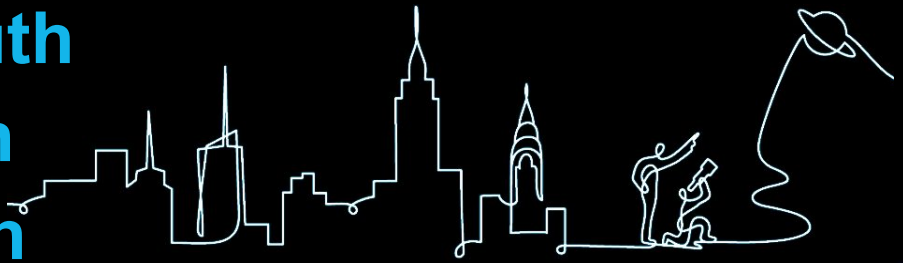

Amplify Science
New York City
AmplifyScience
Unpacking Phenomena
Grades 6-8
AmplifyScience
AmplifyScience

Who's in the Room?

Represent 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

- Explore and begin unpacking your next Amplify Science Unit
- Build your facility using the planning and implementation resources.
- Develop a plan for implementing the core unit within your class schedule and instructional format

Plan for the day

- Approach Essentials
- Unit Storyline
- Unit Planning
- Reflection and closing

Questions
Reflections
Connections

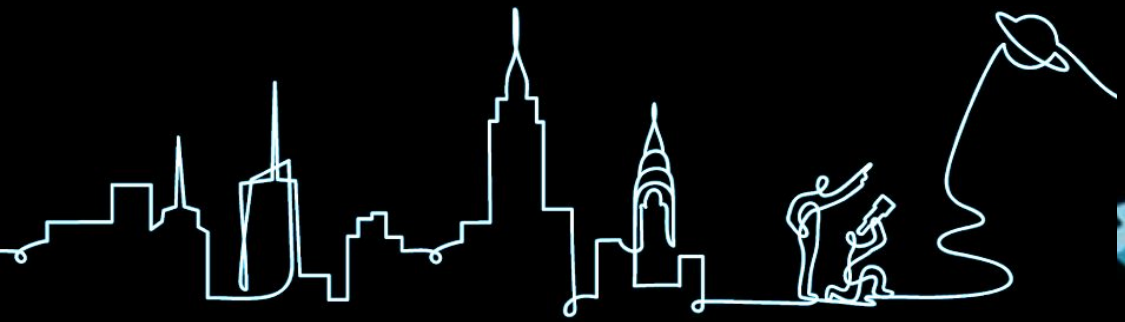
Planning Notes

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!

Reflect and Share

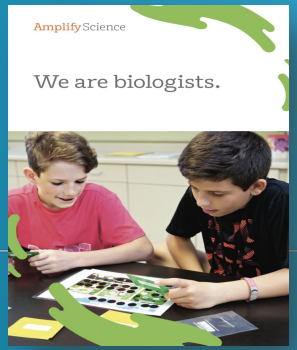
Amplify Science units are designed around storylines. What does this mean for the student experience?

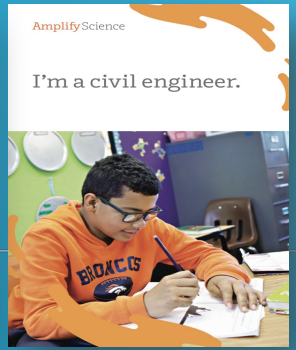


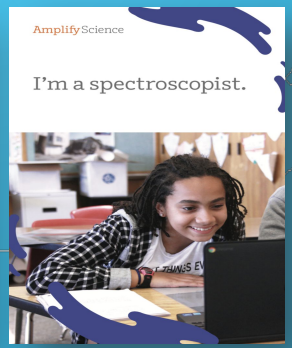
Revisiting
The Amplify Science approach

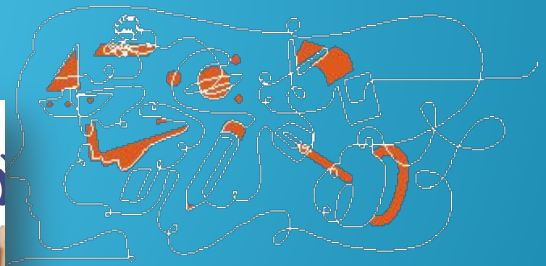
Problem-based deep dives

Students inhabit the role of scientists and engineers to explain or predict phenomena. They use what they figure out to solve real-world problems.









The approach

Introduce a phenomenon/real world problem

Collect evidence from multiple sources

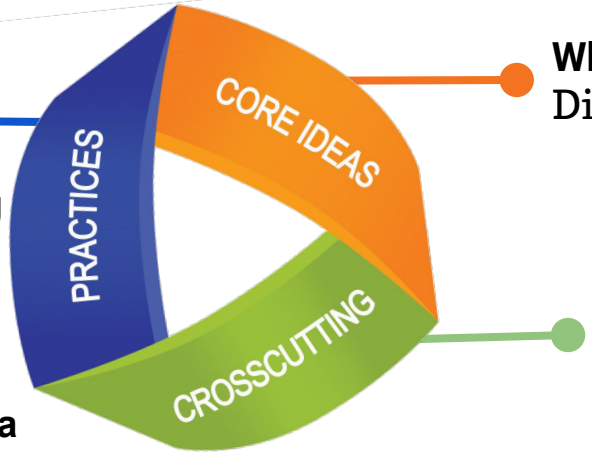
Build increasingly complex explanations

Apply knowledge to solve a different problem

NGSS/NYSSLS 3D

What scientists do
Science and Engineering Practices

1. Asking questions and defining problems
2. Developing and using models
3. Planning and carrying out investigations
4. Analyzing and interpreting data
5. Using mathematics and computational thinking
6. Constructing explanations and designing solutions
7. Engaging in argument from evidence
8. Obtaining, evaluating, and communicating information

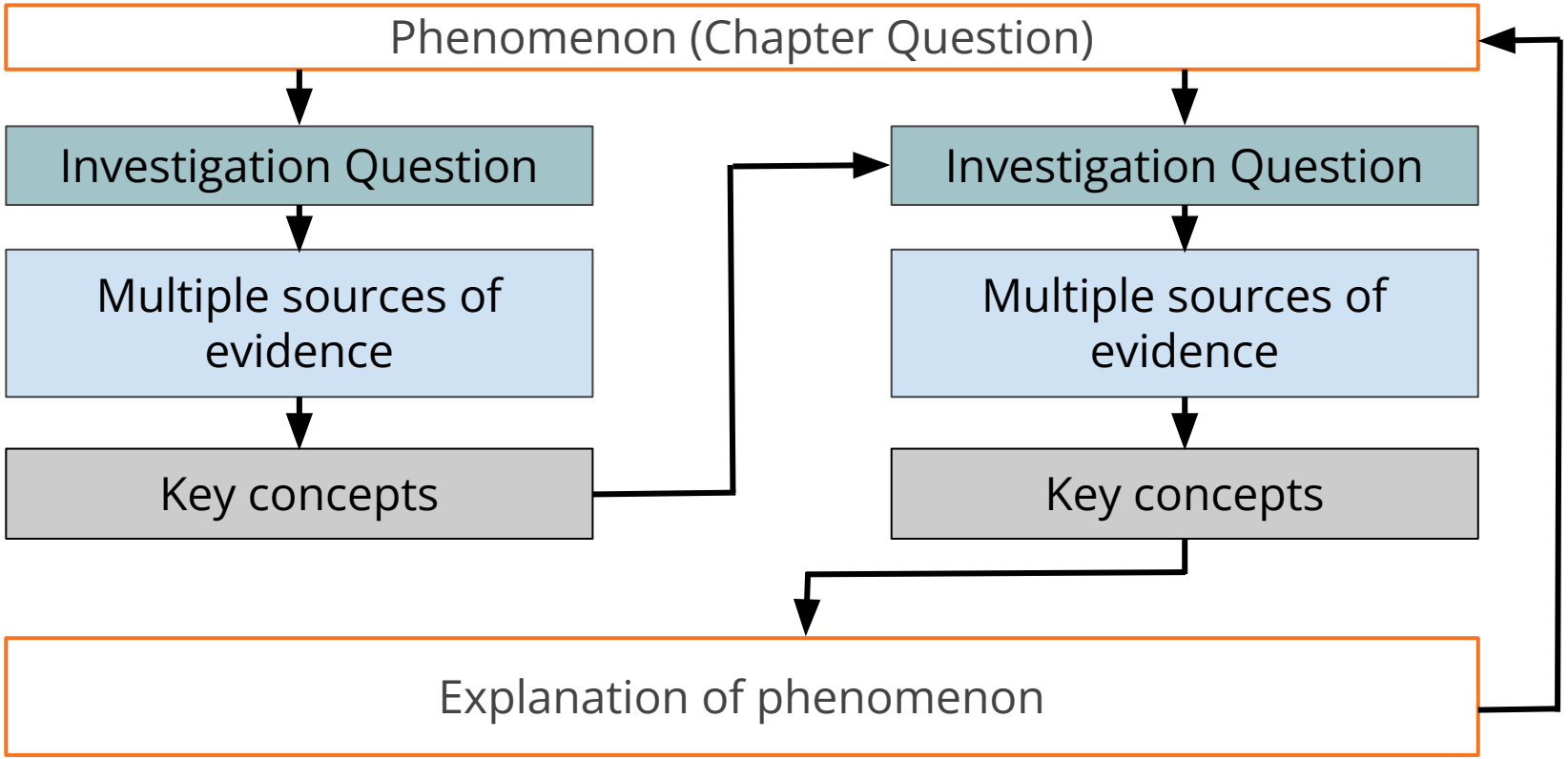


What scientists want to know
Disciplinary Core Ideas

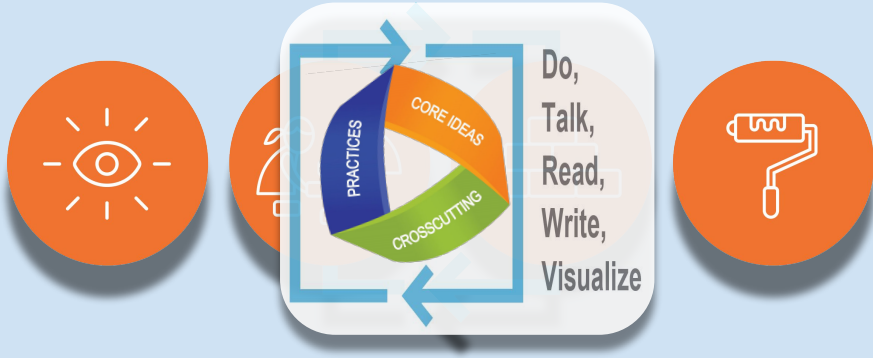
How scientists make sense of, organize and connect...
Crosscutting Concepts

- patterns
- cause and effect
- scale, proportion, and quantity
- systems and system models
- energy and matter
- structure and function
- stability and change

Coherent storylines



Practicing Multiple modalities and using three dimensions to figure out not just learn about!



A scientific **phenomenon** is an **observable event** that occurs in the universe that we can use science ideas to explain or predict.

Amplify Science NYC 21-22

Partnership: Amplify-LHS-NYC DOE

AmplifyScience AmplifyScience NYC Edition

NGSS + Companion Lessons NYSSLS

New York City Resources site

Amplify Science
Resources for NYC (6-8)

—

Welcome! This site contains supporting resources designed for the New York City Department of Education Amplify Science adoption for grades 6–8.

THE LAWRENCE HALL OF SCIENCE
UNIVERSITY OF CALIFORNIA, BERKELEY

Amplify.

No Login Required:
Bookmark this website!


Questions?

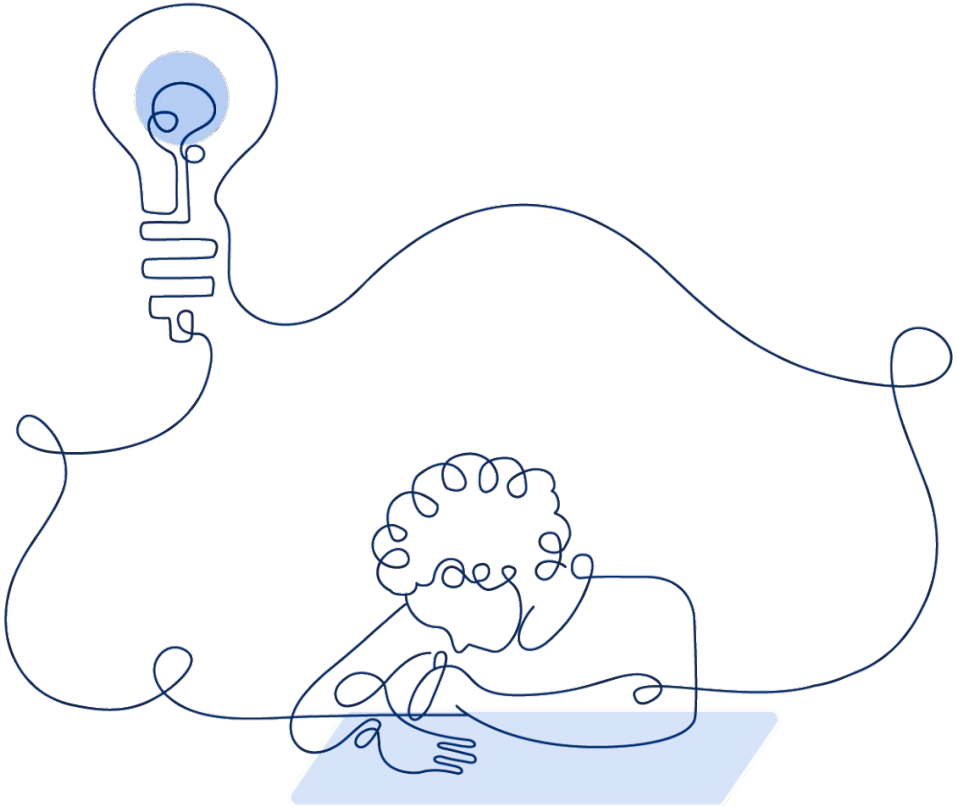
Plan for the day

- Approach Essentials
- Unit Storyline
- Unit Planning
- Reflection and closing

Introducing the phenomenon

Amplify Science units are designed around complex phenomena that drive student learning through the unit.

