Welcome to Amplify Science!

Follow the directions below as we wait to begin.

1. Please log in to your Amplify Account.

2. Sign in using link dropped in chat.

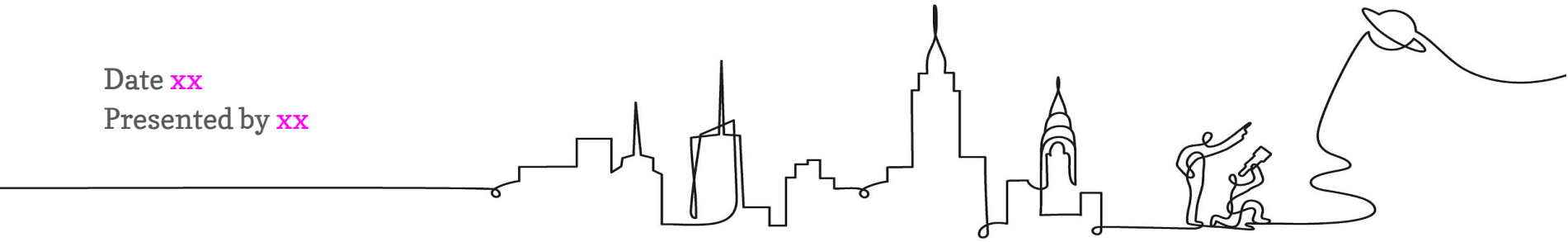3. In the chat, share your name, grade level, and school you teach in.

Amplify Science
New York City

Analyzing Student Assessment Data
Grade K- Pushes and Pulls

Date xx
Presented by xx

Remote Professional Learning Norms

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

Engage at your comfort level - chat, ask questions, discuss, share!

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Use two windows for today's webinar

Objectives:

By the end of this 1-hour workshop, you will be able to...

- Explore the Amplify Science Formative Assessment system.

- Explore how to use Embedded Formative Assessments to gain access to credible, actionable, and timely diagnostic information about students progress toward learning the unit goals.

- Learn strategies for analyzing student's work & assessment data, examine resources to help plan for tailoring instruction.

- Explore supports for differentiation to meet the diverse learning needs in their classroom

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Plan for the day

- **Framing the day**
  - Welcome and introductions
  - Anticipatory Activity

- **Amplify Science Assessment System**
  - Credible, Actionable, Timely
  - Embedded Formative Assessments
  - Monitoring Student Progress

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  - Strategies for collecting/analyzing student work & assessment data
  - Resources for tailoring instruction

- **Amplify Science Embedded Supports**
  - Multimodal Instruction
  - Discourse routines
  - Differentiation/ Meeting the needs of diverse learners

- **Closing**
  - Reflection/Survey

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Introductions!

Who do we have in the room today?

- **Introduce yourself (Name, School, Role)**
- **In the chat, share one word or phrase thats describes how you teaching Amplify.**
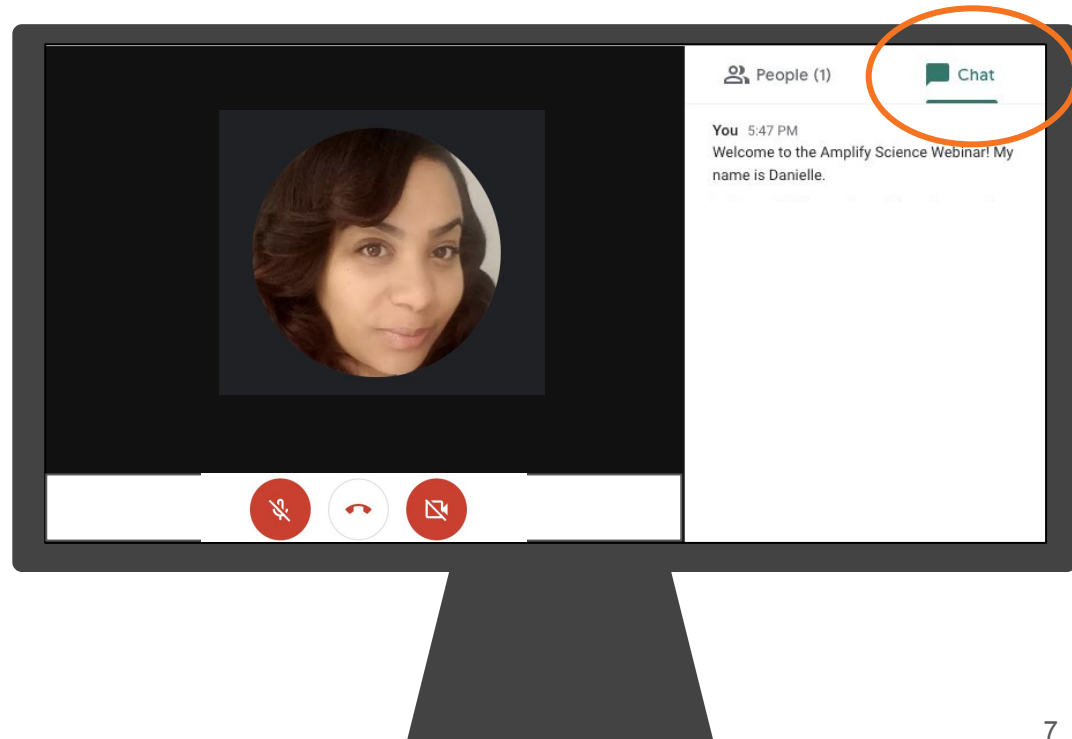
Anticipatory activity

On the Jamboard "post"….

- How are you currently collecting student data?
- How are you using that data to form your instruction?

Please respond to the question in the Jamboard. If having difficulty use the chat.

Idea

Idea

Idea

Idea

Idea

Plan for the day

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Credible, Actionable, Timely

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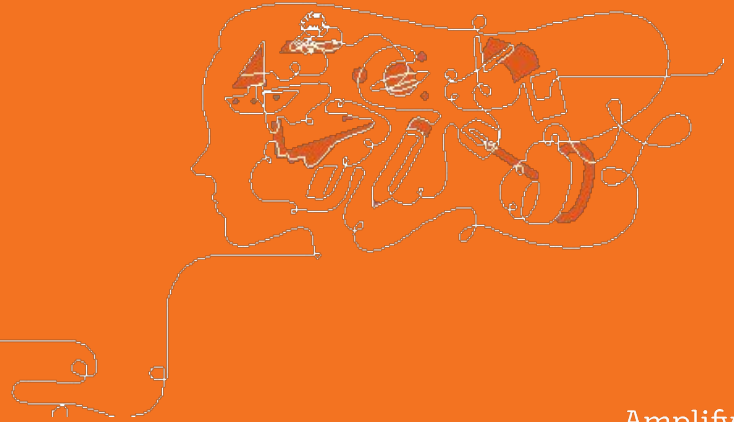
Design Principles of Formative Assessment

- **Credible:** information from the assessment is trustworthy
- **Actionable:** information is at a level of specificity such that a teacher can use it to bolster instruction
- **Timely:** information comes at a time when a teacher is able to take action and when a student can productively leverage feedback

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Assessment System

- The Assessment System includes formal and informal opportunities for students to demonstrate understanding and for teachers to gather information throughout the unit. Built largely around instructionally embedded performances, these opportunities encompass a range of modalities that, as a system, attend to the three-dimensional nature of science learning specified in the Next Generation Science Standards (NGSS) and the National Research Council's *Framework for K–12 Science Education* (2012).
- Each assessment was developed for a particular purpose. Entry-Level and Summative Assessments, includes assessments that can be used to measure growth, including entry-level assessments that reveal students' thinking at the beginning of the unit, and assessments that indicate students' level of understanding at the end of the unit, which can show the progress students have made and that can be used summatively.
- The second section, Monitoring Progress, includes assessments that can be used to monitor students' progress—formative assessments that provide teachers with actionable information and instructional suggestions for supporting students' learning and keeping all students on track—and assessments that help students monitor their own progress.
- Finally, the Assessments and Grading section provides suggestions around how the assessments might relate to grading.
- Assessment in kindergarten and grade 1 emphasizes multiple opportunities for students to show what they know through their oral and physical responses to prompts during partner and class discussions, through their engagement and participation in activities, and through some independent work products.

