

Amplify Science

Guided Unit Internalization

New York City

With @Home Resources

Grade K Pushes and Pulls



Who's in the Room?

Represent for your Borough!



Share your name, role, borough.

1- Brooklyn North

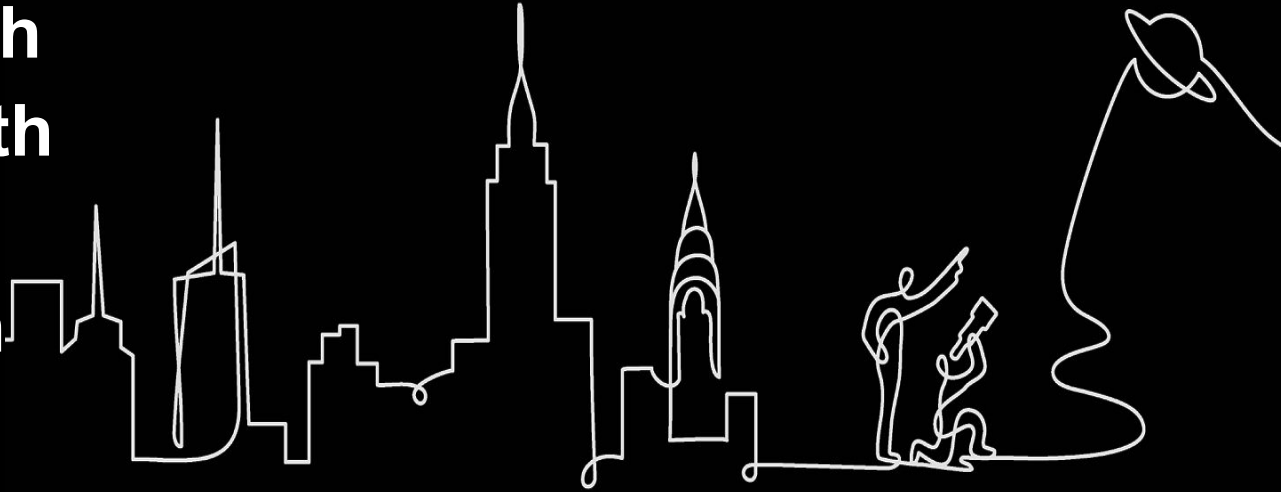
2- Brooklyn South

3- Queens North

4- Queens South

5- The Bronx

6- Staten Island



Workshop Norms



- **Please keep your camera on, if possible.**

- **Take some time to orient yourself to the platform**



- **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:

- Make instructional decisions about remote or hybrid learning
- Develop a plan for using @Home resources within your class schedule and instructional format.



Amplify Science New York City

Guided Unit Internalization With @Home Resources



Guided Unit Internalization

Part 1: Unit-level internalization

Unit title:	
What is the phenomenon students are investigating in your unit?	
Unit Question:	Student role:
By the end of the unit, students figure out ...	
What science ideas do students need to figure out in order to explain the phenomenon?	

Participant Materials

AmplifyScience@Lesson Adaptation Tool (Remote/Hybrid)

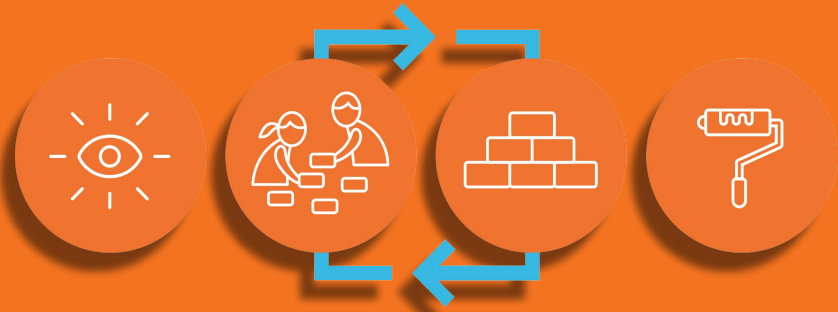
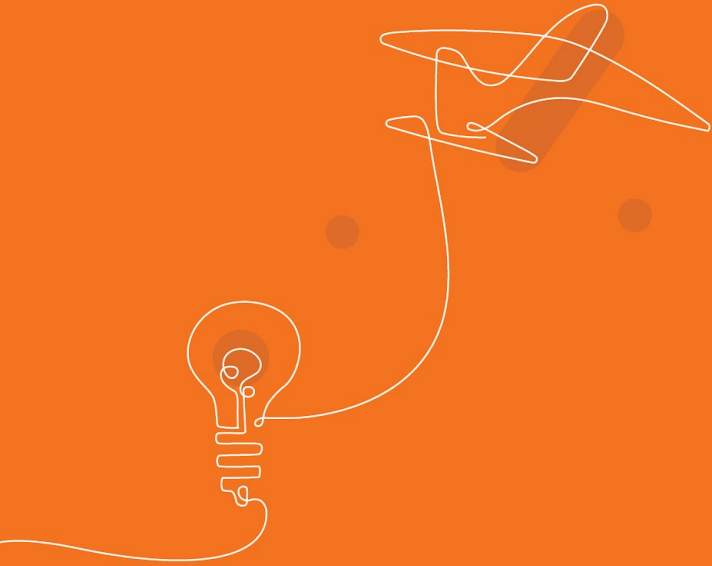
Lesson:	Date:
Lesson purpose: <small>(Lesson brief, Overview)</small>	3-D connections and formative assessment opportunities:
What the students will learn in this lesson and potential challenges.	How will the students be practicing the multiple modalities during this lesson?

Plan for the day

- **Framing the day**
- Unit Internalization
- Amplify Science @Home
- Planning to teach using @Home resources
- Reflection and closing



Revisiting the Amplify Science approach





Questions
Reflections
Connections

Unit 2 Planning Notes

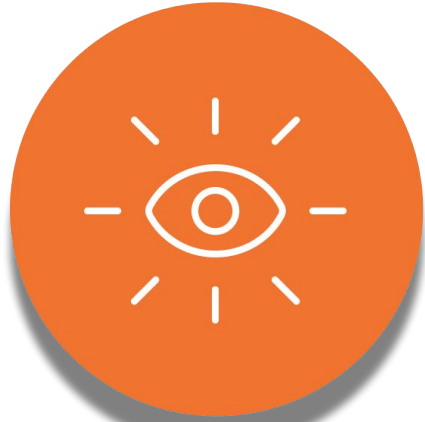
Amplify Science Approach Review:

Note Taking Opportunities

A version of this presentation will be available to you.

However, you may want to record some of the presenter's comments and suggestions from your colleagues!

