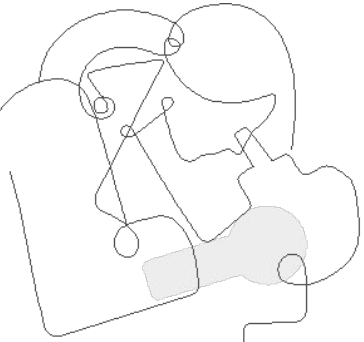
Amplify Science

Amplify Science Assessments

Grades: Transitional Kindergarten, Kindergarten, and Grade 1



LAUSD May 2022
Presented by: JoAnna Chocooj, MA Ed UCB, & Amplify Professional Learning Specialist
& Brycé Pesce, Amplify Professional Learning Specialist and Anna Gaiter, LAUSD

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Welcome!

- **Please share your own "Fun Fact" with us in the chat!**

Intro: **JoAnna Chocooj**

- 30 year veteran teacher in SF Bay Area = small Urban district in Vallejo, CA
- Taught TK-6th, but TK-1st are my personal favorites!
- I got this wonderful water/sand table for my classroom from Donorschoose.org - use in all 3 Amplify Science TK Units but especially *Wondering About Puddles*
- **FUN FACT:** I grew up in tiny desert town of Trona, CA, just 65 miles south of Death Valley. Very few puddles!

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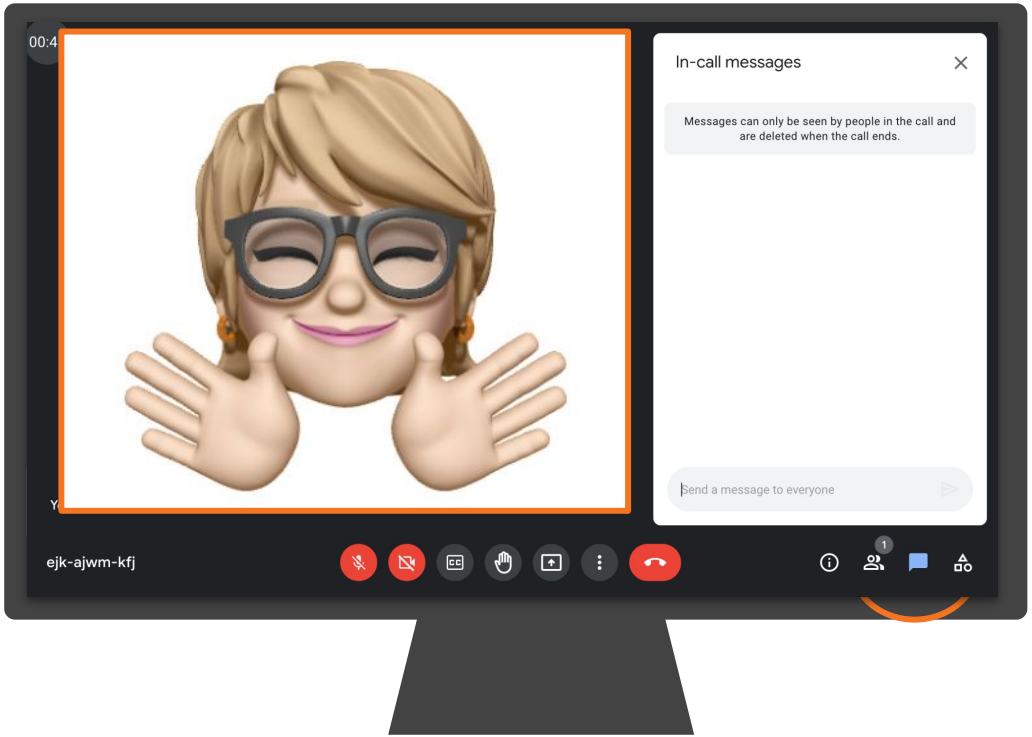
Ice Breaker!
In the Chat…

- **Question 1:** On a scale from 1-5, how familiar are you with navigating Amplify Science?

- **Question 2:** Share what experience you have had with assessments in the Amplify Science curriculum.
  - 1 = there are assessments?
  - 3 = some, helpful to understand students' progress,
  - 5 = a lot, I can practically use them to write my report cards!



Amplify's Purpose Statement

Dear teachers,

You do a job that is nearly impossible and **utterly essential**.

We are in your corner – extending your reach, saving you time, and enhancing your understanding of each student.

Thank you for working with us to craft rigorous and riveting learning experiences for your classroom.

We share your goal of **inspiring all students to think deeply, creatively, and for themselves.**

Sincerely,
Amplify

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.

- Note Catcher
- TK Participant Notebook

Planning for the Unit

Earth Science
Wondering About Puddles

Unit Overview

In the *Earth Science: Wondering About Puddles* unit, students investigate the phenomenon of puddles existing in some places but not in other places along a girl's walk to school. Students are challenged to solve the mystery of where and why puddles do and do not form. First, students figure out that water flows down as far as it can go, so puddles are likely to form at the bottom of slopes. Next, students investigate how certain types of ground can have puddles, while other types of ground do not have puddles. They figure out that some types of ground, such as gravel, have spaces for water to flow down into, which initially keeps puddles from forming. Meanwhile, other types of ground, such as pavement, do not have spaces for water to flow down into, so puddles form. Later in the unit, students figure out that more rain can cause water to fill the spaces in types of ground such as gravel, causing puddles to form in places in which they initially had not formed. In the course of solving these puddle mysteries, students are introduced to core ideas in Earth science and physical science, including types of earth materials and properties of materials, as well as the interaction of water and earth materials. The unit also includes an emphasis on planning and carrying out investigations, sharing ideas as scientists, and generating questions after learning new ideas. Students gather evidence for these ideas from a variety of sources: a book, pictures and illustrations, models, and indoor and outdoor hands-on investigations. Students share their developing ideas through discussion, drawing, and writing. Through the activities, students are exposed to the crosscutting concepts of *Cause and Effect* and *Scale, Proportion, and Quantity*. The context of puddles along a walk to school provides a familiar and puzzling starting point to inspire students' investigations both inside and outside the classroom.

Structure of the Unit

Each unit in the *Amplify* Science Transitional Kindergarten (TK) curriculum begins with an Introductory Activity that introduces a phenomenon. The Introductory Activity is followed by a series of three Explorations—each Exploration is comprised of a Kickoff Discussion, four activities, and a Shared Drawing and Discussion—in which students investigate to collect evidence that will help them construct an understanding of the phenomenon. Each unit ends with a Culminating Activity that consolidates students' understanding. See the unit diagram on the next page for a visual representation of the flow of instructional activities.

Depending on your class schedule and configuration, each unit can be implemented in a variety of instructional formats. (For additional information about how to personalize a unit for your class, see Flexible Implementation in the Instructional Resources section on page 6.) Each instructional activity is designed to span approximately 25 minutes. Depending on the implementation options you choose, teaching the entire unit will take approximately 4–6 weeks.

1 *Amplify* Science Transitional Kindergarten

Notes

10

Schoology

- To join Amplify ES Group: W4PK-W466-63F5B




Plan for the day

- **Introduction and Framing**
- Unit Overview
- Formative Assessments
  - On-the-Fly Assessments
  - Critical Juncture
  - Self Assessments
- End of Unit Assessments
  - TK Culminating Activity
- Closing

Overarching goals

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

- ❑ **Describe the overall structure of the Assessment System**
- ❑ **Describe the overall structure and purpose the Formative Assessments.**
- ❑ **Understand the Critical Juncture and End of Unit assessment.**
- ❑ **Understand how the formative assessments build to the summative assessment.**

Year at a Glance: Transitional Kindergarten

Life Science:
Wondering About Noises in Trees
Student Role:Scientist

Physical Science:
Wondering About Buildings
Student Role:Building Engineer

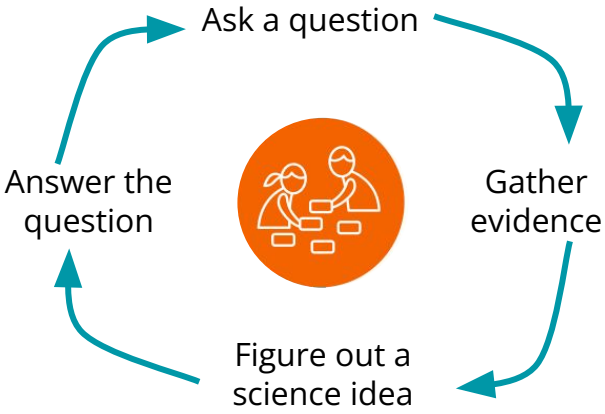
Earth Science:
Wondering About Puddles
Student Role:Hydrologist

Number of Lessons: 20 lessons per unit
Time: 15 mins per lesson
Instructional Time: 4 - 6 weeks per unit - **Flexible Implementation**

Amplify Science TK Instructional Approach

Find out about a Mystery, a Phenomenon

NGSS focus



Gather evidence to figure out science ideas

California PLFF's & NGSS 3D Learning

Explain the Mystery, the Phenomenon

California PLFF Application to NGSS !

