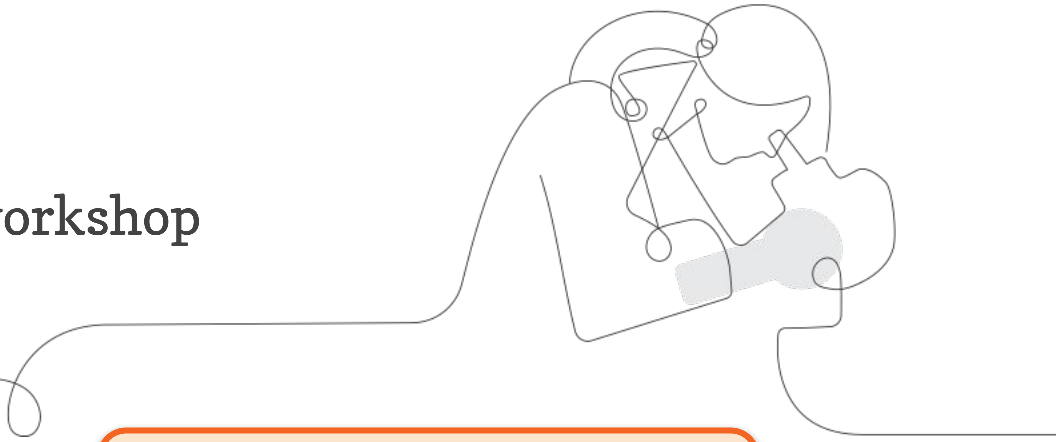
Do Now: *Use the link in the chat to add your best remote learning tips and tricks to the Jamboard.*

Amplify Science

Unit Internalization & Guided Planning

Deep-dive and strengthening workshop

Grade 8, Force and Motion



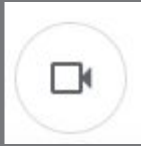
LAUSD

10/10/2020

Presented by Your Name

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

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
    - Amplify Science Refresher
    - 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**
  - **Amplify Science Refresher**
  - **Instructional Materials**
- Unit Internalization
- Planning to teach
  - Collecting evidence of student learning to meet diverse learner needs
- Reflection and closing

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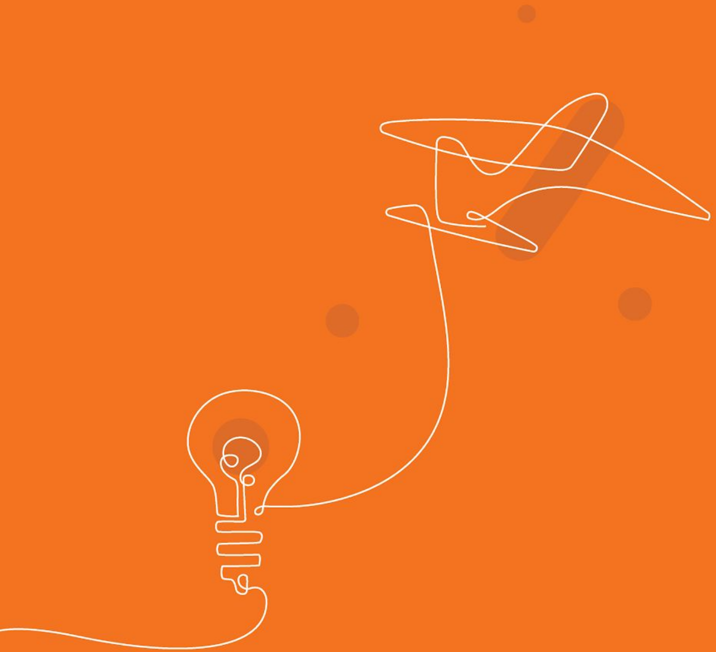

Amplify Science Refresher

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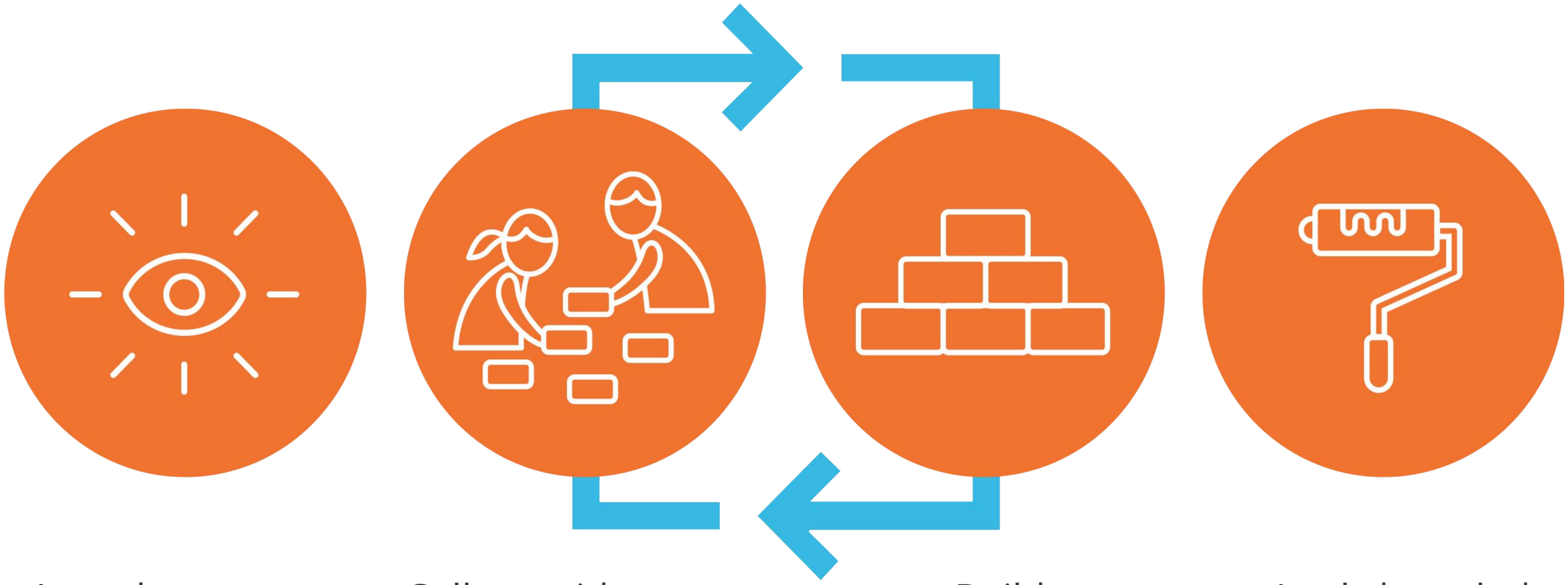
Amplify Science Instructional Approach



Introduce a phenomenon and a related problem

Collect evidence from multiple sources

Build increasingly complex explanations

Apply knowledge to solve a different problem

Middle school course curriculum structure

Integrated model*

These are the prioritized units for 7th grade.

Grade 6	Grade 7	Grade 8
Launch: **Microbiome**	Launch: **Geology on Mars**	Launch: **Harnessing Human Energy**
Metabolism	**Plate Motion**	**Force and Motion**
Engineering Internship: **Metabolism**	Engineering Internship: **Plate Motion**	Engineering Internship: **Force and Motion**
Traits and Reproduction	**Rock Transformations**	**Magnetic Fields**
Thermal Energy	**Phase Change**	**Light Waves**
Ocean, Atmosphere, and Climate	Engineering Internship: **Phase Change**	**Earth, Moon, and Sun**
Weather Patterns	**Chemical Reactions**	**Natural Selection**
Earth's Changing Climate	**Populations and Resources**	Engineering Internship: **Natural Selection**
Engineering Internship: **Earth's Changing Climate**	**Matter and Energy in Ecosystems**	**Evolutionary History**

