Amplify Science

Balancing Forces

Deconstructing Unit Phenomena

New York City Public Schools
July 2019
Presented by Your Name

Workshop goals

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

- Deconstruct unit phenomena to understand how it gives students access to NYSSLS.
- Articulate the alignment between the Progress Build and the assessment system.
- Plan opportunities to engage students in academic discourse.
- Plan unit pacing with a focus on supporting key connections throughout the unit.

Balancing Forces

Plan for the day

- Welcome and reflection
- Unpacking unit phenomena
- Meaningful student discourse
- Unit preview
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- Closing

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Norms: Establishing a culture of learners

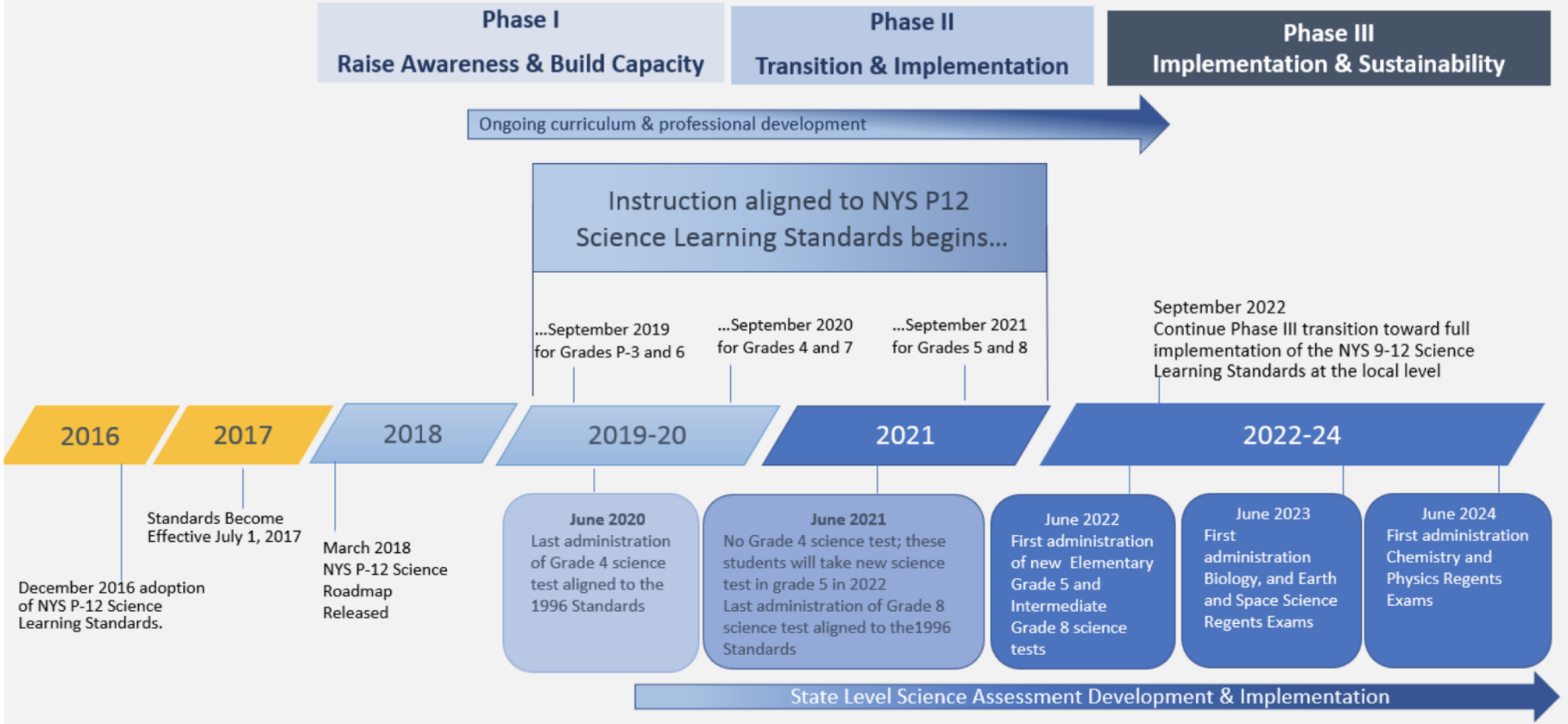
Take risks: Ask any questions, provide any answers.

