Amplify Science

Grade Level Orientation and

Refresher Workshop

Gr 8: Launch Unit, Harnessing Human

Energy

LAUSD

Date

Presented by Your Name





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



Plan for the day

- Framing the day
- Introduction to the Launch Unit
- Unit Internalization
- Experiencing the Launch Unit
- Planning with the Classroom Slides
- Closing

Ice Breaker!

Reflecting

- Round 1: Share a key takeaway from the 2020-21 school year.
- Round 2: Share something you're looking forward to as you start a new school year.



Overarching goals

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

- Leverage successes and learnings from remote and hybrid teaching in your transition back to school for the 2021-22 school year.
- Experience what teaching and learning look like in Amplify Science.
- Understand the benefits of teaching the standard Amplify Science curriculum.
- Apply program essentials to prepare to teach.



Introducing Amplify Science





Course curriculum structure

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

Grade 7

- Launch: Geology on Mars
- Plate Motion
- Engineering Internship: Plate Motion
- Rock Transformations
- Phase Change
- Engineering Internship: Phase Change
- Chemical Reactions
- Populations and Resources
- Matter and Energy
 in Ecosystems

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

Key takeaways:

- 9 units per grade level
- 145 lessons total per year
- Lessons are 45 minutes long

6-8 Curriculum: Unit types Launch units

Each year starts with an 11-day Launch unit.

Launch units introduce instructional routines and norms as well as key science practices students will leverage in every Amplify Science unit.



11 Lessons

Harnessing Human Energy

6-8 Curriculum: Unit types Core units

Each year has six Core units. Core units are 19 days long.

In each Core unit, students take on the role of a scientist or engineer and work to solve a real-world problem.



19 Lessons
Force and Motion

6-8 Curriculum: Unit types Engineering Internships

Each year has two Engineering Internships. Engineering Internships are 10 days long.

In these units, students work as interns for a fictional company, Futura Engineering. They focus on designing solutions to real-world problems.



10 Lessons

Force and Motion Engineering Internship

Today's focal unit

Today's workshop will focus on your Launch unit: Harnessing Human Energy.

You should have watched the Navigating Program Essentials asynchronous session before attending this workshop.



11 Lessons Harnessing Human Energy

Capitalizing on Amplify Science in a responsive relaunch





Capitalizing on Amplify Science in a responsive relaunch

Amplify Science...

- Is NGSS-designed
- Engages students in figuring out phenomena
- Has a robust system of formative assessment
- Has a strong emphasis on literacy development
- Is for all students



"As you transition back to in-person learning, it's time to shift back to the standard Amplify Science curriculum to fully meet the NGSS."

-Capitalizing on Amplify Science in a responsive relaunch





Capitalizing on Amplify Science in a responsive relaunch

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The Next Generation Science Standards (NGSS) are not a list of discrete pieces of knowledge for students to acquire; rather, the **three dimensional structure of the NGSS** supports students in deepening their understanding of disciplinary core ideas across grade bands, by engaging in science and engineering practices and using Crosscutting Concepts. Thus, our systems of relaunch should emphasize helping students continue to progress in their ability to figure out, like a scientist, using all three dimensions.

How can this feature of Amplify Science support our responsive relaunch plans?

- Amplify Science learning experiences are three dimensional.
- The Science and Engineering Practices (SEP) and Crosscutting Concepts (CCC) are not specified at each grade level but rather defined with increasing sophistication in each grade band (K-2, 3-5, 6-8). Therefore there is no "loss" of these dimensions, only opportunities to strengthen them in the upcoming year.
- The content in the Disciplinary Core Ideas (DCI) spirals and is not taught in each grade level, but rather in each grade band (K-2, 3-5, 6-8). This means there are no direct dependencies in teaching one grade level's content from the grade level prior.
- Each Amplify Science unit can be taught independently and includes supports to make sure all students can succeed regardless of their prior instruction. For unitguestic information, see the Standards and Goals Unit Guide document in the section called, "How This Unit Fits into the Amplify Science Curriculum." This section provides useful information advect where a unit's ideas fit in the trajectory of core ideas, as well as guidance around prerequisite howedge for accessing the unit.

What are recommendations for capitalizing on this feature of Amplify Science?