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Assessment System Components

- **Assessment guides/rubrics:** Guidance is provided to gauge the level of student performance on the assessment task, with suggestions for student feedback and questioning strategies to advance learning, revise performance, or elicit and clarify student thinking. Assessment guides/rubrics are available in Digital Resources in the Lesson Brief for the lesson in which the task occurs.

- **Clipboard Assessment Tool:** The Clipboard Assessment Tool offers support for conducting brief, talk-based checks that reveal students' thinking and correspond to the level of the Progress Build. The Clipboard Assessment Tool is provided at key points in the unit (in Digital Resources) and includes tailored sets of questions and the specific activities that present an opportunity to ask those questions. Also included is space to write notes about students' ideas.

- **Possible student responses:** Possible student responses are provided to model how evidence of understanding, or partial understanding, may be demonstrated by the student for the specific task. Possible student responses are provided in the Possible Responses tab in the activity where there is an applicable notebook page. Possible student responses also appear in the Assessment Guide for the End-of-Unit Assessment (in Digital Resources).

- **Look for/Now what? notes:** Each On-the-Fly Assessment includes a two-part description of what evidence of understanding would look like for the task (Look for) and how instruction may be adjusted in response (Now what?). These are accessible by pressing the orange hummingbird icon in the activity in which they appear.

- **Assess understanding/Tailor instruction notes:** Each Critical Juncture Assessment includes a two-part description of how the expected level of student understanding may be demonstrated in the task (Assess understanding) and how instruction may be adjusted in response (Tailor instruction) at the class, group, and student level. These are accessible by pressing the orange hummingbird icon for the activity in which they appear.

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Embedded Formative Assessments

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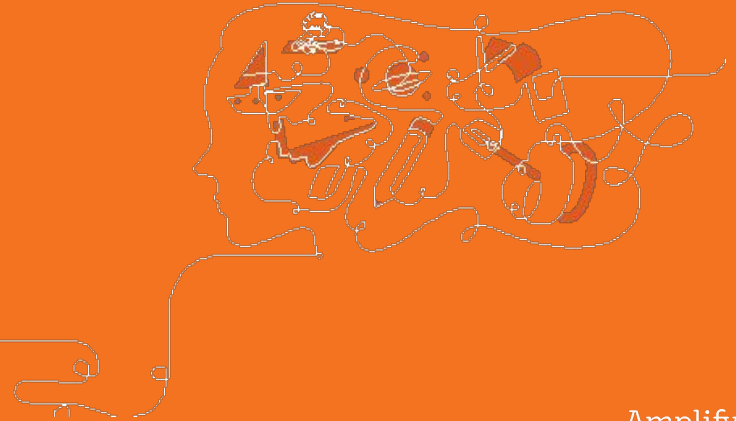
What is Formative Assessment?

Formative assessment is a cycle of eliciting, interpreting, and taking action on information about student learning.

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Design Principles of Formative Assessment

Model of student learning over time

- Considers students' prior knowledge
- Built to develop conceptual connections
- Leads to complex understanding
- Support for diagnosing learner progress

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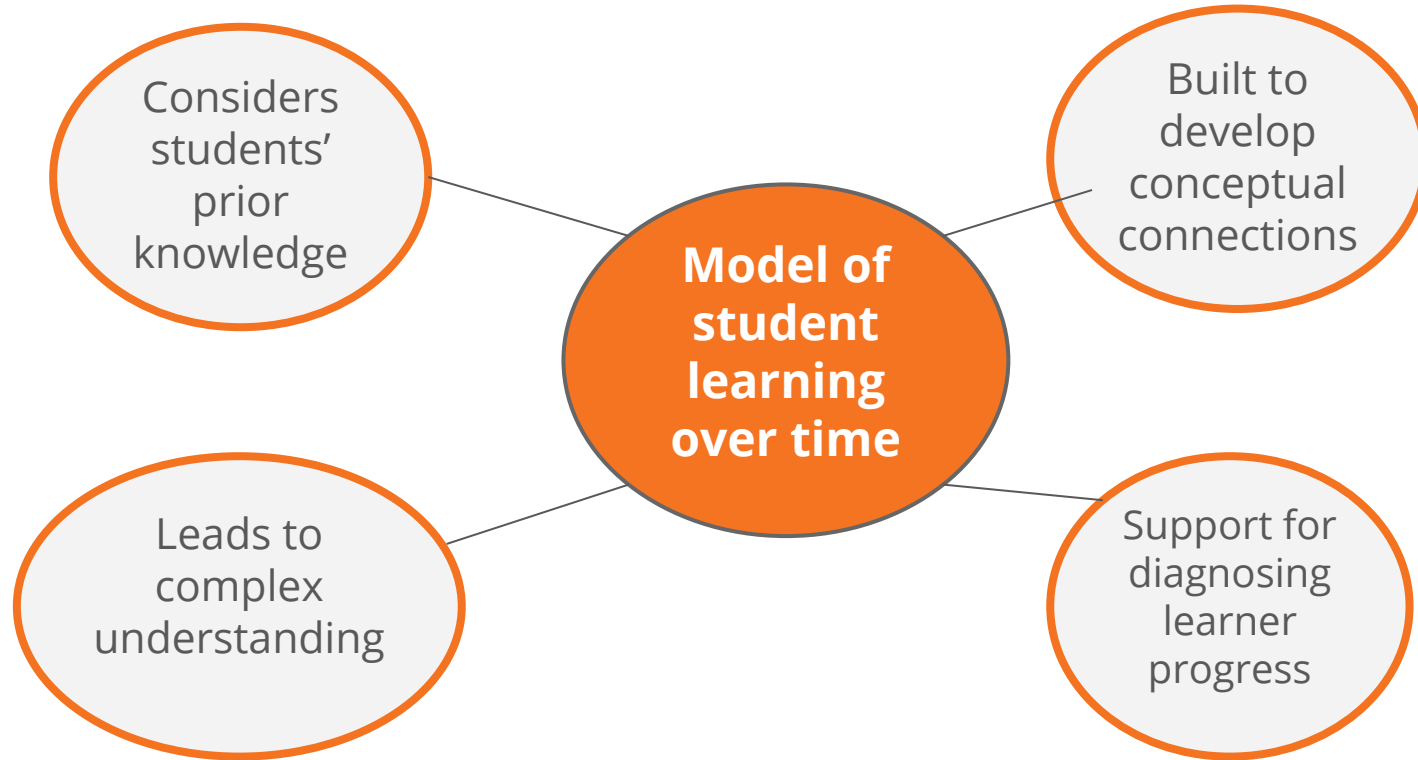
Types of assessments

(F) Formative Assessments
Used to guide instruction

Pre-Unit
Designed to gauge students' initial understanding and pre-conceptions about core ideas in the unit.

On-the-Fly
Quick check for understanding designed to help monitor and support student progress throughout the unit.

Critical Juncture
Designed to occur at points in the unit in which it is especially important that students understand the content before continuing.

(S) Summative Assessments
Used to measure student learning at the end of instruction

End-of-Unit
Final evaluation of students' understanding of core ideas in the unit.

Pushes and Pulls Progress Build

Deep, causal understanding

Prior knowledge

Moving objects can change direction because of a force from a moving or still object.

An object starts to move in the direction of the force exerted on it.

Stronger force causes an object to move a longer distance.

An object starts to move when a force is exerted on it.

What new ideas are added at each level?

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Pre- and End-of-Unit Assessments

Deep, causal understanding

Prior knowledge

Moving objects can change direction because of a force from a moving or still object.

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Pre-Unit Assessment

- Reveals preconceptions

- Reveals ideas and experiences students can build on throughout the unit

- Contains multiple choice questions and two written responses

- Multiple choice section is auto-scored

- Contains a Scoring Guide with rubrics for analyzing student responses

- Happens in Lesson 1.1

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Critical Juncture Assessments

Deep, causal understanding

Prior knowledge

Moving objects can change direction because of a force from a moving or still object.