AmplifyScience

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

Launch units

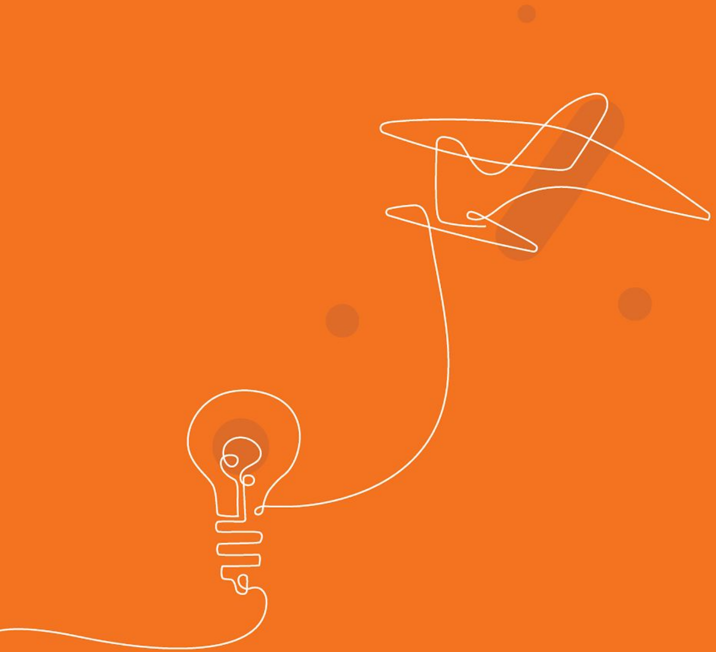
- First unit
- 11 lessons

Core units

- Majority of units
- 19 lessons

Engineering Internships

- Two per year
- 10 lessons



Instructional Materials

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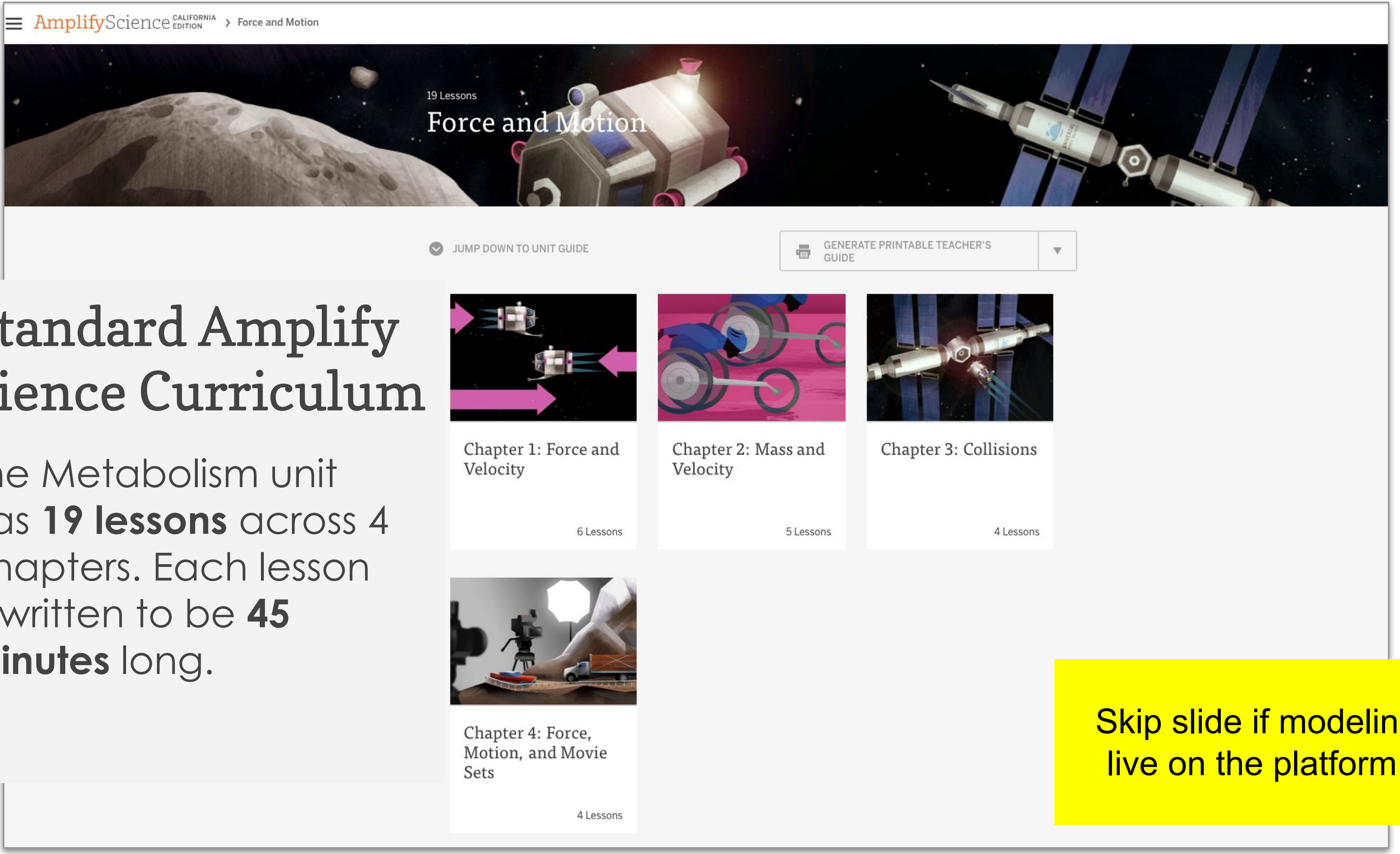
Standard Amplify Science Curriculum



Standard Amplify Science Curriculum

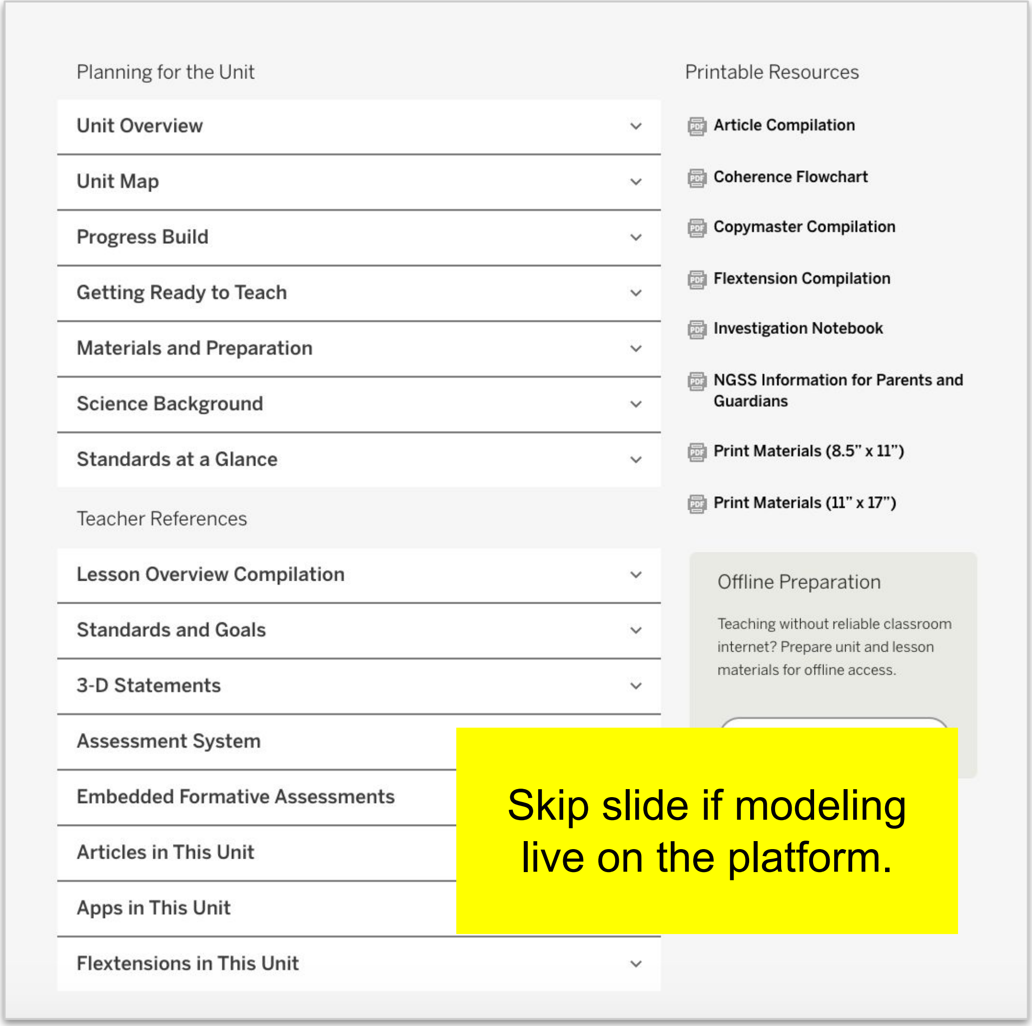
The Metabolism unit has **19 lessons** across 4 chapters. Each lesson is written to be **45 minutes** long.

Skip slide if modeling live on the platform.

Standard Amplify Science Curriculum

On the standard Amplify Science platform you will find all of your key documents for planning for the unit.

We will be using many of these in today's workshop.

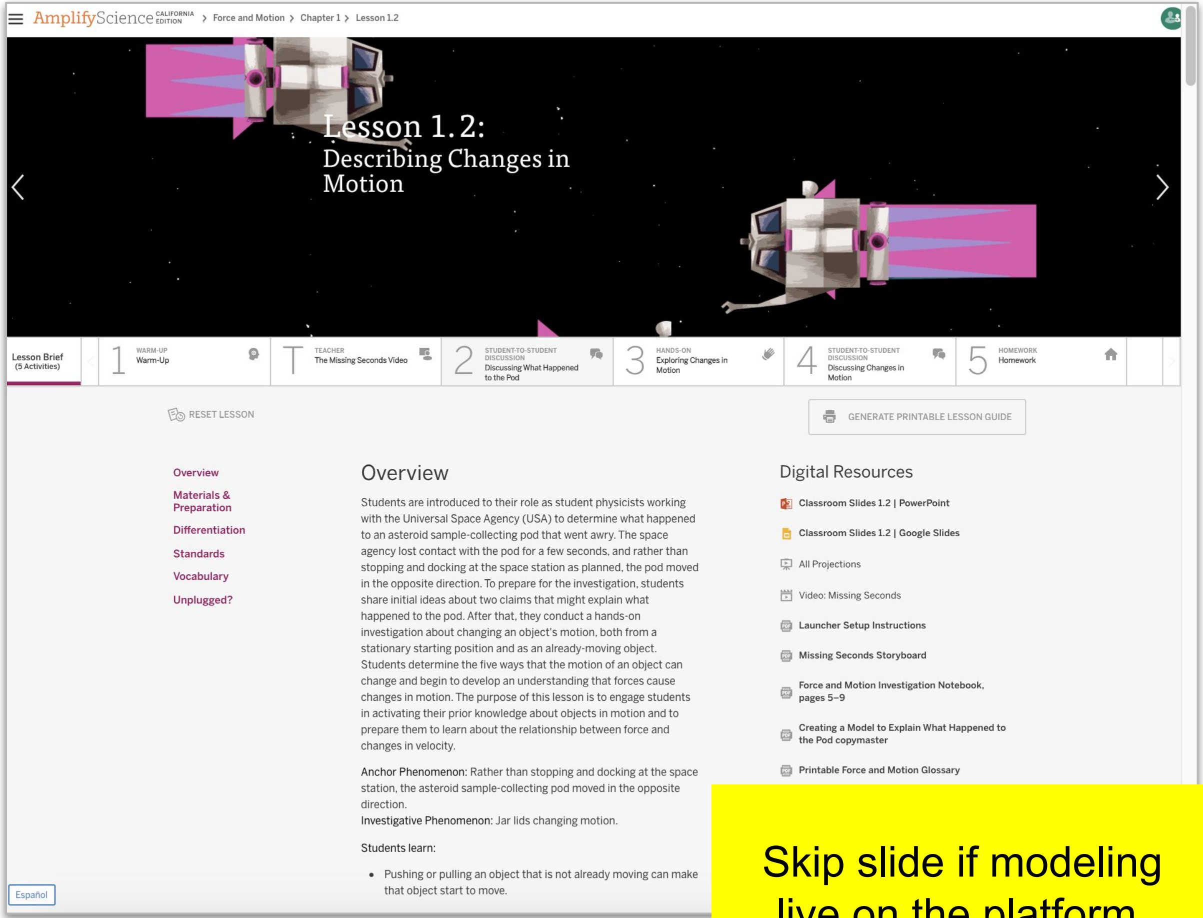


Skip slide if modeling live on the platform.

Standard Amplify Science Curriculum

On the standard Amplify Science platform you will find key lesson level information.

We will be navigating to lessons during today's workshop in order to better plan for collecting evidence of student learning in order to plan to meet the needs of diverse learners.



