Do Now: Use the link in the chat to add your best remote learning tips and tricks for teaching Amplify Science to the Jamboard.

Amplify Science

Unit Internalization & Guided Planning

Deep-dive and strengthening workshop Grade 8, Natural Selection

LAUSD 3/6/2021

Presented by Your Name

In a new tab, please log in to your Amplify Science account through Schoology.

Use two windows for today's webinar

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	\leftarrow \rightarrow C $(here expansion)$ meet.google.com/hcs-dxpk-wrm?aut	🕴 🖈 🛛 🛩 🤣 🔇 🗠 🕌 🔕	← → C	v 0 0 0 Vip
		왕 ²¹ 🗏 _{You} 🖉 🚷	= AmplifyScience CALIFORNIA > Plate Motion > Chapter 1 > Lesson 1	Vindow
Window #1	🗖 Miller Copy of Navigation Progr. 🗴 🚺 Amplify Curriculum 🛛 🗴 🎯 PM,Resource,Coherence,Flowci: X 🕇	- σ x	Lesson 1.2: Using Fossils to Understand Earth	
	← → C	9-2020#progress-build 🗢 🖈 🖪 🗊 🦚 :	Latti	97 m
	GPEN PRINTABLE PROGRESS BUILD	Flextension Compilation		
	Progress Build Level 1: The Earth's entire outer layer (below the water and soil that we see) is made of soils rock that is divided into plates. Earth's plates can move. Undersent the soil weighted hand, and water that we see on the surface of Earth is the outer layer of Earth's geosphere. The soils part of our rocky planet. This outer layer of Earth's geosphere. The soil part of our rocky planet. This outer layer of Earth's geosphere. And, these plates can move.	Investigation Notebook NGSS Information for Parents and Guardian Print Materials (11° x 12°) Print Materials (8.5° x 11°)	24	
	Progress Build Level 2: The plates move on top of a soft, solid layer of rock called the mantle. At plate boundaries where the plates are moving	Print materials (6.5 X11)	Lesson Brief (4 Activities)	e TEACHER-LED DISCUSSION
	away from each other, rock rises from the mantle and hardens, adding new solid rock to the edges of the plates. At plate boundaries where plates are moving toward each other, one plate moves underneath the other and sinks into the mantle. Underneath the soli wegetation, and water that we see on the surface of	Offline Preparation Teaching without reliable classroom internet? Prepare unit and lesson materials for offline access.	(A Activities)	
	Earth is the outer layer of Earth's geosphere, the solid part of our rocky	Offline Guide	E RESET LESSUN	GENERATE PRINTABLE LESSO
	Getting Ready to Teach ~			
	Español Materials and Preparation ~		Lesson Brief	Digital Resources
			Overview ~	🕞 All Projections
			Materials & Preparation ~	Completed Scientific Argumentation Wall Diagree
			Differentiation ~	📅 Video: Meet a Pa
			Español rds ~	The Ancient Mesosaurus

Norms: Establishing a Culture of Learners



- Please keep your camera on, if possible.
- Take some time to orient yourself to the platform
 - "where's the chat box? what are these squares at the top of my screen?, where's the mute button?"



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



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



Make sure you have a note-catcher present



Be an active participant - chat, ask questions, discuss, share!

Workshop goals

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

- Internalize your upcoming unit.
- Plan for collecting **evidence of student learning** in order to make instructional decisions to **support diverse learner needs**.
- Gather resources to develop a multi-day plan for implementing Amplify Science within your class schedule and instructional format.



Plan for the day

- Framing the day
 - Welcome
 - Instructional Materials
- Unit Internalization
- Planning to teach
 - Collecting evidence of student learning to meet diverse learner needs
- Reflection and closing



Plan for the day

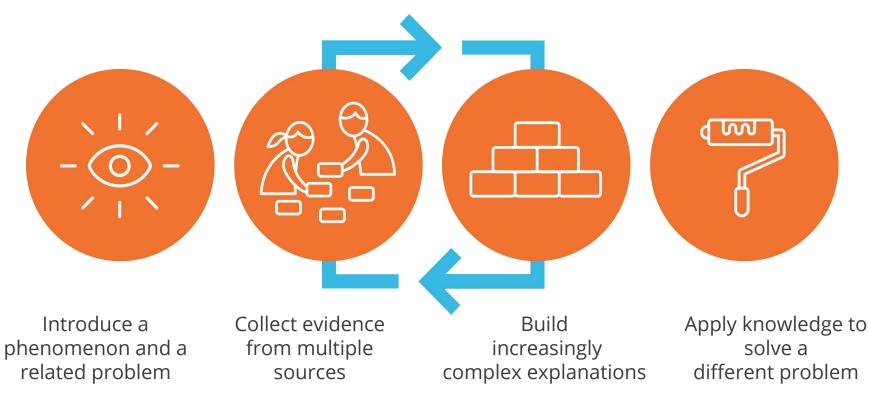
- Framing the day
 - Welcome
 - Instructional Materials
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- Planning to teach
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- Reflection and closing

Amplify Science Refresher

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Amplify Science Instructional Approach



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Instructional Materials



Middle school course curriculum structure

Geology on Mars

Engineering Internship:

Rock Transformations

Engineering Internship:

Phase Change

Chemical Reactions

Matter and Energy

in Ecosystems

Populations and Resources

Grade 7

Launch:

Plate Motion

Plate Motion

Phase Change

Integrated model*

Grade 6

- Launch: Microbiome
- Metabolism
- Engineering Internship: Metabolism
- Traits and Reproduction
- Thermal Energy
- Ocean, Atmosphere, and Climate
- Weather Patterns
- Earth's Changing Climate
- Engineering Internship: Earth's Changing Climate

AmplifyScience

authored by

Grade 8

- Launch: Harnessing Human Energy
- Force and Motion
- Engineering Internship: Force and Motion
- Magnetic Fields
- Light Waves
- Earth, Moon, and Sun
- Natural Selection
- Engineering Internship: Natural Selection
- Evolutionary History

Launch unit

- First unit
- 11 lessons

Core units

- Majority of units
- 19 lessons

Engineering Internships

- Two per year
- 10 lessons

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Standard Amplify Science Curriculum

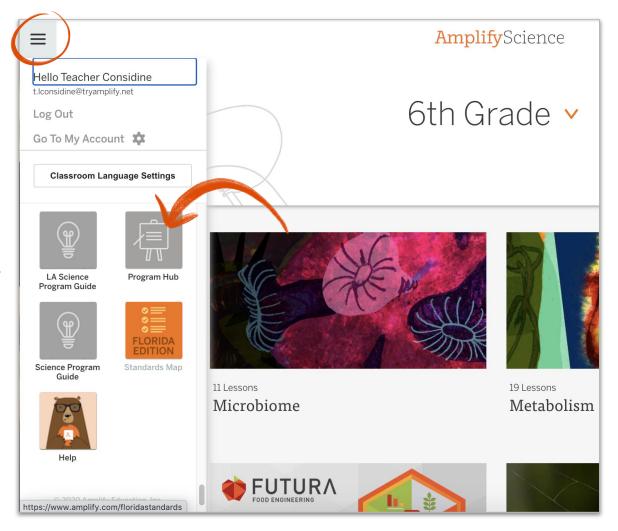


Amplify Science @Home Curriculum



Amplify Science @Home Curriculum

In addition to the standard Amplify Science curriculum, you also have access to Amplify Science @Home Curriculum on the Science Program Hub.



AmplifyScience@Home

Two different options:

@Home Units

 Digital or print-based versions of Amplify Science units condensed by about 50%

@Home Videos

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





@Home Units

A shift in approach to respond to user feedback

Original approach: two different resources



Print-based: @Home packets

Digital: @Home slides and student sheets

Print-based: PDFs of @Home Slides and student sheets

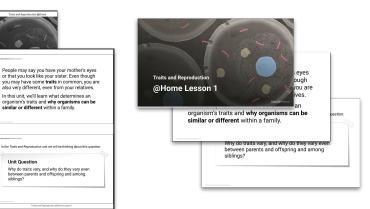
Traite and Re-

@Home Lessor

Today, we will beg and Reproduction

> **Digital:** Google Slides @Home Slides and Google Doc student sheets 20

Updated approach: one resource, two formats



Amplify Science @Home Curriculum

You have access to the Natural Selection @Home Unit.

