

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, & school you teach in.



Amplify Science

New York City

Unit 3: Supporting Diverse Learner Needs

Grade 5 returning teachers

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!

Use two windows for today's webinar

Window #1

Meet - Etiwanda Grade 7 N x +
meet.google.com/hcs-dxpk-wrm?aut...

Miller Copy of Navigation Prop... x Amplify Curriculum
apps.learning.amplify.com/curriculum/#unit/8a31e095506df82015256f884b4544_californiaintegrated2019-2020#progress-build

Amplify Science CALIFORNIA > Plate Motion

OPEN PRINTABLE PROGRESS BUILD

Progress Build Level 1: The Earth's entire outer layer (below the water and soil that we see) is made of solid rock that is divided into plates. Earth's plates can move.

Underneath the soil, vegetation, and water that we see on the surface of Earth is the outer layer of Earth's geosphere, the solid part of our rocky planet. This outer layer of Earth is covered entirely with hard, solid rock that is divided into sections called plates. And, these plates can move.

Progress Build Level 2: The plates move on top of a soft, solid layer of rock called the mantle. At plate boundaries where the plates are moving away from each other, rock rises from the mantle and hardens, adding new solid rock to the edges of the plates. At plate boundaries where plates are moving toward each other, one plate moves underneath the other and sinks into the mantle.

Underneath the soil, vegetation, and water that we see on the surface of Earth is the outer layer of Earth's geosphere, the solid part of our rocky

Getting Ready to Teach
Materials and Preparation

Flexension Compilation
Investigation Notebook
NGSS Information for Parents and Guardians
Print Materials (11" x 17")
Print Materials (8.5" x 11")
Offline Preparation
Teaching without reliable classroom internet? Prepare unit and lesson materials for offline access.
Offline Guide

Window #2

Amplify Curriculum
apps.learning.amplify.com/curriculu...
Amplify Science CALIFORNIA > Plate Motion > Chapter 1 > Lesson 1.2

Lesson 1.2:
Using Fossils to Understand Earth

Lesson Brief (4 Activities) 1 WARM-UP Warm-Up T TEACHER-LED DISCUSSION Why Geologists Value Fossils 2 TEACHER-LED DISCUSSION Introducing Mesos

RESET LESSON GENERATE PRINTABLE LESSON

Lesson Brief

Overview
Materials & Preparation
Differentiation
Español rds

Digital Resources
All Projections
Completed Scientific Argumentation Wall Diagram
Video: Meet a Paleontologist
The Ancient Mesosaurus

Overarching goals

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

- Identify the embedded supports for diverse learner needs within your third unit.
- Understand the research-based principles that guided the creation of these supports & strategies in Amplify Science.





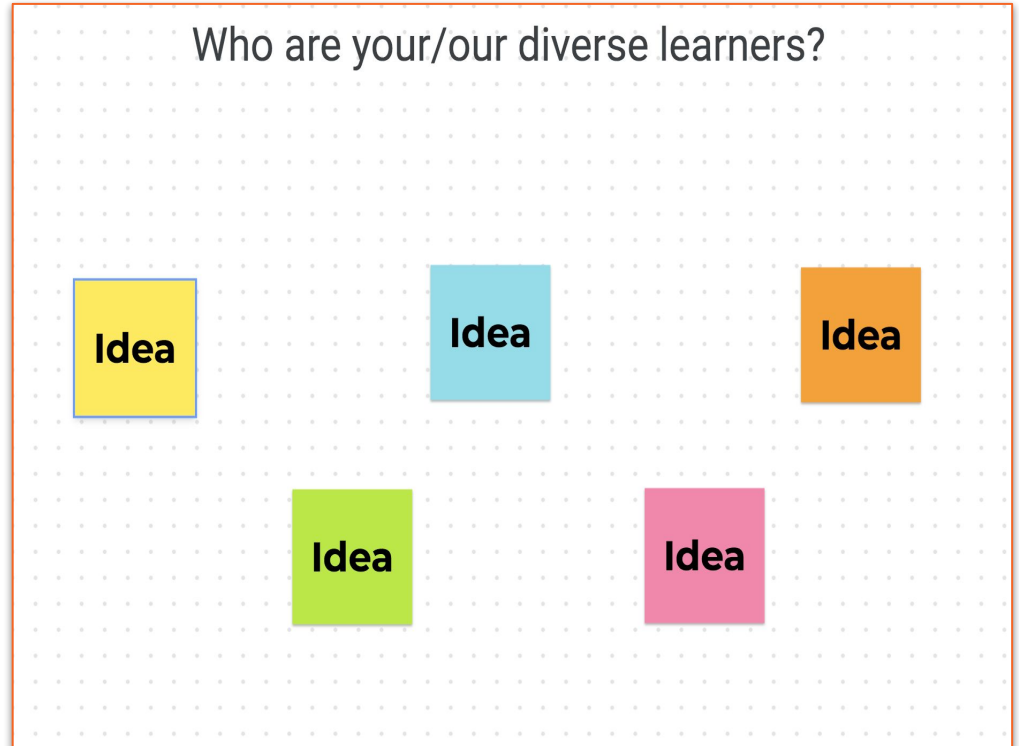
Plan for the day

- **Framing the day**
 - Welcome and introductions
 - Anticipatory activity
- Embedded supports for diverse learners
 - Research-based principles
- Analyzing an instructional sequence
 - Diverse learner profiles
 - Disciplinary literacy in science
- Multimodal instruction @home
- Closing
 - Reflection & additional resources
 - Survey

Anticipatory activity

On the Jamboard “post”

- Your thoughts on this prompt: “Who are your/our **diverse learners**?”