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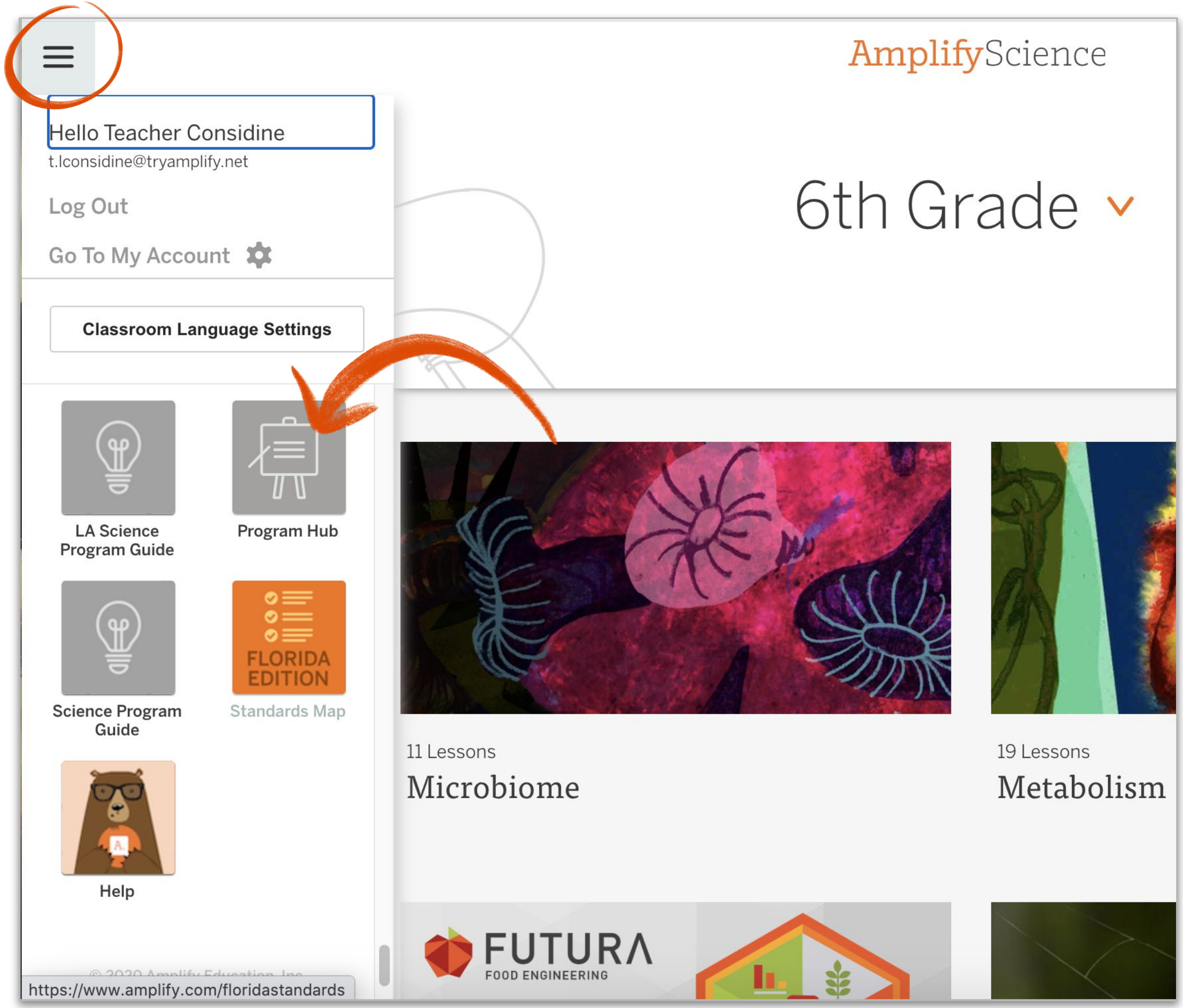
Amplify Science @Home Curriculum

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

- Packet or slide deck versions of Amplify Science units condensed by about 50%

@Home Videos

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

Amplify Science @Home Curriculum

You have access to the Metabolism @Home Unit.

The Force and Motion @Home Unit has **13 lessons.** Each lesson is written to be **30 minutes** long.

Force and Motion@Home Unit resources

- Teacher Overview (PDF, Google) and Lesson Index
- Family Overview (PDF, Google) *To come: Spanish versions of this and all student materials*
- @Home Slides compilation (PDF, Google)
- @Home Packet compilation (PDF, Google)
- @Home Student Sheets Compilation (PDF, Google) *Note: Either Students Sheets or student access to their Amplify account is required when using @Home Slides.*
- Individual @Home Lesson materials (see table below)

Paper option

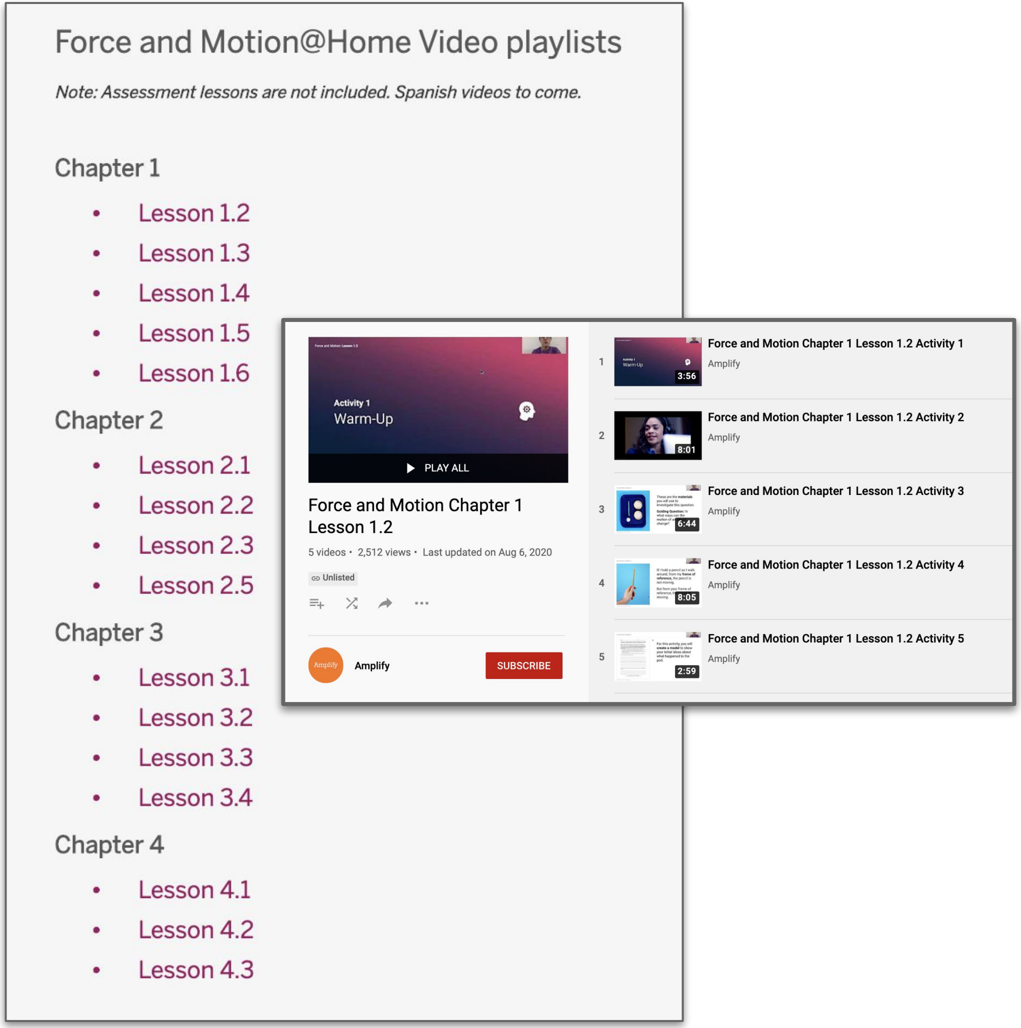
Digital option

	Print-based option	Digital option
Lesson 1	Packet (PDF, Google) – Spanish to come	Slides (PDF, Google) + Student Sheets (Google) – Spanish to come
Lesson 2	Packet (PDF, Google) – Spanish to come	Slides (PDF, Google) + Student Sheets (Google) – Spanish to come
Lesson 3	Packet (PDF, Google) – Spanish to come	Slides (PDF, Google) + Student Sheets (Google) – Spanish to come
Lesson 4	Packet (PDF, Google) – Spanish to come	Slides (PDF, Google) + Student Sheets (Google) – Spanish to come
Lesson 5	Packet (PDF, Google) – Spanish to come	Slides (PDF, Google) + Student Sheets (Google) – Spanish to come

Amplify Science @Home Curriculum

You have access to the Force and Motion @Home Videos.

There are 16 @Home Videos for the Force and Motion unit. This covers all lessons expect for the assessment lessons (1.1, 2.4, and 4.4). The video playlists on YouTube teach the standard Amplify Science Lessons.


Force and Motion@Home Video playlists

Note: Assessment lessons are not included. Spanish videos to come.

Chapter 1

- Lesson 1.2
- Lesson 1.3
- Lesson 1.4
- Lesson 1.5
- Lesson 1.6

Chapter 2

- Lesson 2.1
- Lesson 2.2
- Lesson 2.3
- Lesson 2.5

Chapter 3

- Lesson 3.1
- Lesson 3.2
- Lesson 3.3
- Lesson 3.4

Chapter 4

- Lesson 4.1
- Lesson 4.2
- Lesson 4.3

Resource Poll

Which of these resources have you been using?

- ❑ Standard Amplify Science Curriculum
- ❑ @Home Units
- ❑ @Home Videos

Questions?