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Critical Juncture Assessment

- Occurs at a key point in the unit

- Gauges students' growing understanding about core ideas in the unit

- Contains multiple choice questions and two written responses

- Multiple choice section is auto-scored

- Contains a Scoring Guide with rubrics for analyzing student responses

- Followed by a differentiated lesson based on results

On-the-fly Assessments

Deep, causal understanding

Prior knowledge

Moving objects can change direction because of a force from a moving or still object.

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On the Fly Assessment

- Mostly frequently occurring assessment

- Quick check for understanding designed to help monitor and support student progress throughout the unit.

- Provides teachers with an opportunity to adjust instruction to meet student needs

- Contains Look For and Now What evaluation guidance

- Followed by a differentiated lesson based on results

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Self Assessments

Deep, causal understanding

↑

Prior knowledge

Moving objects can change direction because of a force from a moving or still object. 🙂

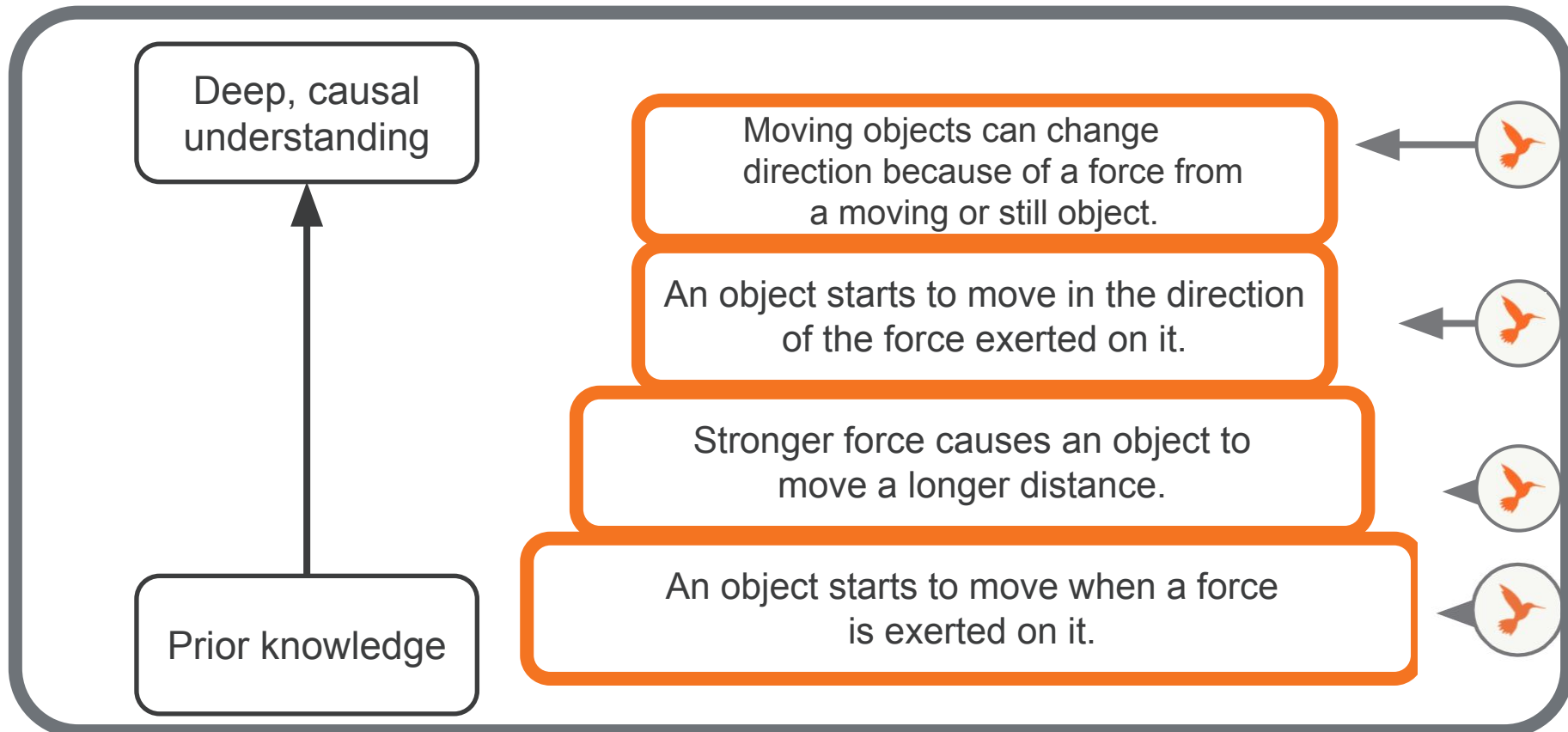An object starts to move in the direction of the force exerted on it. 🙂

Stronger force causes an object to move a longer distance. 🙂

An object starts to move when a force is exerted on it. 🙂

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Portfolio Assessments

Deep, causal understanding

Prior knowledge

Moving objects can change direction because of a force from a moving or still object.

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Investigation Assessment

Deep, causal understanding

Prior knowledge

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Investigation Assessments

Grade	Unit Title
Kindergarten	Sunlight and Weather
First Grade	Light and Sound
Second Grade	Plant and Animal Relationships
Third Grade	Balancing Forces
Fourth Grade	Vision and Light
Fifth Grade	Patterns of Earth and Sky

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Assessment System

Deep, causal understanding

Prior knowledge

Moving objects can change direction because of a force from a moving or still object.

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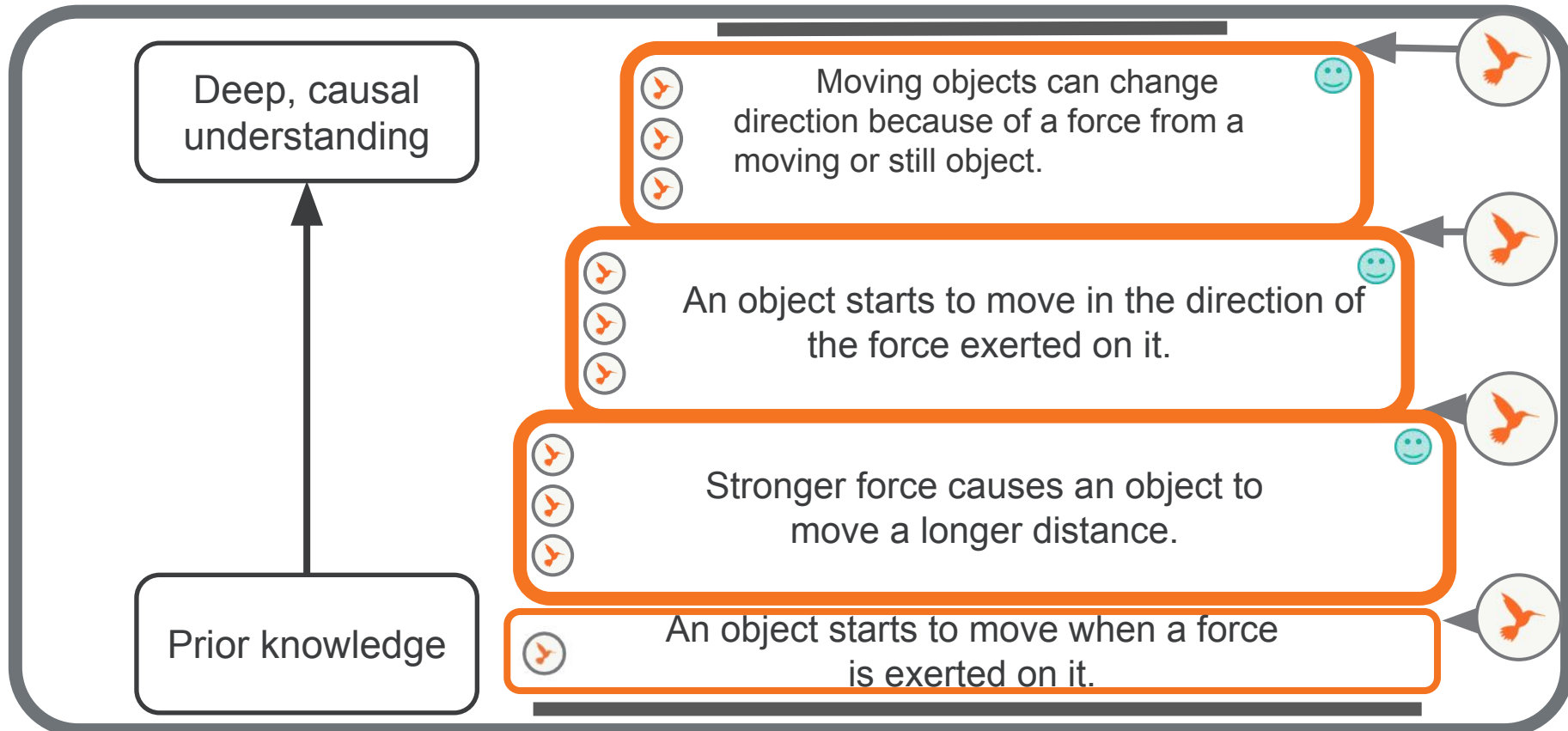Stronger force causes an object to move a longer distance.