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



Questions?



Plan for the day

- **Framing the day**
 - Welcome and introductions
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- **Embedded supports for diverse learners**
 - **Research-based principles**
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The Amplify Science curriculum was developed with supporting diverse learning needs in mind.



Two overarching conceptual frameworks informed Amplify Science's approach to ensuring access and equity for all students:

Universal Design for Learning & Culturally Linguistically Responsive Teaching.



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**.

Universal Design for Learning Guidelines

I. Provide Multiple Means Representation

1: Provide options for perception

- 1.1 Offer ways of customizing the display of information
- 1.2 Offer alternatives for auditory information
- 1.3 Offer alternatives for visual information

2: Provide options for language, mathematical expressions, and symbols

- 2.1 Clarify vocabulary and symbols
- 2.2 Clarify syntax and structure
- 2.3 Support decoding of text, mathematical expressions, and symbols
- 2.4 Promote understanding across languages and symbols
- 2.5 Illustrate through multiple media

3: Provide options for comprehension

- 3.1 Activate or supply background knowledge
- 3.2 Highlight patterns, critical features, big ideas, and relationships
- 3.3 Guide information processing, visualization, and manipulation
- 3.4 Maximize transfer and generalization

<http://www.cast.org/>

4: Provide options for physical action

- 4.1 Vary the methods for response and navigation
- 4.2 Optimize access to tools and assistive technologies

5: Provide options for expression and communication

6: Provide options for executive functions

- 6.1 Guide appropriate goal-setting
- 6.2 Support planning and strategy development
- 6.3 Facilitate managing information and resources
- 6.4 Enhance capacity for monitoring progress

Provide Multiple Means of Engagement

7: Provide options for recruiting interest

- 7.1 Optimize individual choice and autonomy
- 7.2 Optimize relevance, value, and authenticity
- 7.3 Minimize threats and distractions

8: Provide options for sustaining effort and persistence

- 8.1 Optimize challenge and experience of goals and objectives
- 8.2 Optimize resources to optimize challenge
- 8.3 Promote collaboration and community
- 8.4 Provide timely, specific, and mastery-oriented feedback

9: Provide options for self-regulation

- 9.1 Promote expectations and beliefs that optimize motivation
- 9.2 Facilitate personal coping skills and strategies
- 9.3 Develop self-assessment and reflection

Virtual round robin: Give an instructional strategy from each category that you've used in your classroom.

Resourceful, knowledgeable learners

Strategic, goal-directed learners

Purposeful, motivated learners

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.



Source: (l): Aaron Yaazie; (um): Kyle Spradley/ University of Missouri; (lm) Dr. Grace O'Connell; (ur) Jane Rigby; (lr) Tina Shelton/ John A. Burns/ University of Hawaii at Manoa

Culturally and linguistically responsive teaching

Think, type, chat: What have you leveraged from the Amplify curriculum to support culturally and linguistically responsive teaching?

CULTURALLY AND LINGUISTICALLY RESPONSIVE TEACHING PRINCIPLES

- ∨ Promote a positive disposition toward diversity: +
- ∨ Leverage students' cultural and experiential backgrounds: +
- ∨ Value language diversity and multilingualism: +
- ∨ Cultivate students' development of the language of science: +

Differentiation strategies to support **ALL** students

t.rsinha-das@tryamplify.net

Log Out

Go To My Account ⚙️

Classroom Language Settings

LEA Resources

LA Science Program Guide

Science Program Guide

Help

Interim Assessments

Program Hub

AmplifyScience

Amplify Science

Welcome

Program developers

Designed for the NGSS

Program components

Scope and Sequence

Phenomena, standards, and progressions

Assessments

Science and literacy

Access and equity

Resources

Access and equity

Universal Design for Learning

Culturally and linguistically responsive

Differentiation strategies

– 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

Diverse learner needs

Student population	Strategies for support
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	

- In pairs, choose a **student population**.
- Jot down strategies you've read about from the **Program Guide** & those from your **own practice**.



Questions?



Plan for the day

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 - **Disciplinary literacy in science**
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Sample student profiles

Learner A: Enjoys science and math. Loves to tell stories about her many travels and enjoys figuring out phenomena presented. While she finds verbal explanations to be sufficient, she does not find it necessary to elaborate on her ideas through written explanation or written argument. She often shuts down when pushed to provide supporting details in writing.

Learner B: Enjoys reading and writing. When provided a written assignment, he is anxious to provide lengthy written and verbal explanations. Although, this learner enjoys reading, writing and speaking, he is challenged by sentence structure, spelling and staying on topic.

Learner C: This new student enjoys expressing himself through art and drawings. He is not a strong reader, yet, as English is his second language. This student has strong comprehension skills and has adapted to using the classroom artifacts to help him construct written explanations.

Learner D: Enjoys solving critical thinking problems and has rich science vocabulary. She works best when provided independent tasks and does not work well in collaborative group settings. She relies on step by step teacher validation and is not likely to complete a task without making sure her answer is affirmed by an adult in the room.

The Earth System



What can determine how much water is available for human use?