Plan for the day

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

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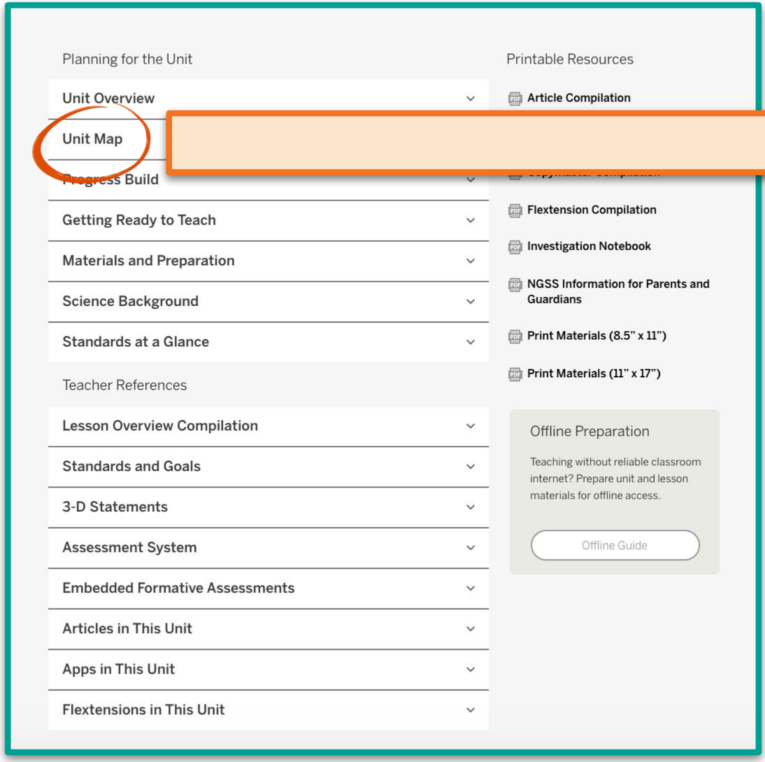
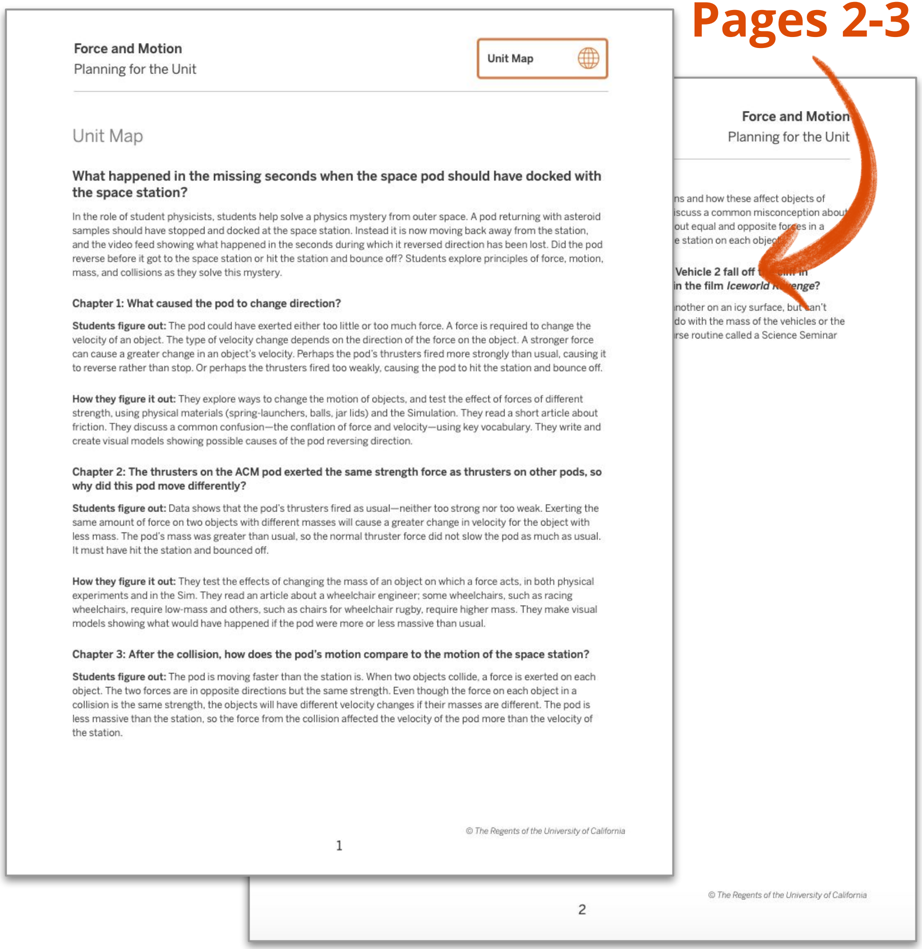
Unit Map



Pages 2-3



Force and Motion
Planning for the Unit

Unit Map

Unit Map

What happened in the missing seconds when the space pod should have docked with the space station?

In the role of student physicists, students help solve a physics mystery from outer space. A pod returning with asteroid samples should have stopped and docked at the space station. Instead it is now moving back away from the station, and the video feed showing what happened in the seconds during which it reversed direction has been lost. Did the pod reverse before it got to the space station or hit the station and bounce off? Students explore principles of force, motion, mass, and collisions as they solve this mystery.

Chapter 1: What caused the pod to change direction?

Students figure out: The pod could have exerted either too little or too much force. A force is required to change the velocity of an object. The type of velocity change depends on the direction of the force on the object. A stronger force can cause a greater change in an object's velocity. Perhaps the pod's thrusters fired more strongly than usual, causing it to reverse rather than stop. Or perhaps the thrusters fired too weakly, causing the pod to hit the station and bounce off.

How they figure it out: They explore ways to change the motion of objects, and test the effect of forces of different strength, using physical materials (spring-launchers, balls, jar lids) and the Simulation. They read a short article about friction. They discuss a common confusion—the conflation of force and velocity—using key vocabulary. They write and create visual models showing possible causes of the pod reversing direction.

Chapter 2: The thrusters on the ACM pod exerted the same strength force as thrusters on other pods, so why did this pod move differently?

Students figure out: Data shows that the pod's thrusters fired as usual—neither too strong nor too weak. Exerting the same amount of force on two objects with different masses will cause a greater change in velocity for the object with less mass. The pod's mass was greater than usual, so the normal thruster force did not slow the pod as much as usual. It must have hit the station and bounced off.

How they figure it out: They test the effects of changing the mass of an object on which a force acts, in both physical experiments and in the Sim. They read an article about a wheelchair engineer; some wheelchairs, such as racing wheelchairs, require low-mass and others, such as chairs for wheelchair rugby, require higher mass. They make visual models showing what would have happened if the pod were more or less massive than usual.

Chapter 3: After the collision, how does the pod's motion compare to the motion of the space station?

Students figure out: The pod is moving faster than the station is. When two objects collide, a force is exerted on each object. The two forces are in opposite directions but the same strength. Even though the force on each object in a collision is the same strength, the objects will have different velocity changes if their masses are different. The pod is less massive than the station, so the force from the collision affected the velocity of the pod more than the velocity of the station.

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1

Force and Motion
Planning for the Unit

2

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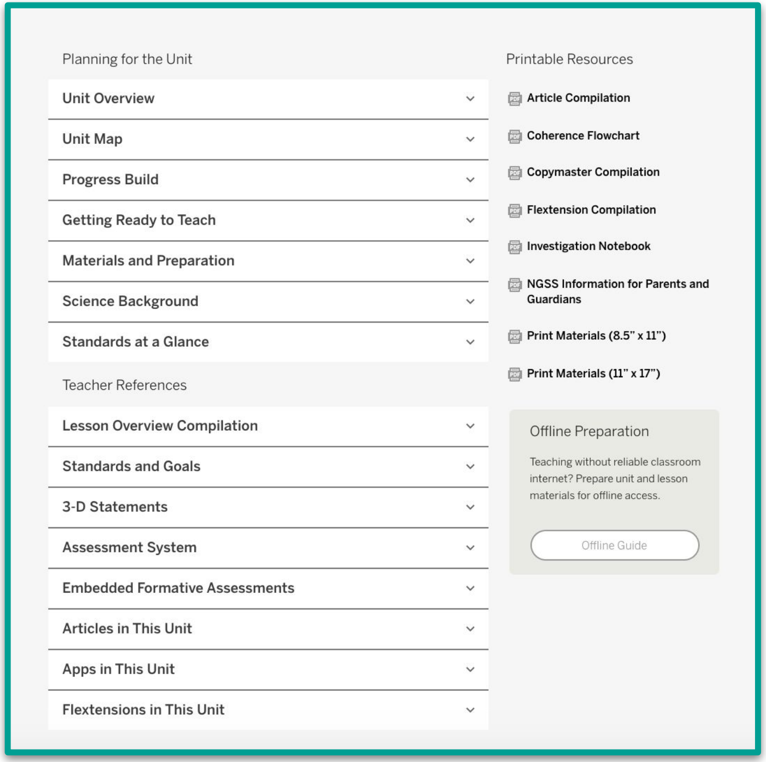
Unit Guide Resources



Page 1

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

Unit 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 Crosscutting Concepts) and CCSS (English Language Arts and Mathematics) in the unit, explains how 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

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Page 4

Guided Unit Internalization

Part 1: Unit-level internalization

Unit title: Force and Motion

What is the phenomenon students are investigating in your unit?

A pod returning with asteroid samples should have stopped and docked at the space station. Instead it is now moving back away from the station, and the video feed showing what happened in the seconds during which it reversed direction has been lost. Did the pod reverse before it got to the space station or hit the station and bounce off?

Unit Question:	**Student role:**
How do forces affect motion?	Student physicists

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

The pod is moving faster than the station is. When two objects collide, a force is exerted on each object. The two forces are in opposite directions but the same strength. Even though the force on each object in a collision is the same strength, the objects will have different velocity changes if their masses are different. The pod is less massive than the station, so the force from the collision affected the velocity of the pod more than the velocity of the station.

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

A force causes a change in an object's velocity. An object's mass determines its velocity change for a given force. When two objects collide, both experience the same strength force, but in opposite directions.

Questions?

Plan for the day

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

Unit Map

Unit Map

What happened in the missing seconds when the space pod should have docked with the space station?

In the role of student physicists, students help solve a physics mystery from outer space. A pod returning with asteroid samples should have stopped and docked at the space station. Instead it is now moving back away from the station, and the video feed showing what happened in the seconds during which it reversed direction has been lost. Did the pod reverse before it got to the space station or hit the station and bounce off? Students explore principles of force, motion, mass, and collisions as they solve this mystery.

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Chapter 1: Force and Velocity

