear card. Here are the bear groupings : • Black bear: 1, 5, 9, 13, 17 • Brown bear: 2, 6, 10, 14, 18 • Spectacled bear: 4, 8, 12, 16, 20 • Sun bear: 3, 7, 11, 15, 19
1.5	1	X		<b>Prep Prior:</b> For each group of 4: 1 set of Elk Mountain Pack Data Cards, clipped together (6 cards/set)
2.4	2	X	X	<b>Prep Prior:</b> Print out Parent 1 and 2 Instructions copymaster. Make two copies of each sheet so you have a total of three sheets of Parent 1 Instructions and three sheets of Parent 2 Instructions. Cut apart each Parent 1 and Parent 2 strip. You should have 18 Parent 1 strips and 18 Parent 2 strips. Each pair of students will receive 1 strip of instructions from each parent. Using a permanent marker, label 1 cup with "Instructions from Parent 1." On the other cup, write "Instructions from Parent 2." Place the respective strips in each cup. Each pair of students will choose one Parent 1 strip of instructions and one Parent 2 strip of instructions from the cups. <b>Prep Day of:</b> Each pair will get three pieces of clay: red, green, and yellow. Each piece of clay should be about 2 inches.
3.1	2	X		<b>Prep Prior:</b> For each group of 4: 1 set of Flamingo Family Data Cards, clipped together (3 cards/set)
3.3	3	X		<b>Prep Prior:</b> For each group of 4: Label 3 cups: cup 1, cup 2, cup 3. Each group will also need 1 bottle of red and 1 bottle of blue food coloring. Note: Each group will need approximately one cup of water for each of the three cups. Teacher will need to provide three stalks of celery (the lighter, inner stalks with leaves intact work best) per group. The length of the celery stalks you will need for the investigation will depend on the thickness of the stalks. Cut off the end of a stalk so the stalk measures approximately 10 inches. Place the stalk in a cup of water to ensure that the stalk does not cause the cup to tip over.
3.4	1	X		Trays from previous days celery experiment
4.3	1	X		<b>Prep Prior:</b> For each group of 4: 1 set of Sparrow Family Data Cards, clipped together (3 cards/set) For each group of 2: crayons and/or color pencils (minimum: gray, brown, black, yellow, pink)*

# 4 Easy Steps to Teaching a lesson



## DIRECTIONS:

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



The screenshot shows a digital interface for 'Lesson 1.1: Pre-Unit Assessment'. At the top, the title 'Lesson 1.1: Pre-Unit Assessment' is displayed against a dark background with a cityscape illustration. Below the title, there is a navigation bar with a '3' icon and the text 'TEACHER-LED DISCUSSION Introducing Investigation Notebooks'. The main content area is divided into three sections: a left sidebar, a central overview, and a right sidebar. The left sidebar contains links: 'Overview', 'Materials & Preparation', 'Differentiation', 'Standards', 'Vocabulary', and 'Unplugged?'. The central section is titled 'Overview' and 'Students' Initial Explanations', with a paragraph of text describing the unit's focus on electrical systems and blackouts. The right sidebar is titled 'Digital Resources' and lists several items: 'Classroom Slides 1.1 | PowerPoint', 'Classroom Slides 1.1 | Google Slides', 'All Projections', 'Pre-Unit Writing: Explaining Why The Lamp Won't Turn On copymaster', and 'Assessment Guide: Interpreting Students' Pre-Unit Explanations About Why the Lamp Won't Turn On'. A 'RESET LESSON' button is located in the top left of the main content area, and a 'GENERATE PRINTABLE LESSON GUIDE' button is in the top right.

# Preparing to Teach

## Lesson-specific differentiation

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

### Differentiation

#### Embedded Supports for Diverse Learners

**Accessing prior knowledge.** This lesson provides an opportunity for students to discuss their own experiences with blackouts. The time reserved for students to share ideas, questions, and experiences related to a blackout allows them to learn from one another. Sharing these initial ideas about blackouts can help students mentally prepare to learn more about the topic. This priming can help reduce the cognitive load of encountering a new topic for all students. This can be particularly beneficial for English learners.