How is this related to coherence?



G6 Populations and Resources

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I'm an Ecologists!

Glacier Sea has seen an alarming increase in the moon jelly population. In the role of student ecologists, students investigate reproduction, predation, food webs, and indirect effects to discover the cause.

Populations and Resources

Anchor Phenomenon: The size of the moon jelly population in Glacier Sea has increased dramatically.

G7 Phase Change

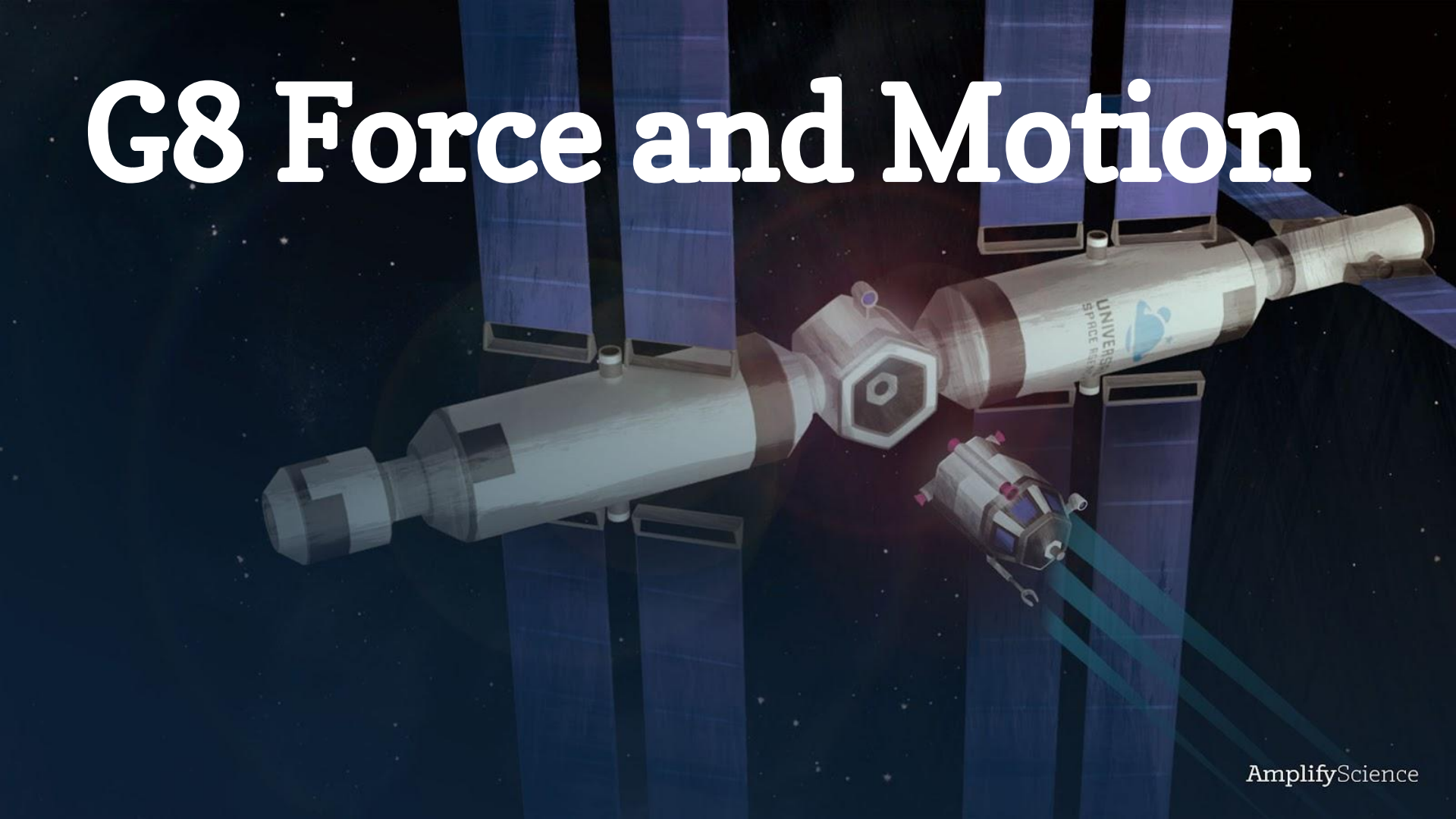
I'm a Chemist!

Taking on the role of student chemists working for the fictional Universal Space Agency (USA), students investigate the mystery of a disappearing methane lake on Titan (see unit map).

Phase Change

Anchor Phenomenon: Images taken by a space probe show that a methane lake on Titan disappeared.

G8 Force and Motion



AmplifyScience

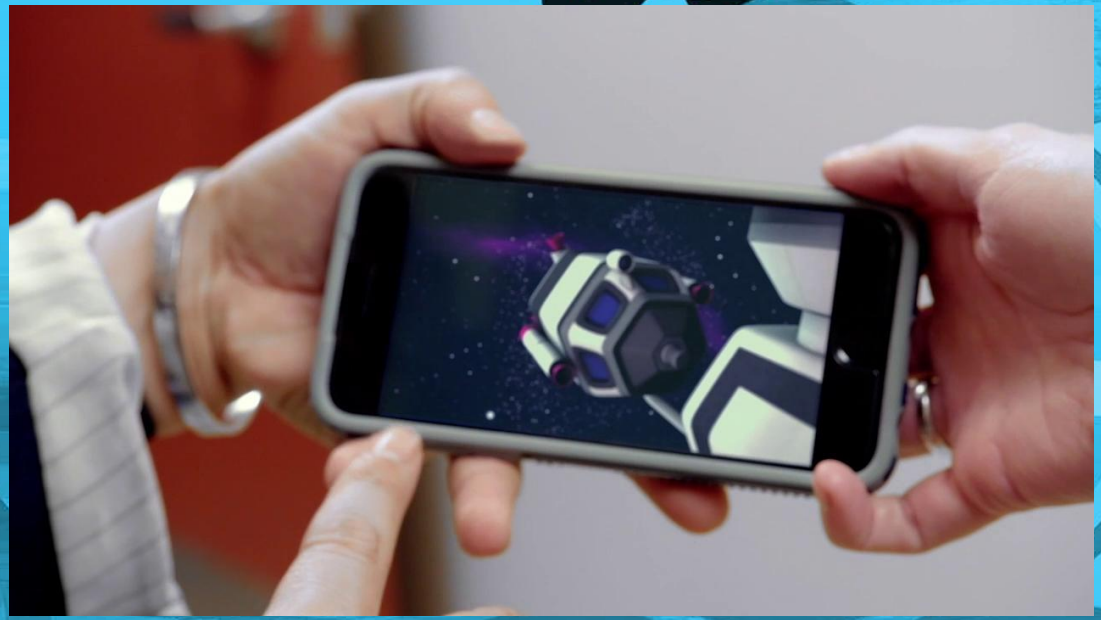
I'm a Physicists!

In the role of student physicists, students help solve a physics mystery from outer space. A pod returning with asteroid samples should have stopped and docked at the space station. Students explore principles of force, motion, mass, and collisions as they solve this mystery (unit map).

Force and Motion

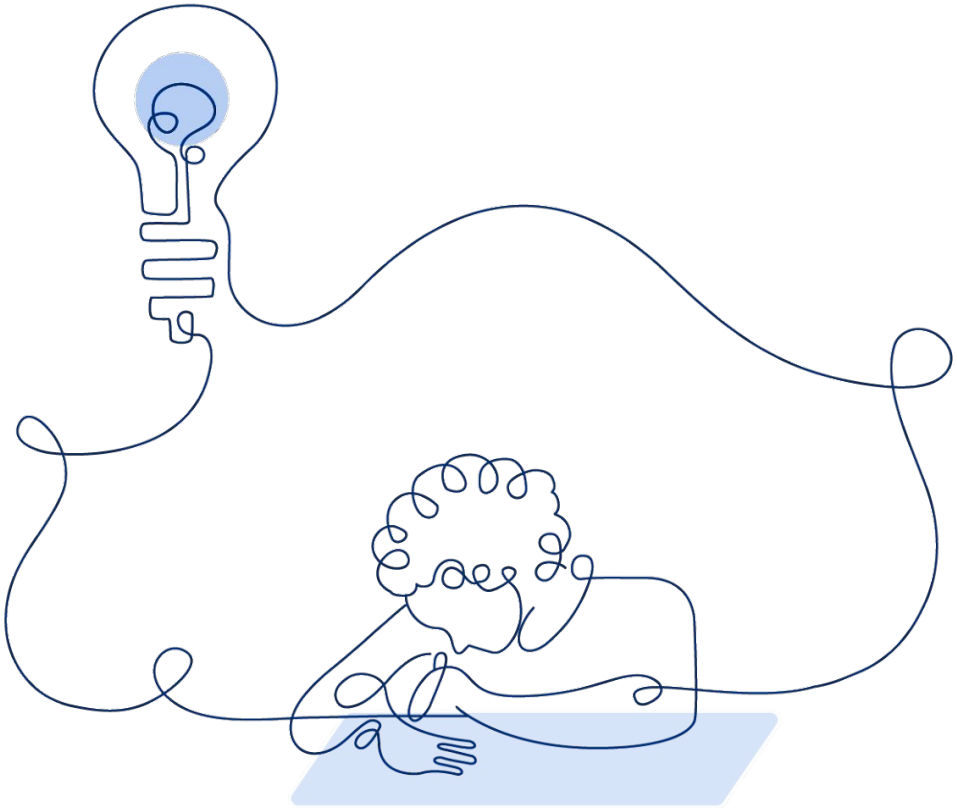
Anchor Phenomenon:

Rather than stopping and docking at the space station, the asteroid sample-collecting pod moved in the opposite direction.

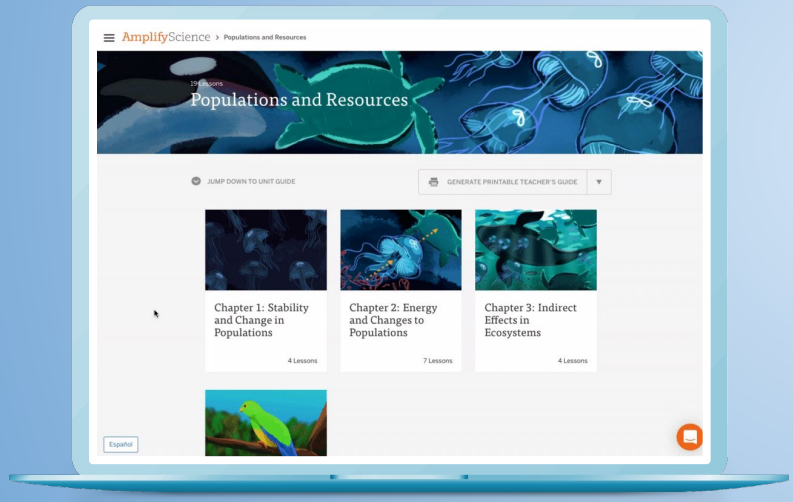


Unit phenomena

Besides the Anchor Phenomenon, what other phenomena do you think students will be grappling with throughout this unit? Where do you find this information?