JUMP DOWN TO CHAPTER OVERVIEW

Lesson 1.1:
Pre-Unit Assessment

Lesson 1.2:
Describing Changes in Motion

Lesson 1.3:
Investigating Direction of Force

Lesson 1.4:
Explaining Force and Velocity

Lesson 1.5:
Force Strength and Velocity Change

Lesson 1.6:
Evaluating Claims and Thruster Forces

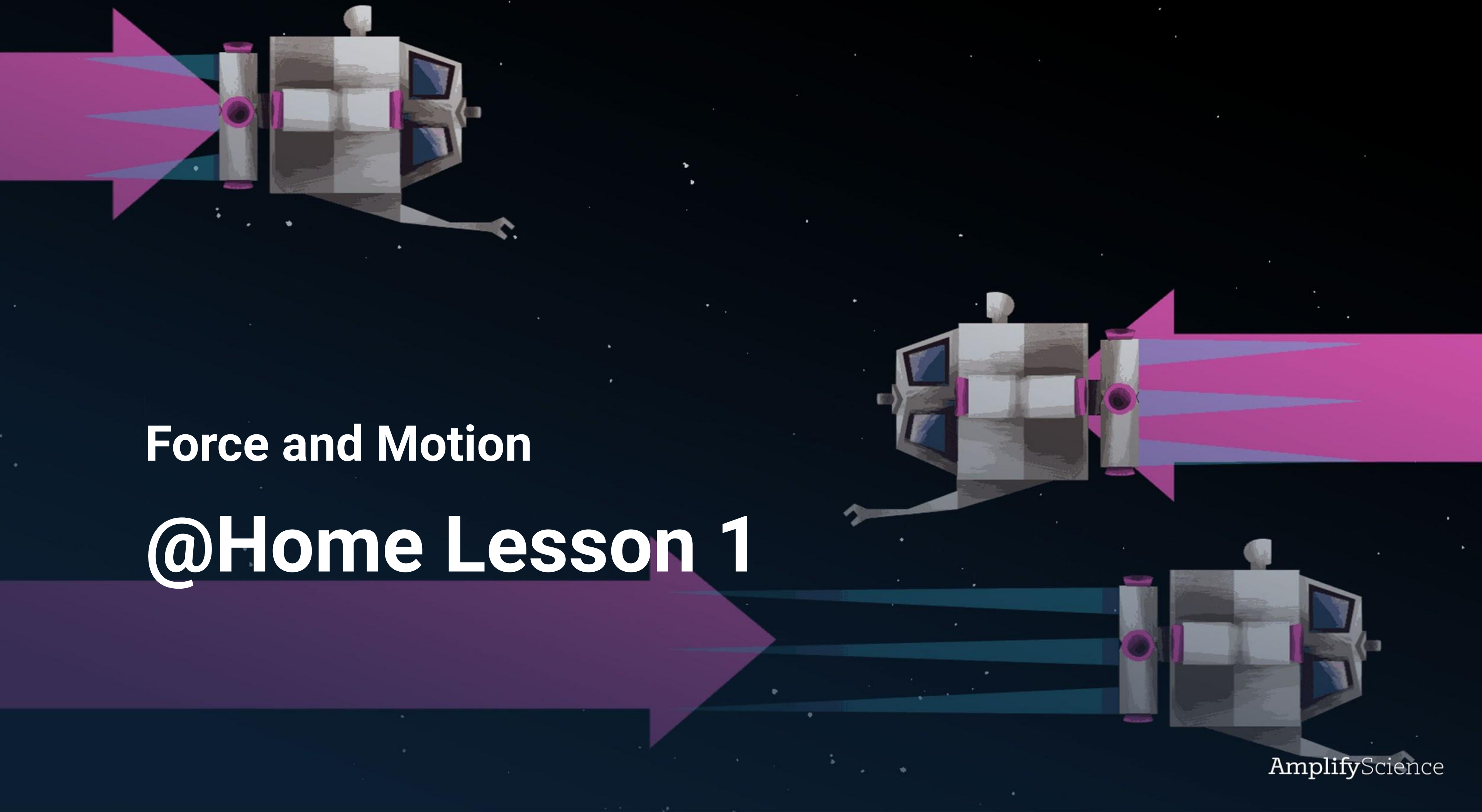
Adapted from: Amplify Science *Force and Motion* Lesson 1.2

Key Activities

- **Introducing the *Force and Motion* Unit:** Students are introduced to the unit problem—a space pod that did not change velocity as expected—and their role as student physicists.
- **Talk:** Students discuss what may have gone wrong with the space pod.
- **Do:** Students explore ways that can cause an object, such as a small ball, the lid of a jar, or a toy car, to change its motion.

Ideas for synchronous or in-person instruction

While meeting, lead a full-class discussion about what may have happened to the pod after pairs discuss. If meeting in person, conduct the hands-on activity as in *Force and Motion* Lesson 1.2, Activity 3.

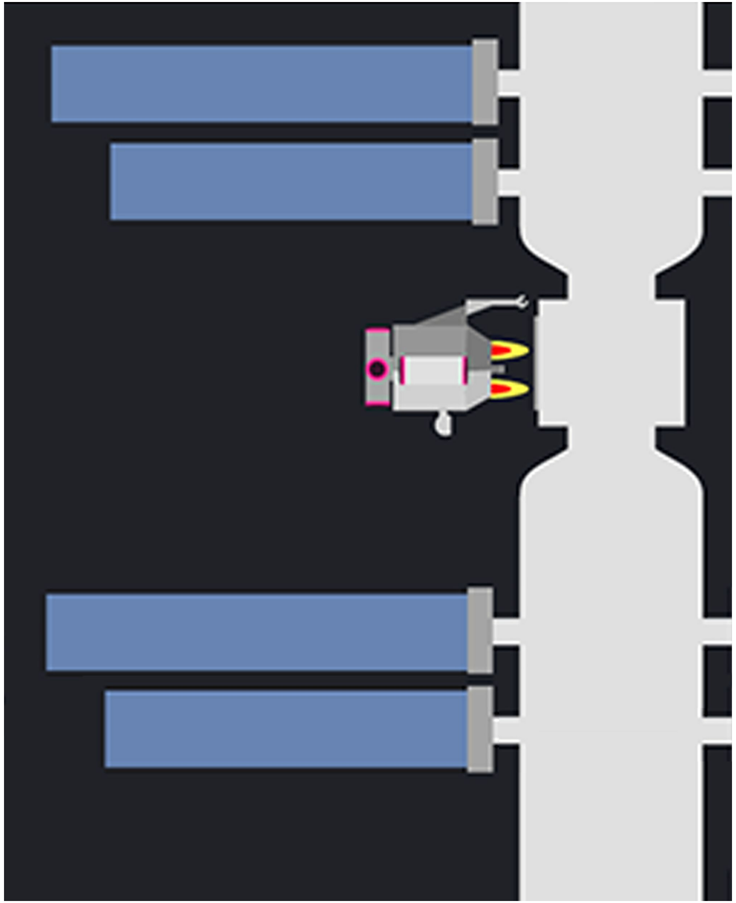


Force and Motion

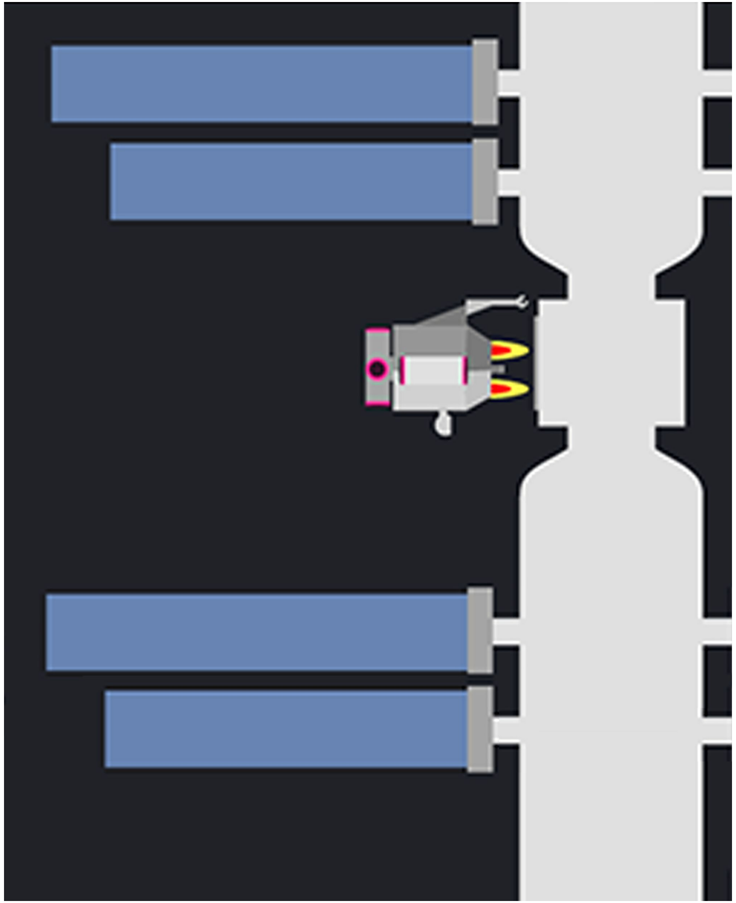
@Home Lesson 1

AmplifyScience

Today, we will begin a new unit called ***Force and Motion***.



In this unit, we will investigate a mystery. A **space pod** was sent on a mission and, in the few seconds that it lost contact with the ground, it **moved in an unexpected way.**



The space pod mystery is fictional but based on real missions.

Investigating this mystery will help you figure out how forces affect the motion of objects.

As we investigate the space pod, we will also learn about this question.

Unit Question

How do forces affect motion?

Next, you will watch a **video** about the space pod mystery. As you watch, think about this question:

Why do you think the pod moved in the opposite direction instead of stopping like it was supposed to?

tinyurl.com/AMPFAM-01

Adapted from: Amplify Science *Force and Motion* Lesson 1.2

Key Activities

- **Introducing the *Force and Motion* Unit:** Students are introduced to the unit problem—a space pod that did not change velocity as expected—and their role as student physicists.
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- **Do:** Students explore ways that can cause an object, such as a small ball, the lid of a jar, or a toy car, to change its motion.

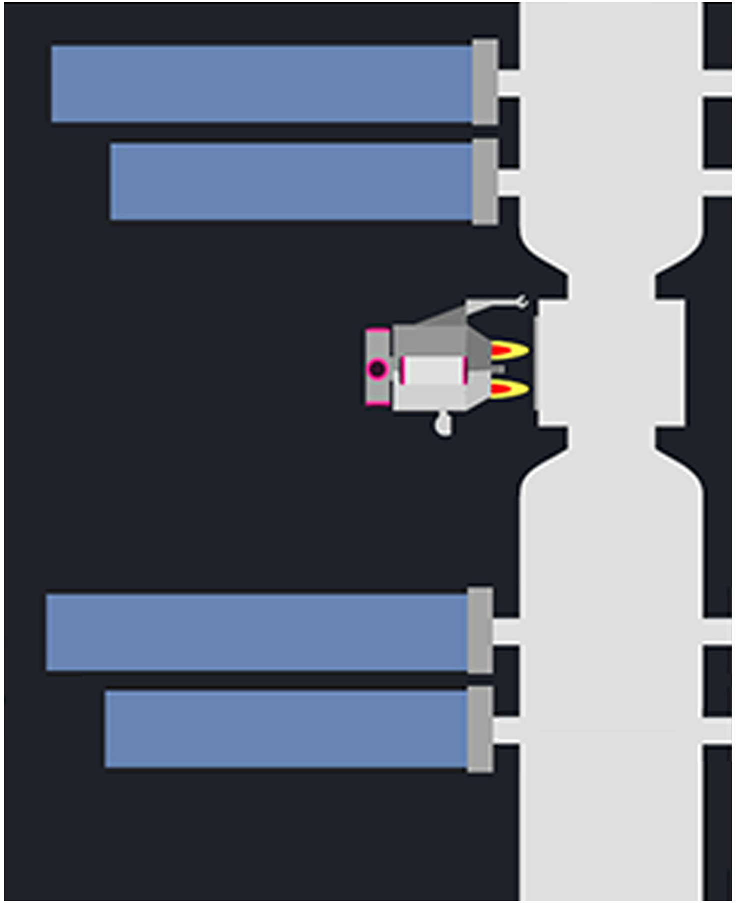
Ideas for synchronous or in-person instruction

While meeting, lead a full-class discussion about what may have happened to the pod after pairs discuss. If meeting in person, conduct the hands-on activity as in *Force and Motion* Lesson 1.2, Activity 3.

Next, you'll discuss the video and what might have happened to the pod.

In this lesson and many others in the *Force and Motion* @Home Unit you will need to **talk with a partner**. Check with your teacher about how you will work with partners in this @Home Unit.

Your partner could be a classmate on the phone or someone at home with you.