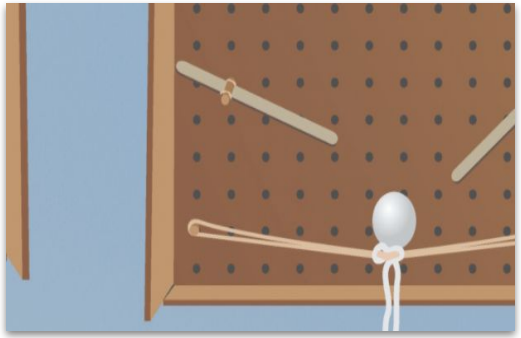
Year at a Glance: Kindergarten

Needs of Plants and Animals

Domain: Life Science

Unit type: Investigation

Student role: Scientist

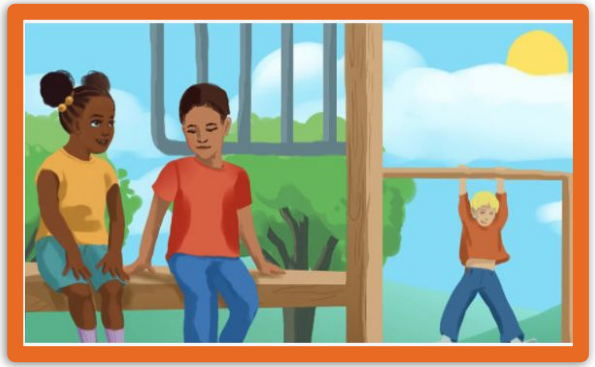


Pushes and Pulls

Domain: Physical Science

Unit type: Engineering Design

Student role: Pinball Engineer



Sunlight and Weather

Domain: Earth and Space Science

Unit type: Modeling

Student role: Weather Scientist

Year at a Glance: Grade 1

Animal and Plant Defenses

Domain: Life Science

Unit type: Modeling

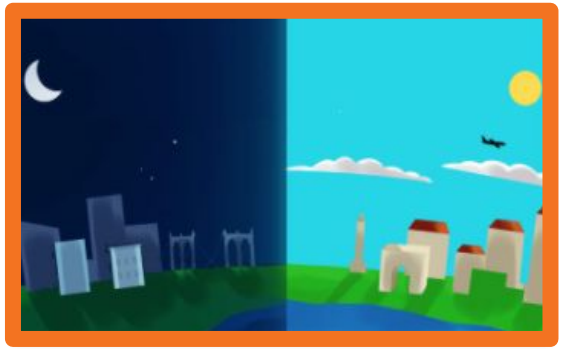
Student role: Marine Scientist

Light and Sound

Domain: Physical Science

Unit type: Engineering Design

Student role: Light and Sound Engineer



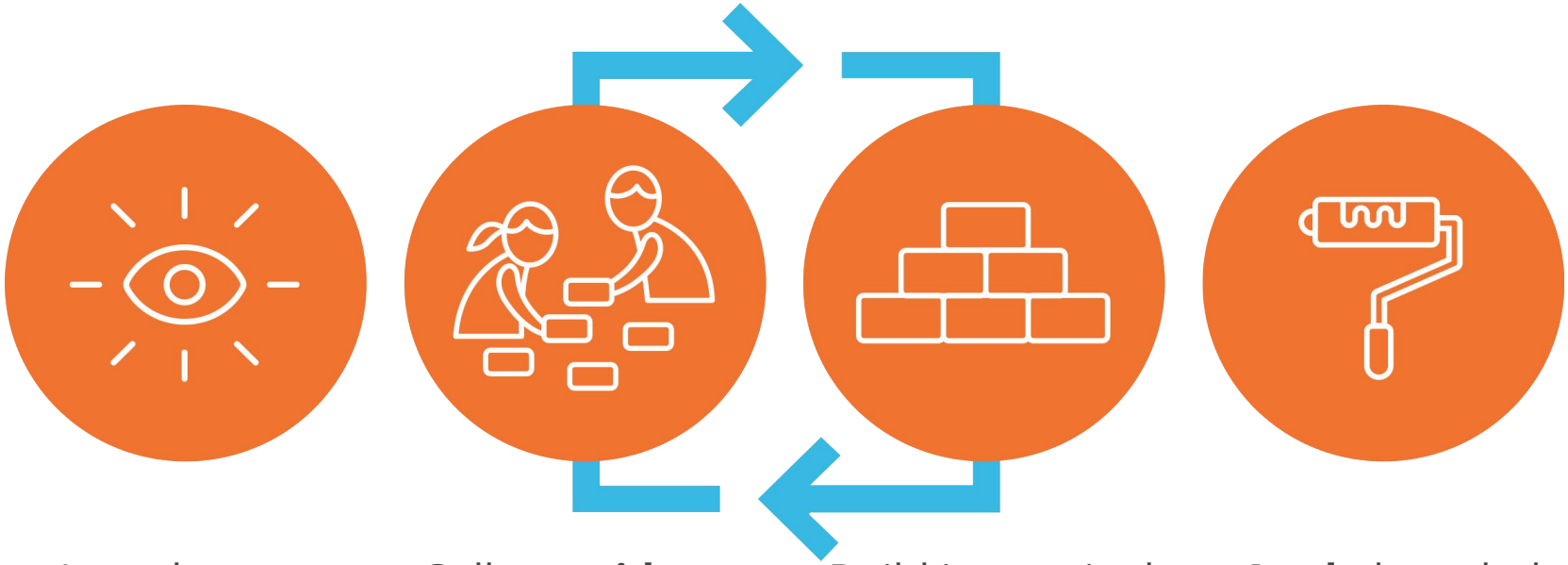
Spinning Earth

Domain: Earth and Space Science

Unit type: Investigation

Student role: Sky Scientist

Amplify Science Approach



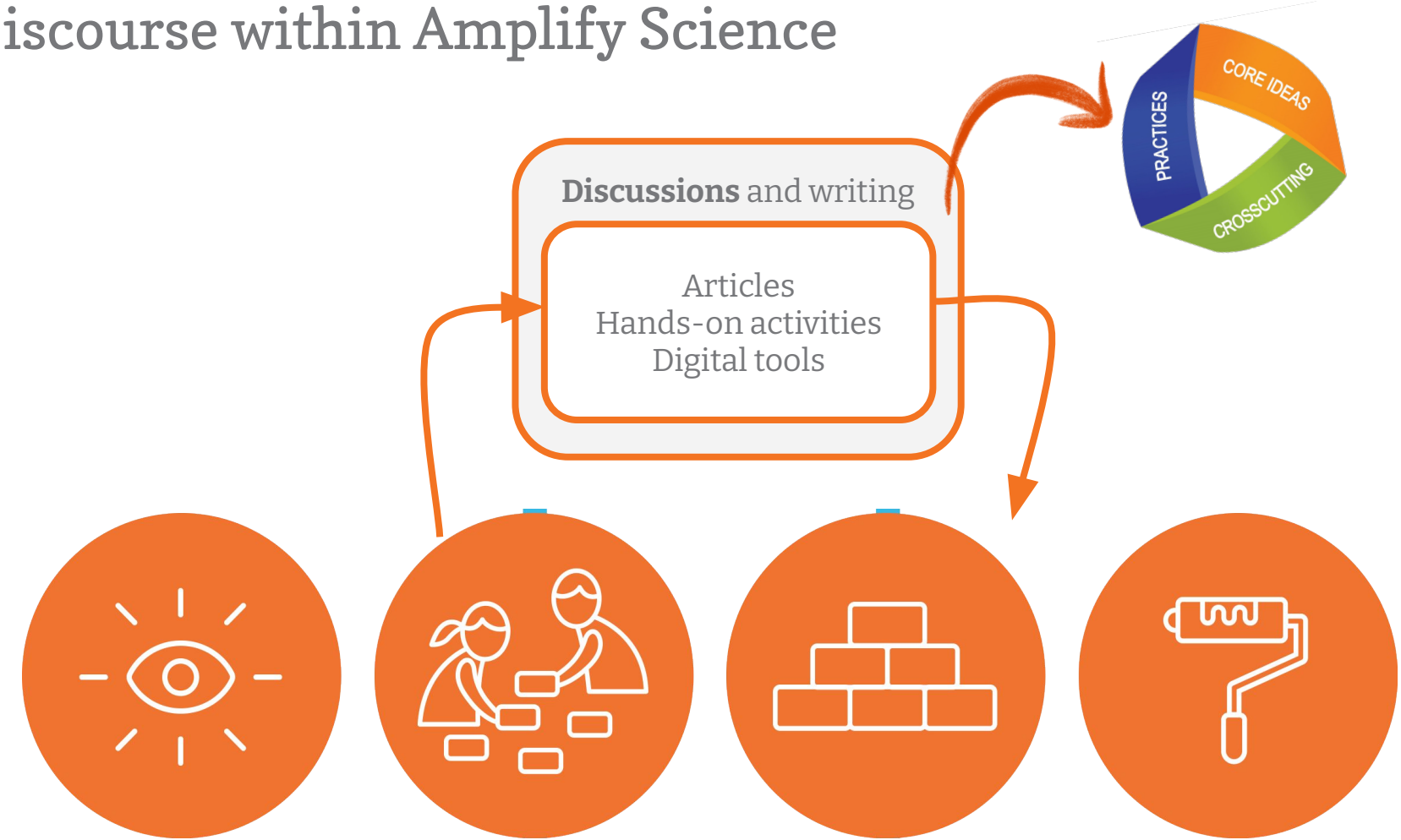
Introduce a **phenomenon** and a related problem

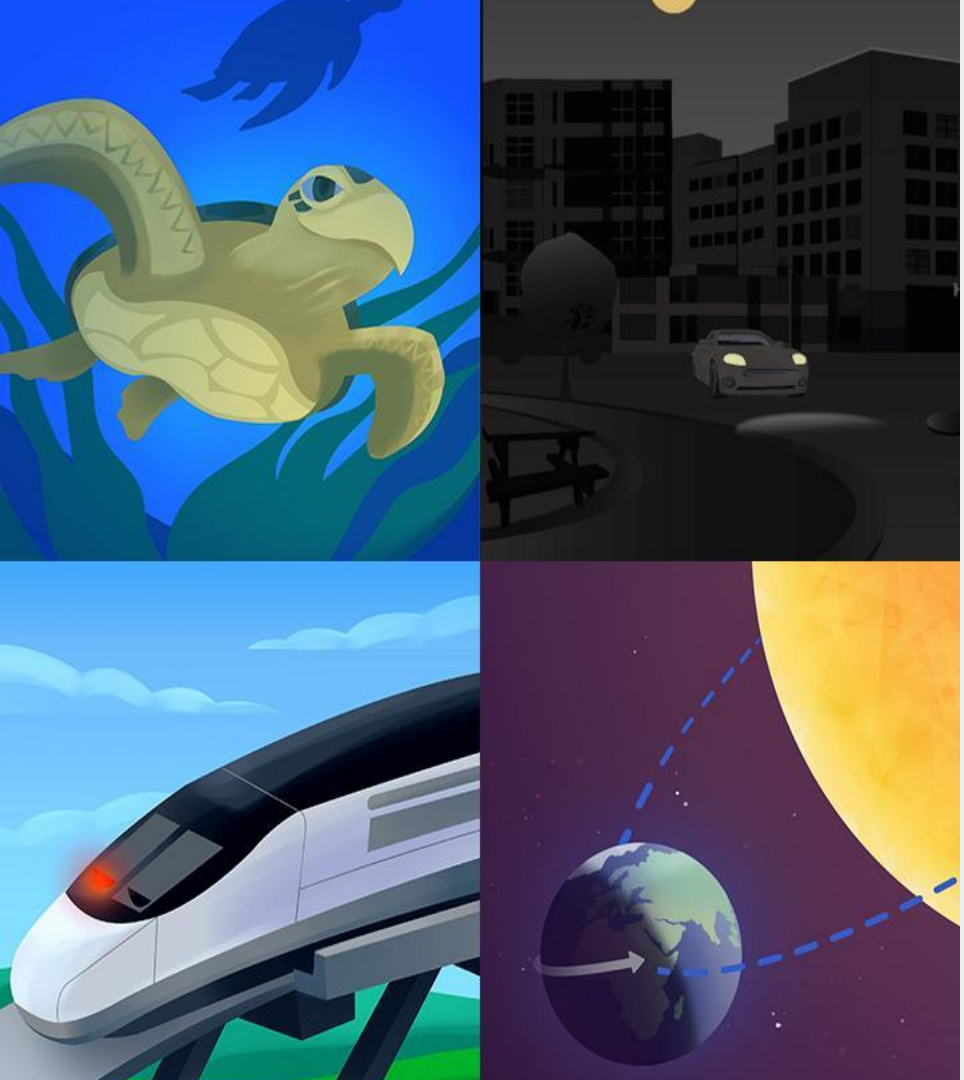
Collect **evidence** from multiple sources

Build increasingly complex **explanations**

Apply knowledge to solve a different problem

Discourse within Amplify Science





Plan for the day

- Introduction and Framing
- **Unit Overview**
- Formative Assessments
  - On-the-Fly Assessments
  - Critical Juncture
  - Self Assessments
- End of Unit Assessments
- Closing

Wondering About Puddles

Problem: As the girl walked to school, she observed that there were puddles in some places but not in other places. She wonders why this is?

Wondering About Puddles

Problem: As the girl walked to school, she observed that there were puddles in some places but not in other places. She wonders why this is.

Role: Hydrologists (Water Scientists)

In the *Earth Science: Wondering About Puddles* unit, students investigate the phenomenon of puddles existing in some places but not in other places along a girl's walk to school. Students are challenged to solve the mystery of where and why puddles do and do not form.

Wondering About Puddles

Coherent Storylines

Why are there puddles on some parts of the sidewalk, but not others?

