

Amplify Science

Unit Internalization / Guided Planning

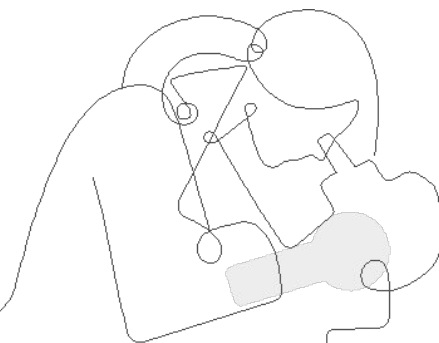
Grade 3, Unit 2: Inheritance and Traits

Part 1

School/District Name: LAUSD

Date:

Presented by:



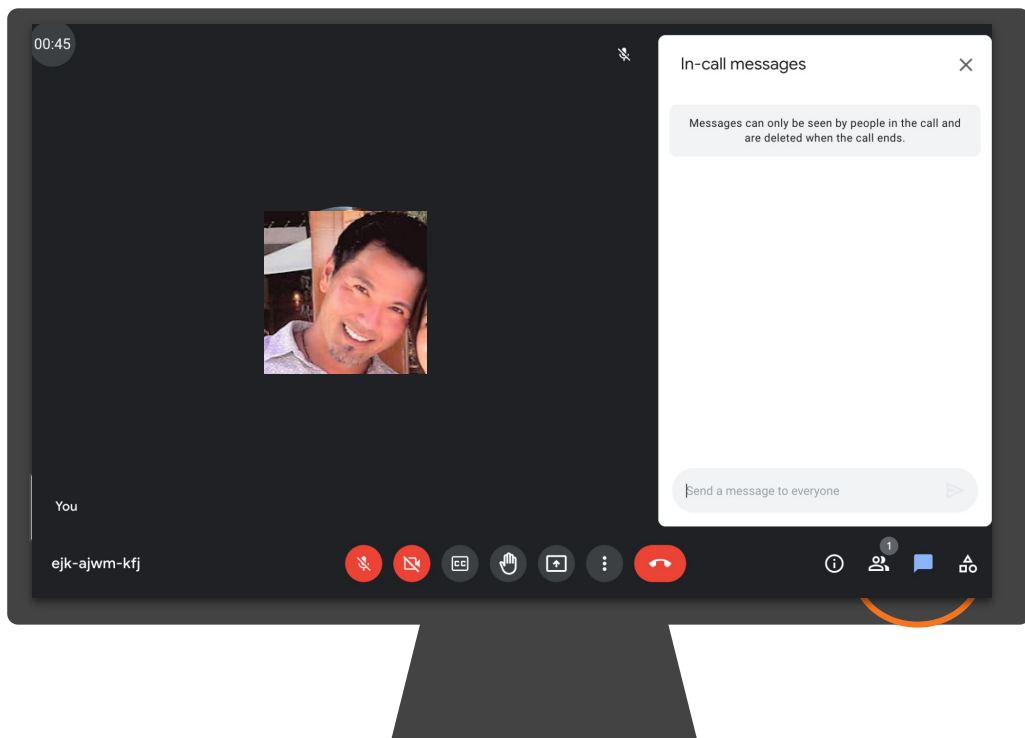
Thought Swap!

How is it going so far?

Question 1: Question 1:

What is one **success** you've had with teaching *Balancing Forces*?

Question 2: What is something that has been **challenging** for you and how have you worked to overcome that challenge?



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.

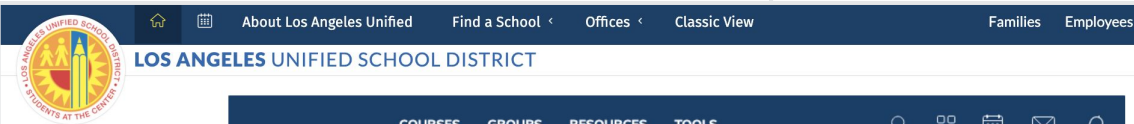
We share your goal of **inspiring all students to think deeply, creatively, and for themselves**.

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.

Schoolology



[← Back to Schoolology Home Page](#)

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, Schoolology.

For information on District-approval policies and procedures, please visit: [udipp.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.

Publisher Name Starts With

Content Area All

Grade Level All

Content Type All

Textbook Title Starts With

Submit

All Amplify Products



LMS App Center

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- 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](#)

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
Creative

Vendor Support Desk:
P: 800.823.9969
E: help@amplify.com
S: amplify.com/support/
Textbook Title(s):
NA



Vendor Support Desk:
P: 800.823.9969
E: help@amplify.com
S: amplify.com/support/
Textbook Title(s):
NA

op is for
only)

 mCLASS Educators: To view or make changes to your account go to mclass.amplify.com.

Hi, Terin

Classes

Programs & Licenses

Account Settings

Help Center 



[CKLA Hub](#)



[CKLA Resource Site](#)



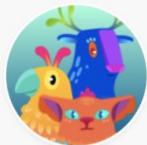
[mCLASS Assessment](#)



[mCLASS Reporting](#)



[Reading 6-8](#)



[Reading K-5](#)



[Science](#)



[Vocabulary](#)



Amplify. on Schoology

2021-2022



Join Amplify Science Schoology Group

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

Navigation Temperature Check

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

1 = Extremely Uncomfortable

2 = Uncomfortable

3 = Mild

4 = Comfortable

5 = Extremely Comfortable

Part 1

Overarching goals

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





Plan for the day: Part 1

- Introduction and Framing
- NGSS & 3D Learning
- Phenomenon-based Instruction
- Unit Internalization
- Additional Resources
- Closing



THE LAWRENCE
HALL OF SCIENCE

UNIVERSITY OF CALIFORNIA, BERKELEY

+

Amplify.

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

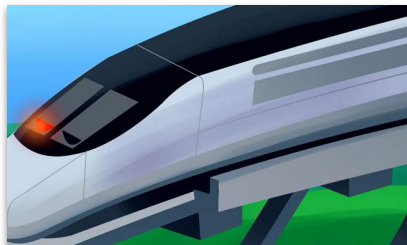
Grade 5

- 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

Year at a Glance: Grade 3



Balancing Forces

Domain: Physical Science

Unit type: Modeling

Student role:
Engineers

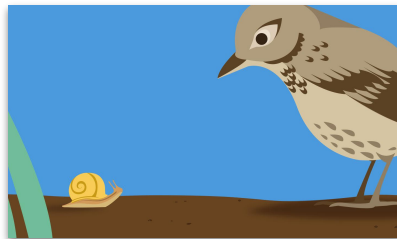


Inheritance and Traits

Domain: Life Science

Unit type: Investigation

Student role: Wildlife biologists

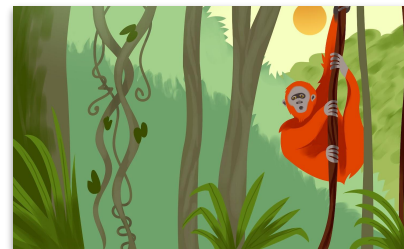


Environments and Survival

Domain: Life Science

Unit type: Engineering Design

Student role:
Biomimicry engineers



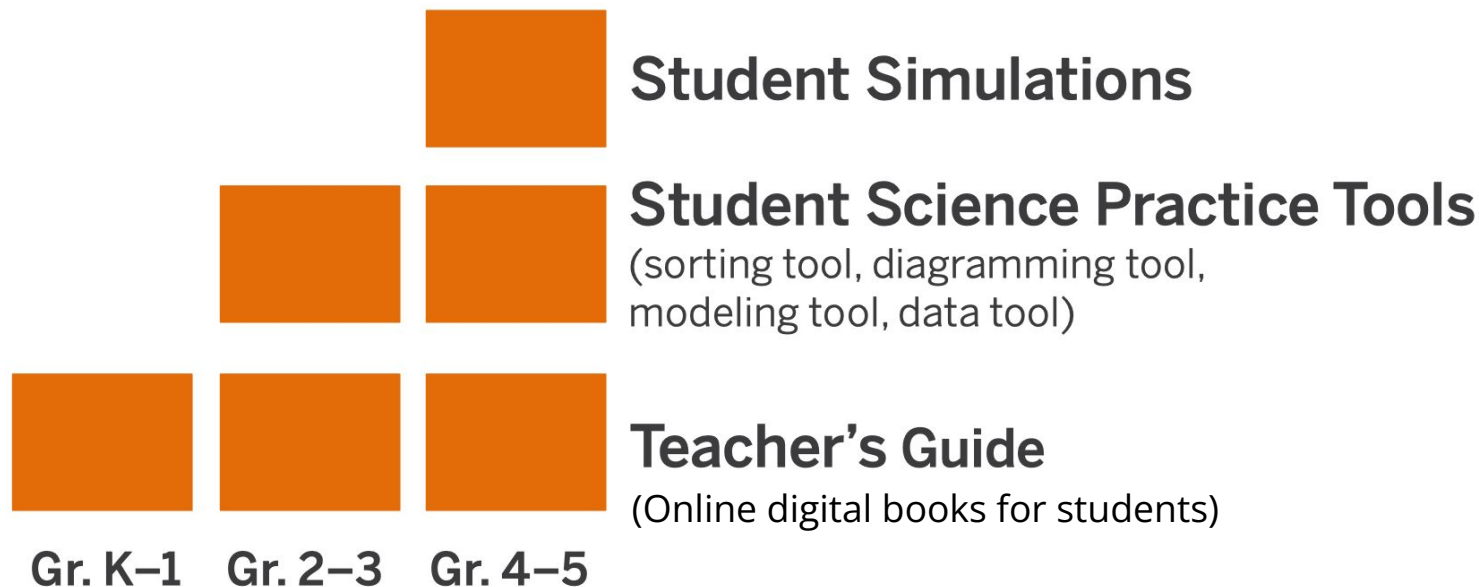
Weather and Climate

Domain: Earth and Space Science

Unit type:
Argumentation

Student role:
Meteorologists

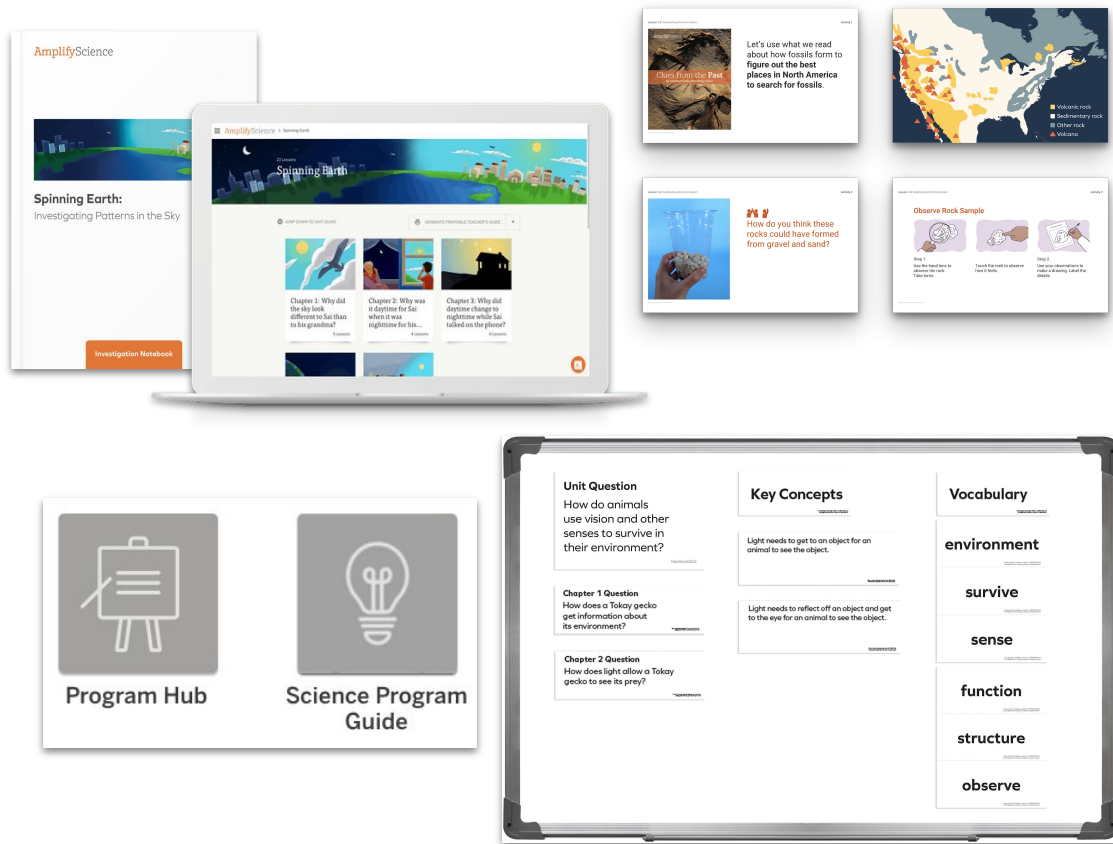
What are the digital components of Amplify Science Elementary?



K-5 Program components

Teacher materials

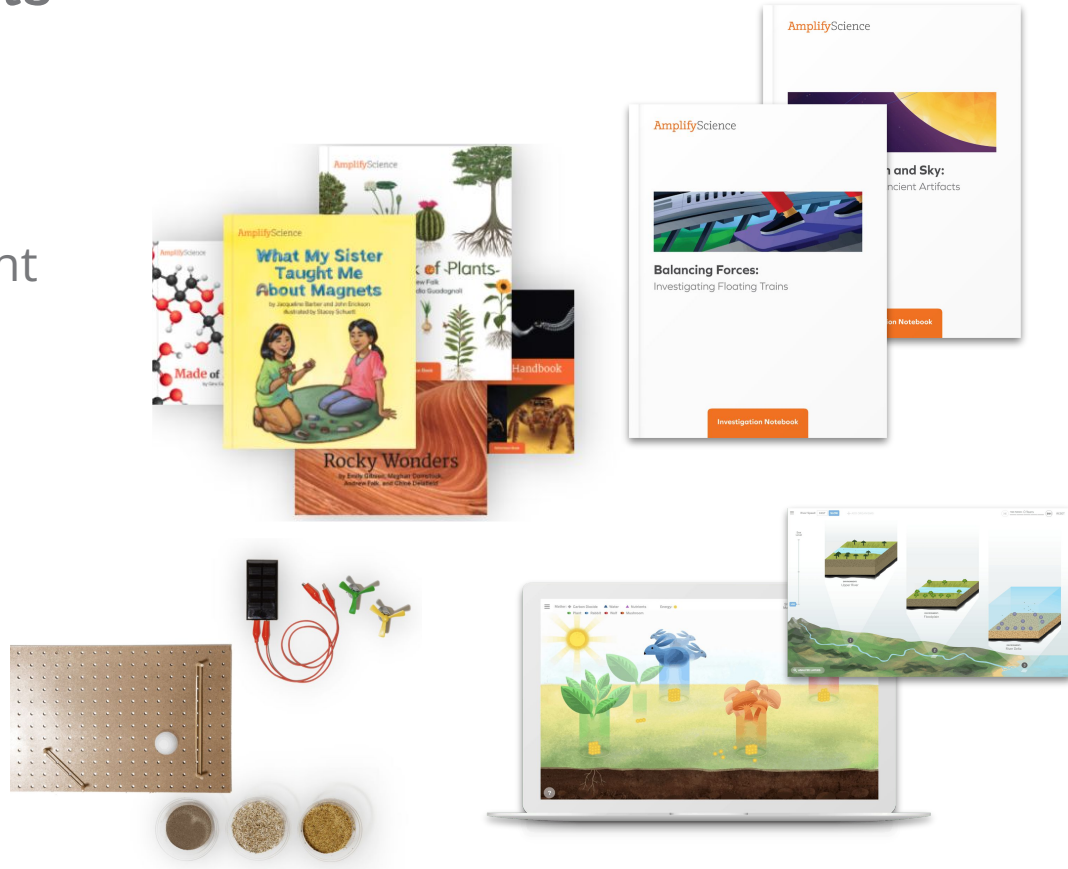
- Teacher's Guide (print and digital)
- Classroom Slides
- Classroom wall materials
- Embedded assessments
- Program Guide
- Program Hub
- Amplify Help Site