The cities of East Ferris and West Ferris are located on different sides of a mountain on the fictional Ferris Island. East Ferris is having a water shortage while West Ferris is not. As water resource engineers, students learn about the Earth system so they can help figure out what is causing the water shortage on one part of the island. They also design ways to alleviate the effects of water shortages, including freshwater collection systems and proposals for using chemical reactions to treat wastewater.

As you experience model activity:

- Choose a **learner profile**.
- Reflect on what this student may be **challenged by**.

Keeping Diverse Learner Needs in Mind Reflection Tool

Unit Name: _____ Chapter #: _____ Lesson #: _____

Circle the Selected Learner Profile: A B C D

Directions: Reflect on each lesson activity and jot down strategies to support the student you selected from the Learner Profile.

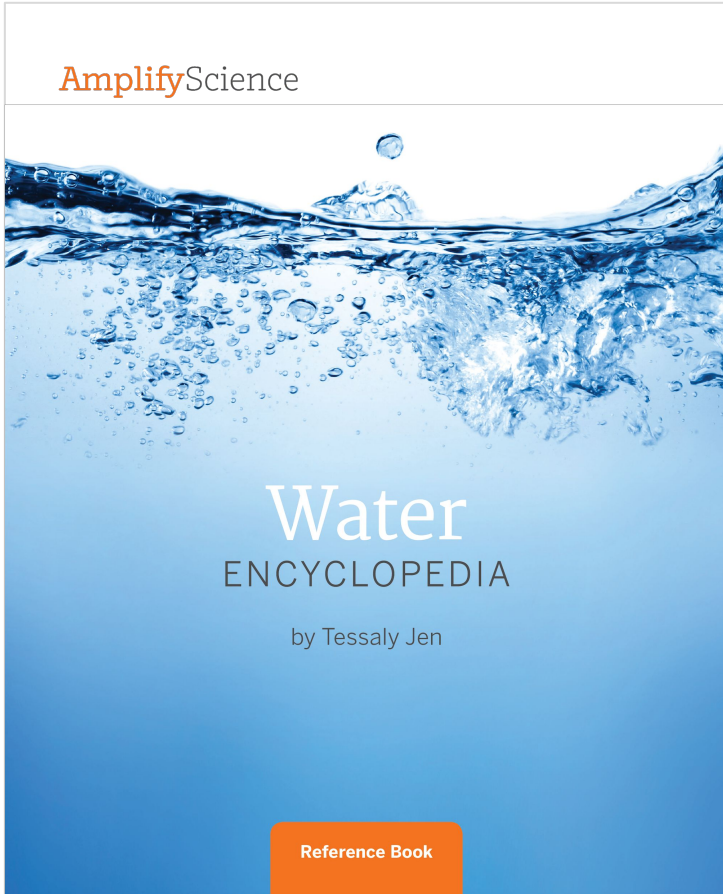
Lesson Activity	My Student May be Challenged by...	Suggestions from the Differentiation Brief	Suggestions from my own Teacher Toolkit
1			
2			
3			
4			
5			

Take a Moment: How will this activity influence your planning practices?

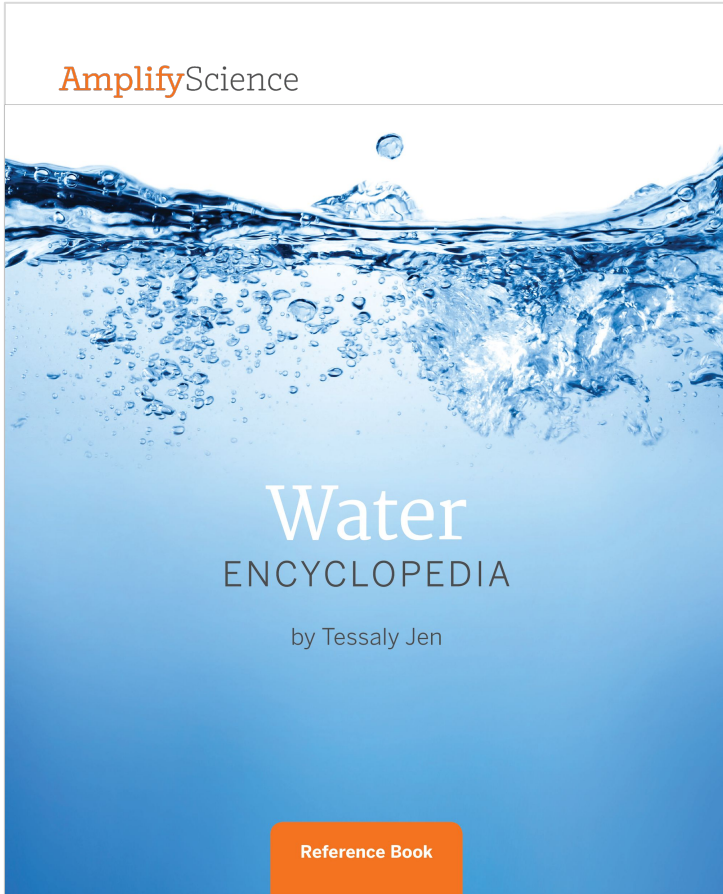
Activity 4

Water Distribution on Earth





Let's look in this **reference book** to find out more about where water is on Earth.



Look through the book to see how it is organized and what kind of information it contains.

What do you **notice**?

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.