Participate: Share your thinking, participate in discussion and reflection.

Be fully present: Unplug and immerse yourself in the moment.

Physical needs: Stand up, get water, take breaks.

New York State P-12 Science Standards Development, Adoption, and Implementation



Planning your year

Overview: Amplify Science K-5 Course Structure

PRIMARILY LIFE SCIENCE PRIMARILY PHYSICAL SCIENCE PRIMARILY EARTH SCIENCE

All units have 22 lessons except Grade 5: The Earth System, which has 26 lessons.

	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	Minutes per lesson
K	Needs of Plants and Animals			Pushes and Pulls				Sunlight and Weather			45
1	Animal and Plant Defenses			Light and Sound				Spinning Earth			45
2	Plant and Animal Relationships			Properties of Materials				Changing Landforms			60
3	Balancing Forces			Inheritance and Traits		Environments and Survival			Weather and Climate		60
4	Energy Conversions			Vision and Light		Earth's Features			Waves, Energy and Information		60
5	Patterns of Earth and Sky			Modeling Matter		The Earth System (26 lessons)			Ecosystem Restoration		60

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NYC Middle School
Unit Pacing Calendars and Unit Guides

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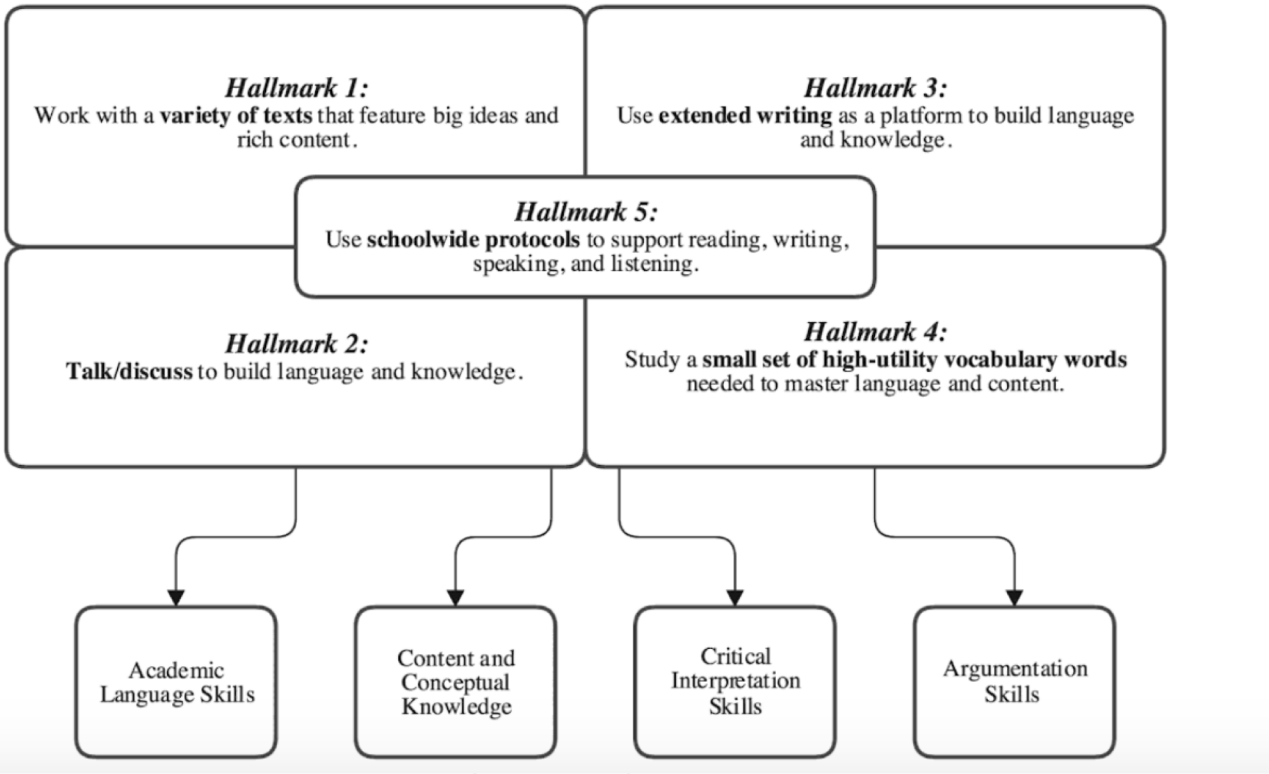
Advanced literacies