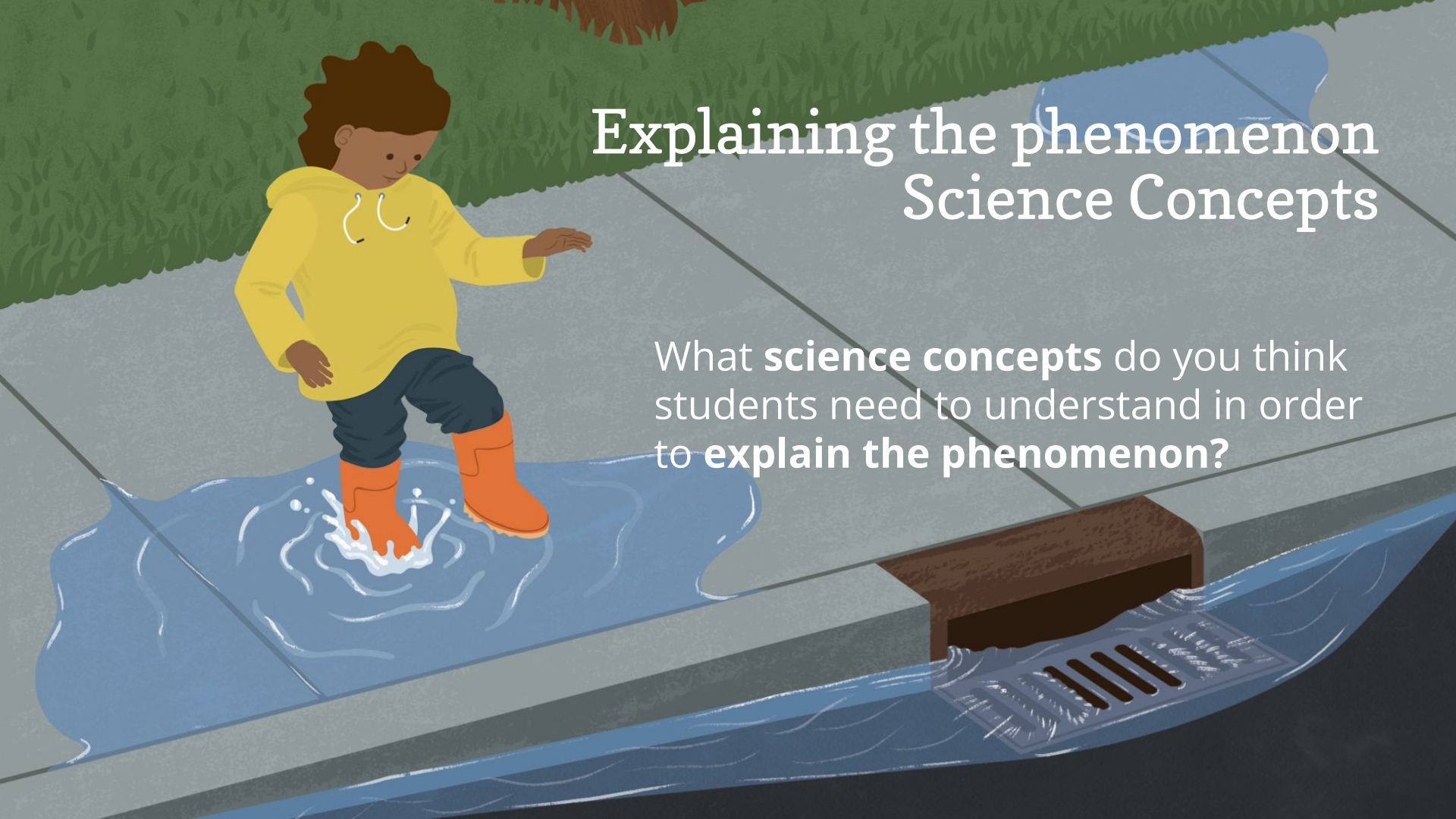
Exploration 1

Why are there puddles on the sidewalk, but not on the path?

Exploration 2

Why are there puddles on the path sometimes?

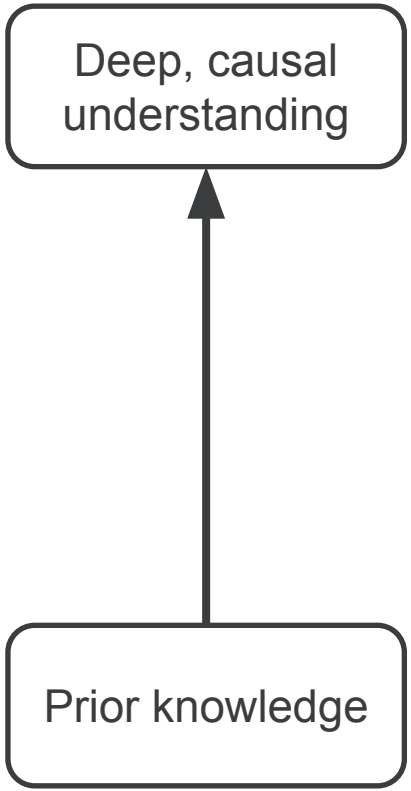
Exploration 3



Explaining the phenomenon
Science Concepts

What **science concepts** do you think students need to understand in order to **explain the phenomenon?**

Progression of Wondering About Puddles



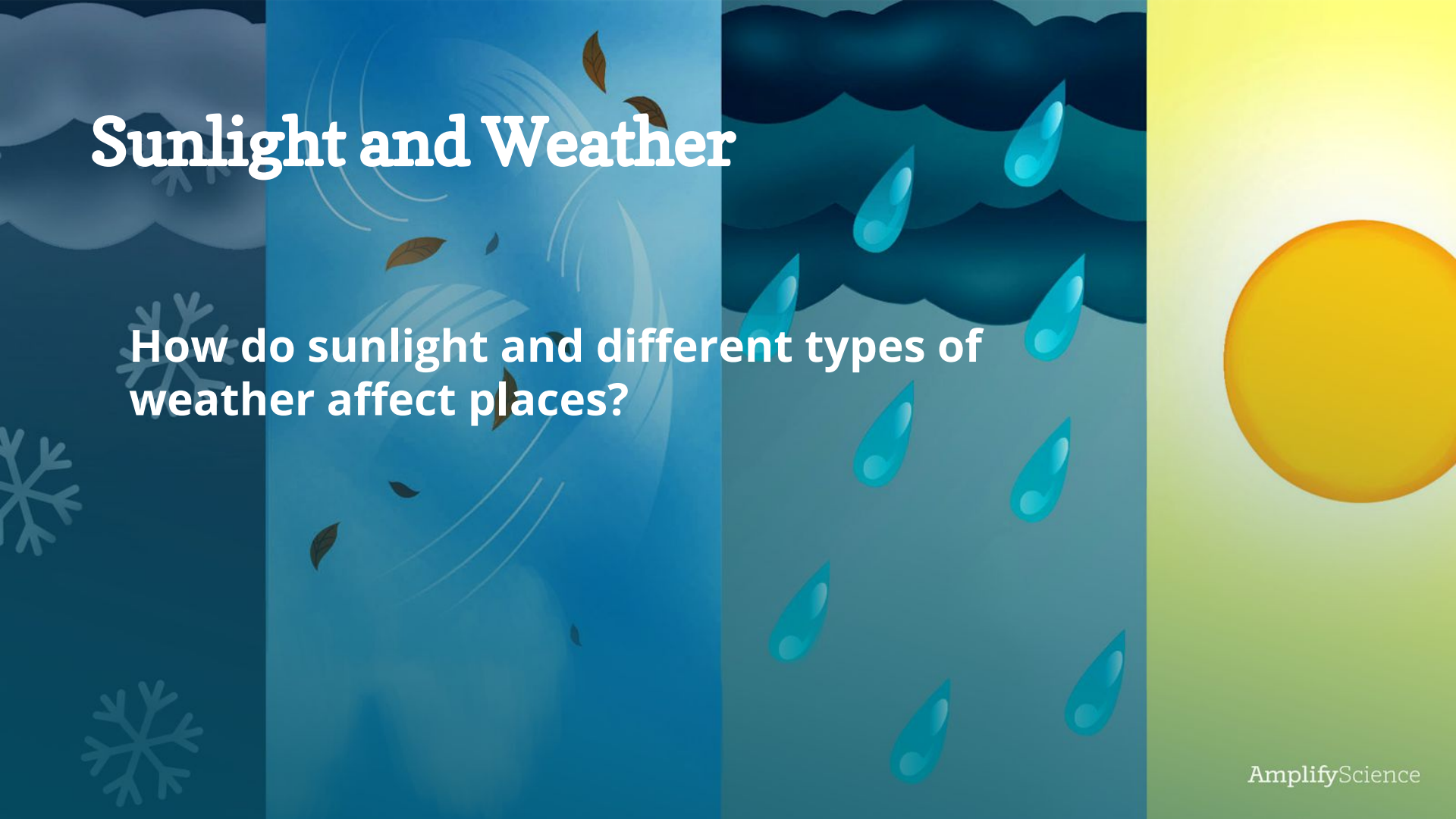
Places have puddles when the spaces in their ground materials become full of water.

Water flows down into spaces in the ground. Puddles can form on a surface when there are no spaces in the ground for the water to flow into.

There are different reasons why puddles may form in some areas but not in others. Water flows down as far as it can go. A puddle can form at the bottom of a slope.

Sunlight and Weather

How do sunlight and different types of weather affect places?



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Sunlight and Weather

Problem: Why are the playgrounds at two schools different temperatures? Why does one playground flood?

Role: Weather Scientists

Students gather data from models of the sun and of Earth's surface and observe their own playgrounds to figure out how sunlight causes changes in the temperature of different surfaces.

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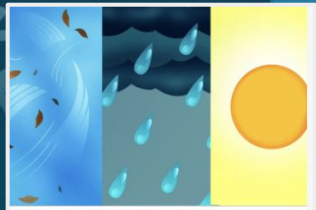
Sunlight and Weather

Coherent Storylines

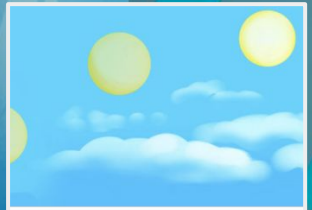


Chapter 1: What is the weather like on the playgrounds?

4 Lessons

Chapter 2: Why do the playgrounds get warm?

4 Lessons



Chapter 3: Why are the playgrounds warmer in the afternoon?

4 Lessons

Chapter 4: Why is Woodland Elementary School's playground always warmer during recess?

Chapter 5: Why does only Woodland Elementary School's playground flood?

6 Lessons

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Explaining the phenomenon: Science Concepts

What **science concepts** do you think students need to understand in order to **explain the phenomenon?**

Sunlight and Weather Progress Build

Assumed prior knowledge (preconceptions): Students are assumed to be generally aware that the sun is in the sky during the daytime. They are expected to have some experience with different aspects of weather including warmer and cooler temperatures, clouds, wind, rain, and perhaps snow

Level 1

Surfaces get warm in sunlight.

Level 2

Temperature increases with time in sunlight.

Level 3

Dark-colored surfaces get warmer in sunlight.

Prior knowledge → Deep, causal understanding

Spinning Earth

Why does the sky look different at different times?

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Spinning Earth

Problem: Why doesn't the sky always look the same?

Role: Sky Scientists

Students assume the role of sky scientists helping a young boy named Sai who lives in a place near them in order to understand the anchor phenomenon of the unit: why the sky looks different to him than to his grandma when they talk on the phone.

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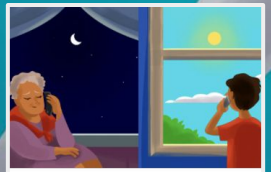
Spinning Earth

Coherent Storylines

Chapter 1: Why did the sky look different to Sai than to his grandma?

5 Lessons

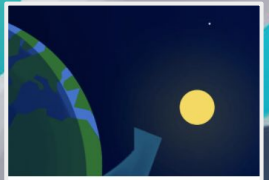


Chapter 2: Why was it daytime for Sai when it was nighttime for his...

4 Lessons

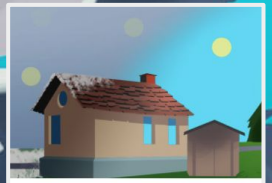
Chapter 3: Why did daytime change to nighttime while Sai talked on the phone?

6 Lessons



Chapter 4: What will Sai see in the sky when he calls his grandma tomorrow?

4 Lessons



Chapter 5: Why was it nighttime for Sai when he called his grandma during th...