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Unit Level Assessment Documents

Assessment System:
- explains the organization of the assessment system
- lists out each assessment in the unit with key information
- goes into an explanation of each type of assessment found in the unit

Embedded Formative Assessments:
- explains what to look for at each assessment opportunity
- gives guidance for instructional next steps

Assessment Opportunity	Next Generation Science Standards
Lesson 1.1: 3-D Performance Task: Scientific Explanation	**DCI:** • PS3.A: Definitions of Energy
Assessment Type: Pre-Unit Assessment	**SEPs:** • Practice 1: Asking Questions and Defining Problems • Practice 6: Constructing Explanations and Designing Solutions
Evaluation Guidance: • Assessment Guide (in Digital Resources for Lesson 1.1), with support for revealing students' prior knowledge, preconceptions, and to gauge their facility for using the SEPs and CCCs. • Possible Student Responses	**CCC:** • Systems and System Models

Printable Resources

- Coherence Flowcharts
- Copymaster Compilation
- Flextension Compilation
- Investigation Notebook
- Multi-Language Glossary
- NGSS Information for Parents and Guardians

Standards and Goals

3-D Statements

Assessment System

Embedded Formative Assessments

Books in This Unit

Apps in This Unit
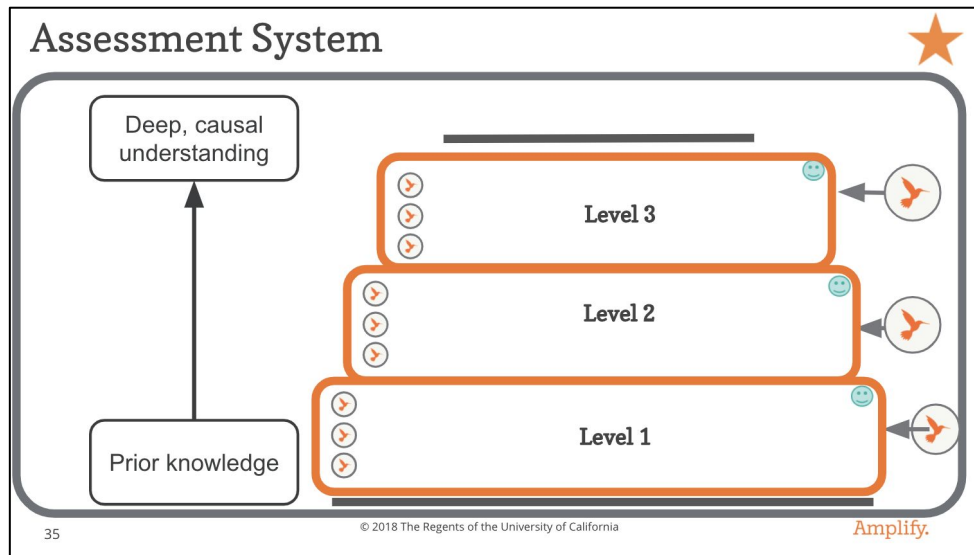
Flextensions in This Unit

Lesson 1.2, Activity 4

On-the-Fly Assessment 1: Synthesizing Information

Look for: This lesson provides students' first opportunity to learn about and discuss how to synthesize information as a reading strategy. They will continue to develop facility with this strategy throughout the unit through repeated practice. As you circulate, make note of what students are connecting to the reading and what deeper understanding they come to as a result. Are they connecting together relevant pieces of information from different sources? Are they using these connections to help them better understand systems?
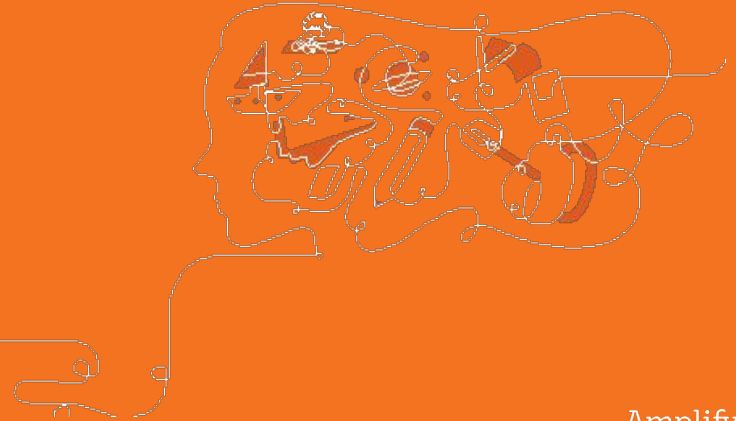
Now what? If students are having trouble getting started with synthesizing, or if they are connecting the reading to unrelated information, provide some additional models. You may wish to provide examples that combine information from the first section of *Systems* with information from other sources. Depending on how many students need this support, you could either coach a few students individually during the reading or you could work with a small group or the whole class. Be sure to remind students to keep in mind the goal of connecting pieces of information in order to come to a deeper understanding of the concept of systems.

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Assessment Reflection

- There are many assessment opportunities in each Amplify Science unit.

- What does having this quantity of assessment opportunities do for students? For teachers?

Assessment System

Deep, causal understanding

Prior knowledge

Level 3

Level 2

Level 1

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Monitoring Student Progress

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How can you monitor students progress?

- Through the implementation of multimodal instruction (Do, Talk, Read, Write, Visualize)
- Using the embedded formative assessments (Pre/End of unit, On-the-fly, Critical Juncture,etc)
- Observation
- Student Work

Multiple Modalities: Do, Talk, Read, Write, Visualize

The crosscutting concept emphasized in the **Pushes and Pulls** unit is Cause and Effect. In their role as pinball engineers, students delve deeply into investigating the relationship between force and motion and use that information to design and build a Class Pinball Machine. Students conduct simple tests to gather evidence to support or refute their ideas about causes. Students return to the idea of cause and effect again and again throughout the unit, through a variety of modalities.

Do. Students have multiple opportunities to investigate connections between observable causes and effects, such as seeing the effect of exerting a strong or gentle force on a ball.

Talk. Each investigation is followed by opportunities for student-to-student talk through which students develop an understanding of the mechanisms that connect those causes to their effects—exerting a gentle force results in moving the ball a shorter distance than exerting a strong force.

Read. In Forces in Ball Games, the unit's reference book, students read about forces in different games that involve balls. Students analyze what caused a force to be exerted and the effect of that force.

Write. Students write a mini-book that explains why the pinball moves the way it does. Students' explanations include a description of the effect of a specific kind of force that is exerted.