K-5 Program components

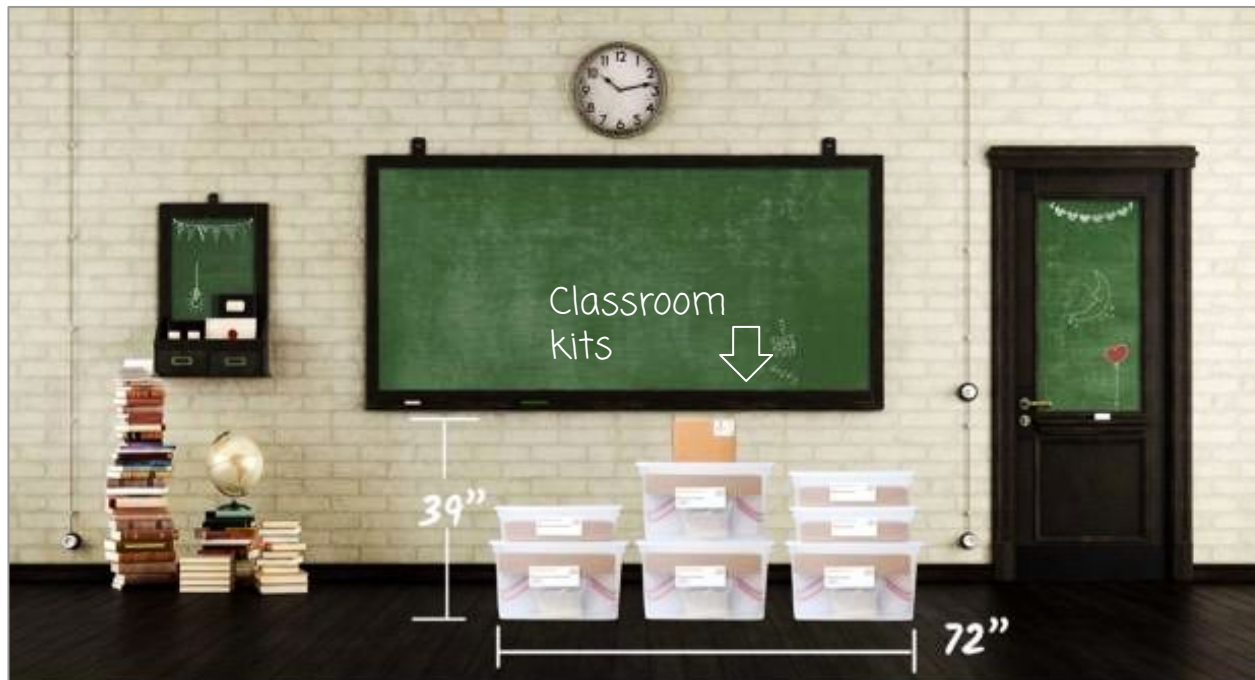
Student materials

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



K-5 Program components

Classroom kits

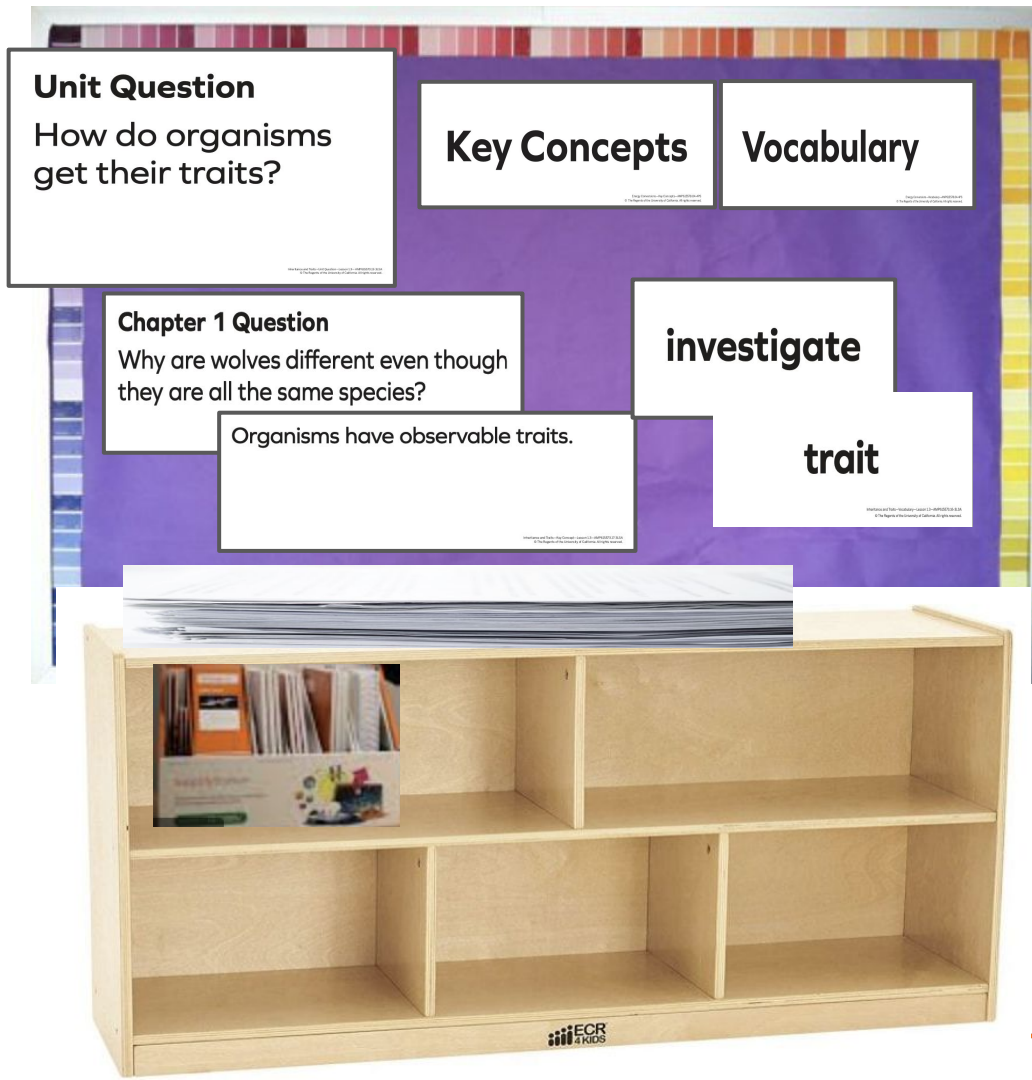


Classroom kits

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

Unpacking the Kit

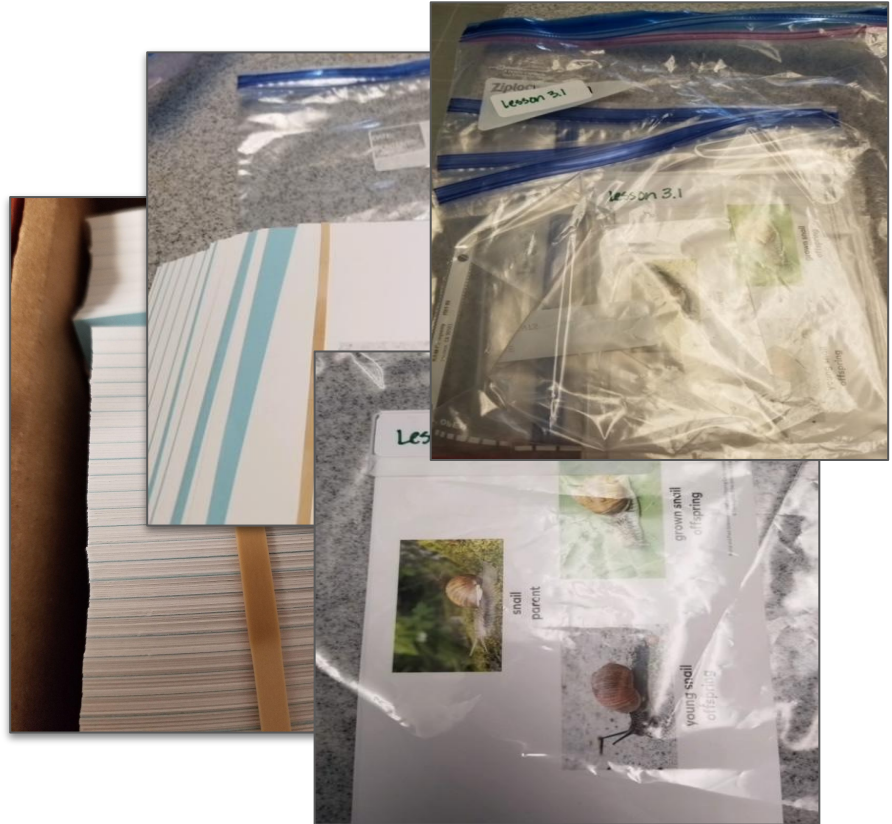
- Pull out the unit question, key concepts and vocabulary materials.
- Place them on the top of the table or bookcase below your science board
- Take books out of kit and place in the bookcase or on the table. (Always collect books after each lesson use. Return to bookcase so they are easily accessible.)



Cards for games, sorting or matching activities

Organization tips:

- Separate and place in envelopes or bags (or clip together)
- Label the envelopes or bags with the name and lesson # and activity # (ex. Lesson 2.4, Act. 1)
- Put each envelope or bag (1 set) into a bigger bag and label



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 is titled 'Amplify Science- Elementary' and lists several resources. The first resource is 'NGSS Resources' (purple folder icon), added by MARIA ARTEAGA on Jun 1, 2021. The second resource is 'Google Drive link for K-6 Phenomenal Notebooking Resources' (pink folder icon), added by INYOUNG LEE on Feb 1, 2021. The third resource is 'Amplify_Science_Shared_Logins.pdf' (PDF icon), added by Señor Fernando REYES on Aug 9, 2021. The fourth resource is 'Lesson Prep Videos' (green folder icon, 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

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 >
New! Lesson Prep Videos	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

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)

[illegible]

Hands On Material Organization

Completed for Inheritance and Traits

A1		fx	Directions						
	A	B	C	D	E	F	G	H	
1	Directions								
2	1. Open the Digital Lesson Guides Only page 7 from the Unit Landing page or go the Print TE to page 31. (Chapter 1 Activities)								
3	2. Look for the lessons with Hands On.								
4	HANDS-ON								
5	3. Note in the table below.								
6	4. Review the materials and preparation to determine if it can be prepared prior to the lesson or on the day of the lesson.								
7	5. Use this same procedure for each Chapter. (Go to the Chapter Activities Contents)								
8									
9	Chapter/Lesson	Activity	Prep Prior	Prep Day of	What to do				
10	1.3	1	X		Prep Prior: 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)				
11	1.4	2	X		Prep Prior: 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				
12	1.5	1	X		Prep Prior: For each group of 4: 1 set of Elk Mountain Pack Data Cards, clipped together (6 cards/set)				
13					Prep Prior: 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				

- 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

Questions?





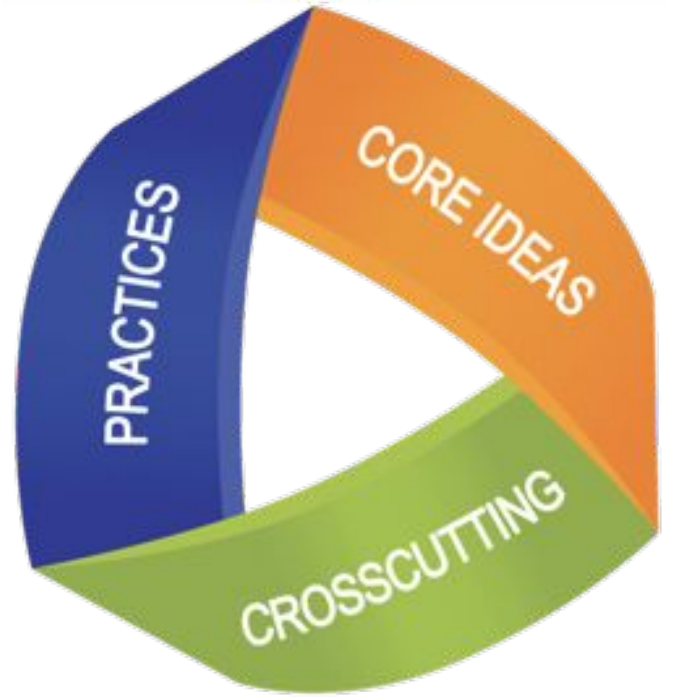
Plan for the day: Part 1

- Introduction and Framing
- NGSS & 3D Learning
- Phenomenon-based Instruction
- Unit Internalization
- Additional Resources
- Closing

NGSS - Three dimensional learning

Evaluate your knowledge

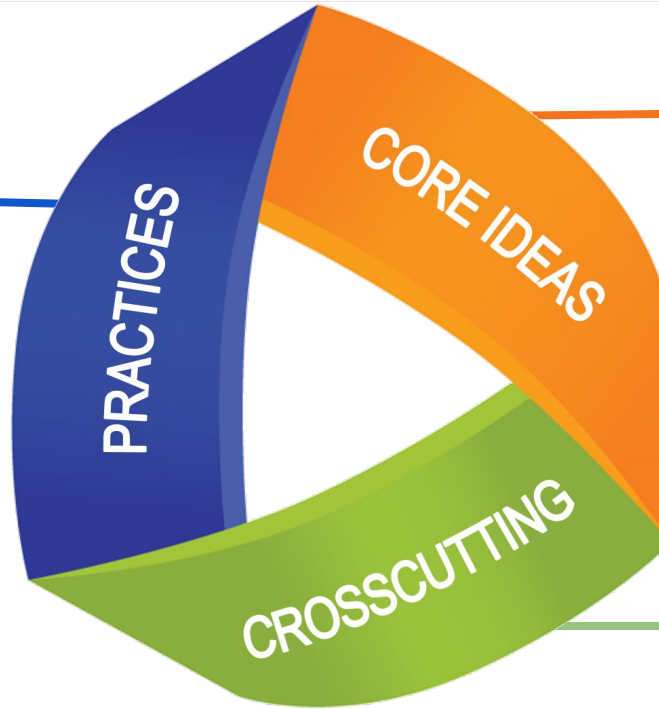
- On a scale of 0-5, how would you rate your familiarity with 3-D learning?



Figuring out Phenomena

Using 3-D teaching and learning

What scientists do
Science and
Engineering Practices



What scientists
want to know
Disciplinary Core
Ideas

How scientists
think
Crosscutting Concepts



Three-dimensional learning

Reflection

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

Lesson 3.2

Students use a model to figure out the relationship between different parts of a habitat system in order to construct their understanding about how animals can help move seeds around a habitat (systems and system models).