Contents

How to Use This Book.....	4	Ocean.....	26
Chemical Reactions and Water.....	5	Phases of Water.....	28
Collecting Water for Human Use.....	6	Places Where Water Exists on Earth.....	30
Condensation of Water.....	8	Precipitation.....	32
Conserving Water.....	9	Properties of Water.....	33
Evaporation of Water.....	11	Shortages of Water.....	34
Freezing of Water.....	12	Surface Water.....	36
Freshwater and Salt Water.....	13	Transporting Water.....	37
Groundwater.....	14	Treating Water for Human Use.....	38
Habitats in Water.....	16	Wastewater.....	40
Human Body and Water.....	17	Water in the Solar System.....	41
Human Use of Water.....	18	Watersheds.....	42
Hydrosphere.....	20	Water Vapor.....	44
Ice.....	21	Weather and Water.....	46
Living Things and Water.....	22	Glossary.....	47
Melting and Water.....	23	Index.....	48
Microorganisms in Water.....	24		
Molecules of Water.....	25		

Turn to page 3, Contents, in *Water Encyclopedia*.

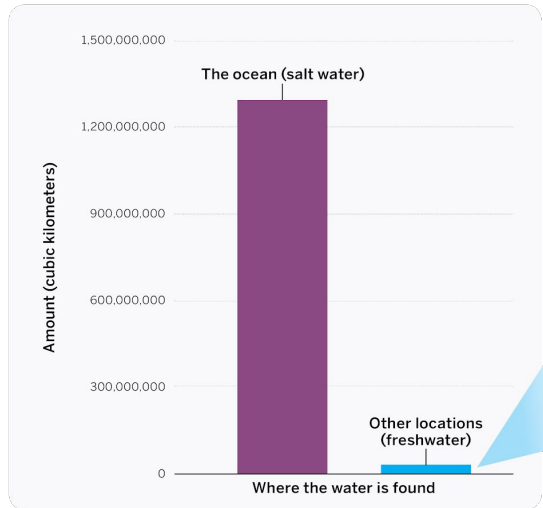


Where could we look to find out more about **where water is on Earth?**

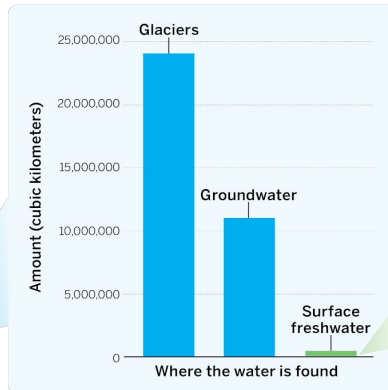


Read pages 30–31. What do you notice?

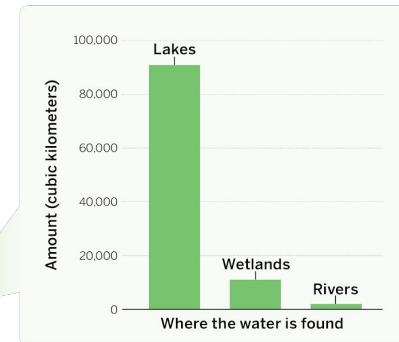
Water on Earth



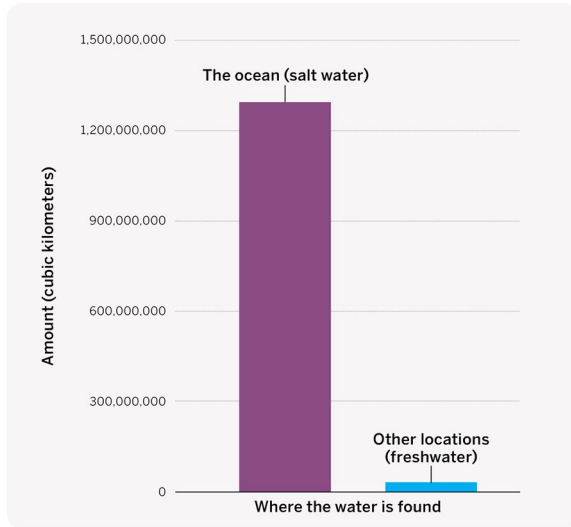
Freshwater on Earth



Surface Freshwater on Earth



Water on Earth



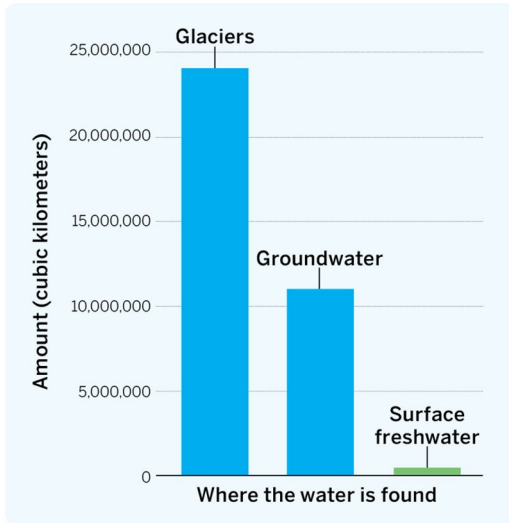
This graph shows how much water on Earth is salt water in the ocean and how much is freshwater.

This is the graph on page 30. Notice the title and labels.



What do you observe on this graph?