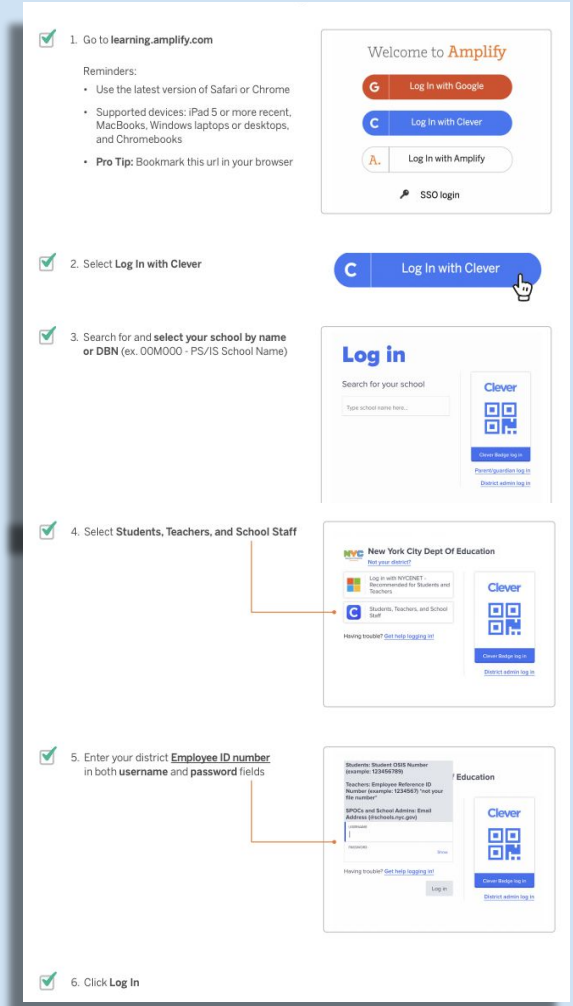


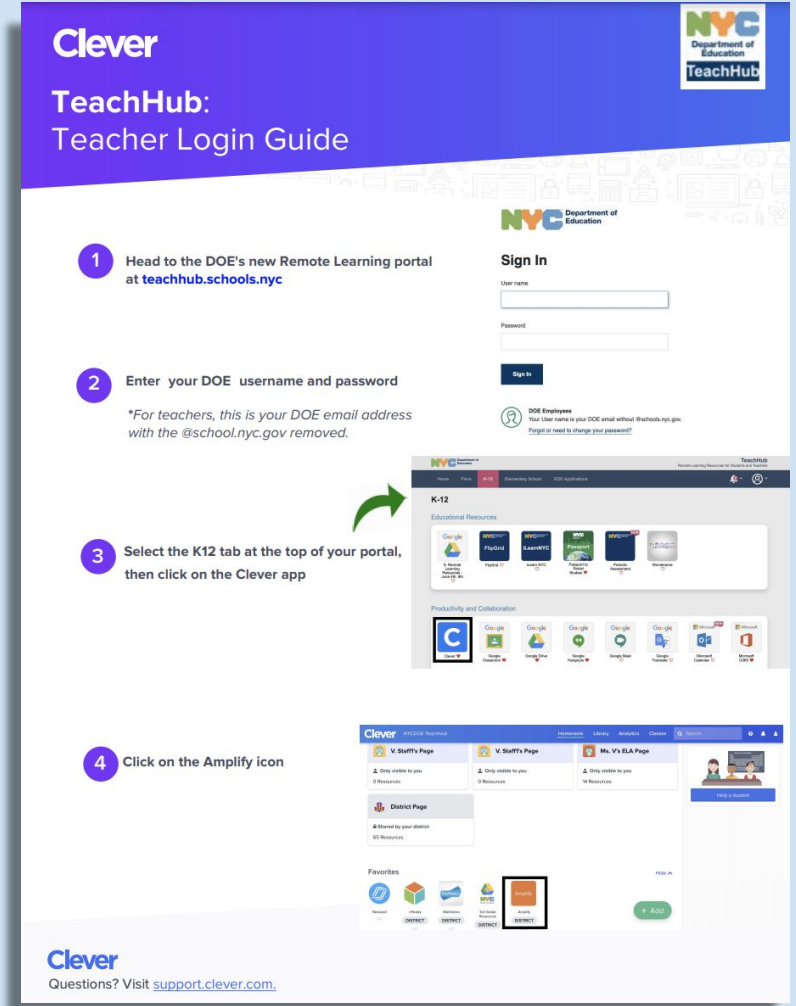
Digital Teacher's Guide



Amplify.

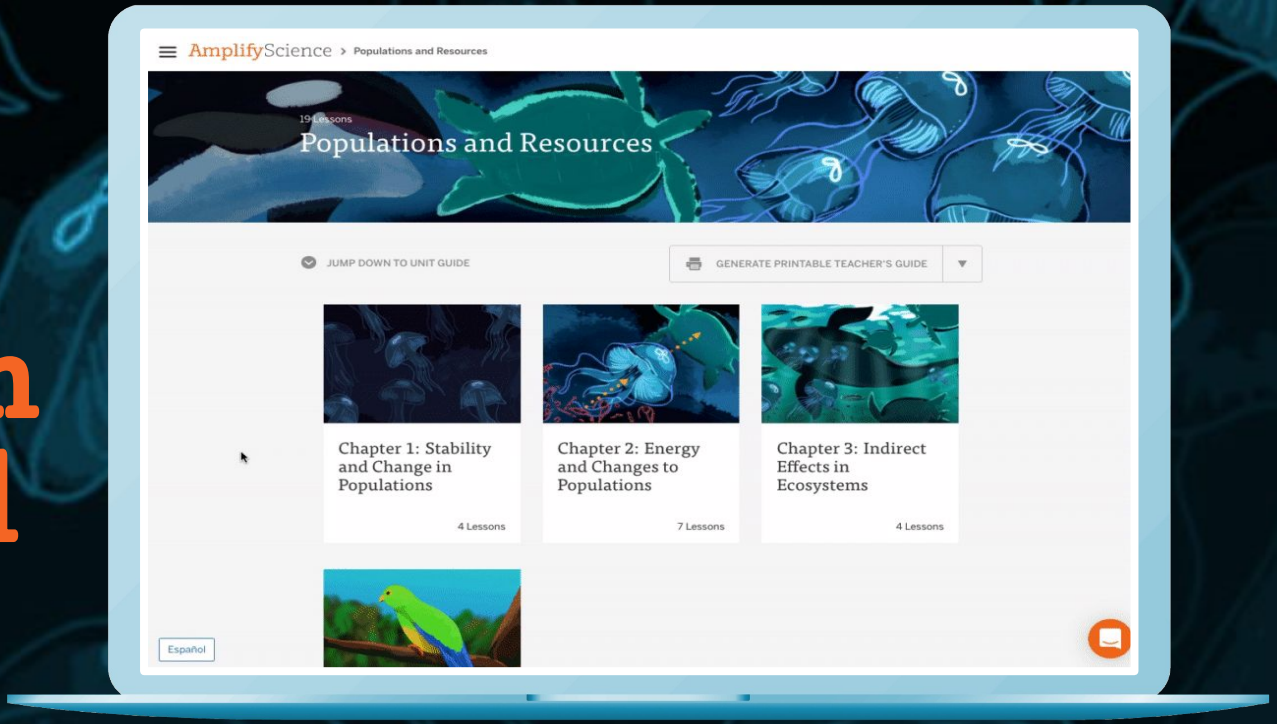
Login to Your Digital Teacher's Guide



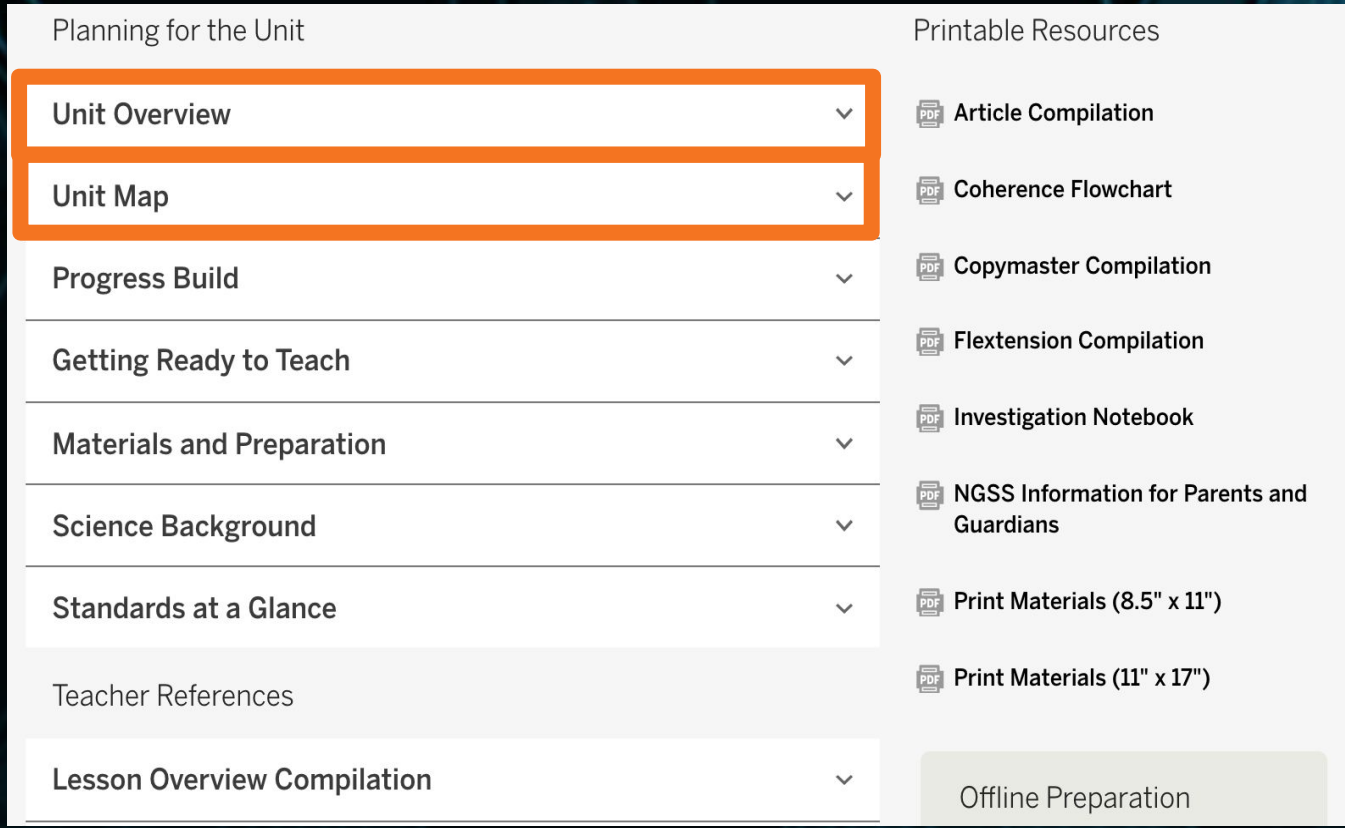



Questions?