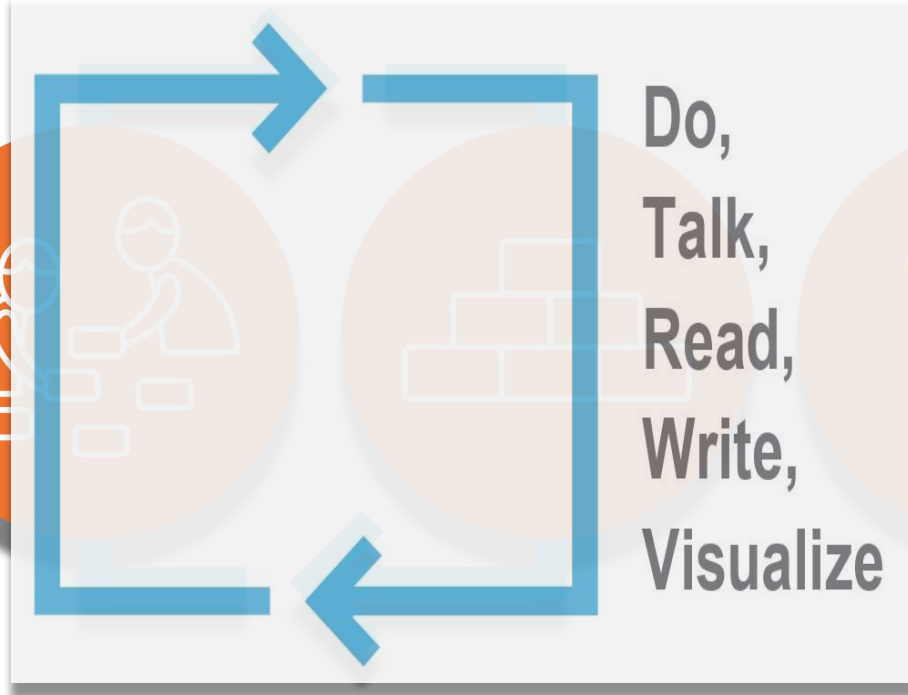
The approach



**Introduce a
phenomenon/real
world problem**



**Collect evidence
from
multiple sources**



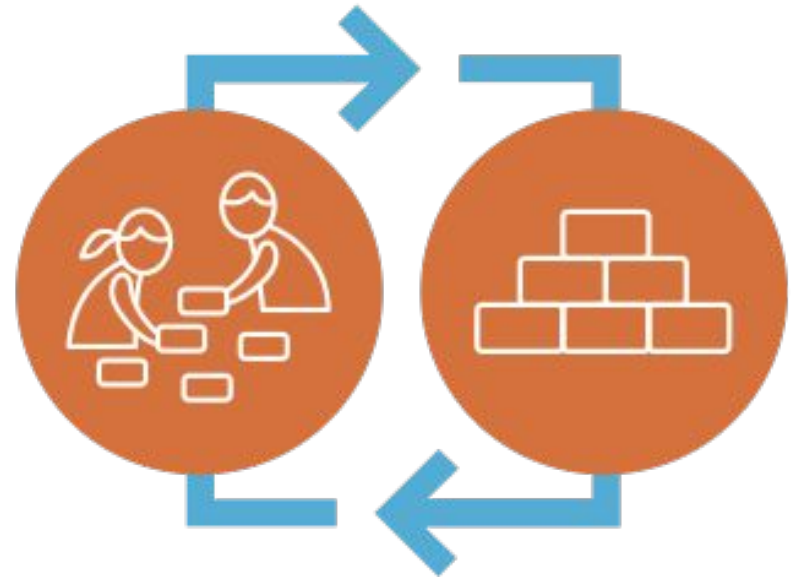
**Build
increasingly
complex
explanations**

**Apply knowledge to
solve a different
problem**

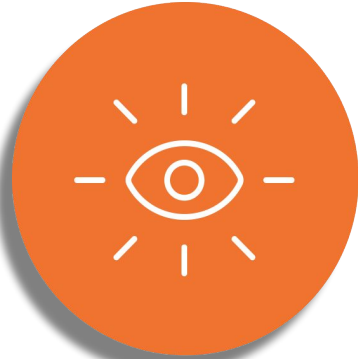
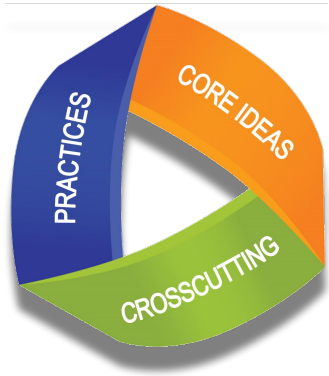
Multimodal Phenomenon-based approach

The anchor phenomenon drives instruction through a whole unit

Taking on the **roles** of scientists and engineers, students gather evidence and use it to build **increasingly complex explanations** about a rich, real-world anchoring phenomenon.



Using three dimensions to figure out





Questions?

Amplify Science Chat Race

Type the letter for your answer to the questions you see here in chat!

A

Type letter A in
Chat

C

Type letter C in
Chat

B

Type letter B in
Chat

D

Type letter D in
Chat

What are the multiple modalities?

A

Do, talk, read,
write, visualize

C

Do, visualize,
hands-on
projects

B

Read, write,
google search

D

Reading, writing,
math

What is the first step to the Amplify Science Approach?

A

Collect evidence
from multiple
sources

C

Apply knowledge to
solve different
problem

B

Introduce a
Phenomenon and/or
real world problem

D

Build an increasingly
complex explanation

Where can you find login information and NYC scope and sequence?

A

On the NYC
Resource Site

C

In the offline
preparation
guide

B

The Program
Hub

D

The TG on the
Unit Level

Plan for the day

- Framing the day
- **Unit Internalization**
- Amplify Science @Home
- Planning to teach using @Home resources
- Reflection and closing



Unit Design Problem

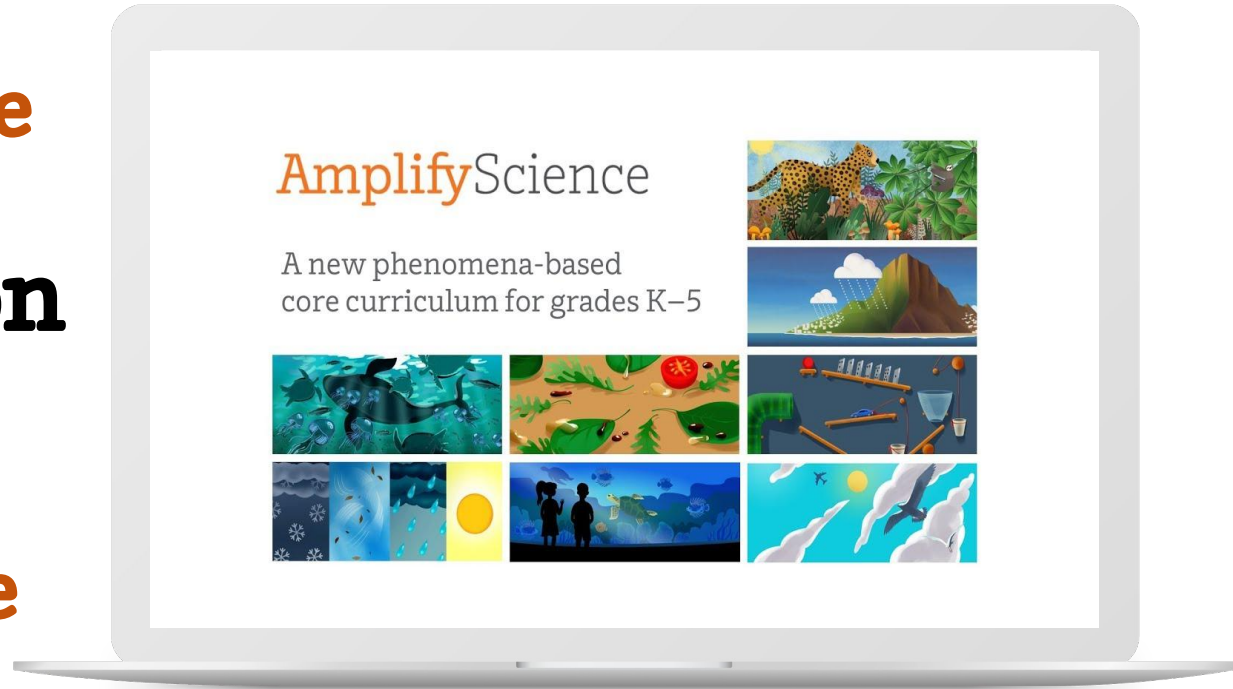
The background of the slide is a corkboard with a grid of dark blue dots. A white ball is suspended by a white string that is tied to a horizontal wooden rod. Several other wooden rods are pinned to the board at various angles. The left side of the board is bordered by a light blue wall.

We want to create a pinball machine that lets us control the way a pinball moves.










Navigate-Type-Chat

What are the chapter and investigative phenomena for your unit 2?

Amplify Science Unit Two Internalization Notes with Digital Teacher's Guide



Where do you find all of the Unit Phenomena listed with Unit questions?