Visualize. Throughout the unit, students focus on visualizing the movement that one might expect after a specific kind of force is exerted.
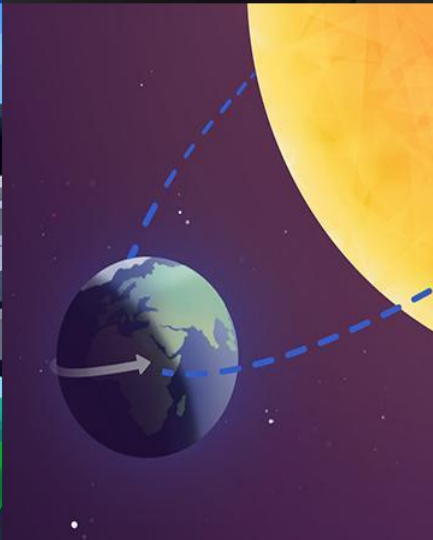
Plan for the day

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  - Differentiation/Meeting the needs of diverse learners

- **Closing**
  - Reflection/Survey

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Strategies for Collecting and Analyzing Student Work

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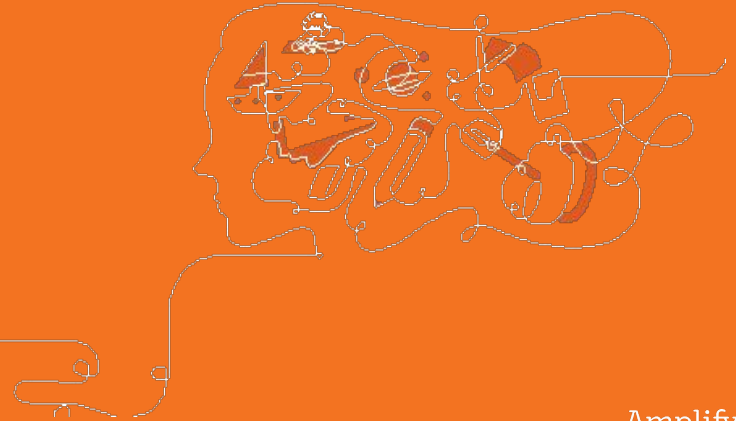
Collecting Data

How do you typically collect and record student data?

What strategies have you successfully used for collecting data in a remote learning setting ?

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Collecting data

What ideas do you have for collecting student data?

Synchronous	Asynchronous
Formative assessments	Formative assessments
Summative assessments	Summative assessments
Observations	Observations
Classwork	Classwork
Homework	Homework
Simulations	Simulations
Modeling Tools	Modeling Tools
Student Talk	Student Talk

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Recording Data

What ideas do you have for collecting student data from assessments?

Synchronous

Amplify Platform

Note - taking

Graphic Organizer

Google doc/forms

Google Classroom

Asynchronous

Amplify Platform

Google Classroom

Google Forms

Google Doc

Third Party Apps

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Pushes and Pulls: Lesson 1.2 Overview

Lesson Goal:

The purpose of this lesson is to connect students' discoveries about movement with scientific language, which, in turn, prepares them for explaining forces when they build their Box Models to test how a pinball machine works.

Activity 1: Exploring and Describing Movement

- Students learn to play Rugball. They practice the game, and then start to use their own words to describe the ball's movements.

Activity 2: Visualizing Movement

- Students look at a slideshow of images to visualize several types of movement and then discuss what made the objects start to move.

Activity 3: Explaining with Because

- Students discuss and perform everyday classroom actions, learning how to connect events by using a *because* language frame.

Activity 4: Reading Talking About Forces

- Teacher reads aloud *Talking About Forces*, stopping to practice both visualizing and using scientific language about exerting forces.

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Collecting and Analyzing Embedded Formative Assessment Data

Look at the class data, what do you notice about the class as a whole? Individually?

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[On-The- Fly Status of the Class Data Organization Tool]

Teacher: **Grade Level :**   **Date:**

Unit Name: **Chapter:**   **Lesson:**

Directions: **A.)** Determine the "Look For's" for the On the Fly Assessment.
Look For's: (input all "Look For relevant to the on the fly assessment)

1.
2.
3.

B.) On the chart below, place a **plus (+)** if student demonstrates a strong understanding of the look for, a **backslash (/)** if student demonstrates some understanding and a **minus (-)** if student demonstrates **no understanding** of the above look for.

C.) After data are collected in the OTF, refer to the NOW WHAT section for ideas on how to respond to your students' needs.

Student Name	Look For # 1	Look For # 2	Look For # 3	Notes
A	+	+	+	Use lesson extension
B	/	/	/	RT
C	-	-	-	Small group reteach required (see differentiation brief)
D	+	+	/	RT
E	+	-	-	Small group reteach required (see differentiation brief)
F	-	-	-	Small group reteach required (see differentiation brief)
G	/	/	-	RT
H	+	/	-	RT
I	+	-	-	Small group reteach required (see differentiation brief)
J	+	/	-	RT
K	/	-	-	RT

1

Planning for an Upcoming Assessment

1.Choose an upcoming assessment for your unit.

2.Plan using the template or your note catcher.

Unit: Lesson:			
Analyzing student data: refer to the Look for section of the Lesson ____ assessment. *(If using the @Home Units refer to the chapter assessment considerations).*		**Taking action based on student data:** refer to the Now what section of the ____ assessment and consider how you might adjust instruction in your classroom.	
How will I collect data?	**Which misconception?**	**When?**	**How?**
	❏ Key Concept ❏ Practice ❏ Crosscutting Concept Notes:	❏ In the moment ❏ In upcoming activity ❏ Outside of lesson Notes:	❏ Keep an eye on certain students ❏ Provide additional instruction ❏ Revisit an activity Notes:

Model Analysis: 1.2 Activity 2

Analyzing student data: refer to the Look for section of the Lesson 2.1 assessment and refer to your observation notes.		Taking action based on student data: refer to the Now what section of the 2.1 assessment and consider how you might adjust instruction in your classroom.	
Which misconception?	**Which students?**	**When?**	**How?**
❏ Key Concept ❏ ✔ Practice Crosscutting Concept Notes: *Students visualize types of movement and discuss what made the object start to move.*	*Tristian* *Trent* *Wanda* *Zena*	❏ In the moment ❏ In upcoming activity ❏ Outside of lesson Notes:	❏ Keep an eye on certain students ❏ Provide additional instruction ❏ Revisit an activity Notes:

Model Analysis: 1.2 Activity 2

Analyzing Student Assessment Data: Refer to the "Look For" section of Lesson 1.2 Act. 2 and refer to your observation notes.		Taking action based on student data: refer to the Now what section of the 1.2 Act. 2 assessment and consider how you might adjust instruction in your classroom.	
Which misconception?	**Which students?**	**When?**	**How?**
❏ Key Concept ❏ Practice ☑ Crosscutting Concept Notes: The focal comprehension strategy in this unit is visualizing by using information read or seen in books. Student should reference elements in an image and talk or gesture to describe movement.	Tristian Trent Wanda Zena	☑ In the moment ❏ In upcoming activity ❏ Outside of lesson Notes: Repeat one or two accurate examples of visualizing that you noticed in students' talk. Highlight the way that students took what could be seen in the images and then went beyond it in describing movement.	☑ Keep an eye on certain students ❏ Provide additional instruction ❏ Revisit an activity Notes: Coach students listed during 1.2 Act 3 after the Teacher Led Discussion as we continue to movement.

Resources for Tailoring Instruction

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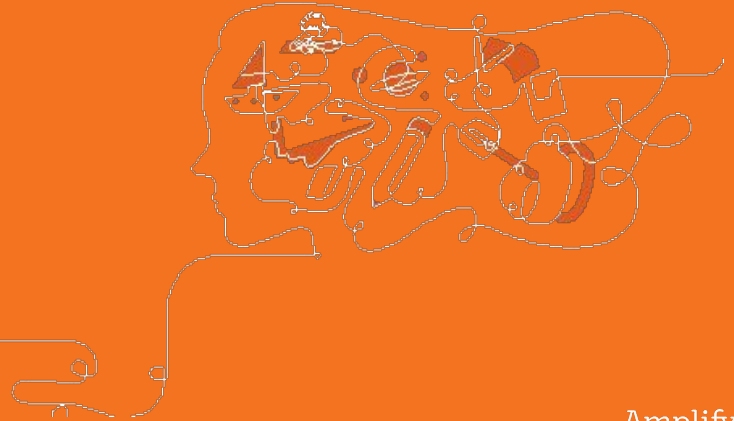
How do I tailor instruction for my classroom?