3 Lessons

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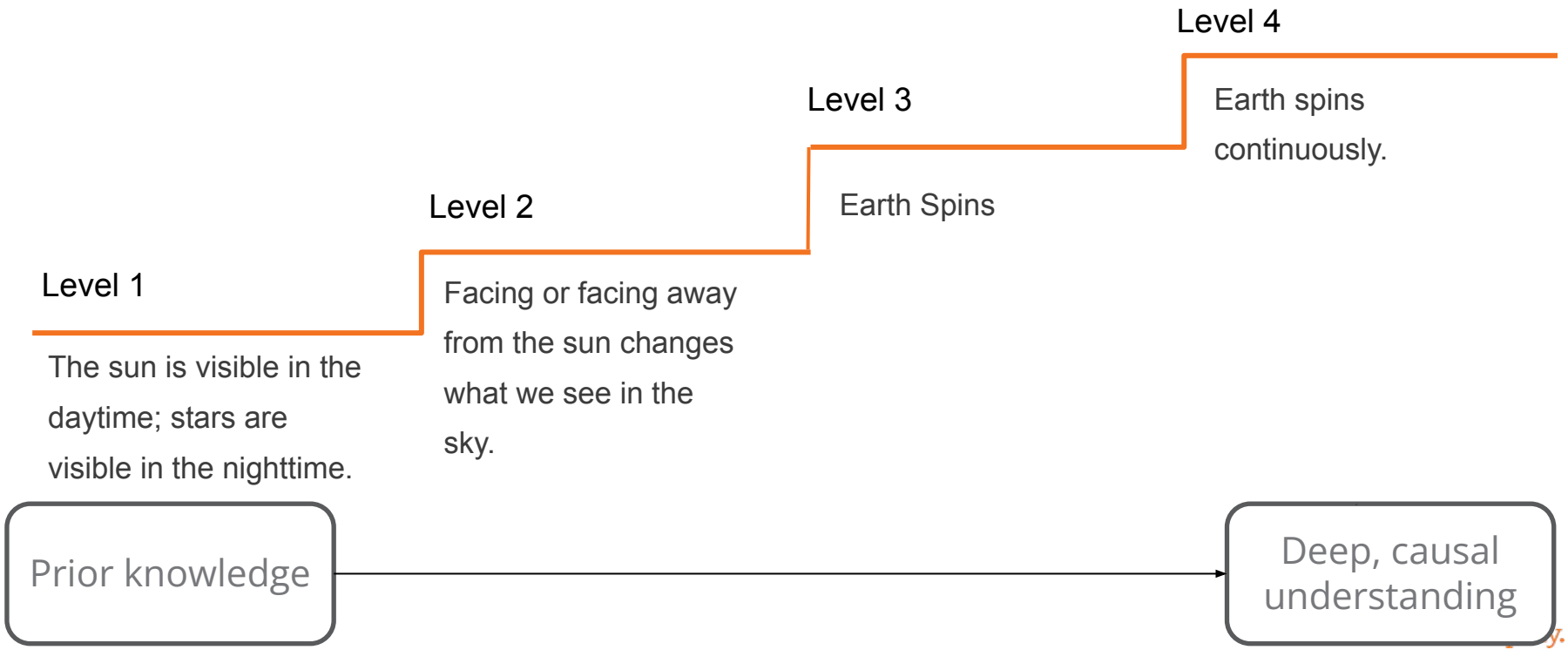
Explaining the phenomenon: Science Concepts

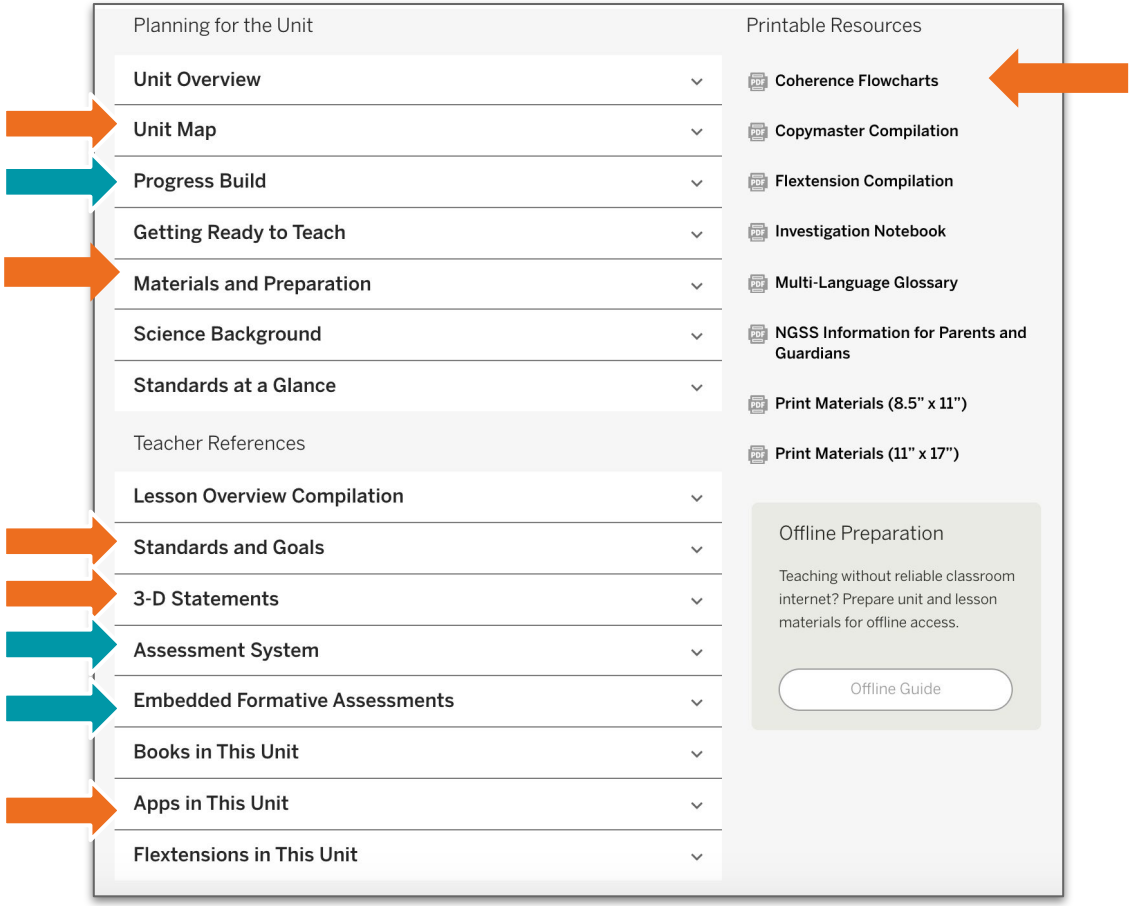
What **science concepts** do you think students need to understand in order to **explain the phenomenon?**

Environments and Survival Progress Build

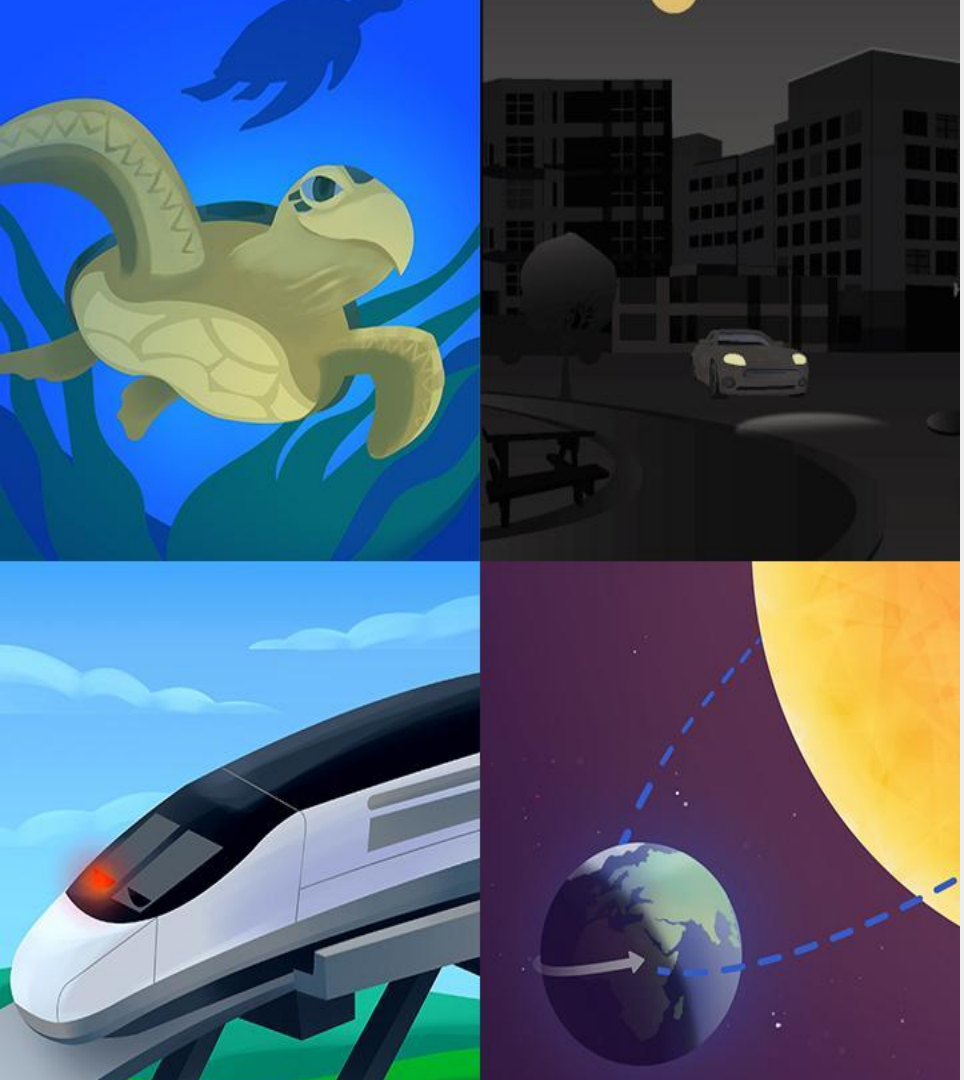
Assumed prior knowledge (preconceptions): Students are assumed to know that the sun is a very bright, relatively large object sometimes seen in the sky and that stars are bright, small objects seen in a darker sky.



Key Unit Guide Documents for Planning



Questions? Concerns? Aha's! This reminds me...



