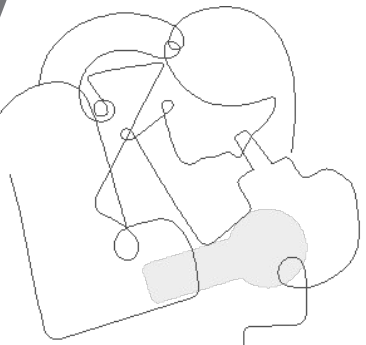
Amplify Science

Standard Curriculum Relaunch / Guided Planning

Grade 6 Elementary: Metabolism

Part 1



School/District Name: LAUSD
Date: October, 2021
Presented by:

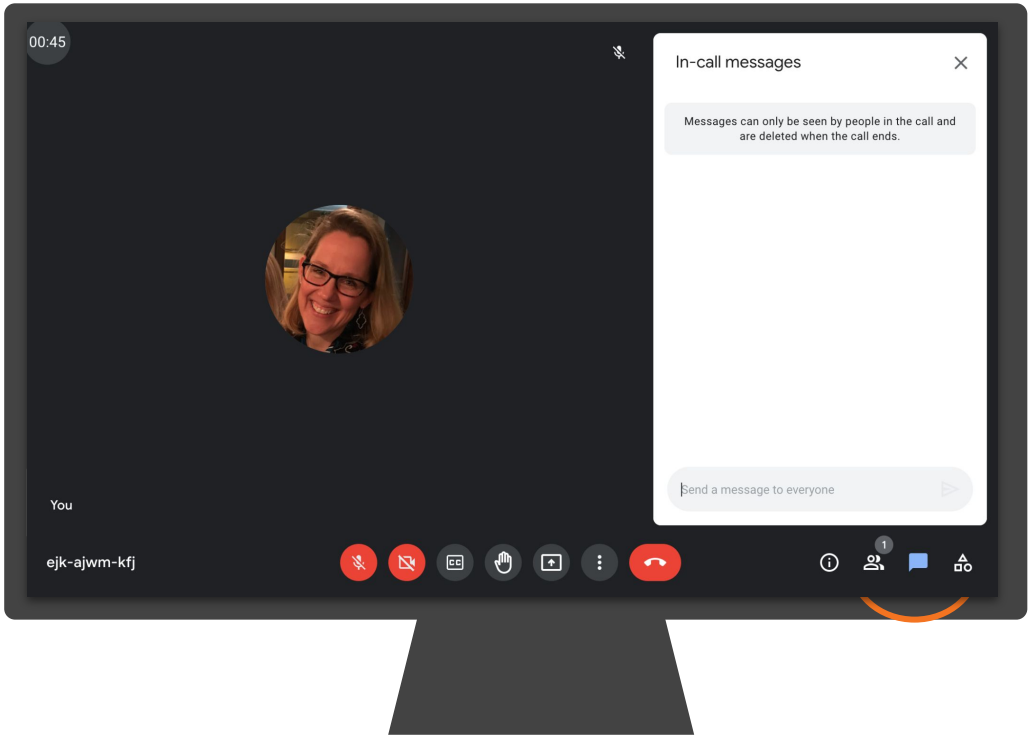
TOP RATED BY EDREPORTS

PLPG CERTIFIED PROVIDER

Ice Breaker!

Who do we have in the room today?

- **Question 1:** Which aspects of implementing the Standard Amplify Science curriculum are you most excited or hopeful about?
- **Question 2:** What do you feel most hesitant about?



Amplify's Purpose Statement

Dear teachers,

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

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

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

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

Sincerely,
Amplify

Norms: Establishing a culture of learners

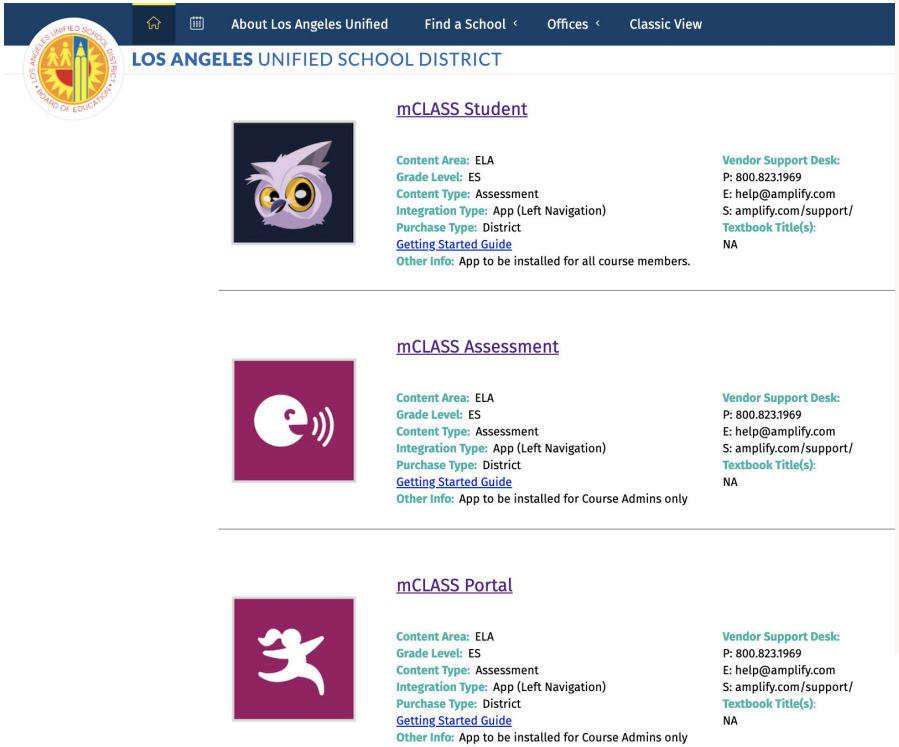
- **Take risks:** Ask any questions, provide any answers.
- **Participate:** Share your thinking, participate in discussion and reflection.
- **Be fully present:** Unplug and immerse yourself in the moment.
- **Physical needs:** Stand up, get water, take breaks.

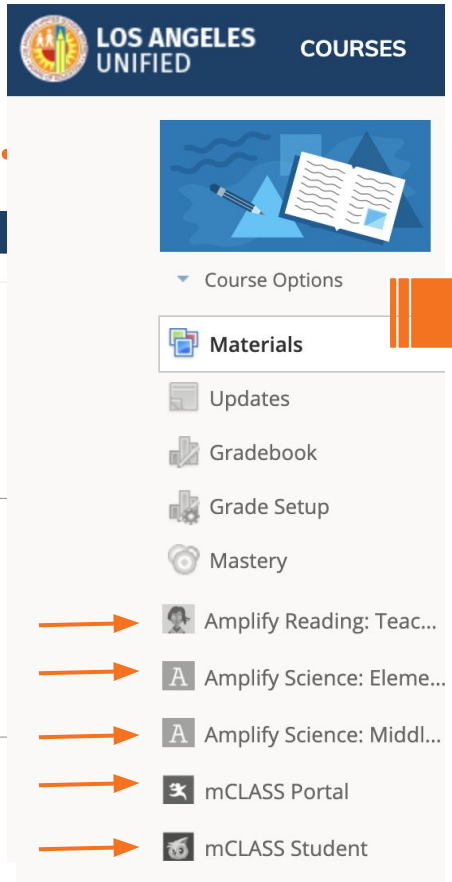
Overarching goals

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

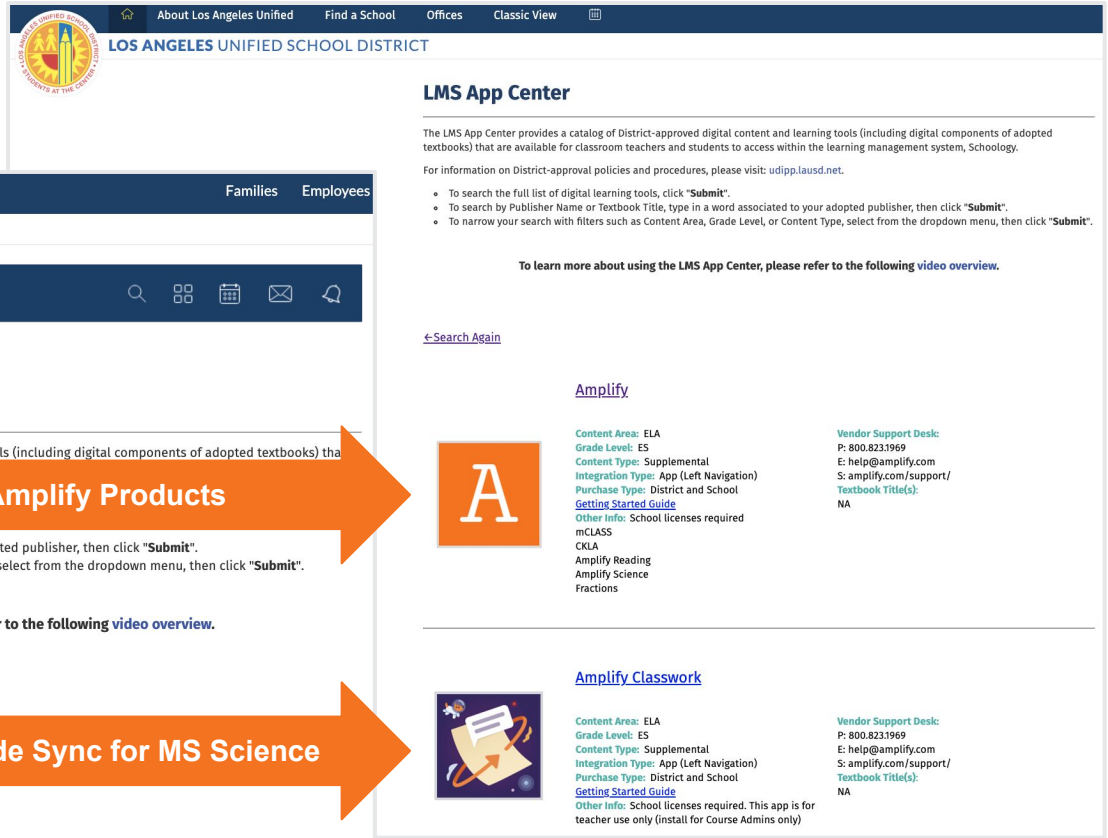
- ❏ Navigate the Amplify Science standard curriculum.
- ❏ Describe what teaching and learning look like in Amplify Science.
- ❏ Apply the program essentials to prepare to teach.

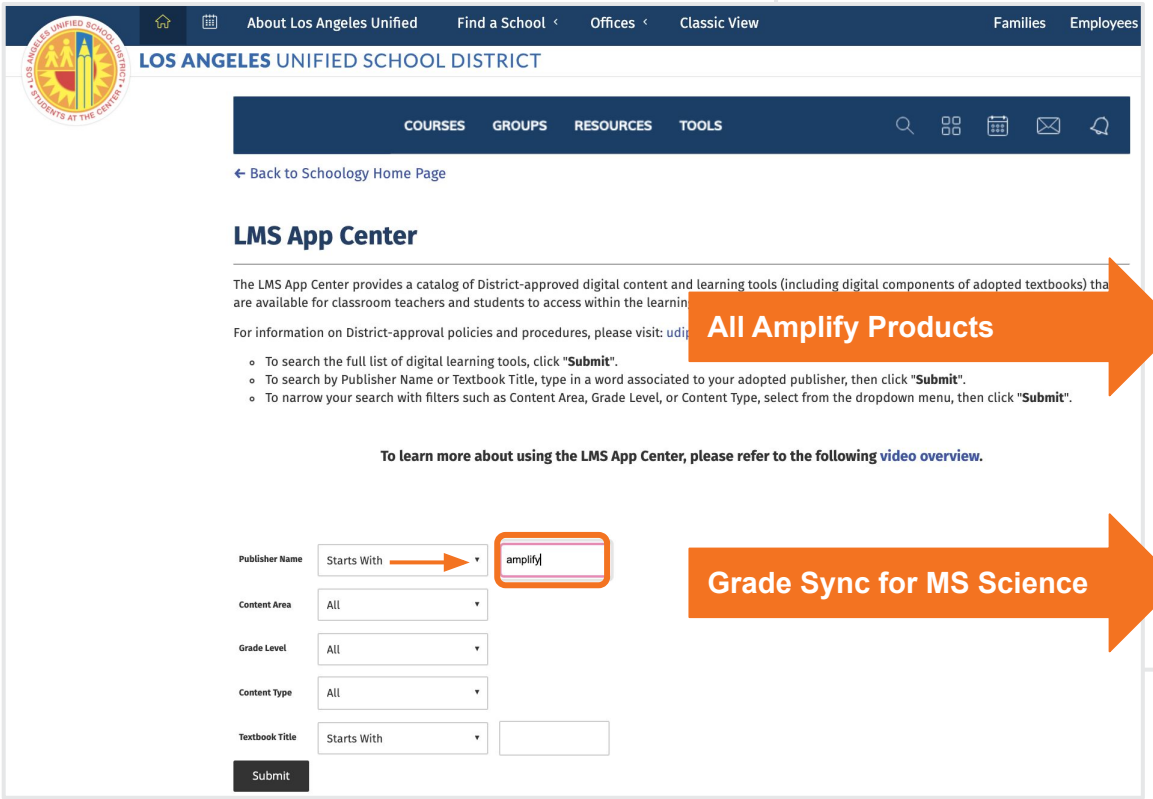
Last year's Amplify apps.





This year's app(s).





All Amplify Products

Grade Sync for MS Science

my.amplify.com

Amplify. MY ACCOUNT ADMIN REPORTS LAUNCH PROGRAMS TERIN NGO

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

Hi, Terin

Classes

Programs & Licenses

Account Settings

Help Center

CKLA Hub

CKLA Resource Site

mCLASS Assessment

mCLASS Reporting

Reading 6-8

Reading K-5

Science

Vocabulary

Amplify. on Schoology

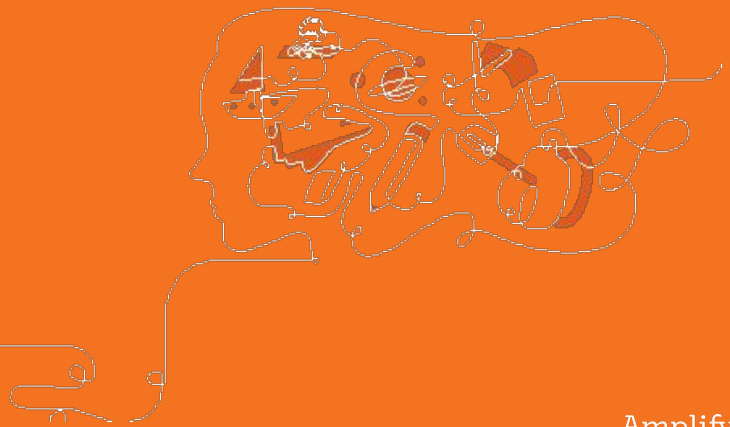
2021-2022

Join Amplify Science Schoology Group

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

To join Amplify MS Group: SPG7G-K7BT9

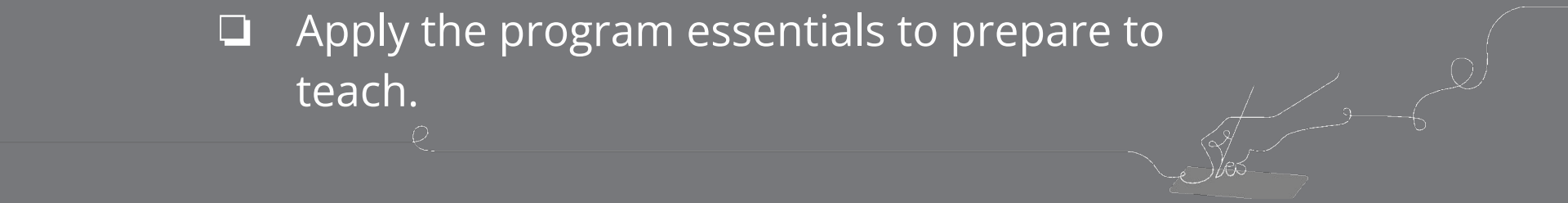
Part 1:
Amplify Science
Standard Curriculum Relaunch

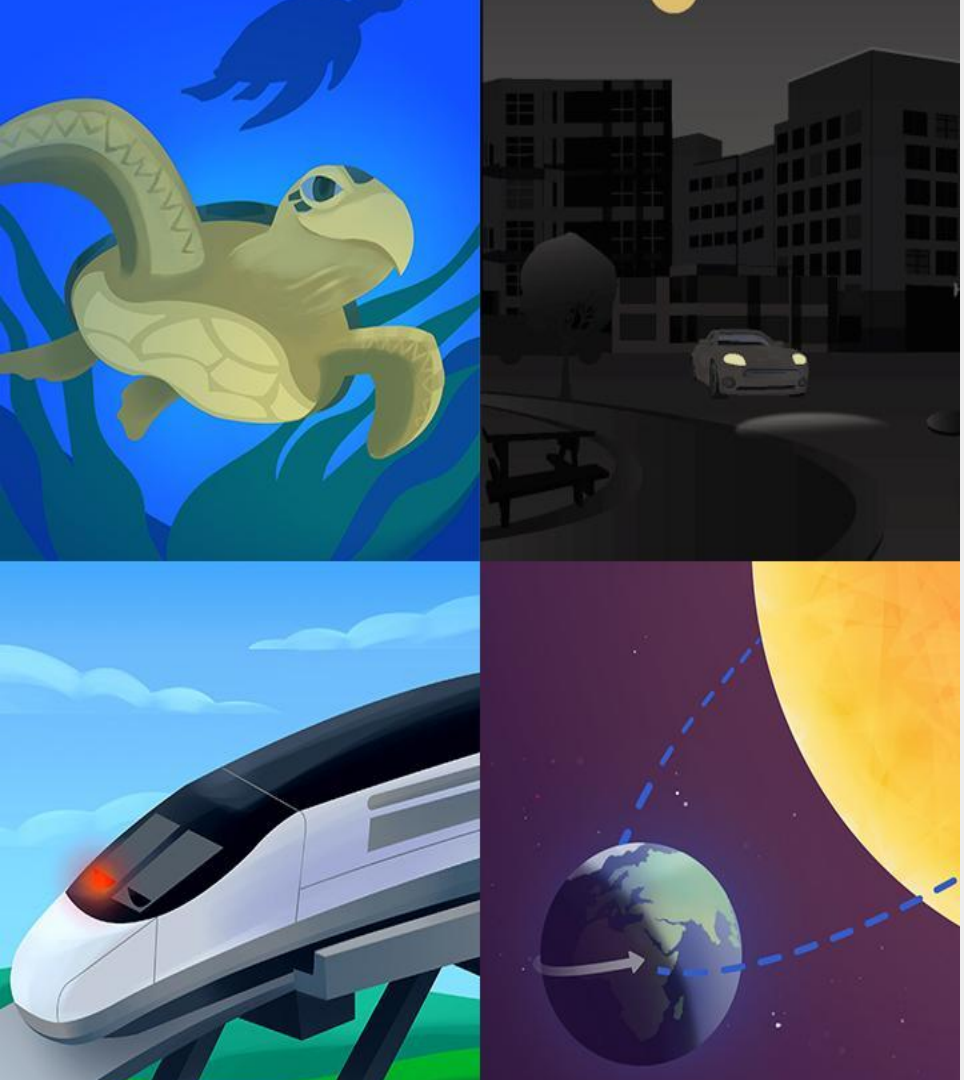


Overarching goals

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

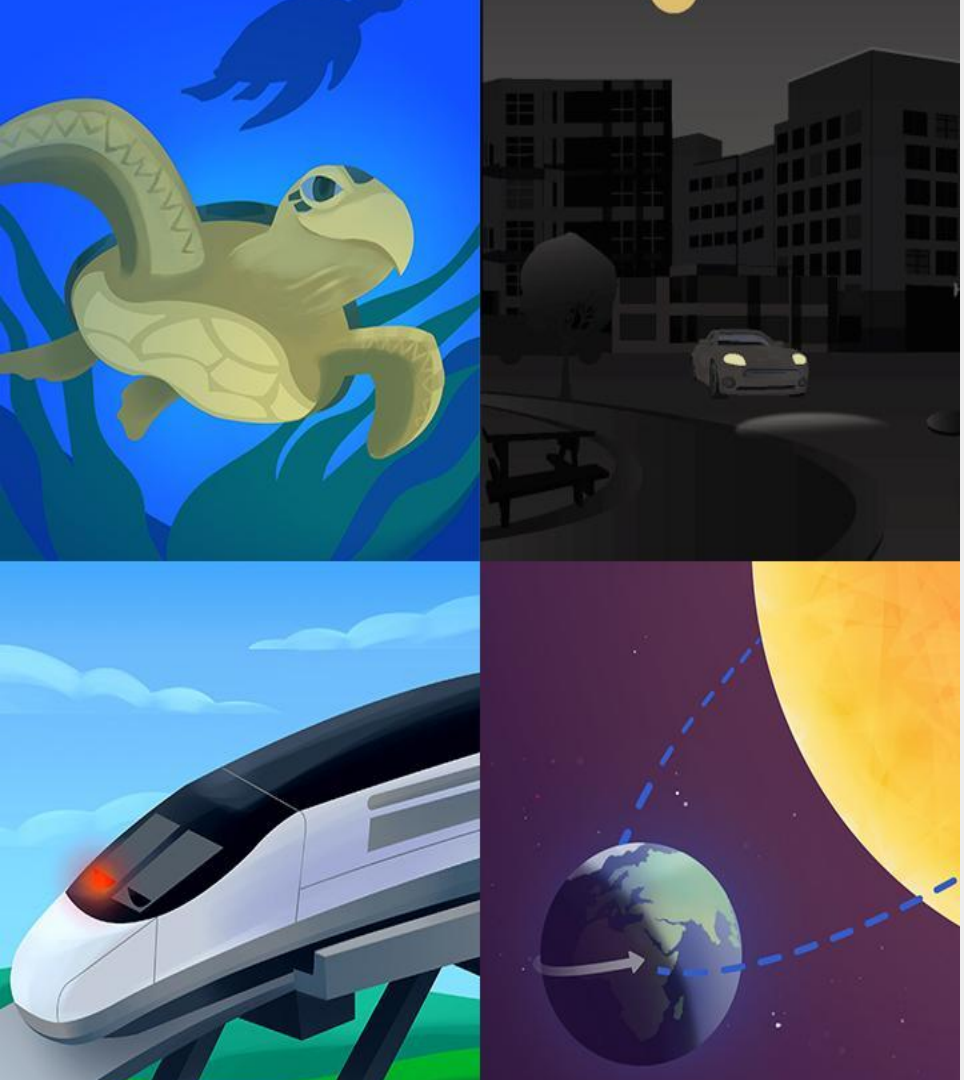
- ❑ Navigate the full Amplify Science curriculum.
- ❑ Understand the program's phenomenon-based approach.
- ❑ Apply the program essentials to prepare to teach.