- Group students according to ability level
- Use the "Look For" and "Now what" tools to provide support based on formative assessment data
- Use the differentiation brief within each lesson
- Pull intervention suggestions from the student online component
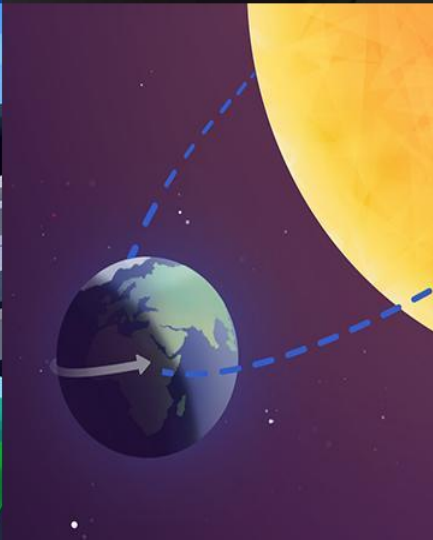
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Multimodal Instruction

Multimodal, phenomenon-based learning

In each Amplify Science unit, students embody the role of a scientist or engineer to **figure out** phenomena.

Through problem based deep dives, they gather evidence from multiple sources, using multiple modalities.

Do, Talk, Read, Write, Visualize

Amplify Science approach
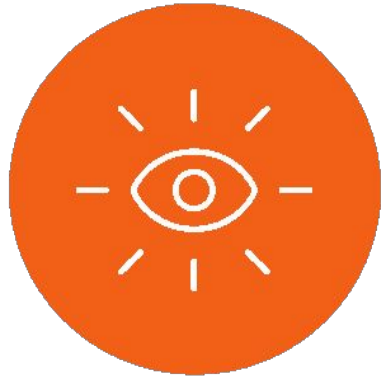
Introduce a phenomenon and a related problem

Collect evidence from multiple sources
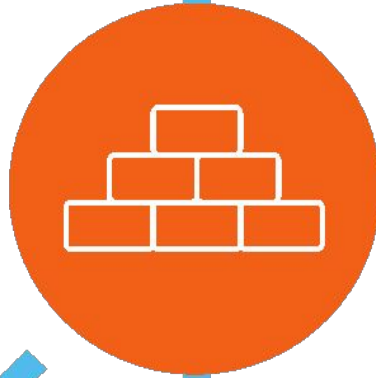
Build increasingly complex explanations

Apply knowledge to a different context

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Multimodal learning

Gathering evidence from different sources

Science Concept

Read

Do

Write

Talk

Visualize
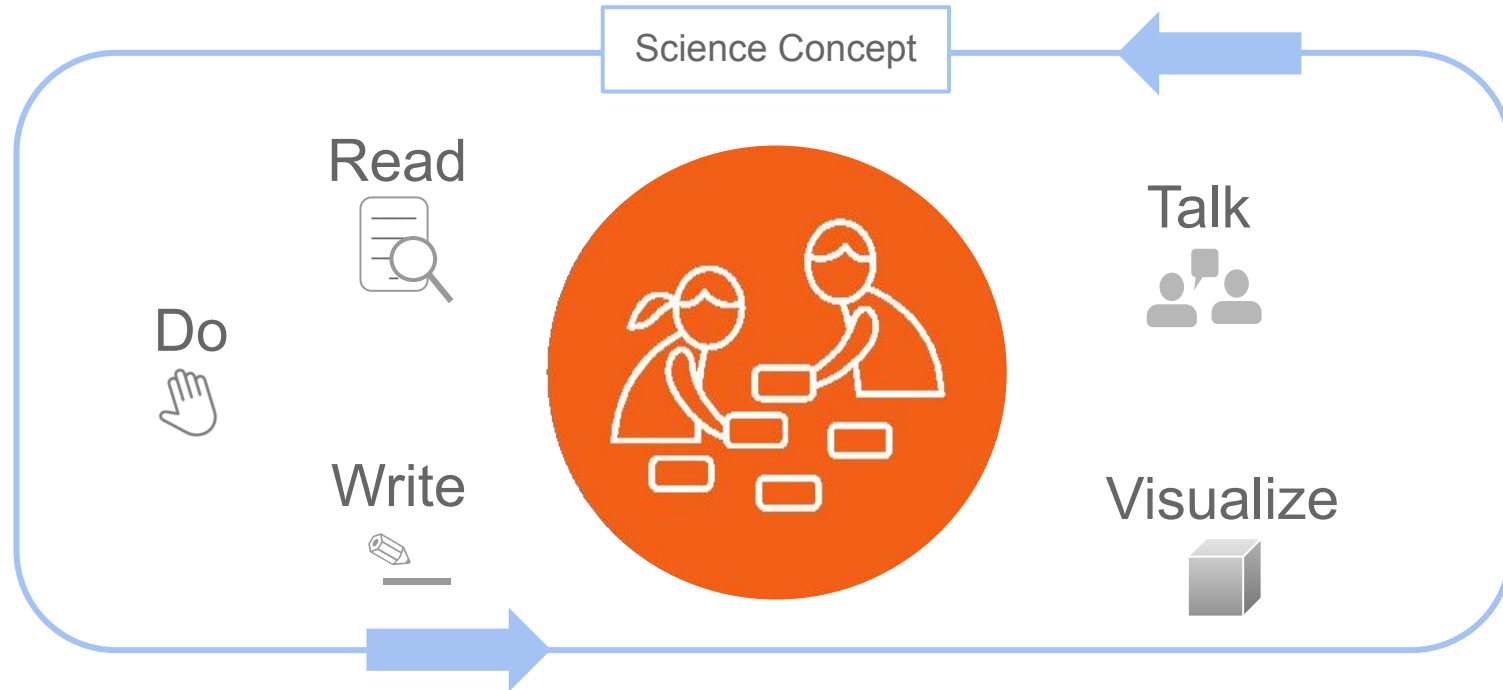
Amplify.

Discourse Routines
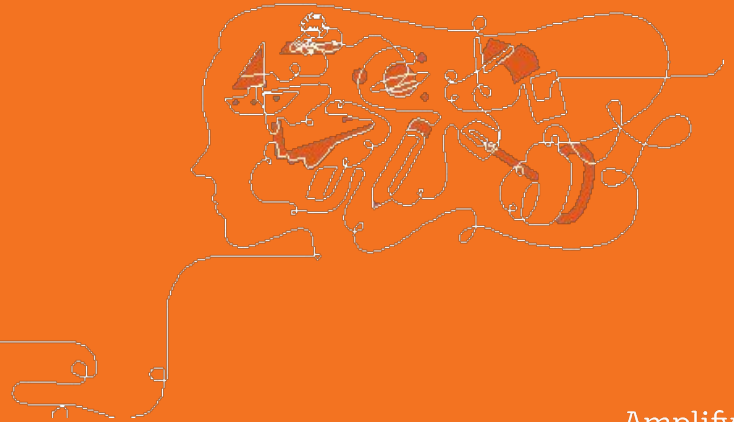
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Amplify Science discourse routines

- Oral Composition and/or Drawings as teacher captures words (K-1)
- Explanation Language Frames
- Shared Listening
- Partner Reading
- Thought Swap
- Think-Pair-Share
- Word Relationships
- Questioning Strategies [K-8]
  - Do you agree/disagree?