The Natural Selection @Home Unit has **14 lessons.** Each lesson is written to be **30 minutes** long.

Natural Selection -Spanish @Home unit to come March 10 @Home Unit @Home Videos Hands-on investigations videos @Home Unit Instructions > English NS@Home Teacher **NS@Home Family** NS@Home Student Materials Resources Overview 7 Google TEACHER OVERVIEW ALL SLIDES 7 Google D PDF 7 Google PDF ALL STUDENT SHEETS LESSON INDEX C Google PDF ALL PACKETS (INCL. STUDENT SHEETS) PDF Digital option NS@Home L/ son 2 NS@H on 1 PHome Lesson 3 Paper option SLIDES SLIDES SLIDES C Google C Goog C Google PDF DPDF PDF SHEETS STUDENT SHEETS STUDENT SHEETS [↗] Google 7. Google C Google PDF PDF PDF

Amplify Science @Home Curriculum

You have access to the Natural Selection @Home Videos.

There are 16 @Home Videos for the Natural Selection unit. This covers all lessons expect for the assessment lessons (1.1, 2.5, and 4.4). The video playlists on YouTube teach the standard Amplify Science Lessons.

Natural Selection @Home unit to come February 25 (Eng.) and March 10 (Span.) @Home Unit @Home Videos Hands-on investigations videos @Home Videos Z Z Z NS Lesson 1.2 NS Lesson 1.3 NS Lesson 14 Natural Selection Chapter 1 Lesson 1.2 Activity 1 NS Lesson 1.5 Amplify Natural Selection Chapter 1 Lesson 1.2 Activity T NS Lesson 2.2 Amplify PLAY ALL Natural Selection Chapter 1 Lesson 1.2 Activity 2 E M Natural Selection Chapter 1 Amplify Lesson 1.2 NS Lesson 2.6 6 videos · 301 views · Last updated on Jan 19, 2021 Natural Selection Chapter 1 Lesson 1.2 Activity 3 Unlisted Amplify NS Lesson 3.3 Natural Selection Chapter 1 Lesson 1.2 Activity 4 Part A Amplify SUBSCRIBE Amplify NS Lesson 4.3 latural Selection Chapter 1 Lesson 1.2 Activity 4 Part B Amplif









Plan for the day

- Framing the day
 - Welcome
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- Unit Internalization
- Planning to teach
 - Collecting evidence of student learning to meet diverse learner needs
- Reflection and closing

Unit Guide Resources

Planning for the Unit		Printable Resources
Unit Overview	~	Article Compilation
Unit Map	~	Coherence Flowchart
Progress Build	~	Copymaster Compilation
Getting Ready to Teach	~	Flextension Compilation
Materials and Preparation	~	Investigation Notebook
Science Background	~	MGSS Information for Parents and Guardians
Standards at a Glance	~	Print Materials (8.5" x 11")
Teacher References		Print Materials (11" x 17")
Lesson Overview Compilation	~	Offline Preparation
Standards and Goals	~	Teaching without reliable classroom internet? Prepare unit and lesson
3-D Statements	~	materials for offline access.
Assessment System	~	Offline Guide
Embedded Formative Assessments	~	
Articles in This Unit	~	
Apps in This Unit	~	
Flextensions in This Unit	~	

Unit Guide resources

Once a unit is selected, select JUMP DOWN TO UNIT GUIDE in order to access all unit-level resources in an Amplify Science unit.

Planning for the unit

Onit Overview	Describes what's in each unit, the rationale, and how students learn across chapters			
Unit Map	Provides an overview of what students figure out in each chapter, and how they figure it out			
Progress Build	Explains the learning progression of ideas students figure out in the unit			
Getting Ready to Teach	Provides tips for effectively preparing to teach and teaching the unit in your classroom			
Materials and Preparation	Lists materials included in the unit's kit, items to be provided by the teacher, and briefly outlines preparation requirements for each lesson			
Science Background	Adult-level primer on the science content students figure out in the unit			
Standards at a Glance	Lists Next Generation Science Standards (NGSS) (Performance Expectations, Science and Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts), Common Core State Standards for English Language Arts, and Common Core State Standards for Mathematics			
Teacher references				
Lesson Overview Compilation	Lesson Overview of each lesson in the unit, including lesson summary, activity purposes, and timing			
Standards and Goals	Lists NGSS (Science and Engineering Practices, Disciplinary Core Ideas, and Crosscutt Concepts) and CCSS (English Language Arts and Mathematics) in the unit, explains ho the standards are reached			
3-D Statements	Describes 3-D learning across the unit, chapters, and in individual lessons			
Assessment System	Describes components of the Amplify Science Assessment System, identifies each 3-D assessment opportunity in the unit			
Embedded Formative Assessments	Includes full text of formative assessments in the unit			
Books in This Unit	Summarizes each unit text and explains how the text supports instruction			
Apps in This Unit	Outlines functionality of digital tools and how students use them (in grades 2-5)			
Printable resources				
Copymaster Compilation	Compilation of all copymasters for the teacher to print and copy throughout the unit			
Investigation Notebook	Digital version of the Investigation Notebook, for copying and projecting			
Multi-Language Glossary	Glossary of unit vocabulary in multiple languages			
Print Materials (8.5" x 11")	Digital compilation of printed cards (i.e. vocabulary cards, student card sets) provided in the kit			
Print Materials (11" x 17")	Digital compilation of printed Unit Question, Chapter Questions, and Key Concepts provided in the kit			





Unit Map

Planning for the Unit		Printable Resources
Unit Overview	~	Article Compilation
Unit Map		
Progress Build	~	
Getting Ready to Teach	~	Flextension Compilation
Materials and Preparation	~	Investigation Notebook
Science Background	~	NGSS Information for Parents and Guardians
Standards at a Glance	~	Print Materials (8.5" x 11")
Teacher References		Print Materials (11" x 17")
Lesson Overview Compilation	~	Offline Preparation
Standards and Goals	~	Teaching without reliable classroom internet? Prepare unit and lesson
3-D Statements	~	materials for offline access.
Assessment System	~	Offline Guide
Embedded Formative Assessments	~	
Articles in This Unit	~	
Apps in This Unit	~	
Flextensions in This Unit	~	

Pages 2-3

Natural Selection

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Planning for the Unit

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Natural Selection

Planning for the Unit

Unit Map

Unit Map

What caused the newt population in Oregon State Park to become more poisonous?

According to local legend around Oregon State Park, three unfortunate campers were found deal at their campsils and investigators found only one clue—a rough-skinned newt inside the coffeepot that the campers used to make their morning coffies. Student biologists investigate what caused the rough-skinned newts of Oregon State Park to become so poisonous. They uncover the mechanisms of natural selection, investigating variation in populations, survival and reproduction, and mutation.

Chapter 1: What caused this newt population to become more poisonous?

Students figure out: There is variation in poisonousness among individuals in the next opolation. Because of the presence of predictors (snake), the more poisonous risks were adaptive voor time, the next with higher poisonous level traits became more common in the next population. An adaptive trait will become more common, but a trait does not appear in a pojulation just because it would be helpful, and individual nexts did not change their amount of poison.

How they figure it out: Using the Sim, students explore variation in populations and test when traits will become common. They use a physical model of variation in a population, and analyze histogram evidence about the news population. The occrrect alternate conceptions represented in a short comic strip and represent their own ideas by creating visual models.

Chapter 2: How did the trait for increased poison level become more common in the newt population?