Freshwater on Earth

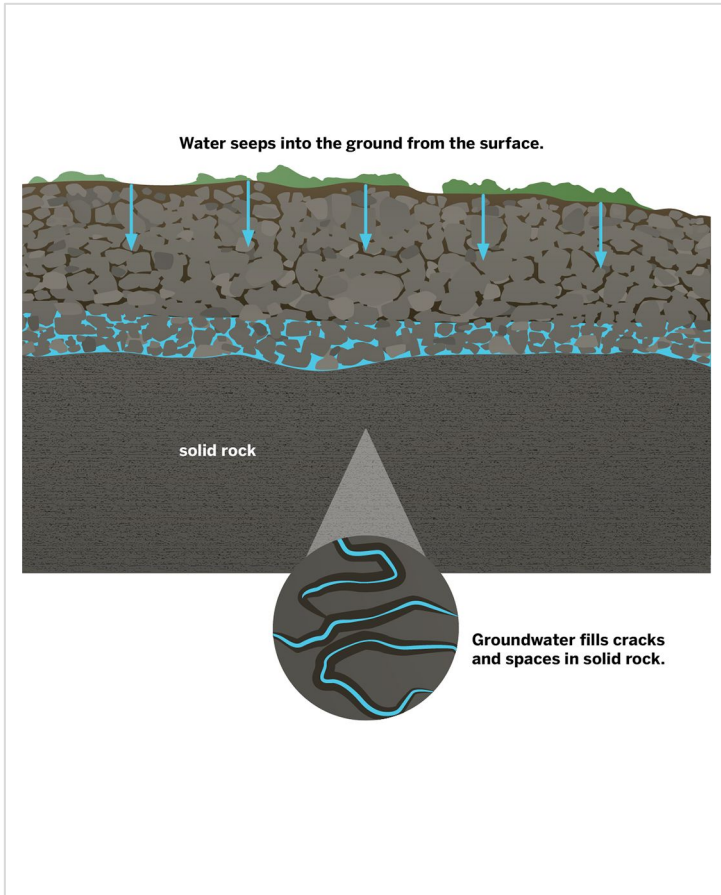


This graph shows where the freshwater on Earth is, including ice in glaciers and liquid water underground and at the surface. Freshwater also exists in plants and animals, as frozen ground ice, and as water vapour in the atmosphere.

This graph is zoomed in on the freshwater data from the last graph.

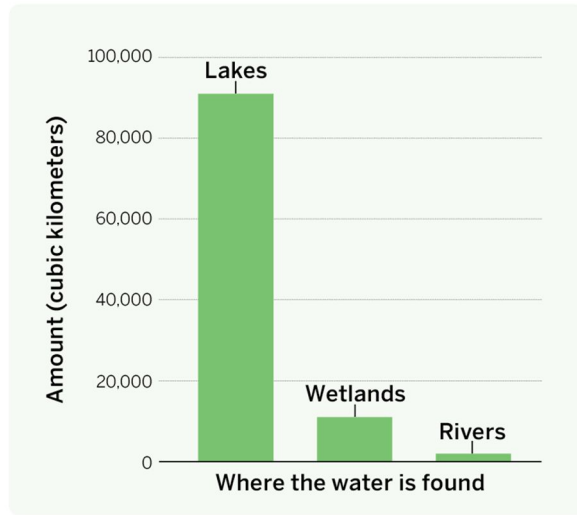


What do you observe on this graph?



This is a **diagram** of **groundwater**. It shows how groundwater is not like a giant underground lake.

Surface Freshwater on Earth



This graph shows where freshwater is on the surface of Earth: in lakes, wetlands, and rivers.

This graph is zoomed in on the surface freshwater from the previous graph.



What do you observe on this graph?

Places Where Water Is Found on Earth

- ocean
- rivers
- groundwater
- lakes
- glaciers
- wetlands

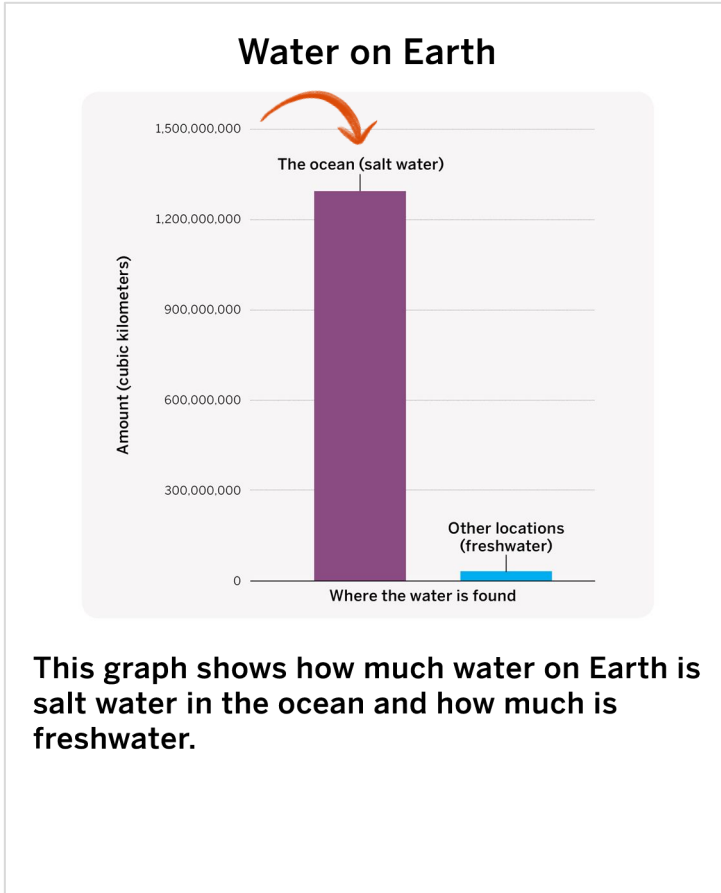
Use the graphs in *Water Encyclopedia* to help you answer this question.