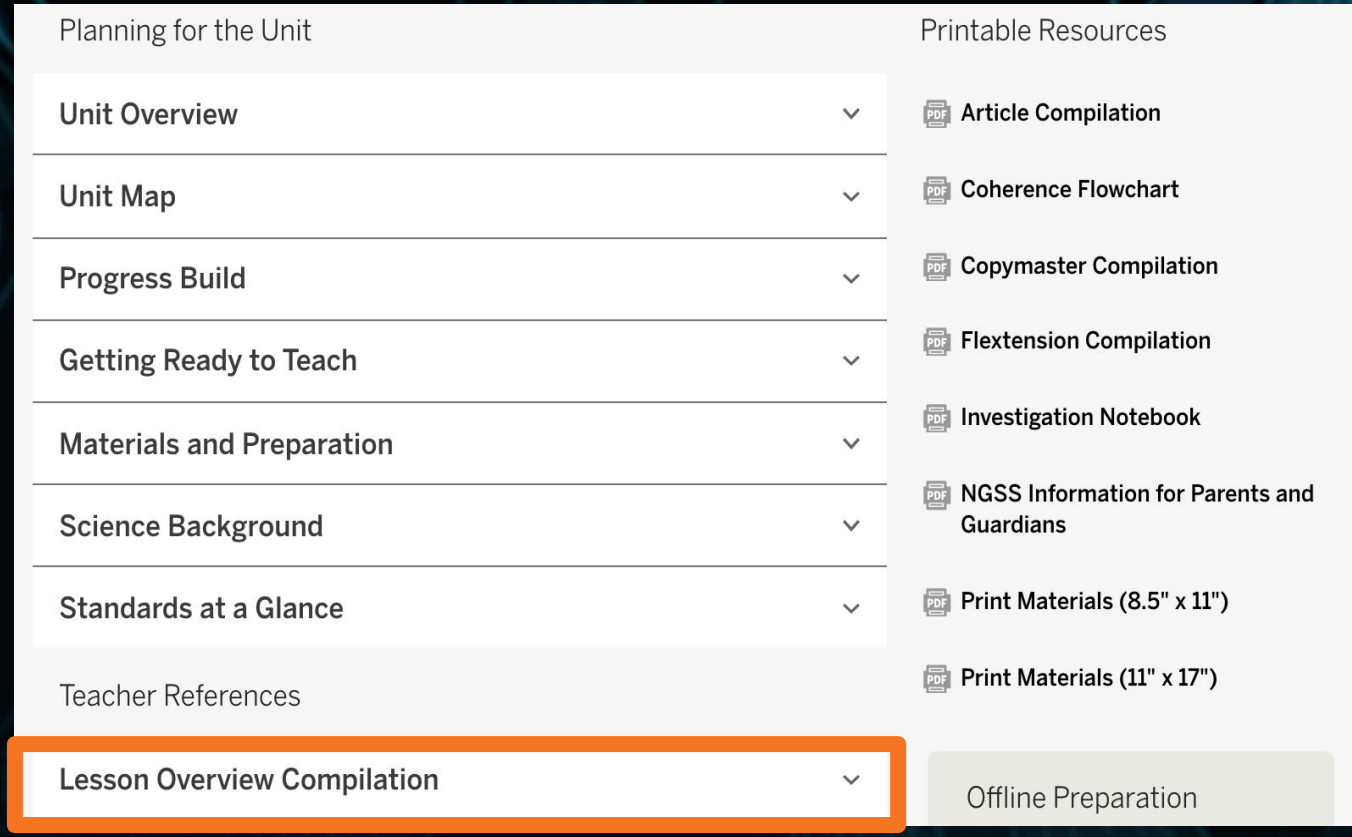
Guided Navigation Unit Level



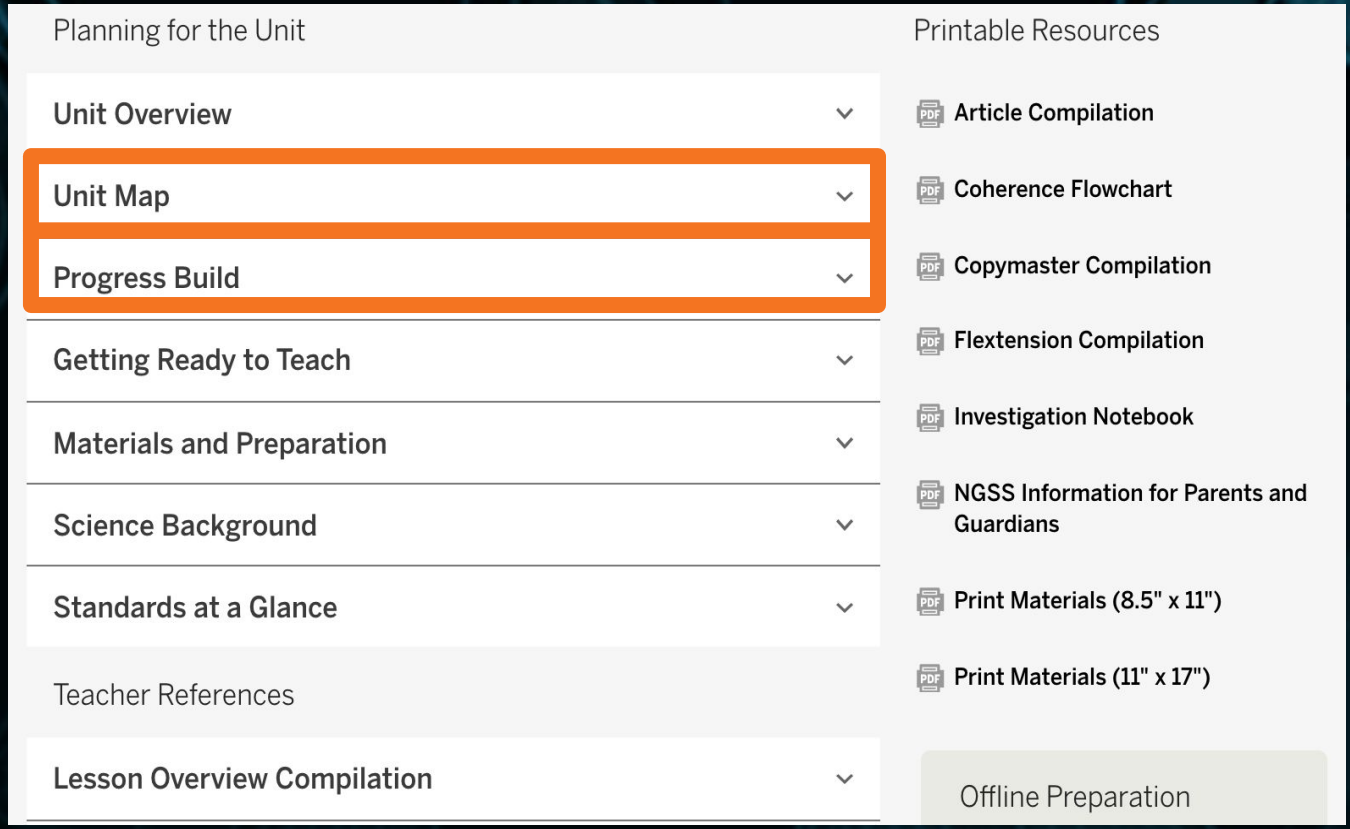
What is the student role? What will students figure out in Chapter 1?



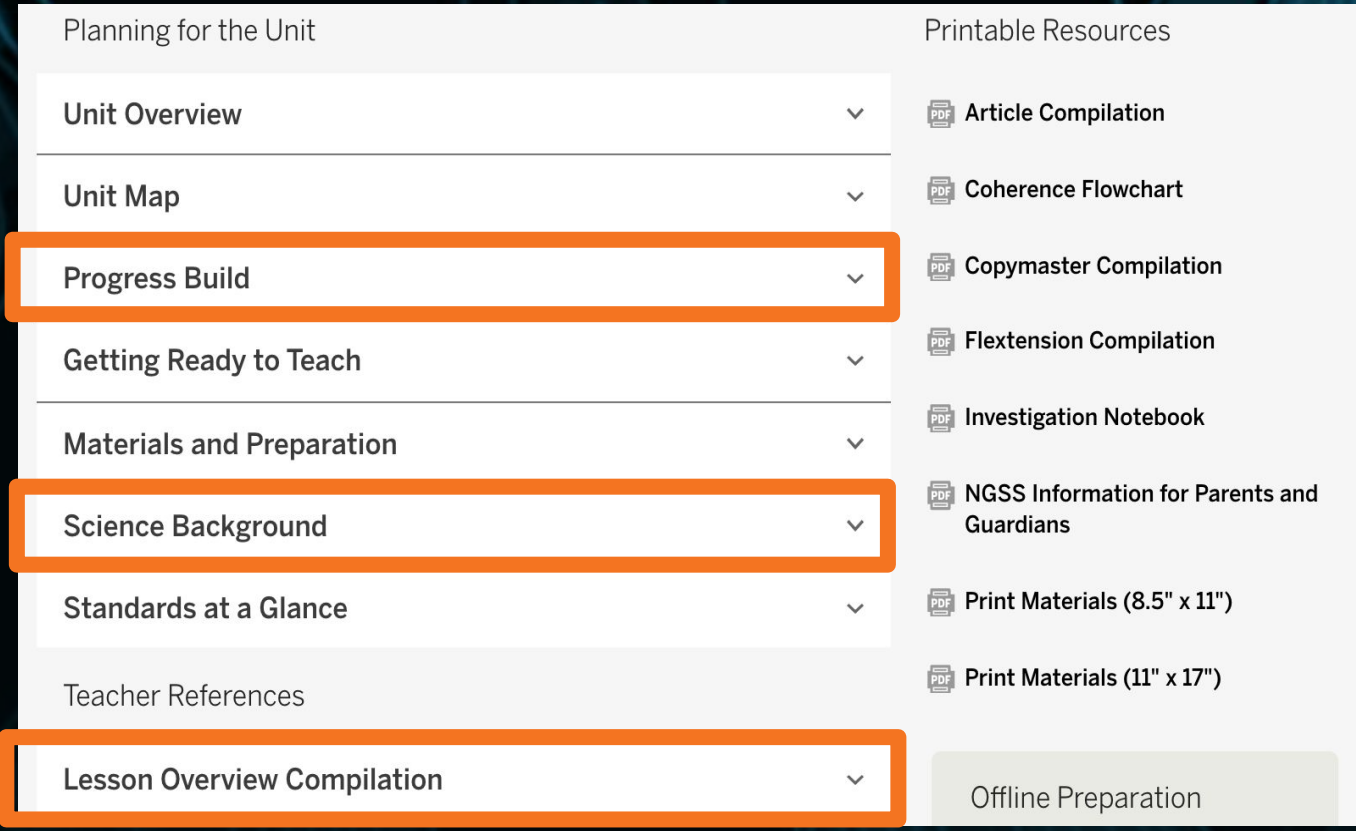
What are the Unit and Chapter Questions ?



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



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



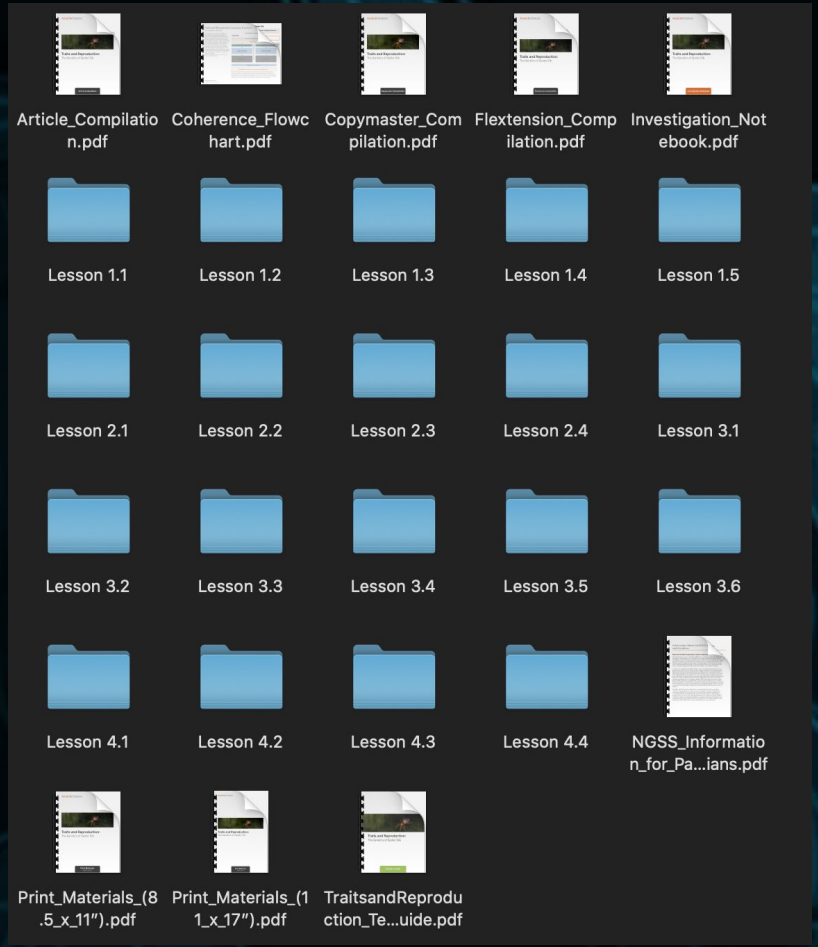
Reflect-Type-Chat! Share and Learn

In two sentences or less, what do students figure out by the end of the unit?


Questions?

Plan for the day

- Approach Essentials
- Unit Storyline
- Unit Planning
- Reflection and closing



Planning Tip!

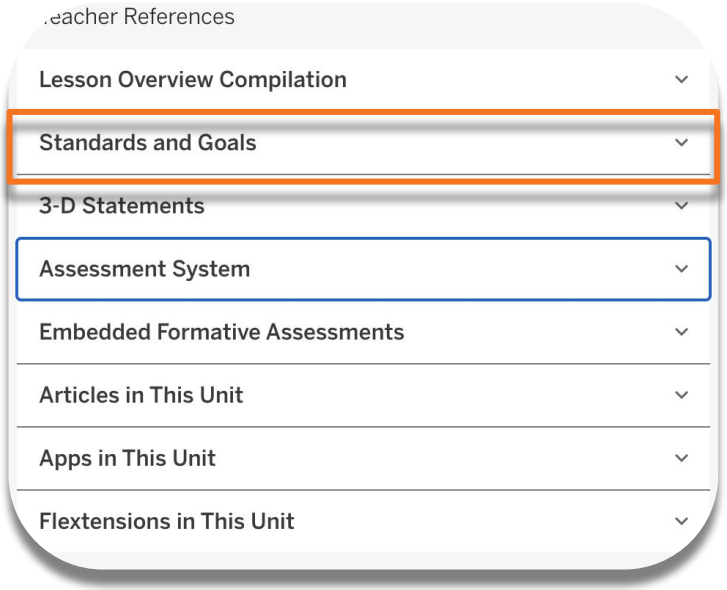
Remember to Download the Offline Guide Materials

Trajectory of your Unit!