Students figure out: Poisonusness beame more common in the newt population because newt with higher levels of poison were likely to survive longer than newts without these trats. Surviving longer means the newts had more chances to reproduce. Newts have poisonous levels that are similar to their parents because genes, and therefore trats, are passed on from parent to offspring. Because more poisonous newts could survive longer and create more poisonous newt offspring, bighy poisonous levels them more common in the population.

How they figure it out: Students use a physical model to investigate reproduction and traits, and use the Sm to investigate how adaptive traits affect and the students. They read and and the that descent set is the start is research on poisonousness as an adaptive trait. They correct the explanations in two more short comic strips and create visual models to represent their explanations.

Chapter 3: How did a poison-level trait that wasn't always present in the newt population become the most common trait?

Students figure out: A trait for extreme poisonousness was introduced into the newt population as the result of a mutation. Because the newts' predator, the garter snake, had some individuals with high poison resistance, the newts with the extreme poison were able to survive longer and reproduce more than other newts, passing on the trait for extreme poison to future generations. As this syckied is surviving and reproducing repeated over many generations, the trait for extreme poison became more common in the population.

How they figure it out: Students read about mutations and how they can cause new traits to appear in populations. They investigate mutations in the Sim. They correct one more misconception in a comic. They make a final visual model and write a final explanation of what made the new to become so poisonous.

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Progress Build

Planning for the Unit		Printable Resources
Unit Overview	~	Article Compilation
Unit Map	~	Coherence Flowchart
Progress Build		
Getting Ready to Teach	Ŷ	Flextension Compilation
Materials and Preparation	~	Investigation Notebook
Science Background	~	MGSS Information for Parents and Guardians
Standards at a Glance	~	Print Materials (8.5" x 11")
Teacher References		Print Materials (11" x 17")
Lesson Overview Compilation	~	Offline Preparation
Standards and Goals	~	Teaching without reliable classroom internet? Prepare unit and lesson
3-D Statements	~	materials for offline access.
Assessment System	~	Offline Guide
Embedded Formative Assessments	~	
Articles in This Unit	~	
Apps in This Unit	~	
Flextensions in This Unit	~	

Natural Selection

Planning for the Unit

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Progress Build
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Progress Build

Each Amplify Science Middle School unit is structured around a unit-specific liaming progression, which we call the Progress Build. The unit's Progress Build excitnes the way student's explanatory understanding of the unit's to call phenomena is likely to develop and deepen over the ocurse of a unit. It is an important tool in understanding the structure of a unit and in supporting student's liaming; it organizes the sequence of instruction (generally, each likel of the Progress Build corresponds to a chapter), defines the focus of assessments, and grounds the inferences about student learning progress that guide suggested instructional adjustments and differentiation. By aligning instruction and assessment to the Progress Build (and therefore to each other), evidence about how student understanding is developing may be used during the course of the unit to support students and modify instruction in an informed way.

The Nathral Selection Progress Build consists of three levels of science understanding. To support a growth model for student learning progress, and, livel encompasses and of the lideas of prior levels and represents an explanatory account of unit phenomena, with the sophistication of that account increasing as the levels increase. At each level, students add new ideas and integrate them into a progress/weighdeper understanding of the mechanisms by which the distribution of thrusts in a population change in response to changes in factors of an emicroment affecting organisms' survival. Since the Progress Build reflects an increasingly complex yet integrated explanation, we represent it by including the merk leasts for each level in bold.

Prior knowledge (preconceptions). At the start of the Natural Selection unit, middle school students will have had some exposure to ideas included in the unit. Students will have expensione with trat diventity in humans and familiar species, such as dogs and cats, but they may not have extensive experience considering variation in less familiar species, such as dogs and cats, but they may not have extensive experience considering variation in less familiar species. For example, students may believe that all innerhors of a species have the exact coincidion pattern used to cancultage them from predators, making all individuals equally likely to survive in the environment. The concept of thorage in that distribution over time depends on an understanding of variation. Students will incegrishe that certain trats are more helpful for survival and that the most helpful traits depend on factors in the organisms' environments. Students will keep have haved of major environment changes that cause organisms to de of. Some students may involute that base factors can make certain individuals more likely to survive than others; others may believe that environment changes make all individuals to real will be survive than others; others may believe that environment changes make all individuals to paralize the survive than others; others may believe that environment changes make all individuals to paralize that such that the survive than others; others may believe that environment changes make all individuals to paralize the survive than others; others may believe that environment changes make all individuals to explain the survive.

Progress Build Level 1: Adaptive traits become more common while traits that are non-adaptive become less common in a population over many generations.

Populations change because individuals with certain trats are more likely to survive in a particular environment than individuals with other traits. Given factors in the environment that affect which traits are more likely to survive, adaptive traits will become more common in the population over time. If the adaptive trait surt present in the starting population, it cannot become more common over time. Changes in the environment cause changes to the distribution of traits in a population.

Progress Build Level 2: Individuals with adaptive traits are more likely to live longer and pass on those traits to their offspring.

Populations change because individuals with certain traits are more likely to survive in a particular environment than individuals with other traits. Given factors in the environment that afflect which traits are more likely to survive, adaptive traits will become more common in the population over time. If the adaptive trait isn't present in the starting population, it cannot become more common over time. Changes in the environment cause changes to the distribution of traits in a population. Individuals with adaptive traits are more likely to like longer and have offspring; individuals with the start of the start of

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Pages 4-5

Natural Selection

lanning for the Unit

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Unit Internalization Work Time

What is the phenomenon students are investigating in your unit?

Guided Unit Internalization

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

Part 1: Unit-level internalization

Unit title:

Unit Ouestion:

		Pag	jes 2	2-5
Natural Selection Planning for the Unit Unit Map What caused the newt population in Oregon State Park to becom According to scula Sengen State Fark three surformatic compers series fore moring confe. Studied biologists meetigate intia courd over lands the confer sub- neground and mutation reproduction. Judie medications of house sectors. Needing would be reproduction. The instrument of population to become more polonous? Students figure wit: Thes is written on polococous task we applied with the time endormers of producto. Needing in the sectors of the sectors of the sectors of the sector of the sectors of the sectors of the sectors.	nd dead at their camposte and npers used to make their regon State Park to become in populations, survival and opulation. Because of the revts with higher poisonous-	Hection the Unit lation to they had smorand dedators Seminar,	•	
Iner traits became more common the risk population. An adaptive trait will become ringener an appropulation patient setting the shipk, and christen sets date of a Here they dignet it and the lange the shipk, and christen sets date of a here they dignet it and the lange the first, there is a shipk and christen sets date of a shipk and christen sets and the shipk and christen sets and the population. They correct allement accorptions represented as a land core is the and re correct sets and the shift and the shift and the shift and the population. They correct allement accorptions represented as a land core is the and re correct sets and the shift and the trait for horse-set patient levels. The population back points were allegative and the shift for the sets and the core common in the population population is and the shift for the shift for the shift the shift of the shift for points and the shift of the shift for the shift of the shift of the shift of the points and the shift for a shift core of the shift of the shift of the shift of the points and the shift of the shift for the shift of the shift of the shift of the points and the shift of the shift for the shift of the shift of the shift of the shift of the points and the shift of the shift for the shift of the shift of the shift of the shift of the shift of the shift for the shift of the shift of the shift of the shift of the shift of the shift of the shift for the shift of the sh	hange their amount of poison. when tracks will become videone about the newt resent their own ideas by in the newt population? use nexts with higher levels of no the nexts hand more use genes, and therefore tracks, ger and create more on. its, and use the Sim to decortes scientist research		call the ificcal the schilerel of about truction ing is reveal which the ansmo	Hection the Unit generats generation generat
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individuals with other traits. Given factors in the environment that affect which traits are more likely to survive, adaptive

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traits will become more common in the population over time. If the adaptive trait isn't present in the starting population, it cannot become more common over time. Changes in the environment cause changes to the distribution of traits in a population. Individuals with adaptive traits are more likely to live longer and have offspring; individuals

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What science ideas do students need to figure out in order to explain the phenomenon?