Planning for the Unit		Printable Resources
Unit Overview	▼	 3-D Assessment 
Unit Map	▼	 Coherence Flowcharts
Progress Build	▼	 Copymaster Compilation
Getting Ready to Teach	▼	 Investigation Notebook
Materials and Preparation	▼	 Multi-Language Glossary
Science Background	▼	 NGSS Information for Parents and Guardians
Standards at a Glance	▼	 Print Materials (8.5" x 11")
Teacher References		 Print Materials (11" x 17")
Lesson Overview Compilation	▼	Offline Preparation

Phenomena Coherence Flowcharts

Pushes and Pulls: Designing a Pinball Machine

We want to create a pinball machine that lets us control the way a pinball moves.
How can we create a pinball machine for our class?

Sometimes a pinball starts to move.
How do we make a pinball start to move?

Sometimes an object starts to move.
What makes an object start to move? (1.1-1.4)

- Investigate how to make objects start to move in a classroom Movement Hunt (1.1)
- Investigate making an object start to move in full-class Rugby routine (1.2)
- Use recognizable images of objects moving to visualize movement (1.2)
- Practice using cause and effect to explain everyday scenarios (1.2)
- Read Talking About Forces (1.2)
- Investigate how to make an object move by exerting a force on it using Forces Investigation materials (1.3)
- Use Explanation Language Frame to explain forces and movement in Forces Investigation (1.3)

- An object starts to move when another object exerts a force on it. (1.3)
- Forces happen between two objects. (1.3)

- Design launchers to make a pinball start to move in individual student Box Models (1.4)
- Diagram Box Model launcher design (1.4)
- Add a launcher to make the pinball start to move in Class Pinball Machine (1.5)
- Shared Writing to explain the Chapter 1 Question (1.5)
- Revisit Talking About Forces to use Explanation Language Frame to explain how objects move in the text (1.5)

To make our pinball start to move, we must exert a force on the pinball. We can use a rubber band launcher to exert a force on the pinball.

Unit Design Problem

Problem students work to solve

Chapter-level Anchor Phenomenon Chapter 1 Question

Investigative Phenomena Investigation Questions

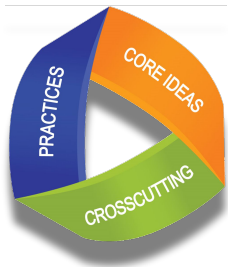
Evidence sources and reflection opportunities

Key concepts

Application of key concepts to problem

Explanation that students can make to answer the Chapter 1 Question

Note: New 3-D Assessment Objectives Overview Now Available



Planning for the Unit	Printable Resources
Unit Overview	3-D Assessment Objectives
Unit Map	Coherence Flowcharts
Progress Build	Copymaster Compilation
Getting Ready to Teach	Investigation Notebook
Materials and Preparation	Multi-Language Glossary
Science Background	NGSS Information for Parents and Guardians
Standards at a Glance	Print Materials (8.5" x 11")
Teacher References	Print Materials (11" x 17")
Lesson Overview Compilation	Offline Preparation



New 3D Assessment Objectives Overview

Pushes and Pulls

3-D Assessment Objectives Overview

The NGSS Performance Expectations specify three-dimensional learning objectives for Grade K as well as for the K–2 grade band. The tables below include the focal Performance Expectations for this unit and identify the locations of summative and formative assessments that reveal student knowledge and use of the three dimensions to support progress toward these Performance Expectations.

Each table includes the Disciplinary Core Ideas (DCIs), Science and Engineering Practices (SEPs), and Crosscutting Concepts (CCCs) included in that Performance Expectation and specifies the location of assessments associated with these three dimensions. Note that SEPs and CCCs build across the grade and grade band, so we list relevant assessments across grades K–2. Also, in cases in which a DCI is addressed in multiple units at a grade, we list assessments in the additional unit(s).

Key:

- Summative assessments are noted with (S); if not so labeled, the assessment is designed to be formative.
- **OTFA** = On-the-Fly Assessment
- **CJ** = Critical Juncture
- **PRE** = Pre-Unit Assessment
- **EOU** = End-of-Unit Assessment
- **TS** = Teacher Support Note
- **INV** = Investigation Assessment
- **CW** = Chapter Writing Assessment

See the Assessment System overview document for more information.

K-PS2-1. Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.

SEP: Planning and Carrying Out Investigations

Needs of Plants and Animals (Grade K)
OTFA 7: Lesson 2.3, Activity 3
OTFA 10: Lesson 3.1, Activity 2

Pushes and Pulls (Grade K)
PRE: Lesson 1.1, Activity T
OTFA 4: Lesson 2.1, Activity 2

Sunlight and Weather (Grade K)
OTFA 2: Lesson 2.1, Activity 4
INV: Lesson 4.1, Activities 3 + 4 (S)
OTFA 14: Lesson 5.2, Activity 4

Light and Sound (Grade 1)
OTFA 2: Lesson 1.3, Activity 3
OTFA 7: Lesson 3.1, Activity 2
INV: Lesson 4.1, Activity 3 (S)

Spinning Earth (Grade 1)
OTFA 7: Lesson 3.1, Activity 2
OTFA 8: Lesson 3.3, Activity 4
OTFA 11: Lesson 4.1, Activity 2

Plant and Animal Relationships (Grade 2)
OTFA 4: Lesson 1.6, Activity 4
OTFA 9: Lesson 3.3, Activity 3
OTFA 12: Lesson 4.1, Activity 4
OTFA 13: Lesson 4.2, Activity 4
INV: Lesson 4.3, Activity 4 and Lesson 4.3, Activities 1–4 (S)
OTFA 14: Lesson 4.3, Activity 3

DCI: PS2.A: Forces and Motion

Pushes and Pulls (Grade K)
PRE: Lesson 1.1, Activity T
OTFA 2: Lesson 1.3, Activity 2
OTFA 3: Lesson 1.4, Activity 4
CJ 1: Lesson 1.5, Activity 4
OTFA 5: Lesson 2.2, Activity 3
CJ 2a: Lesson 2.3, Activity 1
CJ 2b: Lesson 2.3, Activity 2
OTFA 7: Lesson 3.2, Activity 3
CJ 3: Lesson 3.3, Activity 3
CJ 4: Lesson 4.3, Activity 2
OTFA 15: Lesson 6.1, Activity 3
EOU: Lesson 6.3, Activity 1 (S)

DCI: PS2.B: Types of Interactions

Pushes and Pulls (Grade K)
PRE: Lesson 1.1, Activity T
OTFA 2: Lesson 1.3, Activity 2
OTFA 3: Lesson 1.4, Activity 4
CJ 1: Lesson 1.5, Activity 4
CJ 4: Lesson 4.3, Activity 2
EOU: Lesson 6.3, Activity 1 (S)

DCI: PS3.C: Relationship Between Energy and Forces

Pushes and Pulls (Grade K)
TS: Lesson 3.3, Activity 3

CCC: Cause and Effect

Pushes and Pulls (Grade K)
PRE: Lesson 1.1, Activity T
EOU: Lesson 6.3, Activity 1 (S)

Sunlight and Weather (Grade K)
PRE: Lesson 1.3, Activity 4
OTFA 13: Lesson 4.4, Activity 1
EOU: Lesson 5.6, Activity 1 (S)

Animal and Plant Defenses (Grade 1)
OTFA 3: Lesson 1.4, Activity 3

Light and Sound (Grade 1)
PRE: Lesson 1.1, Activity 1
OTFA 3: Lesson 1.4, Activity 3
OTFA 9: Lesson 3.6, Activity 1
INV: Lesson 4.1, Activity 3 (S)
EOU: Lesson 4.6, Activity 1 (S)

Changing Landforms (Grade 2)
OTFA 5: Lesson 2.4, Activity 2

Properties of Materials (Grade 2)
OTFA 8: Lesson 2.3, Activity 5
OTFA 16: Lesson 4.3, Activity 4
EOU: Lesson 4.4, Activity 2 (S)

Printable Resources

NEW



3-D Assessment Objectives



Coherence Flowcharts



Copymaster Compilation



Flextension Compilation



Investigation Notebook



Multi-Language Glossary



NGSS Information for Parents and Guardians

Guided Unit Internalization

Part 1: Unit-level internalization

Unit title:

What is the phenomenon students are investigating in your unit?

Unit Question:

Student role:

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









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

Guided Unit Internalization Document

What is the student role? What will students figure out in Chapter 1?