Science and Engineering Practices

inquiry

1. Asking questions (for science) and defining problems (for engineering)

2. Developing and using models

3. Planning and carrying out investigations

math

4. Analyzing and interpreting data

5. Using mathematics and computational thinking

language

6. Constructing explanations (for science) and designing solutions (for engineering)

7. Engaging in argument from evidence

8. Obtaining, evaluating, and communicating information



Plan for the day: Part 1

- Introduction and Framing
- NGSS & 3D Learning
- Phenomenon-based Instruction
- Unit Internalization
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- Closing

Next Generation Science Standards

Phenomenon-based learning and teaching

A scientific phenomenon is an **observable event** that occurs in the universe that we can use science ideas to explain or predict.

Comparing topics and phenomena

Topic-based	Phenomenon-based
Chemical reactions	There's a reddish-brown substance in a town's tap water.

Next Generation Science Standards

How might learning be different?

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

Comparing topics and phenomena

A shift in science instruction

from learning about
(like a student)



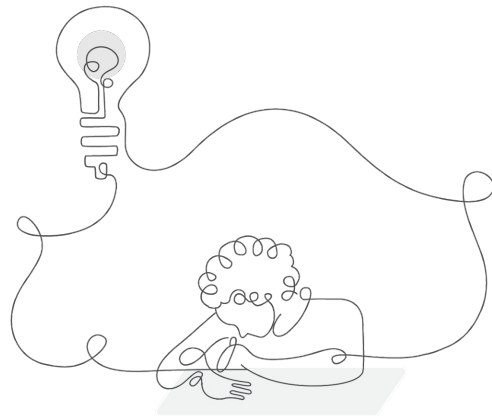
to figuring out
(like a scientist)

Previewing the unit

Introducing the phenomenon

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

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





We're about to begin a new science unit.

You will take on the role of **wildlife biologists**. You will investigate many of the things that scientists like wildlife biologists do.



Take a moment to look at these pictures of wildlife biologists.



What do you think
wildlife biologists study?



Let's look at more pictures of wildlife biologists.



Where do you think
wildlife biologists work?





As wildlife biologists, you will study **wolves** in Graystone National Park.

There is a mystery about one particular wolf that you will work to solve.

Amplify Science

Anchoring phenomenon

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





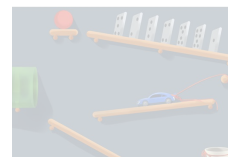
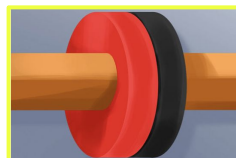
Plan for the day: Part 1

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- Closing

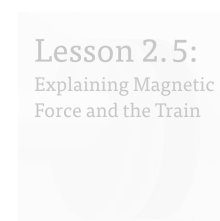
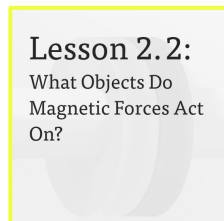
Unit



Chapters



Lessons



Activities



K-5 Navigation structure

Year (each year includes 3–4 units)



Units (each unit includes 3–6 chapters)




Chapters (each chapter includes 2–10 lessons)



Lessons (each lesson includes 2–5 activities)




Let's Go Live!



CURRICULUMCLASSWORKREPORTING

Science California > Inheritance and Traits



22 Lessons

Inheritance and Traits

Printable Teacher Guide

Unit Overview

Chapters

Printable Resources

Planning for the Unit

Teacher References

Offline Preparation

Unit Overview


What's in This Unit?

How do organisms get their traits? This early age, such as *Why does my sibling family? Why is my sister a faster runner*, exploring patterns in the traits of organ wildlife biologists helping a class of stu

Read more

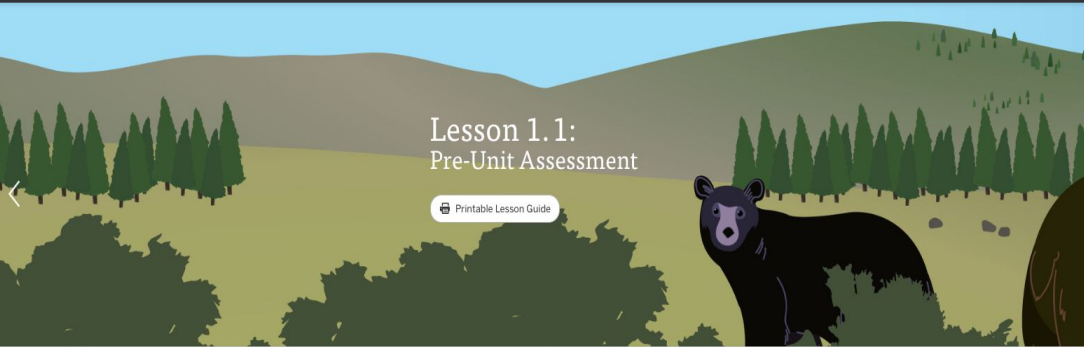
Chapters

Chapter 1: Why are wolves different even though they are all the same species?



CURRICULUMCLASSWORKREPORTING

Science California > Inheritance and Traits > Lesson 1.1



Lesson 1.1: Pre-Unit Assessment

Printable Lesson Guide

Lesson Brief
(4 Activities)

1 TEACHER-LED DISCUSSION
Introducing the Unit

2 WRITING
Writing Initial Explanations

3 TEACHER-LED DISCUSSION
Introducing the Investigation Notebook

4 STUDENT-TO-STUDENT
DISCUSSION
Previewing the Reference Book

RESET LESSON

Overview

Materials & Preparation

Differentiation

Standards

Vocabulary

Unplugged?

Overview

Students' Initial Explanations

Students are introduced to the *Inheritance and Traits* unit and are invited to think about what wildlife biologists study. Then, students write their initial explanations about similarities and differences between fish. Students' written explanations 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 Patterns, 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. This three-dimensional

EnglishEspañol

Digital Resources

- Classroom Slides 1.1 | PowerPoint
- Classroom Slides 1.1 | Google Slides
- All Projections
- Partner Reading Guidelines
- Pre-Unit Writing: Explaining Similarities and Differences Between Fish copymaster
- Assessment Guide: Interpreting Students' Pre-Unit Explanations About Similarities and Differences Between Fish

Amplify

Navigation summary

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



Unit Level resources

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

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

The screenshot displays the Amplify website interface for the 'Energy Conversions' unit. The top navigation bar includes 'Amplify', 'CURRICULUM', 'CLASSWORK', 'REPORTING', 'PROGRAMS & APPS', and 'NATIONALSCIENCE TEACHER'. The left sidebar lists navigation options: 'Unit Overview' (selected), 'Chapters', 'Printable Resources', 'Planning for the Unit', 'Teacher References', and 'Offline Preparation'. The main content area is titled 'Unit Overview' and includes a section 'What's in This Unit?' with a paragraph about the electrical system and a 'Read more' link. Below this is a 'Chapters' section for 'Chapter 1: What happened to the electrical system the night of the blackout?'. It features six lesson cards: 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, and Lesson 1.6 Writing an Argument About the Blackout. The bottom left shows language options 'English' and 'Español', and the bottom right has a chat icon.

Key Unit Documents for Unit Planning

22 Lessons

Animal and Plant Defenses

Printable Teacher Guide

- Unit Overview
- Chapters
- Printable Resources
- Planning for the Unit
- Teacher References
- Offline Preparation

Unit Overview

What's in This Unit

Earth is inhospitable to most life forms. Each of these kinds of organisms has evolved different ways of getting food, water, and shelter. We will explore the function of these defenses.

[Read more](#)

Chapters

- Chapter 1: Pre-Unit Assessment
- Chapter 2: Tortoise Parts
- Chapter 3: Animal and Plant Structures

Unit Overview

What's in This Unit?

Earth is inhospitable to most life forms. Each of these kinds of organisms has evolved different ways of getting food, water, and shelter. We will explore the function of these defenses.

[Read more](#)

Printable Resources

- 3-D Assessment Objectives
- Copymaster Compilation
- Eliciting and Leveraging Students' Prior Knowledge, Personal Experiences, and Cultural Backgrounds
- Multi-Language Glossary
- Print Materials (8.5" x 11")
- Coherence Flowcharts
- Crosscutting Concept Tracker
- Investigation Notebook
- NGSS Information for Parents and Guardians
- Print Materials (11" x 17")

LESSON 1.1 Pre-Unit Assessment

LESSON 1.2 Tortoise Parts

LESSON 1.3 Animal and Plant Structures

Key Unit Documents for Unit Planning

The image shows a screenshot of a digital unit planning interface for a unit titled "Inheritance" (22 Lessons). The interface is divided into several sections, with arrows highlighting key documents for unit planning.

Left Sidebar (Unit Overview):

- Unit Overview
- Chapters
- Printable Resources
- Planning for the Unit
- Teacher References
- Offline Preparation

Unit Overview Section:

- Unit Map
- Progress Build
- Materials and Preparation
- Science Background
- Standards at a Glance
- Teacher References
- Lesson Overview Compilation
- Standards and Assessments
- 3-D Statement
- Assessment System
- Embedded Formative Assessments
- Books in This Unit
- Apps in This Unit
- Opportunities for Extensions
- Flexextensions in This Unit
- Offline Preparation

Printable Resources Section:

- 3-D Assessment Objectives
- Copymaster Compilation
- Eliciting and Leveraging Students' Prior Knowledge, Personal Experiences, and Cultural Backgrounds
- Investigation Notebook
- NGSS Information for Parents and Guardians
- Print Materials (11" x 17")
- Coherence Flowcharts
- Crosscutting Concept Tracker
- Flexextension Compilation
- Multi-Language Glossary
- Print Materials (8.5" x 11")

Unit Level Section:

Students investigate the variation between similar organisms (patterns) and how traits that depict parents and offspring are

[Read more >](#)

Key Unit Documents for Unit Planning

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Unit Level Section:

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[Read more >](#)

Core Unit Planning & Internalization

Unit Title:		1
Overview <small>[Resources: Unit Overview, Teacher's Guide, Coherence Flowchart, Unit Map, 3-D Statements]</small>		
What is the phenomenon/real-world problem students are investigating in your unit?	2	Student Role:
Unit Question:	4	Relationship between the Unit Phenomenon and Unit Question:
By the end of the unit, students figure out...		6
How do students engage with three-dimensional learning to figure out the phenomenon/real-world problem in your unit?		7

Unit Guide resources:

- Unit Overview
- Unit Map
- *Coherence Flowchart*

Unit Guide resources:

- Lesson Overview Compilation
- Unit Overview

Unit Guide resources:

- Unit Map

Unit Guide resources:

- 3D Statements at the Unit Level

Core Unit Planning & Internalization

Unit Title:

Inheritance and Traits

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?

What is the origin of the traits of Wolf 44 - a wolf that appears to be different from the rest of the pack?

Student Role:

Wildlife Biologists

Unit Question:

How do organisms get their traits?

Relationship between the Unit Phenomenon and Unit Question:

By exploring similarities and variations in the traits of many different organisms, students are able to draw conclusions of how Wolf 44 got its traits.

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

Organisms get their traits from parents. Traits can also be determined by the environment. Sometimes traits can be determined by both. Inheritance and the environment.

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

Students investigate the variation between similar organisms and how traits that depict parents and offspring are determined.



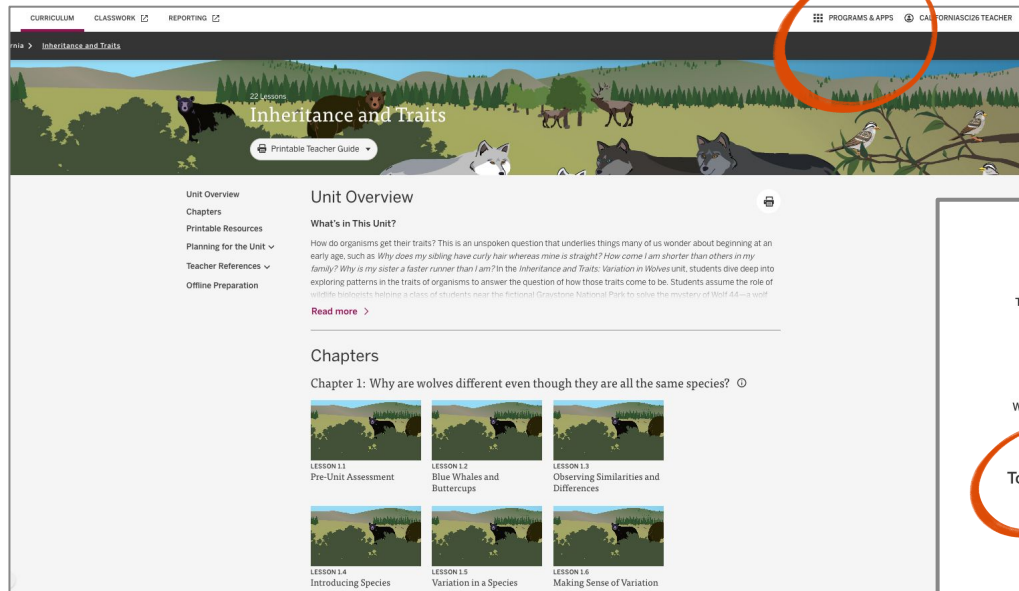
Questions?



Plan for the day: Part 1

- Introduction and Framing
- NGSS & 3D Learning
- Phenomenon-based Instruction
- Unit Internalization
- **Additional Resources**
- Closing

Navigating to the Student Apps page



CURRICULUM CLASSWORK REPORTING PROGRAMS & APPS CA: DNRNASC026 TEACHER

Unit Overview

Chapters

Printable Resources

Planning for the Unit

Teacher References

Offline Preparation

Unit Overview


What's in This Unit?

How do organisms get their traits? This is an unspoken question that underlies things many of us wonder about beginning at an early age, such as *Why does my sibling have curly hair whereas mine is straight? How come I am shorter than others in my family? Why is my sister a faster runner than I am?* In the *Inheritance and Traits: Variation in Wolves* unit, students dive deep into exploring patterns in the traits of organisms to answer the question of how those traits come to be. Students assume the role of *Wolves* by exploring how a class of students near the fictional *Carsonville National Park* to solve the mystery of *Wolf 64*—a wolf.