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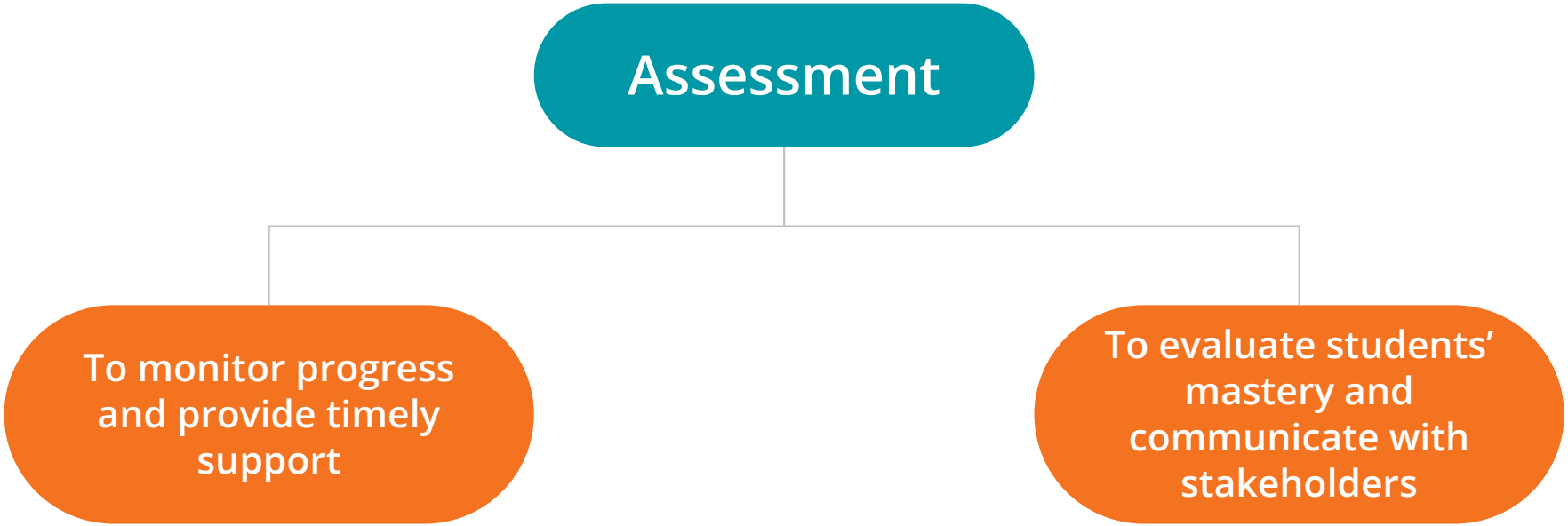
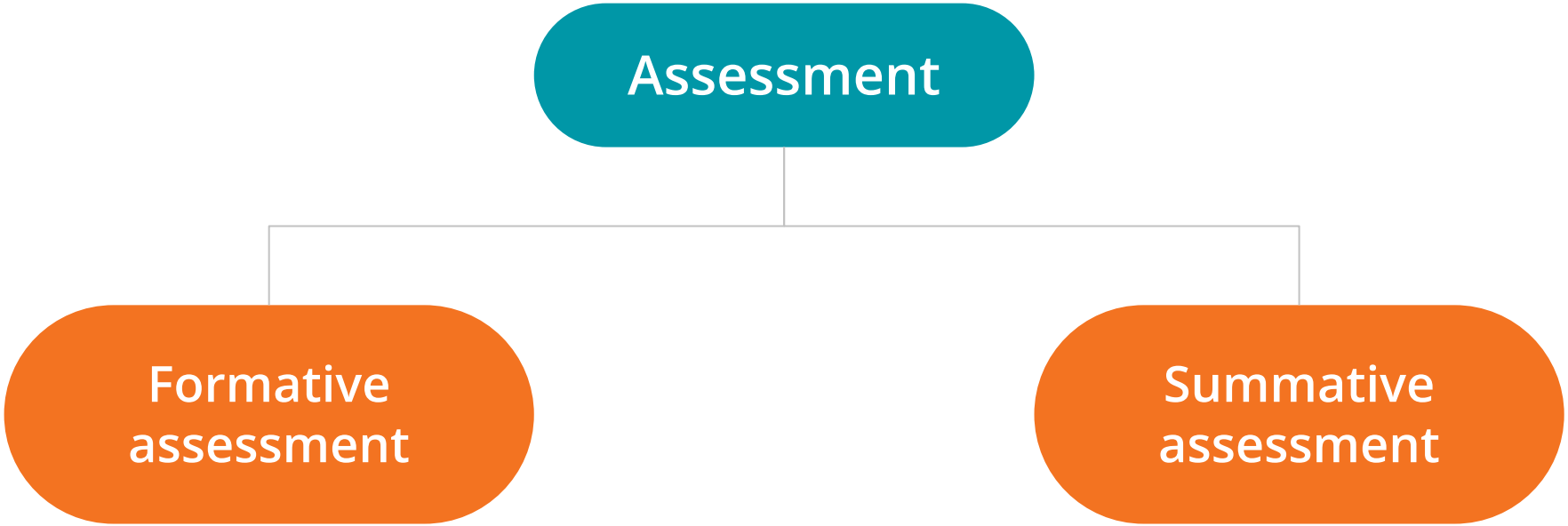
- End of Unit Assessments
  - TK Culminating Activity
- Closing

Why do we assess our students?



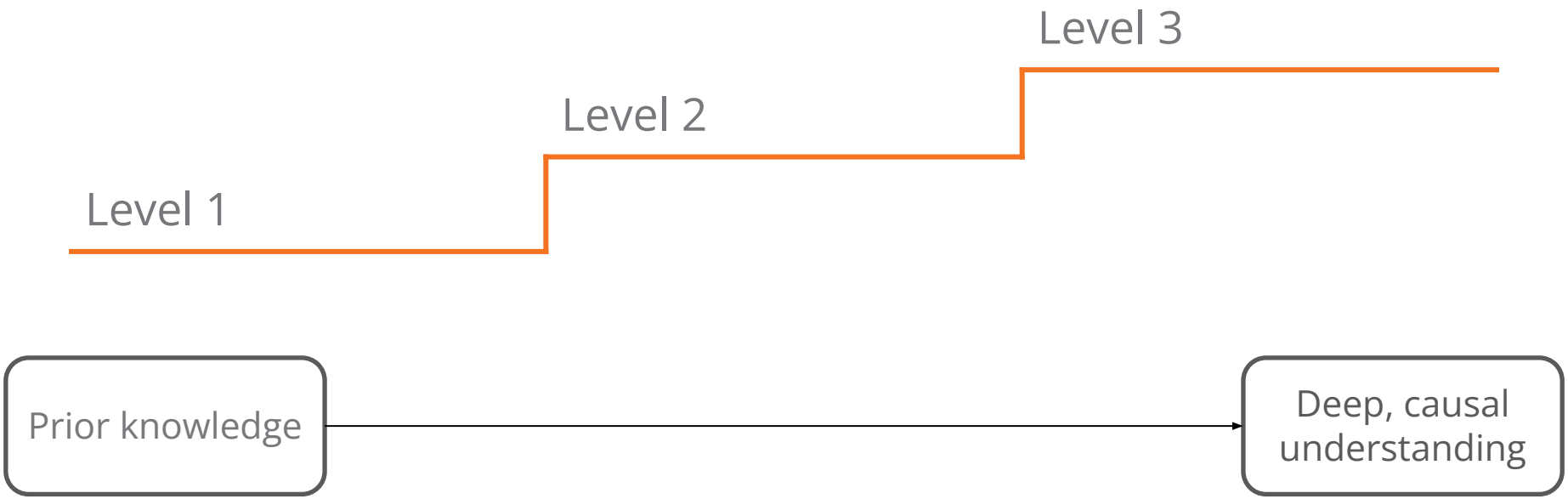
Why do we assess our students?



K-5 Assessment System

Progress Build

A unit-specific learning progression



Sunlight & Weather Progress Build

Assumed prior knowledge (preconceptions): Students are assumed to be generally aware that the sun is in the sky during the daytime. They are expected to have some experience with different aspects of weather including warmer and cooler temperatures, clouds, wind, rain, and perhaps snow. They may have some experiences with touching or walking on surfaces that are very hot due to time in the sunlight and/or darker color, such as sand at the beach or asphalt.

What new ideas are added at Level 2?

What new ideas are added at Level 3?

Level 1

Surfaces get warm in sunlight.

Level 2

Temperature increases with time in sunlight.

Level 3

Dark-colored surfaces get warmer in sunlight.

Prior knowledge → Deep, causal understanding

Spinning Earth Progress Build

Assumed prior knowledge (preconceptions): Students are assumed to know that the sun is a very bright, relatively large object sometimes seen in the sky and that stars are bright, small objects seen in a darker sky.

What new ideas are added at Level 2?

What new ideas are added at Level 3?

Level 1

The sun is visible in the daytime; stars are visible in the nighttime.

Level 2

Facing or facing away from the sun changes what we see in the sky.

Level 3

Earth Spins

Level 4

Earth spins continuously.

Prior knowledge → Deep, causal understanding

Assessments in TK

TG Page 8

Assessment Opportunities

Formative & Embedded Assessments

- **1 per Exploration** (Unit 3: 1.4, 2.2, 3.2)
- **Look for:**
  - Ability to answer Exploration Science Questions
  - Express understanding of Science Ideas
  - Demonstrate Science Practices

End-of Unit Culminating-Summative Assessments

- Look for :
  - Students ability to reflect on and apply their learning

Assessment System - Unit 3

Grade TK Key assessment types

- **Embedded Assessment** opportunities throughout the Activities (lessons)
- **One Formative Assessment** opportunity in each Exploration to assess students' progress toward answering the science questions & understanding the science ideas
- At end of 3rd Exploration, the Unit Culminating Activity has a paired **Self-Assessment** where students reflect on new ideas they have developed & encourages ownership of their learning.
- Students also create their own individual **Student Page** for the final classbook project of the **Culminating Activity**, where they draw & write (labels or dictation) their important takeaways of the Unit. Formative again, & also can be considered **Summative**.

Formative Assessments

Exploration One: Activity 4 (1.4)
Students create and pour water over their Ground Models. They make predictions & observations about where puddles form, and use language frames to explain their thinking. Teacher listens for their understanding & their development of the science idea.

Exploration Two: Activity 2 (2.2)
Students make and discuss observations about ground features in science big book. Teacher listens for students referring specific features of the pictures & forming connections between them to explain their thinking.

Exploration Three: Activity 2 (3.2)
Students use rain cups to model what happens to different types of ground & the puddles that form; & then record & discuss observations. Teacher listens for students' explanation of observations for showing understanding of the science idea.

Exploration 1:

Science Question 1:

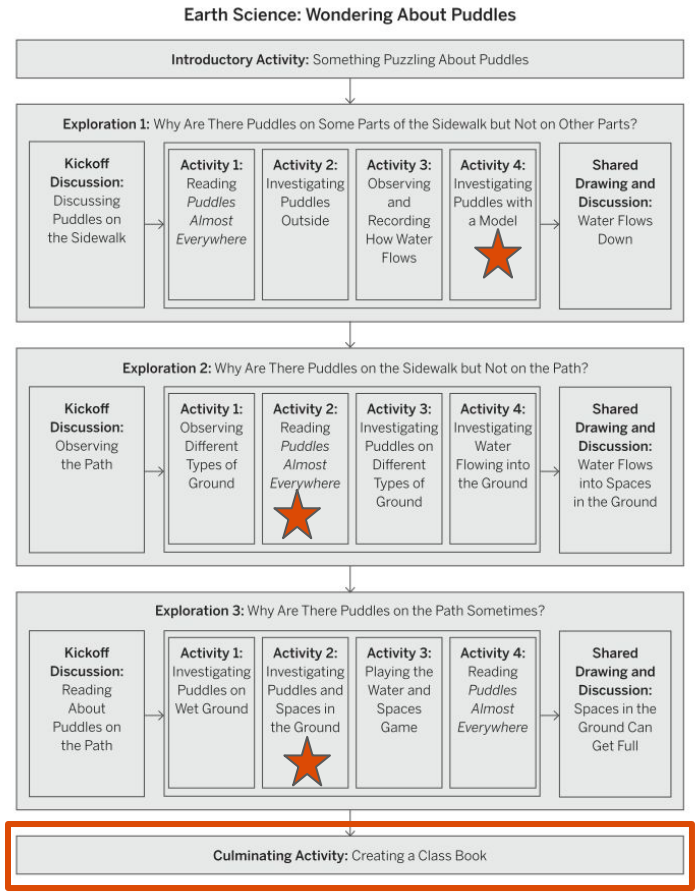
Why are there puddles on some parts of the sidewalk but not on other parts?

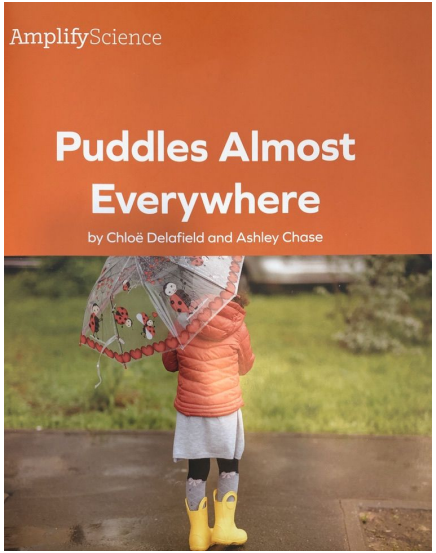
Science Question 2:

Why are their puddles on the sidewalk but not on the path?

Science Question 3:

Why are there puddles on the path sometimes?





Exploration 3: Places have puddles when the spaces in their ground materials become full of water.

Exploration 2: Water flows down into spaces in the ground. Puddles can form on a surface when there are no spaces in the ground for the water to flow into.

Exploration 1: There are different reasons why puddles may form in some areas but not in others. Water flows down as far as it can go. A puddle can form at the bottom of a slope.