- Move forward with this year. Focus on the current grade level standards and units rather than working to identify "missing" content or trying to backfill discreet science ideas from the previous year.
- Continue strengthening the use of the Science and Engineering Practices and Crosscutting Concepts. Authentic engagement and development of these scientific critical thinking skills is what allows students to apply their knowledge to real-world situations in and out of the classroom.
- Use a system of formative assessment to monitor student understanding (see more details in the next feature).

Can I continue to use the Amplify Science @Home Units in my responsive relaunch plans?

As you transition back to in-person learning, it's time to shift back to the standard Amplify Science curriculum to fully meet the NGSS: The 6Home Units were designed only for use in remote and hybrid teaching settings. During the year of disrupted schooling, they provided awy for all students, regardless of time constraints or materials access, to be exposed to activities related to figuring out phenomena. To create these instructional materials, about 50% of activities were cut, resulting in learning experiences that do not fully engage students using all three dimensions. Examples include: less explicit instruction in disciplinary literacy practices, modifications to hands-on investigations. Imited opportunities for student's engagement in deep learning reduction of opportunities to apply and reflect. Because these are core promotes of student's engagement in deep learning towards figuring out phenomena, we do not recommend using the @Home Units for in-person instruction. As needed, the materials can be were a student's labsent, as they can be completed asynchronously.

Amplify Science... is NGSS-designed

Key points:

- Students progress in their ability to figure out using three dimensions across multiple years.
- Disciplinary Core Ideas spiral across grade bands (K-2, 3-5, 6-8).
- Amplify Science units are not dependent on specific science concepts from previous grades.

Key recommendations:

• Focus on standards and **units at your grade level** instead of revisiting "missing" content.

Amplify Science is NGSS-designed

Navigate to the **Standards and Goals** document in your unit's Unit Guide.

Skim the following subsections:

- Trajectory of Core Ideas
- Prerequisite Knowledge

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

Amplify Science engages students in figuring out phenomena

Key points:

- Figuring out phenomena increases student motivation and makes learning relevant.
- Students construct increasingly complete explanations of anchor phenomena throughout Amplify Science units.

Key recommendations:

• Prioritize **teaching units fully** so students can come to a complex explanation of the unit phenomenon. Key takeaway Teaching complete units at your grade level is the best way to ensure your students progress along the Next Generation Science Standards as you return to onsite teaching.

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Amplify Science

has a robust system of formative assessment

Key points:

- Formative assessments in Amplify Science allow frequent insight into student learning in all three dimensions.
- Formative assessments include "Now what" suggestions for providing more support when needed.

Key recommendations:

 Use unit resources to get familiar with the Assessment System. Formatively assess your students and adjust instruction as needed.

Amplify Science

has a strong emphasis on literacy development

Key points:

- Amplify Science supports students with scientific reading, writing, speaking, and listening
- Literacy and discourse are key aspects of the work professional scientists do

Key recommendations:

- Use the standard curriculum as written to develop students' disciplinary literacy
- Attend to the CCSS-ELA standards addressed in Amplify Science lessons

Amplify Science is for all students

Key points:

- Multimodal instruction provides multiple entry points into complex science ideas, and allows for multiple means of expression.
- Amplify Science prioritizes representation of diverse scientists.

Key recommendations:

 Leverage lesson-specific differentiation resources to support all learners in your class.

Key takeaway Formative assessments, explicit literacy instruction, and lesson-specific differentiation suggestions are built-in tools for ensuring your students have equitable access to rigorous science learning.



Amplify Science is for all students

Empower student scientists by establishing a **culture of figuring out** in your classroom.