[Read more >](#)

Chapters


Chapter 1: Why are wolves different even though they are all the same species? ⓘ




LESSON 1.1
Pre-Unit Assessment




LESSON 1.2
Blue Whales and Buttercups




LESSON 1.3
Observing Similarities and Differences



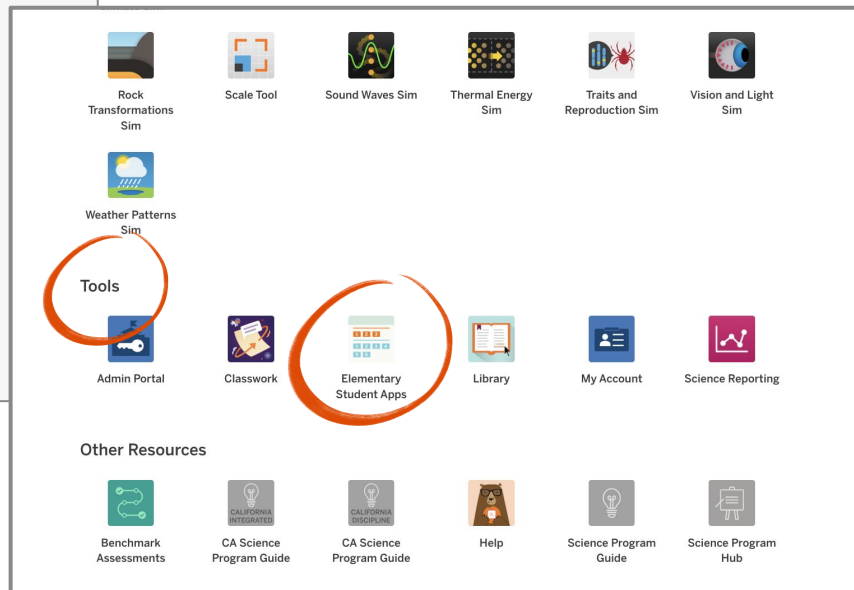
LESSON 1.4
Introducing Species



LESSON 1.5
Variation in a Species



LESSON 1.6
Making Sense of Variation



Rock Transformations Sim

Scale Tool

Sound Waves Sim

Thermal Energy Sim

Traits and Reproduction Sim

Vision and Light Sim

Weather Patterns Sim

Tools

Admin Portal

Classwork

Elementary Student Apps

Library

My Account

Science Reporting

Other Resources

Benchmark Assessments

CA Science Program Guide

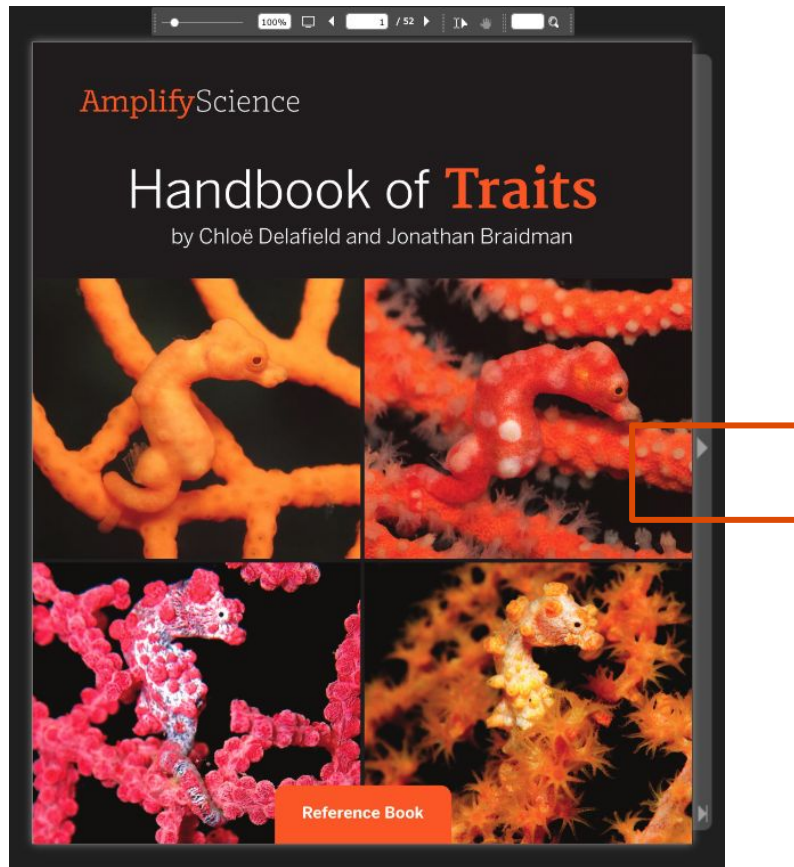
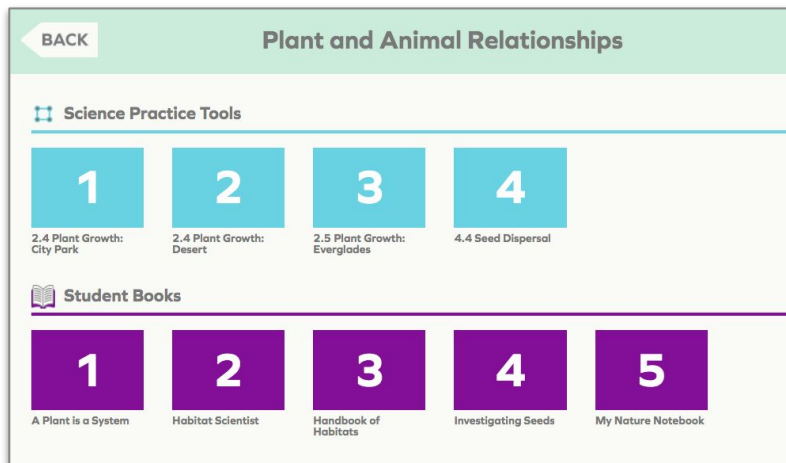
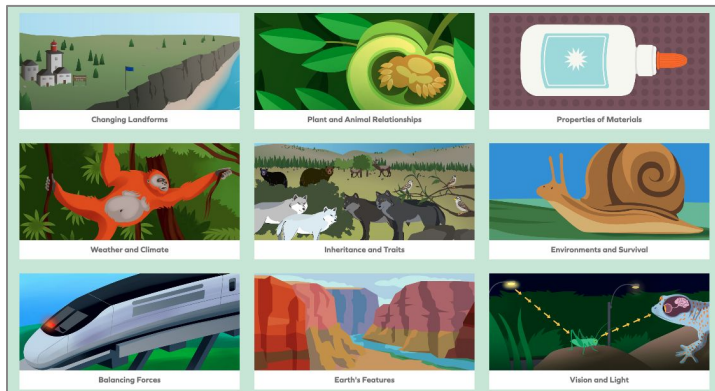
CA Science Program Guide

Help

Science Program Guide

Science Program Hub

Student Apps page and accessing the book



Program Hub

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

CURRICULUM CLASSWORK REPORTING PROGRAMS & APPS CALIFORNIA SCIENCE TEACHER

Inheritance and Traits

22 Lessons

Printable Teacher Guide

Unit Overview
Chapters
Printable Resources
Planning for the Unit
Teacher References
Offline Preparation

Unit Overview

What's in This Unit?

How do organisms get their traits? This is an unspoken question that underlies things many of us wonder about beginning at an early age, such as: Why does my sibling have curly hair whereas mine is straight? How come I am shorter than others in my family? Why is my sister a faster runner than I am? In the Inheritance and Traits: Variation in Wolves unit, students dive deep into exploring patterns in the traits of organisms to answer the question of how those traits come to be. Students assume the role of wildlife biologists helping a class of students near the National Grand Canyon National Park to solve the mystery of Wolf AA—a wolf.

[Read more](#)

Chapters

Chapter 1: Why are wolves different even though they are all the same species?

LESSON 1.1
Pre-Unit Assessment

LESSON 1.2
Blue Whales and Buttercups

LESSON 1.3
Observing Similarities and Differences

LESSON 1.4
Introducing Species

LESSON 1.5
Variation in a Species

LESSON 1.6
Making Sense of Variation

Amplify CURRICULUM CLASSWORK REPORTING PROGRAMS & APPS NATIONAL SCIENCE TEACHER

Science

Units

Program: 4th Grade Science Eng/Esp

Units

Energy Conversions
22 Lessons

Motion and Light
22 Lessons

Welcome Science Educators!

The Amplify Science Program Hub was created to provide you with resources, tools, and advice for all stages of your implementation. Want a tour? [Click here!](#)

Remote and hybrid learning resources
Amplify Science@Home makes remote and hybrid learning easier.

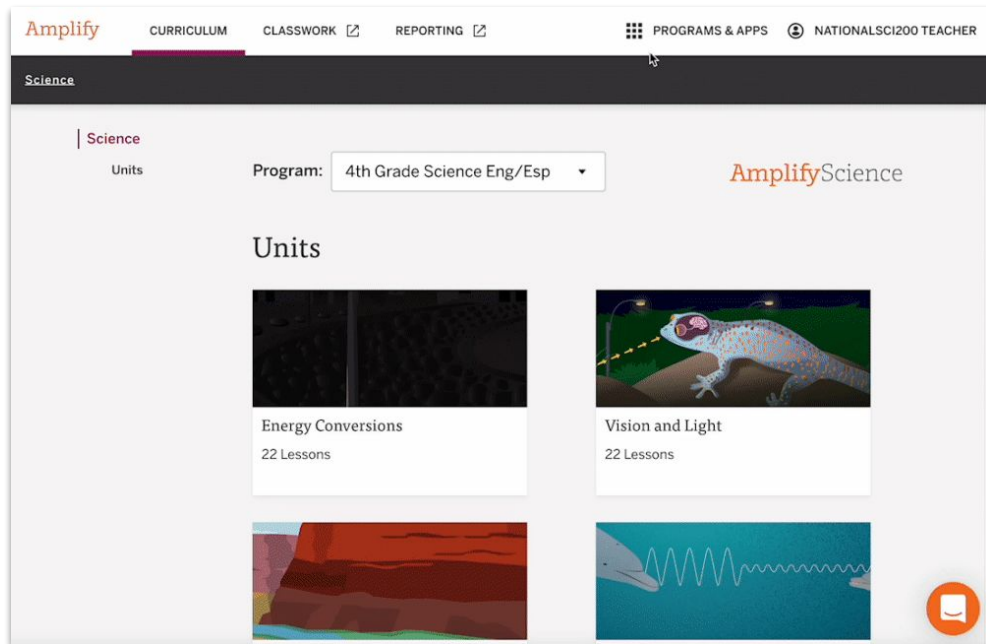
Professional Learning Resources
Let's get started!

Additional Unit Materials
Additional resources to complement the units you're teaching.

Explore the Program Hub

Familiarize yourself with the Program Hub.

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



Additional resources

Welcome, caregivers!

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

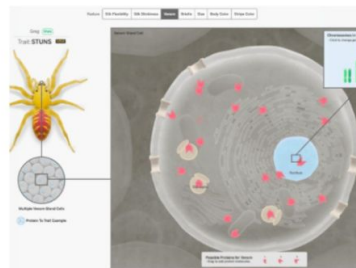
[Para acceder a este sitio en español haga clic aquí.](#)

Amplify welcomes you and your learner to the Science program for the new school year. We are very excited to provide you with exceptional learning opportunities through Science. Below are resources and helpful guides for enabling your student to have the most productive experience with our platform throughout the year.

 [Contact Us](#)



Grades 6-8



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!





Plan for the day: Part 1

- Introduction and Framing
- NGSS & 3D Learning
- Phenomenon-based Instruction
- Unit Internalization
- Additional Resources
- Closing

Overarching goals

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



Closing reflection

Based on our work in Part 1, share:

Head: something you'll keep in mind

Heart: something you're feeling

Feet: something you're planning to do

Additional resources and ongoing support

Customer Care

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



help@amplify.com



800-823-1969



Amplify Chat



Please provide feedback!

Type:

Strengthen

Session title:

Unit Internalization / Guided Planning

(Part 1)

Professional Learning Specialist name:

Welcome to Amplify Science!

or use Demo Account

1. Go to **learning.amplify.com**
2. Select **Log in with Amplify**
3. If you're already logged in with other Google accounts, click **Use another account**
4. Enter teacher demo account credentials
 - xxxxxxxx@pd.tryamplify.net
 - Password: xxxx
5. Explore as we wait to begin

Do Now: Log in through your Schoology account

Welcome to **Amplify**

G

Log In with Google

C

Log In with Clever

A.

Log In with Amplify



SSO login

Amplify Science

Standard Curriculum Relaunch / Guided Planning

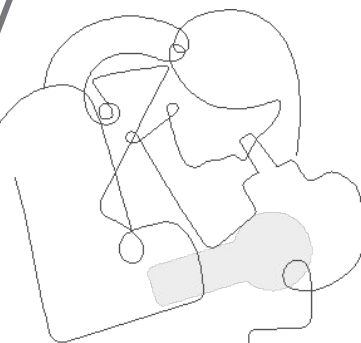
Grade 3: Inheritance and Traits

Part 2

School/District Name: LAUSD

Date: ,

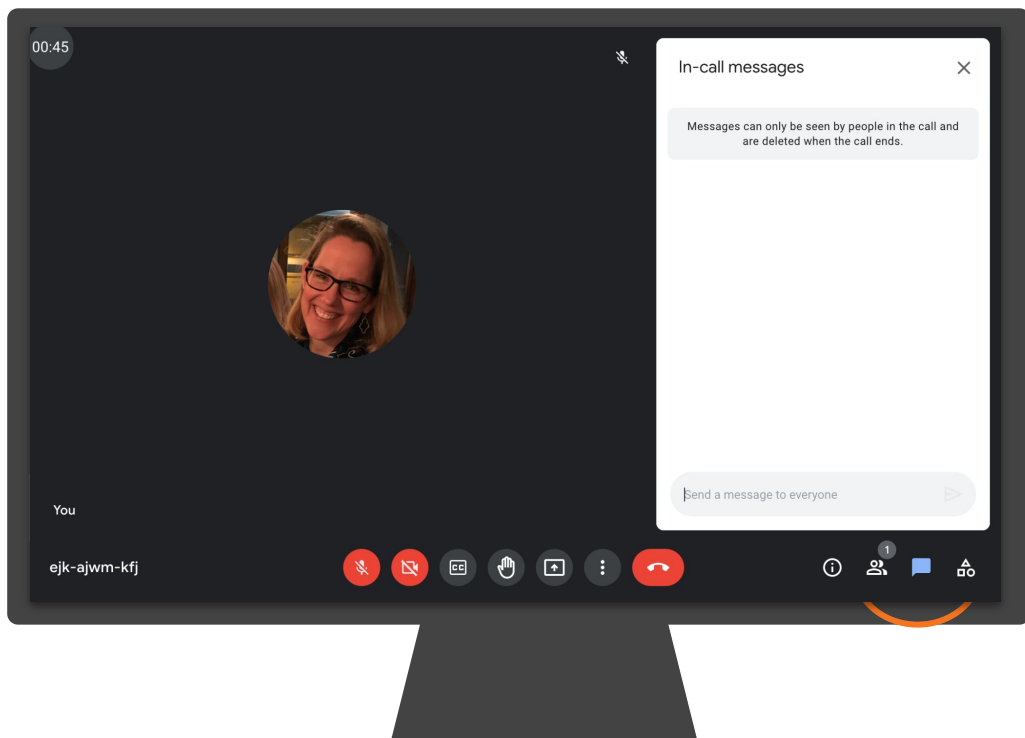
Presented by:



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.

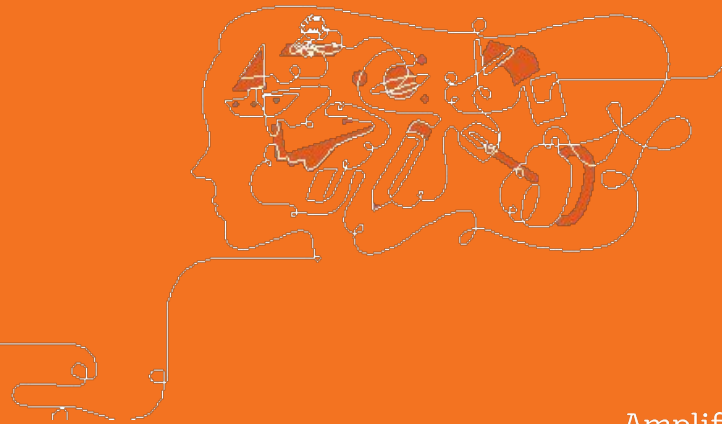
We share your goal of **inspiring all students to think deeply, creatively, and for themselves**.

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.