Guided Unit Internalization
Part 1: Unit-level Internalization

Unit title:	
What is the phenomenon students are investigating in your unit?	
Unit Question:	Student role:
By the end of the unit, students figure out ...	
What science ideas do students need to figure out in order to explain the phenomenon?	

Planning for the Unit	Printable Resources
Unit Overview ▾	 3-D Assessment Objectives
Unit Map ▾	 Coherence Flowcharts
Progress Build ▾	 Copymaster Compilation
Getting Ready to Teach ▾	 Investigation Notebook
Materials and Preparation ▾	 Multi-Language Glossary
Science Background ▾	 NGSS Information for Parents and Guardians
Standards at a Glance ▾	 Print Materials (8.5" x 11")
Teacher References	 Print Materials (11" x 17")
Lesson Overview Compilation ▾	Offline Preparation

What are the Unit and Chapter Questions unit two?

Guided Unit Internalization
Part 1: Unit-level Internalization

Unit title:	
What is the phenomenon students are investigating in your unit?	
Unit Question:	Student role:
By the end of the unit, students figure out ...	
What science ideas do students need to figure out in order to explain the phenomenon?	

Planning for the Unit	Printable Resources
Unit Overview	3-D Assessment Objectives
Unit Map	Coherence Flowcharts
Progress Build	Copymaster Compilation
Getting Ready to Teach	Investigation Notebook
Materials and Preparation	Multi-Language Glossary
Science Background	NGSS Information for Parents and Guardians
Standards at a Glance	Print Materials (8.5" x 11")
Teacher References	Print Materials (11" x 17")
Lesson Overview Compilation	Offline Preparation

By the end of
the unit what
will the
students
figure out?

Guided Unit Internalization
Part 1: Unit-level internalization









Unit title:

What is the phenomenon students are investigating in your unit?

Unit Question: Student role:

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

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

Planning for the Unit		Printable Resources
Unit Overview	▼	 3-D Assessment Objectives
Unit Map	▼	 Coherence Flowcharts
Progress Build	▼	 Copymaster Compilation
Getting Ready to Teach	▼	 Investigation Notebook
Materials and Preparation	▼	 Multi-Language Glossary
Science Background	▼	 NGSS Information for Parents and Guardians
Standards at a Glance	▼	 Print Materials (8.5" x 11")
Teacher References		 Print Materials (11" x 17")
Lesson Overview Compilation	▼	Offline Preparation

What science concepts do students need to figure out in order to build an explanation of the unit phenomena?

Guided Unit Internalization
Part 1: Unit-level Internalization

Unit title:	
What is the phenomenon students are investigating in your unit?	
Unit Question:	Student role:
By the end of the unit, students figure out ...	
What science ideas do students need to figure out in order to explain the phenomenon?	

Planning for the Unit	Printable Resources
Unit Overview	3-D Assessment Objectives
Unit Map	Coherence Flowcharts
Progress Build	Copymaster Compilation
Getting Ready to Teach	Investigation Notebook
Materials and Preparation	Multi-Language Glossary
Science Background	NGSS Information for Parents and Guardians
Standards at a Glance	Print Materials (8.5" x 11")
Teacher References	Print Materials (11" x 17")
Lesson Overview Compilation	Offline Preparation

Guided Unit Internalization

Part 1: Unit-level internalization

Unit title:

What is the phenomenon students are investigating in your unit?

Unit Overview

Unit Question:

Lesson Overview Compilation

Student role:

Unit Overview

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

**Unit Map, See also
Progress Build**

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

**Unit Map, Progress Build,
Science Background Document**

**Where to
Look!**

Where do you find a table listing the books and the in-class lessons they are used for?

A

Science
Background

C

Progress Build

B

Lesson Overview
Compilation

D

Materials and
Preparation

Where do you find possible student preconceptions?

A

Science
Background

C

Progress Build

B

Lesson Overview
Compilation

D

Materials and
Preparation

In Chat

- What is the Unit Anchor Phenomenon?
 - What is the Unit Question?



Questions?

Plan for the day

- Framing the day
- Unit Internalization
- **Amplify Science @Home**
- Planning to teach using @Home resources
- Reflection and closing





Questions
Reflections
Connections

Unit 2 Planning Notes

Global
Navigation

Program Hub Self Study

AmplifyScience

Hello Teacher Sinha-Das
17616-0401@amplify.net

Log Out

Go To My Account

Classroom Language Settings

ELA Resources

Job Postments

LA Science Program Guide

Science Program Guide


FLORIDA EDITION

Standards Map


Help

© 2020 Amplify Education, Inc. Terms | Privacy


1st Grade ▾ **Step 1**



22 Lessons
Animal and Plant Defenses



22 Lessons
Light and Sound



22 Lessons
Spinning Earth

AmplifyScience Program Hub

LAUNCH PROGRAMS

TEACHER SINHA-DAS


Step 2

Welcome, Amplify Science Educators!

The Amplify Science Program Hub consists of resources, tools, and advice to help you make the most of getting started with your program. We've also provided tips and guidance on how to use Amplify Science in a remote and hybrid learning model.

We're excited to partner with you on this journey and can't wait to get started! Please select the button below that best describes your role:

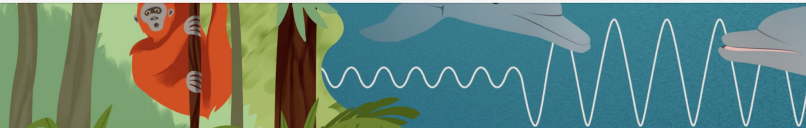
I am a Teacher **I am a Leader**



AmplifyScience Program Hub

LAUNCH PROGRAMS

TEACHER SINHA-DAS



Hello, Teacher!

Search

Welcome

Remote learning: Amplify Science@Home

Hands-on investigations support

Unit extensions

Using this site for self study

Program Overview

Navigation and Materials

Welcome, Amplify Science teacher!

Let's get started! This site will provide you with the knowledge and skills you need to start teaching with Amplify Science. Here you will:

- learn to navigate the digital Teacher's Guide
- become familiar with unit resources
- get planning tips, and
- find our new, flexible remote and hybrid learning supports

This site will be continuously updated, so please check back regularly.

Step 3

AmplifyScience Program Hub

LAUNCH PROGRAMS

TEACHER SINHA-DAS

Hello, Teacher!

Search

Welcome

Remote learning: Amplify Science@Home

About Amplify Science@Home

Grade-level resources

@Home Resources Orientation Videos

Additional resources

Hands-on investigations support

Unit extensions

Using this site for self study

Program Overview

Navigation and Materials

Grade-level resources

Select your grade below to access the @Home resources. Please do not share or distribute these materials outside of your district.

- Kindergarten
- Grade 1
- Grade 2
- Grade 3
- Grade 4
- Grade 5
- Grade 6
- Grade 7
- Grade 8

Step 4 (scroll down and choose your grade)

@Home Resources Orientation Videos

Check out these videos for an overview of what's available, plus tips and strategies for teaching with Amplify Science@Home this back to school.

Navigate to your unit on the Program Hub locate and record planning notes on:

1. Self-Study Resources

2. @Home Videos for Unit 2

**Explore your
Unit 2
@Home**



Reminder!

