

Amplify Science

Guided Unit Internalization

New York City

With @Home Resources

**Grade 2 Properties of
Materials**



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)

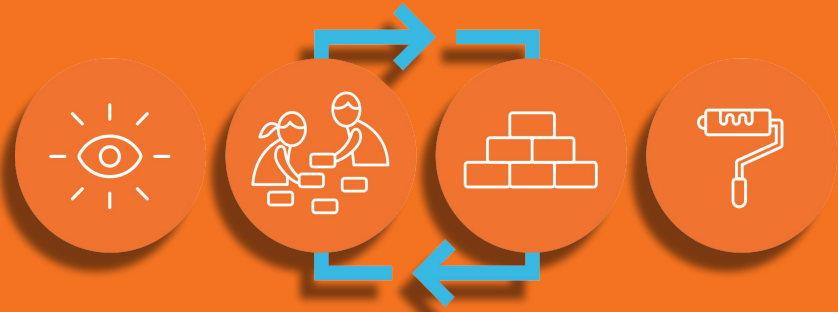
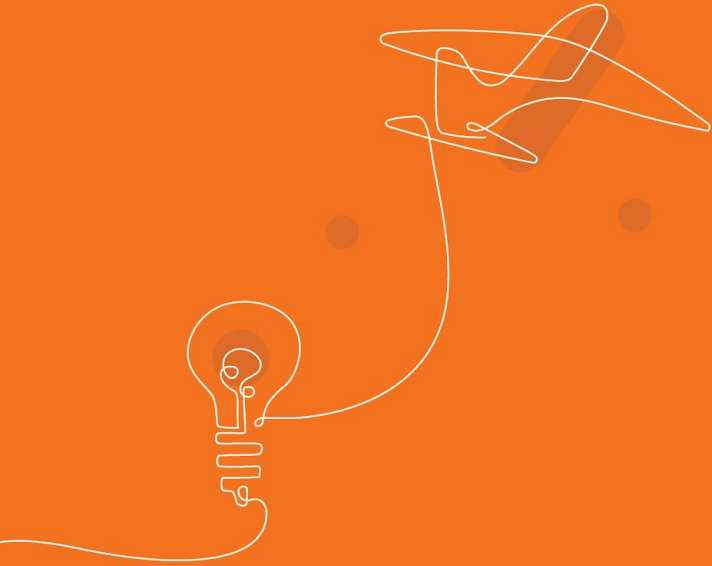
Lesson:	Date:
Lesson purpose: <small>(Lesson brief, Overview)</small>	3-D connections and formative assessment opportunities:
What the students will learn in this lesson and potential challenges.	How will the students be practicing the multiple modalities during this lesson?

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

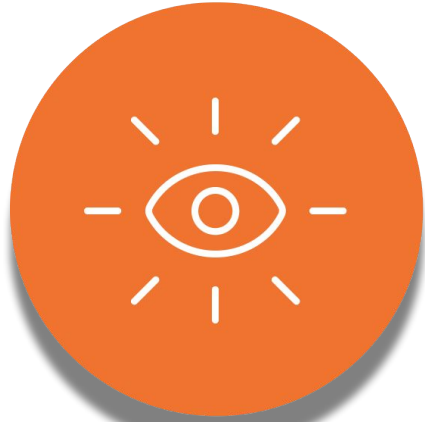
Amplify Science Approach Review:

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!