Plan for the day: Part 1

- Introduction and Framing
- Phenomenon-based Instruction
- Program Essentials



Plan for the day: Part 1

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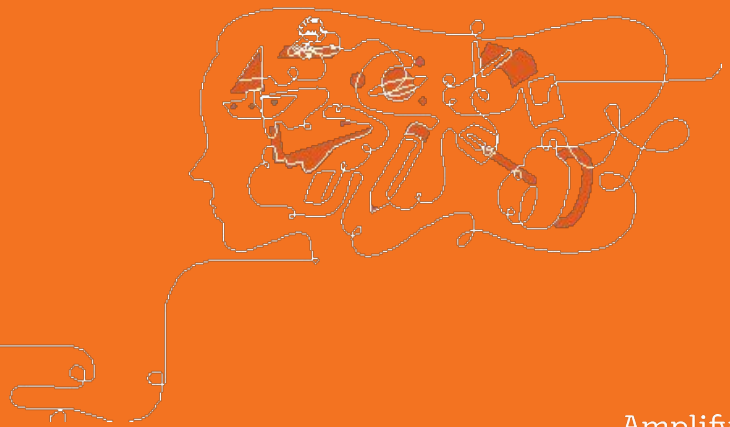
- Unit Internalization

Introducing Amplify Science



THE LAWRENCE HALL OF SCIENCE
UNIVERSITY OF CALIFORNIA, BERKELEY

+ Amplify.

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

6th Grade Elementary course curriculum 2021-2022

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

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- **Plate Motion**
- Engineering Internship: **Plate Motion**
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- Engineering Internship: **Phase Change**
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- **Light Waves**
- **Earth, Moon, and Sun**
- **Natural Selection**
- Engineering Internship: **Natural Selection**
- **Evolutionary History**

AmplifyScience

authored by THE LAWRENCE HALL OF SCIENCE UNIVERSITY OF CALIFORNIA, BERKELEY

**These are the possible prioritized units for 6th grade elementary*

Launch units

- First unit
- 11 lessons

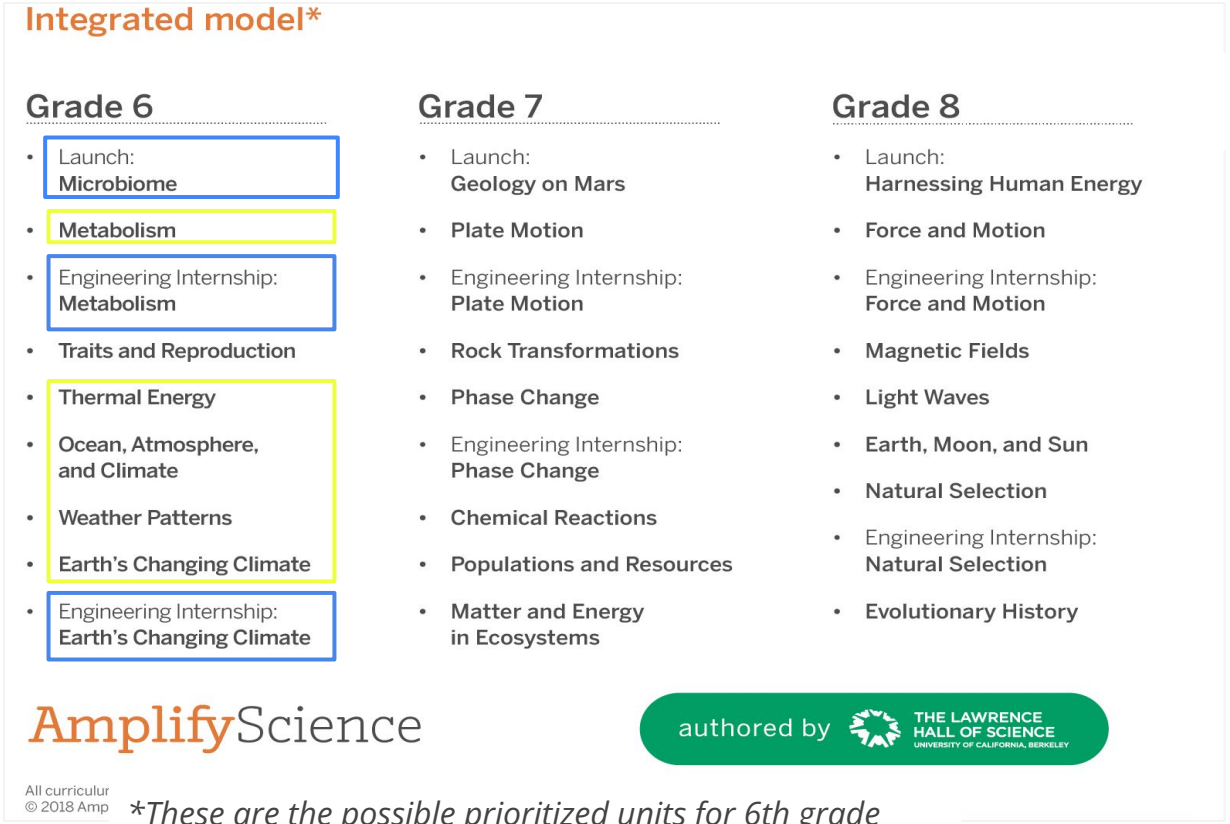
Core units

- Elementary 6th Grade will be teaching 4 Core Units

Engineering Internships

- Elementary 6th Grade will be teaching only one: Metabolism

6th Grade Elementary course curriculum 2022-2023



*These are the possible prioritized units for 6th grade elementary

Launch units

- First unit
- 11 lessons

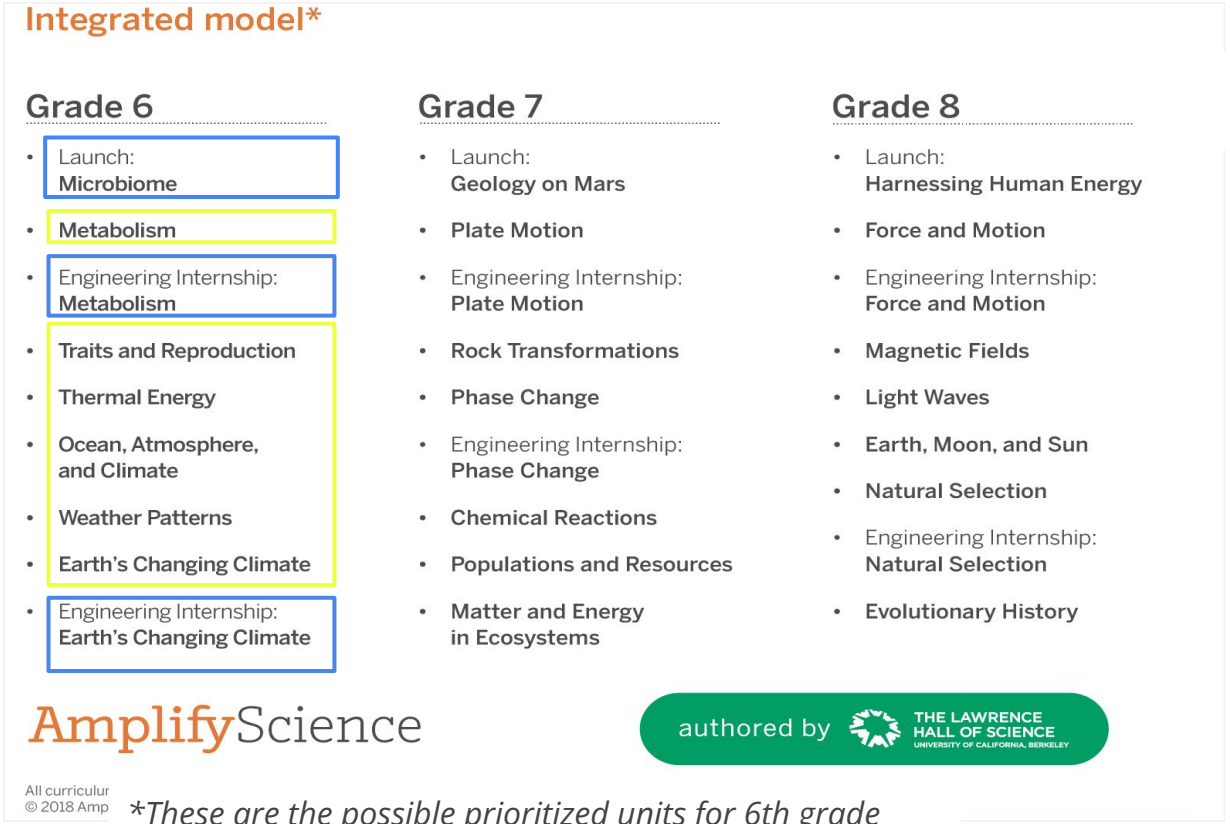
Core units

- Majority of units
- 19 lessons

Engineering Internships

- Two per year
- 10 lessons

6th Grade Elementary course curriculum 2023-2024



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- First unit
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Core units

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Engineering Internships

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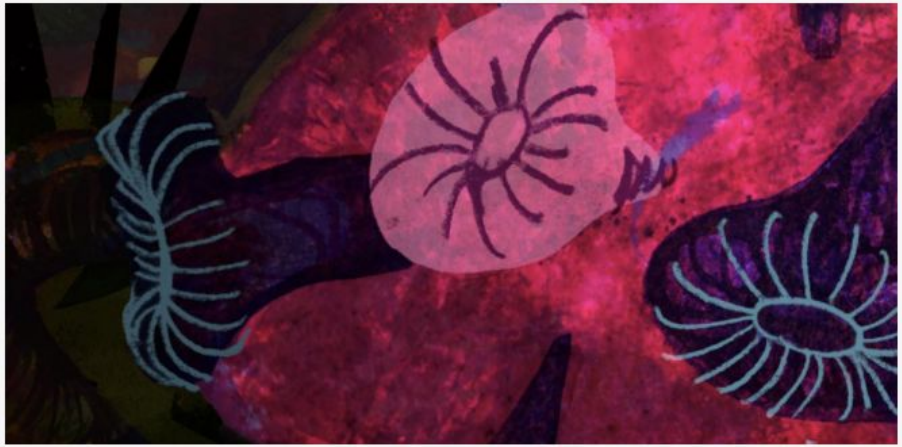
6-8 Curriculum: Unit types

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

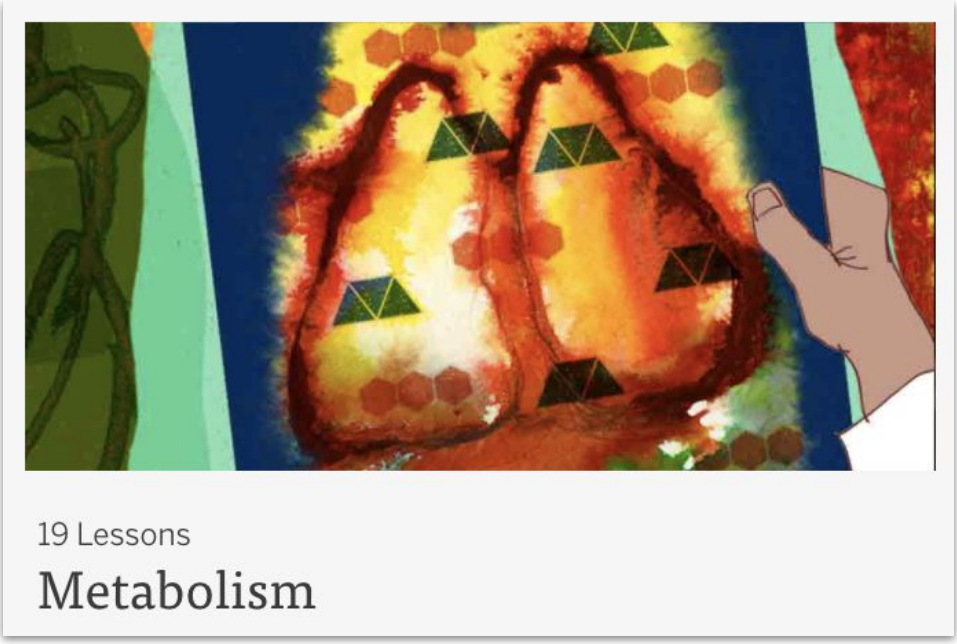
Microbiome

6-8 Curriculum: Unit types

Core Units

Each year has six Core Units. Core Units are 19 days long. The expectation this year, is to teach four.

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



Curriculum: Unit types

Engineering Internships

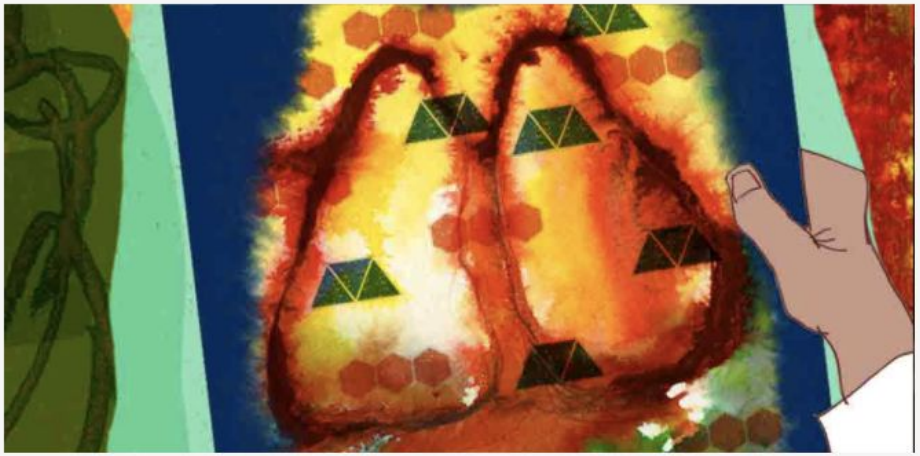
Each year has two Engineering Internships. Engineering Internships are 10 days long. The expectation this year, is to teach one.

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

Curriculum: Unit types

Today's workshop will focus on your first Core Unit: Metabolism.

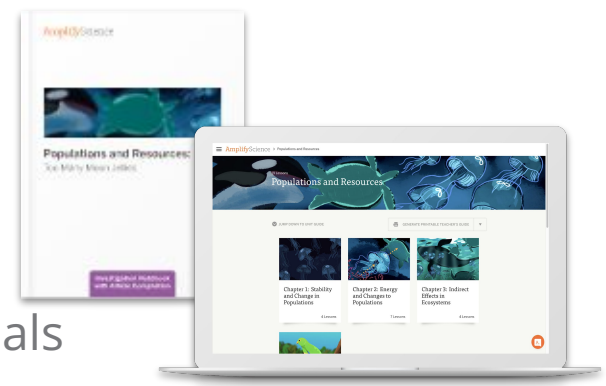
What you learn today about navigating the digital platform and how to teach Amplify Science will prepare you for all unit types.

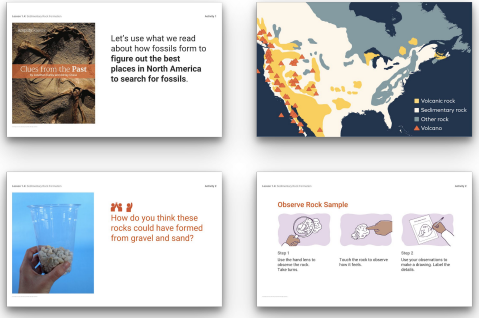


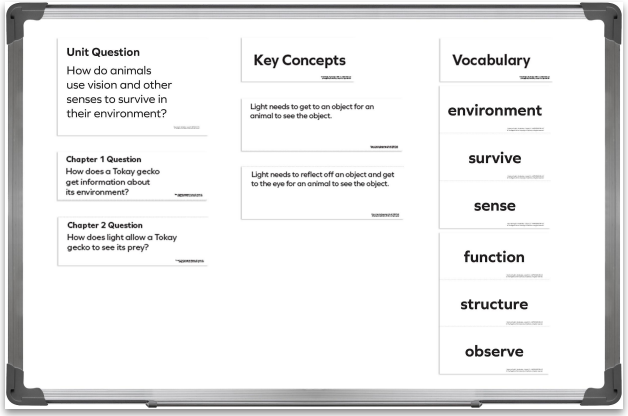
Program components

Teacher materials

- Teacher's Guide
- Classroom Slides
- Classroom Wall materials
- Argumentation wall materials
- Embedded assessments
- Classwork
- Reporting App
- Assign feature
- Program Guide
- Program Hub
- Amplify Help site



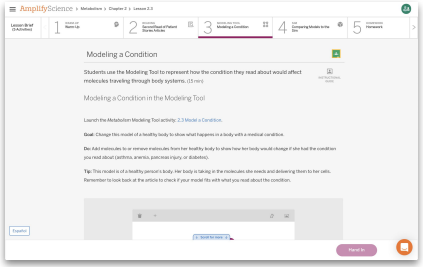


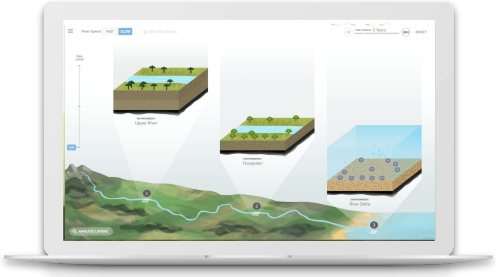


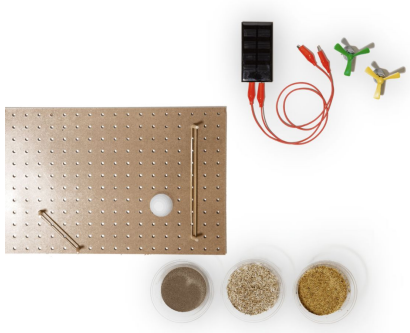
Program components

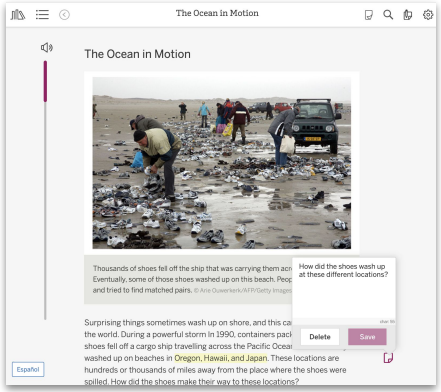
Student materials

- Hands-on materials
- Digital student experience
- Articles (digital or print)
- Simulations and other digital tools
- Investigation Notebooks
- My Work

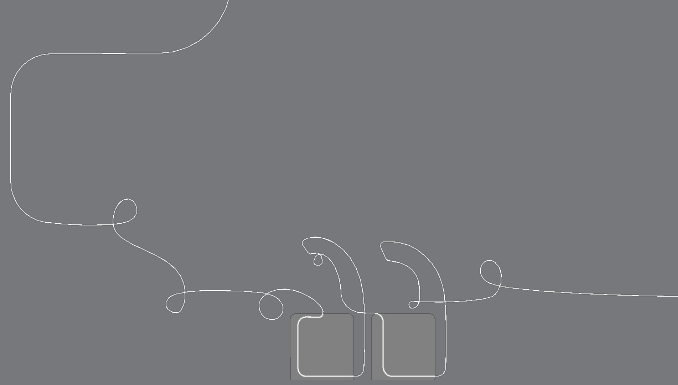








Questions?



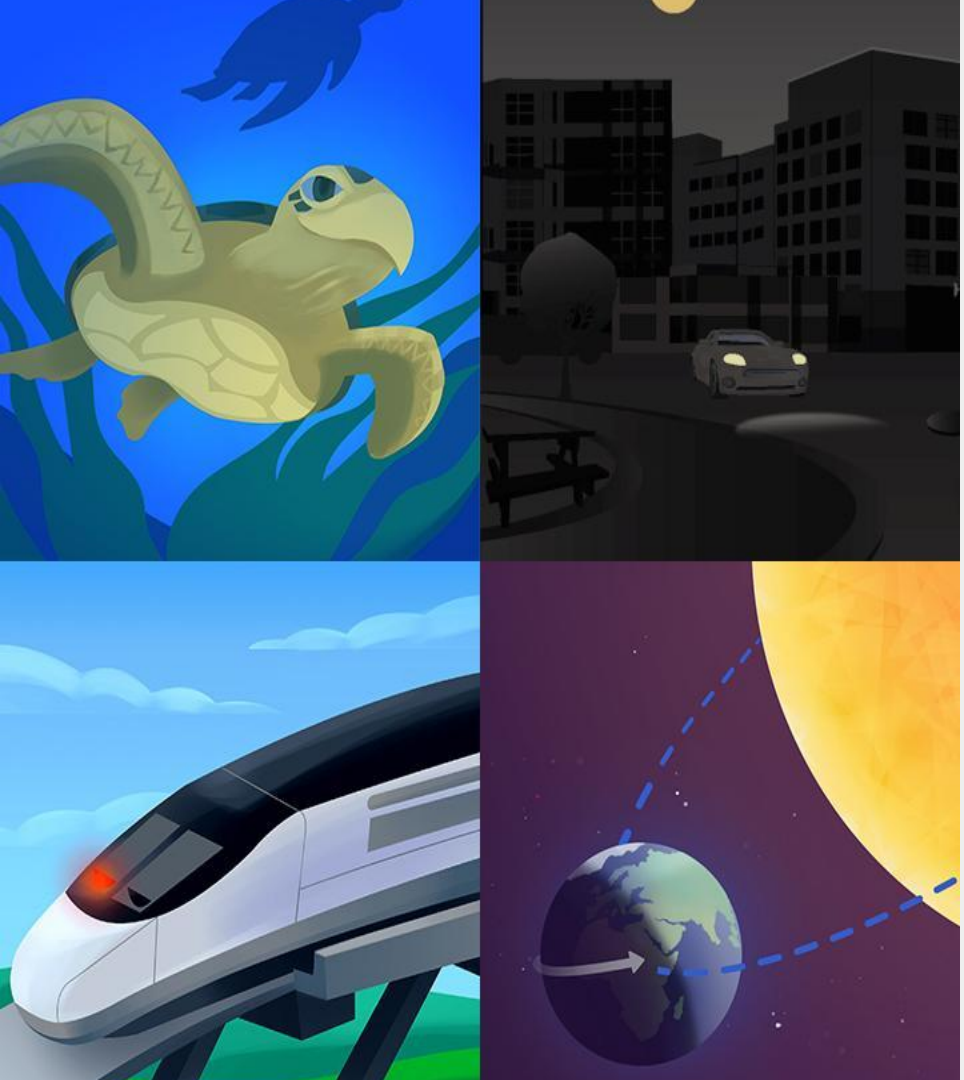
Framing our reflections

Teacher lens and student lens

To synthesize our learning, we'll return to these questions throughout the session:

- What is teaching like with Amplify Science?
- What is learning like with Amplify Science?