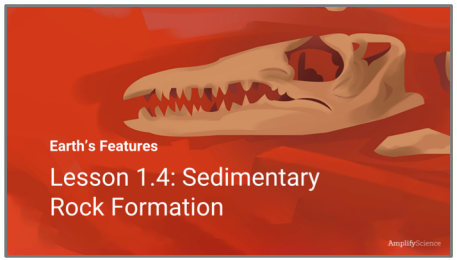
Strengthening the instructional core

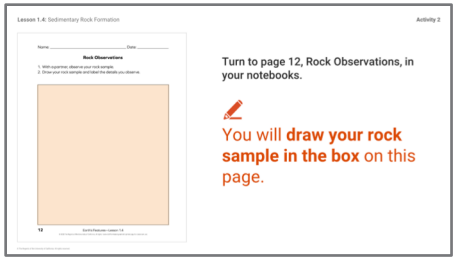


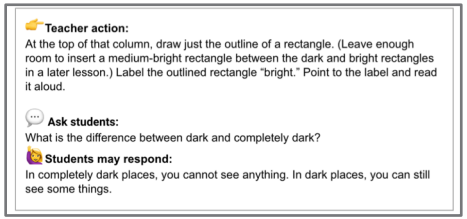
Danielson framework

- Domain 1: Planning and Preparation
  - 1a. Demonstrating Knowledge of Content and Pedagogy
  - 1e. Designing Coherent Instruction
- Domain 3: Instruction
  - 3b. Using Questioning and Discussion Techniques
  - 3c. Engaging Students in Learning
  - 3e. Using Assessments in Instruction

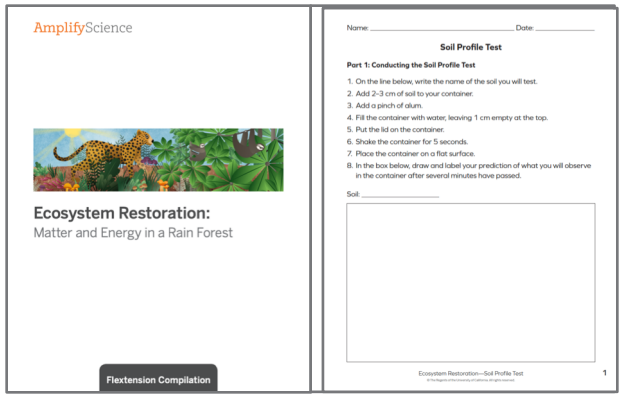
Amplify Science: What's new for 2019-2020