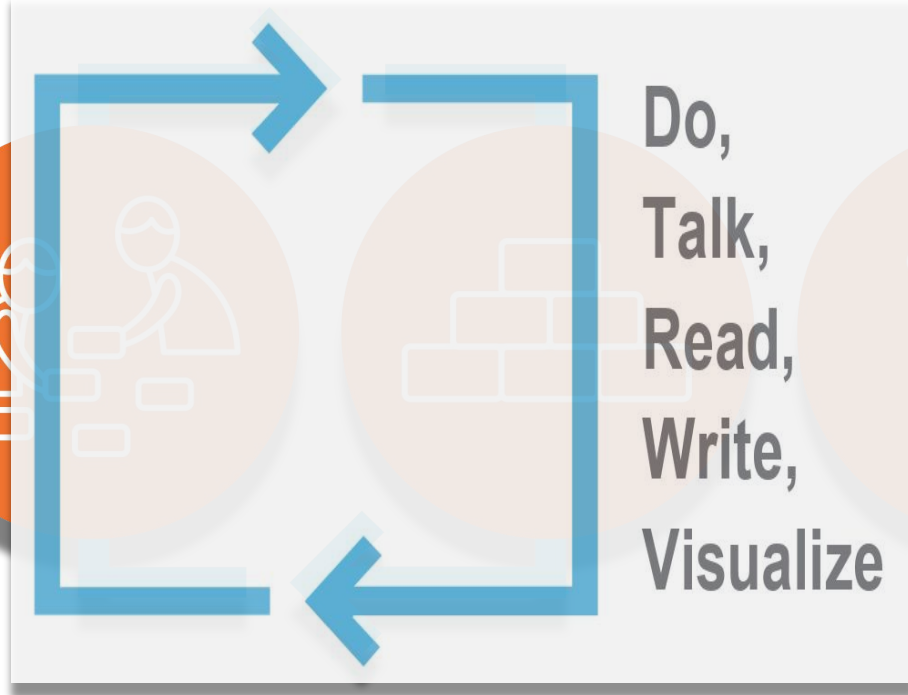
The approach



**Introduce a
phenomenon/real
world problem**



**Collect evidence
from
multiple sources**



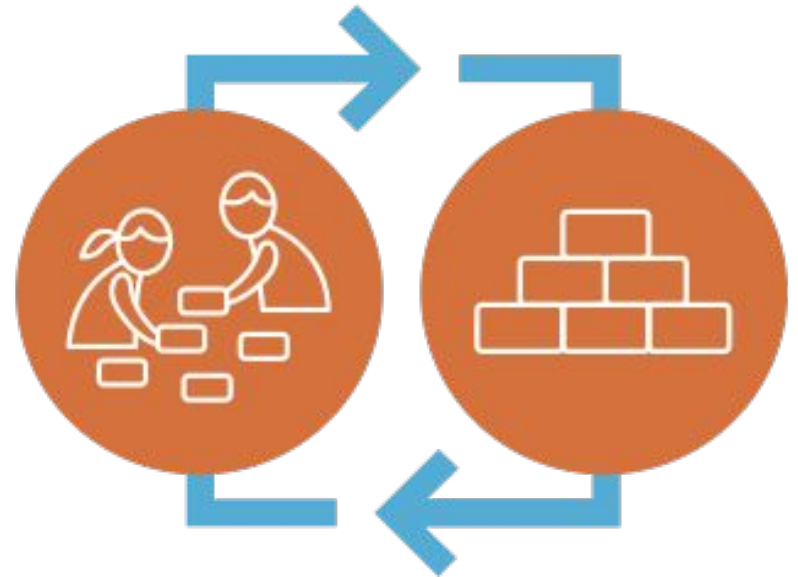
**Build
increasingly
complex
explanations**

**Apply knowledge to
solve a different
problem**

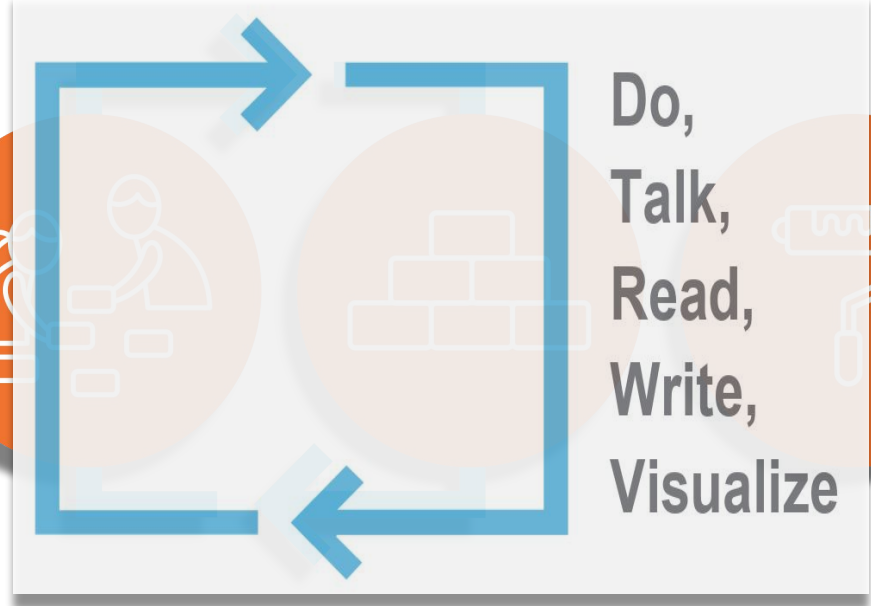
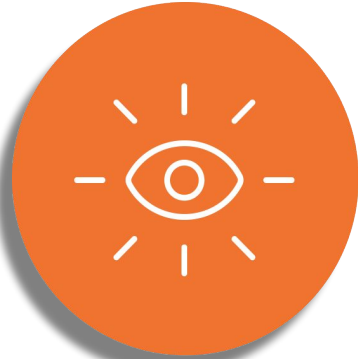
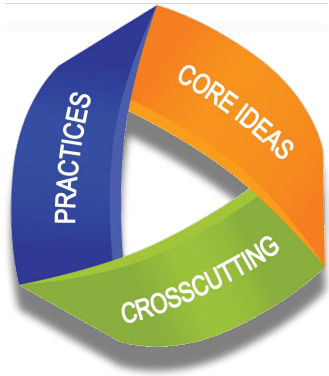
Multimodal Phenomenon-based approach