AmplifyScience@Home

@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

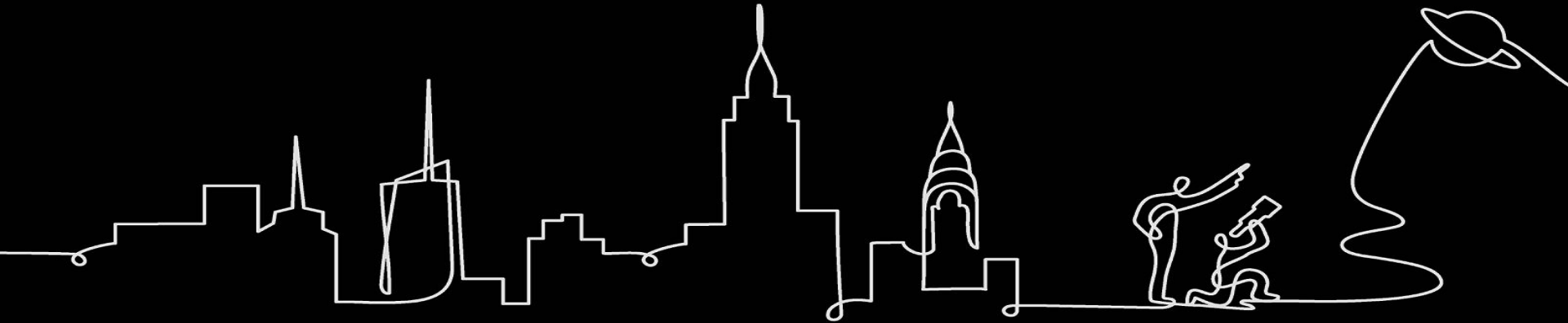


In Chat

What are some possible
uses for the @Home
Videos

Reflect-Type-Chat! Share and Learn

**Which self-study resource on the
Program-Hub will you use most often
and why?**



Lesson Adaptation Considerations

While planning consider the information below to select the appropriate resources:

- Do you have more, less, or the same time as last year for Science?
- Your classroom instructional model (Hybrid or Remote)
- Student's access to technology (packet or slides/sheets)
- The 3rd party applications will you pair with Amplify resources (if any)?
- Do I want to add a hands on component? (model via video? Or complete during in person synchronous instruction)

Lesson:	Date:
Lesson purpose: [Lesson Brief: Overview]	3-D connections and formative assessment opportunities:
What the students will learn in this lesson and potential challenges.	How will the students be practicing the multiple modalities during this lesson?

Amplify Science sample lesson planning template cont.

Part 2: Getting ready to teach

Look at the Classroom Slides, digital tools, and books, as well as the Step-by-Step, Teacher Supports, and Possible Responses tabs in the Instructional Guide.

	Teaching notes	Remote/Hybrid Adaptation notes
	<p>Consider:</p> <ul style="list-style-type: none"> • What will the students experience in each activity? • How does each activity support students in achieving the purpose of the lesson? • What do you feel comfortable with? • What challenges might you encounter in teaching this lesson, and how might you address these challenges? 	<p>Consider:</p> <ul style="list-style-type: none"> • Materials will you need to prepare • Differentiate • Time for lesson • Your classroom instructional model • Student's access to technology • 3rd party applications • Add a hands on component? (model via video Or complete during in person synchronous instruction)
Activity 1		
Time:		
Activity 2		
Time:		
Activity 3		
Time:		
Activity 4		
Time:		
Activity 5		
Time:		

Lesson Adaptation Tool for Remote and Hybrid Learning



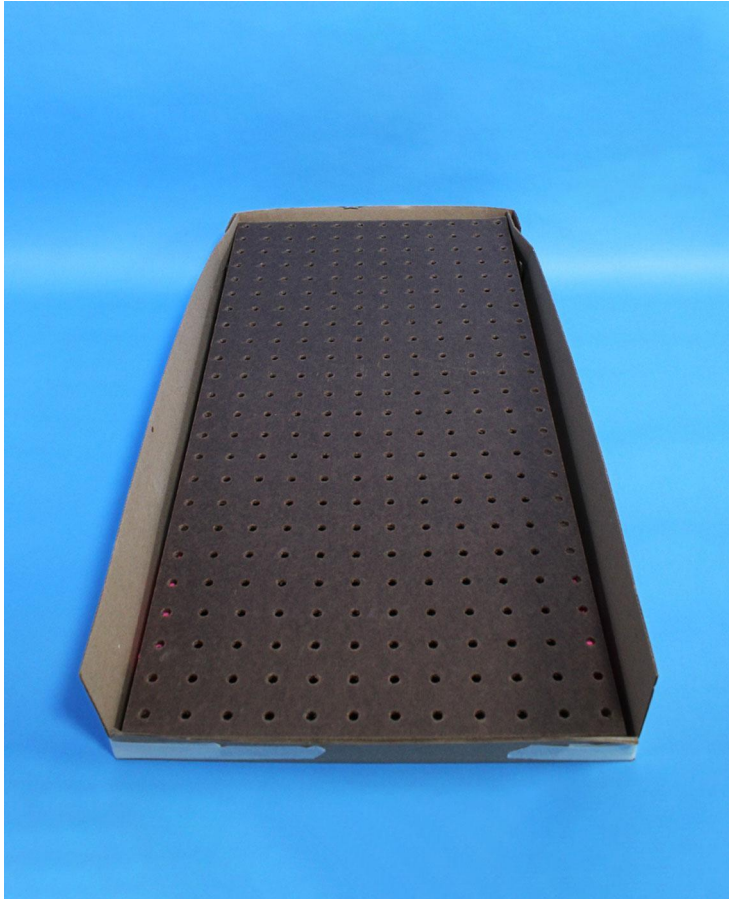
Grade K | Pushes and Pulls

Lesson 1.2: Talking About Forces

Activity 1

Exploring and Describing Movement





We are **engineers**, and we are working to design a **pinball machine** for our classroom.

We will build our pinball machine in this box.

What Engineers Do

Find out about a problem.



One thing engineers do is **find out about a problem.**

Our problem is that we need to figure out how to make this pinball machine so that it makes a pinball **start to move.**

Investigation Question:

What makes an object start to move?

In the last lesson, we made objects in the classroom start to move.



What are some **objects** we made move with our bodies?

How did we make those objects **start to move?**



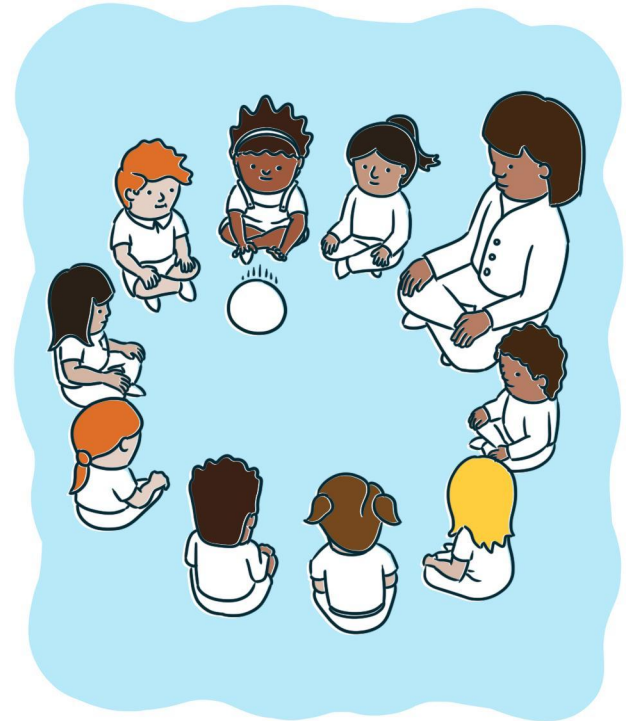
Today, we will play a game called **Rugball**.

This is a game we will play many times as we learn about **movement** and work as **engineers** to design a pinball machine.

Playing Rugby: Introduction *(try now if there are grown-ups or siblings where you are)*

We are trying to start moving the ball.

- 1.**
Sit in a circle so everyone can see.
- 2.**
Start the ball moving with a push—not a throw or a kick.
- 3.**
Keep the ball in the circle. If the ball goes outside the circle, wait for the teacher to ask a student to get it.



Activity 2

Visualizing Movement



In the Movement Hunt and when we played Rugbyball, we made **objects** move. I wonder if there are things other than people that can make things start to move.

We will look at pictures that show objects moving and **visualize** what is happening. I will **show you how.**



This is a picture. I cannot see anything moving.

I'll share how I **imagine the movement** to better understand what is happening.

I will show you some more pictures. For each one, **visualize** what is happening.

Think about **what is moving**, and **what is making that object move**.

You can also **act out** what is happening with your body.



Engineers work together to learn more about the things they study.