Review the Standards and Goals document for this unit:

1. **What are the focal performance expectations?**
2. **In what ways are the multiple modalities connected to the cross-cutting concepts?**
3. **How does this unit fit into the Amplify Science curriculum?**

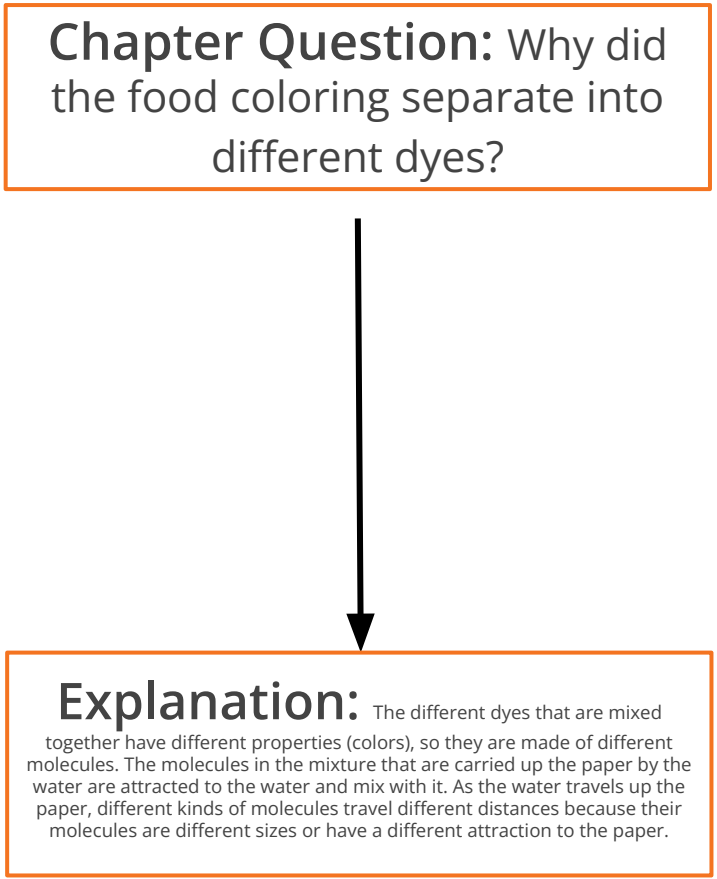
Standards and Goals



Coherence

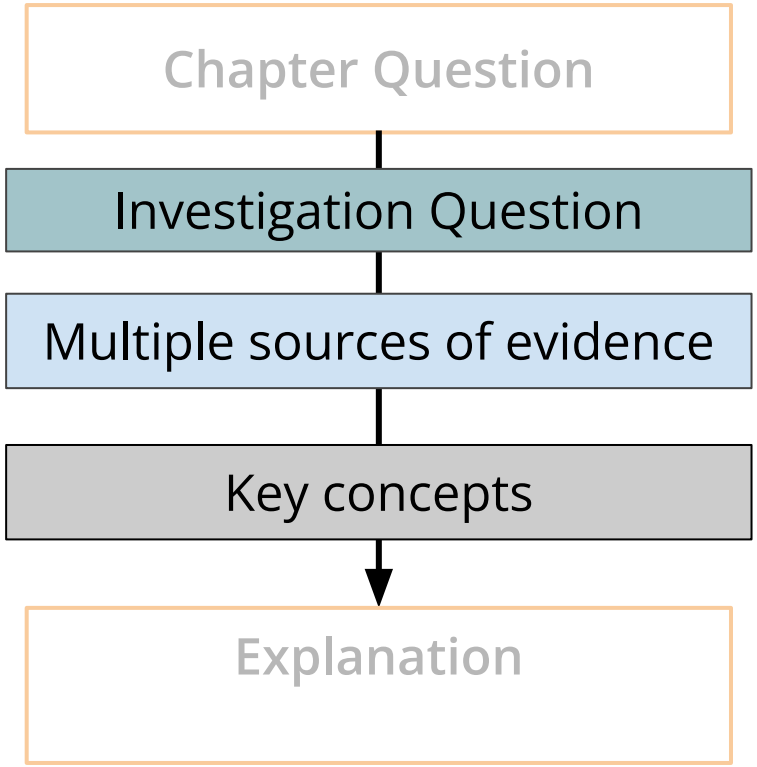
Please respond in the chat

How do students get from the **question** at the beginning of the chapter to the **explanation** at the end of the chapter in Amplify Science?



Constructing science knowledge

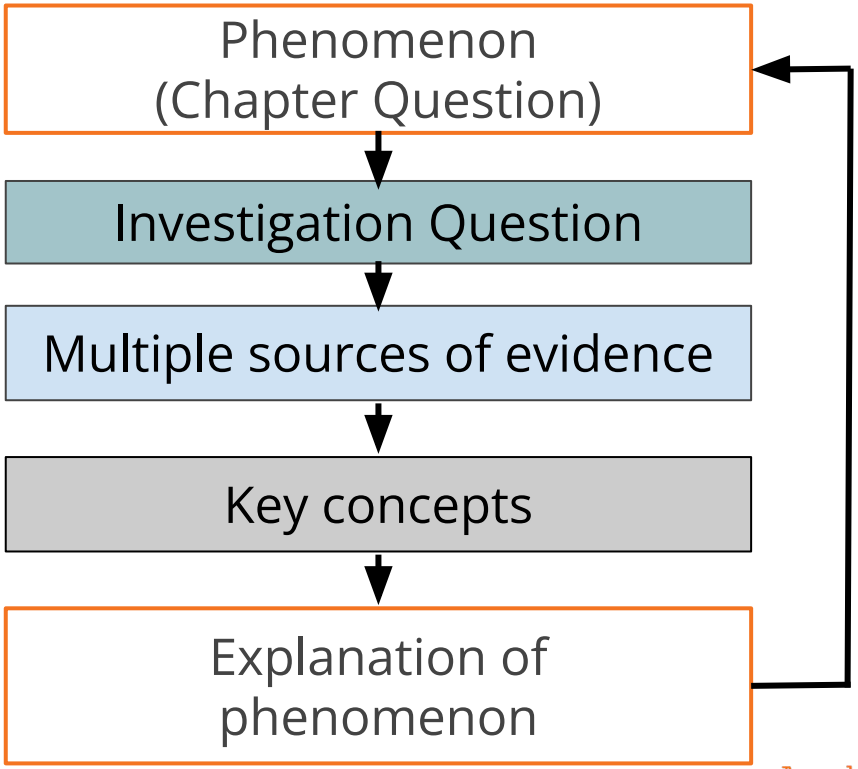
In order to progress through a unit storyline, students figure out general science ideas they can use to explain the phenomenon.



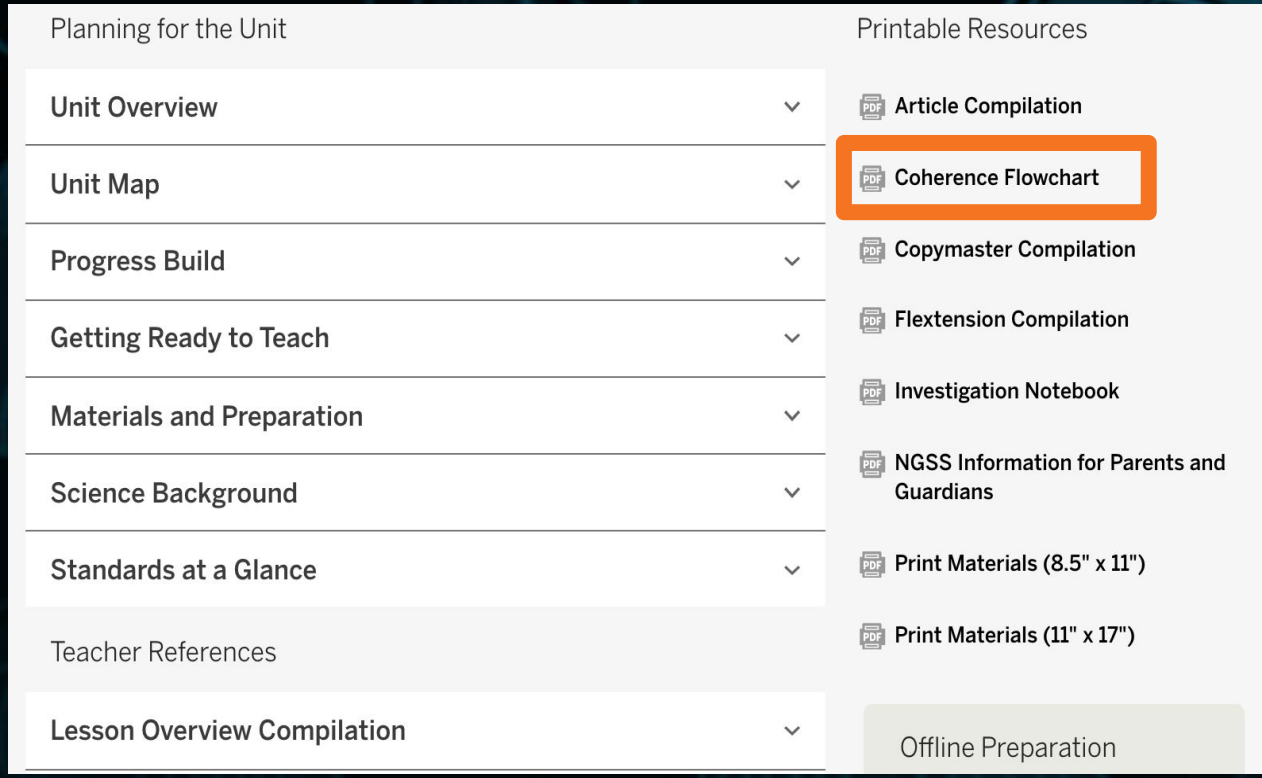
Coherence flowchart

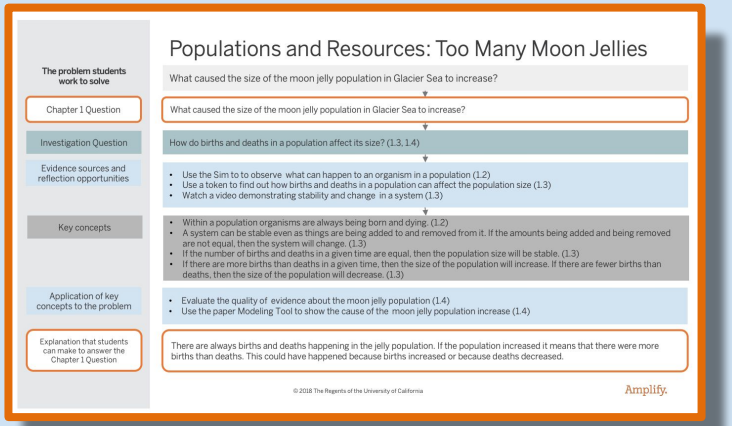
Respond in the chat

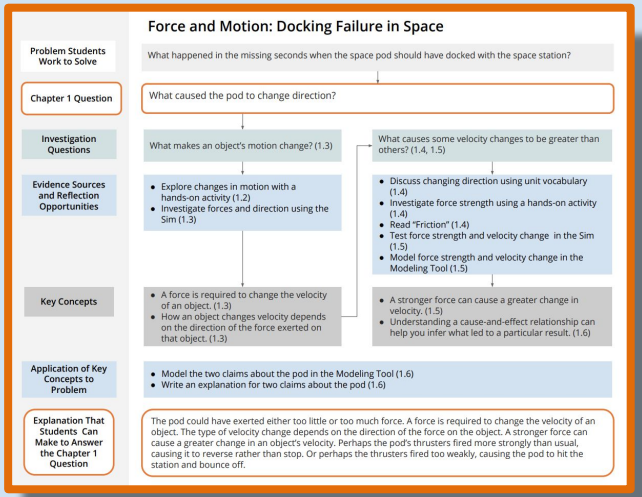
Share your **prior knowledge** about the coherence flowchart, and how you've used it as a tool in your planning and teaching.

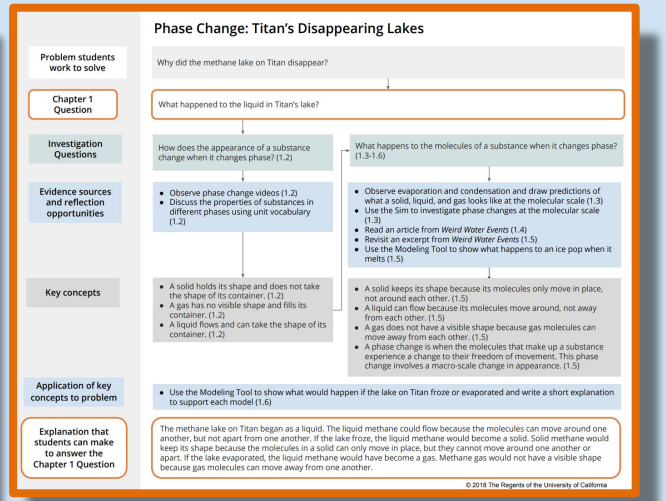


Planning with the Coherence Flowchart?









Skim the Unit Coherence Flowchart

Think about how you might use the Coherence Flowchart to summarize learning throughout Chapter 1.

What are the connections between the Evidence sources/reflection opportunities and 3D learning? Note: also view Lesson 3D statements

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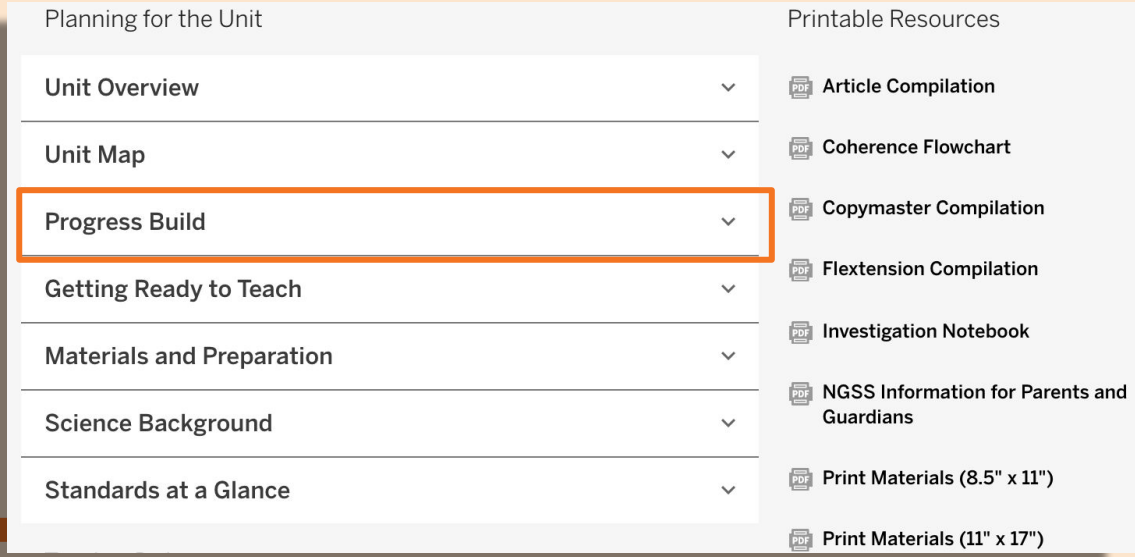
Questions?