How would you order these places from the **least amount of water to the most?**

Key Concept

Almost all of Earth's water is salt water in the ocean. The limited amount of freshwater is mostly in glaciers and groundwater.



Why does it matter to people that most of Earth's water is **salt water?**

End of model activity

Differentiation in Amplify Science

Lesson Brief	
Overview	▼
Materials & Preparation	▼
Differentiation	▼
Standards	▼
Vocabulary	▼
Unplugged?	▼



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

Reflection part 1:

- Navigate to the **model** lesson **activity**.
- Review the **differentiation brief** and jot down notes on the **note-catcher** to describe the supports you think would best support your **diverse learner**.

Keeping Diverse Learner Needs in Mind
Reflection Tool

Unit Name: _____ Chapter #: ____ Lesson #: ____

Circle the Selected Learner Profile: A B C D

Directions: Reflect on each lesson activity and jot down strategies to support the student you selected from the Learner Profile.

Lesson Activity	My Student May be Challenged by...	Suggestions from the Differentiation Brief	Suggestions from my own Teacher Toolkit
1			
2			
3			
4			
5			

Take a Moment: How will this activity influence your planning practices?

A disciplinary literacy approach to learning science

In the Amplify Science program, students **learn to read, write, and speak as scientists do** as they acquire facility with the **academic language** and vocabulary of science. Through the **seamless integration of science and literacy instruction**, students also learn that reading, writing, and talking are **essential practices of science**, and that all scientists use these practices to gather information, communicate claims, leverage evidence, draw conclusions from data, and share their ideas through oral and written **explanations and arguments**.

Reflection part 2:

How did language & literacy help students in developing scientific understanding in the model activity?





Questions?



Plan for the day

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 - Disciplinary literacy in science
- **Multimodal instruction @home**
- Closing
 - Reflection & additional resources
 - Survey

AmplifyScience@Home

A suite of resources designed to make extended remote and hybrid learning easier for teachers and students.



Temperature Check

Rate your comfort level accessing and navigating the Amplify Science @Home Resources

1 = Extremely Uncomfortable

2 = Uncomfortable

3 = Mild

4 = Comfortable

5 = Extremely Comfortable


AmplifyScience

Hello Teacher Sinha-Das
 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


1st Grade ▾ **Step 1**



22 Lessons
Animal and Plant Defenses



22 Lessons
Light and Sound



22 Lessons
Spinning Earth

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Amplify Science Program Hub

Welcome Science Educators! **Step 2**

The Amplify Science Program Hub was created to provide you with resources, tools, and advice for all stages of your implementation. Want a tour? Click [here!](#)

Remote and hybrid learning resources
 Amplify Science@Home makes remote and hybrid learning easier.

Professional Learning Resources
 Let's get started!

Additional Unit Materials
 Additional resources to complement the units you're teaching.

AmplifyScienceProgramHub HELP CENTER LAUNCH PROGRAMS TEACHER SINHA

Amplify Science Program Hub > Remote and hybrid learning resources

Remote and hybrid learning resources ▾

Resources for the first unit of each grade level are available now, and subsequent units will be released on a rolling basis. For grades 6-8, materials will be released and organized according to our national Integrated Sequence.

Step 3 (choose your grade)

Grade Level Units Grade TK ▾

Transitional Kindergarten

AmplifyScienceProgramHub HELP CENTER LAUNCH PROGRAMS TEACHER SINHA

Amplify Science Program Hub > Remote and hybrid learning resources

Remote and hybrid learning resources ▾

Resources for the first unit of each grade level are available now, and subsequent units will be released on a rolling basis. For grades 6-8, materials will be released and organized according to our national Integrated Sequence.

Step 4 (scroll down and choose your unit)

Grade Level Units NYC Grade 7 ▾

Orientation and Tutorials
 Learn more about how to use @Home resources.

Microbiome

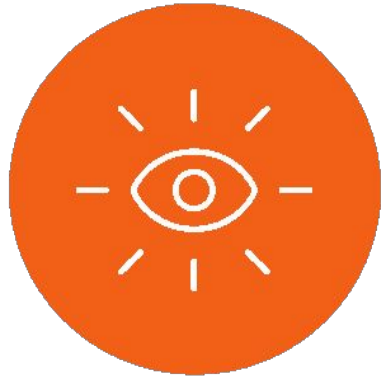
Metabolism

Phase Change

Chemical Reactions

Plate Motion

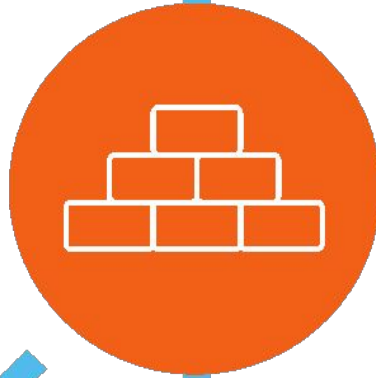
Amplify Science approach



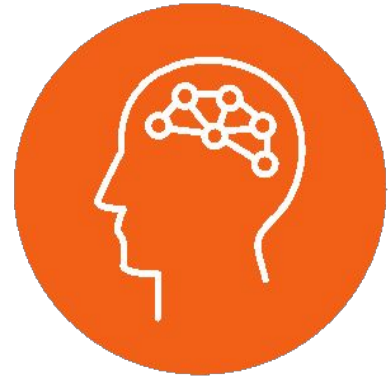
**Introduce a phenomenon
and a related problem**