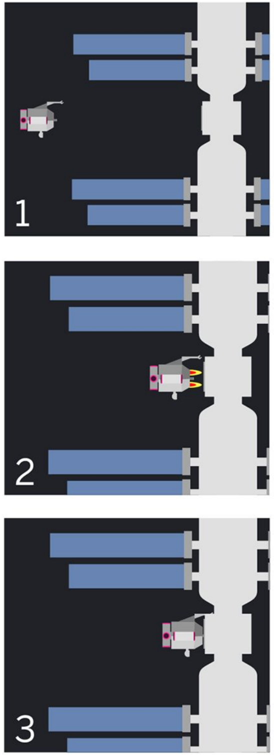


Discuss this question with your partner.

Why do you think the pod moved in the **opposite direction** instead of **stopping** like it was supposed to?

Next, you’ll review the information on the next three slides and discuss with your partner.

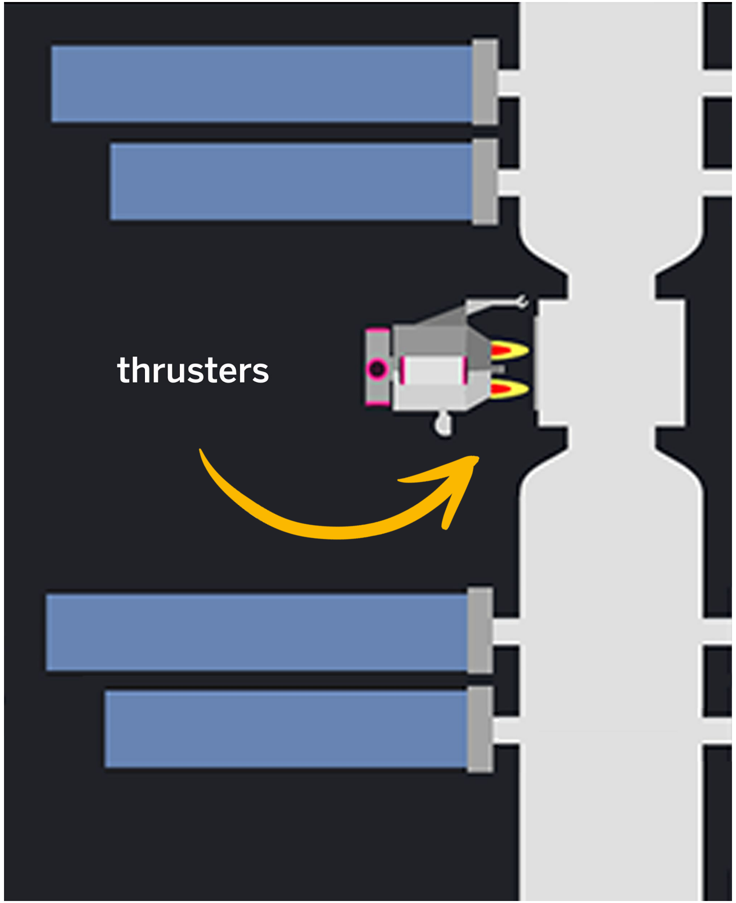
Asteroid Collection Missions



1. Pod approaches space station at medium speed.
2. Thrusters fire to stop the pod.
3. Docking: pod connects to space station.

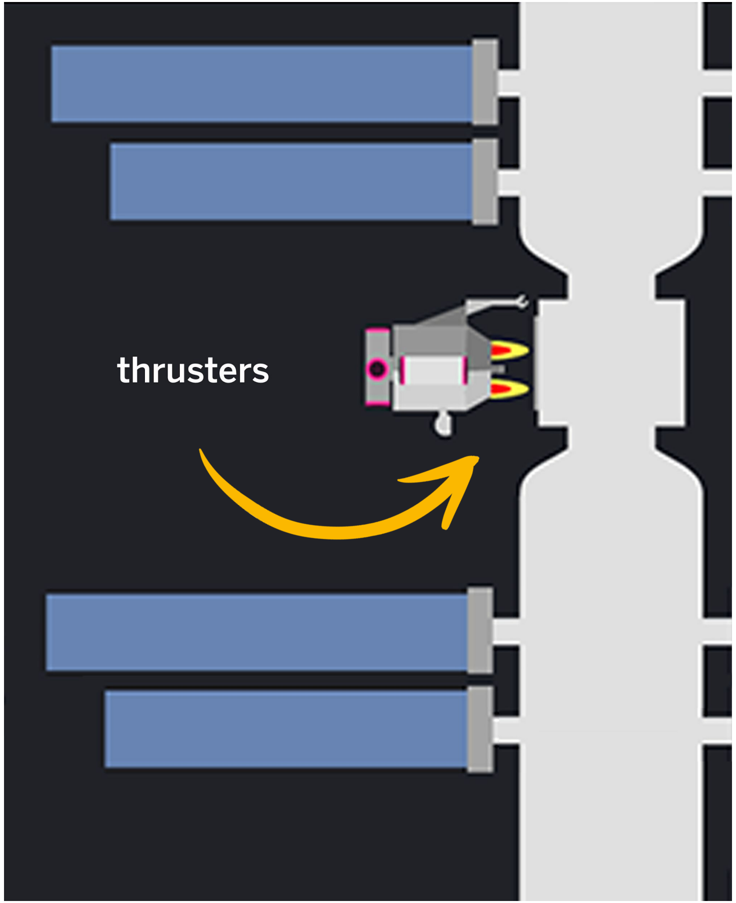
This image shows **what's usually supposed to happen** during asteroid collection missions.

In this mission, everything was supposed to be the same.



The **thrusters,** or small engines, were supposed to fire and stop the pod as it reached the space station so it could dock.

Instead, this pod moved in the **opposite direction.**



The space agency knows something was different—the thrusters did not have the effect they usually do. This pod moved away from the station instead of stopping and docking.

With your partner, read the claims on the next slide carefully and discuss them.

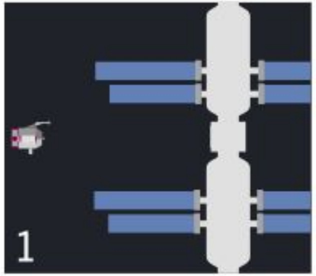
How are these claims different?

Which of these claims makes the most sense to you?

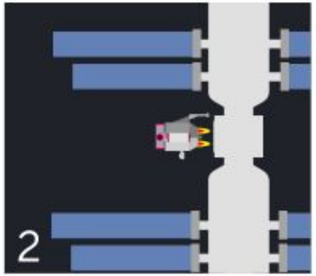
Normally, when the thrusters fire, the pod will stop, but this mission was different.

Claim 1: The thrusters caused the pod to move in the opposite direction.

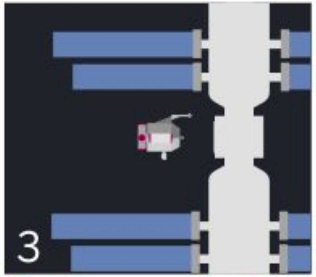
Claim 2: The thrusters only slowed the pod, it didn’t stop; the pod hit the space station, which made it bounce and move in the opposite direction.



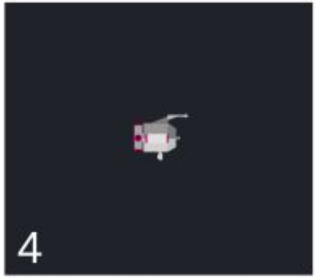
Pod approaches space station at medium speed.



Thrusters fire to stop the pod.



Thrusters cause pod to move in opposite direction OR pod hits space station and bounces off.



Pod travels far away from the space station.

We'll investigate this question over the next few lessons.

Chapter 1 Question

What caused the pod to change direction?

@Home Lesson 1

Adapted from: Amplify Science *Force and Motion* Lesson 1.2

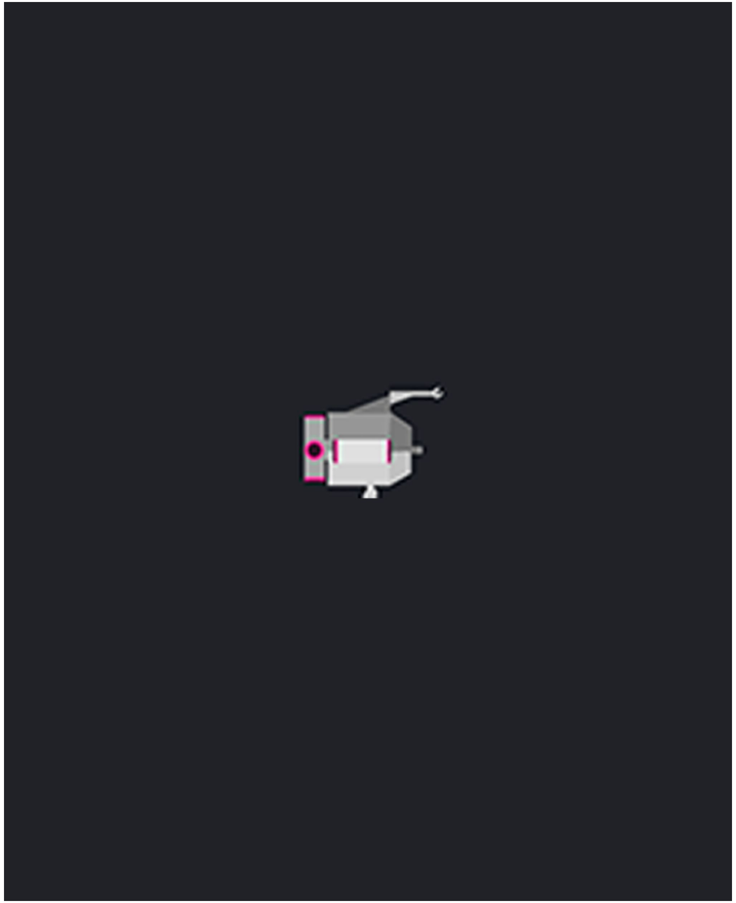
Key Activities

- **Introducing the *Force and Motion* Unit:** Students are introduced to the unit problem—a space pod that did not change velocity as expected—and their role as student physicists.
- **Talk:** Students discuss what may have gone wrong with the space pod.
- **Do:** Students explore ways that can cause an object, such as a small ball, the lid of a jar, or a toy car, to change its motion.