As you look at the pictures share your ideas with your partner and talk about how to answer this question: **What movements did you visualize in the picture?**







Vocabulary



visualize

to make a movie or picture in our minds

Activity 3

Explaining with Because



We explored making the rugby ball move and visualized how different objects were moving in pictures. Now, we are going to try some movements of our own to practice talking about them like scientists and engineers.

Scientists and engineers use the word **because** to explain why something happened.



I am going to **stand on one foot**. Watch my movements carefully.

_____ because _____.

We can explain what happened and why with “because.”

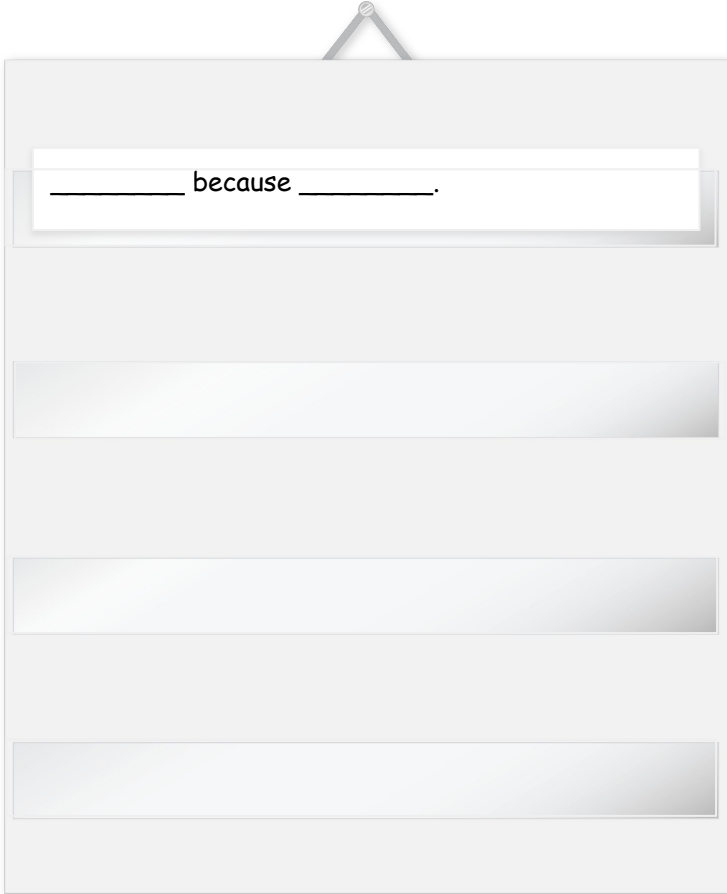


What happened when I tried to **balance?**

_____ because _____.

I tipped over **because** I stood on one foot.

The word **because** means that the first part of what I said made the second part happen.

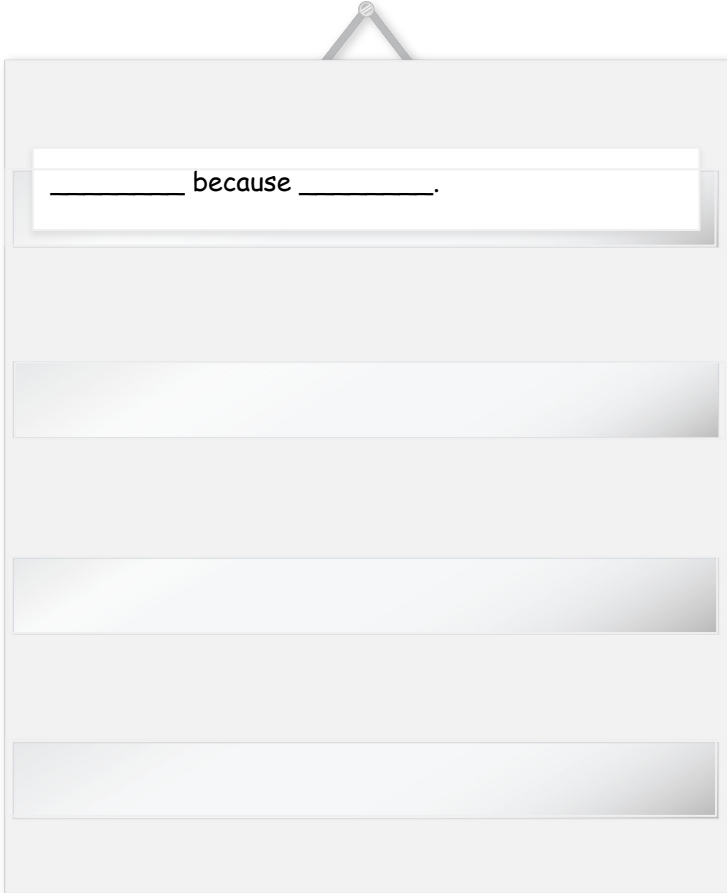


_____ because _____.

Let's try a different movement together.



Run in place.

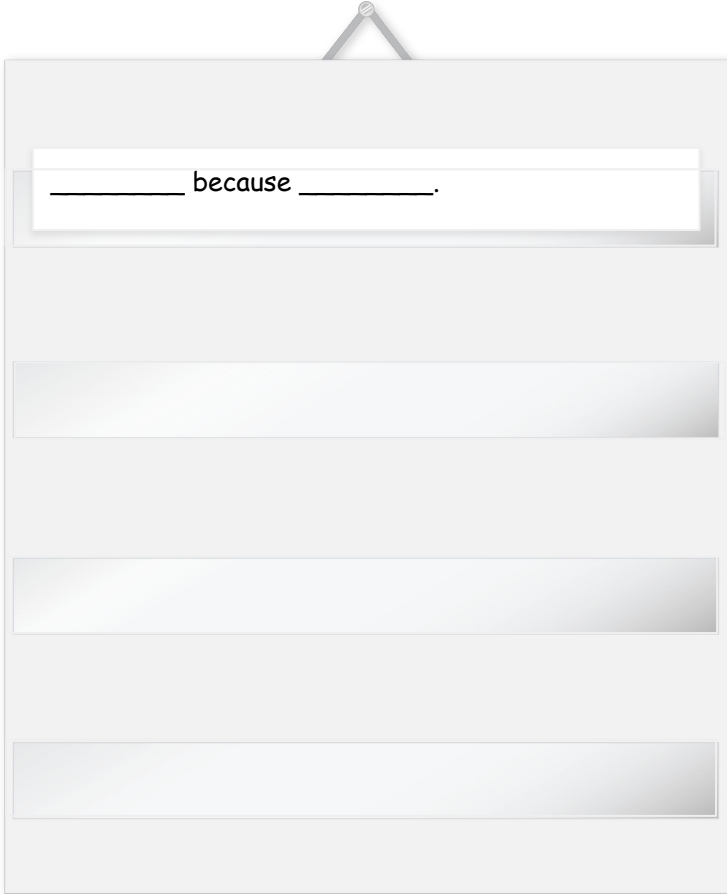


_____ because _____.

Let's make a sentence about it.



**Raise your hand if you
feel tired or out
of breath.**



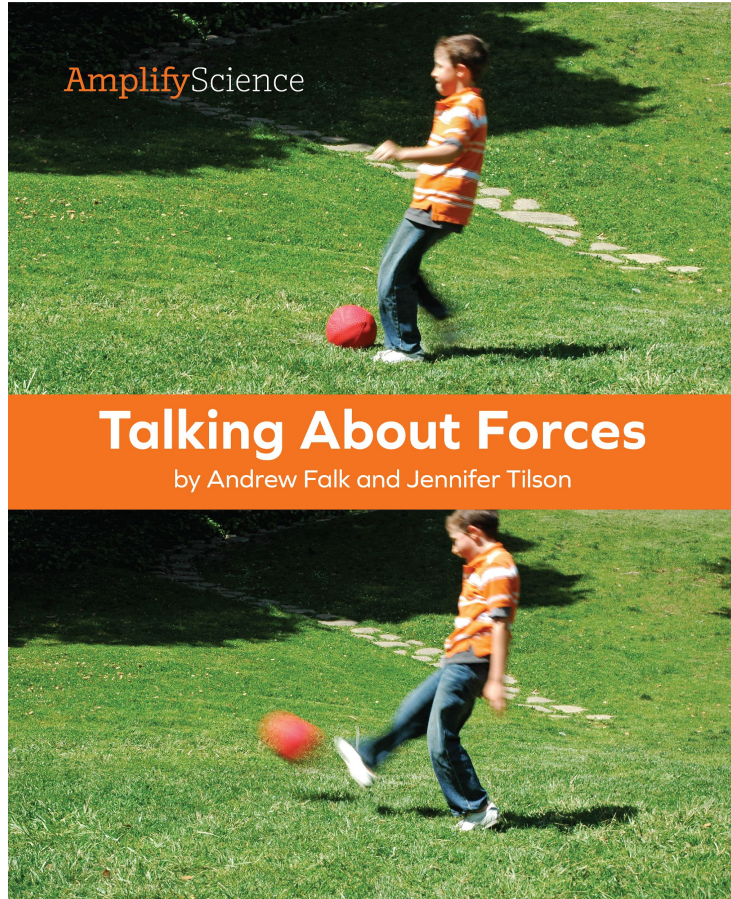
_____ because _____.