Planning for the Assessment System

Progress Build

The unit's Progress Build describes the way students' explanatory understanding of the unit's focal phenomena is likely to develop and deepen over the course of a unit. It is an important tool in understanding the structure of a unit and in supporting students' learning: it organizes the sequence of instruction (generally, each level of the Progress Build corresponds to a chapter), defines the focus of assessments, and grounds the inferences about student learning progress that guide suggested instructional adjustments and differentiation.

Locate the Progress Build in your unit



Level 3

Level 2

Level 1

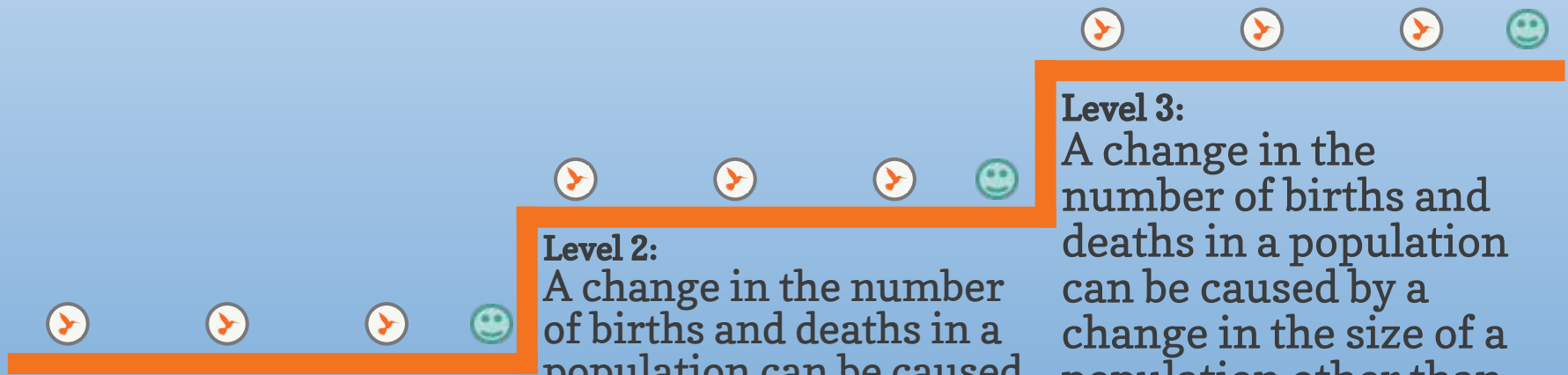
G6 Populations and Resources

1.1

Pre-unit assessment

Critical Junctures

End-of-Unit Assessment



Level 1:
There are always births and deaths occurring in a population. Changes in the number of births and deaths can change the size of a population.

Level 2:
A change in the number of births and deaths in a population can be caused by a change in the size of its resource populations or consumer populations.

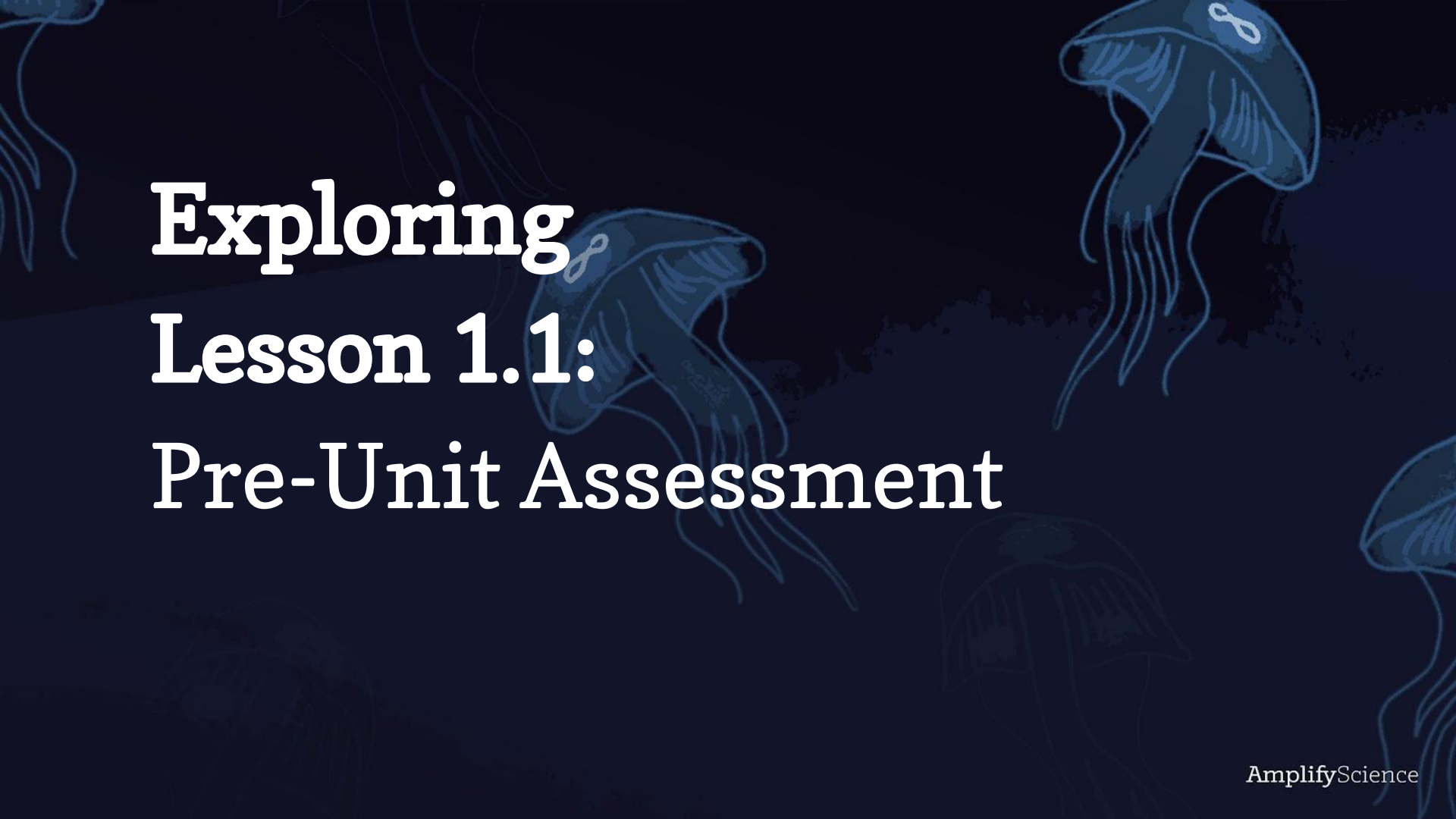
Level 3:
A change in the number of births and deaths in a population can be caused by a change in the size of a population other than its resource or consumer population.

6-5 Assessment System

Pre-unit assessment

Critical Juncture

End-of-Unit Assessment



Exploring
Lesson 1.1:
Pre-Unit Assessment

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Explore the Pre-unit Assessment

Directions:

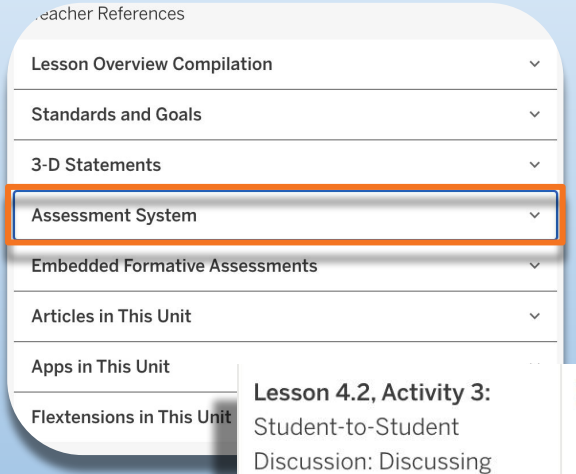
- Navigate to your grade levels upcoming unit
- Click on the Unit Map to determine the phenomena student investigate
- Open Lesson 1.1
- Review and explore the pre-unit assessment
  Note: notice the differing formats offers.

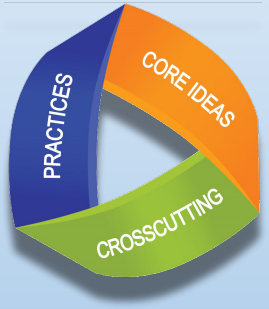
Focus Questions:

1. How does this assessment help you determine student learning goals?
2. What next steps would you take after receiving the results of the assessment?

Read through the assessment system documents.

How are assessments working as a system?





Lesson 4.2, Activity 3:
Student-to-Student Discussion: Discussing Evidence and Claims

Assessment Type:
On-the-Fly Assessment

Evaluation Guidance:

- Look for/Now What? notes

DCI:

- LS4.A: Evidence of Common Ancestry and Diversity

SEPs:

- Practice 4: Analyzing and Interpreting Data
- Practice 7: Engaging in Argument from Evidence
- Practice 8: Obtaining, Evaluating, and Communicating Information

CCC:

- Stability and Change


Questions?

For your Pedagogical Consideration!

Review the Science Background document for this unit. Focus on the pedagogical considerations. In your notes, summarize your findings.

- Unit Overview
- Unit Map
- Progress Build
- Getting Ready to Teach
- Materials and Preparation
- Science Background
- Standards at a Glance

Planning for Digital Apps

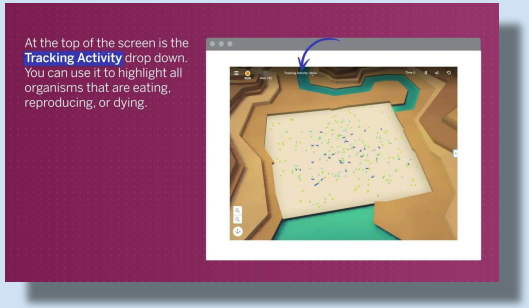
Read the Apps in your Unit Section of the Teacher References

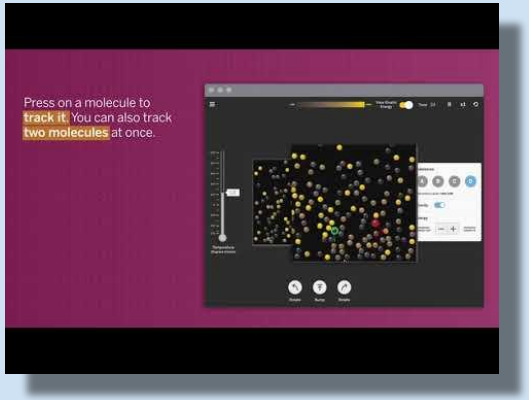
Teacher References

- Lesson Overview Compilation
- Standards and Goals
- 3-D Statements
- Assessment System
- Articles in This Unit
- **Apps in This Unit**

Locate the Simulation Explanation Video.

Watch the video before you begin working with the simulation. Share in chat where you located the video!





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Questions?

Science Seminar

Considering claims and evidence

Participating in the Science Seminar

Writing an argument

Science Seminar

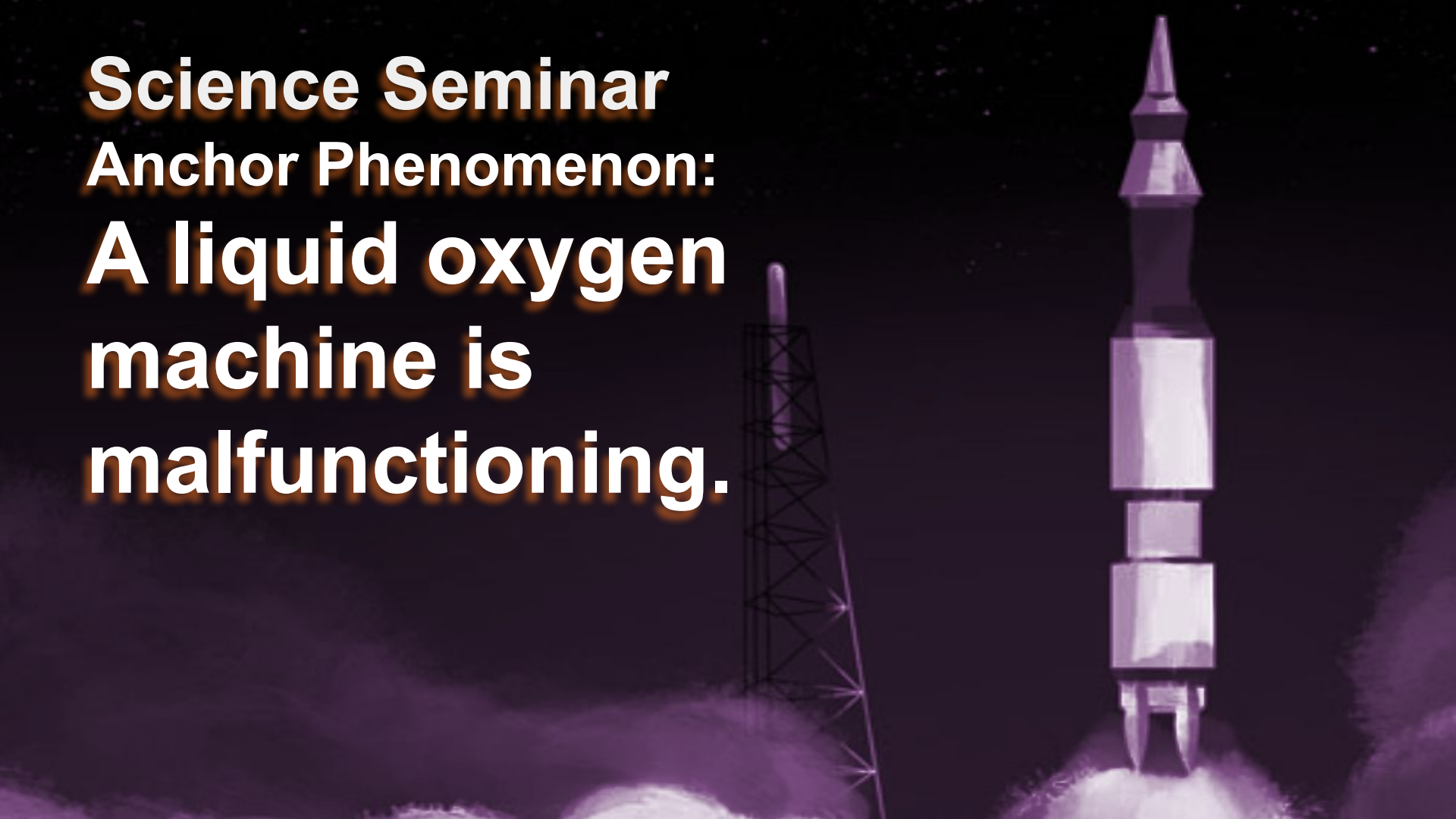
Anchor Phenomenon:

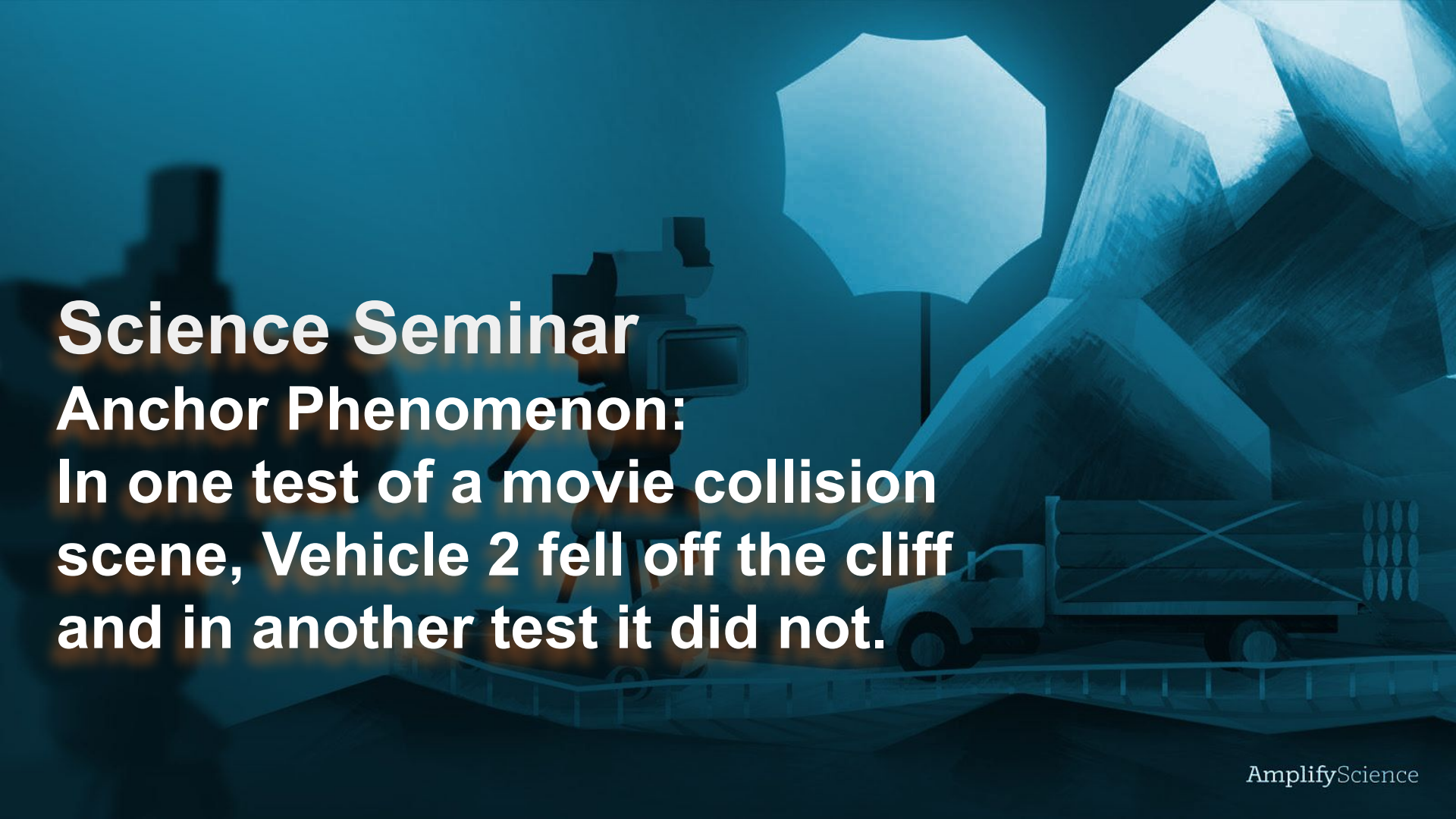
The size of an orange-bellied parrot population on an island off the coast of Australia has decreased.

Science Seminar

Anchor Phenomenon:

A liquid oxygen machine is malfunctioning.





Science Seminar

Anchor Phenomenon:

In one test of a movie collision scene, Vehicle 2 fell off the cliff and in another test it did not.

Lesson Exploration and Planning

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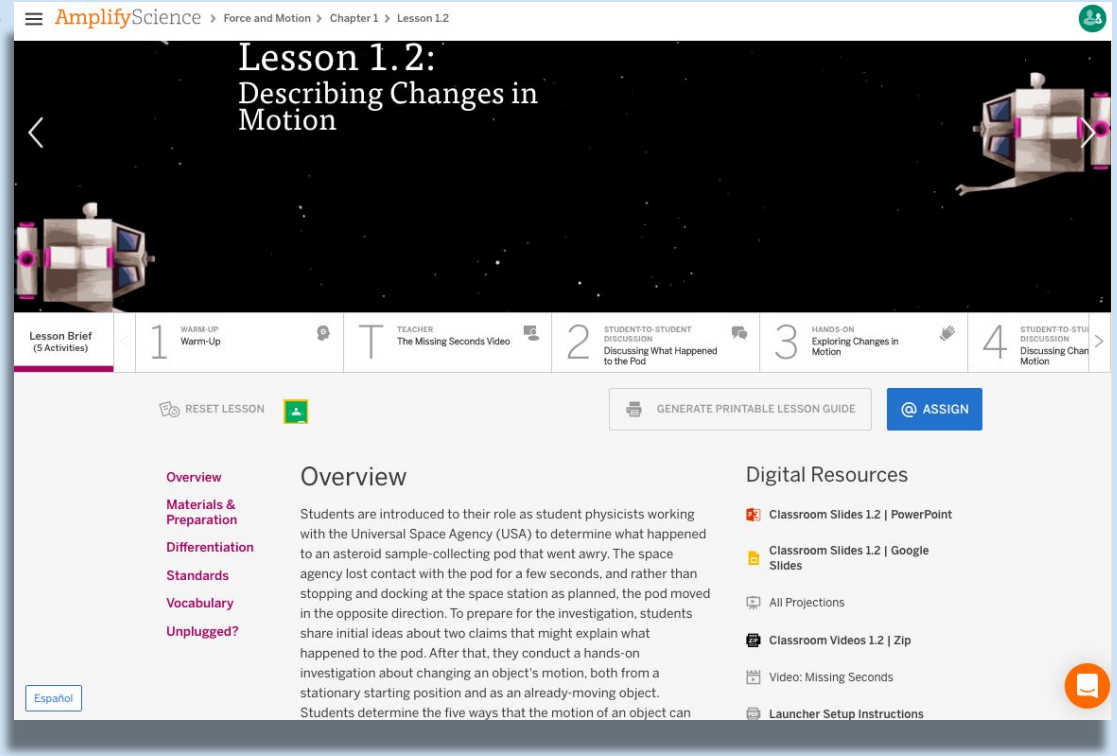
Science Seminar Lesson Exploration

Use the Lesson Brief for:

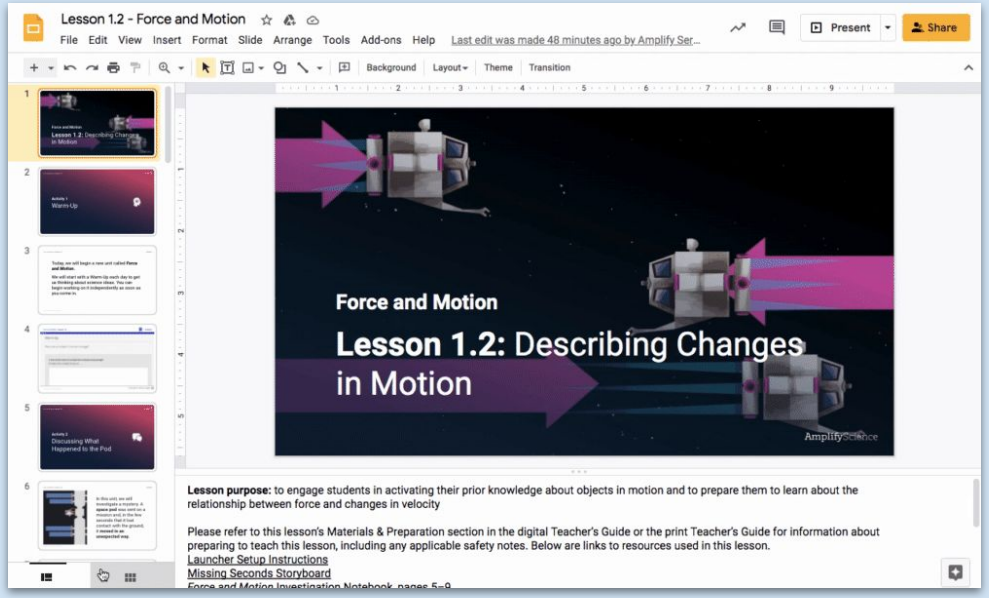
1. Locate information about lesson timing
2. Determine the materials and preparation
3. Locate and record differentiation suggestions
4. Note the available Digital Resources



Using Classroom Slides as a planning tool
Focus: Science Seminar

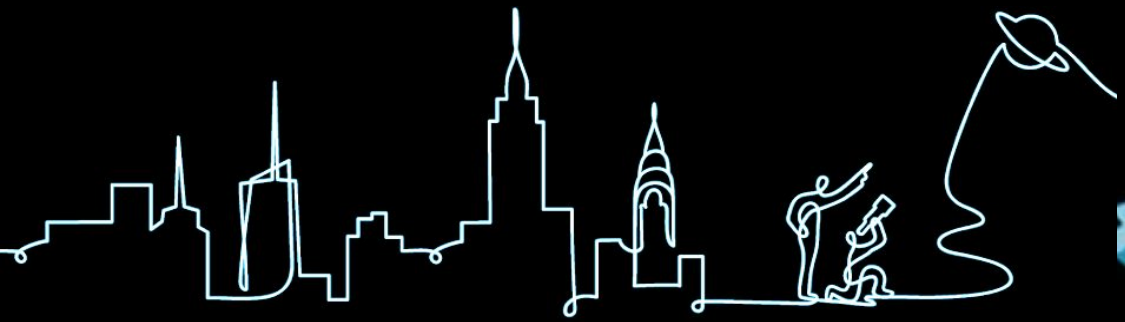
Teacher tip: Classroom Slides are a great visual summary of a lesson. Many teachers download and flip through a lesson's Classroom Slides deck to preview what happens in the lesson.

Download and use the slides to review the science seminar lessons in your unit.

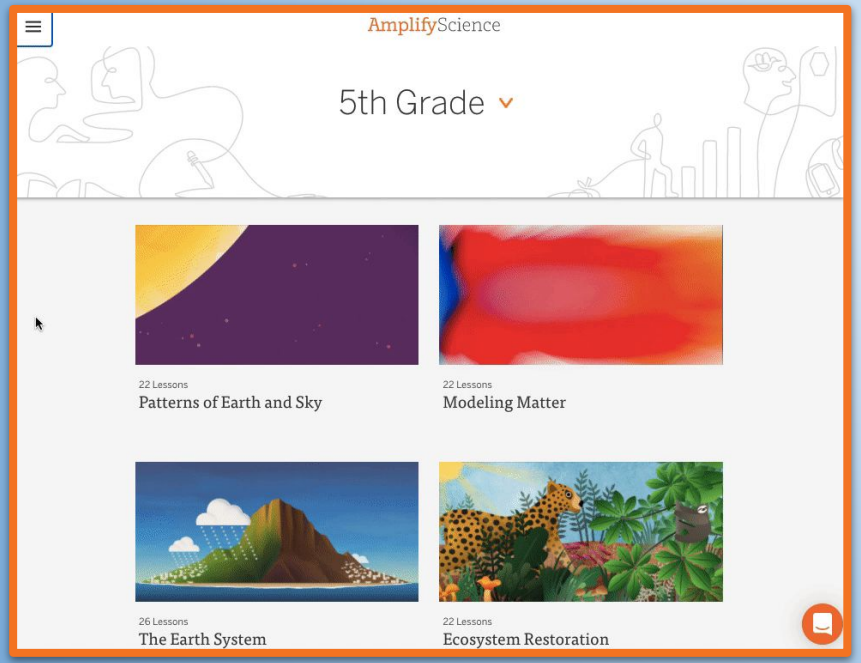



Questions?