#### Specific Differentiation Strategies for English Learners

**Alternate means of expressing ideas.** Some English learners may experience more success expressing their ideas when provided a few different options. It may be appropriate for these students to express their ideas for the pre-unit assessment using labeled drawings or diagrams rather than providing purely written responses. After students have recorded their responses, you may wish to invite them to elaborate on their responses orally as you record their ideas. It is very appropriate for students to express their ideas in their primary language. Providing students with this opportunity allows them to show what they know about the science concepts, rather than whether or not they can express their understanding of concepts in English. Offering alternate ways of expressing understanding can ensure that you will have a baseline from which to measure students' growth of understanding over the course of the unit.

**Academic language support.** Developing science language and literacy is a complex process that includes, yet is broader than, vocabulary knowledge and usage. Science texts include general academic and discipline-specific vocabulary, and they also include disciplinary ways of using language, such as grammatically complex sentences and texts that are structured in more academic ways than everyday language. These broader aspects of academic language in science can be highlighted to students. See the Science Framework (Chapter 10), the ELA-ELD Framework (Chapter 2), and the ELD Standards (Chapter 5) for guidance on how to support students to develop science disciplinary language and literacy.

# 4 Easy Steps to Teaching a lesson

## DIRECTIONS:

1. Download the **Classroom Slides** for **Lesson 1.1** and review them.
2. Read the **Overview**.
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4. Read the **Differentiation** document.

The screenshot shows the interface for Lesson 1.1: Pre-Unit Assessment. At the top, the title "Lesson 1.1: Pre-Unit Assessment" is displayed. Below the title, there is a navigation bar with a "3" icon and the text "TEACHER-LED DISCUSSION Introducing Investigation Notebooks".

On the left side, there is a sidebar with a "RESET LESSON" button and a list of links: "Overview", "Materials & Preparation", "Differentiation", "Standards", "Vocabulary", and "Unplugged?".

On the right side, there is a "GENERATE PRINTABLE LESSON GUIDE" button. Below this, there is a section titled "Digital Resources" with a list of links: "Classroom Slides 1.1 | PowerPoint", "Classroom Slides 1.1 | Google Slides", "All Projections", "Pre-Unit Writing: Explaining Why The Lamp Won't Turn On copymaster", and "Assessment Guide: Interpreting Students' Pre-Unit Explanations About Why the Lamp Won't Turn On".

Four numbered arrows indicate the steps:

- Arrow 1 points to the "Classroom Slides 1.1 | PowerPoint" link in the Digital Resources section.
- Arrow 2 points to the "Overview" link in the sidebar.
- Arrow 3 points to the "Materials & Preparation" link in the sidebar.
- Arrow 4 points to the "Differentiation" link in the sidebar.

Lesson ____		Activity Overview		From the Lesson at a glance in the overview
What is the purpose of this lesson?		Activity 1 (##min)		
What will students learn?		Activity 2 (##min)		
3-D Statement (identify SEP, CCC, and DCI):		Activity 3 (##min)		
Student Resources:		Activity 4 (##min)		
Assessment Opportunities:		Activity 5 (##min)		



Lesson <u>1.2</u>	Activity Overview	
What is the purpose of this lesson?	Activity 1 (10 min)	Introducing the Problem
What will students learn?	Activity 2 (10 min)	Discussing Initial Ideas
3-D Statement (identify SEP, CCC, and DCI):	Activity 3 (20 min)	Making Blocks Move
Student Resources:	Activity 4 (20 min)	Sharing Observations
Assessment Opportunities: n/a	Activity 5 (## min)	

(Make your own copy first before planning)