Part 2: Guided Planning

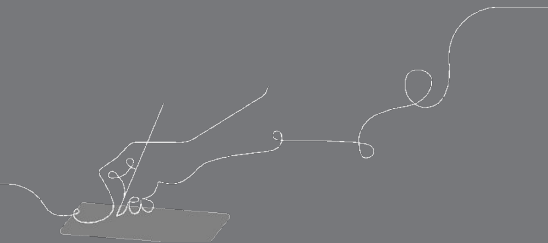


Overarching goals

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

- ❑ Describe what teaching and learning look like in Amplify Science.
- ❑ Prepare to teach using Amplify Science resources.

e

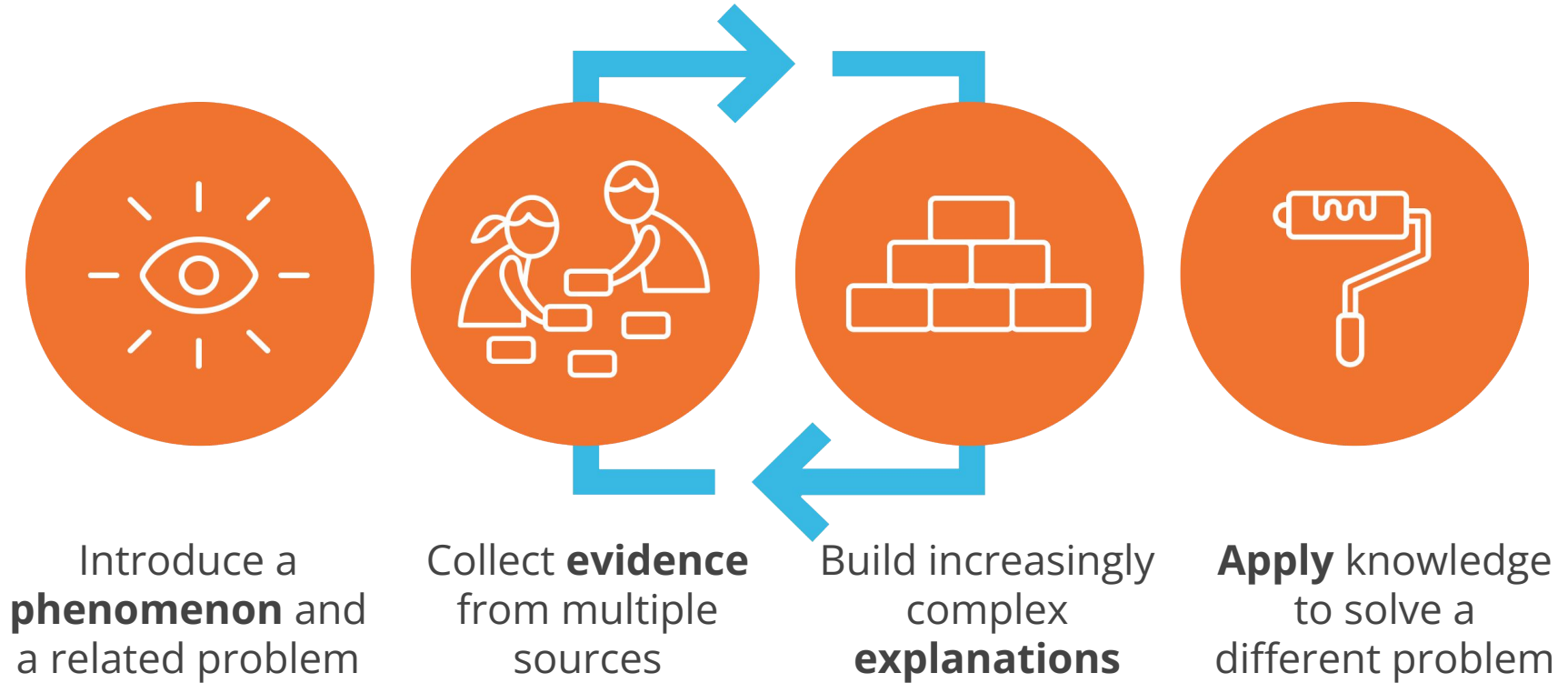




Plan for the day: Part 2

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

Amplify Science Approach



Inheritance and Traits

Problem: Why does Wolf 44 appear different from the rest of the wolves in its pack?

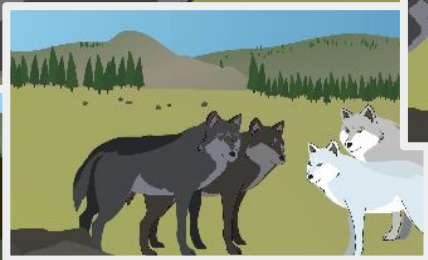
Role: Wildlife Biologists

Students observe variation between and within different species, investigate inherited traits and those that result from the environment, and explain how Wolf 44 acquired certain traits.

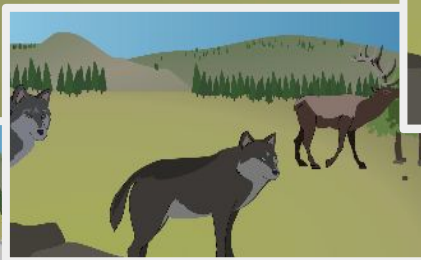
Coherent Storylines



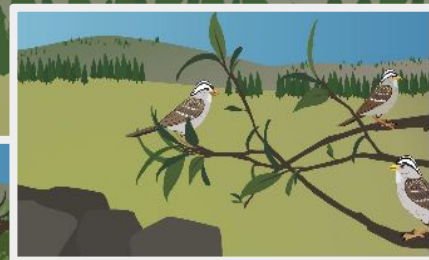
Why are wolves different from each other even though they are all the same species?



Why is Wolf 44's color similar to one pack but different from the other?



Why isn't Wolf 44 like the Bison Valley Pack in hunting style and size?



How can scientists investigate questions about traits?

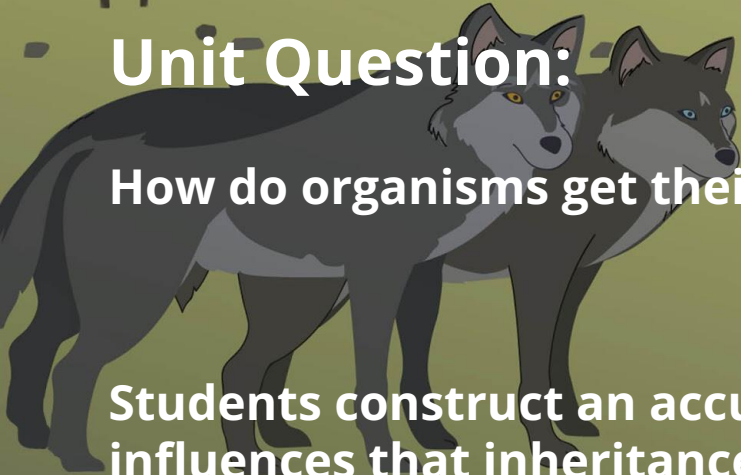


Inheritance and Traits

Unit Question:

How do organisms get their traits?

Students construct an accurate understanding of the influences that inheritance and the environment play in determining organisms' traits.



Explaining the phenomenon: Science Concepts

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

Progress Build

Inheritance and Traits

Assumed prior knowledge (preconceptions): Students are likely to understand (and to have experienced) that individuals in a family tend to share similarities, although it is not expected that students have formal ideas about inheritance.

Level 3

Traits can be determined by inheritance, the environment, or both.

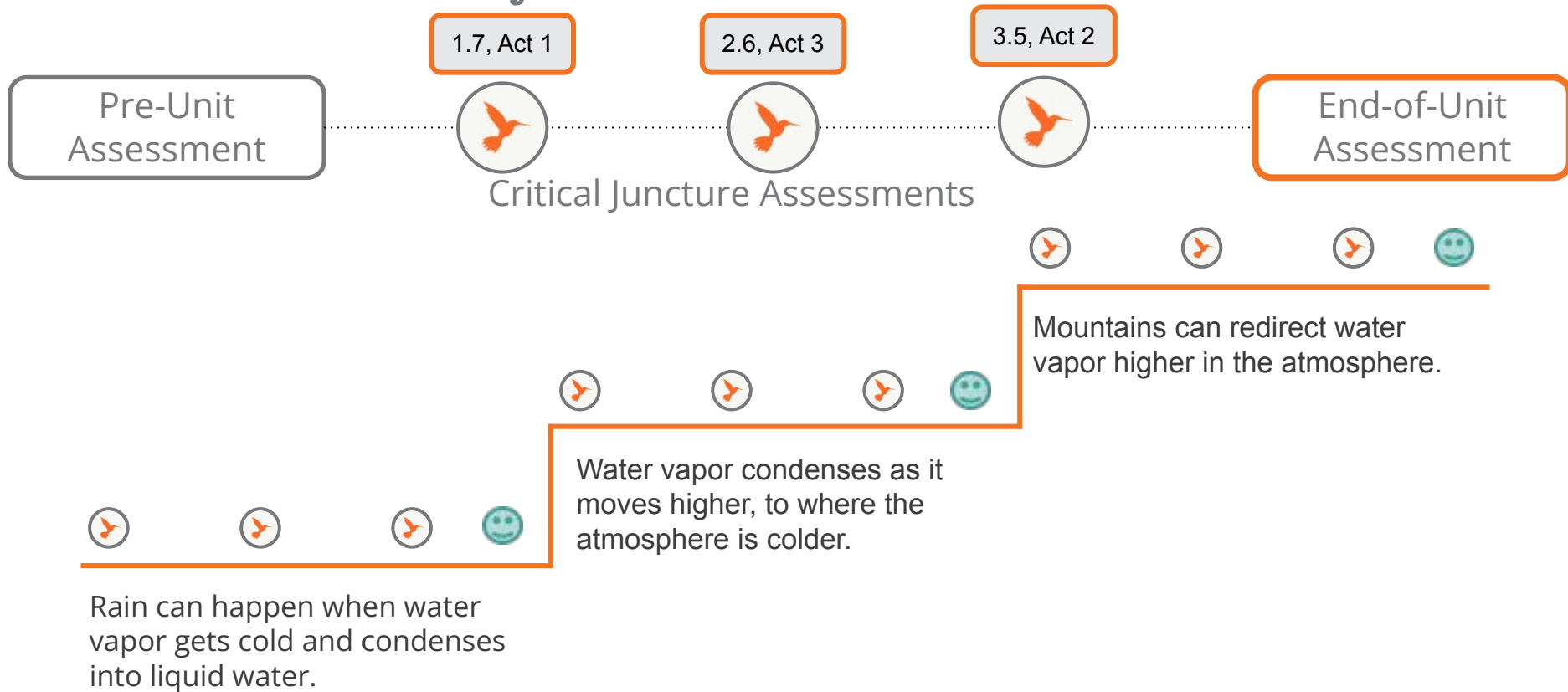
Level 2

Organisms get instruction for traits from their parents

Level 1

Traits vary within a species


K-5 Assessment System



Beginning the Unit

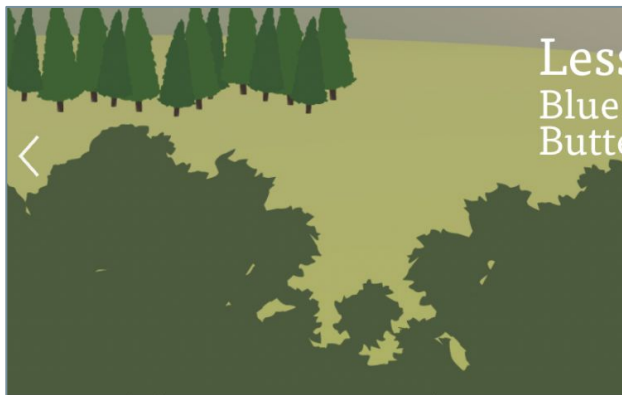
The first lesson of every Unit is a pre-unit assessment.

Chapter 1: Why are wolves different even though they are all the same species?

 JUMP DOWN TO CHAPTER OVERVIEW

Lesson 1.1: Pre-Unit Assessment	Lesson 1.2: Blue Whales and Buttercups	Lesson 1.3: Observing Similarities and Differences
Lesson 1.4: Introducing Species	Lesson 1.5: Variation in a Species	Lesson 1.6: Making Sense of Variation
Lesson 1.7: Explaining Variation		

Inheritance and Traits Family Connection



Lesson Brief
(3 Activities)

1 TEACHER-LED DISCUSSION
Introducing Asking Questions

2 READING
Partner Reading

RESET LESSON

Overview
Materials & Preparation
Differentiation
Standards
Vocabulary
Unplugged?

Español

Name: _____ Date: _____

Inheritance and Traits 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 wildlife biologists to figure out why a wolf in one of two wolf packs in a national park appears to be different from the rest of its pack. We will be answering the question, *How do organisms get their traits?*

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?

Write notes here about what you learn:

organisms can be quite different, they are all related.

es

arities and ster

tudents' Pre-es and

n Notebook,

e:

r: Comparing

2-5

ections

Prior and Cultural



Beginning the Unit

We will be looking at Chapter 1, Lesson 2 for our model lesson.

Chapter 1: Why are wolves different even though they are all the same species?

👉 JUMP DOWN TO CHAPTER OVERVIEW

Lesson 1.1: Pre-Unit Assessment	Lesson 1.2: Blue Whales and Buttercups	Lesson 1.3: Observing Similarities and Differences
Lesson 1.4: Introducing Species	Lesson 1.5: Variation in a Species	Lesson 1.6: Making Sense of Variation
Lesson 1.7: Explaining Variation		



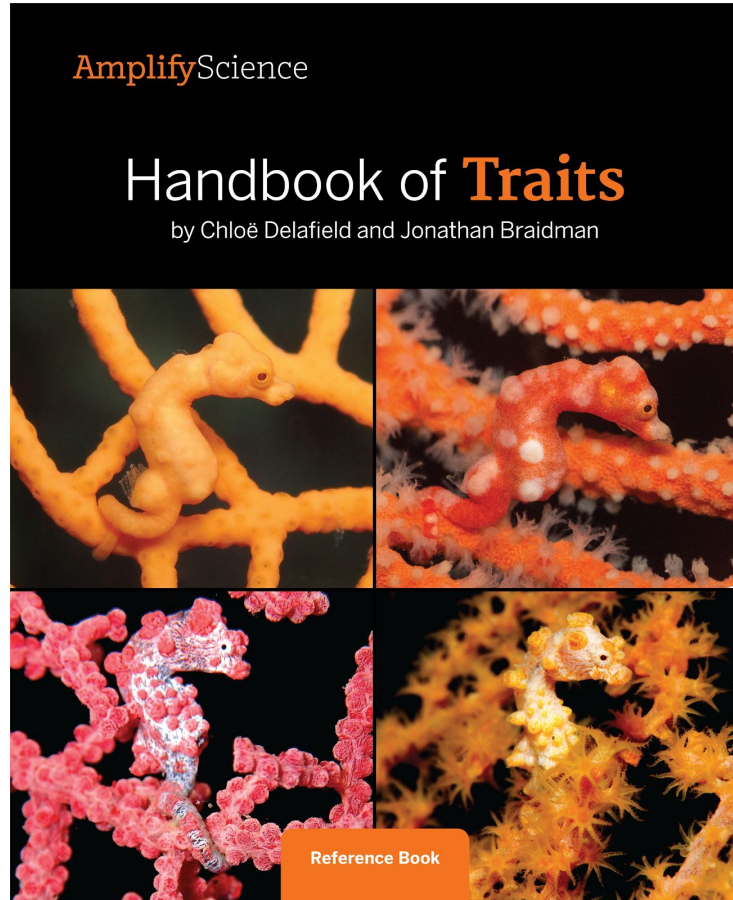
Grade 3 | Inheritance and Traits

Lesson 1.2: Blue Whales and Buttercups

Activity 1

Introducing Asking Questions





We read about a lot of different organisms in *Handbook of Traits*.



What **new ideas** do you have **about organisms** based on reading the book?