Teaching	Learning
	



Plan for the day: Part 1

- Introduction and Framing
- Phenomenon-based Instruction
- Unit Internalization

Next Generation Science Standards

Phenomenon-based learning and teaching

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

Comparing topics and phenomena

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

Next Generation Science Standards

How might learning be different?

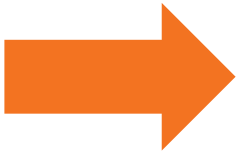
Topic-based	Phenomenon-based
Chemical reactions	There's a reddish-brown substance in a town's tap water.
Electric circuits	A flashlight won't turn on, even though it used to work.
Natural selection	A population of newts has become more poisonous over time.

Comparing topics and phenomena

A shift in science instruction

from learning about

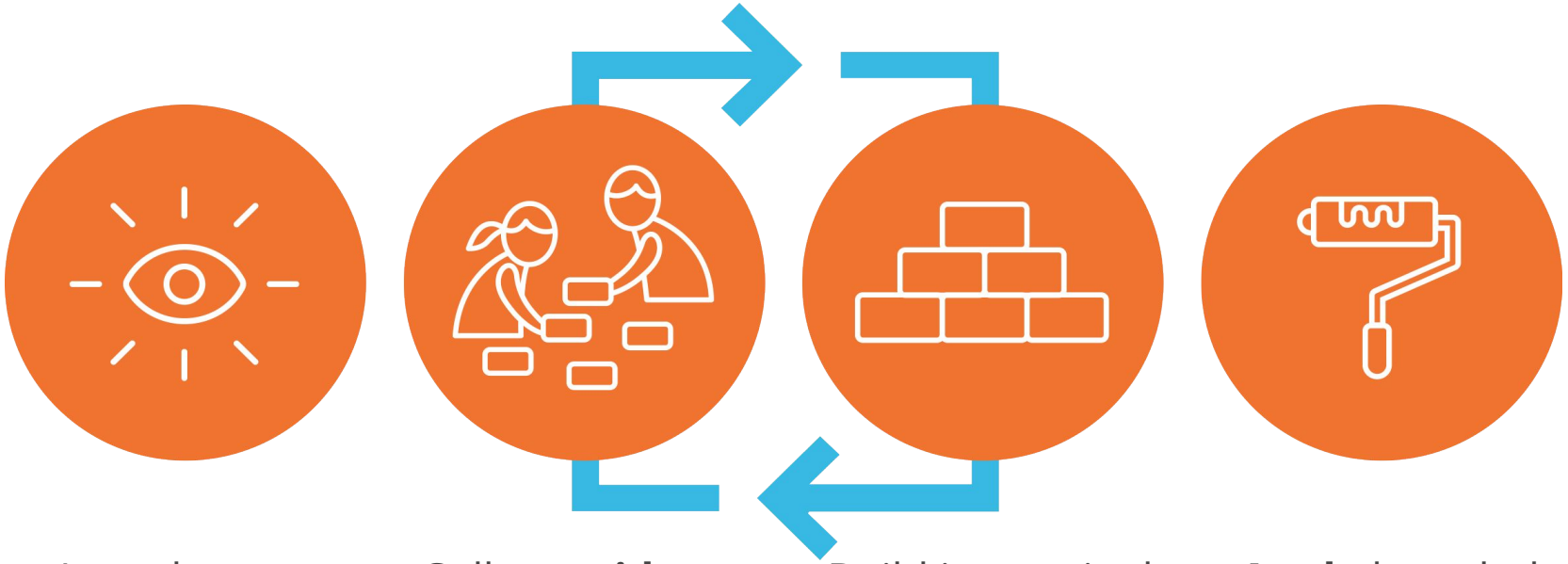
(like a student)



to figuring out

(like a scientist)

Amplify Science Approach



Introduce a **phenomenon** and a related problem

Collect **evidence** from multiple sources

Build increasingly complex **explanations**

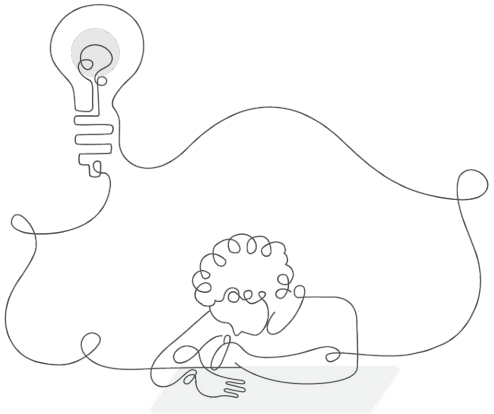
Apply knowledge to solve a different problem

Previewing the unit

Introducing the phenomenon

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

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



Today, we will begin a new unit called ***Metabolism*.**

We will start with a Warm-Up each day to get us thinking about science ideas. For today's Warm-Up, you will watch and respond to a video that introduces your new role as **medical students.**

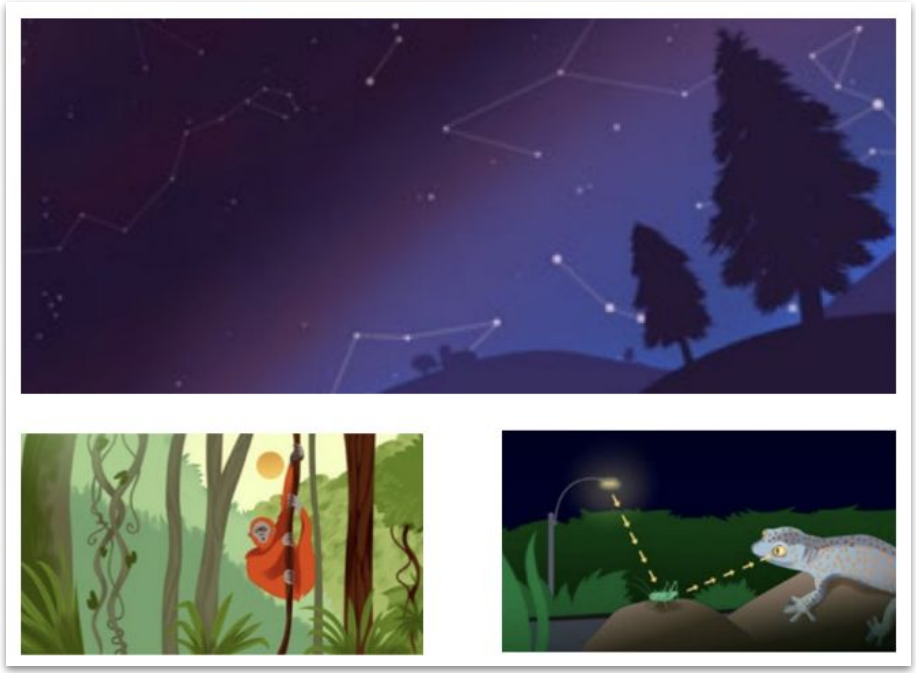
Why do you think your new patient, Elisa, is feeling tired all the time?

Explain your ideas.

Amplify Science

Anchoring phenomenon

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

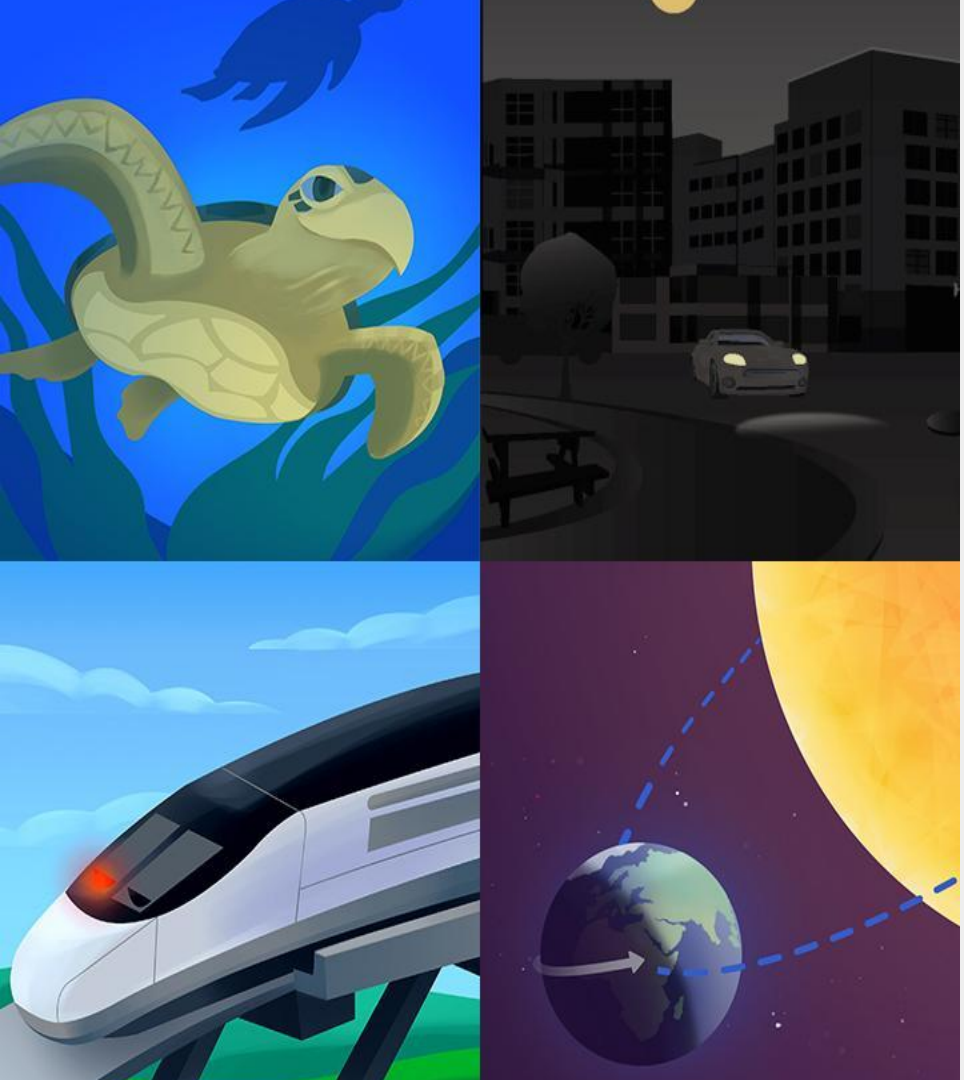


Reflection

Teacher lens and student lens

Return to your reflection notes. Add any new insights about teaching or learning with Amplify Science.

Teaching	Learning
	



Plan for the day: Part 1

- Introduction and Framing
- Phenomenon-based Instruction
- Program Essentials

Unit structure

Unit

↓

Chapter

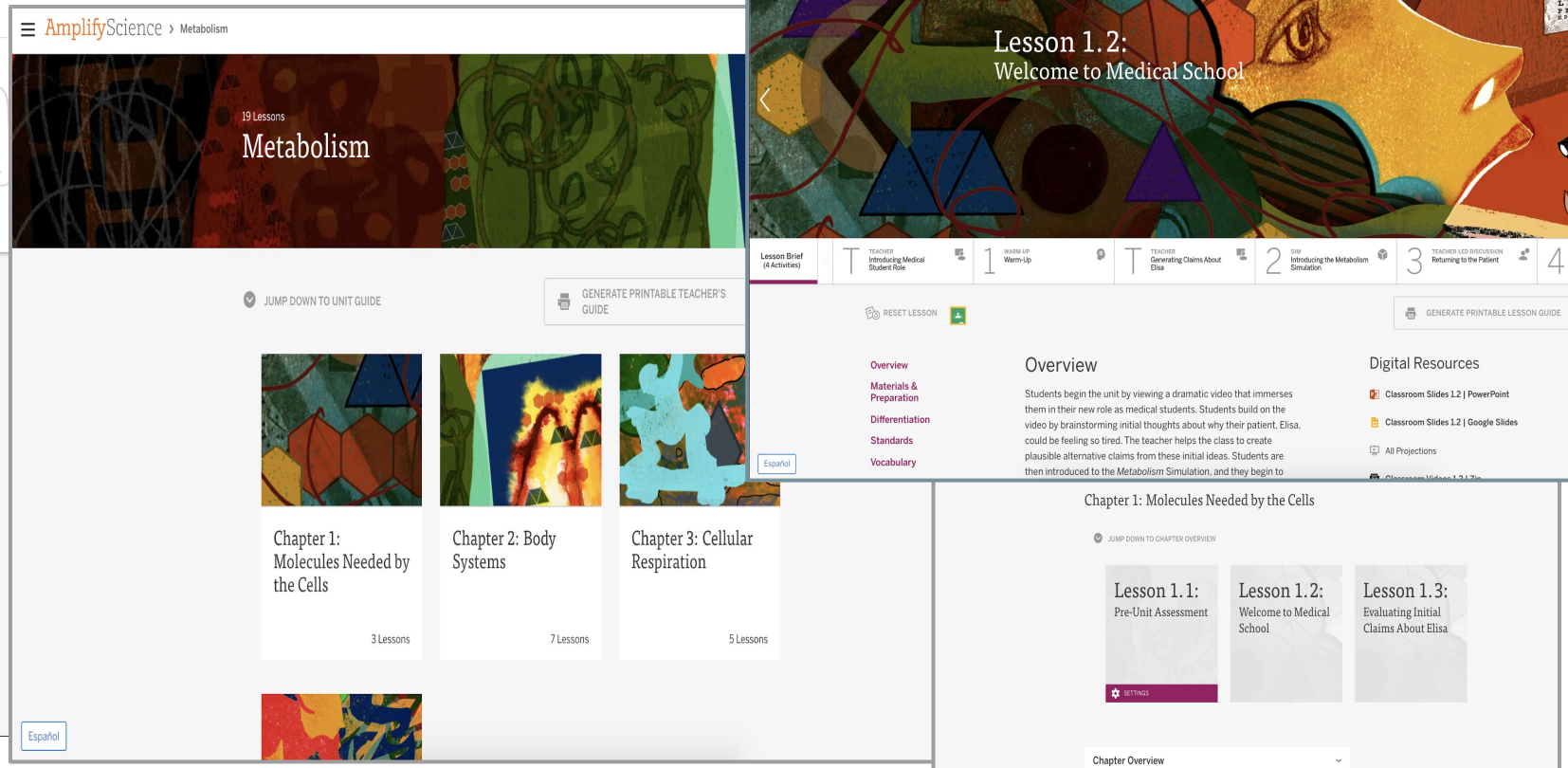
↓

Lesson

↓

Activity

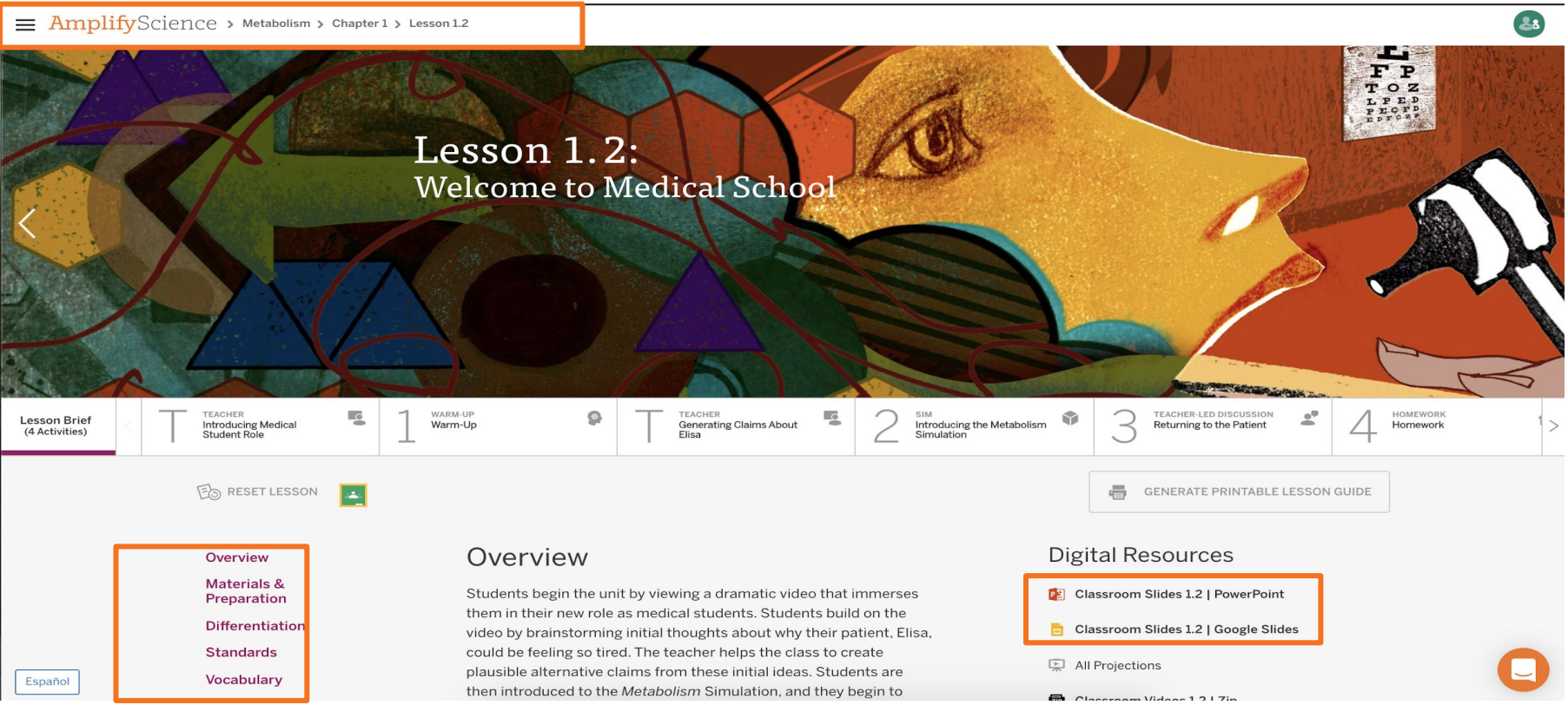
Let's Go Live!


AmplifyScience › Metabolism
19 Lessons
Metabolism
JUMP DOWN TO UNIT GUIDE
GENERATE PRINTABLE TEACHER'S GUIDE
Chapter 1: Molecules Needed by the Cells
3 Lessons
Chapter 2: Body Systems
7 Lessons
Chapter 3: Cellular Respiration
5 Lessons
Español

AmplifyScience › Metabolism › Chapter 1 › Lesson 1.2
Lesson 1.2:
Welcome to Medical School
Lesson Brief (4 Activities)
RESET LESSON
GENERATE PRINTABLE LESSON GUIDE
Overview
Materials & Preparation
Differentiation
Standards
Vocabulary
Overview
Students begin the unit by viewing a dramatic video that immerses them in their new role as medical students. Students build on the video by brainstorming initial thoughts about why their patient, Elisa, could be feeling so tired. The teacher helps the class to create plausible alternative claims from these initial ideas. Students are then introduced to the Metabolism Simulation, and they begin to
Digital Resources
Classroom Slides 1.2 | PowerPoint
Classroom Slides 1.2 | Google Slides
All Projections
Español

Chapter 1: Molecules Needed by the Cells
JUMP DOWN TO CHAPTER OVERVIEW
Lesson 1.1:
Pre-Unit Assessment
SETTINGS
Lesson 1.2:
Welcome to Medical School
Lesson 1.3:
Evaluating Initial Claims About Elisa
Chapter Overview

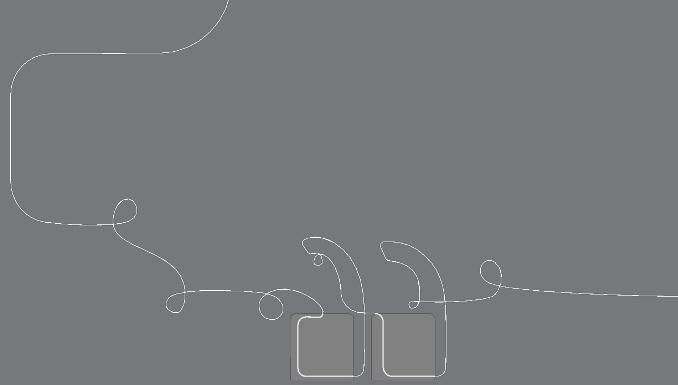
Explore the Program Essentials



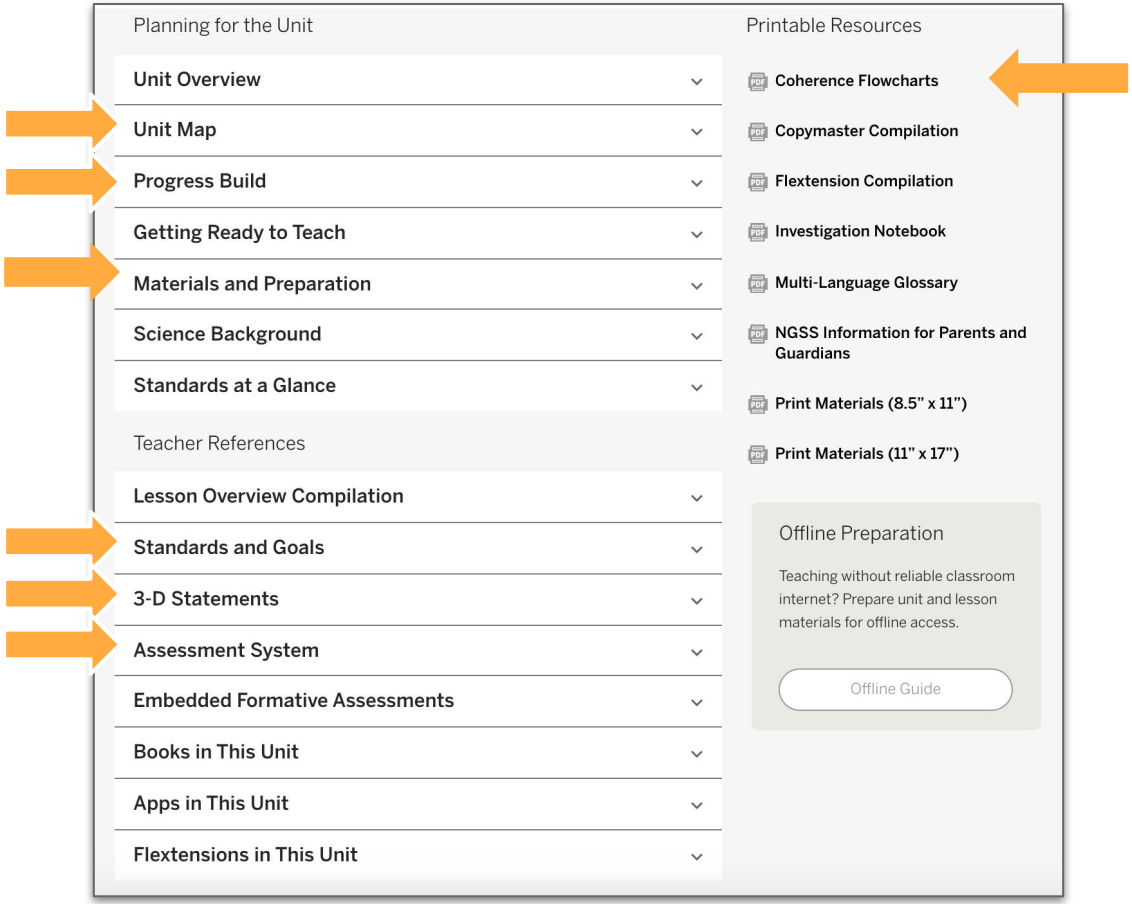
Navigation summary

1. Select your first unit
    a. You are now on the Unit Landing Page.

2. Select **JUMP DOWN TO UNIT GUIDE.**
    a. **Or scroll down the page to *Planning for the Unit* and *Teacher References***



Key Unit Guide Documents for Planning



Core Unit Planning & Internalization

Unit Title:	Metabolism

Overview

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

What is the phenomenon/real-world problem students are investigating in your unit?	Student Role:
Unit Question:	Relationship between the Unit Phenomenon and Unit Question:
By the end of the unit, students figure out...	
How do students engage with three-dimensional learning to figure out the phenomenon/real-world problem in your unit?	