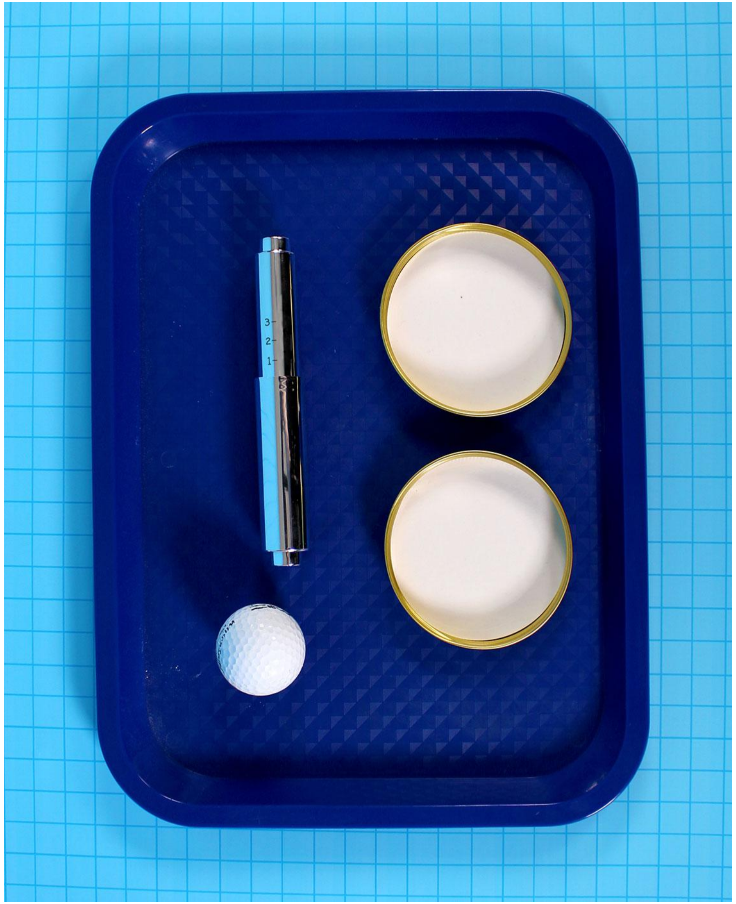
Ideas for synchronous or in-person instruction

While meeting, lead a full-class discussion about what may have happened to the pod after pairs discuss. If meeting in person, conduct the hands-on activity as in *Force and Motion* Lesson 1.2, Activity 3.

The first step in determining what happened to the pod is to come up with some possible reasons that it would change direction. To do that requires some exploring—testing objects to see what makes them experience a change in motion.



In this activity, to understand why the pod changed direction, we will **investigate how the motion of an object can change** and what causes these changes to happen.



You will need to find an **object you can roll or slide** on the floor or a table, for example, a small ball, the lid of a jar, or a toy car.

The objects don't have to be the same as what is pictured here. These are just examples.

Name: ______________________ Date: ____________________

Exploring Changes in Motion

Find an object you can roll or slide on the floor or a table, for example, a small ball or the lid of a jar. Use this object to investigate the guiding question. Record your notes in the table.

One possible answer has been provided to help you get started.

Guiding Question: *In what ways can the motion of an object change?*

- An object that is already moving can . . .
- An object that is not already moving can . . .

Example: An object that is already moving can slow down.

Find the **Exploring Changes in Motion** page.

Name: ____________________ Date: ________________

Exploring Changes in Motion

Find an object you can roll or slide on the floor or a table, for example, a small ball or the lid of a jar. Use this object to investigate the guiding question. Record your notes in the table.

One possible answer has been provided to help you get started.

Guiding Question: *In what ways can the motion of an object change?*

- An object that is already moving can . . .
- An object that is not already moving can . . .

Example: An object that is already moving can slow down.

Use your materials to test out different ways that the **motion of an object can change.**

Record your notes in the **data table.**

You might have figured out these five ways that motion can change:

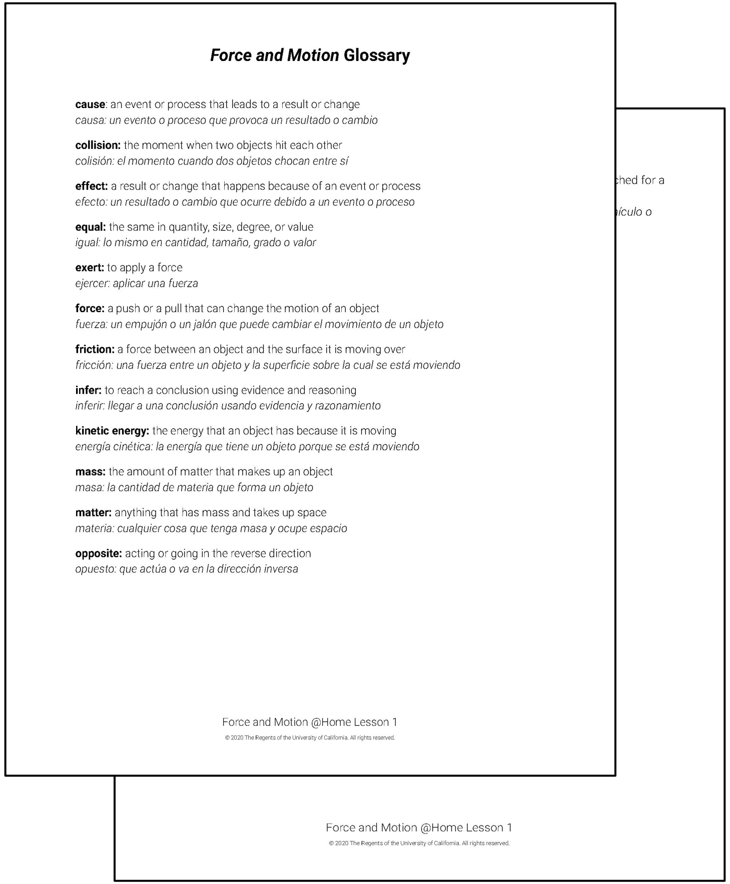
1. start moving
2. stop moving
3. speed up
4. slow down
5. change direction

This is an important word we will use.

velocity

speed in a particular direction

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.



Force and Motion Glossary

cause: an event or process that leads to a result or change
causa: un evento o proceso que provoca un resultado o cambio

collision: the moment when two objects hit each other
colisión: el momento cuando dos objetos chocan entre sí

effect: a result or change that happens because of an event or process
efecto: un resultado o cambio que ocurre debido a un evento o proceso

equal: the same in quantity, size, degree, or value
igual: lo mismo en cantidad, tamaño, grado o valor

exert: to apply a force
ejercer: aplicar una fuerza

force: a push or a pull that can change the motion of an object
fuerza: un empujón o un jalón que puede cambiar el movimiento de un objeto

friction: a force between an object and the surface it is moving over
fricción: una fuerza entre un objeto y la superficie sobre la cual se está moviendo

infer: to reach a conclusion using evidence and reasoning
inferir: llegar a una conclusión usando evidencia y razonamiento

kinetic energy: the energy that an object has because it is moving
energía cinética: la energía que tiene un objeto porque se está moviendo

mass: the amount of matter that makes up an object
masa: la cantidad de materia que forma un objeto

matter: anything that has mass and takes up space
materia: cualquier cosa que tenga masa y ocupe espacio

opposite: acting or going in the reverse direction
opuesto: que actúa o va en la dirección inversa

Force and Motion @Home Lesson 1

Force and Motion @Home Lesson 1

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

***Force and Motion* Glossary** pages or Amplify Library

We will continue to explore how objects can **change velocity** over the next few lessons.

End of @Home Lesson

THE LAWRENCE HALL OF SCIENCE
UNIVERSITY OF CALIFORNIA, BERKELEY

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Adapted from: Amplify Science *Force and Motion* Lesson 1.2

Key Activities

- **Introducing the *Force and Motion* Unit:** Students are introduced to the unit problem—a space pod that did not change velocity as expected—and their role as student physicists.
- **Talk:** Students discuss what may have gone wrong with the space pod.
- **Do:** Students explore ways that can cause an object, such as a small ball, the lid of a jar, or a toy car, to change its motion.

Ideas for synchronous or in-person instruction

While meeting, lead a full-class discussion about what may have happened to the pod after pairs discuss. If meeting in person, conduct the hands-on activity as in *Force and Motion* Lesson 1.2, Activity 3.

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 10

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

page 6

Day 1: @Home Lesson 1

Minutes for science: 15 min

Instructional format:
- [x] Asynchronous
- [ ] Synchronous

Lesson or part of lesson:

@Home Lesson 1, video & talk prework (slides 1-15)

Mode of instruction:
- [x] Preview
- [ ] Review
- [ ] Teach full lesson live
- [ ] Teach using synchronous suggestions
- [x] Students work independently using:
  - [ ] @Home Packet
  - [x] @Home Slides and @Home Student Sheets
  - [ ] @Home Videos

Students will...

view the video and jot down their initial ideas about the pod on slide 9 and their initial ideas about the claims on slide 14. Students will also be asked to gather objects for an experiment.

Teacher will...

assign slides 1-15 in Schoology and provide direction for students to jot down their ideas when they get to slides 9 and 14 to share during the next lesson. Ask students to gather objects for use in a hands-on investigation.

Minutes for science: ____________

Instructional format:
- [ ] Asynchronous
- [x] Synchronous

Lesson or part of lesson:

Mode of instruction:
- [ ] Preview
- [ ] Review
- [ ] Teach full lesson live
- [ ] Teach using synchronous suggestions
- [ ] Students work independently using:
  - [ ] @Home Packet
  - [ ] @Home Slides and @Home Student Sheets
  - [ ] @Home Videos

Students will...

Teacher will...

page 6

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

Day 1: @Home Lesson 1

Minutes for science: 15 min **Instructional format:** ☒ Asynchronous ☐ Synchronous	**Minutes for science:** 30 min **Instructional format:** ☐ Asynchronous ☒ Synchronous
Lesson or part of lesson: @Home Lesson 1, video & talk prework (slides 1-15) **Mode of instruction:** ☒ Preview ❏ Review ❏ Teach full lesson live ❏ Teach using synchronous suggestions ☒ Students work independently using: ❏ @Home Packet ☒ @Home Slides and @Home Student Sheets ❏ @Home Videos	**Lesson or part of lesson:** @Home Lesson 1, talk & do (slides 9-27) **Mode of instruction:** ❏ Preview ❏ Review ❏ Teach full lesson live ☒ Teach using synchronous suggestions ❏ Students work independently using: ❏ @Home Packet ❏ @Home Slides and @Home Student Sheets ❏ @Home Videos

Students will...	Teacher will...	Students will...	Teacher will...
view the video and jot down their initial ideas about the pod on slide 9 and their initial ideas about the claims on slide 14. Students will also be asked to gather objects for an experiment.	assign slides 1-15 in Schoology and provide direction for students to jot down their ideas when they get to slides 9 and 14 to share during the next lesson.	engage in a discussion about their initial ideas as well as the claims they will investigate, then they will explore forces in a hands-on investigation.	lead students through the lesson activities using slides 4-28.