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

## Digital Resources



Classroom Slides 1.1 | PowerPoint



Classroom Slides 1.1 | Google Slides

Lesson ____	Activity Overview	
<p>What is the purpose of this lesson?</p> <p>The purpose of this lesson is to introduce students to the concept of systems and to prepare them to investigate the electrical system, its parts, and their functions.</p>	<p><b>Activity 1</b> <b>(5 min)</b></p>	<p><b>Reflecting on the Unit Problem</b></p>
<p>What will students learn?</p> <p>Synthesizing can help readers understand informational text. There are many kinds of systems in the world around us. Scientists and engineers gather information from books</p>	<p><b>Activity 2 (15 min)</b></p>	<p><b>Observing a Simple System</b></p>
<p>3-D Statement (identify SEP, CCC, and DCI):</p> <p>Students read the book <i>Systems</i> to obtain information about what a system is and how parts within a system interact (systems and system models).</p>	<p><b>Activity 3 (15 min)</b></p>	<p><b>Introduction to Synthesizing</b></p>
<p>Student Resources:</p> <p>1 copy of <i>Systems</i> oer pairs  <i>Energy Conversions</i> Investigation Notebook (pages 3-5)  optional: 1 copy of the Chapter 1 Home Investigation: Blackout Interview student sheet</p>	<p><b>Activity 4 (25 min)</b></p>	<p><b>Reading: Systems</b></p>
<p>Assessment Opportunities:</p> <p>Activity 4</p>	<p><b>Activity 5</b> <b>(##min)</b></p>	

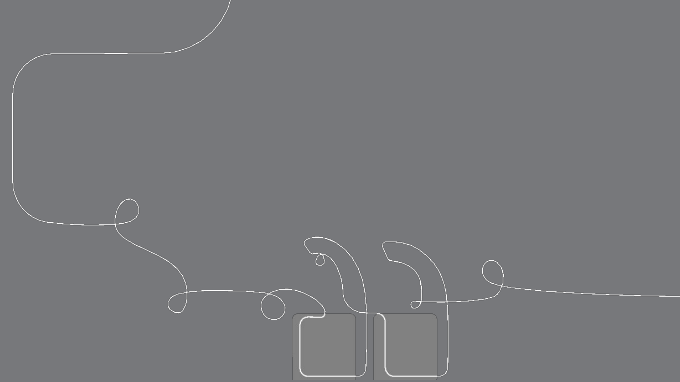
# 4 Easy Steps to Teaching a lesson

## DIRECTIONS:

1. Download the **Classroom Slides** for **Lesson 1.1** and review them.
2. Read the **Overview**.
3. Explore the **Materials & Preparation** document.
4. Read the **Differentiation** document.
5. If you have time, navigate to **Lesson 1.3** and repeat steps 1-4.

The screenshot shows the 'Lesson 1.1: Pre-Unit Assessment' interface. At the top, the title 'Lesson 1.1: Pre-Unit Assessment' is displayed. Below the title, there is a navigation bar with a 'RESET LESSON' button and a list of links: Overview, Materials & Preparation, Differentiation, Standards, Vocabulary, and Unplugged?. To the right of the navigation bar is a 'GENERATE PRINTABLE LESSON GUIDE' button. The main content area is titled 'Overview' and contains the text 'Students' Initial Explanations'. Below this text is a paragraph describing the unit's focus on electrical systems and blackouts. On the right side of the interface, there is a 'Digital Resources' section with links to 'Classroom Slides 1.1 | PowerPoint', 'Classroom Slides 1.1 | Google Slides', 'All Projections', 'Pre-Unit Writing: Explaining Why The Lamp Won't Turn On copymaster', and 'Assessment Guide: Interpreting Students' Pre-Unit Explanations About Why the Lamp Won't Turn On'. Four numbered orange arrows point to specific elements: Arrow 1 points to the 'Classroom Slides 1.1 | PowerPoint' link; Arrow 2 points to the 'Overview' link in the navigation bar; Arrow 3 points to the 'Materials & Preparation' link in the navigation bar; and Arrow 4 points to the 'Differentiation' link in the navigation bar.

# Questions?





## Plan for the day: Part 2

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

# Additional resources

## Welcome, caregivers!

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

[Para acceder a este sitio en español haga clic aquí.](#)

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



Grades 6-8



[Caregivers](#)

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



# Welcome to Amplify Science!

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

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

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



# Program Hub

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

The screenshot shows the Amplify Science Program Hub interface. At the top, the Amplify Science logo is circled in orange. Below it, the title 'Animal and Plant Defenses' is displayed with a large illustration of a sea turtle. A sidebar on the left contains a 'JUMP DOWN TO UNIT GUIDE' button and two chapter cards. The first card, 'Chapter 1: How does Spruce the Sea Turtle do what she needs to do to survive?', is circled in orange and shows '5 Lessons'. The second card, 'Chapter 2: How does Spruce the Sea Turtle do what she needs to do to survive?', is partially visible. At the bottom left, there is a language selector button labeled 'Español'.