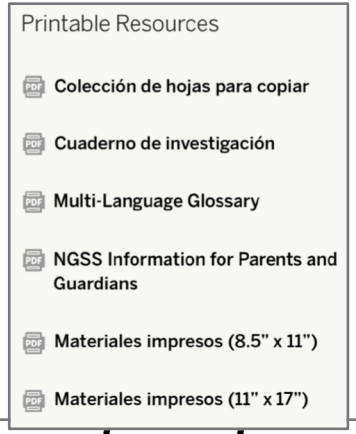




Classroom Slides



Hands-on Flextensions



Spanish Digital Teacher's Guide

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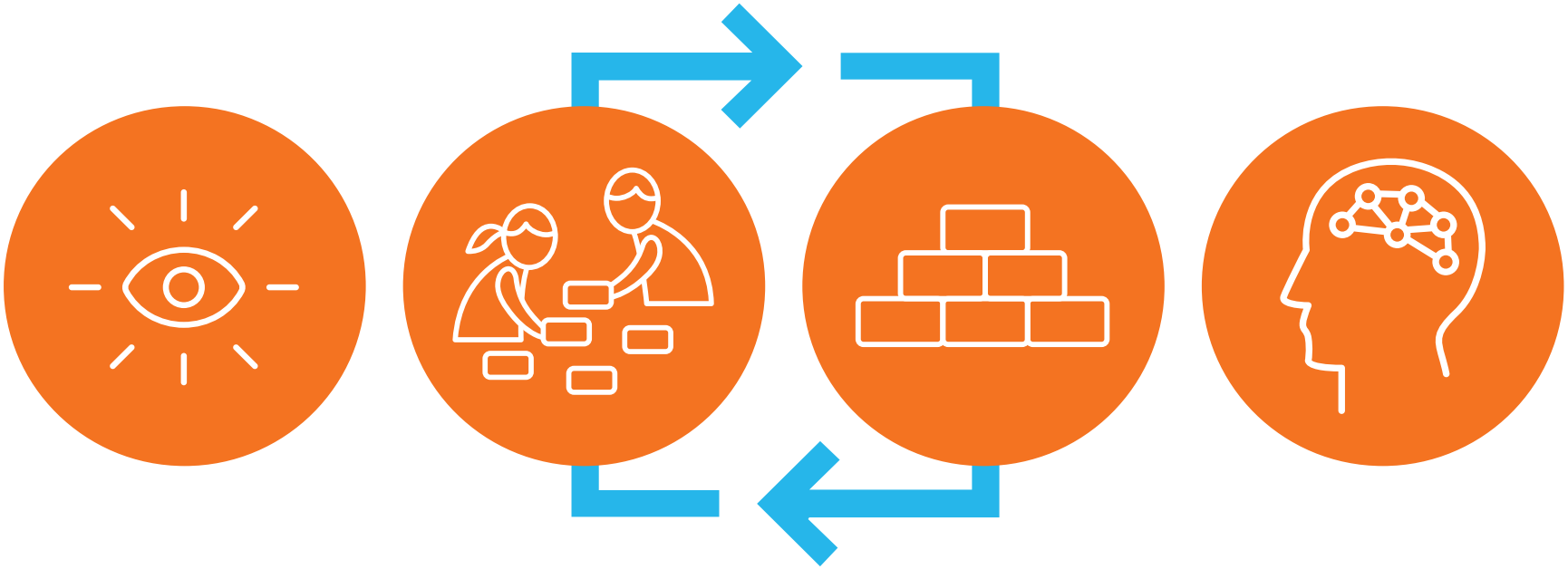
Unpacking Unit phenomena

The purpose of this section is to help you:

- Understand how the three dimensions of the NYSSLS/NGSS comprise Performance Expectations.
- Analyze three dimensions of the unit and describe how they support students in figuring out unit phenomenon.
- Visualize the relationship between the unit phenomenon, Progress Build, and embedded assessment opportunities.

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

Creating a visual story of the unit

Part 1: Access materials
Part 2: Organize cards
Part 3: Annotate your visual
Part 4: Share out