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page 7

Look at the *Students will* columns. What are students working in the lesson(s) that you could collect, review, or provide feedback on? See Some Types of Written Work in Amplify Science to the right for guidance. If there isn't a work product listed above, do you want to add one? Make notes below. Asynchronous: students jot notes about their initial ideas about the pod as well as their initial ideas about the claims. Synchronous: record observations of forces during the hands-on investigation.	**Some Types of Written Work in Amplify Science** • Daily written reflections • Homework tasks • Investigation notebook pages • Written explanations (typically at the end of Chapter) • Diagrams • Recording pages for Sim uses, investigations, etc

How will students submit this work product to you? See the Completing and Submitting Written Work tables to the right for guidance on how students can complete and submit work. Asynchronous: students will bring handwritten notes to the synchronous lesson to share on a Jamboard and discuss Synchronous: students will submit their work from the hands-on activity on the Amplify Science website.	**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

How will you differentiate this lesson for diverse learners? (Navigate to the lesson level on the standard Amplify Science platform and click on differentiation in the left menu.)

Amplify Science
Force and Motion Chapter 1 @Home Science Wall

Chapter 1 Question
What caused the pod to change direction?

Key Concepts	Vocabulary
1. A force is required to change the velocity of an object.	velocity
2. How an object changes velocity depends on the direction of the force exerted on that object.	force
3. A stronger force can cause a greater change in velocity.	exert
4. Understanding a cause-and-effect relationship can help you infer what led to a particular result.	friction

11

ns. What are students working in the lesson(s)
r provide feedback on?
nplify Science to the right for guidance.

above, do you want to add one? Make notes below.
ot notes about their initial ideas
their initial ideas about the claims.
rvations of forces during the

ork product to you?
ritten Work tables to the right for guidance on how
rk.

will bring handwritten notes to the
are on a Jamboard and discuss

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Amplify Science website.

Some Types of Written Work in Amplify Science

- Daily written reflections
- Homework tasks
- Investigation notebook pages
- Written explanations (typically at the end of Chapter)
- Diagrams
- Recording pages for Sim uses, investigations, etc

Completing Written Work	Submitting 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)	• 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

How will you differentiate this lesson for diverse learners? (Navigate to the lesson level on the standard Amplify Science platform and click on differentiation in the left menu.)

Supports:
- Make available the @Home Classroom Wall found in the @Home Student Packet to support discussions and writing. Students can add pictures to go with the vocabulary/key concepts to help them make meaning.
- Leverage primary language for discussions
- Consider simplifying the language of each claim and providing additional visuals to support understanding.

Extension:
- Create diagrams to support the ideas they record during the hands-on investigation.

Planning Resource

pages 8 & 9

Day 2:__________

Minutes for science: __________

Instructional format:
- ☐ Asynchronous
- ☐ Synchronous

Lesson or part of lesson:

Mode of instruction:
- ❏ Preview
- ❏ Review
- ❏ Teach full lesson live
- ❏ Teach using synchronous suggestions
- ❏ Students work independently using:
  - ❏ @Home Packet
  - ❏ @Home Slides and @Home Student Sheets
  - ❏ @Home Videos

Students will...	Teacher will...

Minutes for science: __________

Instructional format:
- ☐ Asynchronous
- ☐ Synchronous

Lesson or part of lesson:

Mode of instruction:
- ❏ Preview
- ❏ Review
- ❏ Teach full lesson live
- ❏ Teach using synchronous suggestions
- ❏ Students work independently using:
  - ❏ @Home Packet
  - ❏ @Home Slides and @Home Student Sheets
  - ❏ @Home Videos

Students will...	Teacher will...

Some Types of Written Work in Amplify Science

ten reflections
k tasks
ion notebook pages
xplanations (typically at the end of Chapter)
pages for Sim uses, investigations, etc

Written Work	Submitting Written Work
r and pencil lude prompts nt platform on Notebook eo or audio file ering prompt eated digital ogle , etc)	• 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

Science platform and click on differentiation in the left menu.)

Questions?

Plan for the day

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

During this workshop did we meet our objectives?

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

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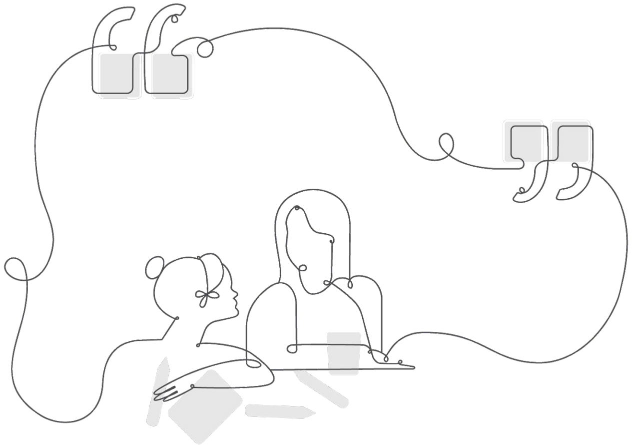
Upcoming LAUSD Office Hours

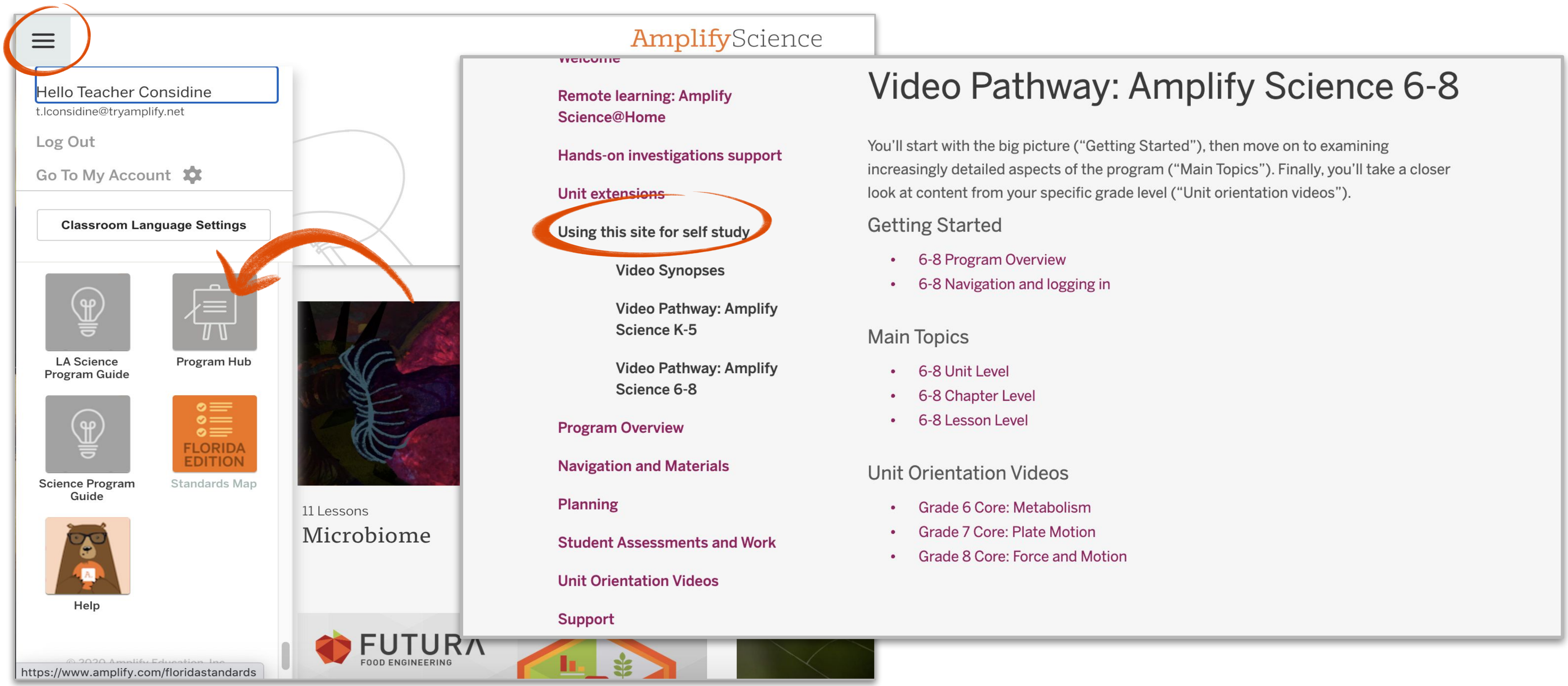
Bi-weekly through October

- Thursday, 10/15 (3-4pm)
- Thursday, 10/29 (3-4pm)



https://tinyurl.com/6-8OfficeHours

Program Hub: Self Study Resources



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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/

Back to school national webinar series

Now-October, topics include:

- Remote and hybrid learning support
- Navigation support
- What's new for 2020-2021
- Planning support
- Curriculum overview

bit.ly/BTSwebinars

Additional Amplify resources

Caregivers site

Provide your students' families information about Amplify Science and what students are learning

amplify.com/amplify-science-family-resource-intro/

Additional Amplify resources

Program Guide

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

http://amplify.com/science/california/review

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

Amplify Chat

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.

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**		
Day 4	**Synchronous (60 min)**		
	1. **Community Building** (SEL) • Creating a safe space for sharing on Zoom using Community Circle.	1. **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.*	1. **Community Building** (SEL) • Students will respond to the question posed by the teacher in the chat.
	2. **Aspects of Modeling:** • Deepen students' understanding of scientific models. (SEP Modeling)	2. **Aspects of Modeling:** • Read article and watch video Students need to understand the role of modeling in science.	2. **Aspects of Modeling** • Students will read this article and watch this video and answer questions in a Schoology Quiz: in LAUSD MS Science Group: SPG7G-K7BT9) or in Google Docs.
	3. **Uploading Images to a Discussion** • Learn how to upload an image to a Schoology Discussion using a video tutorial. (Tool)	1. **Uploading Images to a Discussion** • The teacher provides students the link to the informational video on "How to upload the image to Schoology discussion."	3. **Uploading Images to a Discussion** • Students will watch a tutorial on how to upload an image to a Schoology discussion. • Students upload their initial model of the phenomenon to a Schoology discussion.
	4. **Introduce Initial Model Critique** • Critique a model of a classmate in a constructive way to promote collaboration and student discussion. (SEP Modeling)	4. **Introduce Initial Model Critique** • Using the Discussion and Writing Prompts PDF select sentence starters from pages 6 and 8 to have students use to critique the models of classmates.	4. **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**		
	Revise Initial Model: • 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 classmates 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 Schoology 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

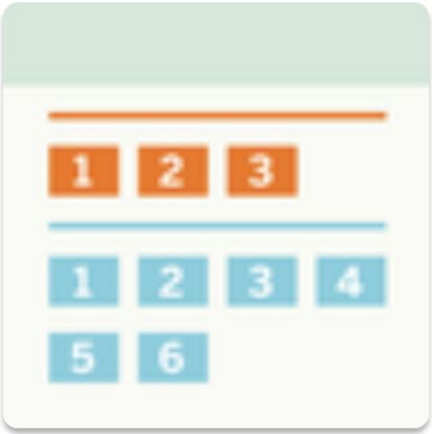
Elementary Student Apps Shared Logins

English

- Username: ampsci123
- Password: ampsci123

Spanish

- Username: ampsci123sp
- Password: ampsci123sp



Elementary Student Apps

Amplify.