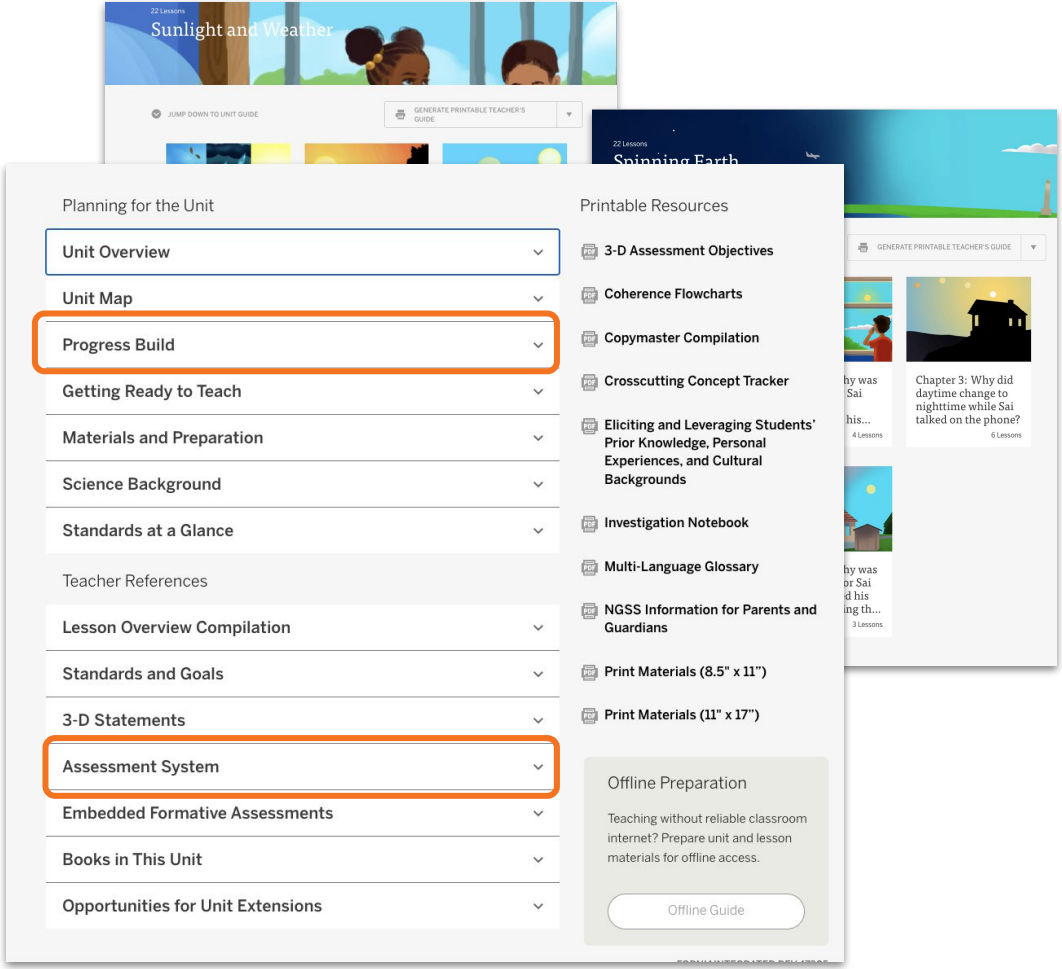
Assessment System and Progress Build

Work time
Grades K and 1:

- Read and analyze your unit's Progress Build.
- Browse the Assessment System

TK [Public - [PN] Gr TK, Unit 3.pdf]

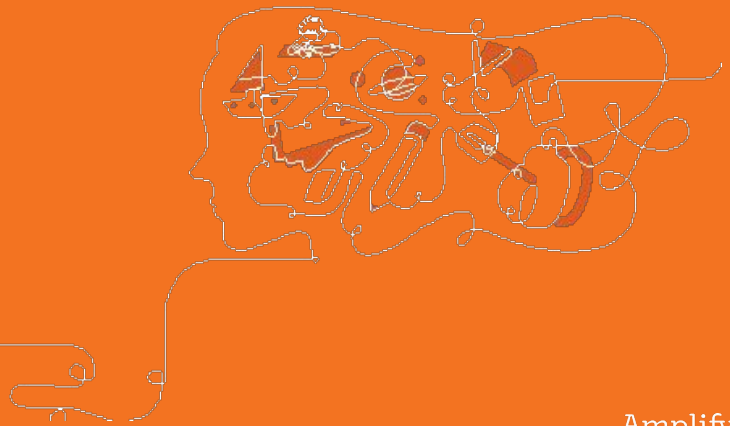
- Browse page 56
- Look up & read the Embedded Assessments in each Exploration in your TG.



Amplify.

Formative Assessments

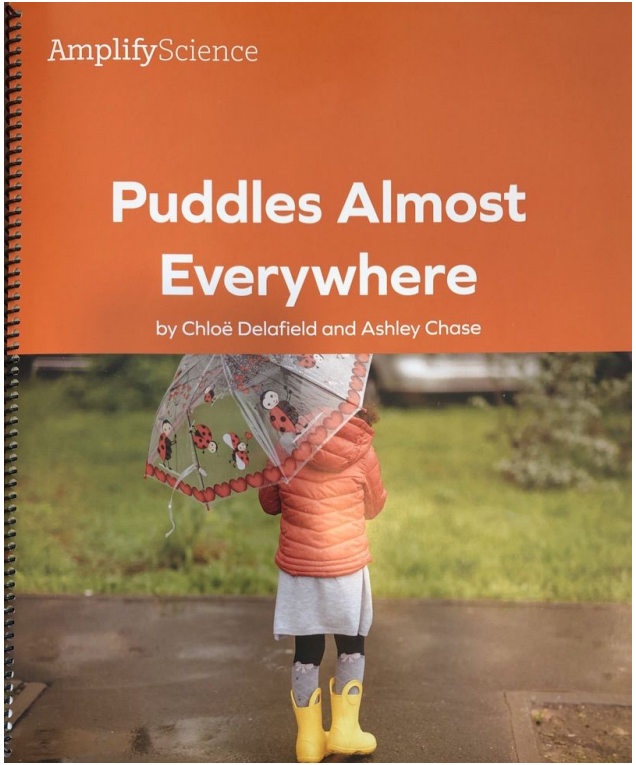
- ✔ Pre-Unit Assessment
- On-the-Fly Assessment
- Critical Juncture



TK Introductory Activity

Something Puzzling about Puddles

The teacher reads aloud the first few pages of *Puddles Almost Everywhere*, which begins the story of a young girl who works like a scientist as she observes puddles on her walk to school. Students are introduced to their role as scientists. *They also share their initial ideas about why there are puddles in some places but not in other places.* **The purpose of this Introductory Activity is to introduce students to the unit phenomenon and to their role as scientists in order to motivate their learning throughout the unit.**



PN pg 8
TG pg 18

Students learn

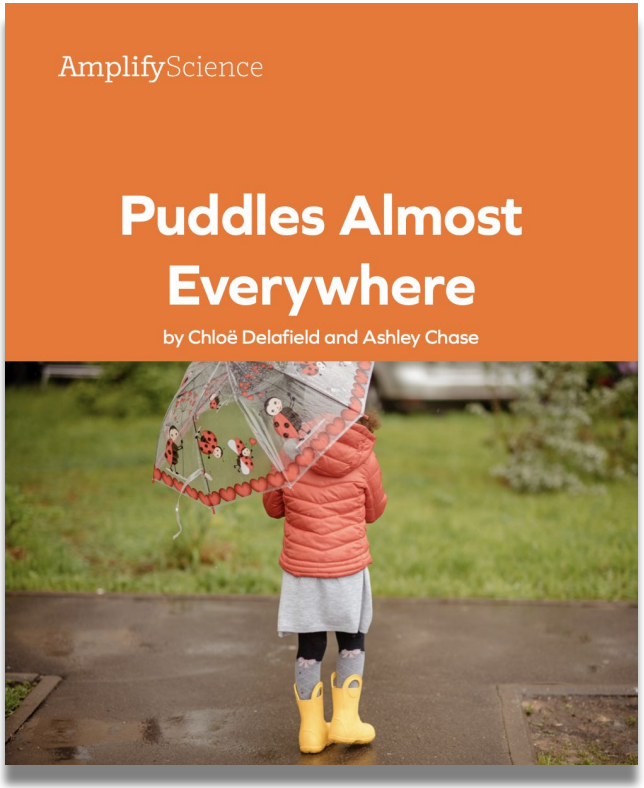
- Scientists wonder about things and try to figure out more about them.

Vocabulary

- observe
- scientist

TK: Introductory Activity

Something Puzzling about Puddles



1.Introduce the unit. Let students know that they are beginning a new science unit in which they will solve a mystery.

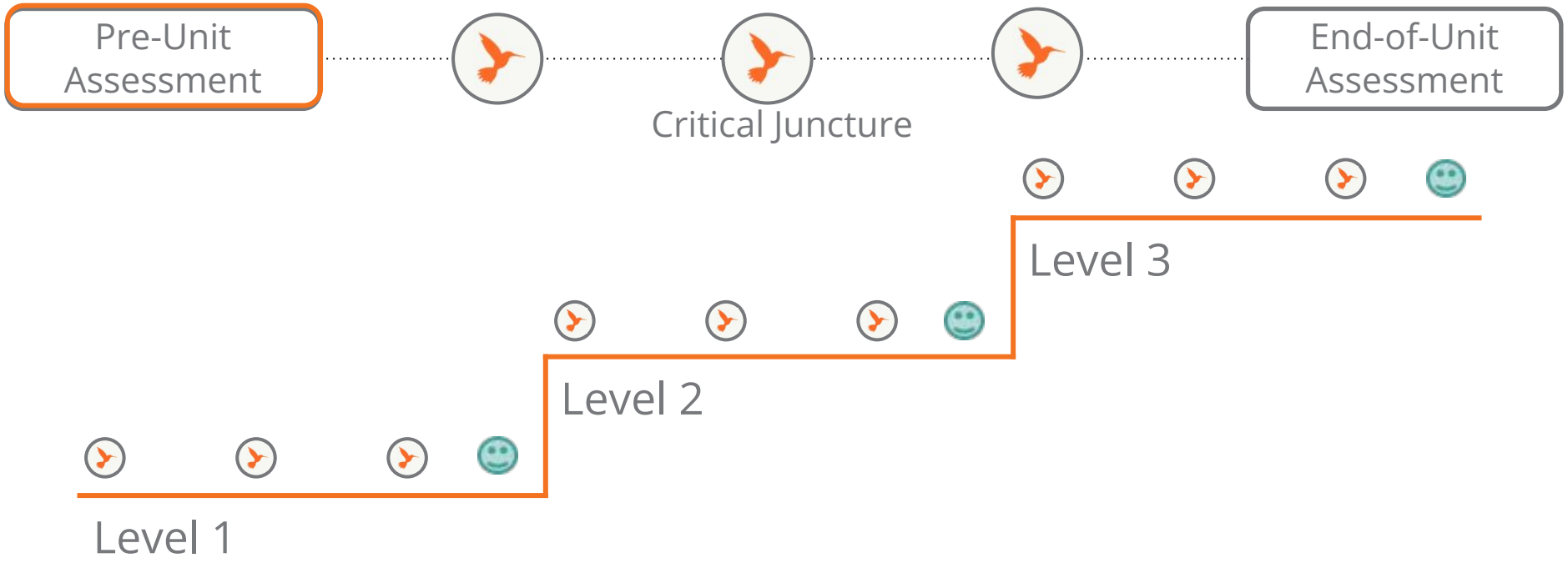
2.Introduce *Puddles Almost Everywhere*. Show the front cover of the book and invite students to share their observations. Explain that this book will introduce students to the mystery they will help solve. Point to a puddle on the front cover.

💬This is a puddle. Puddles are a big part of the mystery we will work to solve.

3.Invite students to share ideas and wonderings about puddles.

💬What do you know about puddles?
💬What do you wonder about puddles?
Invite volunteers to share their ideas. Accept all responses.