Tips for establishing a culture of figuring out To promote equity, relevance, and engagement

- Elicit and leverage students' prior knowledge, personal experiences, and cultural backgrounds
 - Find space and time where students can share their experiences and ideas related to the unit phenomenon or problem that they will be seeking to explain or solve.
 - Have students return to their funds of knowledge at key moments of the figuring out process for the purpose of building on their ideas, using their connections as a source of evidence, or to notice if their ideas have changed over time.
 - Think about how to attribute ideas from students who might not see themselves as contributors to the conversation.
- Value student questions
 - Utilize the embedded question-asking opportunities in the unit to elicit questions from students.
 - Document, return to, and sort student questions at key moments, such as the beginning of the unit when the unit phenomenon is introduced and at the beginning and end of each chapter.
- Connect to local and relevant phenomena
 - Welcome in students' interest in and experience with local and everyday
 phenomena, and help draw connections to what they're figuring out throughout
 the year about the unit phenomena.
 - Compare and contrast the unit phenomenon to local phenomena.
 - Encourage students' explorations and observations of everyday phenomena at home or in their communities.
 - Identify community resources that can help students explore phenomena in their community.
- Allow for a variety of sensemaking types and paces
 - Attend to how different students thrive with different modalities, or need less or more time with them.
 - Use the storyline in the unit to teach sequentially but allow for flexibility based on student need.
- Take on the role of an interested skeptic¹
 - Students might not be intrigued by a phenomenon right away because they believe they already know how or why it happens. Help students become dissatisfied with what they can explain.²
 - Ask questions such as: "Is that how a scientist would do it?", "Is that consistent with what we read about?", or "Do you agree with your partner's idea?"

¹ Sara Goodman, knowatom.com ² Using Phenomena in NGSS-Designed Lessons and Units

> Tips for a Culture of Figuring Out by The Learning Design Group © 2021 The Regents of the University of California



Questions?





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Middle school curriculum course structure

Integrated model*

Launch Unit 11 lessons

Grade 6

- Launch: Microbiome
- Metabolism
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- Weather Patterns
- Earth's Changing Climate
- Engineering Internship:
 Earth's Changing Climate

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What is a launch unit?

- First unit of the year
- Interesting, immersive, and often surprising problem-context
- Introduces **practices** that are integral to science, such as:
 - Argumentation
 - Reading
 - Writing
 - Talking about science ideas
 - Using models
- Introduces routines such as:
 - Active reading
 - Discourse routines

Launch unit: Grade 8 Harnessing Human Energy

Opportunities for students to extend their scientific thinking and practices outside the traditional realms of the science classroom.



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Launch Unit: Harnessing Human Energy



Problem: In order to help a team of rescue workers with an energy problem. Students work to find a way to get energy to the batteries in the rescue workers' electrical devices, even during power outages

Role: Student Energy Scientists

Students are motivated to explore relationships between different types of energy—with an emphasis on kinetic energy and potential energy—and the ways energy is transferred and converted. To solve the rescue team's energy problem, students research various ways to capture and store energy.

Unit Question How is it possible to charge electrical devices when the power is out?

Goals for argumentation in Amplify Science

- To provide students an authentic opportunity to engage in the practice of argumentation
- To make clear to students the purpose of argumentation and the role it plays in building and communicating scientific knowledge
- To help students build their own knowledge through argumentation



Specific goals for argumentation in launch units

- Introduce the **practice of argumentation** in science
- Introduce **tools** that will be used throughout the year to support students in getting better at specific aspects of oral and written argumentation:
 - Card sorts
 - Evidence gradient
 - Reasoning tool



Argumentation Wall

The Argumentation Wall is built in the launch unit, used throughout the year.

Completed Scientific Argumentation Wall Diagram



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Reasoning Tool

Reasoning Tool

Evidence	This matters because (How does this evidence support the claim?)	Therefore, (claim)

Microbiome—Reasoning Tool—Lesson 2.5—AMP615585.26-MB © The Regents of the University of California. All rights reserved.

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Students read each article twice The first read is always to annotate (questions, connections, comments, etc.

Subsequent reads are for a particular purpose

PRACTICES

CROSSCUTTIN

- To examine a specific visual representation
- To answer a question
- To find evidence to support a claim, or
- To draw conclusions across texts, etc.