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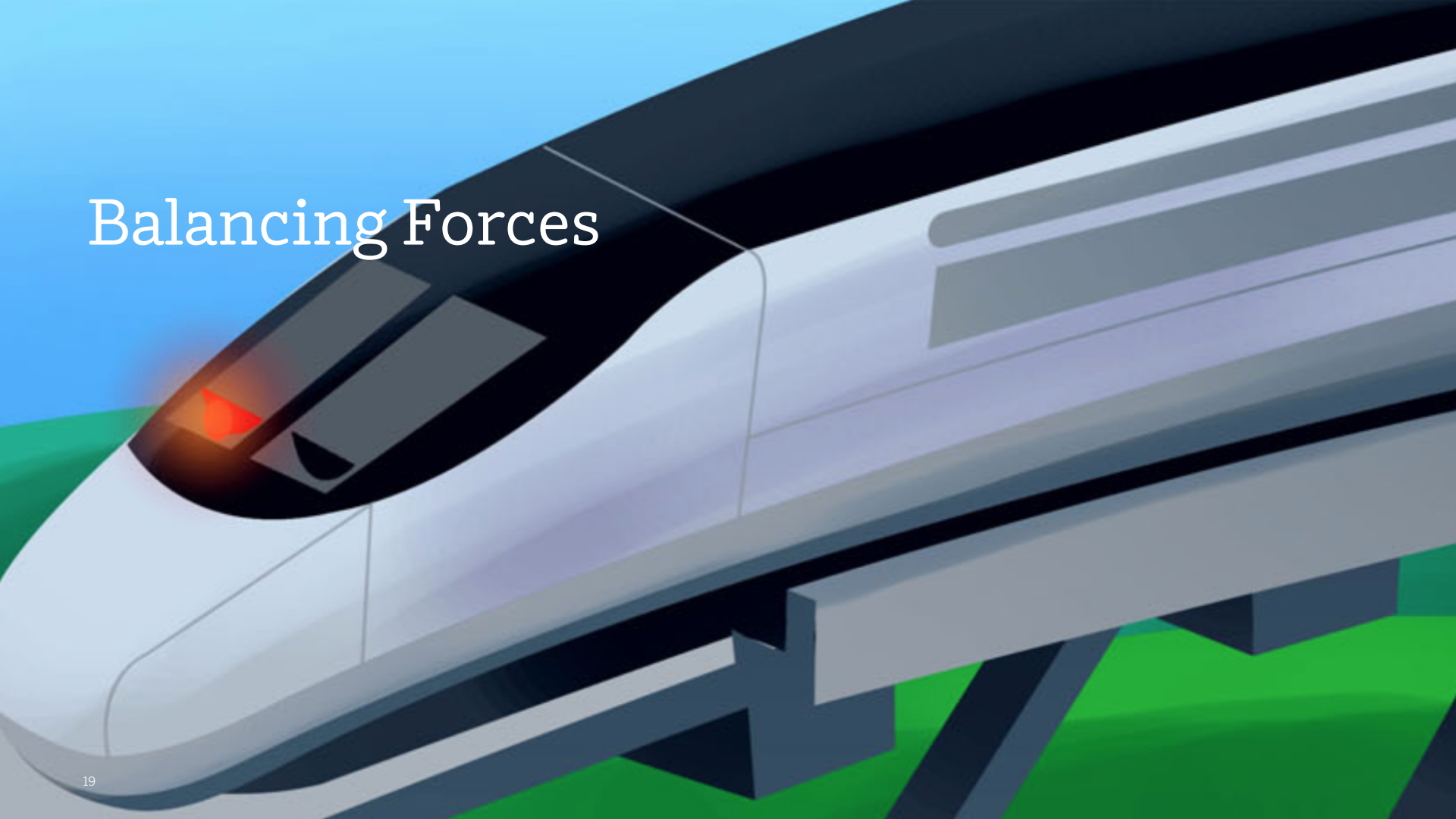
Meaningful student discourse

The purpose of this section is to help you:

- Understand academic language and academic discourse.
- Leverage discourse routines to engage ALL students in academic discourse.
- Obtain peer feedback to inform implementation in your classroom.

Meaningful student discourse

Balancing Forces



Chapter 1: Why does the train rise?

JUMP DOWN TO CHAPTER OVERVIEW

Lesson 1.1:
Pre-Unit Assessment

Lesson 1.2:
Making an Object Move

Lesson 1.3:
Forces All Around

Lesson 1.4:
Explaining Forces and the Train

Chapter 2: Why does the train rise without anything touching it?