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	Kindergarten - Grade 1	**Grades 2-5**
Discourse routines	Students engage in informal partner, small group, and full class talk as well as with Shared Listening, a structured discourse routine. To work towards answering each Chapter question, students first compose responses orally with a Language Frame activity using sentence frames written on sentence strips, completed with cards. They use this practiced sentence structure to write explanations together as a class (Shared Writing) or in their investigation notebooks.	Students engage in informal partner, small group, and full class talk as well as with a variety of structured discourse routines. Each unit includes 2-3 different routines such as: • Shared listening • Think-pair-share • Think-draw (or write) -pair-share • Thought swap • Concept mapping • Word relationships • Building on ideas • Evidence circles

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Additional support considerations

Modifying the instructional suggestions for my students

- Additional practice time

- Strategic grouping

- Additional resources (multilingual glossary, word banks, other environmental print)

- Increased support for gradual release of responsibility

- Alternative response options

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Differentiation

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Differentiation Briefs

- Embedded supports for diverse learners
- Potential challenges in this lesson
- Specific differentiation strategies for English learners
- Specific differentiation strategies for students who need more support
- Specific differentiation strategies for students who need more challenge

Lesson Brief

Overview

Materials & Preparation

Differentiation

Standards

Vocabulary

Unplugged?

Step-by-step   Teacher Support   Possible Responses   My Notes

Differentiation briefs

Categories of differentiation briefs

- Embedded supports for diverse learners
- Potential challenges in this lesson
- Specific differentiation strategies for English learners
- Specific differentiation strategies for students who need more support
- Specific differentiation strategies for students who need more challenge

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Lesson 1.2 Specific Differentiation

Embedded Supports for Diverse Learners

Read-Alouds. Reading to learn more about science complements the science activities in this unit. Our approach to reading is built on a synergistic design of texts and instruction that supports students in understanding the information presented in the texts. In this lesson *Talking About Forces* is introduced through a Read-Aloud experience. You read the text and model using comprehension strategies, fluent and expressive reading, and thinking about new vocabulary in order to facilitate students' comprehension of the text. As you read this book aloud, students learn more about science and more about the process of reading a book about science.

Gestures to support word learning. Gestures are a natural communicative and visual component of speech production. Gestures serve the speaker by providing a nonverbal way to communicate ideas and benefit the listener by providing a multimodal way of understanding the information a speaker is trying to convey. As you read *Talking About Forces*, students are invited to use specific gestures to accompany spoken vocabulary and aid visualizing. This gives English learners and students unfamiliar with key vocabulary more opportunities to connect the new vocabulary to their primary languages or prior knowledge. Giving all students a nonverbal way to use science vocabulary also provides multiple opportunities for them to express their thinking and ultimately produce new spoken vocabulary.

Partner talk. Learning to communicate in the ways that scientists and engineers do is an important practice in this unit. In this lesson, students will have multiple opportunities to think about their own ideas and then discuss those ideas with partners. We encourage you to use any partner-discussion routines with which your students are familiar. This prepares them for the more formalized discourse routine to which they will be introduced later in the unit.

Explanation Language Frames. Students benefit from extra practice and real-world examples as they develop their understanding of how to explain scientific ideas through oral language. Providing the Explanation Language Frames gives students a scaffold to help them construct their own sentences to explain their understanding about the relationship of forces to movement.

Potential Challenges in This Lesson

Reading-centered. Reading science texts is challenging. The vocabulary and sentence structures in *Talking About Forces* may be unfamiliar to some students. Students who struggle to follow complex oral language in general may struggle with the reading in this lesson.

Overstimulation. Some students may have difficulty focusing on the task at hand during Activity 1 (the Rugball activity). Consider ways you can make expectations clear ahead of time and support students in focusing their efforts on observing and describing how the ball moves.

Specific Differentiation Strategies for English Learners

Leveraging primary languages. Acknowledging students' primary languages can have a positive affective and cognitive impact. Having students use their primary languages affirms their identities and cultures and helps them gain access to unfamiliar content in English. You may wish to explain that the word *because* is used in the Explanation Language Frames and that it translates to the word *porque* in Spanish. You may wish to write a language frame, using the Spanish word (__ *porque*__.) and invite English learners for whom Spanish is their primary language to complete the language frame in English or Spanish.

Specific Differentiation Strategies for Students Who Need More Support

Choose partners strategically. Creating positive and supportive student partnerships is a crucial first step for creating the kind of classroom culture in which students feel confident and comfortable sharing their thinking. This unit provides many opportunities for student learning to occur through partner discussions. Thinking ahead to create good working partnerships will be an essential component of success for these kinds of lessons.

Intonation. You may wish to stress the word *because* when you model the Explanation Language Frame. The additional stress on the word *because* can help students anticipate that you are connecting two ideas. As students become more familiar with this sentence structure, you can reduce this scaffold.

Specific Differentiation Strategies for Students Who Need More Challenge

Additional examples, using Explanation Language Frame. During Activity 3, invite a few students to share their own examples that use the *because* Explanation Language Frame. This challenges students to use the language frame and provides additional examples of this language for all students to hear.

Embedded instructional design

- Modeling Active Reading/ Active Reading
- Anticipation Guides
- Science/ Everyday Word Chart
- Word Relationships Activities
- Graphic Organizers
- Reflective writing with language frames/ sentence starters
- Practice Tools
- Physical and digital models

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Additional supports

- Cognates
- Multilingual Glossary
- Word Banks
- Multiple-Meaning Words
- Extended Modeling
- Additional Visual Representations
- Optional Graphic Organizers
- Response Option

English-Arabic Glossary (continued)

English-Arabic Glossary

design: to try to make something new that people want or need

تصميم: محاولة بناء شيء جديد يريده الناس أو يحتاجونه

direction: the way something is facing or moving, such as left, right, toward you, or away from you

اتجاه: المسار الذي يستقبله شيء ما أو يمضي نحوه مثل اليسار أو اليمين أو المضي نحوك أو بعيدًا عنك

distance: how far it is between two things

مسافة: البُعد بين شيئين اثنين

exert: to cause a force to act on an object

بذل: يوقع قوة للتأثير على جسم ما

engineer: a person who makes something in order to solve a problem

مهندس: شخص يقوم بشيء ما لحل إحدى المشكلات

force: a push or a pull

قوة: فعل الدفع أو السحب

object: a thing that can be seen or touched

جسم: شيء يمكن رؤيته أو لمسه

Pushes and Pulls—English-Arabic Glossary

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Resources for Diverse Learners

- Optional investigation notebook pages
- Digital copy of vocabulary words
- Access to lesson level powerpoints (editable)
- Remote learning access for students (via Program Hub)
  - Student readers (English/Spanish)
  - Modeling tools/Sims/Practice tools
  - Videos with calls to action (English/Spanish)
  - Student slides, packets, and sheets (editable)

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Reflect and Share

What is an example of an embedded differentiation strategy you want to use in your classroom to support students?

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Meeting the Needs of Diverse Learners

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Who are our Diverse Learners?

"Diverse learning is not based on race or dependent on a deficit model. Students who are considered gifted are also diverse learners. All students are diverse and unique, in their own right. Let's agree that diverse learning recognizes that all students have unique learning needs and we educators must be prepared to provide multiple entry points for all learners to access the rigor of the goals and standards."