Page 6

Student role:

Unit Guide Document	Guided Unit Internalization Part 1: Unit-level internalization Unit title: Natural Selection					
Unit Map	What is the phenomenon students are investigating in your unit? What caused the rough-skinned newts of Oregon State Park to become so poisonous?					
Lesson Overview Compilation	Unit Question: Why do populations change over time?	Student role: Student biologists				
Unit Map	By the end of the unit, students figure out A trait for extreme poisonousness was introduced into the newt population as the result of a mutation. Because the newts' predator, the garter snake, had some individuals with high poison resistance, the newts with the extreme poison were able to survive longer and reproduce more than other newts, passing on the trait for extreme poison to future generations. As this cycle of surviving and reproducing repeated over ma generations, the trait for extreme poison became more common in the population.					
Progress Buld Adaptive traits become more common while traits that are non-adaptive become less common in a population over many generations. Individuals with adaptive traits are r likely to live longer and pass on those traits to their offspring. Mutations can sometime introduce new traits into a population.						









Plan for the day

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Unit Map

What caused the newt population in Oregon State Park to become more poisonous?

According to local legend around Oregon State Park, three unfortunate campers were found dead at their campsite and investigators found only one clue—a rough-skinned newt inside the coffeepot that the campers used to make their morning coffee. Student biologists investigate what caused the rough-skinned newts of Oregon State Park to become so poisonous. They uncover the mechanisms of natural selection, investigating variation in populations, survival and reproduction, and mutation.

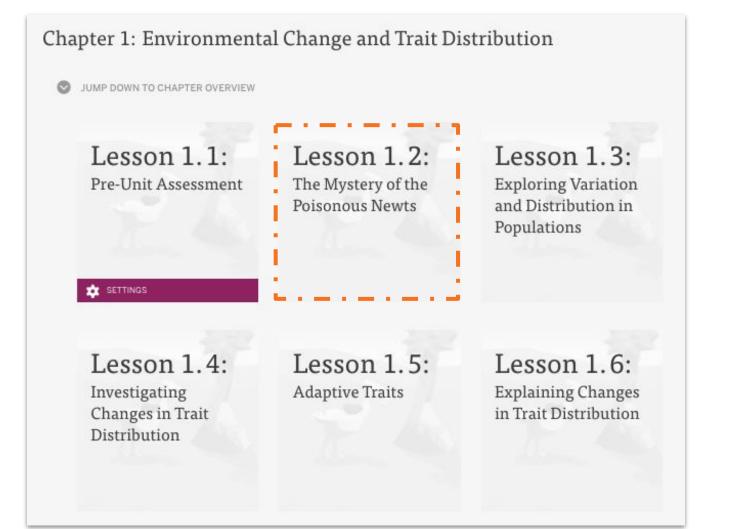
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How they figure it out: Using the Sim, students explore variation in populations and test when traits will become common. They use a physical model of variation in a population, and analyze histogram evidence about the newt population. They correct alternate conceptions represented in a short comic strip and represent their own ideas by creating visual models.







Pages 8-10

@Home Unit Lesson Index

This resource correlates lessons from the Standard Curriculum with @Home Unit Lessons.

It also lists the @Home Unit Student Sheets with information about where they came from (i.e. Student Investigation Notebook, copymaster, or new for the @Home Unit)

atural Selection @Hor	me Lesson Index						
arning or hybrid learning situation. To	versions of Amplify Science units adapted for a b help you plan instruction, below we have lister e unit's Lesson(s) from which they come.						
ndex: @Home Unit Lessons a	nd corresponding Natural Selection L	Lessons					
Home Lesson	Adapted from Amplify Science Natural Selectio	on					
DHome Lesson 1	Lesson 1.1						
Home Lesson 2	Lesson 1.4						
Home Lesson 3	Lesson 1.5			modified versions of the unit's			
Home Lesson 4	Lesson 1.6		en e	n necessary, new pages were also			
Home Lesson 5	Lesson 2.1		S	heet and Packet page titles and			
Home Lesson 6	Lesson 2.2			ding Natural Selection			
Home Lesson 7	Lesson 2.3			ang natural Selection			
Home Lesson 8	Lesson 2.4			Dessible Dessesses			
Home Lesson 9	Lesson 3.1			Possible Responses		2.3 Digital	N/A
Home Lesson 10	Lesson 3.2				re	ces	Lesson 2.4, Activity 2, Possible
Home Lesson 11	Lesson 3.3		_	N/A			Responses
Home Lesson 12	Lesson 4.1			N/A	e	d from Pg. 70	N/A
Home Lesson 13	Lesson 4.2 and 4.3		Lesson 1.4, Activity 2, Possible	ed from Pgs. 72-73	Lesson 2.4, Activity 4, Possible		
Home Lesson 14	Lesson 4.4			Responses Lesson 1.4, Activity 3, Possible		u nom egs. 72-73	Responses
				Responses		3.1 Digital	N/A
				Lesson 1.4, Activity 3, Possible Responses		ces	N/A
				Lesson 1.4, Activity 4, Possible	2		Lesson 3.2, Activity 2, Possible Responses
				Responses Lesson 1.5, Activity 2, Possible	3		Lesson 3.2, Activity 3, Possible
			8	Responses Lesson 1.5, Activity 2, Possible Responses Lesson 1.5, Activity 3, Possible	3 e	d from Pgs.	
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	he Regents of the University of California. All rights reserved. Partner A		8 1	Responses Lesson 1.5, Activity 2, Possible Responses Lesson 1.5, Activity 3, Possible Responses Lesson 1.6, Activity 2, Possible Responses	e	5 d from Pg. 105 d from Pg. 111	Lesson 3.2, Activity 3, Possible Responses Lesson 3.2, Activity 3, Possible Responses Lesson 3.2, Activity 3, Possible Responses Lesson 3.3, Activity 2, Possible Responses
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Key activities

- Introducing the Poisonous Newts: Students are introduced to the unit problem and their role as student biologists.
- **Observe:** Students make observations of individuals in a population of butterflies in order to learn about traits in a population.
- **Do**: Students use the *Natural Selection* Sim, or watch a video of the Sim investigation, to learn how to make different traits in the populations of the Sim.

Ideas for synchronous or in-person instruction

Before meeting, have students watch the introductory video. While meeting, have students share their initial ideas about the video. Have students work in groups of three to four to observe the Butterfly Population Cards, then share as a class. Provide students with time to explore the Sim then ask students to complete the Sim activity for this Lesson. With the whole class, discuss what students learn from using the Sim, then show the Histogram video and discuss it as well.



Natural Selection @Home Lesson 1



Today, we will begin a new unit called *Natural Selection*. In this unit we will learn about how populations of organisms change over time.

Look at the image of a population of dart frogs from a rain forest in Ecuador on the next slide. What do you notice about them?





The frogs on the previous slide represent a population.



a group of the same type of organism living in the same area

In this lesson and throughout the unit you will need to access different pages such as the Glossary on the next slide. Check with your teacher about how you will access materials and complete and submit work in this @Home Unit.

Natural Selection @Home Lesson 1

	Natural Sele	ction Glossary (continued)
		appen that is based on what you already know dria suceder que está basada en lo que tú ya conoces
		by another animal for food
prey: an animal t	hat is hunted or killed l al cual otro animal caz generation: a g generación: un	
	predator: an depredador: u	environment: everything (living and nonliving) that surrounds an organism ambiente: todo (viviente y no viviente) lo que rodea a un organismo feature: a characteristic that all members of a species have artíbuto: vuo acaracteristic que terient otodo sta inviduos de una especie
		gene: an instruction for making a protein molecule gen: una instrucción para formar una molécula de proteína
		gene version: a specific form of a gene that provides instructions for making a particular protein molecule versión de gen: una forma especifica de un gen que proporciona instrucciones para hacer una molécula de proteina particular
_		Natural Selection @Home Lesson 1

Throughout the year, you can look up vocabulary words in the **Glossary** to help you understand what they mean. You can find this in your student pages or in the Amplify Library.