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





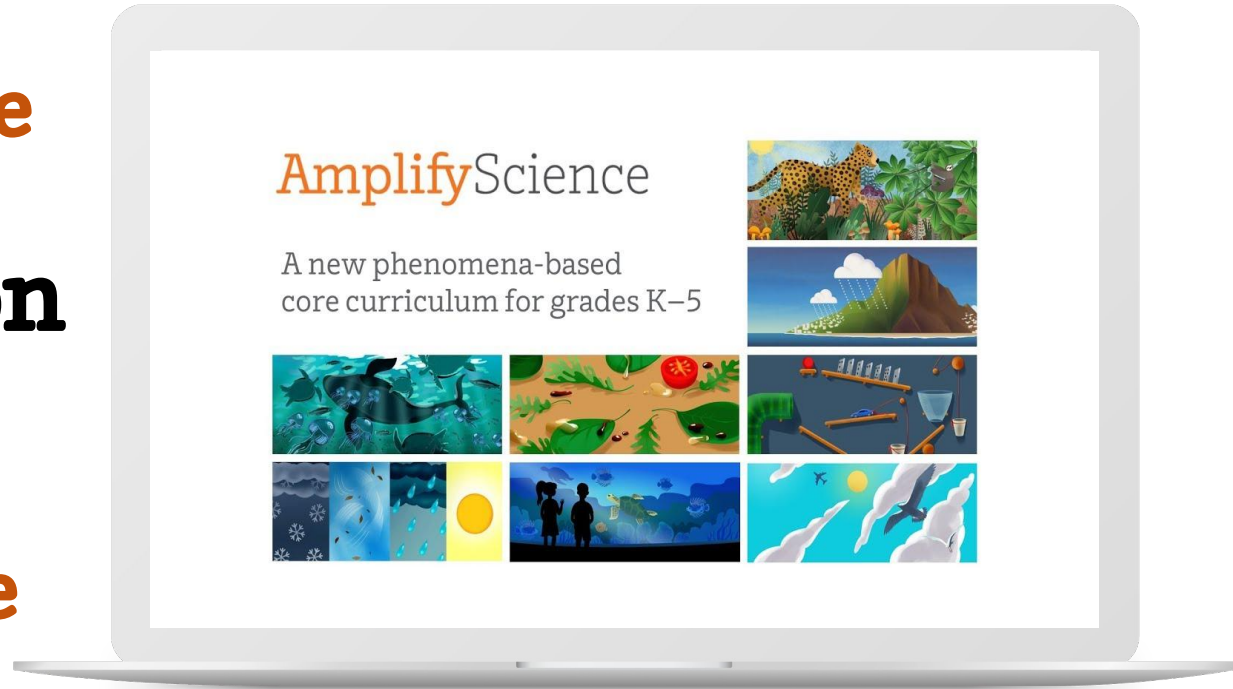
Unit Design Problem

We want to make a glue mixture that is better than what the school uses now.










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

Unit Design Problem

Problem students work to solve

Properties of Materials: Designing Glue

We want to make a glue mixture that is better than what the school uses now.
How can we design a glue mixture that is better than what the school uses now?

Chapter-level Anchor Phenomenon Chapter 1 Question

Different glue mixtures have different properties. Some are stickier than others.
How can you make a sticky glue? (introduced in 1.3)

Investigative Phenomena Investigation Questions

There are different materials in the world with different properties.
What can be noticed about different materials? (1.2-1.3)

- Read *What If Rain Boots Were Made of Paper?* (1.2)
- Reflect on materials and properties (1.3)
- Brainstorm uses and properties of a good glue (1.3)
- Observe mystery glues (1.3)

- Properties include how materials smell, look, taste, feel, and sound. (1.2)
- Different materials have different properties. (1.3)
- You can tell if materials and substances are different by observing their properties. (1.3)

Different materials and substances act differently from each other when tested.
How can you tell if substances are different? (1.4)

- Observe properties of dry mystery glues and analyze results of mystery glue sticky tests (1.4)
- Write arguments about whether mystery glues are the same or different (1.4)

- You can tell if materials and substances are different by observing their properties or by testing them. (1.4)

Properties of mixtures can change.
How can the properties of a mixture change? (1.5-1.7)

- Observe dry glue ingredients (1.5)
- Make and observe mixtures (1.5)
- Graph and analyze sticky tests results (1.6)
- Read *Jelly Bean Engineer* (1.7)

- Properties of mixtures can change when other ingredients are added. (1.5)
- Properties of substances are the same whether you have a small amount or a large amount. (1.7)
- Engineers test their designs to find out whether they meet their design goals. (1.7)

Evidence sources and reflection opportunities

Key concepts

Investigative Phenomena Investigation Questions

Different ingredients result in different properties of a mixture
*Which ingredients should we use (or not use) in our glue? (1.8-1.9)**

- Write design arguments for the ingredients that make the best glues (1.8)
- Make Glue #1 (1.9)
- Write a comparison of partners' glues (1.9)

Application of key concepts to problem

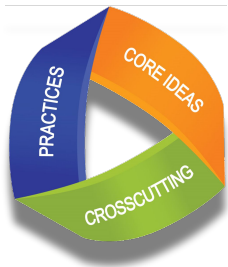
Explanation that students can make to answer the Chapter 1 Question

Glue is a mixture of several ingredients such as flour, water, and cornstarch, and depending on the properties of those ingredients and how they are combined, you can create different glues. Some glues might be stickier or stronger than others. By understanding materials and observing and testing different recipes, you can choose the ingredients that provide the properties you are seeking.

*This Investigation Question guides application of key concepts to the problem.

Phenomena Coherence Flowcharts

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

New 3D Assessment Objectives Overview

Properties of Materials

3-D Assessment Objectives Overview

The NGSS Performance Expectations specify three-dimensional learning objectives for Grade 2 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.

2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.

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 1
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: PS1.A: Structure and Properties of Matter

Properties of Materials (Grade 2)

OTFA 3: Lesson 1.5, Activity 3
OTFA 4: Lesson 1.6, Activity 1
CJ 1: Lesson 1.9, Activity 4
CJ 2: Lesson 2.2, Activity 4
EOU: Lesson 4.4, Activity 2 (S)

CCC: Patterns

Needs of Plants and Animals (Grade K)

OTFA 5: Lesson 2.2, Activity 1
OTFA 13: Lesson 4.2, Activity 2

Sunlight and Weather (Grade K)

OTFA 6: Lesson 3.2, Activity 3
OTFA 10: Lesson 4.2, Activity 1

Light and Sound (Grade 1)

OTFA 11: Lesson 4.2, Activity 3

Spinning Earth (Grade 1)

PRE: Lesson 1.1, Activity 3
OTFA 5: Lesson 2.2, Activity 4
OTFA 13: Lesson 4.3, Activity 4
CJ 4: Lesson 4.4, Activity 5
TS: Lesson 5.1, Activity 3
EOU: Lesson 5.3, Activity 1 (S)

Changing Landforms (Grade 2)