Science and Engineering Practices

8. Obtaining, Evaluating, and Communicating Information



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Part 1: Unit-level internalization		Pu
Harnessing Human Energy	gγ	
What is the phenomenon students are investigating in y	your unit?	
Students work to find a way to get e electrical devices, even during power o	energy to the batteries in the rescue workers' outages,	
Unit Question:	Student role:	
	Energy scientists	
By the end of the unit, students figure out	Energy scientists	
By the end of the unit, students figure out	Energy scientists	
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By the end of the unit, students figure out What science ideas do students need to figure out in or	der to explain the phenomenon?	
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Guided Unit Internalization Part 1: Unit-level internalization		page 3
Unit title: Harnessing Human Energy		
What is the phenomenon students are investigating in your unit? Students work to find a way to get energy to the batte	ries in the rescue workers'	
electrical devices, even during power outages, Unit Question:	Student role:	
How can rescue workers get energy for their equipment during rescue missions?	Energy scientists	
By the end of the unit, students figure out		
What science ideas do students need to figure out in order to explain the phenom	enon?	

Energy Conversions

Planning for the Unit Printable Resources Unit Overview Coherence Flowcharts V **Copymaster Compilation** Unit Map V Flextension Compilation **Progress Build** \sim Investigation Notebook **Getting Ready to Teach** V Multi-Language Glossary Materials and Preparation V NGSS In PDF Science Background \sim Guardiar Summarize what Standards at a Glance V Print Ma students figure Print Ma Teacher References out by the end of Lesson Overview Compilation V Offline the unit. Standards and Goals V Teaching internet **3-D Statements** V materials Assessment System V

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Español

Guided Unit Internalization Part 1: Unit-level internalization	page 3	
Unit title: Harnessing Human Energy		
What is the phenomenon students are investigating in your unit?		
Students work to find a way to get energy to the batteries in the rescue workers' electrical devices, even during power outages,		
Unit Question: Student role:		
How can rescue workers get energy for their equipment during rescue missions?	entists	
By the end of the unit, students figure out		
The rescue workers need a system that transfers and converts energy. engineers have designed different solutions that can convert kinetic en- human motion into other useful forms	ocientists and gy from	
What science ideas do students need to figure out in order to explain the phenomenon?		

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Guided Unit Internalization Part 1: Unit-level internalization				
Unit title: Harnessing Human Energy				
What is the phenomenon students are investigating in your unit? Students work to find a way to get energy to the batteries in the rescue workers' electrical devices, even during power outages,				
Unit Question: How can rescue workers get energy for their equipment during rescue missions?	student role: Energy scientists			
By the end of the unit, students figure out The rescue workers need a system that transfers and converts energy. Scientists and engineers have designed different solutions that can convert kinetic energy from human motion into other useful forms				
What science ideas do students need to figure out in order to explain the phenomenon? When something is moving, it has kinetic energy. When something has the ability to make things move or change in the future, it has potential energy, even if it is not moving or changing now. Energy can be transferred from one object to another, and energy can be converted from one type to another.				

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page 3



Plan for the day

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Chapter 1 Question What is energy?

- explore both virtual and hands-on systems to identify examples of energy
- introduced to a formal definition of *energy*, and they learn to differentiate between kinetic energy and potential energy.

Chapter 2: The Rescue Team's Energy Needs

JUMP DOWN TO CHAPTER OVERVIEW

Lesson 2.1: Investigating Claims About How Objects Get Energy Lesson 2.2: Evaluating Energy Sources Lesson 2.3: Writing Scientific Arguments

Chapter 2

How can the rescue workers get energy to the batteries in their equipment during rescue missions?



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Key Concept

 Energy can be transferred from one object to another, and energy can be converted from one type to another.



Classroom Wall

Unit Question

How is it possible to charge electrical devices when the power is out?

Chapter 1 Question

What is energy and why does it matter to the rescue team?

Chapter 2 Question

How can the rescue workers get energy to the batteries in their equipment during rescue missions?

	Key Concepts	Vocabulary
ge e	1. Whenever something moves or changes, it is because of energy.	system
	2. When something is moving, it has kinetic energy.	claim
	3. When something has the ability to make things move or change in the future, it has	Evidence
	potential energy, even if it is not moving or changing now.	Kinetic energy
	4. Nothing creates energy. If something has energy, the energy must have been transferred	Potential energy
	from something else.	generator
?	another, and energy can be converted from one type to another.	convert
		transfer





Harnessing Human Energy Lesson 2.3: Writing Scientific Arguments Image: Constraint of the second s

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Harnessing Human Energy Lesson 2.3: Writing Scientific Arguments Image: Constraint of the second s

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Activity 1 Warm-Up



Activity 1

Warm-Up

One of the rescue workers has a special flashlight; it has a crank, and the light shines when the crank is turned. Since the rescue worker has never had to replace the batteries or plug in the flashlight, she thinks this flashlight works without an energy source. Do you agree or disagree?