**Collect evidence from
multiple sources**



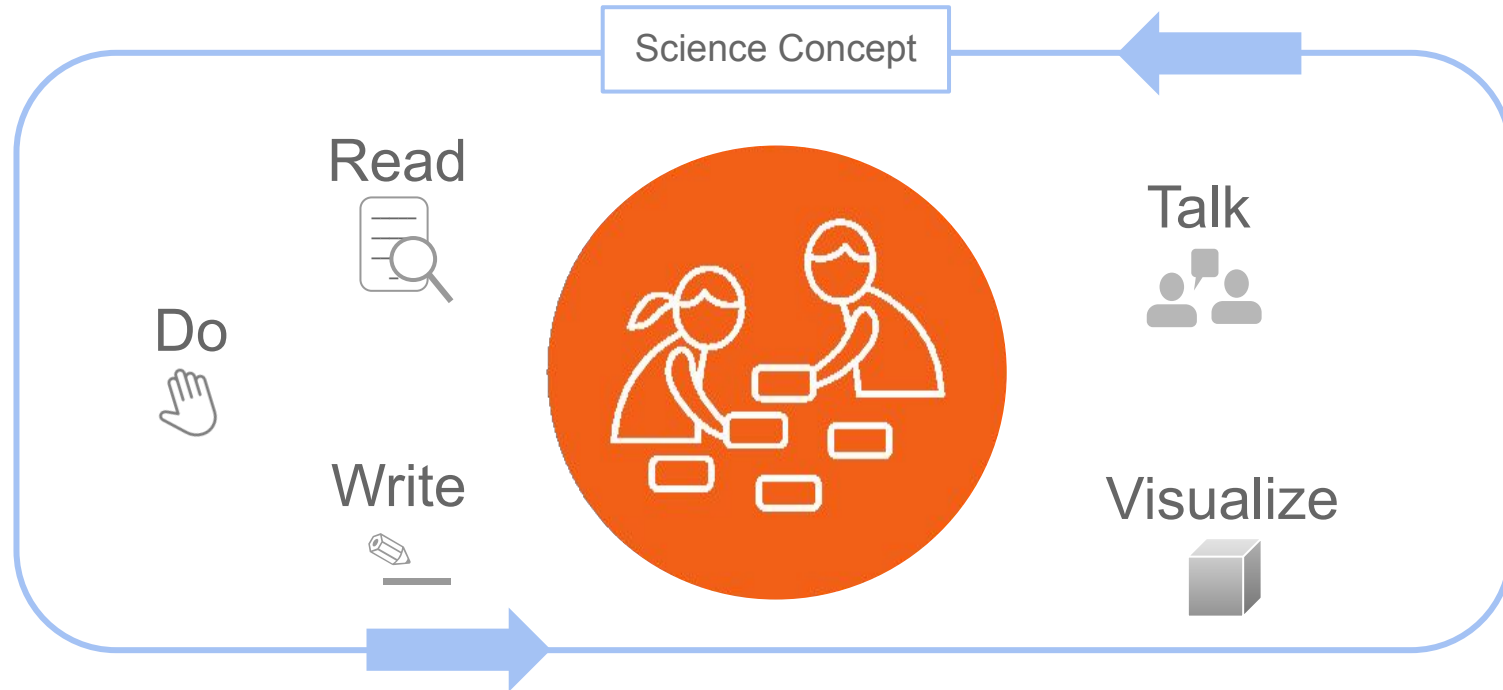
**Build increasingly
complex explanations**



**Apply knowledge
to a different context**

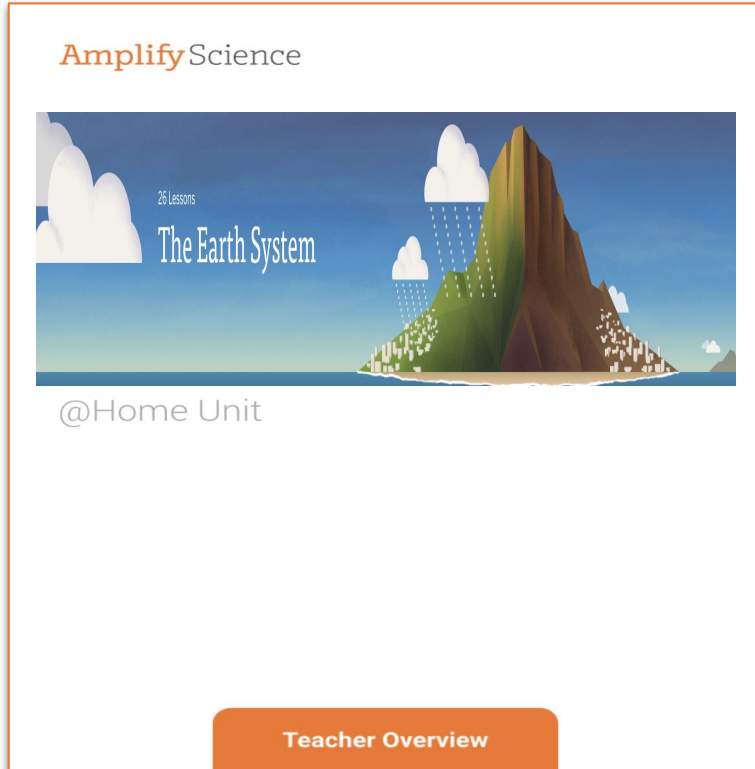
Multimodal learning

Gathering evidence from different sources



@Home units diverse learner supports

The multimodal approach



- Preserves a **coherent** instructional build
- Retains a **multi-modal & 3-D** learning approach
- **Adapted** versions of doing, talking, reading, and writing



Questions?