TS: Lesson 2.1, Activity 3

Printable Resources

NEW



3-D Assessment Objectives



Coherence Flowcharts



Copymaster Compilation



Flexextension 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

Unit Overview



Unit Map



Progress Build



Getting Ready to Teach



Materials and Preparation



Science Background



Standards at a Glance



Teacher References

Lesson Overview Compilation



Printable Resources



3-D Assessment Objectives



Coherence Flowcharts



Copymaster Compilation



Investigation Notebook



Multi-Language Glossary



NGSS Information for Parents and Guardians



Print Materials (8.5" x 11")











Print Materials (11" x 17")

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
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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
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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

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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:

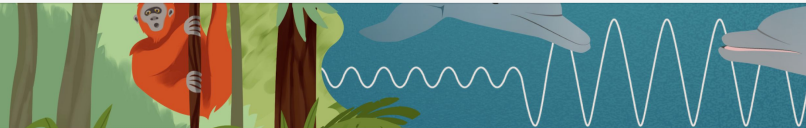
I am a Teacher **I am a Leader**



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

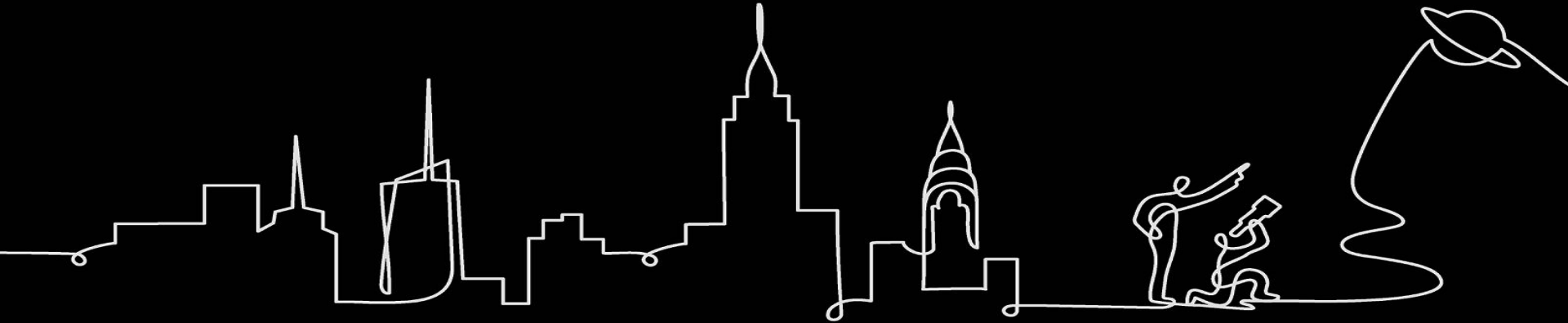


In Chat

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

An illustration showing a hand holding a lit matchstick over a puddle of white liquid. Several red kidney beans are scattered on the surface. The background is a light blue-grey gradient.

Lesson 1.2: What If Rain Boots Were Made of Paper? Grade 2 | Properties of Materials

Activity 1

Introducing the Design Challenge





Unit Question

How can you design a mixture for a certain purpose?

The principal heard that we're starting the *Properties of Materials* unit and thinks we can **help the school** with a **problem**.

I'll read a letter that the principal wrote us. As I read, think about **what the problem is** and **what we will send the principal** at the end of the unit.



Dear Second Grade Students,

Teachers have told me they are worried about some of the supplies at our school. One of the supplies we need to improve is our glue. I talked with a few teachers, and we decided that your second grade class will take on the challenge of designing a new glue for our school.

For the next few weeks, you will become glue engineers. You will make a new glue that can be shared with other classrooms. You will need to learn about glue and the ingredients needed to make glue. You will create your own glue recipes and test them. After that, you will use the evidence from your tests to make your glue even better.

Once you have a final recipe, you will share the recipe with your teacher and me. Thank you so much for your help!

Sincerely,

Your Principal

An **engineer** is a person who uses science knowledge to design something in order to **solve a problem**.

The problem we need to solve is **how to make a glue for our school**. We will take on the role of **glue engineers** as we design the glue.

Vocabulary



design

to try to make something new that solves a problem

Activity 2

Predicting as a Reading Strategy



We will investigate this question over the next few lessons:

What can be noticed about different materials?

In this lesson, we will be **reading** about **different materials**.

Readers often use a **strategy** called **predicting** to help them understand what they are about to read. Predicting is a strategy that you probably use a lot.

Vocabulary



predict

to use what you already know to decide
what you think might happen

AmplifyScience

What If Rain Boots Were Made of Paper?

by Kevin Beals and P. David Pearson
illustrated by Tim Haggerty



Before we read this book, let's practice **predicting** what the book will be about or what we'll learn.

We can use the **title**, **pictures**, **text**, **format**, and **story elements**.

AmplifyScience

What If Rain Boots Were Made of Paper?

by Kevin Beals and P. David Pearson
illustrated by Tim Haggerty



What do you **predict** that the book might be about?

What if rain boots were made of paper?

Would they rip when we put them on?

Would they fall apart in the rain?

Would our feet get wet?



I'll read page 3 out loud.

As I read, I'll think about ways I might change my prediction.



Paper rain boots would be a problem. That's why rain boots are made of **rubber**.

- Rubber bends, so it's easy to slip rain boots on our feet.
- Rubber is strong, so it lasts a long time.
- Rubber keeps out water, so our feet stay dry.

Rubber is a great **material** for making rain boots. Maybe we should make everything out of rubber!

Now I'll read page 4.

Let's think about what we are learning as we read and make a new prediction.

Predicting helps readers understand new ideas and think about what they are going to learn or what might happen next.

Readers don't just predict before they read. They continue to **make and adjust their predictions** as they go along.

AmplifyScience

What If Rain Boots Were Made of Paper?

by Kevin Beals and P. David Pearson
illustrated by Tim Haggerty



What do you **predict** the book will be about?