Core Unit Planning & Internalization

Unit Title: Metabolism

Overview

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

What is the phenomenon/real-world problem students are investigating in your unit?

Student Role:

Unit Question:

Relationship between the Unit Phenomenon and Unit Question:

Suggested resource:

- Unit Overview / Unit Map

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

1

Core Unit Planning & Internalization

Unit Title: Metabolism

Overview

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

What is the phenomenon/real-world problem students are investigating in your unit?

What is causing Elissa, a young patient, to be tired all the time?

Student Role:

Medical Students

Relationship between the Unit Phenomenon and Unit Question:

ure out...

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

Suggested resource:

- Unit Overview / Unit Map

1

Core Unit Planning & Internalization

Unit Title: Metabolism

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

What is the phenomenon/real-world problem students are investigating in your unit?

What is causing Elisa, a young patient, to feel tired all the time?

Student Role:

Medical Students

Unit Question:

Relationship between the Unit Phenomenon and Unit Question:

ut the phenomenon/real-world problem in your unit?

Suggested resource:

- **Lesson Overview Compilation**

Core Unit Planning & Internalization

Unit Title: Metabolism

Overview

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

What is the phenomenon/real-world problem students are investigating in your unit?

What is causing Elisa, a young patient, to feel tired all the time?

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Medical Students

Unit Question:

How do the trillions of cells in the human body get what they need to function, and what do the cells do with the things they absorb.

Relationship between the Unit Phenomenon and Unit Question:

By investigating Elisa's condition, students learn how systems work together to provide the human body with what it needs.

ut the phenomenon/real-world problem in your unit?

Suggested resource:

- **Lesson Overview Compilation**

1

Core Unit Planning & Internalization

Unit Title:	Metabolism

Overview

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

What is the phenomenon/real-world problem students are investigating in your unit?	Student Role:
What is causing Elissa, a young patient, to be tired all the time?	Medical Student
Unit Question:	**Relationship between the Unit Phenomenon and Unit Question:**
How do the trillion of cells in the human body get what it needs to function, and what do the cells do with the things they absorb.	By investigating Elissa's condition, students learn how systems work together to provide the human body with what it needs.
By the end of the unit, students figure out...	
hree ... r unit?	

Suggested resource:

- **Unit Map**

10-word summary

- In 10 words or less, what do students figure out at the end of the unit?

Core Unit Planning & Internalization

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By the end of the unit, students figure out...	
Elissa feels tired because her cells need both glucose and oxagen to release energy, in a process called cellular respiration.	

...r unit?

1

Suggested resource:

- **Unit Map**

10-word summary

- In 10 words or less, what do students figure out at the end of the unit?

Core Unit Planning & Internalization

Unit Title:	Metabolism

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

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Unit Question: What is causing Elissa, a young patient, to be tired all the time?	**Relationship between the Unit Phenomenon and Unit Question:** By investigating Elissa's condition, students learn how systems work together to provide the human body with what it needs.

Suggested resource:

- **3D Statements**

Elissa feels tired because her cells need both glucose and oxagen to release energy, in a process called cellular respiration.

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

Core Unit Planning & Internalization

Unit Title:	Metabolism

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

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By t E…eed both glucose and oxagen to release energy, in a process called cellular respiration.	

Suggested resource:
- **3D Statements**

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

Students engage in argumentation, use physical and digital models, and make connections between the macroscale and microscale processes in the body, considering scale, proportion and quantity. Students construct explanations about how body systems work together..

Navigation Temperature Check

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

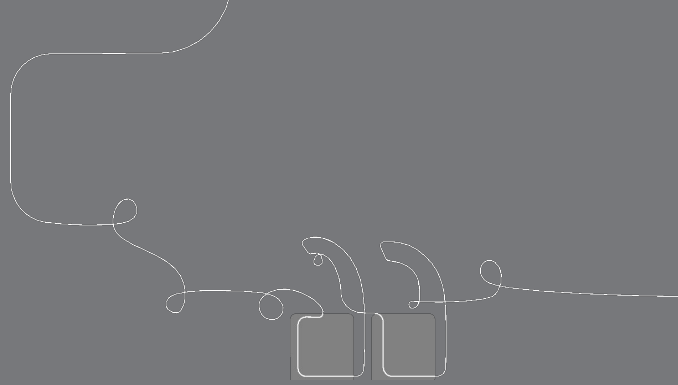
1 = Extremely Uncomfortable

2 = Uncomfortable

3 = Mild

4 = Comfortable

5 = Extremely Comfortable



Questions?

Plan for the day: Part 1

- Introduction and Framing
- Phenomenon-based Instruction
- Unit Internalization
- Closing

Closing reflection

Based on our work today, share:

Head: something you'll keep in mind

Heart: something you're feeling

Feet: something you're planning to do

Additional resources

Welcome, caregivers!

—

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

Para acceder a este sitio en español haga clic aquí.

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

TOP RATED BY EDREPORTS

Grades 6-8

[Caregivers]

Additional resources and ongoing support

Customer Care

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

help@amplify.com

800-823-1969

Amplify Chat

Please provide feedback!

surveymonkey.com/r/InitialAmplifySciPL

Presenter name:

Workshop title:

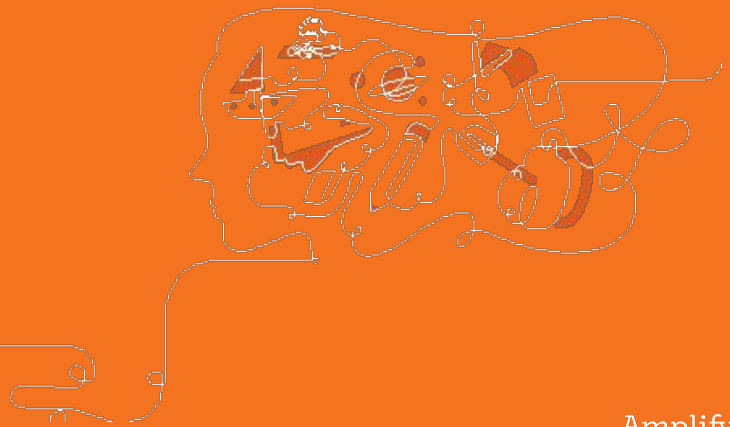
Part 1: Relaunching the Standard Curriculum

Part 2: Guided Planning (Planning for a Lesson)

Modality:

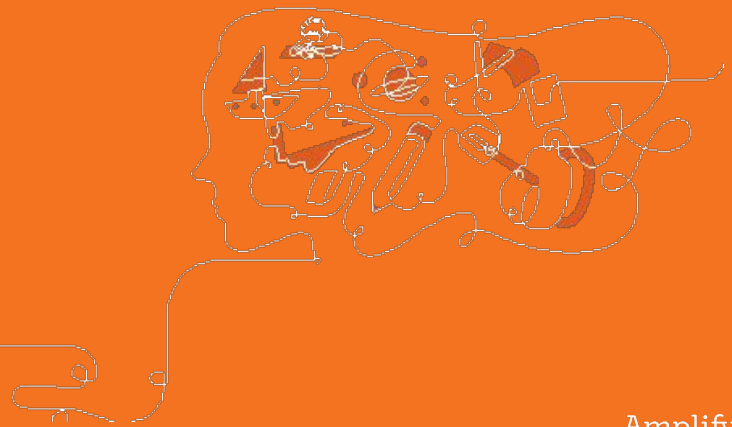
Remote

End of Part 1



Break

10:00 - 10:30

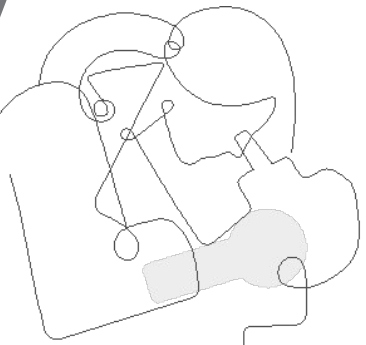


Amplify Science

Standard Curriculum Relaunch / Guided Planning

Grade 6 Elementary: Metabolism

Part 2



School/District Name: LAUSD
Date:,
Presented by:

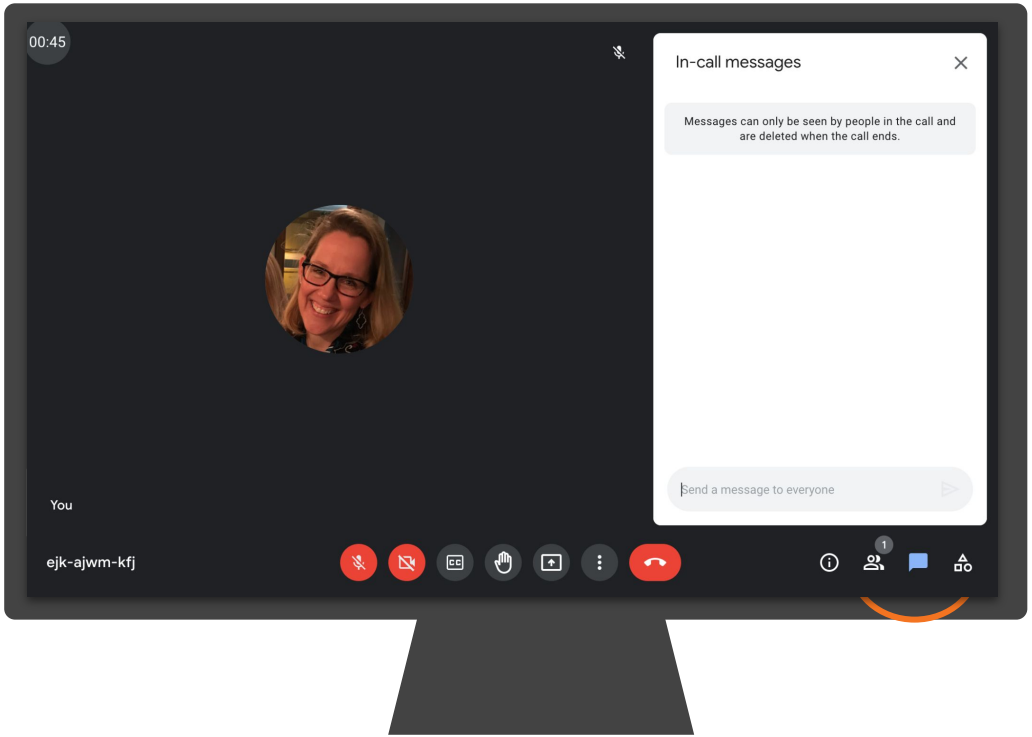
TOP RATED BY EDREPORTS

PLPG CERTIFIED PROVIDER

Ice Breaker!

Who do we have in the room today?

- **Question 1:** Which aspects of implementing the Standard Amplify Science curriculum are you most excited or hopeful about?
- **Question 2:** What do you feel most hesitant about?



Amplify's Purpose Statement

Dear teachers,

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

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

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

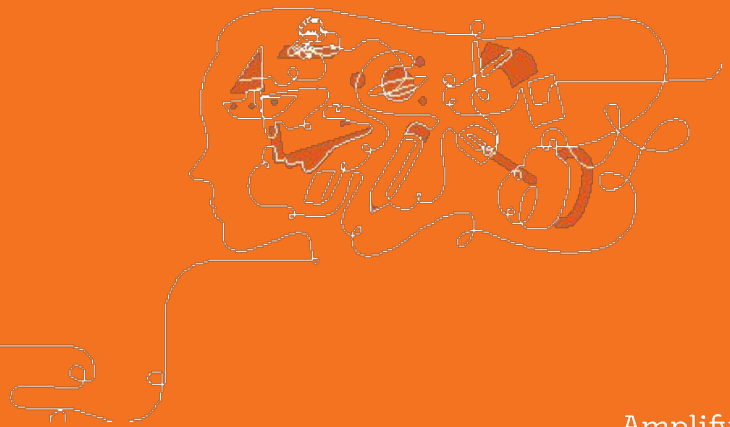
We share your goal of **inspiring all students to think deeply, creatively, and for themselves.**

Sincerely,
Amplify

Norms: Establishing a culture of learners

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

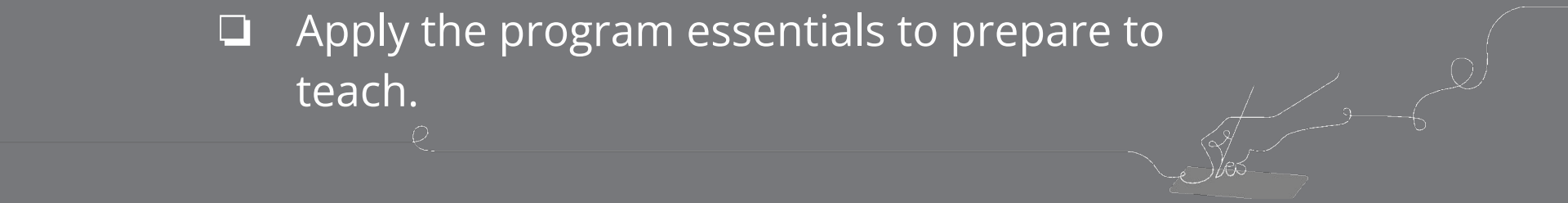
Part 2:
Guided Planning (for a lesson)

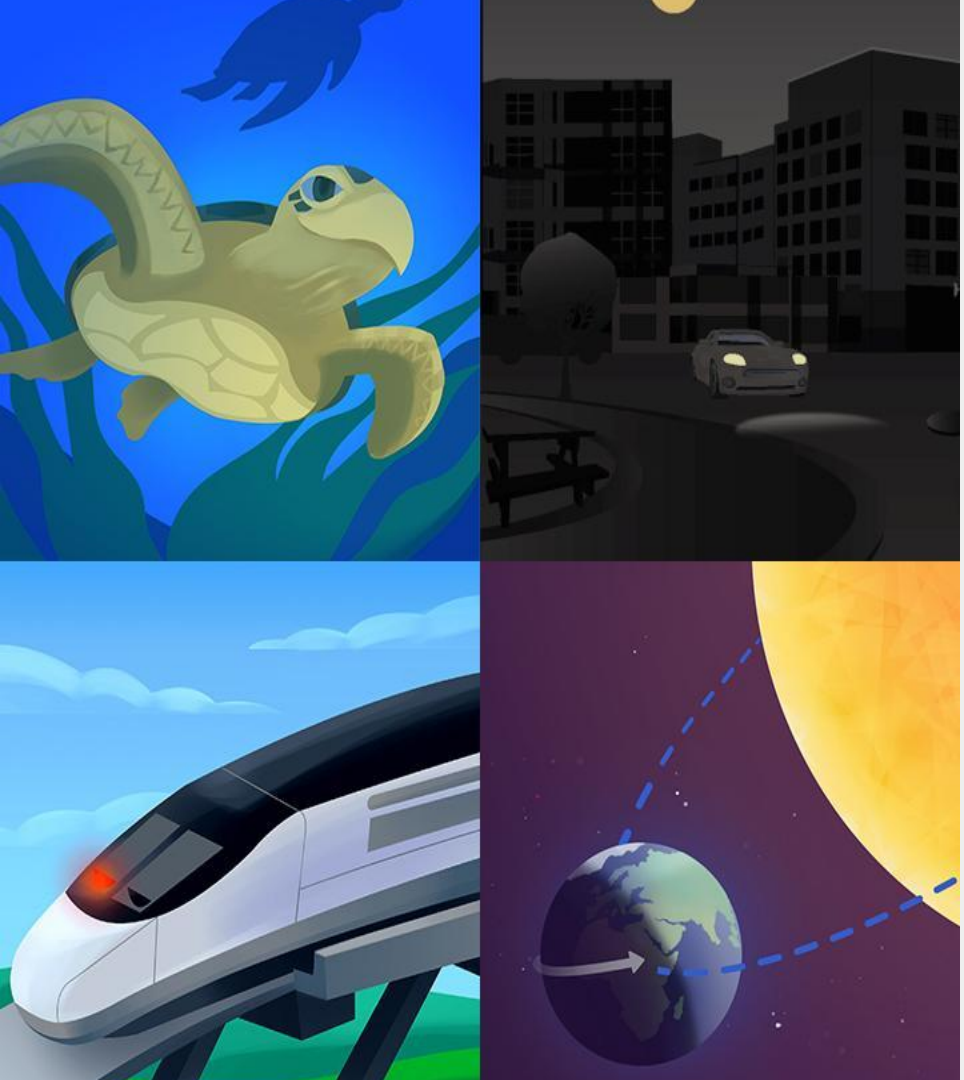


Overarching goals

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

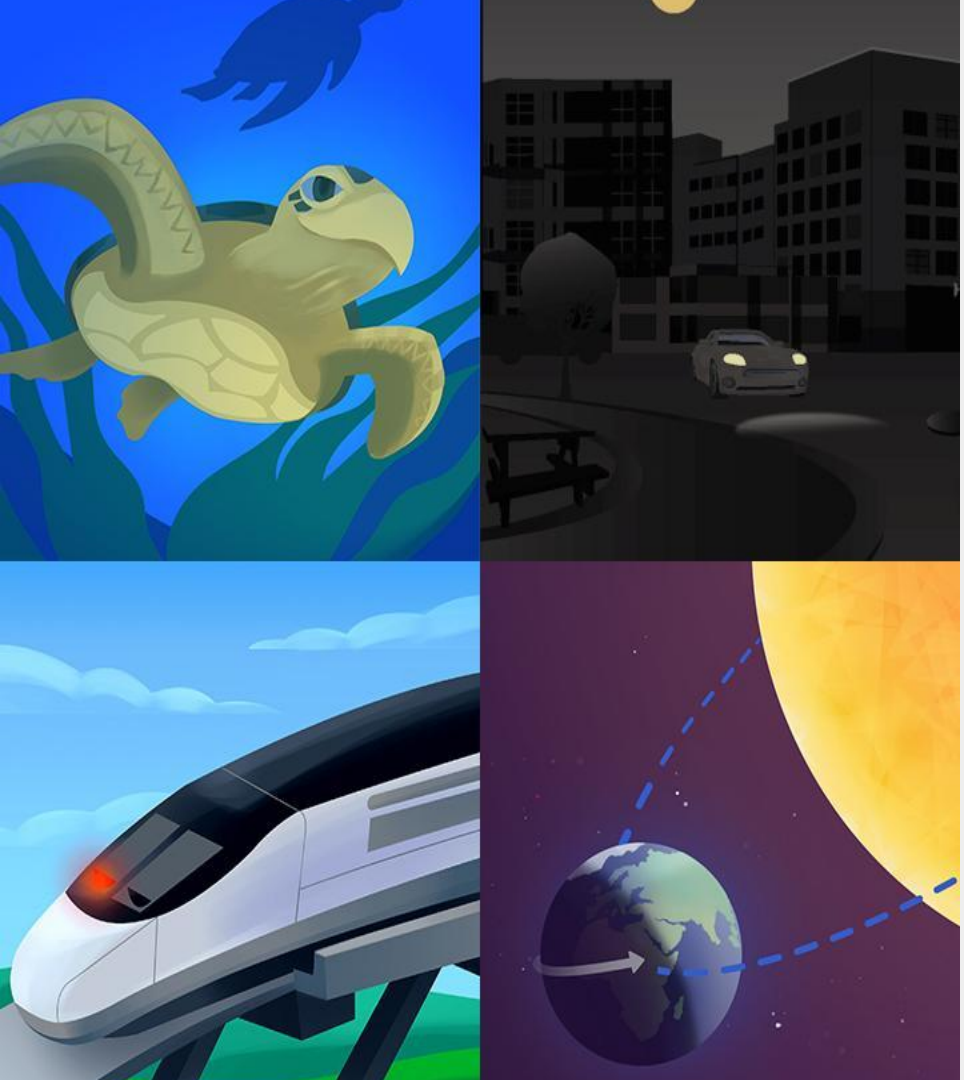
- ❏ Navigate the Amplify Science curriculum.
- ❏ Describe what teaching and learning look like in Amplify Science.
- ❏ Apply the program essentials to prepare to teach.