Remember that we are investigating this question:

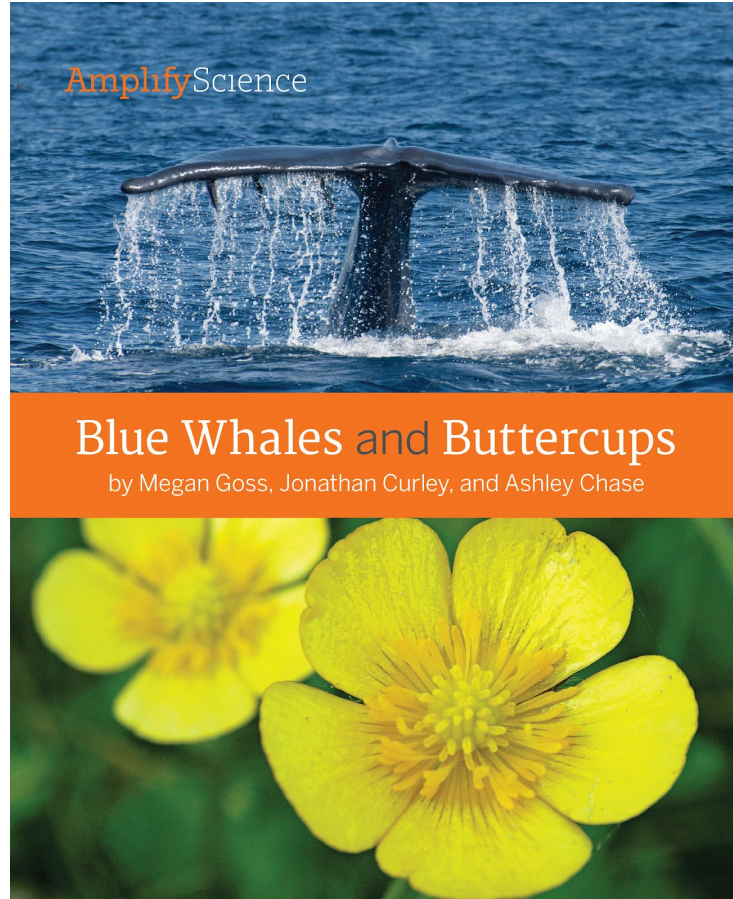
What are some ways that organisms can be similar or different?

Vocabulary



organism

a living thing, such as a plant or an animal



The book title names two organisms: blue whales and buttercups.



What do you know about these organisms?

How are they similar or different?

When you wonder about something, you can **ask questions**.

Readers ask themselves questions to make sure they understand the text and to wonder about the ideas they are reading about.


Asking Questions

Reading	
<ul style="list-style-type: none">• Is the question on topic?• Is there information in the book to help me answer the question?• What else could I do to investigate the question?	

The **Asking Questions chart** will help you ask questions as you investigate.

Let’s look at the three questions on the chart together.

Asking Questions



Reading	
<ul style="list-style-type: none">• Is the question on topic?• Is there information in the book to help me answer the question?• What else could I do to investigate the question?	

The questions we ask should be **on topic**.

Remember, we are investigating organisms, so the questions we ask during reading should be related to organisms.

Asking Questions

Reading	
<ul style="list-style-type: none">• Is the question on topic?• Is there information in the book to help me answer the question?• What else could I do to investigate the question?	

Asking questions about what you are reading and then **finding information in the book that helps answer those questions** is one good way to learn new ideas.

Asking Questions

Reading	
<ul style="list-style-type: none">• Is the question on topic?• Is there information in the book to help me answer the question?• What else could I do to investigate the question?	

Today we are reading, but scientists also investigate in other ways.

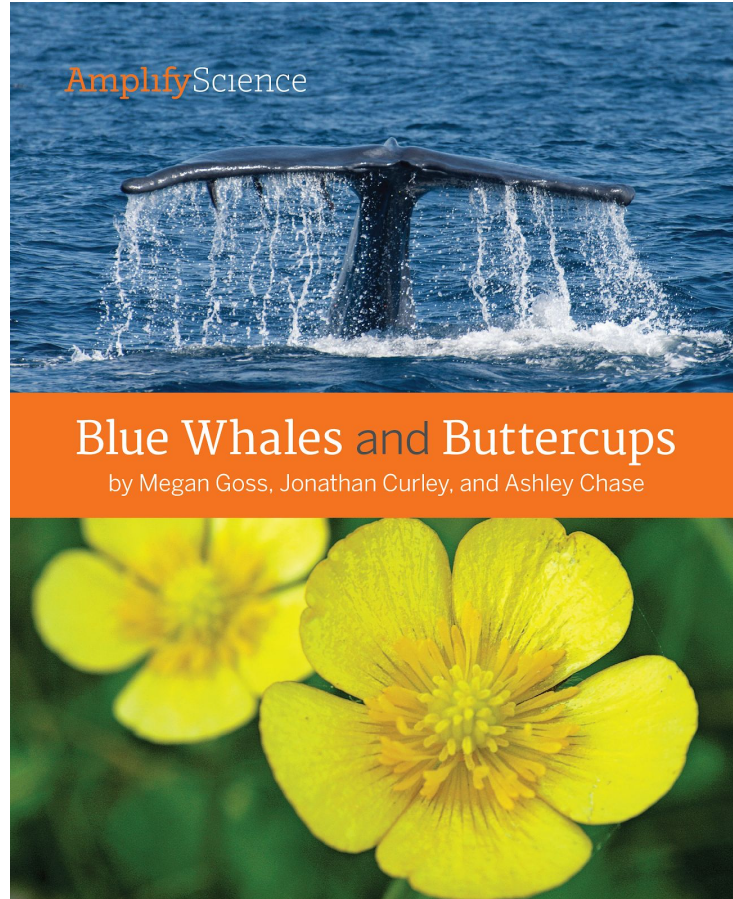


What are some **other ways to investigate questions** besides finding information in a book?

Activity 2

Partner Reading





We will practice **asking questions** as we read *Blue Whales and Buttercups*.

Name: _____ Date: _____

Asking Questions When Reading:
Blue Whales and Buttercups

- Directions:
- 1. As you read the book, record questions you have in Column 1.
 - 2. If you find the answers to your questions as you read, record your answers in Column 2. Be sure to include the page number from the book where you found the information so you can discuss these ideas with the class.
 - 3. In Column 3, record other ways you could investigate your questions.

Question	Information from the book that helps answer my question	Other ways to investigate my question
	Page:	
	Page:	
	Page:	

Turn to page 5 in your notebooks.

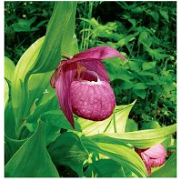
As you read, you will ask questions and **record your questions.**

Let’s try one example together.

How Organisms Are Different

There are so many different kinds of animals, plants, and other **organisms** on Earth. There are polar bears, redwood trees, and nine-armed sea stars. Scientists put organisms into groups called **species**.

Earth has more species than you might expect. Even types of organisms that might seem like one species are often divided into different species. For example, there are actually many different species of whales. There are blue whales, humpback whales, gray whales, and more. Millions of different species of organisms live on Earth.



Organisms can have very different **traits**. A trait is anything you can **observe** about an organism, including the way it looks or acts. Some animals have fur, and others have feathers. Some plants have flowers, and others do not. Some animals protect themselves by running fast, and others protect themselves by biting. We call these differences **variation**. Let's look at some examples of variation.

Name: _____ Date: _____

Asking Questions When Reading:
Blue Whales and Buttercups

- Directions:
- 1. As you read the book, record questions you have in Column 1.
 - 2. If you find the answers to your questions as you read, record your answers in Column 2. Be sure to include the page number from the book where you found the information so you can discuss these ideas with the class.
 - 3. In Column 3, record other ways you could investigate your questions.

Question	Information from the book that helps answer my question	Other ways to investigate my question
Do organisms that look similar have variation?	Page:	
	Page:	
	Page:	

What I read on page 5 makes me wonder: Do organisms that look similar have variation?

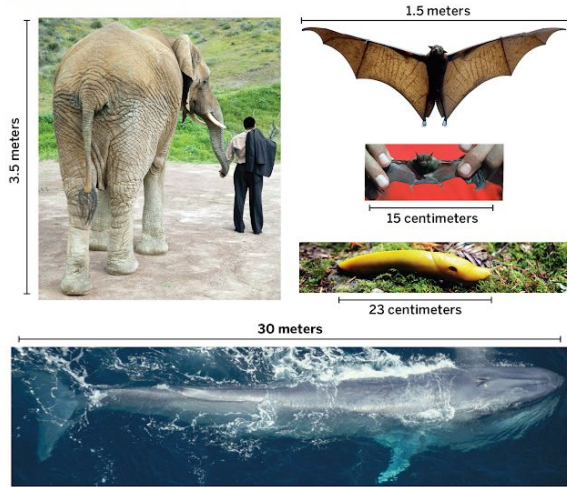
Let's record our question on the notebook page.

Organisms Grow to Different Sizes

You can find lots of variation in the sizes of different organisms. **Compared** to people, elephants are huge. Still, it would take about 20 big elephants to match the weight of just one blue whale. The biggest trees weigh more than 40 blue whales!

You can find huge size variation even between organisms in similar species. For example, the largest species of bat is about 10 times bigger than the smallest species of bat.

1 meter = 100 centimeters



Blue whales are the largest animals in the world.



This is a close-up of the sharp point of a pin. Imagine how tiny the mite sitting on it is!

These are tiny plant-like organisms that float in the ocean. They are too small to see without a microscope.

This tree is one of the largest living things on Earth.

Difference in size is not the only kind of variation among organisms on Earth. . . .

Name: _____ Date: _____

Asking Questions When Reading:
Blue Whales and Buttercups

- Directions:
- As you read the book, record questions you have in Column 1.
 - If you find the answers to your questions as you read, record your answers in Column 2. Be sure to include the page number from the book where you found the information so you can discuss these ideas with the class.
 - In Column 3, record other ways you could investigate your questions.

Question	Information from the book that helps answer my question	Other ways to investigate my question
Do organisms that look similar have variation?	Page: 6 <i>Bats look similar but have variation. The bats are different sizes.</i>	
	Page:	
	Page:	

I read on page 6 that bats can be very different sizes. Bats look similar, but they have variation.


That helps answer our question. **Let's record the page where we found it.**

Name: _____ Date: _____

Asking Questions When Reading:
Blue Whales and Buttercups

Directions:

- 1. As you read the book, record questions you have in Column 1.
- 2. If you find the answers to your questions as you read, record your answers in Column 2. Be sure to include the page number from the book where you found the information so you can discuss these ideas with the class.
- 3. In Column 3, record other ways you could investigate your questions.

Question	Information from the book that helps answer my question	Other ways to investigate my question
Do organisms that look similar have variation?	Page: 6 Bats look similar but have variation. The bats are different sizes.	
	Page:	
	Page:	



What are other ways we could investigate this question?

Organisms Get Around in Different Ways

All animals move, but different animals often move very differently. Animals may walk, run, fly, swim, or slide. Plants don't move around the way animals do, but their seeds get from place to place in different ways. We can see lots of variation in the many ways that different organisms get around.



8

Turn to page 8 of *Blue Whales and Buttercups*.



As you **read** the rest of the book together, **record your own questions and answers** in your notebooks.

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your questions.

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Page:

Name: _____ Date: _____

Asking Questions When Reading:
Blue Whales and Buttercups

- Directions:
1. As you read the book, record questions you have in Column 1.
 2. If you find the answers to your questions as you read, record your answers in Column 2. Be sure to include the page number from the book where you found the information so you can discuss these ideas with the class.
 3. In Column 3, record other ways you could investigate your questions.

Question	Information from the book that helps answer my question	Other ways to investigate my question
	Page:	
	Page:	
	Page:	



What **questions** did you have as you read?

Where did you **find information** to help answer your questions?

Name: _____ Date: _____

Asking Questions When Reading:
Blue Whales and Buttercups

- Directions:
- 1. As you read the book, record questions you have in Column 1.
 - 2. If you find the answers to your questions as you read, record your answers in Column 2. Be sure to include the page number from the book where you found the information so you can discuss these ideas with the class.
 - 3. In Column 3, record other ways you could investigate your questions.

Question	Information from the book that helps answer my question	Other ways to investigate my question
	Page:	
	Page:	
	Page:	



What are some **other ways to investigate** the questions we had as we read?

Activity 3

Reflecting on Relatedness



Scientists who study organisms often ask:
Which other organisms is this organism
closely related to?

Scientists get some of their ideas by
observing and comparing the traits of the
organisms.

How Organisms Are Similar

Different species are **related** to one another. Scientists who study a species often ask: Which other species is this species closely related to? To show how closely related different species are, scientists use many kinds of **evidence**. They get some of their evidence by observing the traits of species. They compare those traits. When two species have similar traits, it may be evidence that they are related.

Still, different species may have similar traits without being closely related. For example, a red bird and a red flower both have the trait of being red. This does not mean that they are closely related! Scientists look at lots of evidence before they say which species are closely related.



wolf



fox



wild dog

There is a lot of evidence that these animals are all closely related to one another. Can you observe any traits they have in common?

Let's examine the photos and the caption on page 14 of the book.



Why might scientists think these organisms are **closely related**?



Look at the two organisms below. Which one is more closely related to the red bird above?



Scientists put related organisms into groups. One group is plants. Plants make their own food using sunlight. Another group is animals. Animals eat plants, other animals, or both plants and animals. These very big groups are made up of smaller groups. One smaller group is all the animals that have four limbs. (Limbs are legs, arms, and wings.)

Look at the photos and read the caption on page 15.

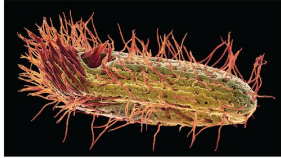


Which is the red bird **more closely related to**: the red flower or the yellow bird? Why do you think so?

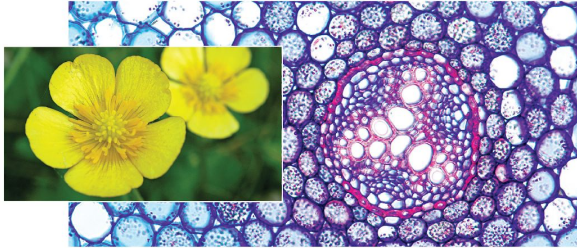
All Organisms Are Related

There is one way that all organisms are the same. They are all made of tiny parts called **cells**. Some organisms have only one cell. Other organisms are made of many cells.

Whether they are big or small, plant or animal, all living things are made of tiny cells. Cells are the basic parts that make up organisms.



This whole living thing is one tiny cell! It is much too small to see without a microscope.



This is a buttercup plant shown under a microscope. You can see the tiny cells that make up the plant.

Turn to page 22 of the book.

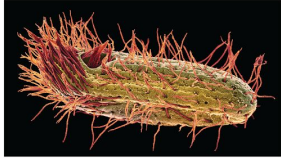


Take a moment to **reread this page** with your partner.

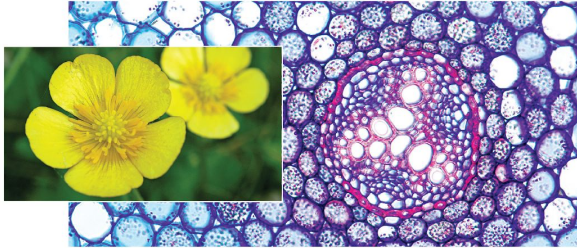
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Whether they are big or small, plant or animal, all living things are made of tiny cells. Cells are the basic parts that make up organisms.