Activity 3

Reading: What If Rain Boots Were Made of Paper?



Partner Reading Guidelines

1. Sit next to your partner and place the book between you.
2. Take turns reading.
3. Read in a quiet voice.
4. Be respectful and polite to your partner.
5. Ask your partner for help if you need it. Work together to make sure you both understand what you read.

AmplifyScience

What If Rain Boots Were Made of Paper?

by Kevin Beals and P. David Pearson
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Read the book with a partner.

As you read, check your predictions and share any new predictions with your partner.

What if rain boots were made of paper?

Would they rip when we put them on?

Would they fall apart in the rain?

Would our feet get wet?



Turn to page 3 and follow along as we reread the book.

I'll call on students to share the reading as we go along.

We'll stop and talk about the book as we read.



Paper rain boots would be a problem. That's why rain boots are made of **rubber**.

- Rubber bends, so it's easy to slip rain boots on our feet.
- Rubber is strong, so it lasts a long time.
- Rubber keeps out water, so our feet stay dry.

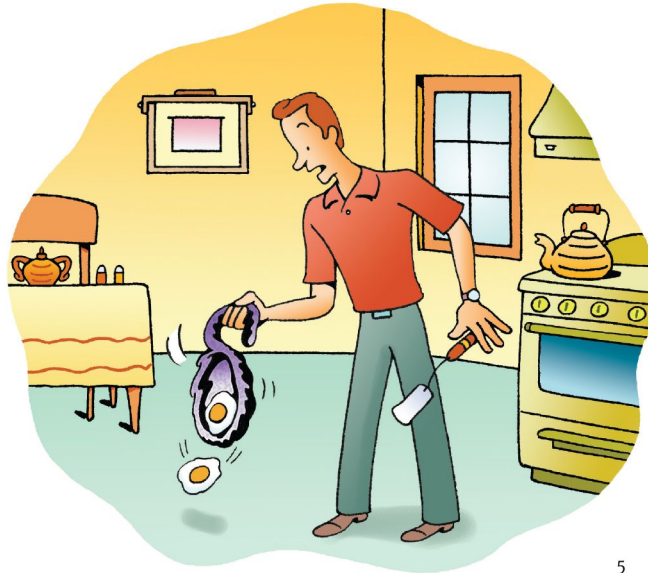
Rubber is a great **material** for making rain boots. Maybe we should make everything out of rubber!

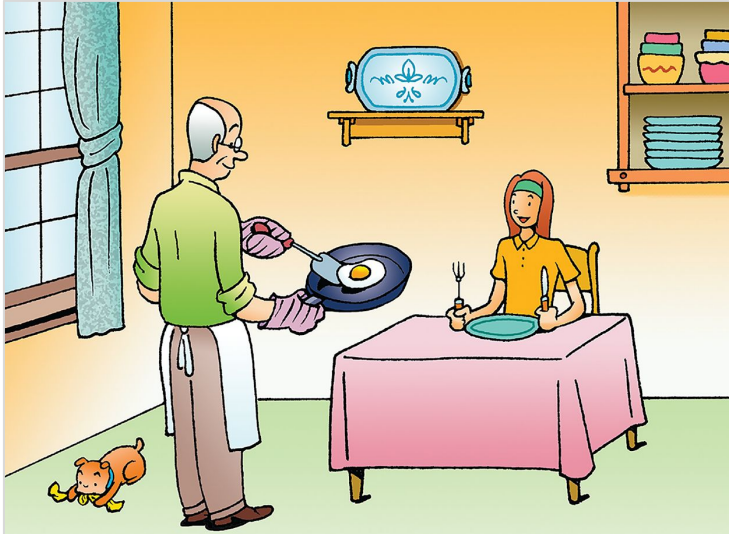
What if pans were made of rubber?

Would food bounce out onto the floor?

Would the pans melt?

Would our food ever get cooked?





Maybe rubber pans are not such a great idea. That's why pans are made of metal.

- Metal is usually hard and strong.
- Metal won't melt or burn on a stove.
- Metal cooks our food just right.

Metal is a great material for making pans. Maybe we should make everything out of metal!

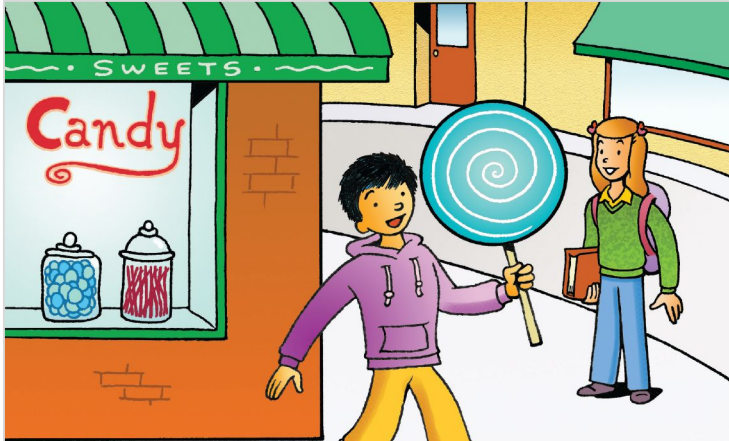
What if candy were made of metal?

Would we be able to chew it?

Would it taste like a car?

Would it **rust** inside our bellies?





Maybe metal candy is not such a great idea. That's why candy is made of sugar.

- Sugar isn't good for our teeth, but eating sugar is better than biting metal!
- Sugar tastes sweet.
- Sugar breaks apart in our mouths and in our bellies.

Sugar is a great material for making candy. Could sugar be the best material for making everything?

What if books were made of sugar?

Could we write in them?

Would the pages stick together?

Could we turn the pages without breaking them?