Natural Selection Glossary pages or Amplify Library



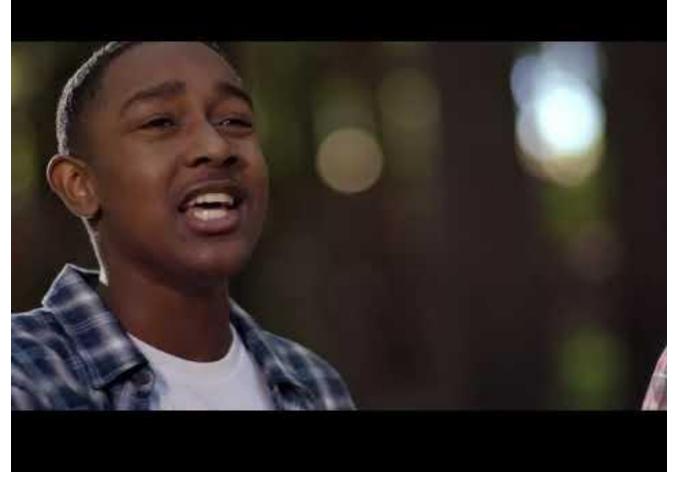
The frogs in the image you just examined are 15 individuals from one population of a species of dart frogs. In this unit, we will focus on a different population that has some very interesting traits.



Let's watch a video that will explain your role in this unit.

You will be helping to solve a mystery about a specific **population of rough-skinned newts.**

Note: all videos in this @Home Unit can be viewed on a smartphone or any other connected device.



Using the print version? Watch the video here: tinyurl.com/AMPNS-11

As you heard in the video, some of these newts are poisonous enough to kill a human. But the population did not always have so many individuals who were extremely poisonous.

We'll investigate why the population **changed over time.** Read the message on the next slide to learn more.

$\bullet \bullet \bullet$

To: Student Biologists **From:** Dr. Alex Young, Head Biologist **Subject:** Claims About the Rough-Skinned Newts



Hello, student biologists! I'd like to ask for your help in investigating the following claims. These claims were brought to us by park visitors.

Claim 1: Some people think that some newts became more poisonous because they wanted to—newts do seem like smart creatures!

Claim 2: Others suggest something in the environment caused the newts to become more poisonous.

Please let us know what you find out about these claims!

Below is the question that will guide our work across the entire unit:

Unit Question

Why do populations change over time?

We will investigate why populations like the rough-skinned newts in Oregon State Park change over time.

We will begin by trying to figure out the answer to this question:

Chapter 1 Question

What caused this newt population to become more poisonous?

What caused this newt population to become more poisonous?

Claim 1: Individual newts became more poisonous because they wanted to.

Claim 2: The newt population became more poisonous because of something in the environment.



Here are two claims that respond to the Chapter 1 Question.

What are your **initial ideas** about the claims?

What caused this newt population to become more poisonous?

Claim 1: Individual newts became more poisonous because they wanted to.

Claim 2: The newt population became more poisonous because of something in the environment.

We will continue to think about this question and these two claims throughout Chapter 1.

Key activities

- Introducing the Poisonous Newts: Students are introduced to the unit problem and their role as student biologists.
- **Observe:** Students make observations of individuals in a population of butterflies in order to learn about traits in a population.
- **Do**: Students use the *Natural Selection* Sim, or watch a video of the Sim investigation, to learn how to make different traits in the populations of the Sim.

Ideas for synchronous or in-person instruction

Before meeting, have students watch the introductory video. While meeting, have students share their initial ideas about the video. Have students work in groups of three to four to observe the Butterfly Population Cards, then share as a class. Provide students with time to explore the Sim then ask students to complete the Sim activity for this Lesson. With the whole class, discuss what students learn from using the Sim, then show the Histogram video and discuss it as well.



Today we will investigate this question:

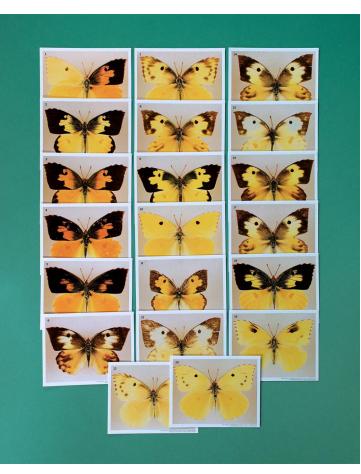
Investigation Question: How can we describe a population?

The first step in understanding why this population of newts changed over time is to learn more about **what a population is and how it can be described**.

Once we know how to describe a population, we can recognize when a population has changed and describe that change.



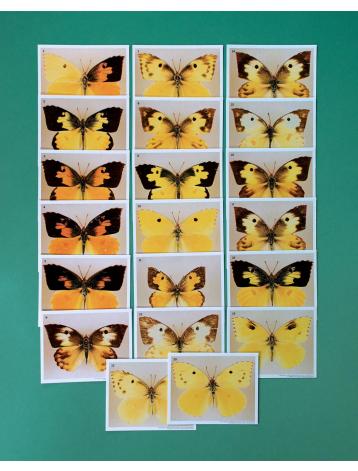
When you were examining the individuals in this population you probably noticed similarities and differences. For example, they are **similar** because they all have four legs. However, the spots on their skin are very different.



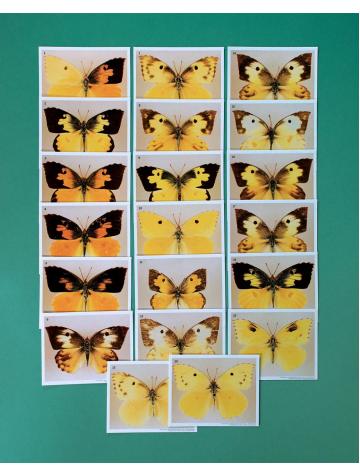
Here is a population of dog face butterflies.

What was one thing that all of these butterflies have in common?

What is different about these butterflies?



All of the butterflies had one or more **colors** on their wings. Wing color is an example of a **feature**: a characteristic that all members of a species have, which varies between organisms.



The different **versions** of this feature (for example, yellow, orange, or black for wing color) are called **traits**.

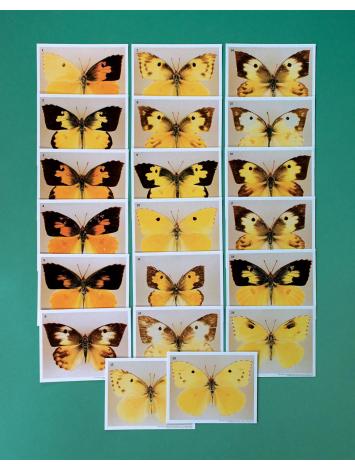
This word can help us describe populations:



a specific characteristic of an individual organism

Observing the animal populations has helped us investigate this question:

Investigation Question: How can we describe a population?



For example, we might say that this population has **different traits** for wing color: some are yellow, some are yellow with black spots, etc.

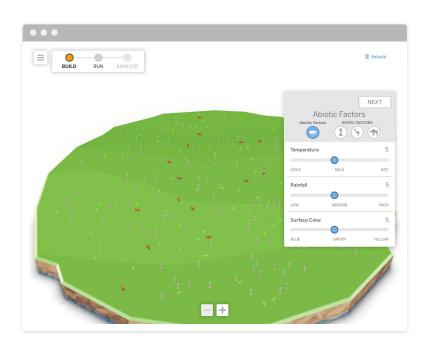
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Ideas for synchronous or in-person instruction

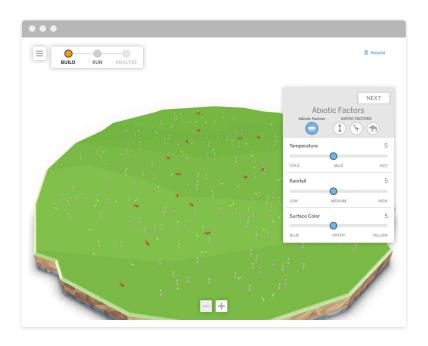
Before meeting, have students watch the introductory video. While meeting, have students share their initial ideas about the video. Have students work in groups of three to four to observe the Butterfly Population Cards, then share as a class. Provide students with time to explore the Sim then ask students to complete the Sim activity for this Lesson. With the whole class, discuss what students learn from using the Sim, then show the Histogram video and discuss it as well.