Let's try out a few more examples, and make sentences explaining what happened with **because**.

Activity 4

Reading: Talking About Forces





This book is called *Talking About Forces*. We will read to find out more about **forces**.

We will **visualize** what is happening in the pictures and words.



It was a beautiful day at the park! Everywhere you looked, there were kids making things move.



We have many ways of talking about what happens when one thing makes another thing move.

Scientists and **engineers** have their own way of **explaining** what is happening. They talk about **forces**. They say that when one thing makes another thing move, it **exerts** a force on it.

Let's see some examples!

4



Scott pushed Francis on the swing, and Francis moved. She sailed forward in the swing, high into the air.

What would a scientist or engineer say happened here?

5



Here is what a scientist or engineer would say:

Francis moved because Scott exerted a force on her.



Faheem jumped into the wagon and asked for a ride. Francis pulled on the handle of the wagon, and the wagon rolled up the hill with Faheem in it!

What would a scientist or engineer say happened here?



Here is what a scientist or engineer would say:

The wagon and Faheem moved because Francis exerted a force on the wagon.



Mia and Scott played catch in the field. When it was her turn to throw, Mia threw the ball and it flew away from her.

What would a scientist or engineer say happened here?



Here is what a scientist or engineer would say:

The ball moved because Mia exerted a force on the ball.



Another ball was sitting on the grass. Jess ran up and kicked the ball. Wham! The ball bounced away over the grass. Jess scored a goal!

What would a scientist or engineer say happened here?



Here is what a scientist or engineer would say:

The ball moved because Jess exerted a force on the ball.



The kids had fun playing in the park and making things move. A scientist or engineer would agree that they had fun playing in the park. A scientist or engineer might also say they exerted forces on lots of **objects** in the park!

Scientists and engineers know that any time you see an object start to move, it is because another object exerted a force on it. When you see one object start to move, look for the other object that made it move. Forces always happen between two objects.

We are really starting to talk like
pinball engineers!

In the next lesson, we will keep figuring out how **forces** work, so we can get ready to start working on our pinball machines.

End of Lesson



THE LAWRENCE
HALL OF SCIENCE
UNIVERSITY OF CALIFORNIA, BERKELEY

Amplify.

Published and Distributed by Amplify. www.amplify.com

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.



Plan for the day




- Framing the day
- Unit Internalization
- Amplify Science @Home
- **Planning to teach using @Home resources**
- Reflection and closing



Sample instructional scenario








Hybrid pod model

Select 1-2 lessons for the week and decide the best instructional format for the different parts of the lesson

In class		Remote online class	Remote
<ul style="list-style-type: none">● Hands-on investigations (option for teacher demo)● Discourse routines● Class discussions● Physical modeling activities		 <ul style="list-style-type: none">● Sim demonstrations● Read-alouds● Shared Writing● Co-constructed class charts	 <ul style="list-style-type: none">● @Home video lessons● @Home Unit activities● Reflective writing● Independently review

Sample instructional scenario

Hybrid pod model

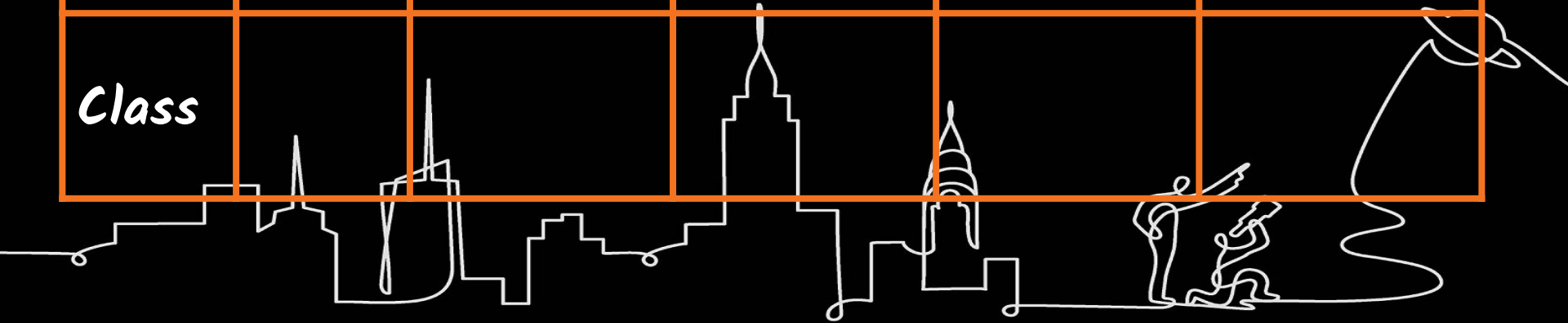
	M-T	W	Th-F
Pod 1	In class 	Remote online class 	Remote 
Pod 2	Remote 	 	In class 

Think-Type-Chat

Share and Learn

Take a moment to think about your current instructional model. Please share in chat!

	M	T	W	Th	F
Class					
Class					



@Home Resources example use case

Hybrid Model: Teach live during in-person/synchronous time



Day 1

Remote

Assign: Lesson 1.1
@Home Video



Day 2

In-person

Teach: Lesson 1.2
live



Day 3

Synchronous

Teach: Lesson 1.3
using clips from
@Home Video



Day 4

Remote

Assign: Lesson 1.4
@Home
Packet/Slides



Day 5

In-person

Revisit: hands-on
or discourse-based
activities the week's
lessons

@Home Resources example use case

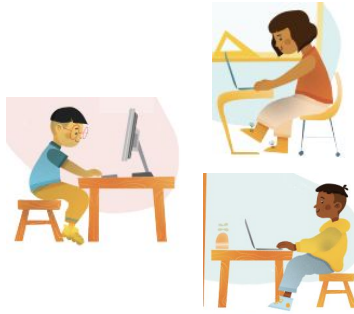
Remote Model: with synchronous & asynchronous learning



Days 1 & 2

Asynchronous

Assign: Lesson 1.1 @Home Video and sheets for students to work through on their own



Day 3

Synchronous

Teach: Lesson 1.2 using clips from the @Home Video



Day 4

Asynchronous

Assign: Lesson 1.3 @Home Packet or @Home Slides for students to work through on their own