Would your little brother try to eat them?





Maybe sugar books are not such a great idea!
I guess that's why books are made of paper.

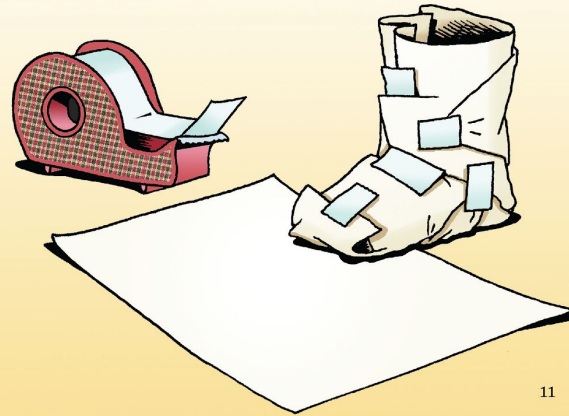
- It's easy to write on paper.
- Paper pages don't stick together.
- Paper is thin but strong, so we can turn the pages without breaking them.
- Your little brother would not like to eat a paper book.

Paper is a great material for making books. Maybe we should make everything out of paper!

Maybe we should make rain boots out of paper. Wait!
We already thought about that.

- Paper is not good for making boots, but rubber is.
- Rubber is not good for making pans, but metal is.
- Metal is not good for making candy, but sugar is.
- Sugar is not good for making books. What is?

When you **design** something, it's important to pick a material that will work.

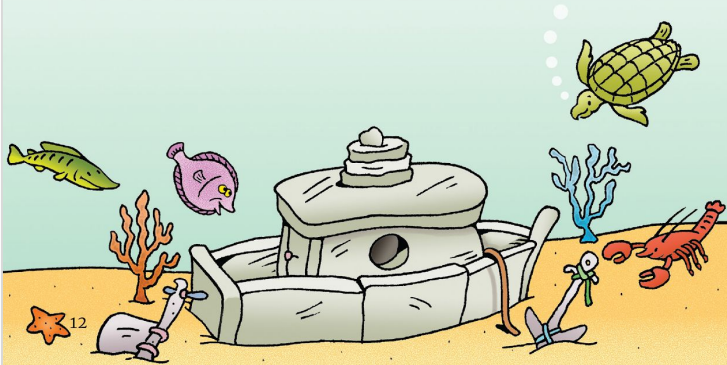


Some materials are just right for making certain things.

- Glass makes good windows.
- Cloth makes good hats.
- Wood makes good tables.
- Brick makes good houses.

Some materials are silly for making certain things.

- You wouldn't use stone to make boats.
- You wouldn't use clay to make food.
- You wouldn't use cloth to make cars.
- You wouldn't use milk to make clothes.

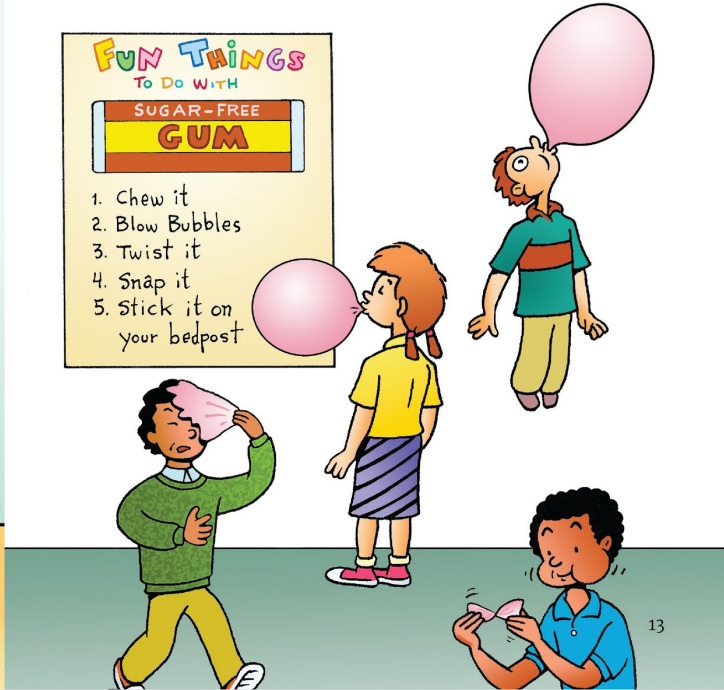


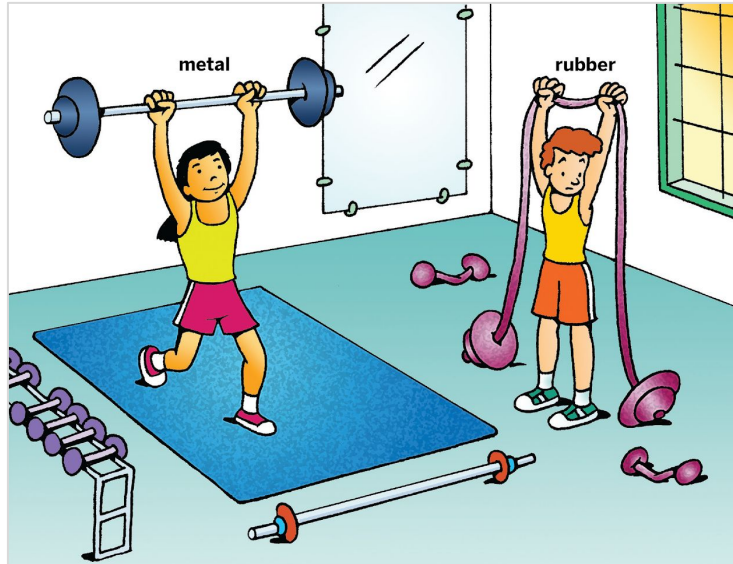
Sometimes things sound silly, but they work really well. Rubber candy sounds silly, but maybe it isn't so silly. A long time ago, people did use rubber for making candy. They designed gum!