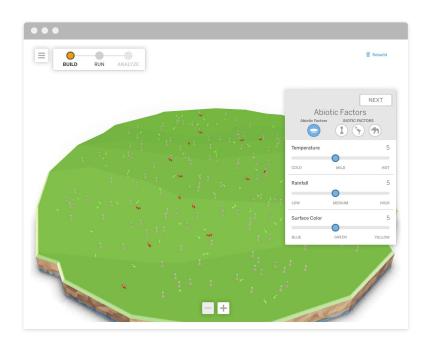


Throughout the unit, we will be using the *Natural Selection Simulation*.

In this lesson you will use the Sim or watch a video of a Sim investigation. Check with your teacher about how you will access Sims and other digital tools in this @Home Unit.



A simulation is a type of **scientific model.** Models can help us study things that happen very slowly.



Since a sim can show changes in a population much more quickly than they happen in nature, they are important tools for biologists who study populations of organisms.



Today, we'll use the Natural Selection Sim to set up populations of organisms and observe their variation in traits. There are three types of organisms in the Sim: thornpalms, ostrilopes, and carnithons.

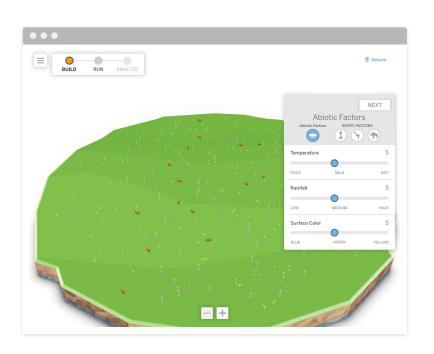


These organisms are not real, but you can learn about populations of real organisms from observing these organisms in the Sim.

Watch the video on the next slide to learn more about the Sim. Dragging the slider on the x-axis of each histogram changes the distribution of traits for that feature.

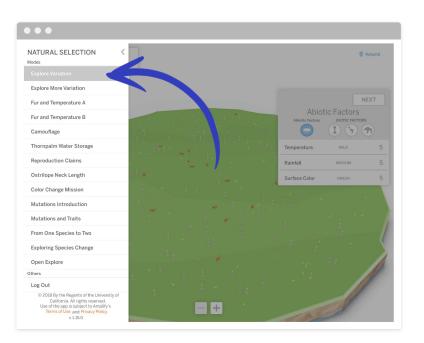


Using the print version? Watch the video here: tinyurl.com/AMPNS-12



The goal of the first set of Sim missions is to set up and observe **different populations**.

We can complete all the missions in **Build** without entering Run.



Each Sim activity has a mode with settings that make it easier to complete. In this activity, you'll focus on a few features of each Sim organism using **Explore** Variation mode.

We will be setting up different populations in the Sim and **changing the traits** of individuals in the populations.

This is possible in the Sim, but it is **not** how populations actually change in the real world. In the real world, traits such as color and fur level stay the same for the life of an individual.

Using the Sim? Follow the instructions for the Sim investigation below. Not using the Sim? Go to <u>tinyurl.com/AMPNS-01</u> to watch a video of someone completing the Sim Missions and write a check mark next to each mission after you complete it.	
Sim I	ivestigation Instructions:
	Open the Natural Selection Simulation and open the mode: Explore Variation.
2.	Complete the missions below. Complete each mission by adjusting the trait-level and variation sliders
3	Zoom in to the environment to observe the individual organisms.
	Write a check mark next to each mission after you complete it.
Tips:	
	It is not necessary to enter Run or Analyze to complete these missions.
•	Turn off organisms that you are not investigating by pressing the INCLUDE
	THORNPALMS/OSTRILOPES/CARNITHONS toggles.
	Aission 1: Set up a thornpalm population where all the thornpalms have medium thorns.
	Alission 2: Set up a thornpalm population where the thornpalms have many different thorn sizes.
	Alission 3: Set up a thornpalm population with many short thornpalms, a few medium-heigh thornpalms, and no tall thornpalms.
	fission 4: Set up an ostrilope population that has blue, green, and yellow ostrilopes.

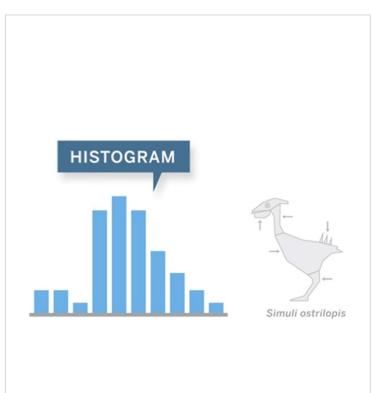
Find the Exploring Variation and Distribution in the Sim page. Use the Sim or watch a video of this Sim investigation.

Complete the four Missions.

Exploring Variation and Distribution in the Sim page

Natural Selection @Home Lesson 1

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You saw a graph called a histogram in the Sim, which is an important type of visual representation that we'll use throughout this unit.

Next, we'll watch a video explaining **histograms**.



Using the print version? Watch the video here: tinyurl.com/AMPNS-13

You have seen several examples of variation within populations.



any difference in traits between individual organisms

As we think about how populations change over time we will need to think about different generations.



a group of individuals born and living at about the same time

A histogram is a useful way to look at the distribution of traits in a population.



the number of individuals with each trait in a population

We learned that individuals in a population can have different traits for the same feature. When individuals have different traits, the population has **variation**. We can also talk about how many individuals in a generation have each trait. This is called the distribution of traits in a population. This information can be shown in a **histogram**.



The Sim creates a **histogram** in the Population menu as you set up each population.

This **key concept** summarizes what we have learned today.

 A population can be described by the traits present and by the number of individuals who have each trait. Natural Selection @Home Lesson 1

End of @Home Lesson





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Key activities

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Suggestions for Online Synchronous Time







Online synchronous time

Online discussions: It's worthwhile to establish norms and routines for online discussions in science to ensure equity of voice, turn-taking, etc.

Digital tool demonstrations: You can share your screen and demonstrate, or invite your students to share their screen and think-aloud as they use a Simulation or other digital tool.

Interactive read-alouds: Screen share a digital book or article, and pause to ask questions and invite discussion as you would in the classroom.

Shared Writing: This is a great opportunity for a collaborative document that all your students can contribute to.