Activity 2 Word Relationships



Chapter 2 Question

How can the rescue workers get energy to the batteries in their equipment during rescue missions?



We are going to use a routine called **Word Relationships**.

We will use **word cards** to create sentences that answer the Chapter 2 Question.



You'll use at least two words to create each sentence.

I'll model one example.

Word Relationships Routine

Answer the Chapter Question With a partner, use the cards to create sentences that answer the Chapter 2 question.

Make Sentences Use at least two words from the cards in each sentence. You don't have to use all the words.

Create Detailed Descriptions Try to create as many sentences as you can. You can also use multiple sentences to express your ideas.

Share At my signal, join another pair of students and share your responses.





Word Relationships

Word Relationships Routine

- 1. With a partner, use the words on the Word Relationships Cards to create sentences that answer the Chapter 2 Question: *How can the rescue workers get energy to the batteries in their equipment during rescue missions?*
- 2. Use at least two words from the Word Relationships Cards in each sentence. You don't have to use all the words.
- 3. There are many different ways to answer the Chapter 2 Question, so try to create as many sentences as you can. You can also use multiple sentences to express your ideas.
- 4. When you have created your sentences, join another pair of students and share your responses.

Word Bank

- energy
- convert







Join another pair and **share your sentences.** Take turns saying a sentence out loud and holding up the cards that are used in the sentence.



Activity 3 Writing a Scientific Argument



The lead energy scientist wants us to write **arguments** about the best energy source for the rescue team.

Let's review his message together.



$\bullet \bullet \bullet$

Writing a Scientific Argument

Message from the Lead Energy Scientist

Dear student energy scientists,

The rescue team needs to be sure they do not run out of energy in emergency situations. They are choosing between these two energy sources for the batteries in their equipment—the sun (solar cells) or human-powered generators. Please write an argument that will convince the rescue workers which energy source is the best choice for solving this energy problem.

Sincerely, Morgan Lewis Lead Energy Scientist, Energy Research Lab







Remember, you need to choose the best energy source for the **rescue team** and their needs.

You'll need to think about their problem to argue for the best solution.

Energy Source Claims

Claim 1: The sun (solar cells) is the best energy source for the rescue team.

Claim 2: Human-powered generators are the best energy source for the rescue team.

Let's **review the two claims** you will consider.

You'll think about six different pieces of **evidence** in order to choose the claim you think is best supported.

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Writing a Scientific Argument

Claims and Evidence

The rescue team is considering using the sun (solar cells) or human-powered generators to get energy to their equipment on rescue missions. Read the claims and evidence below, then talk to your partner about which energy source you think is best for the rescue team.

Claim 1: The sun (solar cells) is the best energy source for the rescue team. Claim 2: Human-powered generators are the best energy source for the rescue team

Evidence:

Evidence Card 1	Evidence Card 2
Solar cells transfer energy from the sun to a battery.	Human-powered generators can be used to transfer energy any time someone is there to turn the crank.
Evidence Card 3	Evidence Card 4
Solar cells only transfer energy when the sun is shining.	Rescue missions take place both in the daytime and at night, as well as in many different environments.
Evidence Card 5	Evidence Card 6



Read and **discuss** the two claims and the six different pieces of evidence.





(b) Claim 2: Human-powered generators are the best energy source for the rescue team.

You'll now pick a claim to support when you write.

Choose the claim that you think is better supported by the evidence. Next, you'll write your **arguments** to convince the rescue team that the energy source you chose is the best solution to their problem.

In your argument, you'll include:

- the claim you selected
- evidence that supports your claim
- vocabulary from the Word Bank

Argumentation Sentence Starters

- I think this evidence supports this claim because...
- I don't think this evidence supports this claim because...
- I agree because...
- I disagree because...
- Why do you think that?

$\bullet \bullet \bullet$

Writing a Scientific Argument

Arguing for an Energy Source

The rescue team needs to be sure they do not run out of energy in emergency situations. Write an argument that will convince the rescue workers which energy source is the best choice for solving this energy problem.