Plan for the day

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Revisiting our objectives

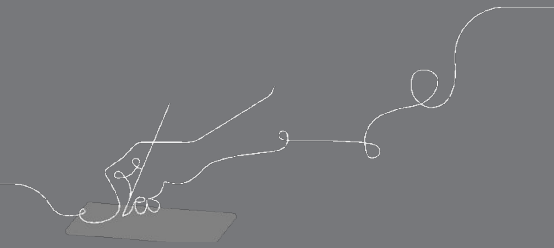
Do you feel ready to...

- Identify the embedded supports for diverse learner needs within your third unit.
- Understand the research-based principles that guided the creation of these supports & strategies in Amplify Science.

1- I'm not sure how I'm going to do this!

3- I have some good ideas but still have some questions.

5- I have a solid plan for how to make this work!



New York City Resources Site

<https://amplify.com/amplify-science-nyc-doe-resources/>



Amplify.

Amplify Science Resources for NYC (K-5)

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 Science! We have access to the many updates and upgrades in our curriculum until late August/early September when we will update our 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!

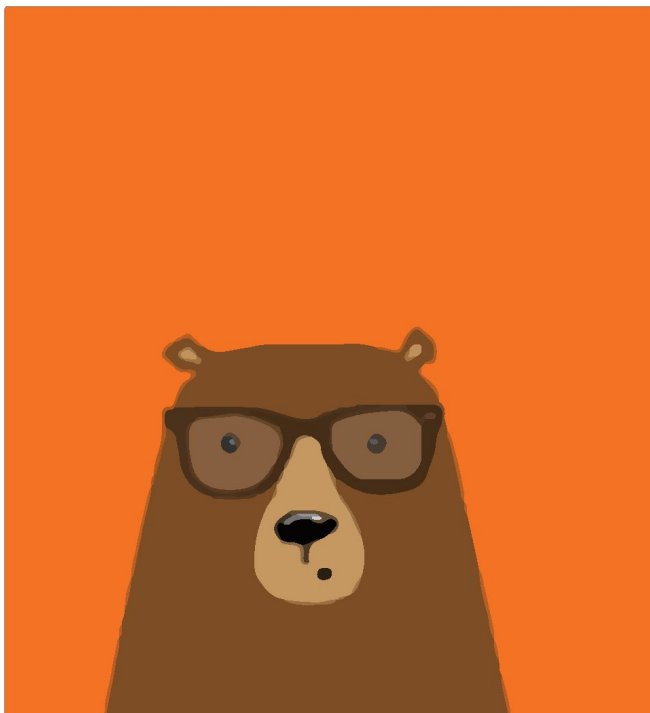
Amplify Science Program Hub

A hub for Amplify Science resources

- **Videos and resources to continue getting ready to teach**
- Amplify@Home resources
- Keep checking back for updates

The screenshot shows the Amplify Science Program Hub website. The browser address bar displays the URL: apps.learning.amplify.com/curriculum/#/yearoverview?subject=Science&programKey=6a0daafb-c356-4e50-841a-558d9bb5181.... The page features a navigation menu on the left with a hamburger icon circled in orange. The main content area includes a user profile for "Molly Teacher Lambertsen" with options for "Log Out" and "Go To My Account". Below this is a "Classroom Language Settings" section. The "Additional Resources" section lists several items: "Benchmark Assessments", "ELA Resources", "LA Science Program Guide", "Interim Assessments", "Science Program Guide", and "Help". The "Home" section displays a grid of resource cards, including "Metabolism" (19 Lessons) and "FUTURE OF ENGINEERING" (19 Lessons). The page footer contains the copyright notice: "© 2020 Amplify Education, Inc."

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.

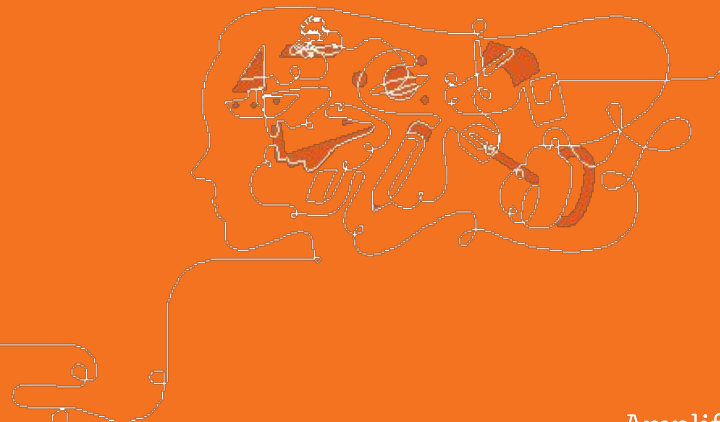


Final Questions?

Please provide us feedback!

URL: <https://www.surveymonkey.com/r/BY56SBR>

Presenter name: XXX



30 minute open office hours
to follow...