FUN THINGS
To Do With

SUGAR-FREE GUM

1. Chew it
2. Blow Bubbles
3. Twist it
4. Snap it
5. Stick it on your bedpost





Every material has different **properties**. Properties include how materials look, feel, smell, taste, sound, and mix with other materials.

Hardness is a property of most kinds of metal.
Being able to bend easily is a property of rubber.

A material's properties make it great for some uses . . .
and not so good for other uses.

What if you were an **engineer**?

What would you design, and what materials would you use?

Just don't try to make a bike out of bananas.

Some things really are silly!



Activity 4

Reflecting on Materials and Properties



AmplifyScience

What If Rain Boots Were Made of Paper?

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We are going to look back at a couple of **important words** in *What If Rain Boots Were Made of Paper?*

Vocabulary



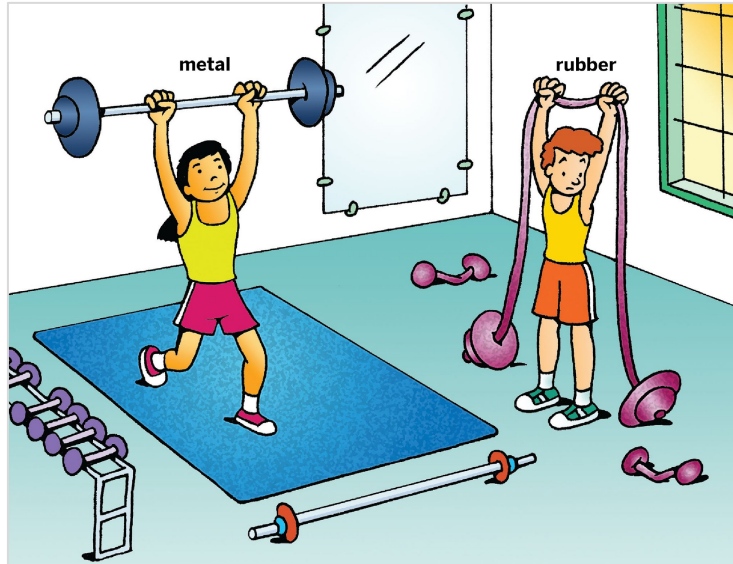
material

the stuff that makes up everything



What **materials** are used to make **cars**?

What **materials** are used to make **bottles**?



Every material has different **properties**. Properties include how materials look, feel, smell, taste, sound, and mix with other materials.

Hardness is a property of most kinds of metal.
Being able to bend easily is a property of rubber.

A material's properties make it great for some uses . . .
and not so good for other uses.

Turn to page 14. Let's think about the word "properties" as we read.



What were some of the silly examples of materials we read about?

Why were they silly?

Key Concept

Properties include how materials smell, look, taste, feel, and sound.

Vocabulary



property

something about a material that you can see,
hear, smell, taste, or feel



What is a **material** you see used in one or more objects in the classroom?

What are the **properties** of that material?

What do its properties make that material **good for**?

Activity 5

Keeping Track of New Ideas



We will continue posting important **words**, **images**, and **ideas** to the **classroom wall**.

You can refer to the wall to remember the new things we're learning.

Before we begin designing our glue, we need to **learn more about materials and their properties**.

End of Lesson



THE LAWRENCE
HALL OF SCIENCE
UNIVERSITY OF CALIFORNIA, BERKELEY

Amplify.

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Suggestions for Online Synchronous Time



Online synchronous time

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

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

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

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

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



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

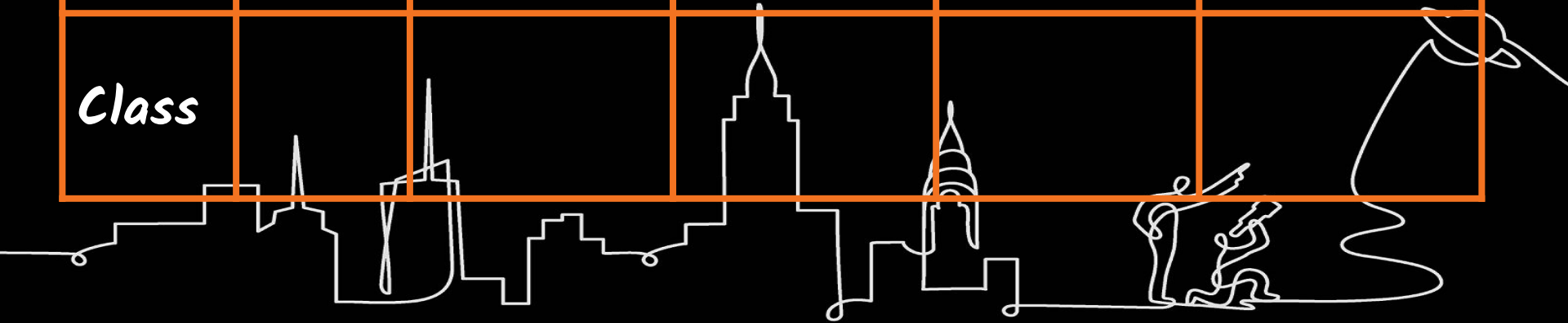
	M-T	W	Th-F
Pod 1	In class 	Remote online class 	Remote 
Pod 2	Remote 	 	In class 