The screenshot shows the Amplify Science mobile app interface. The top navigation bar includes the Amplify Science logo, a user profile section for 'Hello Teacher Martin', and a 'Log Out' button. Below this is a 'Go To My Account' button and a 'Classroom Language Settings' button. The main content area features a grid of icons for various resources: 'CALIFORNIA INTEGRATED', 'ELA Professional Learning', 'ELA Resources', 'Inquiry Experiences', 'Program Hub', 'Science Program Guide', 'FLORIDA EDITION', and 'Help'. The 'Program Hub' icon is circled in orange.

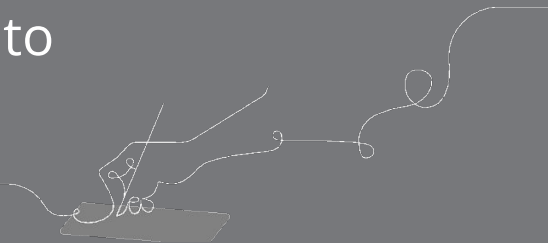
The screenshot shows the Amplify Science Program Hub desktop interface. The top navigation bar includes the Amplify Science logo, a 'HELP CENTER' link, and a 'LAUNCH PROGRAMS' button. The main content area features a 'Welcome Science Educators!' message, followed by a paragraph about the hub's purpose and a link to a tour. Below this are three resource sections: 'Remote and hybrid learning resources' (circled in orange), 'Professional Learning Resources', and 'Additional Unit Materials'. Each section has a corresponding icon and a brief description.

The screenshot shows the Amplify Science Program Hub desktop interface, specifically the 'Pushes and Pulls' section. The top navigation bar includes the Amplify Science logo, a 'HELP CENTER' link, and a 'LAUNCH PROGRAMS' button. The main content area features a 'Welcome Science Educators!' message, followed by a paragraph about the hub's purpose and a link to a tour. Below this are three resource sections: 'Remote and hybrid learning resources' (circled in orange), 'Professional Learning Resources', and 'Additional Unit Materials'. Each section has a corresponding icon and a brief description.

# Overarching goals

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

- ☑ Navigate the Amplify Science curriculum.
- ☑ Describe what teaching and learning look like in Amplify Science.
- ☑ Apply the program essentials to prepare to teach.



# Closing reflection

Based on our work today in Part 2, share:

**Head:** something you'll keep in mind

**Heart:** something you're feeling

**Feet:** something you're planning to do

# 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.



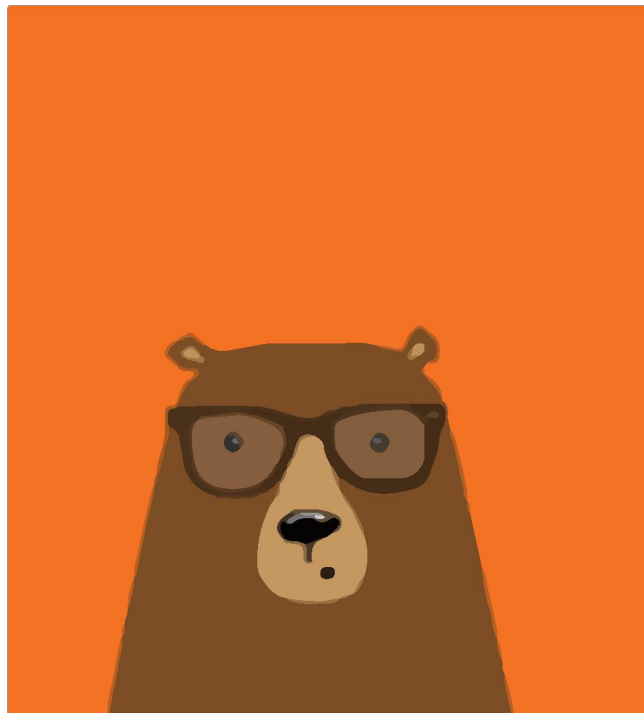
[help@amplify.com](mailto:help@amplify.com)



800-823-1969



Amplify Chat



# Please provide feedback!

**Presenter name:**

**Workshop title:**

Part 1: Relaunching the Standard Curriculum

Part 2: Guided Planning (Planning for a Lesson)

**Modality:**

Remote