JUMP DOWN TO CHAPTER OVERVIEW

Lesson 2.1: Discovering Non-Touching Forces

Lesson 2.2: What Objects Do Magnetic Forces Act On?

Lesson 2.3: Investigating Ways Magnetic Force Moves Objects

Lesson 2.4: What My Sister Taught Me About Magnets

Lesson 2.5: Explaining Magnetic Force and the Train

Chapter 2: Why does the train rise without anything touching it?

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Lesson 2.5:
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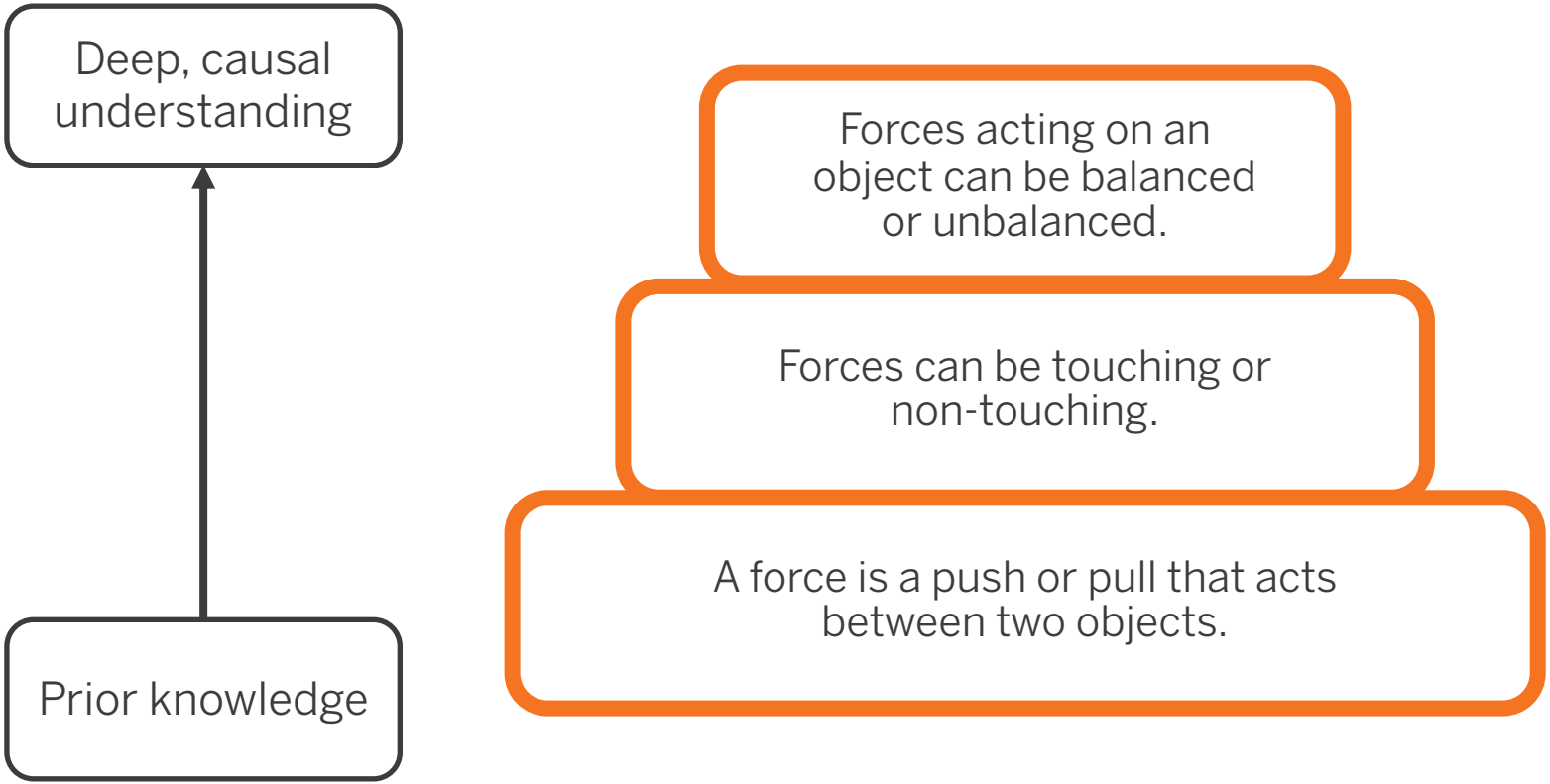
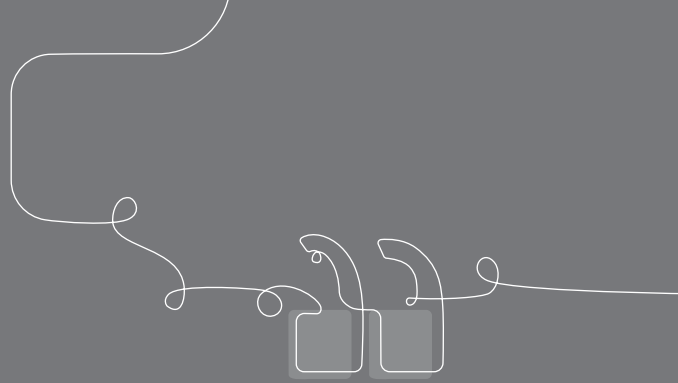
Balancing Forces Progress Build