Plan for the day: Part 2

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



Plan for the day: Part 2

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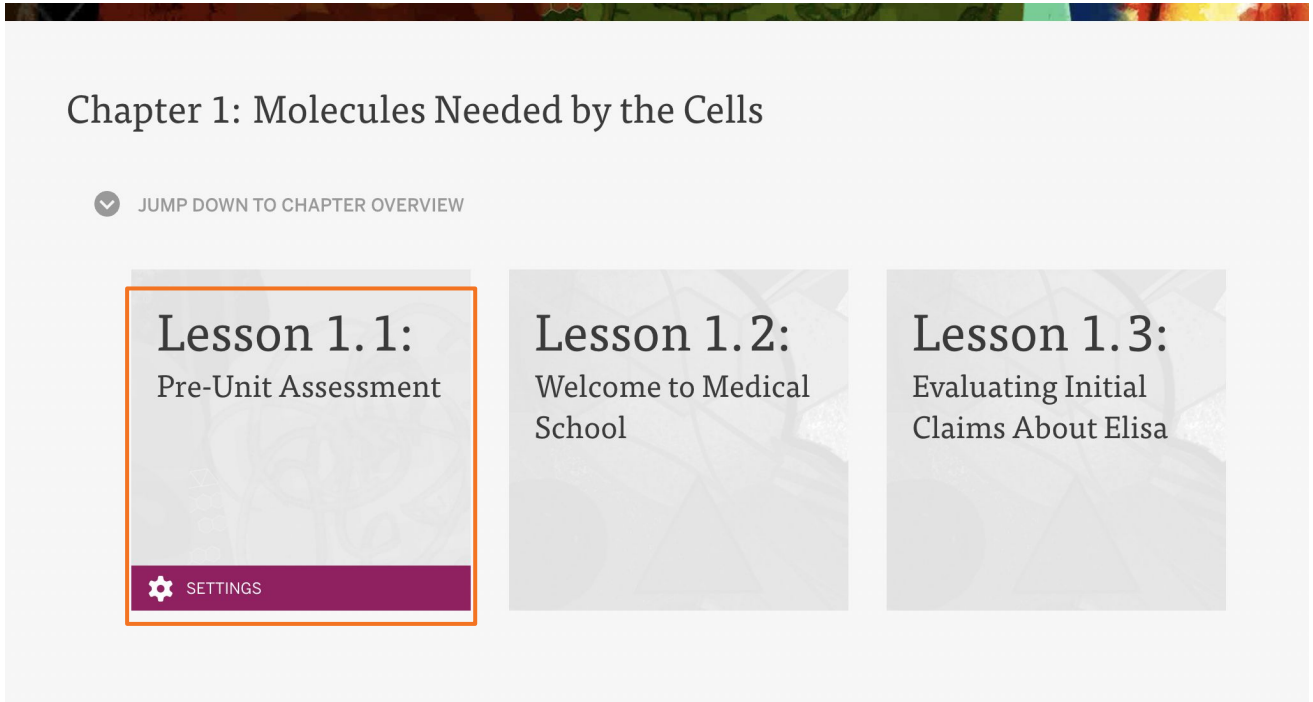
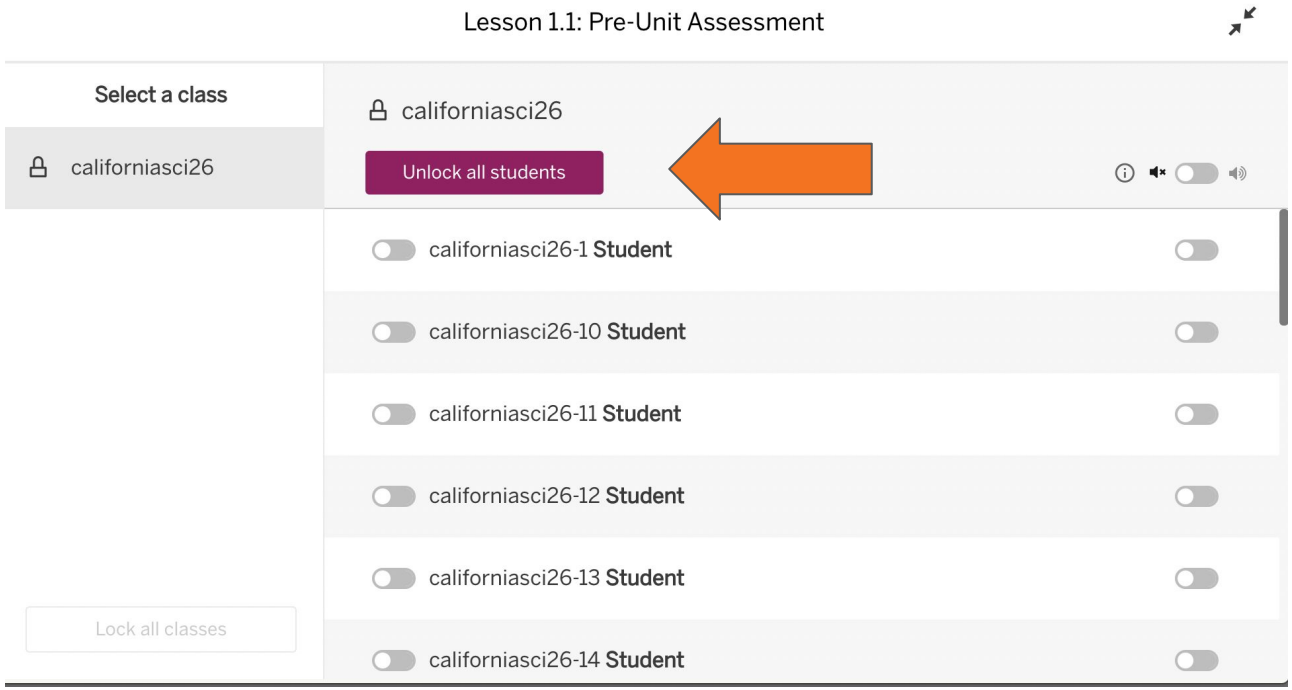
Beginning the Unit

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



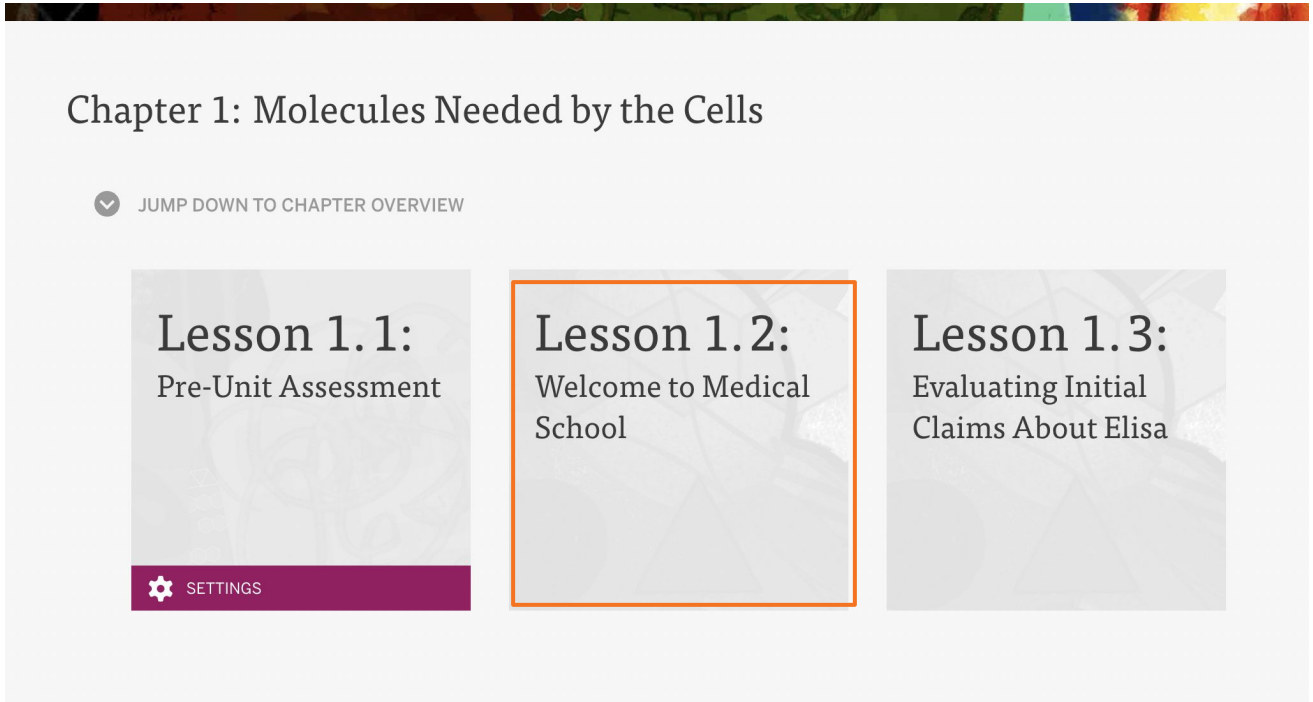
Beginning the Unit

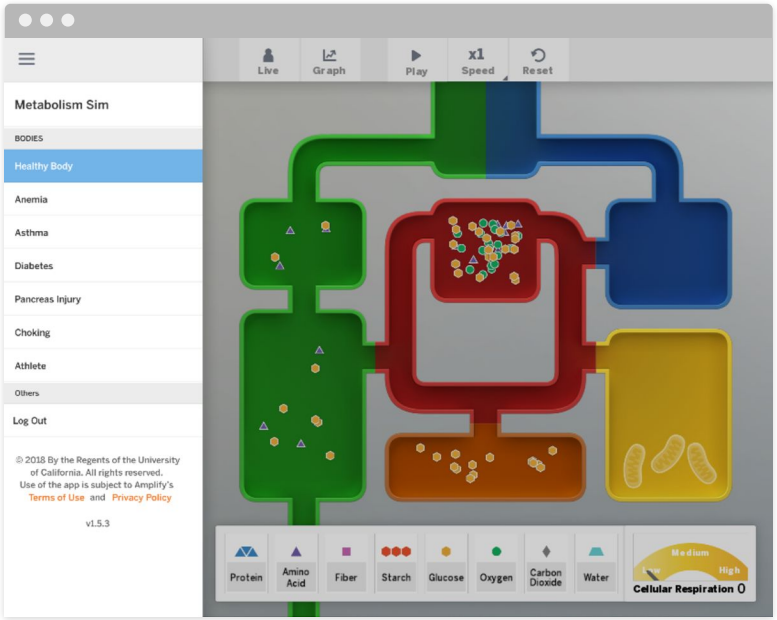
Unlock for students



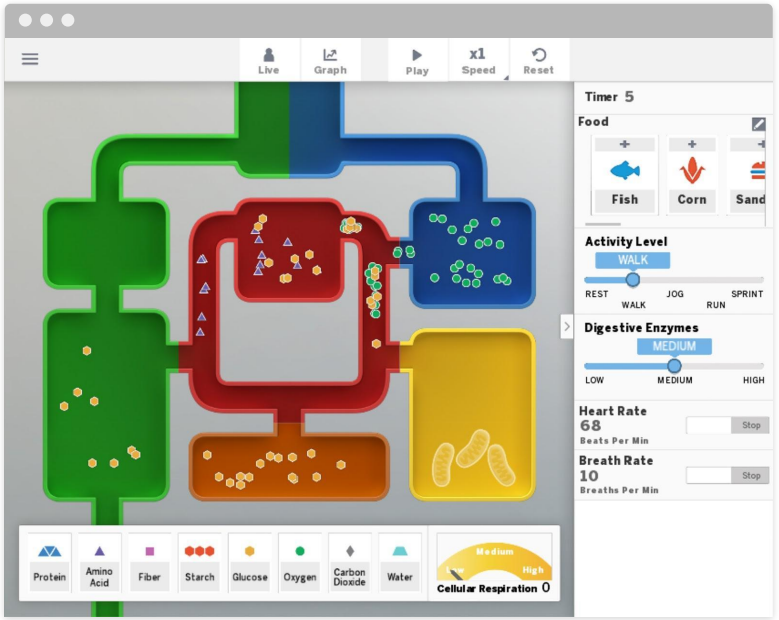
Beginning the Unit

We start our model lesson at Chapter 1, Lesson 2





A lot of things that happen in the human body are hidden or too small to directly observe. We will use a **simulation** to help us learn more about how human body systems function.

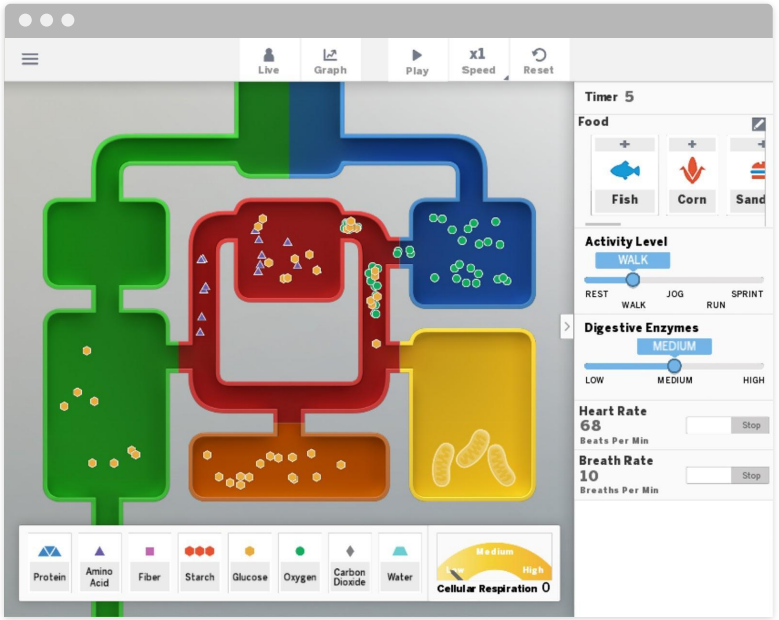


This simulation is called the *Metabolism* Simulation. It's a **scientific model** of the human body that simulates many things that happen inside the human body.

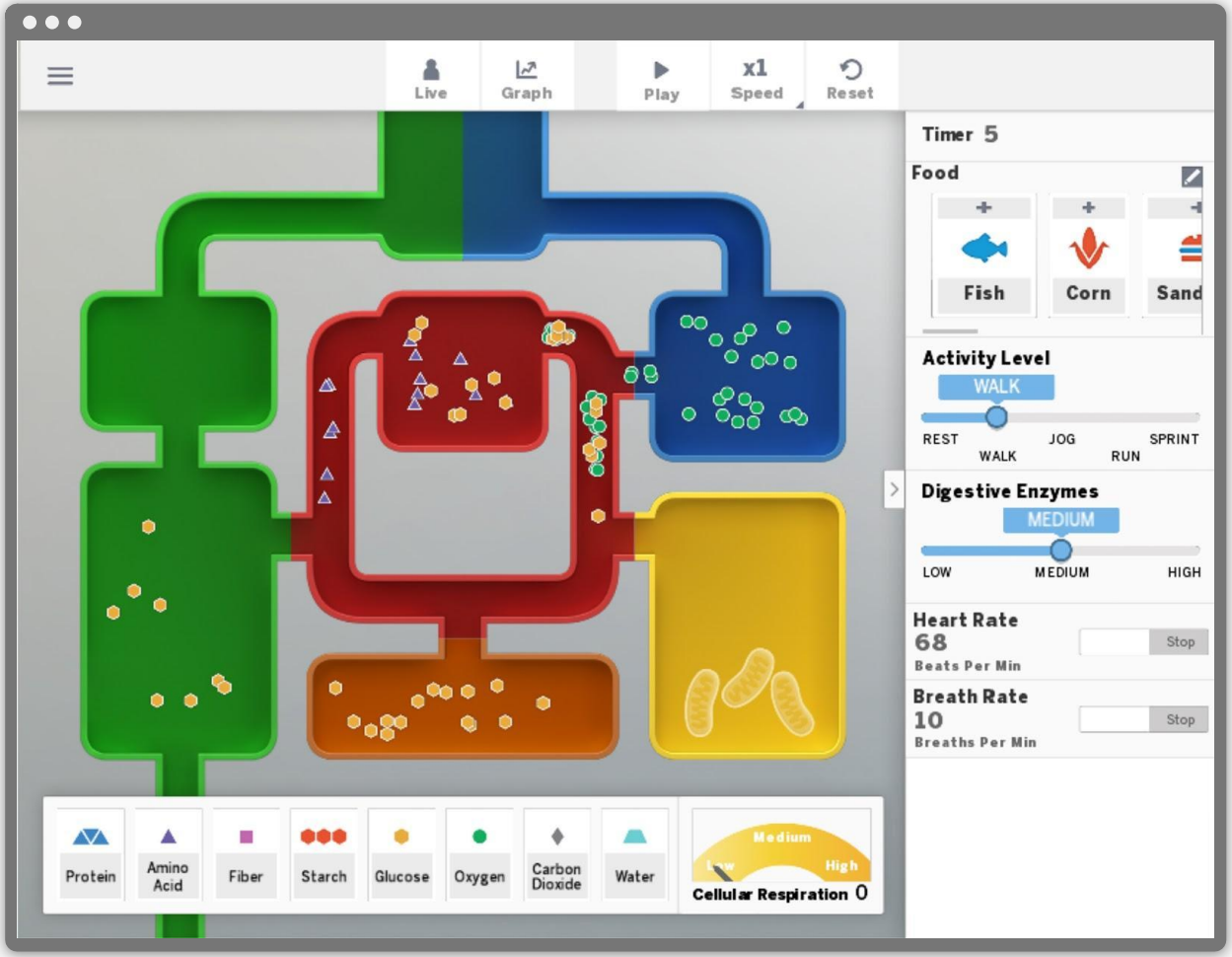
Introducing the Metabolism Simulation

Observing Molecules in the Sim

1. Launch the *Metabolism* Simulation.
2. Select HEALTHY BODY from the menu.
3. Select OBSERVE.
4. Explore with your partner.
5. Think about these questions:
    - How does the Simulation work?



What did you **notice** about the Sim?

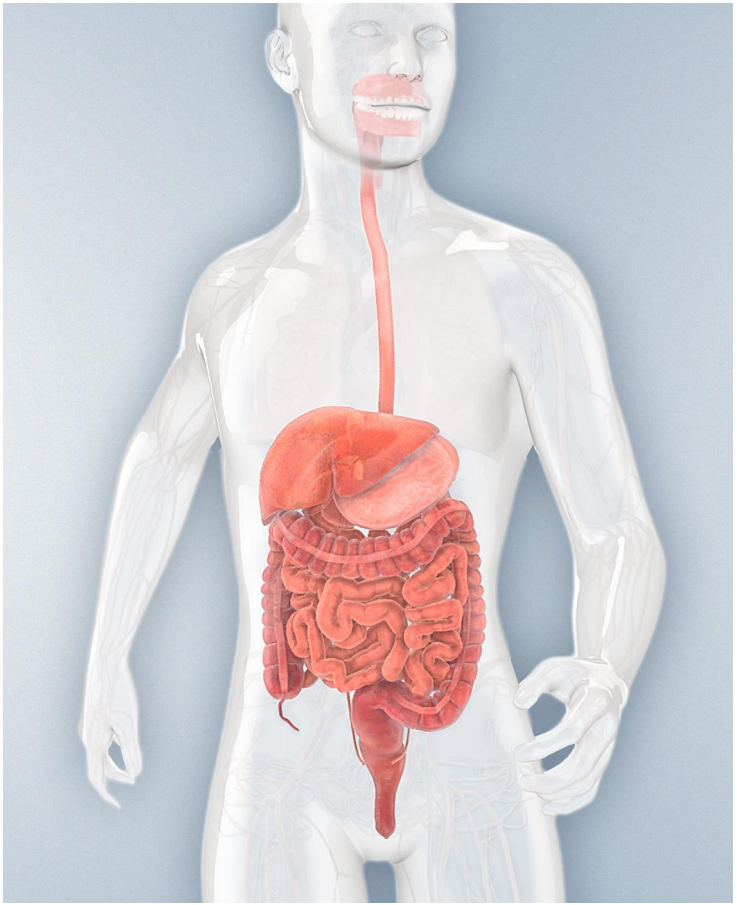

Live
Graph
Play
x1
Speed
Reset
Timer 5
Food
Fish
Corn
Sand
Activity Level
WALK
REST
JOG
SPRINT
WALK
RUN
Digestive Enzymes
MEDIUM
LOW
MEDIUM
HIGH
Heart Rate
68
Beats Per Min
Stop
Breath Rate
10
Breaths Per Min
Stop
Protein
Amino Acid
Fiber
Starch
Glucose
Oxygen
Carbon Dioxide
Water
Medium
High
Cellular Respiration 0

This **key** identifies the different types of **molecules** entering the system.

By pressing them, you can also turn the molecule visibility **off and back on**.

To figure out why Elisa feels so tired, we will first think about healthy bodies.

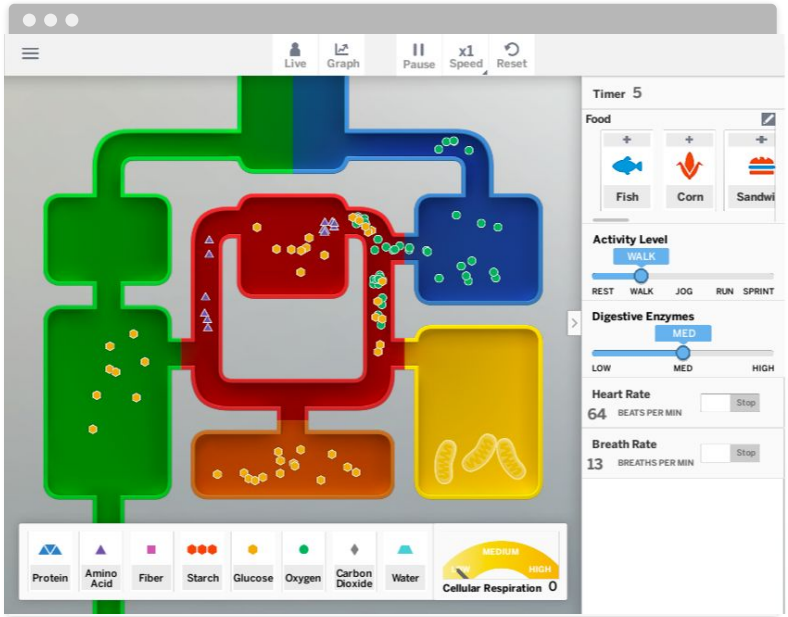
What are some things you know the human body needs to function?



What are signs you can observe when a human body is functioning properly?

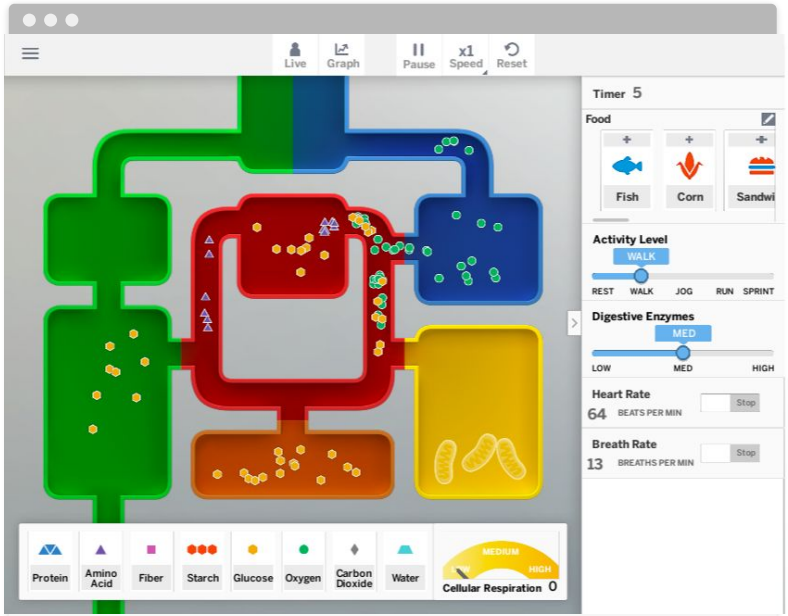
As we discussed, there are certain things we already know the human body needs to function. Two important things the human body needs to survive are **food** and **air.**

As you explore the *Metabolism* Sim again, **watch what happens to the food and air** that enter this healthy Simulation body.