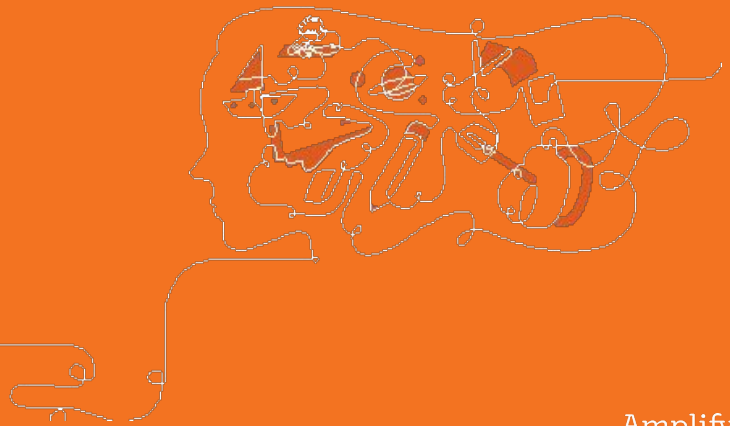
K-5 Assessment System



Amplify.

Kindergarten Example

- Pre-Unit Assessment



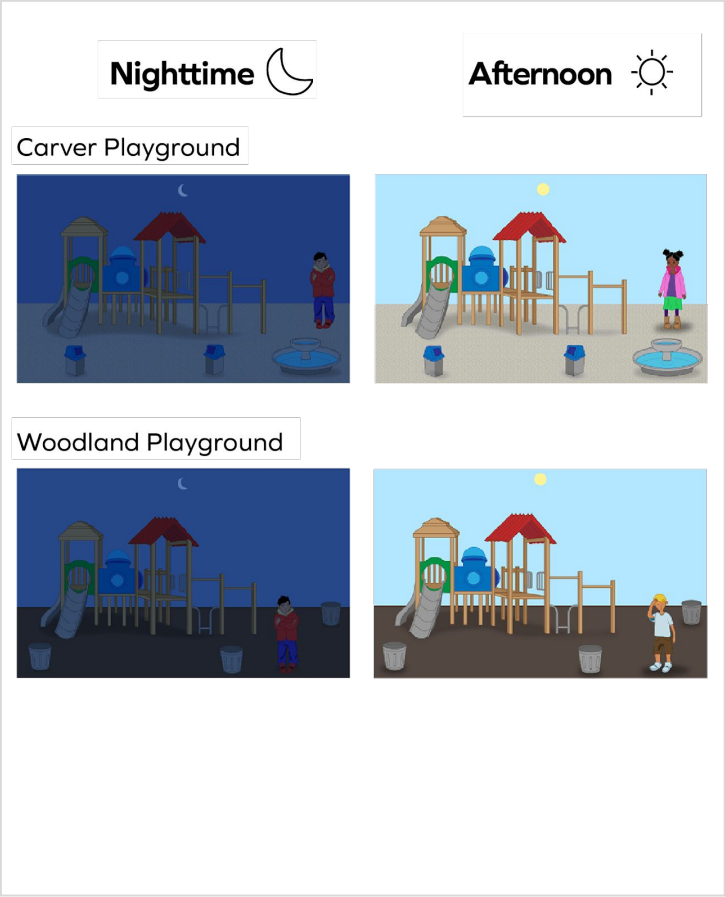
Carver Playground

Woodland Playground

Shared Listening Question 1:

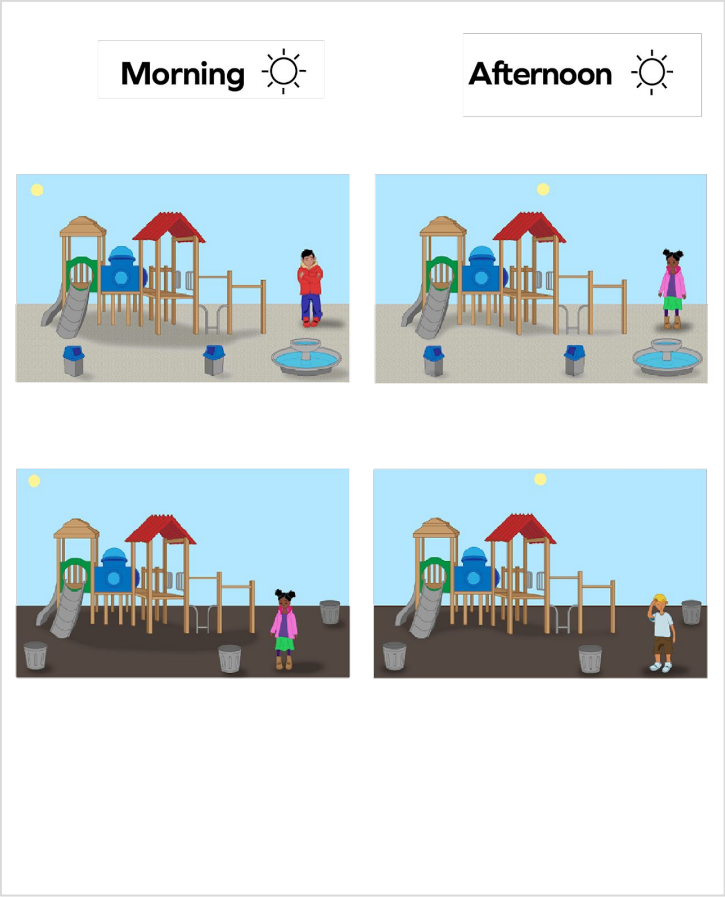
Why do you think the two playgrounds get **warmer but in different ways**?

You will share your ideas to some more questions with a **different partner.**



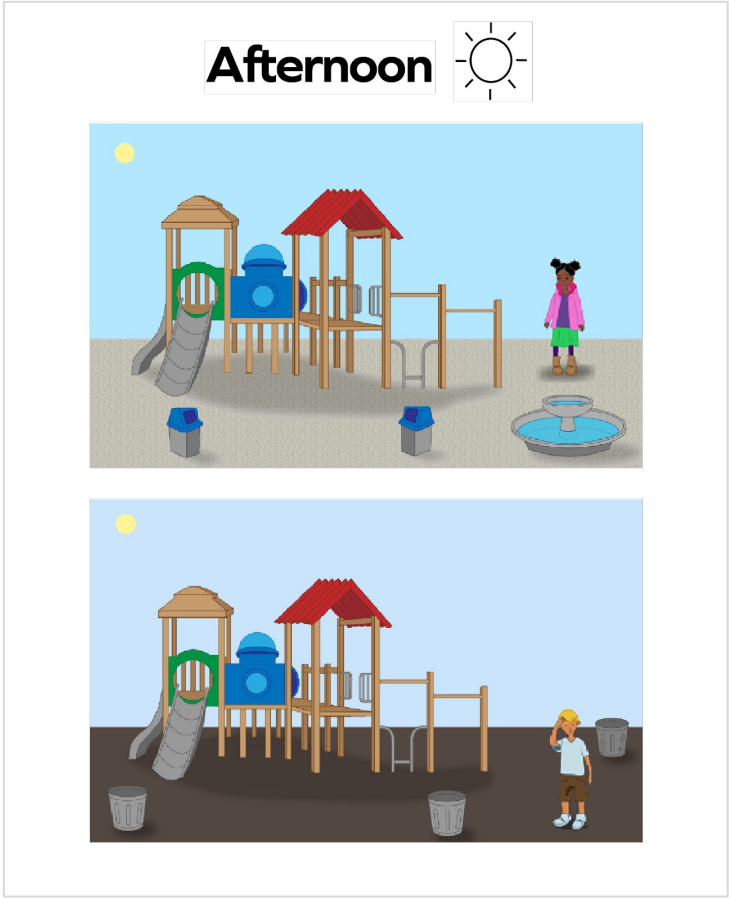
Shared Listening Question 2:

Why do you think both playgrounds were **cold at night**, and **warmer during the day**?



Shared Listening Question 3:

Why do you think both playgrounds were **warmer in the afternoon than they were in the morning**?

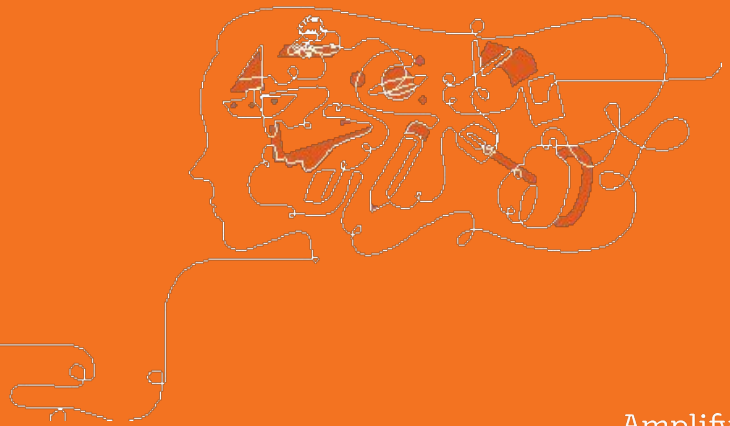


Shared Listening Question 4:

Why do you think that **Woodland is warmer than Carver during the day**?

Grade 1 Example

- Pre-Unit Assessment

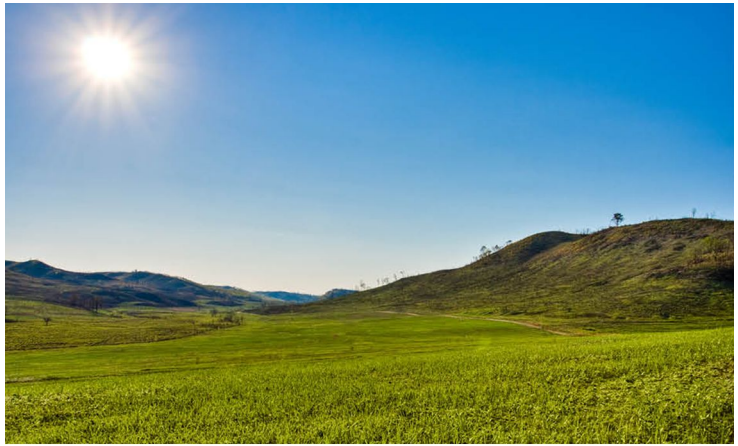


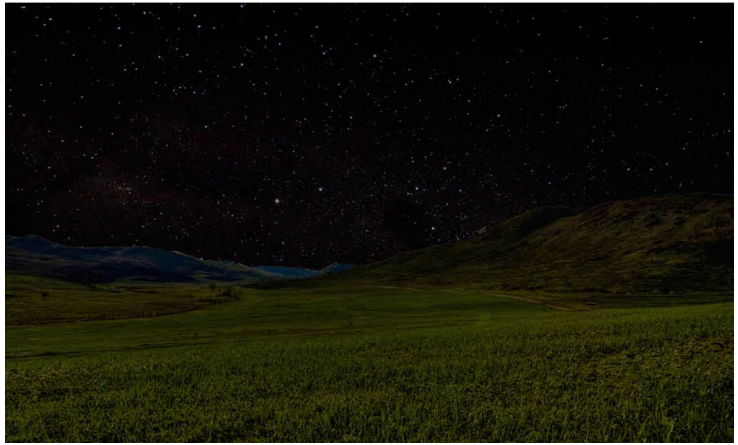
Why does the sky look different **at different times?**