Anonymous Educator

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Universal Design for Learning

Universal Design for Learning (UDL) is a **research-based framework** for improving student learning experiences and outcomes by **focusing on careful instructional planning to meet the varied needs of students.** UDL is **NOT a special-education initiative**. Through the UDL framework, the **needs of ALL learners are considered** and planned for at the point of first teaching, thereby **reducing the need to reteach concepts.**

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Universal Design for Learning Guidelines

I. Provide Multiple Means of **Representation**	II. Provide Multiple Means of **Action and Expression**	III. Provide Multiple Means of **Engagement**
1: Provide options for perception	**4: Provide options for physical action**	**7: Provide options for recruiting interest**
1.1 Offer ways of customizing the display of information	4.1 Vary the methods for response and navigation	7.1 Optimize individual choice and autonomy
1.2 Offer alternatives for auditory information	4.2 Optimize access to tools and assistive technologies	7.2 Optimize relevance, value, and authenticity
1.3 Offer alternatives for visual information		7.3 Minimize threats and distractions
2: Provide options for language, mathematical expressions, and symbols	**5: Provide options for expression and communication**	**8: Provide options for sustaining effort and persistence**
2.1 Clarify vocabulary and symbols		...ience of goals and objectives
2.2 Clarify syntax and structure		...ds and resources to optimize challenge
2.3 Support decoding of text, mathema... and symbols		...oration and community
2.4 Promote understanding across lang...		...stery-oriented feedback
2.5 Illustrate through multiple media		
3: Provide options for comprehension	**6: Provide options for executive functions**	**9: Provide options for self-regulation**
3.1 Activate or supply background knowledge	6.1 Guide appropriate goal-setting	9.1 Promote expectations and beliefs that optimize motivation
3.2. Highlight patterns, critical features, big ideas, and relationships	6.2 Support planning and strategy development	9.2 Facilitate personal coping skills and strategies
3.3 Guide information processing, visualization, and manipulation	6.3 Facilitate managing information and resources	9.3 Develop self-assessment and reflection
3.4 Maximize transfer and generalization	6.4 Enhance capacity for monitoring progress	
Resourceful, knowledgeable learners	**Strategic, goal-directed learners**	**Purposeful, motivated learners**

> **Turn and talk:** Where have you noticed evidence of these principles in the Amplify curriculum?

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Culturally and linguistically responsive teaching

Culturally and linguistically responsive teaching (CLRT) principles **emphasize validating and valuing students' cultural and linguistic heritage** and **creating positive and nurturing learning environments** so that learning is more effective.

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Differentiation Strategies

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Hello Youse Garcia
t.nycmiddle@tryamplify.net

Log Out

Go To My Account ⚙

Thermal Energy Sim

Traits and Reproductio...

Vision and Light Sim

Weather Patterns Sim

Additional Resources

Benchmark Assessments

NYC Resources

2

Science Program Guide

Help

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Welcome

Program developers

Designed for the NGSS

Program components

Scope and Sequence

Phenomena, standards, and progressions

Assessments

Science and literacy

3

Access and equity

Resources

Access and equity

Universal Design for Learning

Culturally and linguistically responsive

Differentiation strategies

4

– **English learners**

– **Students with disabilities**

– **Standard English learners**

– **Girls and young women**

– **Advanced learners and gifted learners**

– **Students living in poverty, foster children and youth, and migrant students**

Lesson-level differentiation

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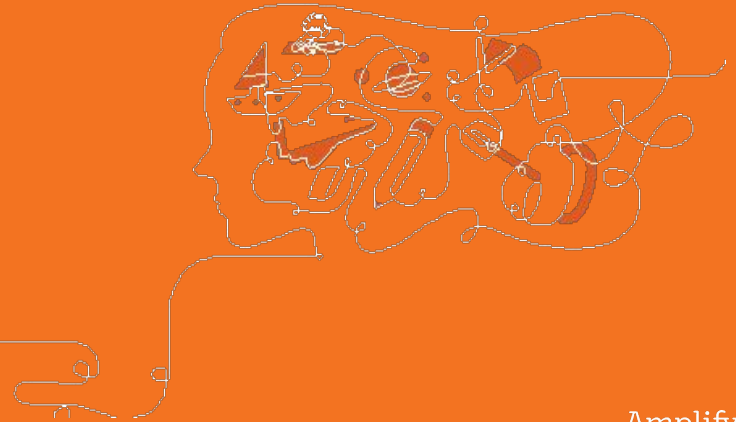# What resources can you use to meet the needs of diverse learners?

A Differentiation

C Do, Talk, Read, Write, Visualize

B Universal Design for Learning

D All of the Above

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Closing/ Reflection

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Revisiting Objectives:

By the end of this 1-hour workshop, you will be able to…

- Explore the Amplify Science Formative Assessment system.

- Explore how to use Embedded Formative Assessments to gain access to credible, actionable, and timely diagnostic information about students progress toward learning the unit goals.

- Learn strategies for analyzing student's work & assessment data, examine resources to help plan for tailoring instruction.

- Explore supports for differentiation to meet the diverse learning needs in their classroom

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New York City Resources Site

https://amplify.com/resources-page-for-nyc-k-5/

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Amplify Science
Resources for NYC (K-5)
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Welcome! This site contains supporting resources designed for the New York City Department of Education Amplify Science adoption for grades K–5.

UPDATE: Summer 2020

Introduction

Getting started resources

Planning and implementation resources

Admin resources

Parent resources

COVID-19 Remote learning resources 2020

Professional learning resources

Questions

UPDATE: Summer 2020

Account Access: It's an exciting time for Amplify Sc... have access to the many updates and upgrades in ou... your regular credentials to login and begin your su... curriculum until late August/early September whe... rosters from STARS.

Any schools or teachers new to Amplify Science in 20/21 are encouraged to contact our Help Desk (1-800-823-1969) for access to your temporary login for summer planning.

Upcoming PL Webinars: Join us for our Summer 2020 Professional Learning opportunities in July for NEW teachers and administrators and August for RETURNING teachers and administrators. Links to register coming soon!
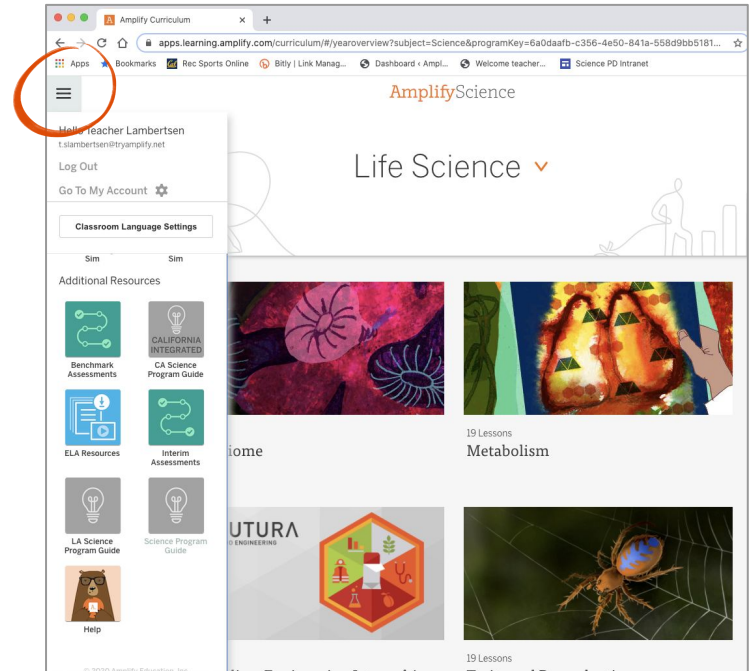
Site Resources
- Login information
- Pacing guides
- Getting started guide
- NYC Companion Lessons
- **Resources from PD sessions**
- And much more!

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Amplify Science Program Hub

A new hub for Amplify Science resources

- **Videos and resources to prepare for instruction**

- **Amplify@Home resources**

- **Self study resource and much more!**

  *Check back often to stay update to date with Amplify Science *

Additional Amplify resources

Program Guide

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

https://my.amplify.com/programguide/content/national/welcome/science/

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.
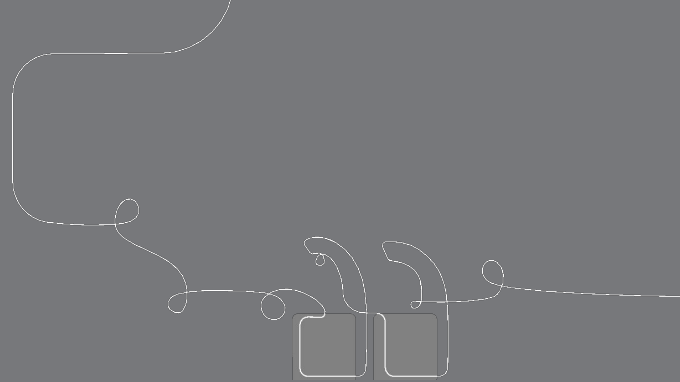
scihelp@amplify.com

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.

Final Questions?

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