Observe the Sim a second time.

This time, watch what happens to the **food and air** that enter this healthy Simulation body.



What happens to the **food and air** that enter this healthy Simulation body?

Unit Question

How do the trillions of cells in the human body get what they need to function, and what do the cells do with the things they absorb?

Classroom Wall Print Materials

Unit Question
How do the trillions of cells in the human body get what they need to function, and what do the cells do with the things they absorb?

Chapter 1 Question
Why does Elisa feel tired all the time?

Investigation Question
What does the human body need to function?

Key Concepts

Vocabulary

Chapter 1 Question

Why does Elisa feel tired all the time?

Classroom Wall Print Materials

Unit Question
How do the trillions of cells in the human body get what they need to function, and what do the cells do with the things they absorb?

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Why does Elisa feel tired all the time?

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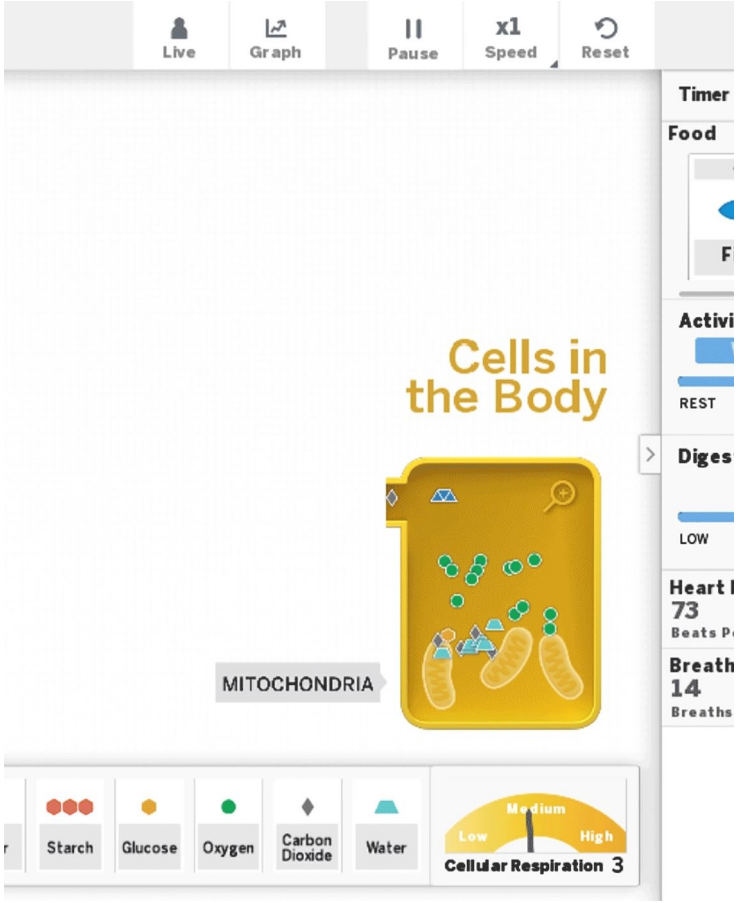
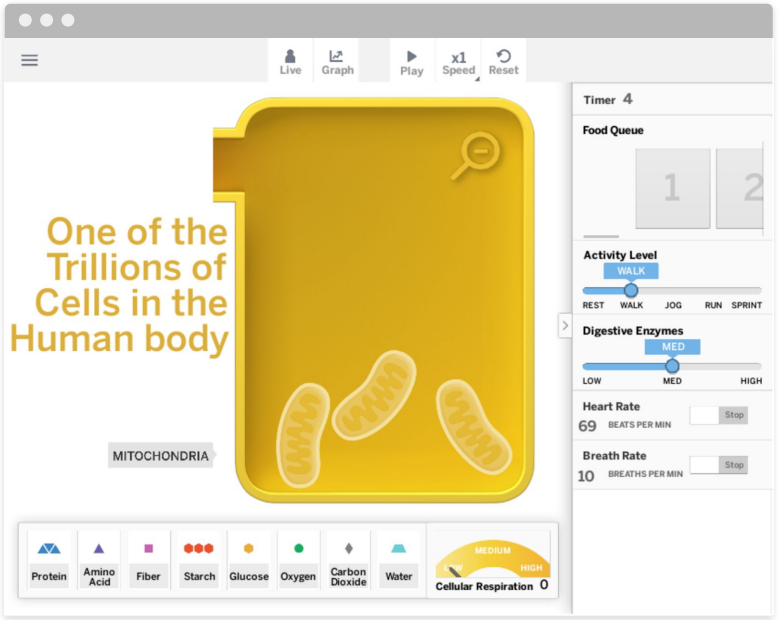
Key Concepts

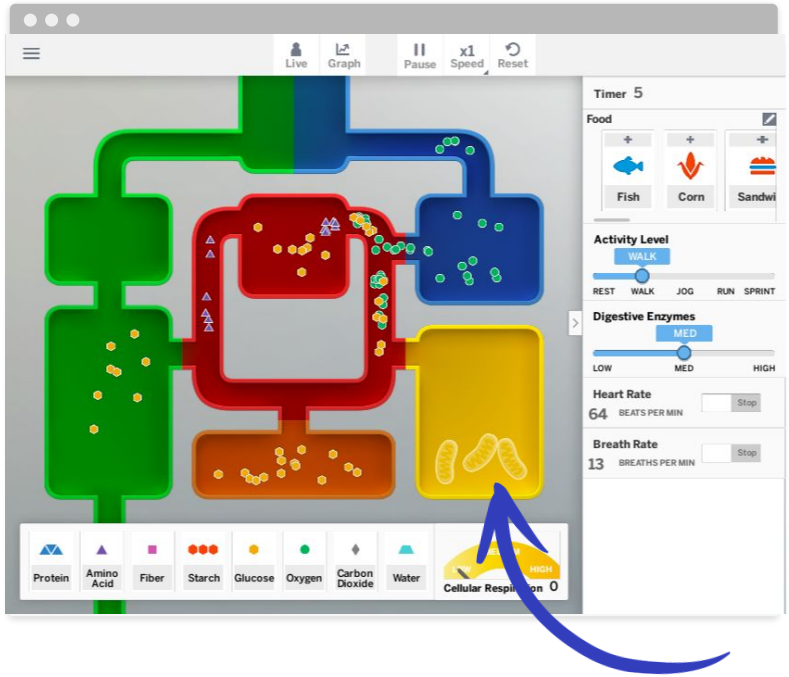
Vocabulary



The yellow box **represents one cell** in this model of the healthy human body. You can zoom into this cell by pressing on the cell and then on the magnifying glass.

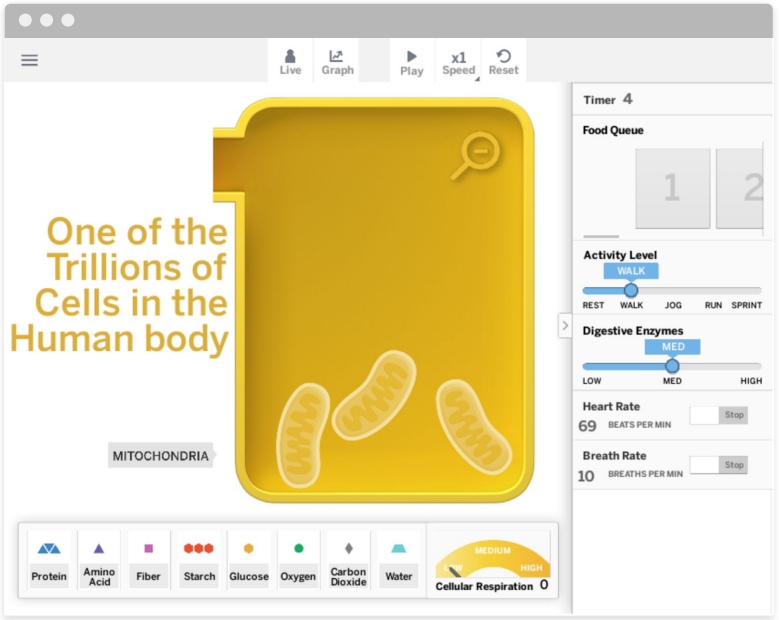


The **trillions of cells** in the body have some **similarities** in the ways they function, so we can learn more about what all cells need by **observing one cell** in the Simulation.



Observe the Sim again.

This time, pay attention to what's happening in the **representative cell** to learn more about what cells in the body need.



Which **molecules** are entering the cell?

5 MIN

Activity 3

Returning to the Patient

Vocabulary

metabolism

the body’s use of molecules for energy and growth

Classroom Wall Print Materials

Unit Question
How do the trillions of cells in the human body get what they need to function, and what do the cells do with the things they absorb?

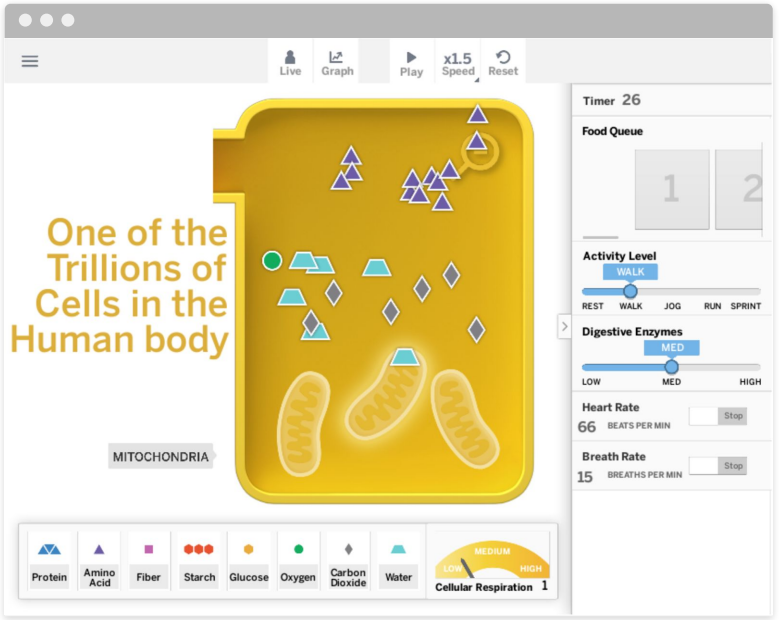
Chapter 1 Question
Why does Elisa feel tired all the time?

Investigation Question
What does the human body need to function?

Key Concepts

Vocabulary

metabolism



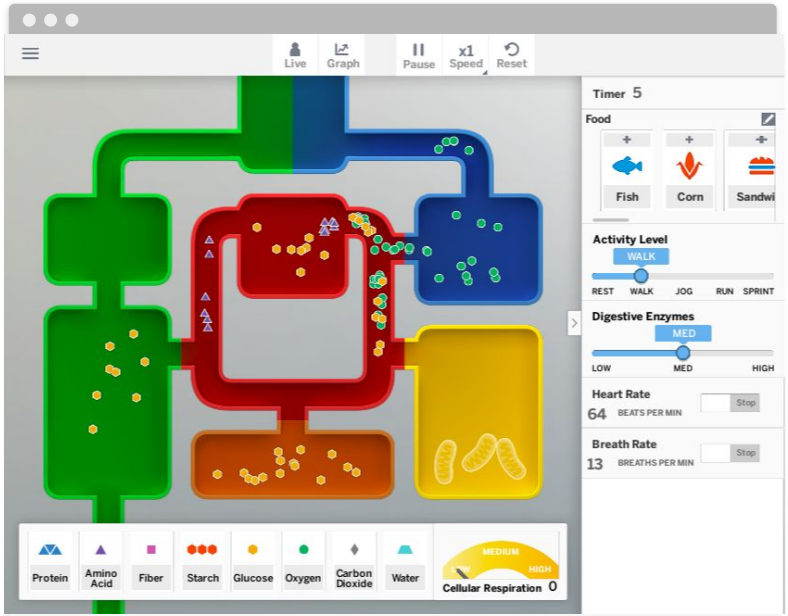
In the Sim, you observed that in a functioning, healthy body, certain **molecules that come from food and air** are transported into the body's **cells.**

Claims

Elisa is feeling tired because she:

Remember the claims we generated about why Elisa is feeling tired.

Do you have any **new insights** or **changes in thinking** about these claims after observing the Sim?



The *Metabolism* Sim can help us investigate if Elisa's problem is related to the **molecules she is taking in from the environment** and/or what is happening in the **cells in her body.**

End of Lesson

THE LAWRENCE HALL OF SCIENCE
UNIVERSITY OF CALIFORNIA, BERKELEY

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Activity 4

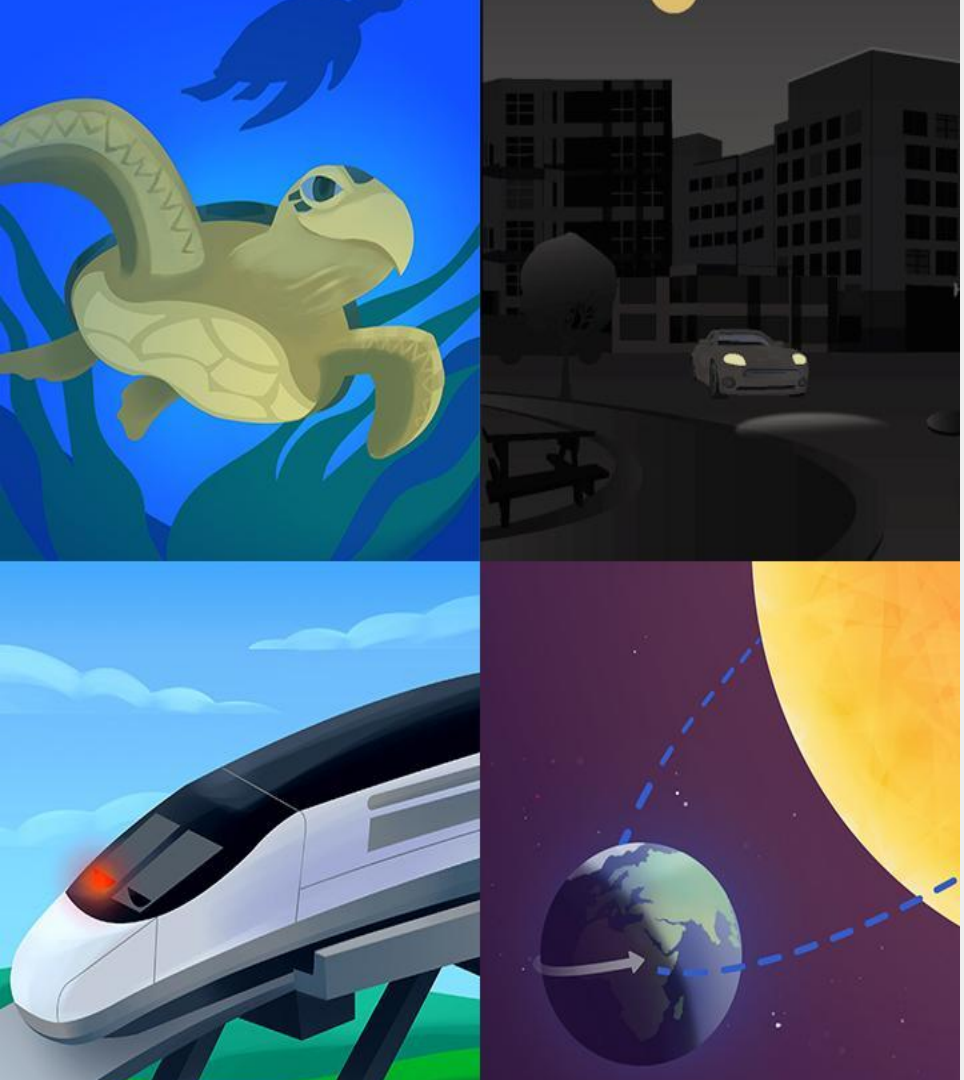
Homework

Homework

Testing Diets in the Sim

In this homework, you will experiment with different diets in the Simulation to see how the diet affects the number of molecules getting to the cells.

1. Launch the *Metabolism* Simulation.
2. Select HEALTHY BODY and then select TEST.
    - In Test Mode, you set up a pre-planned diet by pressing on items under Add Food Source. Then you press Play and observe the Simulation. The diet you selected is fed to the body automatically, and the test runs until the Timer reaches 200. During the test, you can observe the *Metabolism* Sim in the Live View or switch to the Graph View. In the Graph View, you can see the final results for Total Molecules Absorbed by Cells, which is the data you will record below.
3. Plan at least three different tests of the diet for the healthy body. Record your plan in the Diet Plan tables below.
4. Run your tests and record your results: the number of molecules absorbed by the cells



Plan for the day: Part 2

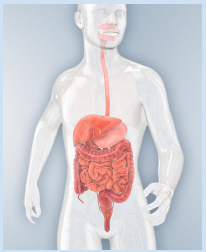
- Teaching and Learning in an Amplify Science Lesson
- Instructional Approach Reflection
- Planning a Lesson
- Closing

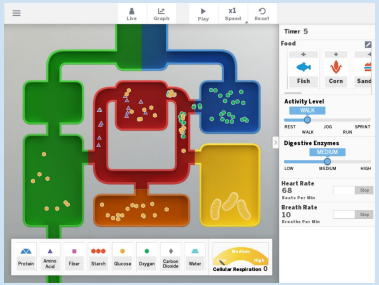
Gathering evidence

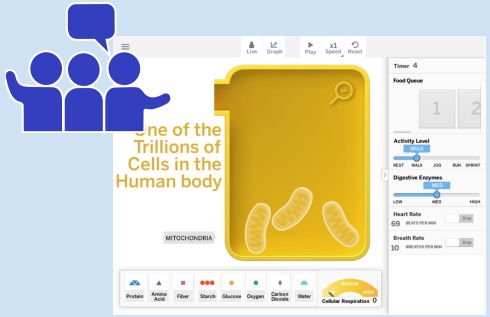
Metabolism Lesson 1.2

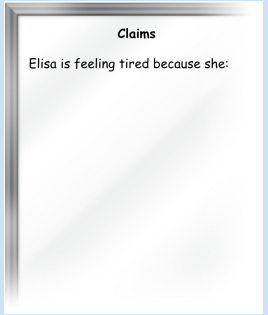
Chapter Question: Why does Elisa feel tired all the time?

Investigation Question: What does the human body need to function?







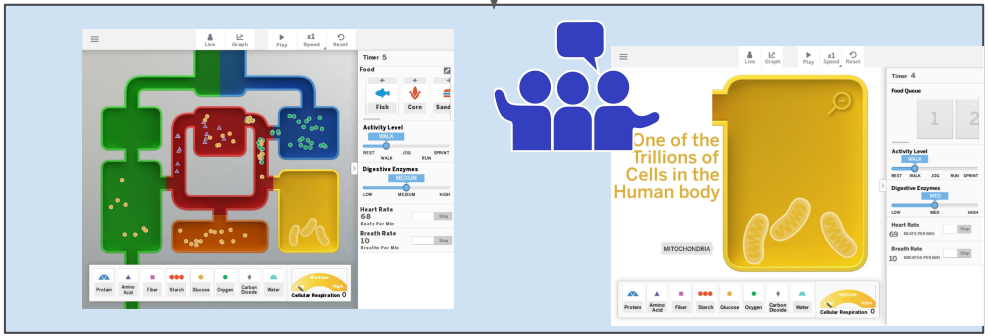


Evidence sources work together

Investigating in the Sim and discussing observations

How do these activities **work together** to support understanding of what the human body needs to function?

Investigation Question: What does the human body need to function?

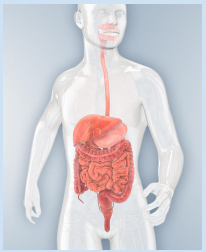


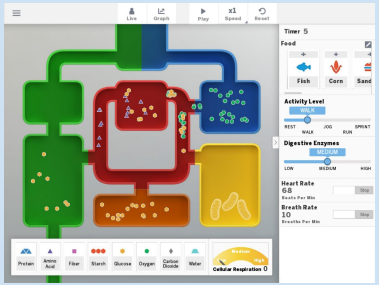
Gathering evidence

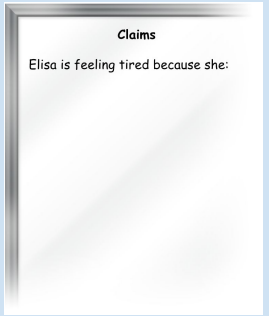
Metabolism Lesson 1.2

Chapter Question: Why does Elisa feel tired all the time?

Investigation Question: What does the human body need to function?



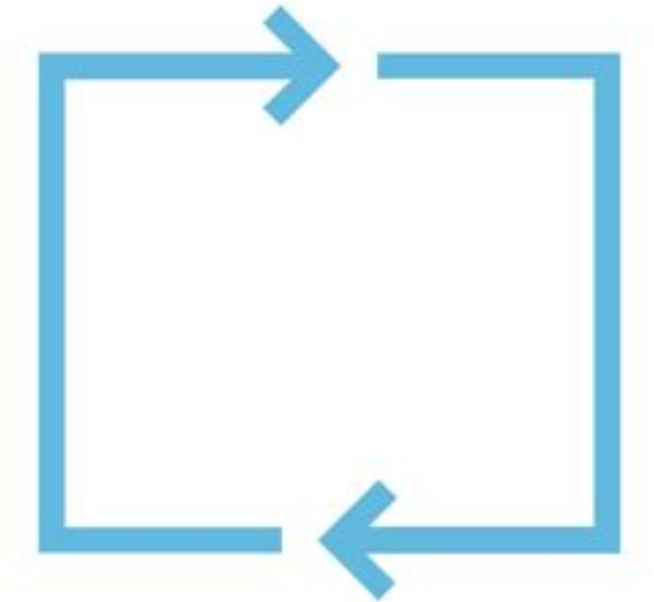




What have students figured out so far?