This whole living thing is one tiny cell! It is much too small to see without a microscope.



This is a buttercup plant shown under a microscope. You can see the tiny cells that make up the plant.



What did you find out about **all organisms** from reading this page?



All organisms are related, but some are more closely related than others.

Organisms that have **more similarities** are **more closely related**.



Think of an organism that is **closely related** to a horse.

Explain why you think it's closely related.

End of Lesson



THE LAWRENCE
HALL OF SCIENCE
UNIVERSITY OF CALIFORNIA, BERKELEY

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Plan for the day: Part 2

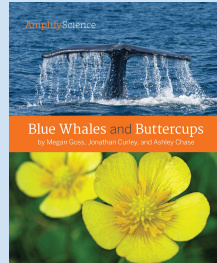
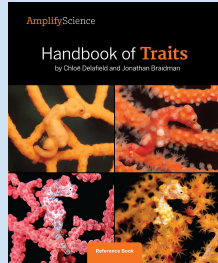
- Teaching and Learning in an Amplify Science Lesson
- Instructional Approach Reflection
- Planning a Lesson
- Closing

Gathering evidence

Inheritance and Traits, 1.2

Why are the wolves different even though they are all from the same species?

What are some ways that organisms can be similar or different?



Asking Questions	
Reading	
- Is the question on topic?	
- Is there information in the book to help me answer the question?	
- What else could I do to investigate the question?	



Asking Questions When Reading: Blue Whales and Buttercups		
Directions:		
1. As you read the book, record questions you have in Column 1.		
2. If you find the answers to your questions as you read, record your answers in Column 2. Be sure to include the page number from the book where you found the information so you can discuss these ideas with the class.		
3. In Column 3, record other ideas you could investigate your questions.		
Question	Information from the book that helps answer my question	Other ways to investigate my question
	Page:	
	Page:	
	Page:	



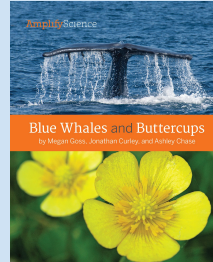
What have students figured out so far?

Evidence sources work together

Investigating and discussing observations

How do these activities
work together to
support understanding of
how different substances
are different?

Investigation Question: What are some ways that organisms can be similar or different?



Name: _____ Date: _____

Asking Questions When Reading
Blue Whales and Buttercups

Directions:

1. As you read the book, record questions you have in Column 1.
2. If you find the answers to your questions in the book, record your answers in Column 2. Be sure to include the page number from the book where you found the information so you can discuss these ideas with the class.
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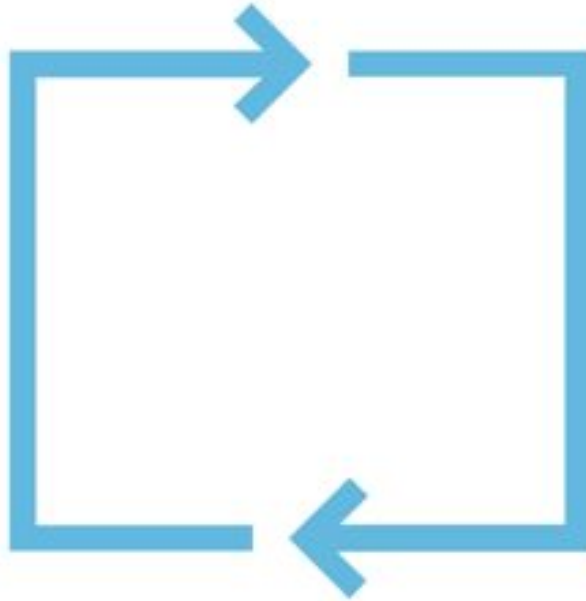
Question	Information from the book that helps answer my question	Other ways to investigate my question
	Page: _____	
	Page: _____	
	Page: _____	

Illustrations and Photos: Corley, C.D.



Multimodal learning

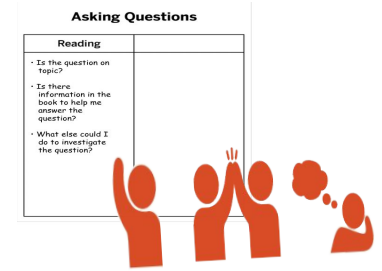
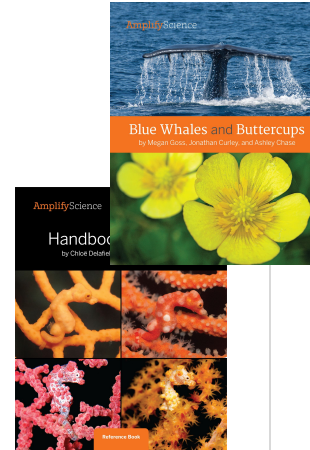
Gathering evidence over multiple lessons



**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!



Asking Questions When Reading
Blue Whales and Buttercups

Name: _____ Date: _____

Directions:

- As you read the book, record questions you have in Column 1.
- After you find the answer to your question in the book, record your answer in Column 2. Be sure to include the page number from the book where you found the information so you can locate these ideas again.
- In Column 3, record other ways you could investigate your questions.

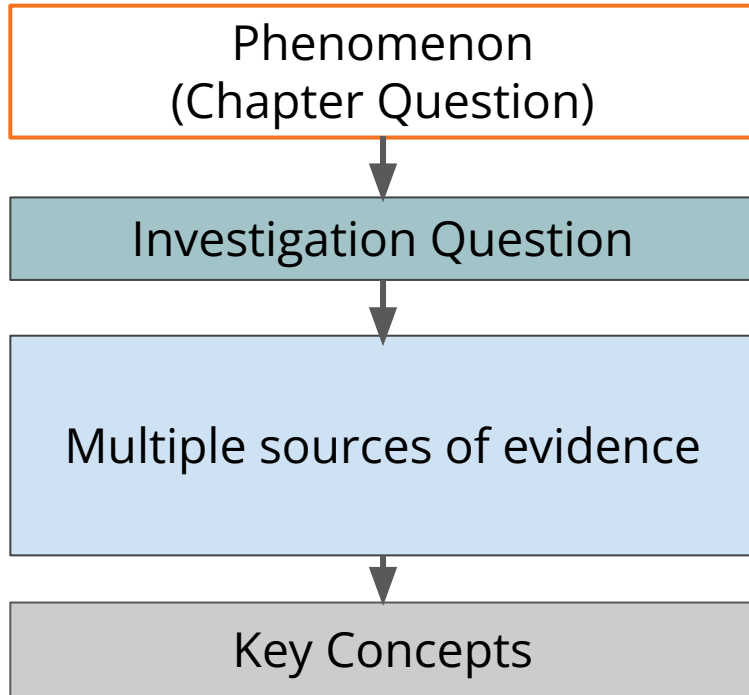
Question	Information from the book that helps answer my question	Other ways to investigate my question
	Page: _____	
	Page: _____	
	Page: _____	

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5

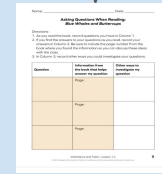
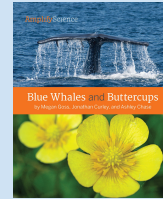
Coherence Flowchart

A diagram of student learning



Chapter Question: Why are the wolves different even though they are all from the same species?

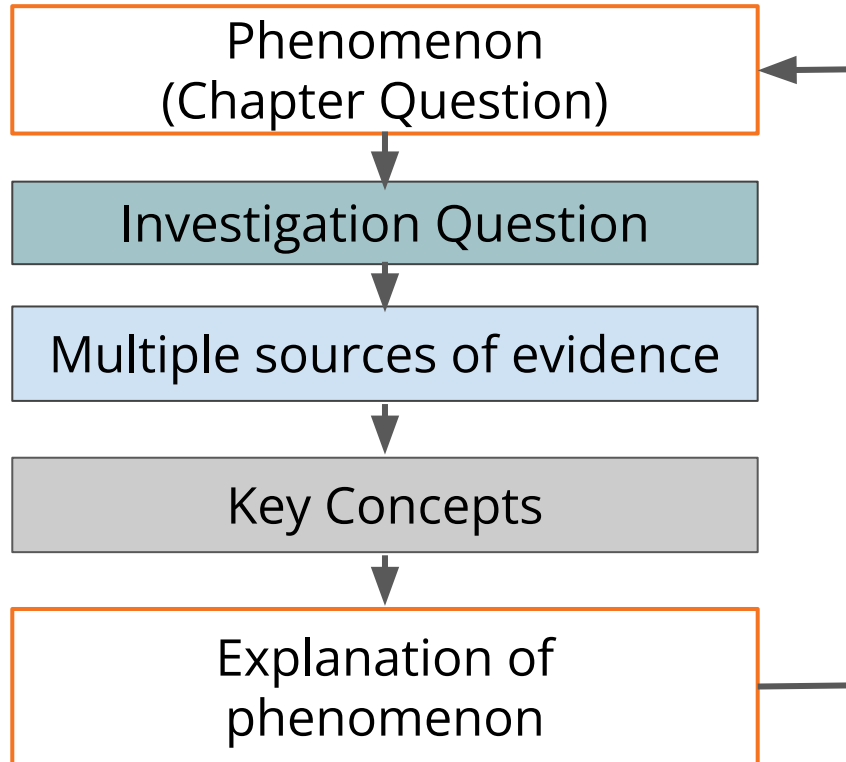
Investigation Question: What are some ways that organisms can be similar or different?



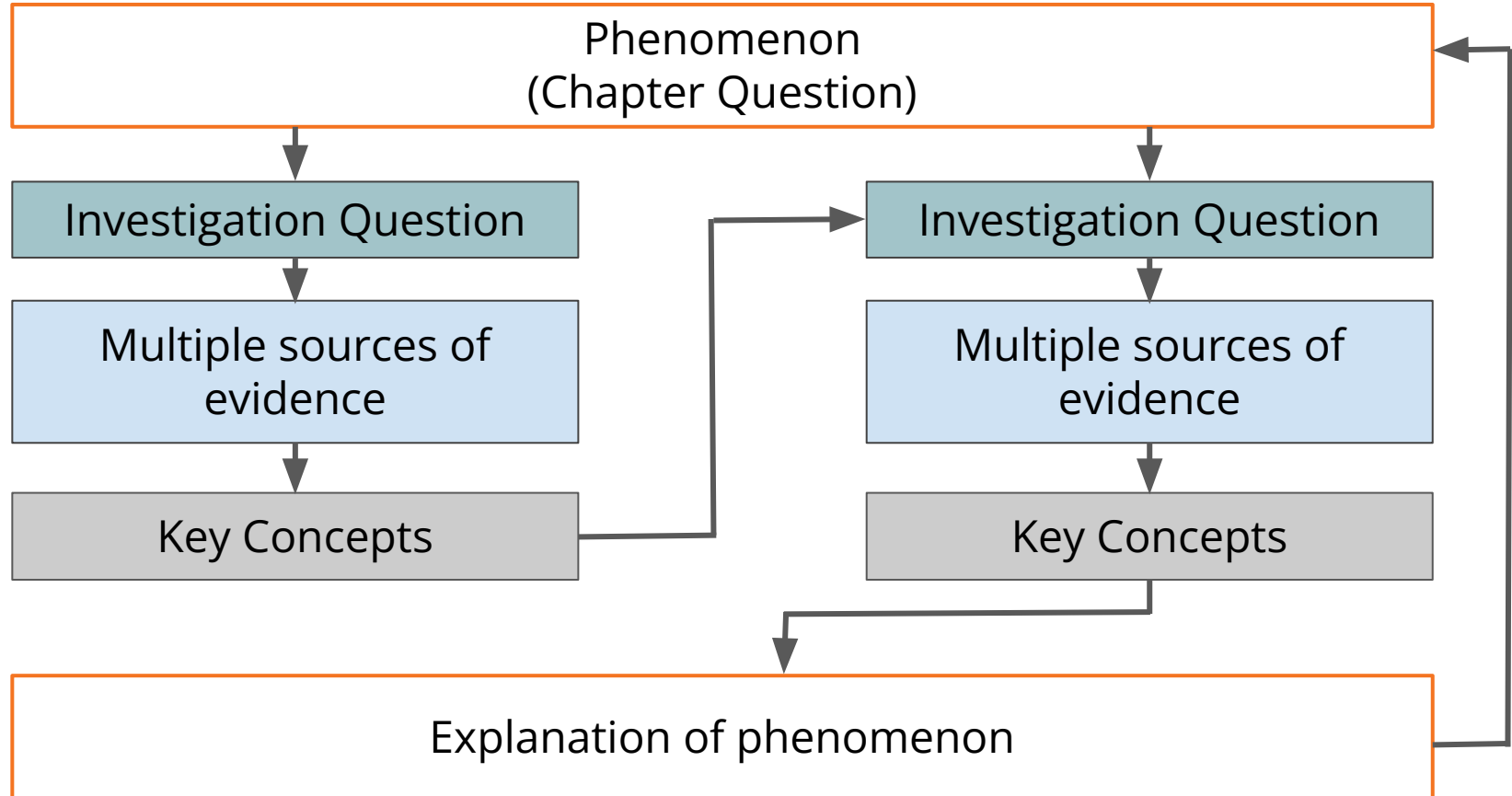
Students figure out: Organisms have similar traits

Coherence Flowchart

A diagram of student learning



Coherence Flowchart



Inheritance and Traits: Variation in Wolves

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

Wolf 44 appears different from the rest of the wolves in its pack.
What is the origin of the traits of Wolf 44—a wolf that appears different from the rest of its pack?

Wolf 44 has a different fur color from the rest of its pack.
Why are wolves different even though they are all the same species? (introduced in 1.4)

There are many different organisms in the world.
What are some ways that organisms can be similar or different? (1.1-1.4)

- Read *Blue Whales and Buttercups* (1.2)
- Reflect on relatedness (1.2)
- Observe similarities and differences between animals (1.3)
- Observe bird traits (1.3)
- Observe bird sounds (1.4)
- Observe bear traits (1.4)

- Organisms have observable traits. (1.3)

There are similarities and variations in traits of organisms.
How can we describe the traits of organisms in a species? (1.5-1.6)

- Look for patterns in the wolf pack (1.5)
- Construct bar graphs to analyze similarity and variation in students' traits (1.5)
- Read *Handbook of Traits* to gather info about how traits vary within a species (1.6)
- Use Word Relationships routine to reflect on learning across the chapter (1.6)
- Create digital models of trait variation (1.6)

- Organisms in a species have many similar traits, but for each trait there can be variation. (1.6)

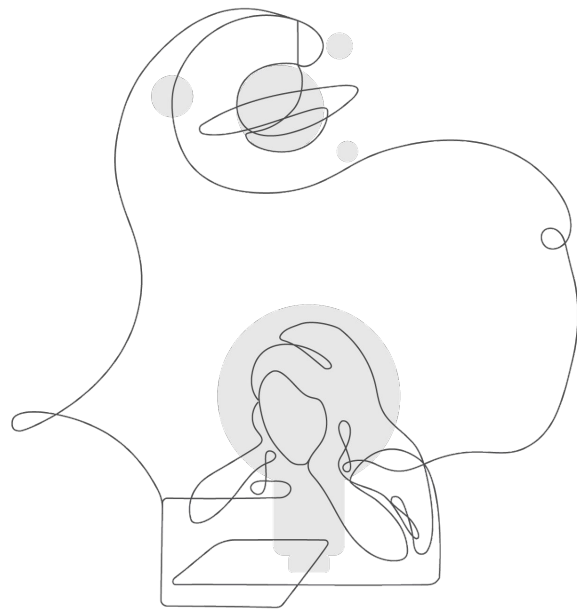
- Review wolf data and reflect on variation of traits within the wolf pack (1.7)
- Write class explanation to answer the Chapter 1 Question (1.7)

Even though all wolves are the same species, some wolves are different from others due to variation of traits within a species. This means that even though wolves can have similarities in their traits, there can also be variations in each trait. For example, wolves have different colors of fur: some wolves have a trait for gray fur, others have a trait for black fur.