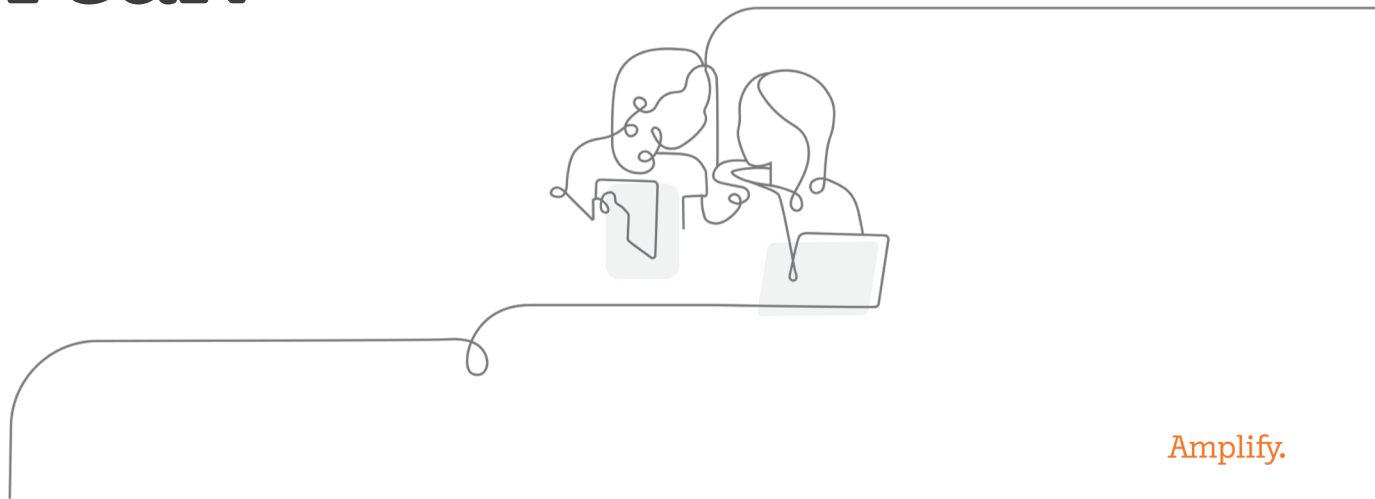


Planning Ahead



What is one strategy that you will implement to engage ALL students in academic discourse?

Lunch Break



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Unit preview: Phenomenon and Progress Builds

The purpose of this section is to help you:

- Understand the phenomena and focal Performance Expectations of the next Unit in the Amplify Science scope and sequence.

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Connecting to unit phenomena

The purpose of this section is to help you:

- Plan unit pacing with a focus on supporting key connections throughout the unit and promoting academic discourse.

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