Co-constructed class charts: You can create digital charts, or create physical charts in your home with student input.

page 18



Questioning Strategies

Open-Ended Questions to Facilitate Student Thinking & Discourse

- Questions to assess students' knowledge and skills
- Questions to promote student-to-student discourse
- Questions to guide student learning

Questioning Strategies for Grades 6-8 Overview of the Role of Open-Ended Questioning Repeated opportunities for students to listen to and speak with others are essential for promoting deep thinking and learning in science. Meaningful teacher-initiated questions create a rich context for promoting open-ended student dialogue and discussion. The Science Framework for California Public Schools explains that "Simply providing opportunities to talk is not enough. Effective questioning can scaffold student thinking" (California Science Framework, 2016, Chapter 11, p. 21). The Framework suggests that "Teacher-initiated questions are key to helping students expand their communication, reasoning, arguments, and representation of ideas in science" (California Science Framework, 2016, Chapter 11, p. 21). The types of questions that teachers pose are instrumental in supporting student understanding. The Framework calls for more openended teacher questioning that "prompts and facilitates students' discourse and thinking" and less teacher questioning that prompts "students to seek a confirmatory right answer" (California Science Framework, 2016, Chapter 11, p. 6). m during The Amplify Science Teacher's Guide is infused with opportunities for students to discuss their developing mote ideas in response to open-ended prompts. Questions to promote student thinking and discussion are purposefully built into the Teacher's Guide instructional steps and Teacher Support notes that surround all our hands-on and reading activities. In addition, all units include discourse routines (e.g., Shared Listening, Think-Draw-Pair-Share, Write and Share, Word Relationships) that provide opportunities for students to use focal off with unit vocabulary as they think and talk with partners and the class about their understanding of key science content and practices. Many of the On-the-Fly Assessment suggestions provided throughout each unit offer open-ended follow-up questions that can be used to probe student thinking and formatively assess student understanding of the content. In addition, each unit includes multiple opportunities for students to respond to open-ended questions through additional modalities (e.g., in writing, with diagrams, through a kinesthetic model) While the prompts embedded in each of the opportunities mentioned above provide fertile ground for student discussion, continued use of flexible, open-ended questions is invaluable for assessing students' knowledge and skills, promoting student-to-student discourse, and guiding student learning. A collection of gradeg to me appropriate questions follows that can be used for these purposes. You will also find a list of activity types included within the Amplify Science curriculum that are particularly conducive to the use of these questions. find more You may choose to print out these questions and activity types for reference throughout your instruction. @ The Reports of the University of California All rights reserved D The Reports of the University of California. All rights reserv th The Reports of the University of California All debts reserve

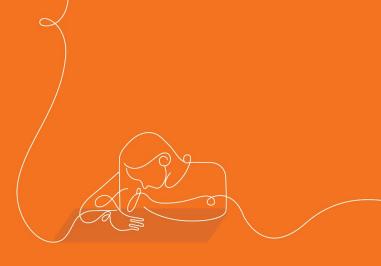
Amplify.

Pages 19-21

Reflection: Teaching @Home Lesson 1

How would you teach this lesson?

How might you include suggestions for online synchronous time and/or questioning strategies?





Multi-day planning, including planning for differentiation and evidence of student work

11

Day@Home Lesson 1				page
Minutes for science: <u>15 min</u>	L	Minutes for science: <u>30 min</u>	_	
Instructional format: Asynchronous Synchronous		Instructional format: Asynchronous Synchronous		
Lesson or part of lesson: Introducing the poisonous newts (slides 1-15)		Lesson or part of lesson: Summarize the introduction to the unit, make observations of individuals in a population & engage with the simulation.		
Mode of instruction: Preview Review Teach full lesson live Teach using synchronous suggest Students work independently Printed @Home Slides Digital @Home Slides @Home Videos	gestions using:	Mode of instruction: Preview Review Teach full lesson live Teach using synchronous sugged Students work independently u Printed @Home Slides Digital @Home Slides @Home Videos	estions Ising:	
Students will View slides and the video that introduces students to the unit. Jot down initial ideas about their reactions to the video.	Teacher will Assign slides 1–15 in Schoology and provide direction for students to jot down their ideas about the unit problem to share when the class meets together.	Students will Vork in groups of three to four to observe the Butterfly Population Cards, then share as a class. They will complete the Sim activity for this Lesson. Finally, they will discuss what they learn from using the Sim, then view the Histogram video and discuss it as well.	Teacher will Revisit the unit question on slide 12 and the claims on slide 14. Present slides 15-24 giving students an opportunity to observe the butterfly population cards. Introduce the simulation via slides 25-43 & give students an opportunity to engage with SIM.	

ynchronous: record observations while engaging with the imulation and as they explore butterfly populations	 Written explanations (typi Diagrams Recording pages for Sim u 	
w will students submit this work product to you? the Completing and Submitting Written Work tables to the right for guidance on how dents can complete and submit work. <u>synchronous</u> : students jot initial ideas on paper or digitally to ring with them to the asynchronous lesson <u>ynchronous</u> : Students will use the student sheets to record heir observations while engaging with the simulation & ubmit through Schoology.	 Completing Written Work Plain paper and pencil (videos include prompts for setup) (6-8) Student platform Investigation Notebook Record video or audio file describing work/answering prompt Teacher-created digital format (Google Classroom, etc) 	 Submitting Written Work Take a picture with a smartphone and email or text to teacher Through teacher-created digital format During in-school time (hybrid model) or lunch/materials pick-up times (6-8) Hand-in button on student platform

2

English-Chinese Glossary	s. What are students working in the lesson(s)	Some Types of Written Work in Amplify Science		
ptive trait: a trait that makes it more likely that an individual will survive in a specific environment 位性性状: 使个体在特定环境中存活率更高的性状 osestor: a related organism from a previous generation 花: 具有柔美天药户上代生物体 mouflage: a way of hiding by looking the same as the background 囊: 使自己与环境融为一体的隐藏方式 use: an event or process that leads to a result or change 团: 导致某种结果或变化的事件或过程 remoseme: a long piece of DNA that contains many genes 魯体: 含有许多基因的 DNA 长链 trubution: the number of individuals with each trait in a population	provide feedback on? plify Science to the right for guidance. bove, do you want to add one? Make notes below. It down their initial ideas vation Inotice/observe	 Daily written ref Homework task: Investigation no Written explana 	S	
存:种群中具有每种性状的个体数量 A: a type of molecule that genes and chromosomes are made of A: 地加克累内和单位的分子	 I think this is important bec prk p 	ause	n Work Submitting Written Work	
Yest: a result or change that happens because of an event or process (政:由于某个事件或过程而产生的结果或变化 Wromment: everything (living and nonliving) that surrounds an organism 現:生物体周囲卵所有(有生命和无生命的)事物 ature: a characteristic that all members of a species have 種:某个物种的所有成员都具备的特性 me an instruction for making a particular protein molecule [政:产生蛋白质分子的指令 meversion: a specific form of a gene that provides instructions for making a particular protein olecule 國政:提供指令以产生特定蛋白质的特殊的基因 Matural Stection—Mult Language Glossary	 I wonder I wonder Infinit actual on paper or aignaity to synchronous lesson II use the student sheets to record ngaging with the simulation and . 	 ecord (6-8) Student platform Investigation Notebook Record video or audio file During in-school time 		
Supports: Encourage stude Provide students Leverage primar Teacher modeling Strategic partne	ents to engage in student-to-student disc with the Multi-Language Glossary when y language for discussions g of the simulation (could also use the vi ering s create a visual representation of what	cussion re appropriate, ad deo)	ld images	

Teacher Overview - Chapter 1 Overview of @Home Lessons 2-5

@Home Lesson 2: GROUP 1

• Students complete a Sim activity that provides evidence about why an ostrilope population changed over time. Students are introduced to the Modeling Tool and use it to make a prediction about a new ostrilope population. Students test their predictions about Population B in the Sim.

Page 17

@Home Lesson 3: GROUP 2

• Students run tests in the Sim in order to gather evidence to support or refute the claim that yellow color is always an adaptive trait in a yellow environment. Students use the Modeling Tool to predict how high water storage in a thornpalm population can become more common over time.

@Home Lesson 4: GROUP 3

• Students are introduced to the Write and Share routine, which they use to demonstrate their understanding of why the distribution of traits in a population changes. Students review the @Home Science Wall, including the Chapter Questions, key concepts, and vocabulary. Students use what they have learned to support a claim in order to answer the Chapter 1 Question.

@Home Lesson 5: GROUP 4

• Students use the Sim to gather evidence about whether or not reproduction always results in offspring with adaptive traits. Students learn about where jellies get the glowing trait.

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pages 13-14

Breakout groups

Discussion prompts

Planning:

• Dig into the @Home Resources for your assigned lesson.