Multimodal learning

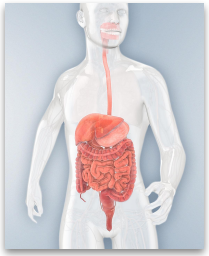
Gathering evidence over multiple lessons

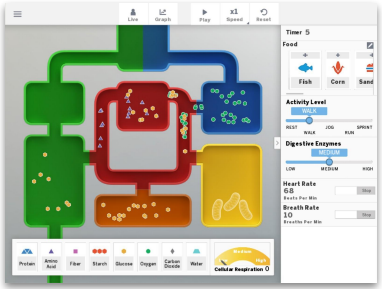


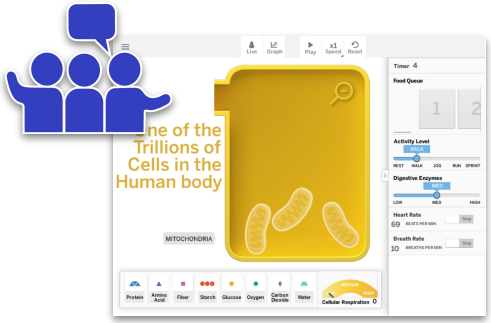
Do,
Talk,
Read,
Write,
Visualize

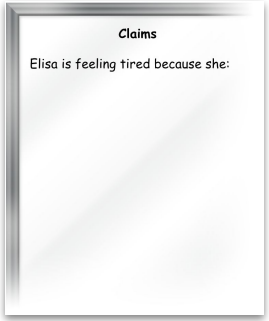
Evidence sources work together

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









Coherence Flowchart

A diagram of student learning

Phenomenon
(Chapter Question)

↓

Investigation Question

↓

Multiple sources of evidence

↓

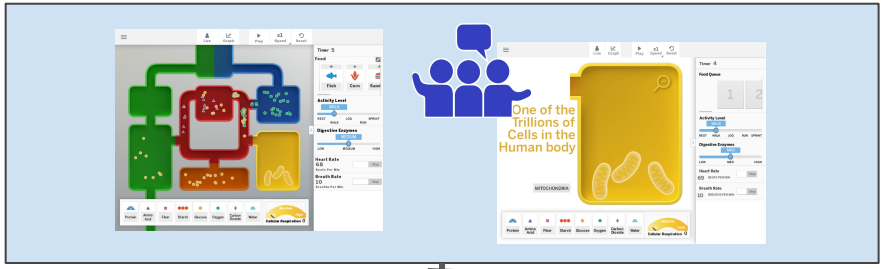
Key Concepts

Chapter Question: Why does Elisa feel tired all the time?

↓

Investigation Question: What does the human body need to function?

↓

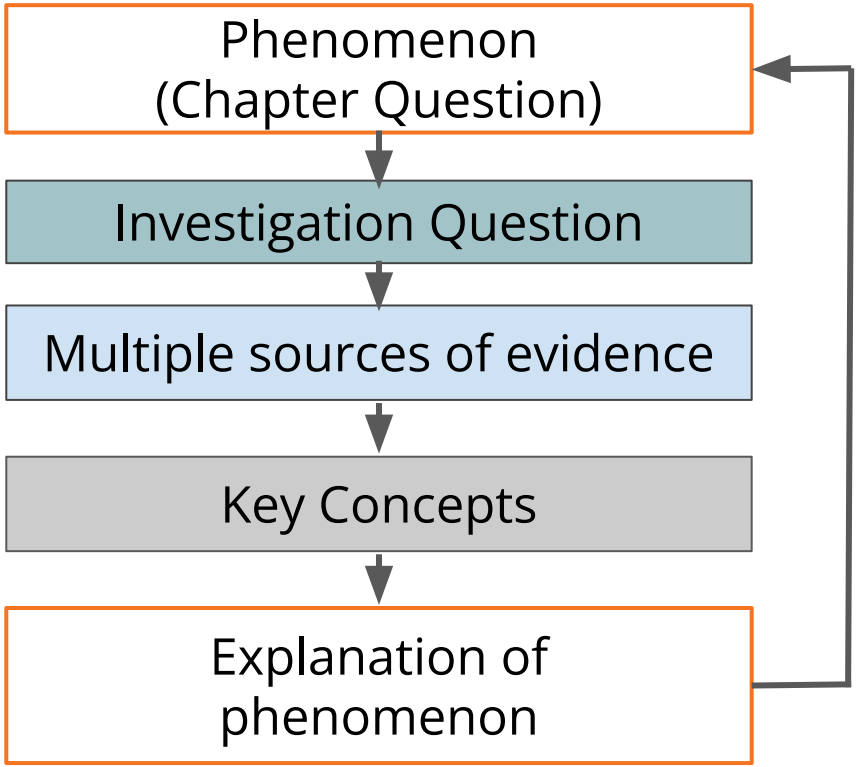


↓

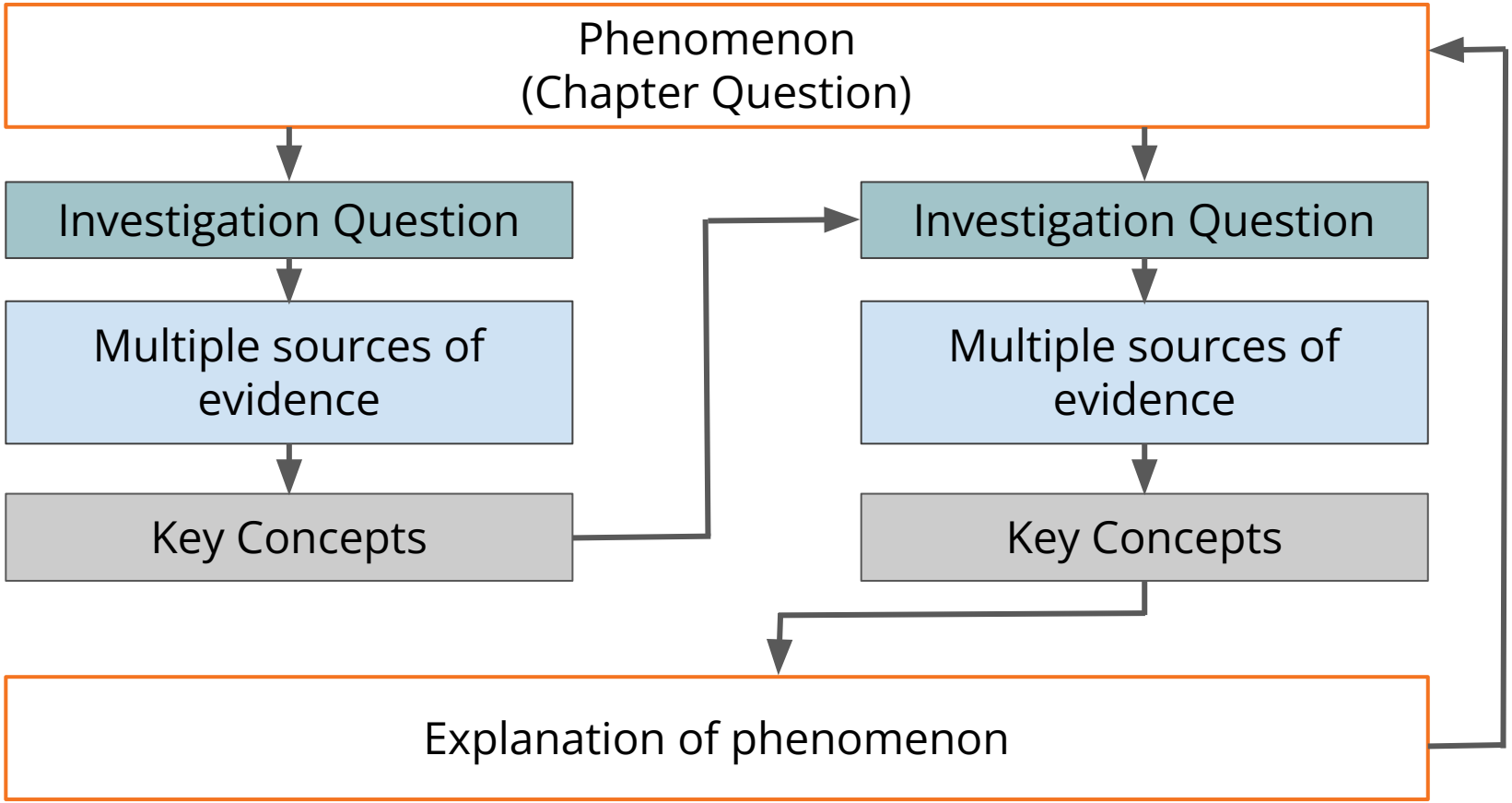
Students figure out: The body takes in molecules by eating and breathing. Some of these molecules travel to the cells of the body.

Coherence Flowchart

A diagram of student learning



Coherence Flowchart



Metabolism: Making the Diagnosis

The problem students work to solve

What is causing Elisa, a young patient, to feel tired all the time?

Chapter 1 Question

Why does Elisa feel tired all the time?

Investigation Question

What does the human body need to function? (1.2)

Which molecules do cells need to function? (1.3)

Evidence Sources and reflection opportunities

- Investigate molecules in the Sim (1.2)
- Test diets in the Sim (1.2)

- Read "Molecules Cells Need" (1.3)
- Model a healthy cell in the modeling tool (1.3)

Key Concepts

Students figure out:

- The body takes in molecules by eating and breathing. (1.2)
- Some of these molecules travel to the cells of the body. (1.2)

- A functioning human body has molecules from food (glucose and amino acids) and molecules from air (oxygen) in its cells. (1.3)

Applying back to the problem

- Evaluate evidence and claims about Elisa (1.3)

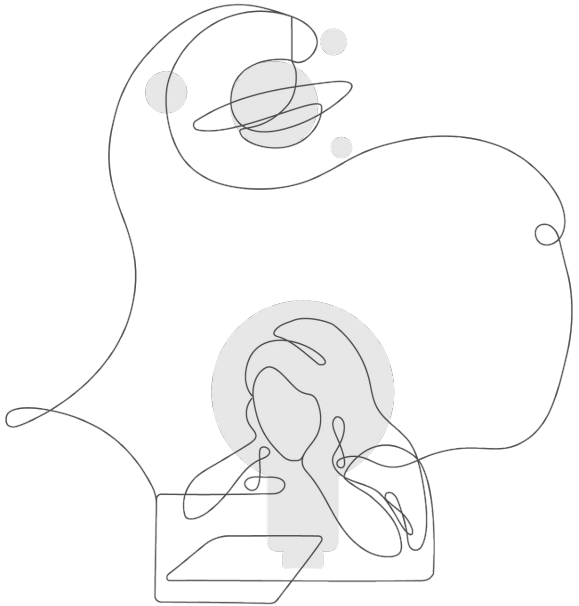
The explanation that students can make to answer the Chapter 1 Question

Elisa's cells need molecules from food like glucose and amino acids and oxygen molecules from air in her cells. If she is tired all the time her cells may not be getting what they need.

Explore the Coherence Flowchart

Skim the Chapter 1 Coherence Flowchart of your first unit.

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



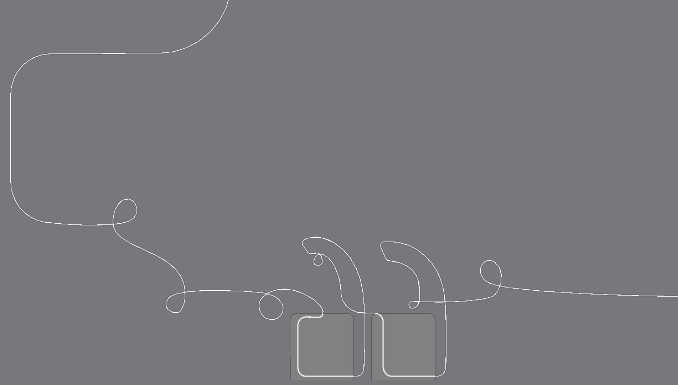
Reflection

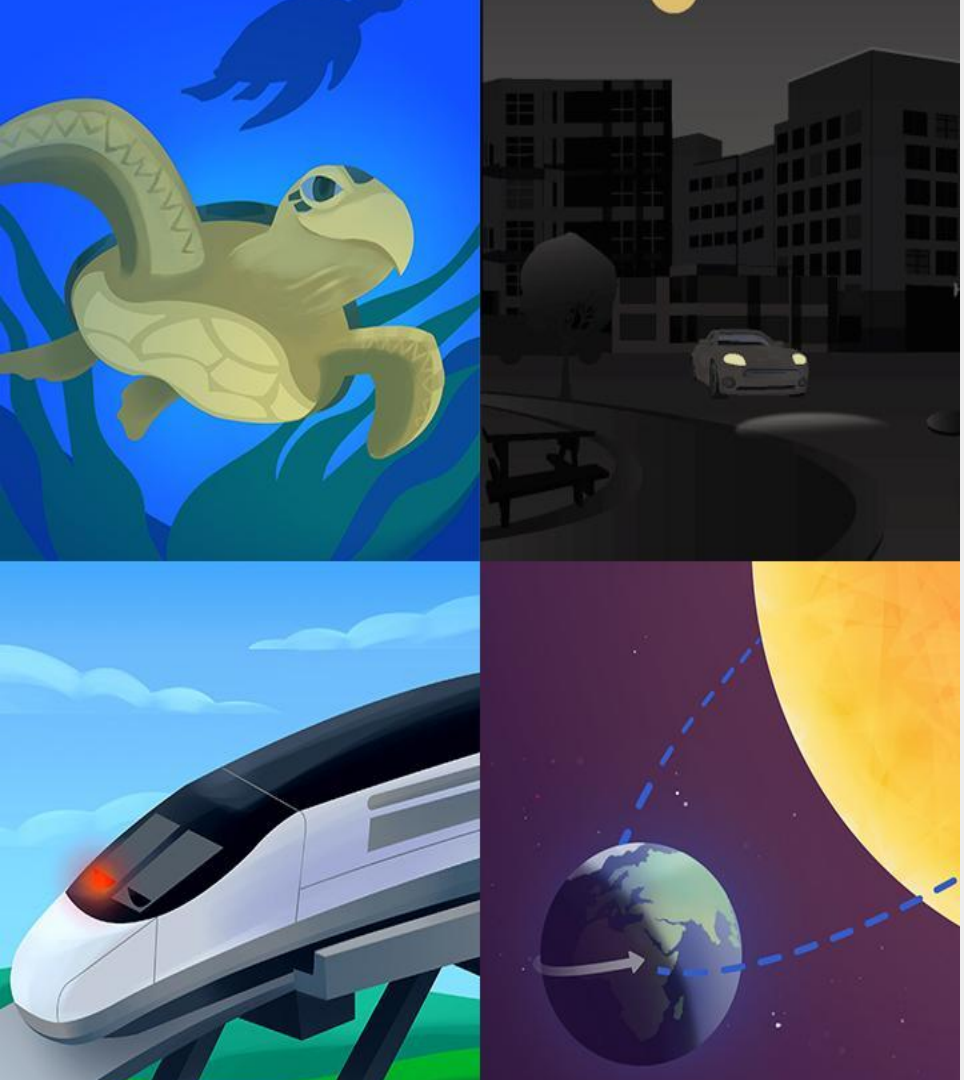
Coherence Flowchart

After looking over the Coherence Flowchart, what new insights do you have about teaching and learning with Amplify Science?

Teaching	Learning
	

Questions?

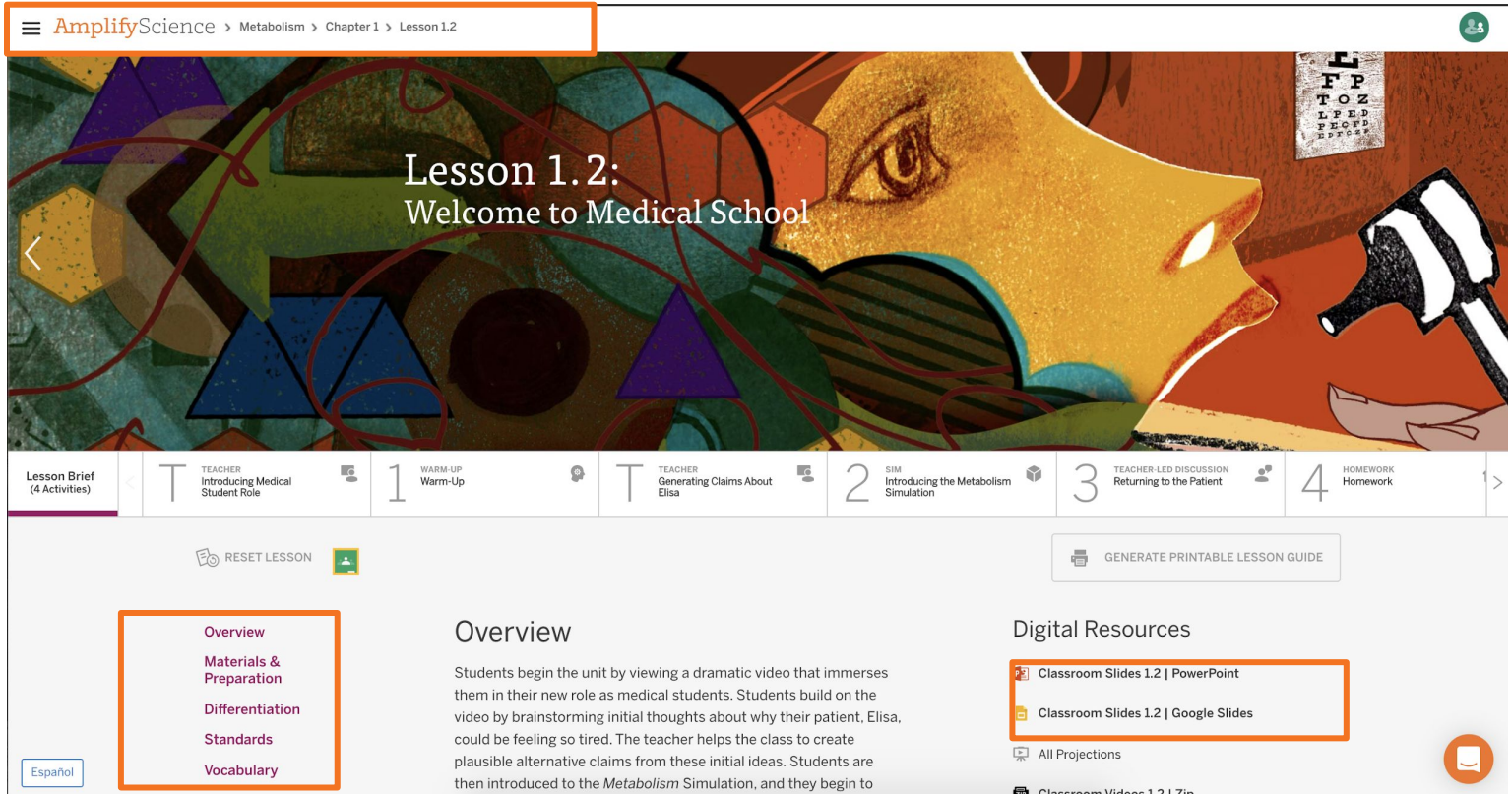




Plan for the day: Part 2

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

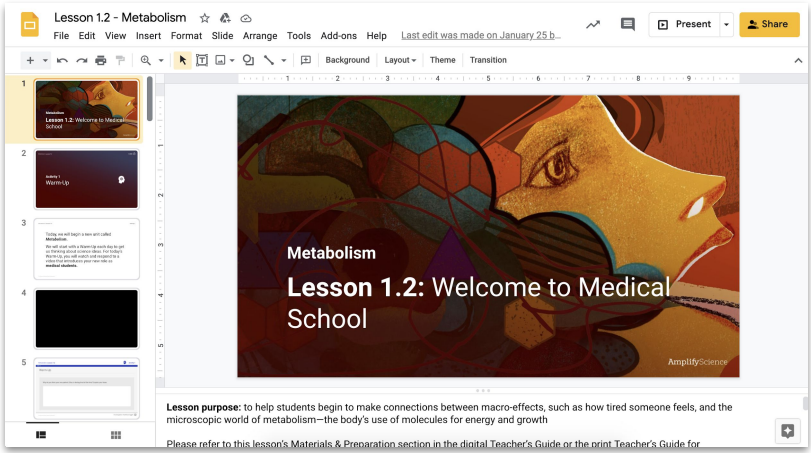
Navigate to the Lesson Brief



Preparing to teach

Classroom Slides

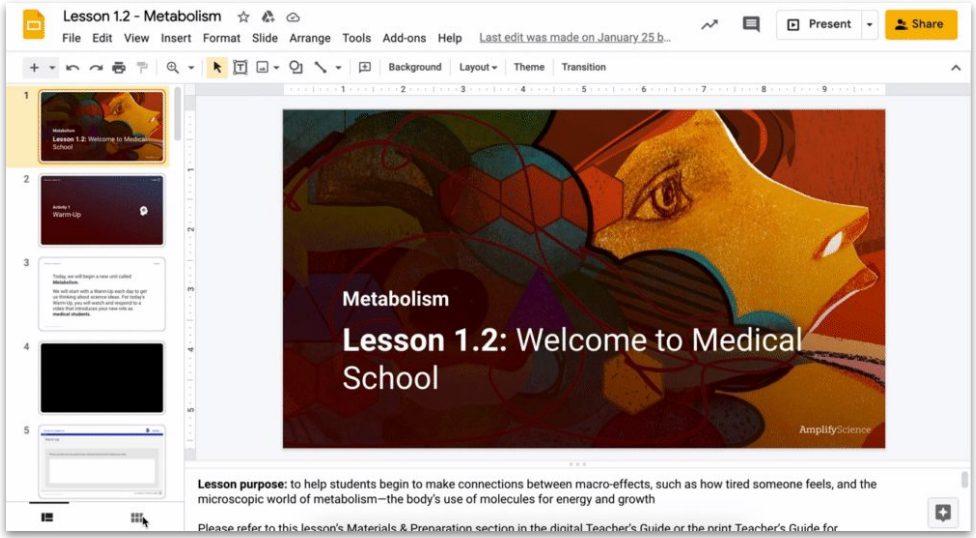
1. Open the **Classroom Slides** under the **Digital Resources**.
2. Read through the Classroom Slides including the **presenter notes** to gain a better understanding of the lesson.
3. **Consider:**
    - What features of the Classroom Slides will support you in teaching this lesson?