Explore the Coherence Flowchart

Skim the Chapter 1 Coherence Flowchart of your first unit.

How can the Coherence Flowchart serve you as a planning tool as you begin teaching Amplify Science?



Questions?





Plan for the day: Part 2

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

Navigate to the Lesson Brief

Lesson 1.2: Blue Whales and Buttercups

Lesson Brief
(3 Activities)

< 1

TEACHER-LED DISCUSSION
Introducing Asking
Questions



2

READING
Partner Reading



3

TEACHER-LED DISCUSSION
Reflecting on Relatedness



 RESET LESSON





 GENERATE PRINTABLE LESSON GUIDE

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.

Digital Resources

-  Classroom Slides 1.2 | PowerPoint
-  Classroom Slides 1.2 | Google Slides
-  Asking Questions T-chart
-  Inheritance and Traits Investigation Notebook, pages 4–7

4 Steps for Starting Your Lesson

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

The screenshot shows a lesson plan interface with a top navigation bar and a main content area. The navigation bar has three tabs: 1. TEACHER-LED DISCUSSION (Reducing Asking Questions), 2. READING (Partner Reading), and 3. TEACHER-LED DISCUSSION (Reflecting on Relatedness). The main content area has a left sidebar with a 'RESET LESSON' button and a list of links: Overview, Materials & Preparation, Differentiation, Standards, Vocabulary, and Unplugged?. The main content area has a title 'Overview' and a paragraph of text. The right sidebar has a 'GENERATE PRINTABLE LESSON GUIDE' button and a 'Digital Resources' section with four items: Classroom Slides 1.2 | PowerPoint, Classroom Slides 1.2 | Google Slides, Asking Questions T-chart, and Inheritance and Traits Investigation Notebook, pages 4-7. Four numbered orange arrows point to specific elements: Arrow 1 points to 'Classroom Slides 1.2 | PowerPoint', Arrow 2 points to 'Overview', Arrow 3 points to 'Materials & Preparation', and Arrow 4 points to 'Differentiation'.

TEACHER-LED DISCUSSION
Reducing Asking Questions

2 READING
Partner Reading

3 TEACHER-LED DISCUSSION
Reflecting on Relatedness

RESET LESSON

GENERATE PRINTABLE LESSON GUIDE

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.

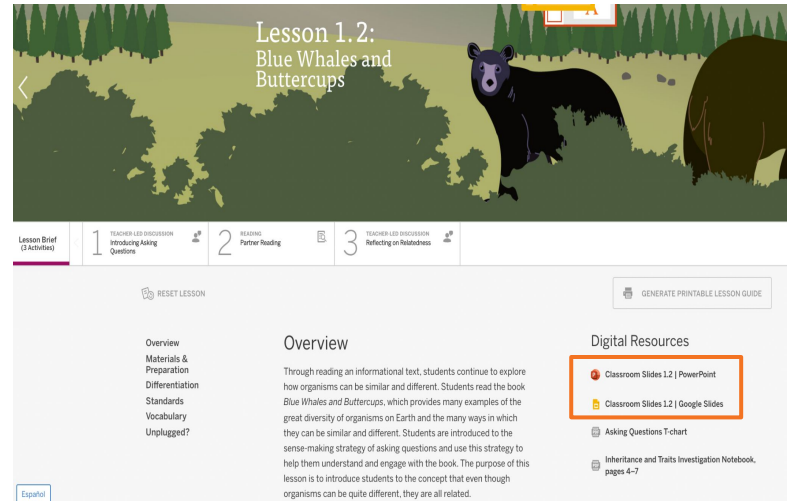
Digital Resources

- Classroom Slides 1.2 | PowerPoint
- Classroom Slides 1.2 | Google Slides
- Asking Questions T-chart
- Inheritance and Traits Investigation Notebook, pages 4-7

Preparing to teach

Classroom Slides

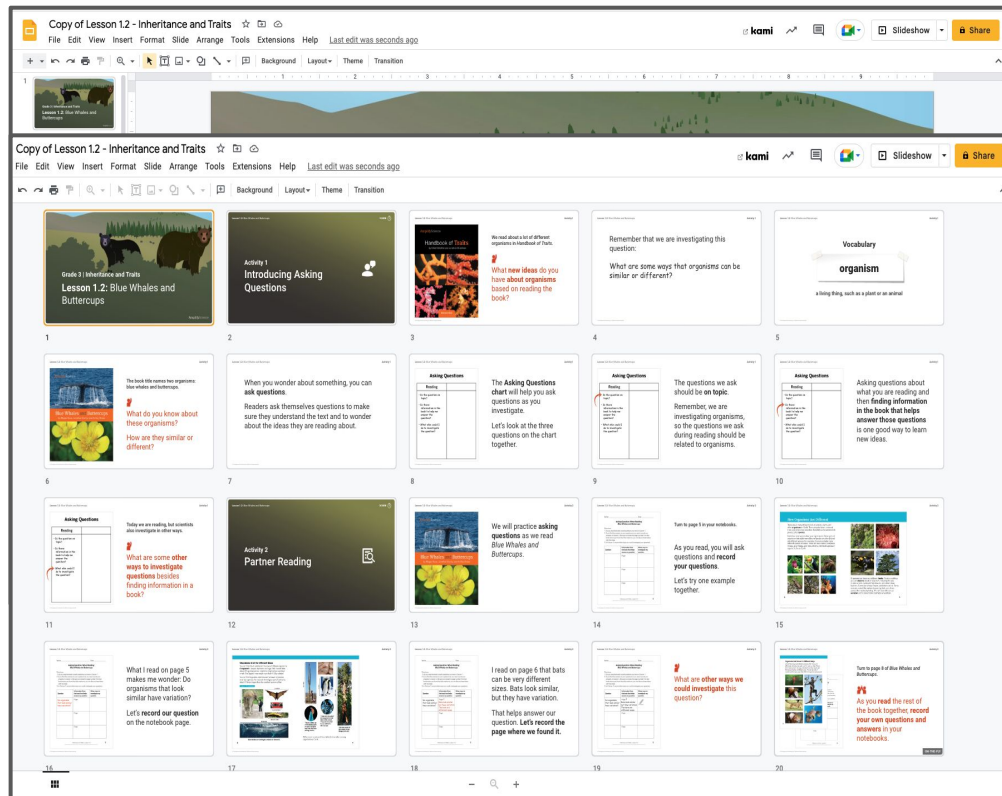
1. Open the Classroom Slides under the Digital Resources.
2. Read through the Classroom Slides including the **presenter notes** to gain a better understanding of the lesson.
3. Consider:
 - What features of the Classroom Slides will support you in teaching this lesson?



Using Classroom Slides as a planning tool

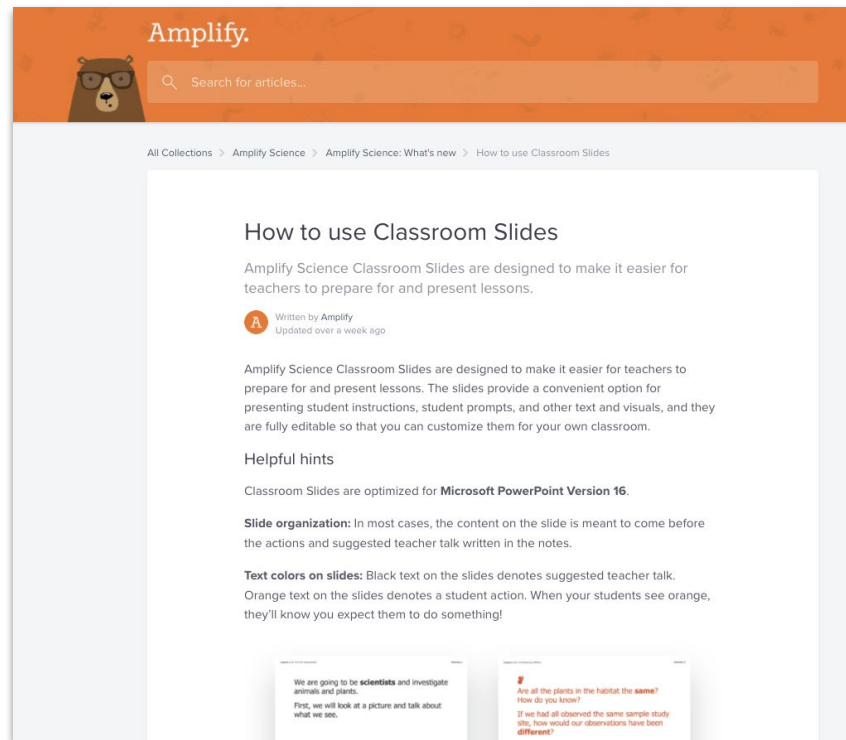
Teacher tip: Classroom Slides are a great visual summary of a lesson. Many teachers download and flip through a lesson's Classroom Slides deck to preview what happens in the lesson.

This is a useful first step for preparing to teach the lesson.



Teaching with Classroom Slides

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



Lesson ____	Activity Overview	
What is the purpose of this lesson? Access prior knowledge about rocks. Make observations of rocks.	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	
<p>What is the purpose of this lesson?</p> <p>The purpose of this lesson is to introduce students to the concept that even though organisms can be quite different, they are all related.</p>	<p>Activity 1 (15 min)</p>	<p>Introducing Asking Questions</p>
<p>What will students learn?</p> <p>An organism is a living thing, such as a plant or an animal. All organisms are related. Scientists closely observe the similarities and differences between different organisms to see how closely related they may be. Asking questions during reading helps readers better understand the ideas in the text. Science findings are based on recognizing patterns. Science findings are limited to what can be answered with evidence.</p>	<p>Activity 2 (30 min)</p>	<p>Partner Reading</p>
<p>3-D Statement (identify SEP, CCC, and DCI):</p> <p>Students obtain information by reading the book <i>Blue Whales and Buttercups</i> And ask questions about similarities and differences. (Patterns).</p>	<p>Activity 3 (15 min)</p>	<p>Reflecting on Relatedness</p>
<p>Student Resources:</p> <p>For each pair of students: 1 copy of <i>Blue Whales and Buttercups</i> <i>Inheritance and Traits</i> Investigation Notebook (pages 4-7)</p>	<p>Activity 4 (# min)</p>	
<p>Assessment Opportunities:</p> <p>On-the-Fly, Activity 2</p>	<p>Activity 5 (##min)</p>	

4 Steps for Starting Your Lesson

1. Download **Classroom Slides** and review them.
2. Read the **Overview**.
3. Review 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 a lesson interface with a top navigation bar and a main content area. The navigation bar includes three tabs: '1. TEACHER-LED DISCUSSION: Introducing Asking Questions', '2. READING: Partner Reading', and '3. TEACHER-LED DISCUSSION: Reflecting on Relatedness'. The main content area has a left sidebar with a 'RESET LESSON' button and a list of links: 'Overview', 'Materials & Preparation', 'Differentiation', 'Standards', 'Vocabulary', and 'Unplugged?'. The central area displays the 'Overview' text. The right sidebar has a 'GENERATE PRINTABLE LESSON GUIDE' button and a 'Digital Resources' section with links to 'Classroom Slides 1.2 | PowerPoint', 'Classroom Slides 1.2 | Google Slides', 'Asking Questions T-chart', and 'Inheritance and Traits Investigation Notebook, pages 4-7'. Four orange arrows with numbers 1 through 4 point to specific elements: Arrow 1 points to the 'Classroom Slides 1.2 | PowerPoint' link; Arrow 2 points to the 'Overview' link in the sidebar; Arrow 3 points to the 'Materials & Preparation' link in the sidebar; and Arrow 4 points to the 'Differentiation' link in the sidebar.

1. TEACHER-LED DISCUSSION: Introducing Asking Questions

2. READING: Partner Reading

3. TEACHER-LED DISCUSSION: Reflecting on Relatedness

RESET LESSON

GENERATE PRINTABLE LESSON GUIDE

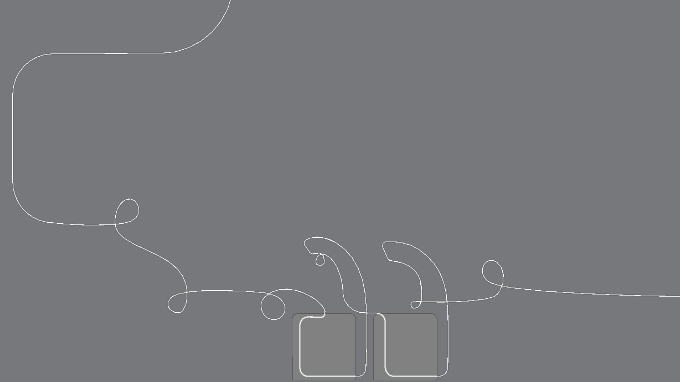
Overview

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.

Digital Resources

- Classroom Slides 1.2 | PowerPoint
- Classroom Slides 1.2 | Google Slides
- Asking Questions T-chart
- Inheritance and Traits Investigation Notebook, pages 4-7

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!

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!

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!

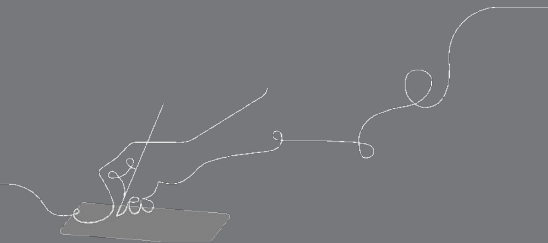


Overarching goals

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

- ❑ Describe what teaching and learning look like in Amplify Science.
- ❑ Prepare to teach using Amplify Science resources.

e



Closing reflection

Based on our work today in Part 2, share:

Head: something you'll keep in mind

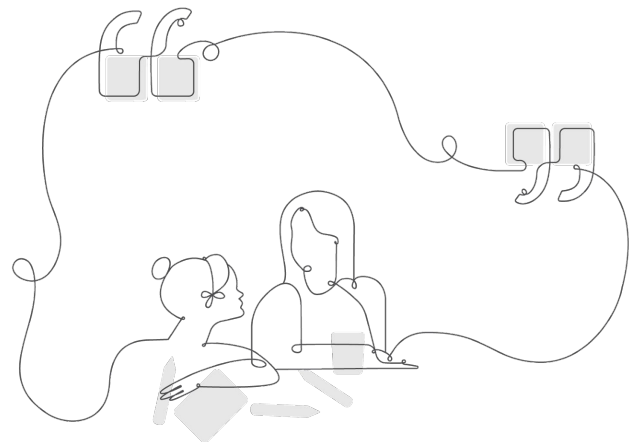
Heart: something you're feeling

Feet: something you're planning to do

Onsite Upcoming Professional Development!

Part 3: Unit 2 - with a focus on assessments

- December 3 (grades 3-6)
- December 12 (grades K-2)



Additional resources and ongoing support

Customer Care

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



help@amplify.com



800-823-1969



Amplify Chat



Please provide feedback!

surveymonkey.com/r/InitialAmplifySciPL

Presenter name:

Workshop title:

Part 1: Relaunching the Standard Curriculum

Part 2: Guided Planning (Planning for a Lesson)

Modality:

Remote