Student work:

• Discuss how you can collect evidence of student work

Differentiation:

• Consider how you might differentiate your lesson

Day 2:		······			
Minutes for science:		Minutes for science:			
Instructional format: Asynchronous Synchronous		Asynchronous Synchronous	Synchronous		
Lesson or part of lesson:		Lesson or part of lesson:			
Mode of instruction: Preview Review Teach full lesson live Students work independe @Home Placket @Ohome Slides and @ @Home Videos	ently using:	Mode of instruction: Preview Review Teach full lesson live Students work Independe @Home Packet @Home Packet @Home Videos	Home Student Sheets		
Students will	Teacher will	Students will	Teacher will		
				ork in Amplify Science	
				s Ily at the end of Chapter) s, investigations, etc	
				is, investigations, etc	
				ubmitting Written Work	
		I	describing work/answering prom	k digital format file During in-school time (hybrid model) or lunch/materials pick-up	
			 Teacher-created digita format (Google Classroom, etc) 	(6-8) Hand-in button on student platform	
	How will you differentiate this l	esson for diverse learners? (Navgete to th	lesson level on the standard Amplify Science platform	and click on differentiation in the left menu.)	

Planning Share Out

- What are your key takeaways from planning?
- Which lesson parts did you plan for synchronous vs. asynchronous time?

Breakout Room 1 -	Day	Day				
Planning	Minutes for science:	Minutes for science: Instructional format: Asynchronous Synchronous				
@Home Lesson 2	Asynchronous					
	Lesson or part of lesson:		Lesson or part of lesson:			
	Mode of instruction: Preview Review Teach full lesson live Teach using synchronous suggestions Students work independently using: Printed @Home Slides Digital @Home Videos @Home Videos		Mode of instruction: Preview Review Teach full lesson live Teach using synchronous suggestions Students work independently using: Printed @Home Sildes Digital @Home Sildes @Home Videos			
	Students will	Teacher will	Students will	Teacher will		











Plan for the day

- Framing the day
 - Welcome
 - Instructional Materials
- Unit Internalization
- Planning to teach
 - Collecting evidence of student learning to meet diverse learner needs
- Reflection and closing

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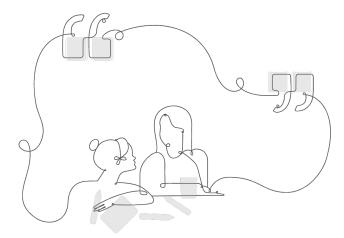
During this workshop did we meet our objectives?

- Were you able to internalize your upcoming unit?
- Do you know how to plan for <u>collecting evidence of student</u> <u>learning</u> in order to make instructional decisions to <u>support</u> <u>diverse learner needs</u>?
- Do you have the resources you need to develop a multi-day plan for implementing Amplify Science within your class schedule and instructional format?

Upcoming LAUSD MS Office Hours

Bi-weekly from 3-4pm

- Thursday, 3/11
- Thursday, 3/25
- Thursday, 4/8
- Thursday, 4/22
- Thursday, 5/13
- Thursday, 5/27



https://tinyurl.com/6-80fficeHours

Additional Amplify resources

Program Hub: Professional Learning Resources

► Hello Teacher Considine Ltconsidine@tryamplify.net Log Out Go To My Account ☆ Classroom Language Settings Professional Learning Resources ▼ This section will provide you with the knowledge and skills you need to start teaching with Amplify Science. You'll find self-study professional learning videos and resources.					
LA Science Program Guide	Getting sta	arted		Planning Videos and resources to help you plan	
Science Program Guide	Assessme Student Asses	nt sments and Work		Unit Orientation	
Help	Additional	Support			

Additional Amplify resources



Caregivers site

Provide your students' families information about Amplify Science and what students are learning **amplify.com/amplify-science-familyresource-intro/**

Additional Amplify resources



Program Guide

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

http://amplify.com/science/california/r eview

Amplify Help

Find lots of advice and answers from the Amplify team. **my.amplify.com/help**

Additional Amplify Support

Customer Care

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



scihelp@amplify.com



800-823-1969



When contacting the customer care team:

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

Please provide us feedback!

URL: <u>https://www.surveymonkey.com/r/AmplifyLAUSDMS</u>

Presenter names (choose 1):

Date: xx





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Welcome to Amplify Science!

This site contains supporting resources designed for the Los Angeles Unified School District Amplify Science adoption for grades TK–8.

All LAUSD schools have access to Amplify Science resources at this time.

Click here for Remote Learning Resources for Amplify Science

Click here to go back to the LAUSD homepage.

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



https://amplify.com/lausd-science/

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Smart Start Plans

Middle School Science Schoology Group

- Access code to join the Schoology Group: SPG7G-K7BT9
- Once in the group, you will find the Smart Start Plans under *resources*.

Day	Learning Objective	What teacher does	What students do		
Monday		Instructional Support Day	,		
		Synchronous (60 min)			
Day 4	 Community Building (SEL) Creating a safe space for sharing on Zoom using Community Circle. 	 Community Building (SEL) The teacher will pose a question to students and have students respond in the Zoom chat. Thinking about the world around you, name at least 2 instances where you observe science happening. 	Community Building (SEL) Students will respond to the question posed by the teacher in the chat.		
	 Aspects of Modeling: Deepen students' understanding of scientific models. (SEP Modeling) 	 Aspects of Modeling: Read article and <u>watch video</u> Students need to understand the role of modeling in science. 	 Aspects of Modeling Students will read this article and watch this video and answer questions in a <u>Schoology Quiz</u>: in LAUSD MS Science Group: SPG7G-K7BT9) or in Google Docs. 		
	 Uploading Images to a Discussion Learn how to upload an image to a Schoology Discussion using a video tutorial. (Tool) 	 Uploading Images to a Discussion The teacher provides students the link to the informational video on "How to upload the image to Schoology discussion." 	 Uploading Images to a Discussion Students will watch a tutorial on how to upload a image to a Schoology discussion. Students upload their initial model of the phenomenon to a Schoology discussion. 		
	 Introduce Initial Model Critique Critique a model of a classmate in a constructive way to promote collaboration and student discussion. (SEP Modeling) 	 Introduce Initial Model Critique Using the <u>Discussion and Writing</u> <u>Prompts PDF</u> select sentence starters from pages 6 and 8 to have students use to critique the models of classmates. 	 Introduce Initial Model Critique Students return to the Initial Model in Schoology Discussion and critique the model of at least 1 classmate. 		
Day 4	Asynchronous				
	 Apply understanding of modeling (SEP modeling) and students revise their initial model. 	 Revise Initial Model: The teacher provides an opportunity for students to revise their initial model based on article and feedback. 	Revise Initial Model: • Students will revisit their initial model and make edits based on critiques from classmaters and the reading. • Students will add an explanation of how their model changed and why they made the changes. • Students upload their revised model to Schoolog discussion.		

Creating Assignments in Schoology

- Click Add Materials.
- Select Add Assignment.
- Fill out the Create Assignment form.
- Options. Use Options to turn on/off the following features: Use Individually Assign to only display the assignment to a specific member of the course or a grading group.
- Click Create to complete

LAUSD Shared Logins

AmplifyScience

Go to: my.amplify.com

A.

Log In with Amplify

District Shared Logins				
Grade	Username	Password		
Kindergarten	LAUSDscienceK	LAUSD1234		
1	LAUSDscience1	LAUSD1234		
2	LAUSDscience2	LAUSD1234		
3	LAUSDscience3	LAUSD1234		
4	LAUSDscience4	LAUSD1234		
5	LAUSDscience5	LAUSD1234		
6	LAUSDscience6	LAUSD1234		
7	LAUSDscience7	LAUSD1234		
8	LAUSDscience8	LAUSD1234		

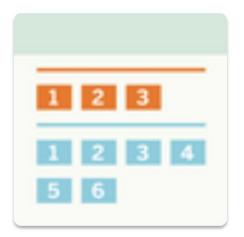
Elementary Student Apps Shared Logins

English

- Username: ampsci123
- Password: ampsci123

Spanish

- Username: ampsci123sp
- Password: ampsci123sp



Elementary Student Apps