Using Classroom Slides as a planning tool

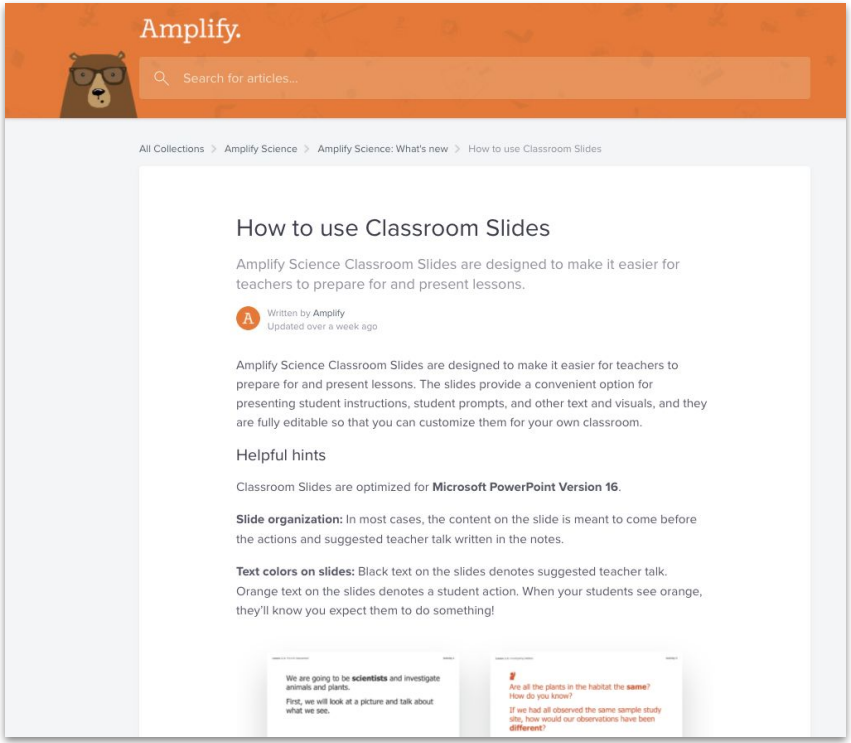
Teacher tip: Classroom Slides are a great visual summary of a lesson. Many teachers download and flip through a lesson's Classroom Slides deck to preview what happens in the lesson.

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



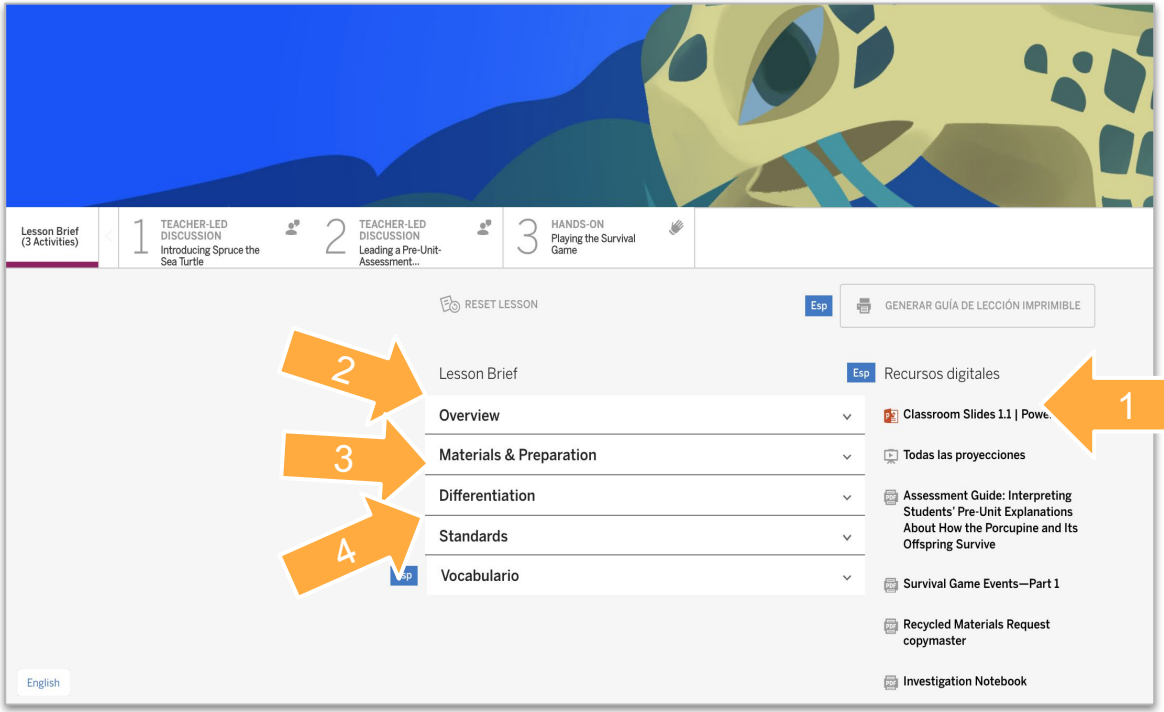
Teaching with Classroom Slides

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



4 Steps for Starting Your Lesson

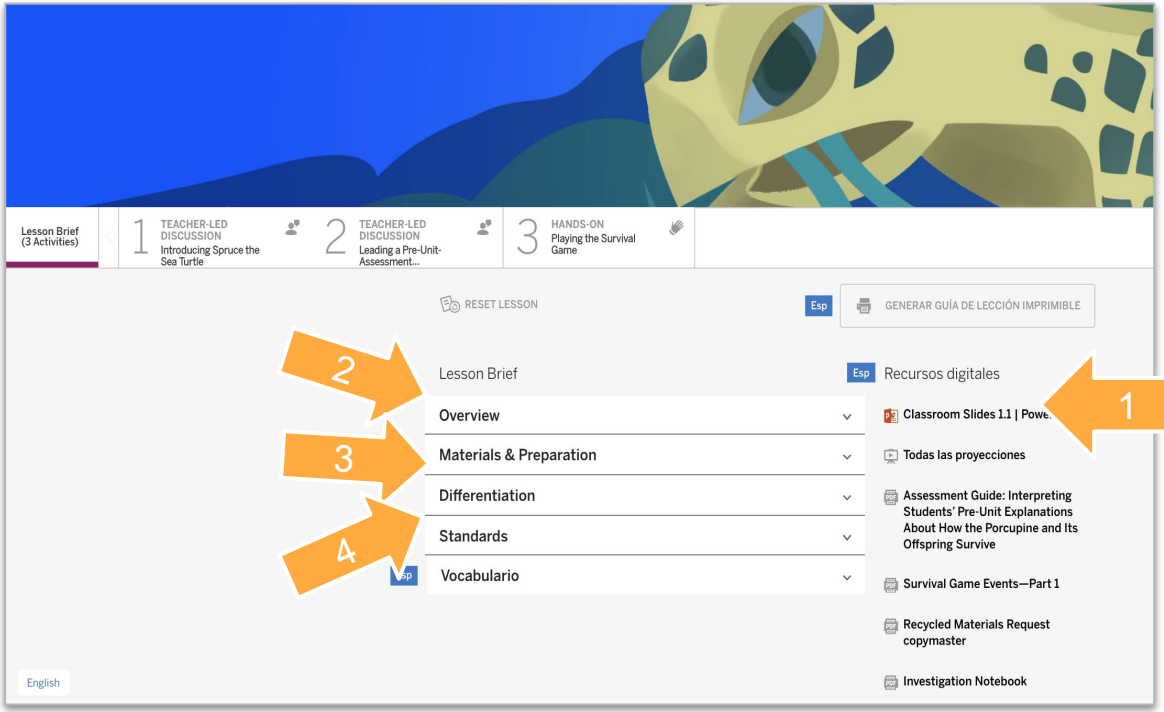
1. Download **Classroom Slides** and review them.
2. Read the **Overview**.
3. Review the **Materials & Preparation** document.
4. Read the **Differentiation** document.



Lesson Planning

DIRECTIONS:

1. Download the **Classroom Slides** for **Lesson 1.2** and review them.
2. Read the **Overview**.
3. Explore the **Materials & Preparation** document.
4. Read the **Differentiation** document.
5. If you have time, navigate to **Lesson 1.3** and repeat steps 1-4.



Lesson __	Activity Overview	
What is the purpose of this lesson? Access prior knowledge about rocks. Make observations of rocks.	**Activity 1 (##min)**	
What will students learn?	**Activity 2 (##min)**	
3-D Statement (identify SEP, CCC, and DCI):	**Activity 3 (##min)**	
Student Resources:	**Activity 4 (##min)**	
Assessment Opportunities:	**Activity 5 (##min)**	

Lesson 1.2	Activity Overview	
What is the purpose of this lesson? The purpose of this lesson is to help students begin to make connections between macro-effects, such as how tired someone feels, and the microscopic world of metabolism—the body's use of molecules for energy and growth.	**Activity 1 (10 min)**	**Warm-Up** **(Teacher Only) Generating Claims About Elisa**
What will students learn? The body takes in molecules by eating and breathing. Some of these molecules travel to the cells of the body	**Activity 2 (20 min)**	**Introducing the Metabolism Simulation**
3-D Statement (identify SEP, CCC, and DCI): Students use a model of the human body to make observations at the molecular scale (scale, proportion, and quantity) in order to investigate where the molecules that the body takes in through eating and breathing go once they are in the body.	**Activity 3 (5 min)**	**Returning to the Patient** (5 min.)
Student Resources: optional: *Metabolism* Investigation Notebook,	**Activity 4 (5 min)**	**Homework**

Remember to plan for…

Student work:

- How do you plan to collect evidence of student work?

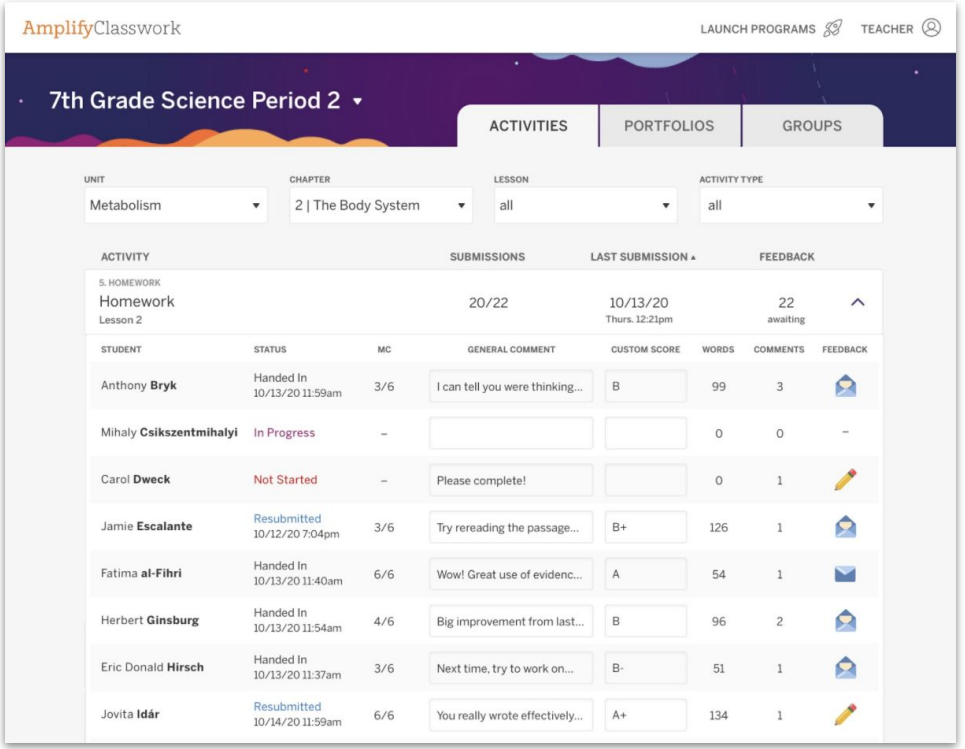
Differentiation:

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

Classwork

Classwork is a feedback tool for all student work that is submitted digitally through the student platform.

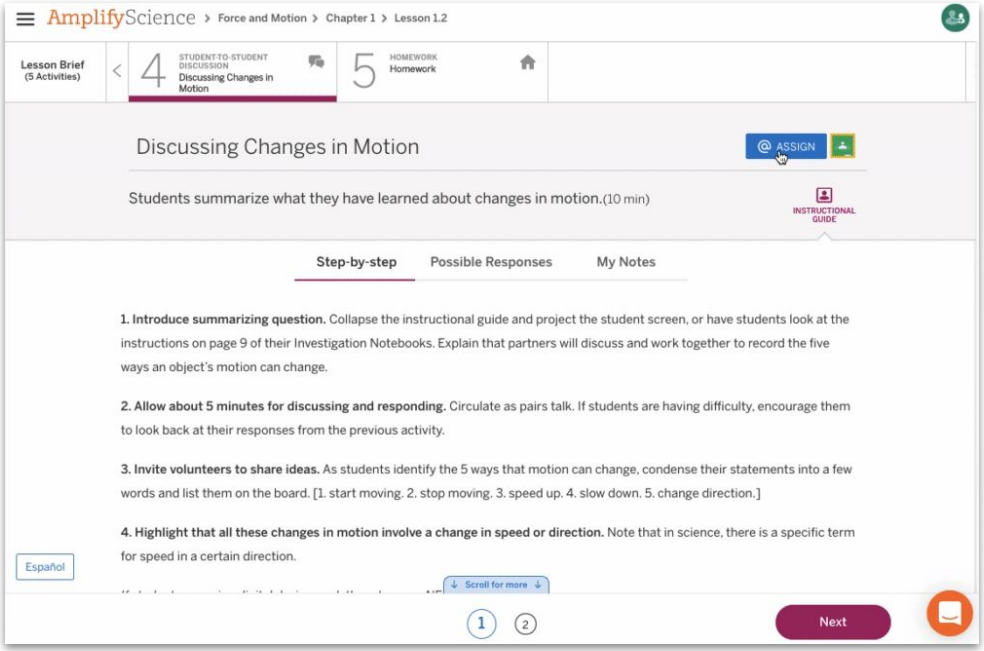
Classwork allows you to track who has completed which assignments, score student work, and send digital feedback.



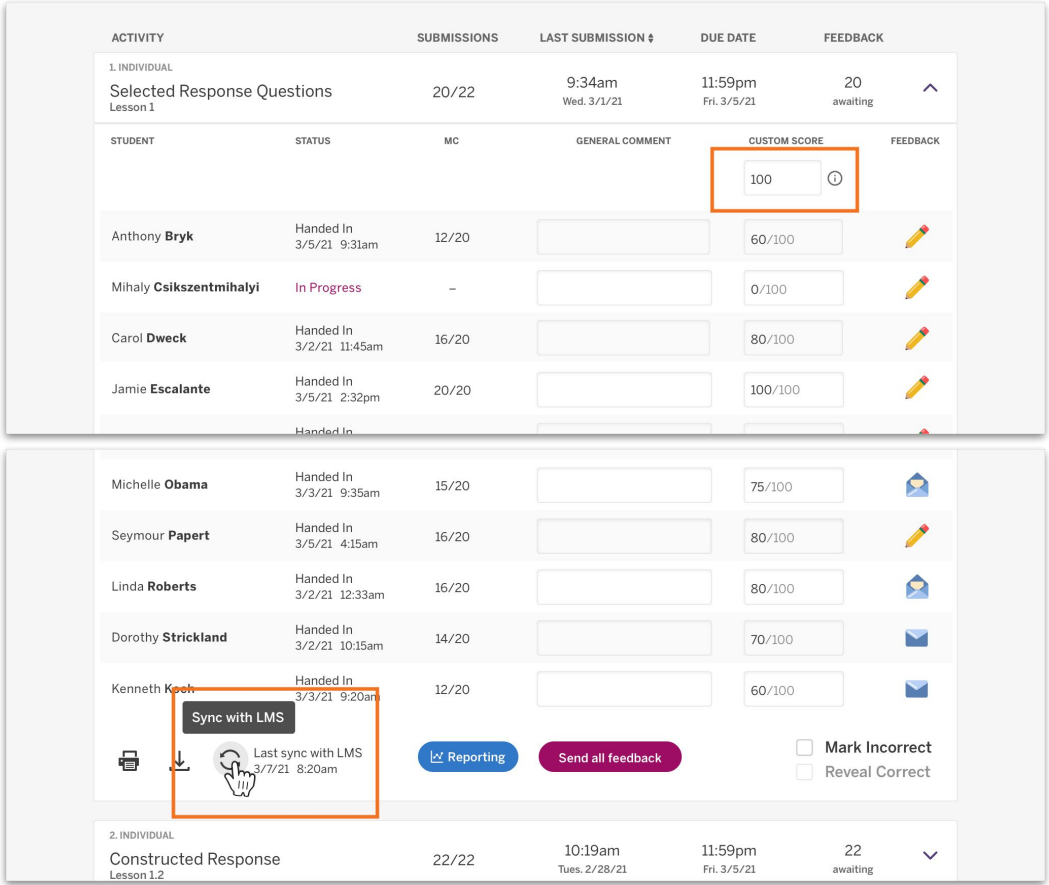
Assign feature

Teacher tip: Use the Assign feature to assign activities and due dates.

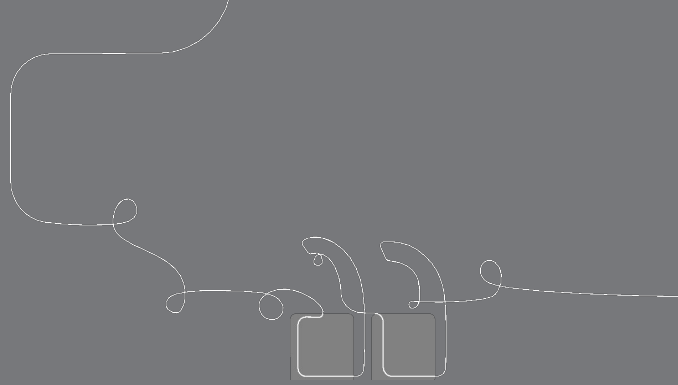
Students will be notified with a bell icon. This makes it easier for students to know what's assigned and what's due.

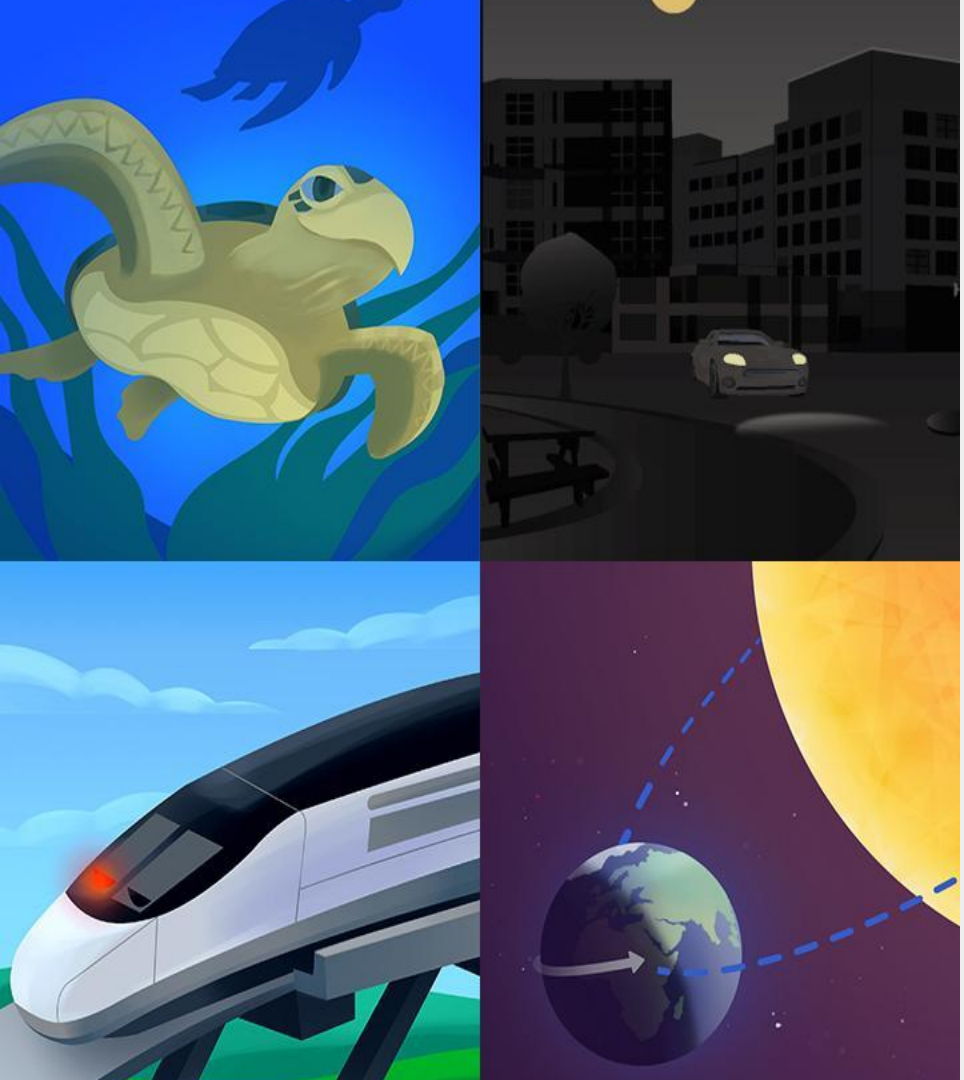


Grade sync from Classwork to Schoology



Questions?





Plan for the day: Part 2

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Additional resources

Welcome, caregivers!

—

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

Para acceder a este sitio en español haga clic aquí.

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

TOP RATED BY EDREPORTS

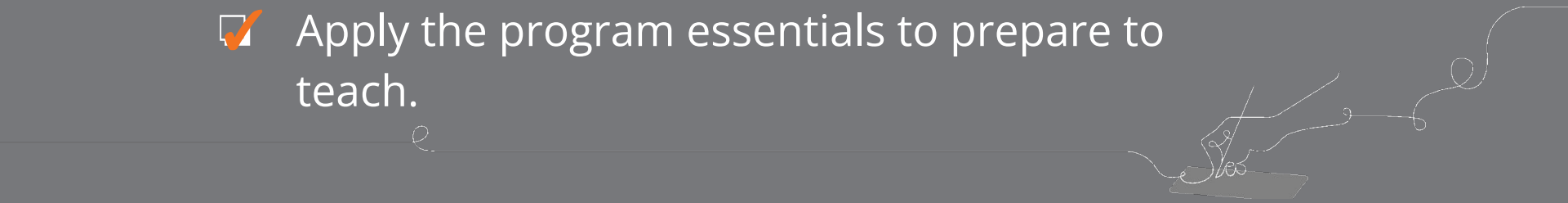
Grades 6-8

[Caregivers]

Overarching goals

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

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



Closing reflection

Based on our work today, share:

Head: something you'll keep in mind

Heart: something you're feeling

Feet: something you're planning to do

Additional resources and ongoing support

Customer Care

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

help@amplify.com

800-823-1969

Amplify Chat

Please provide feedback!

surveymonkey.com/r/InitialAmplifySciPL

Presenter name:

Workshop title:

Part 1: Relaunching the Standard Curriculum

Part 2: Guided Planning (Planning for a Lesson)

Modality:

Remote