Additional Resources



The Program Hub with supplemental and self study resources



Amplify.

Reflect-Type-Chat! Share and Learn

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

Classwork Help

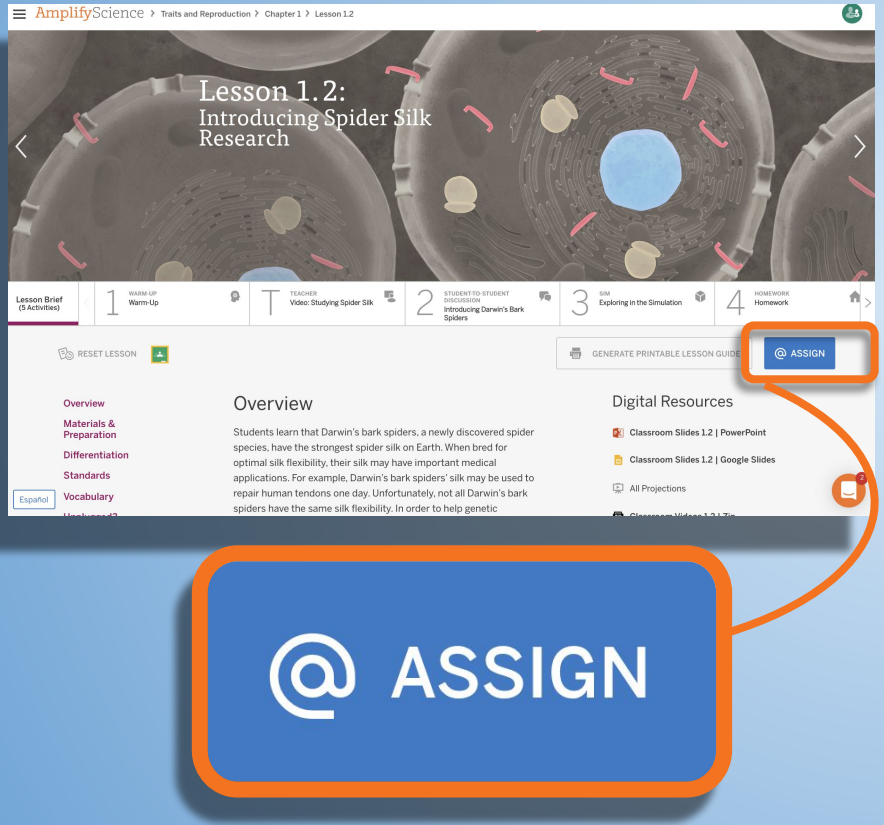
Introduction to Classwork

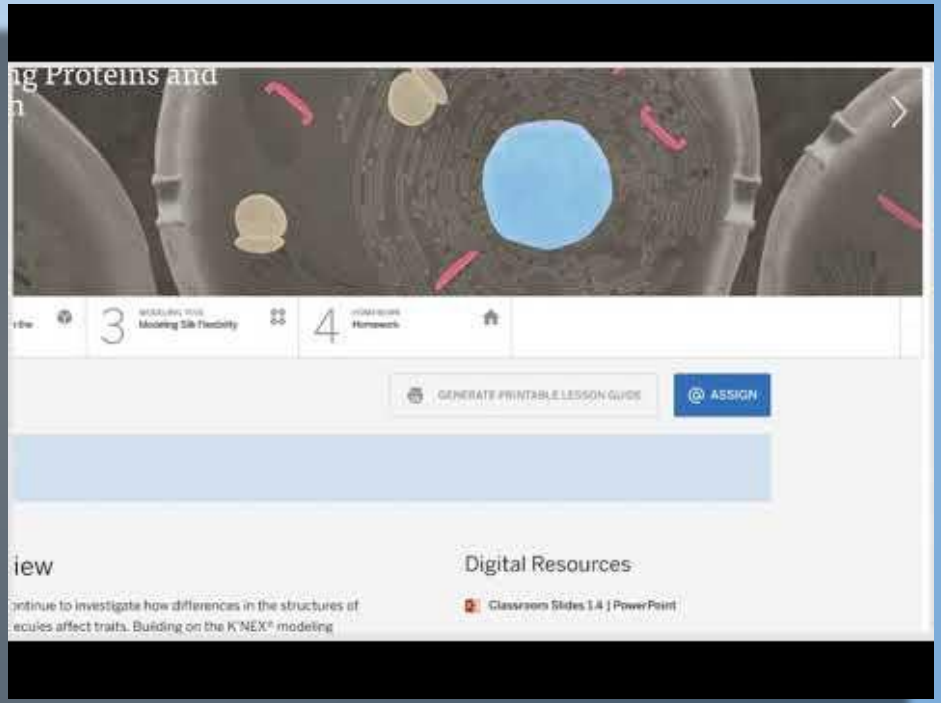
Amplify Science, grades 6-8

Amplify.

September 2020

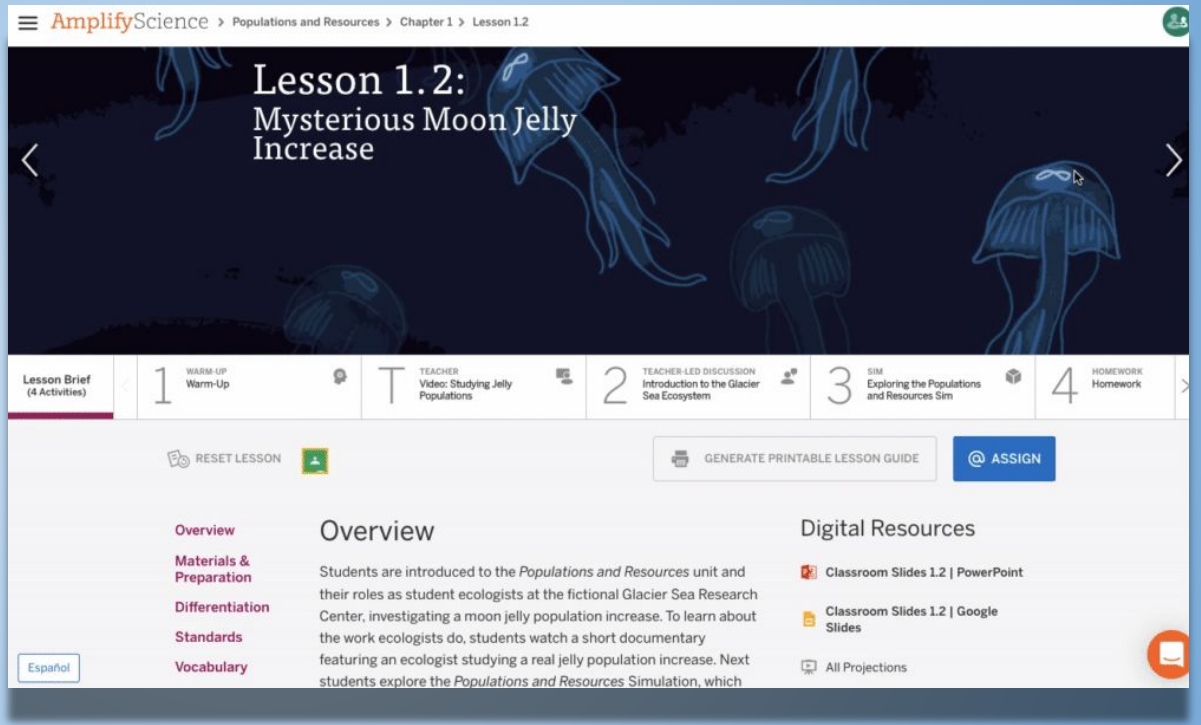
New! Assign in Amplify





Student Status Screen

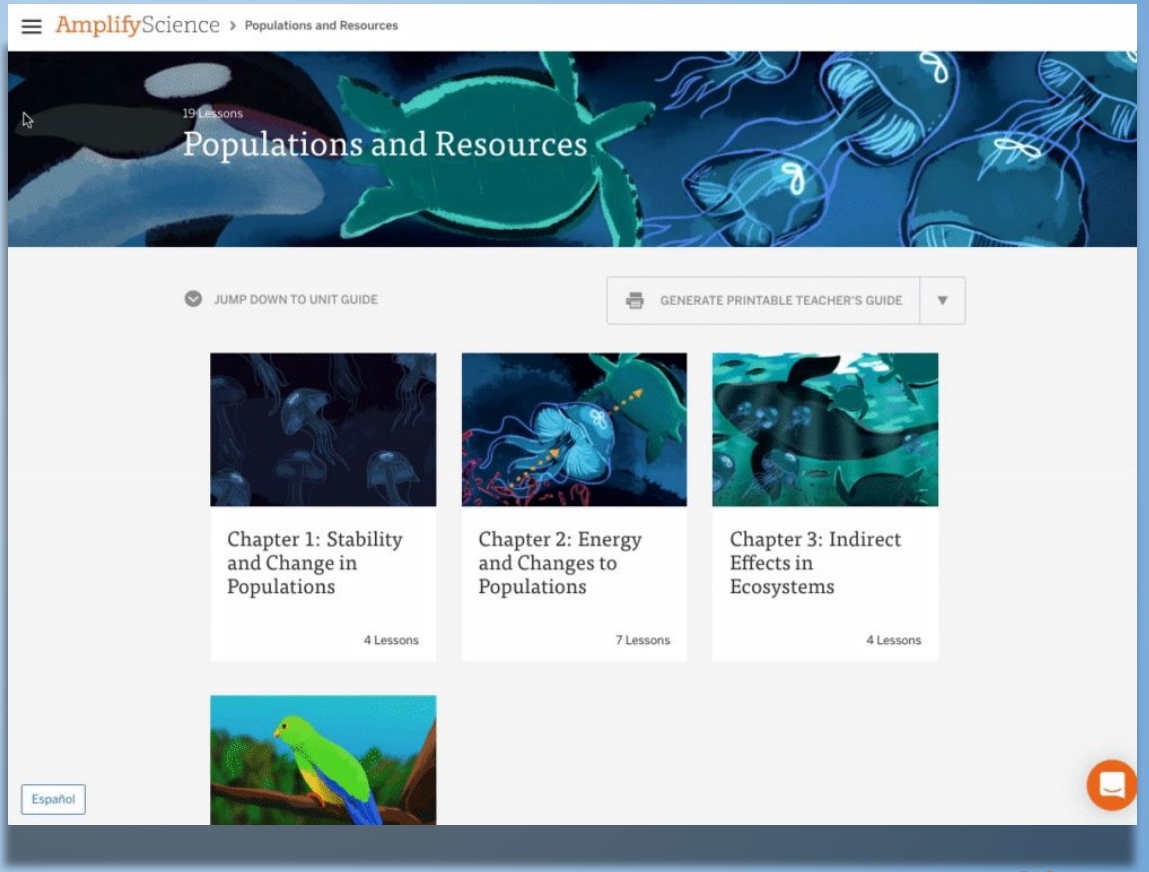
Teacher tip: Use Student Status screen to keep track of where students are in the digital platform while you're teaching, and to see their progress on activities in which they can digitally submit work.



Reporting

The Reporting feature allows you to analyze student performance on Pre-Unit, Critical Juncture, and End-of-Unit Assessments.

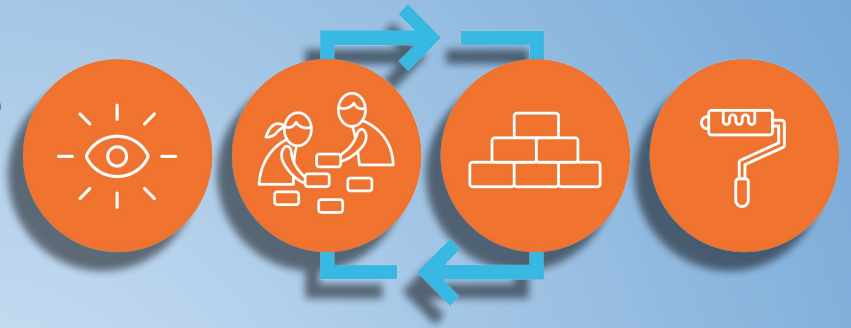
You can generate reports on the full class, individual students, or specific assessment items.



Plan for the day

- Approach Essentials
- Unit Storyline
- Unit Planning
- Reflection and closing

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

Where are differentiation notes for your Unit lessons?

A. Unit Level Materials and Prep

B. Unit Level Science Background

C. Digital TG Lesson Level

D. Teacher Overview

In Chat

What is your number one takeaway from this workshop ?


Questions?

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