Claim 1: The sun (solar cells) is the best energy source for the rescue team. Claim 2: Human-powered generators are the best energy source for the rescue team.

Include the following in your argument:

- · the claim you selected,
- evidence that supports your claim, and

• vocabulary from the Word Bank (no need to use all the words).

Word Bank: energy, transfer, convert, potential energy, kinetic energy



Write your scientific argument for the rescue team.

Remember to include evidence in your argument.



2

Raise your hand if you chose **solar cells** as the energy source for your argument.

Raise your hand if you chose **human-powered generators** as the energy source for your argument.
Harnessing Human Energy: Lesson 2.3

Activity 4 Homework





For this activity, you will **read and annotate** the first article in the set: "Hand-Crank Flashlight."

It will help you prepare to design an energy system for the rescue team.



$\bullet \bullet \bullet$

Homework



Dear student energy scientists,

To help you design a system that solves the rescue team's problem, I would like you to learn about some human-powered devices that already exist. I hope learning about these devices will give you ideas that will help you design an original solution to the rescue team's problem.

Sincerely, Morgan Lewis Lead Energy Scientist, Energy Research Lab



Harnessing Human Energy: Lesson 2.3

End of Lesson





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What Science and Engineering Practices did students engage with during the lesson?

Science and Engineering Practices

- 1. Asking Questions and Defining Problems
- 2. Developing and Using Models
- 3. Planning and Carrying Out Investigations
- 4. Analyzing and Interpreting Data

- 5. Using Mathematics and Computational Thinking
- 6. Constructing Explanations and Designing Solutions
- 7. Engaging in Argument from Evidence
- 8. Obtaining, Evaluating, and Communicating Information



Lesson		Activity Overview	From the Lesson
What is the purpose of this lesson?	Activity 1	Warm Up	overview
students write scientific arguments in order to persuade the rescue team to solve their energy problems by using a specific energy source.	(5 min)		
What will students learn?	Activity 2 (15 min)	Word Relationships	
Nothing can work without energy source. The energy of human movement can charge batteries.			
3-D Statement (identify SEP, CCC, and DCI): Students construct scientific explanations about how the rescue team can transfer, convert, and store energy from different energy sources (energy and matter) to use on rescue missions. Next, students write scientific arguments supporting the energy source that they think is the best choice for the rescue team.	Activity 3 (25 min)	Writing a Scientific Ar	gument
Student Resources:	Activity 4		
Word relationship cards per pair of students			
Assessment Opportunities:	Activity 5	Homework	
none			

Lesson Reflection

_	

Answer in the chat feature

How is a launch unit lesson similar/different from a core unit lesson?

What questions do you have?





Questions?





Plan for the day

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4 Easy Steps to Teaching an **Amplify** Lesson



Step 1: Download the Classroom Slides

Step 2: Read the Overview Section

Step 3: Read the Materials & Preparation Section

Step 4: Read the **Differentiation Section**



Vocabulary

Unplugged?

vsical

short video introduces students to their role as student energy scientists tasked with devising a way for rescue workers to charge their flashlights and other devices during rescue missions. Students consider the Unit Question: How is it possible to charge electrical devices when the power is out? Students then reflect on the rescue workers' problem as they use the Harnessing Human Energy Simulation to make a light shine. The purpose of this lesson is to



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Breakout Groups: Directions for Planning Time

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

Digital Resources



Classroom Slides 3.1 | PowerPoint



Classroom Slides 3.1 | Google Slides



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

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



Breakout groups

Please choose a person from your group to share out!

Planning:

• What did you add to your slide decks?

Differentiation:

• How do you plan to differentiate the lesson for diverse learners?

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



Plan for the day

- Framing the day
- Introduction to the Launch Unit
- Unit Internalization
- Planning with the Classroom Slides

Closing

Overarching goals

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

- Leverage successes and learnings from remote and hybrid teaching in your transition back to school for the 2021-22 school year.
- Navigate the Amplify Science curriculum.
- Describe what teaching and learning look like in Amplify Science.
- Understand the benefits of teaching the standard Amplify Science curriculum.
- \checkmark Apply program essentials to prepare to teach.