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

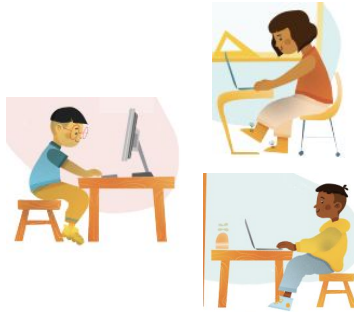
Remote Model: with synchronous & asynchronous learning



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



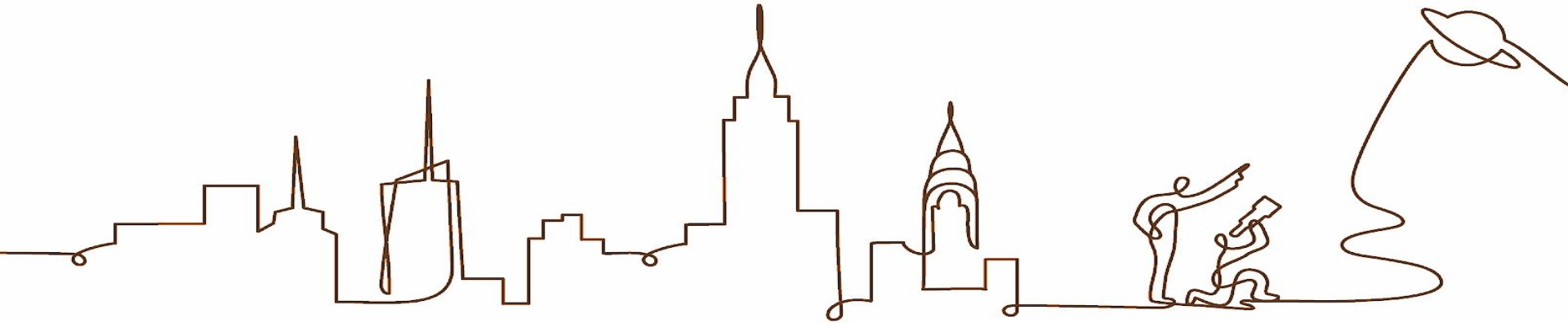
Day 5

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

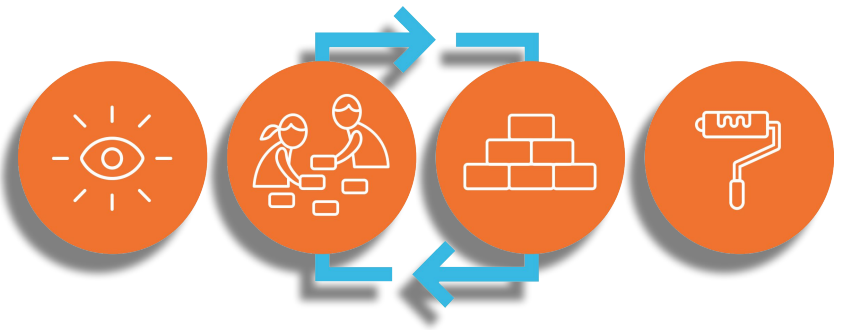
D

@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

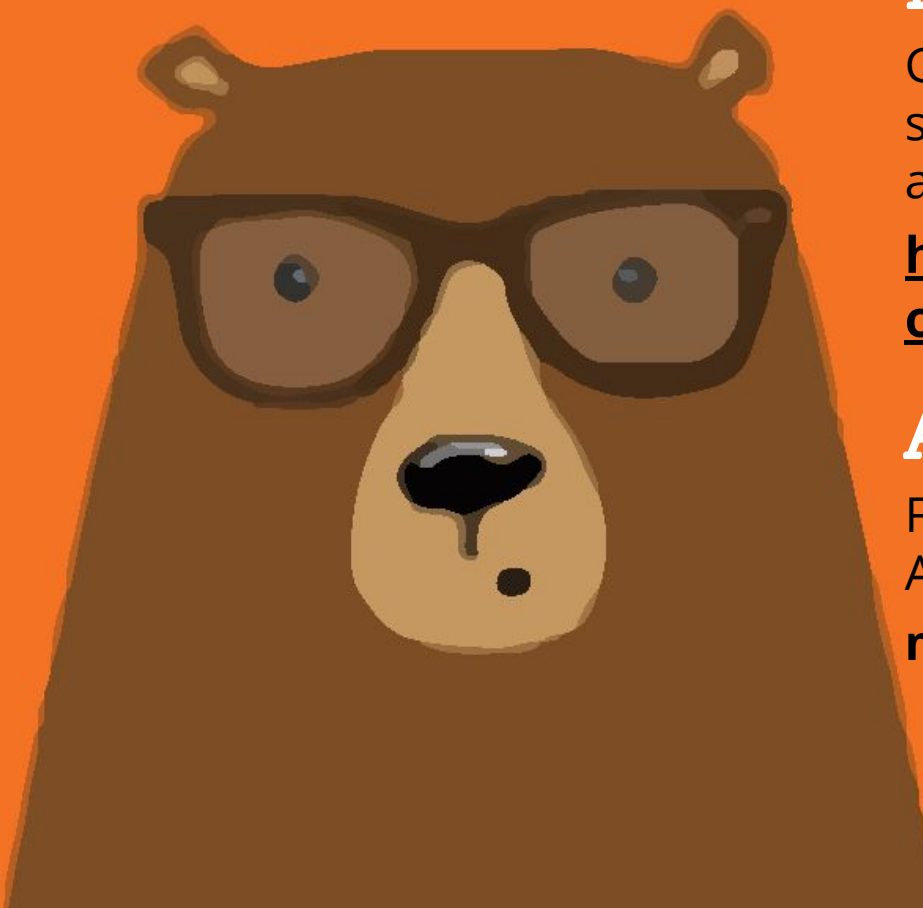
yes but still
working

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