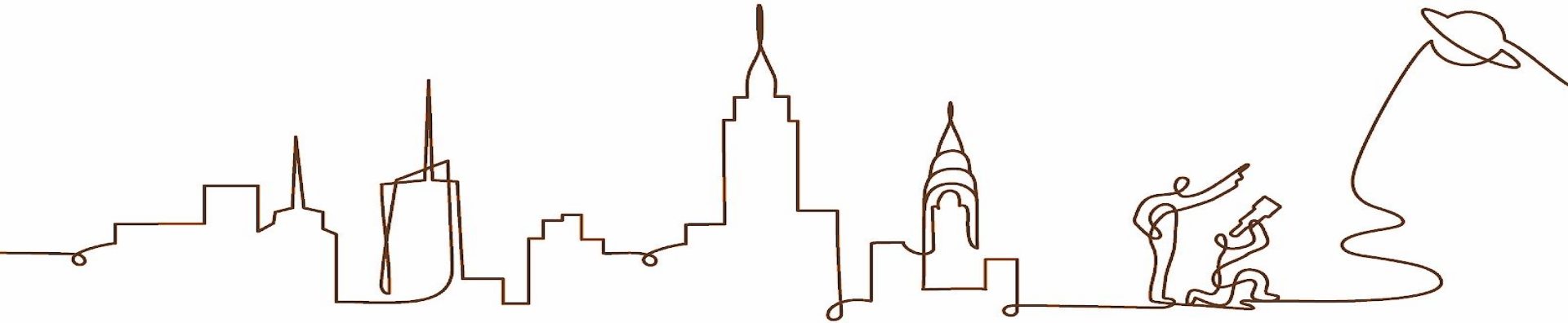
Day 5

Synchronous

Revisit: hands-on or discourse-based activities from the week's lessons

Differentiation

Quick Review of Lesson Level Brief



Guided Planning

Objectives

- Use the resources we have explored to compare@Home lessons w/ in-class lessons.
- Use the lesson adaptation tool to adjust an in-class lesson for remote and hybrid learning.



Lesson:	Date:
Lesson purpose: [Lesson Brief: Overview]	3-D connections and formative assessment opportunities:
What the students will learn in this lesson and potential challenges.	How will the students be practicing the multiple modalities during this lesson?

Lesson Adaptation!

Choose a lesson and use the Lesson Adaptation Tool to begin recording planning information about the lesson.

Amplify Science sample lesson planning template cont.

Part 2: Getting ready to teach

Look at the Classroom Slides, digital tools, and books, as well as the Step-by-Step, Teacher Supports, and Possible Responses tabs in the Instructional Guide.

Teaching notes		Remote/Hybrid Adaptation notes
Consider:	<ul style="list-style-type: none">• What will the students experience in each activity?• How does each activity support students in achieving the purpose of the lesson?• What do you feel comfortable with?• What challenges might you encounter in teaching this lesson, and how might you address these challenges?	Consider: <ul style="list-style-type: none">• Materials will you need to prepare• Differentiate• Time for lesson• Your classroom instructional model• Student's access to technology• 3rd party applications• Add a hands on component? (model via video Or complete during in person synchronous instruction)
Activity 1		
Time:		
Activity 2		
Time:		
Activity 3		
Time:		
Activity 4		
Time:		
Activity 5		
Time:		

Lesson Adaptation!

With the Lesson Adaptation Tool begin adjusting the lesson for remote and hybrid learning. Note begin with in-class slides

Lesson Adaptation Considerations

While planning consider the information below to select the appropriate resources:

- Do you have more, less, or the same time as last year for Science?
- Your classroom instructional model (Hybrid or Remote)
- Student's access to technology (packet or slides/sheets)
- The 3rd party applications will you pair with Amplify resources (if any)?
- Do I want to add a hands on component? (model via video? Or complete during in person synchronous instruction)

Plan for the day

- Framing the day
- Unit Internalization
- Amplify Science @Home
- Planning to teach using @Home resources
- **Reflection and closing**



Where do you locate the new 3-D assessment objective overview?

A

Unit Level
Materials and
Prep

C

Unit Level
Printable
Resources

B

Unit Level 3-D
statements

D

Unit Level
Assessment
Systems

Where are differentiation notes for Unit 2 lessons?

A

Unit Level
Materials and
Prep

C

Digital TG
Lesson Level

B

Unit Level
Science
Background

D

Teacher
Overview

In Chat

What are the focal
performance
expectations for your
unit?

Where can you find assessment recommendations for @Home units?

A

@Home Videos

C

@Home Student
Slides

B

@Home Student
Sheets

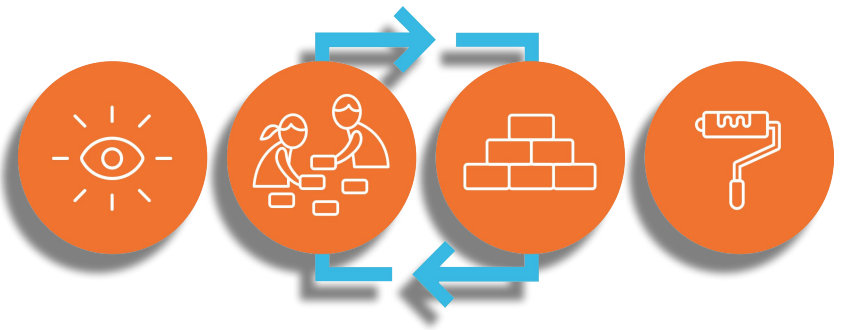
D

@Home Teacher
Overview

In Chat

**What is the Chapter
4-level Phenomenon?**

What does this Image represent?



A Amplify Science Approach

B How students build a complex explanation

C How students deepen their understanding

D All of these

Did We Meet Our Workshop Goals?

1. Make instructional decisions about remote or hybrid learning
2. Develop a plan for using @Home resources within your class schedule and instructional format.

A

yes

C

YES!

B

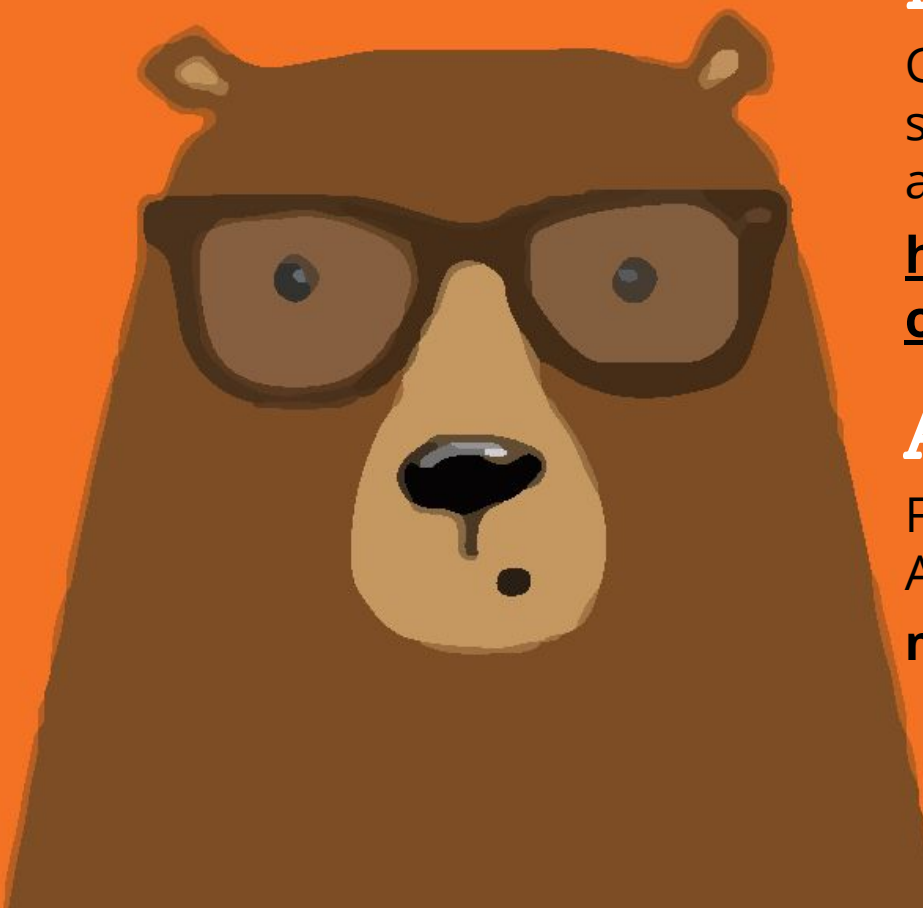
yes but still
working

D

No not quite



Questions?



NYC Program Guide

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

<https://my.amplify.com/programguide/content/national/welcome/nyc/>

Amplify Help

Find lots of advice and answers from the Amplify team.

my.amplify.com/help

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