morning

afternoon

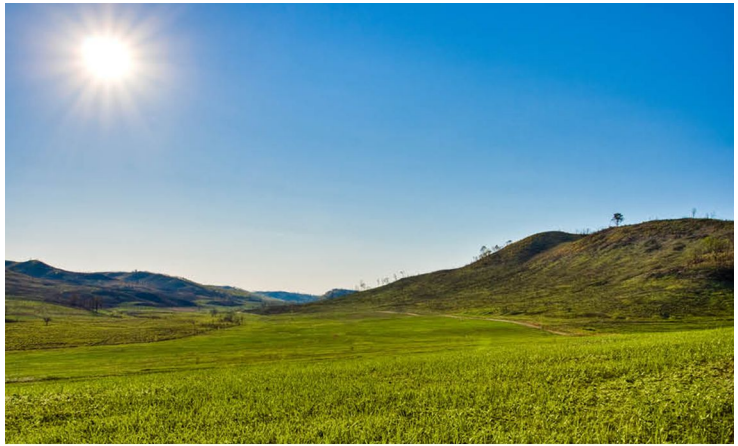
night

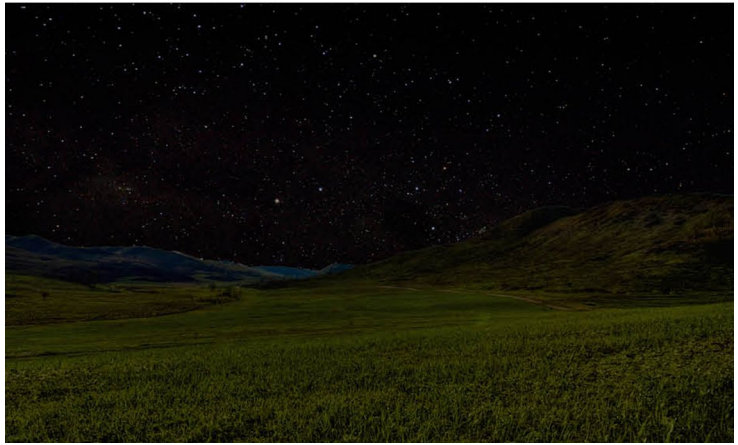




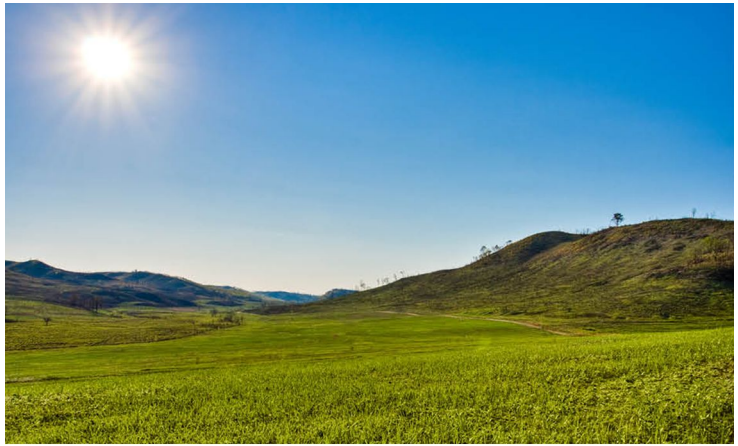
These pictures show the sky in the morning and at night.

How is the sky **different** at these two times?



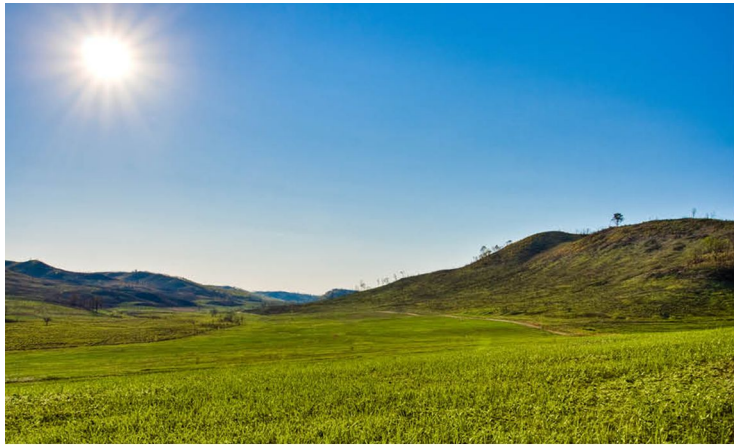


Why does the sky look different at these two times—in the **morning** and at **night?**



These pictures show the sky in the morning and in the afternoon.

How is the sky **different** at these two times?



Why does the sky look different at these two times—in the **morning** and in the **afternoon?**

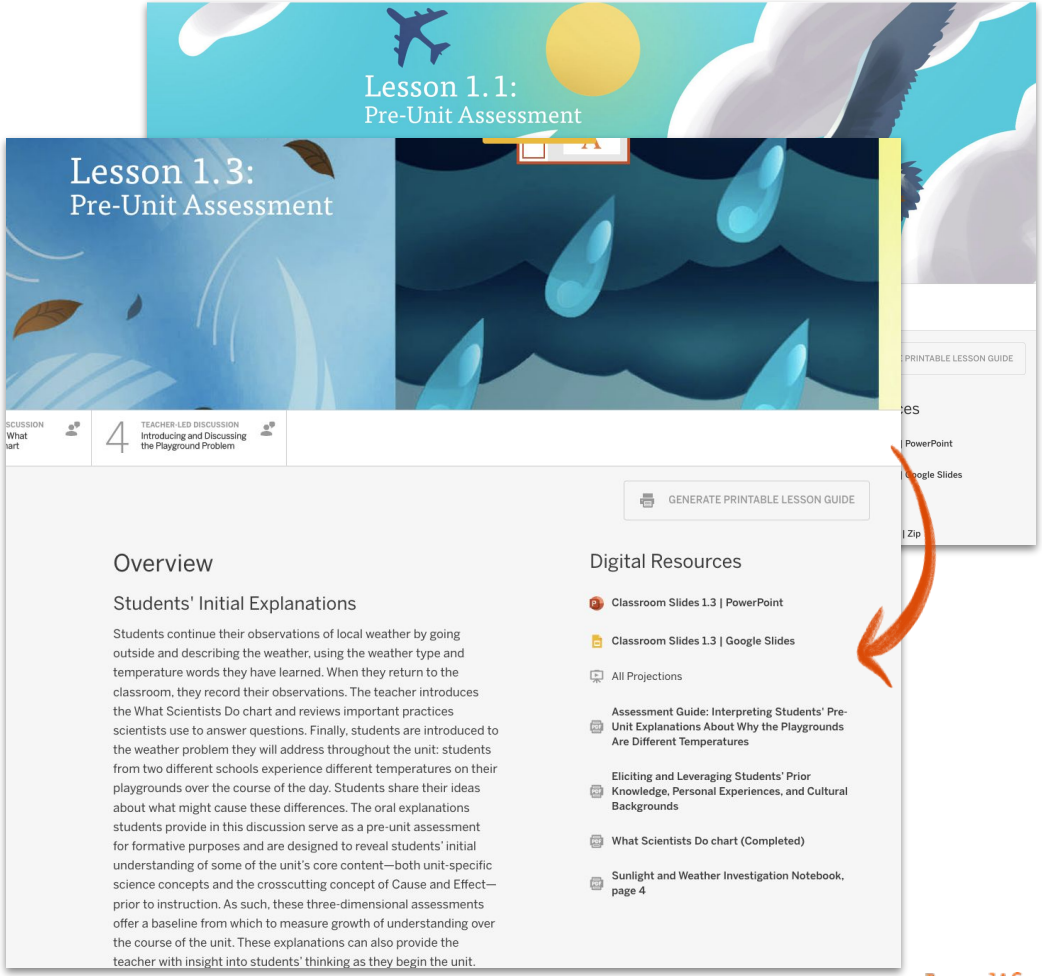
Pre-Unit Assessment

Grade K: Lesson 1.3
Grade 1: Lesson 1.1

- Locate the Assessment Guide for your grade level and read it.

TK [Public - [PN] Gr TK, Unit 3.pdf]

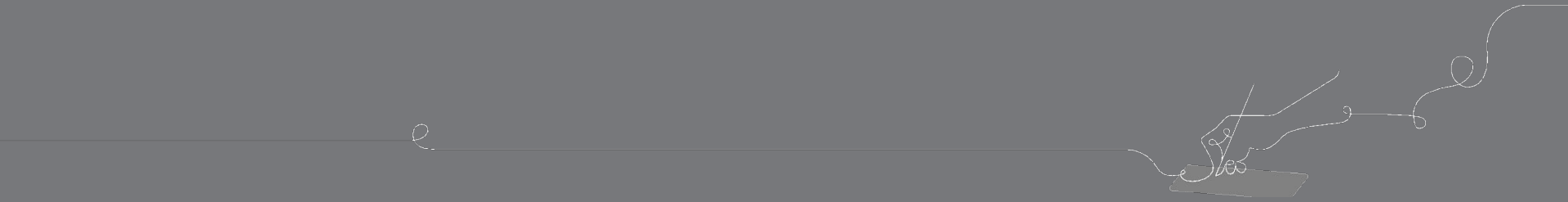
- Browse page 56
- Use pages **57-58** to analyze the formative & embedded Assessment Opportunities in your TG.



Amplify.

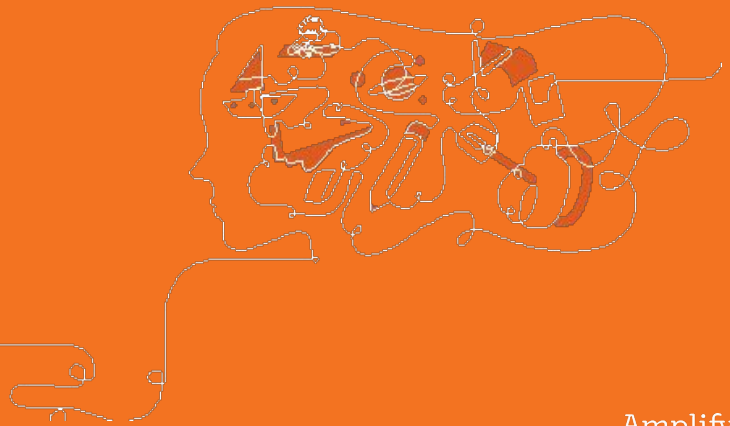
Questions?

Pre-unit Assessments



Formative Assessments

- Pre-Unit Assessment
- ✔ On-the-Fly Assessment
- Critical Juncture



On-the-Fly and Self Assessments

Formative assessment information

On-the-Fly Assessments

In addition to assessing concepts in the Progress Build, some On-the-Fly Assessments provide data about:

- Science and Engineering Practices
- Crosscutting Concepts
- Literacy skills
- Student collaboration

The temperature today is cold.

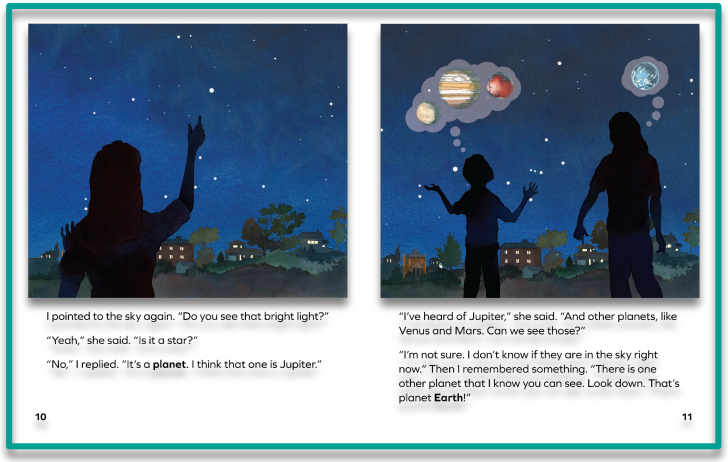
The air feels like the inside of my refrigerator! On cold days, I like to puff air out and form little clouds with my breath.

16

Today is a little warmer than before. I am going to leave my hat at home, but I still need to wear my coat.

What is the temperature today?

17



I pointed to the sky again. "Do you see that bright light?"

"Yeah," she said. "Is it a star?"

"No," I replied. "It's a **planet**. I think that one is Jupiter."

10

"I've heard of Jupiter," she said. "And other planets, like Venus and Mars. Can we see those?"

"I'm not sure. I don't know if they are in the sky right now." Then I remembered something. "There is one other planet that I know you can see. Look down. That's planet **Earth**!"

11

Kindergarten OTF Assessment Example

I don't need a coat today! I am going to school wearing my favorite sweatshirt.

What is the temperature today?

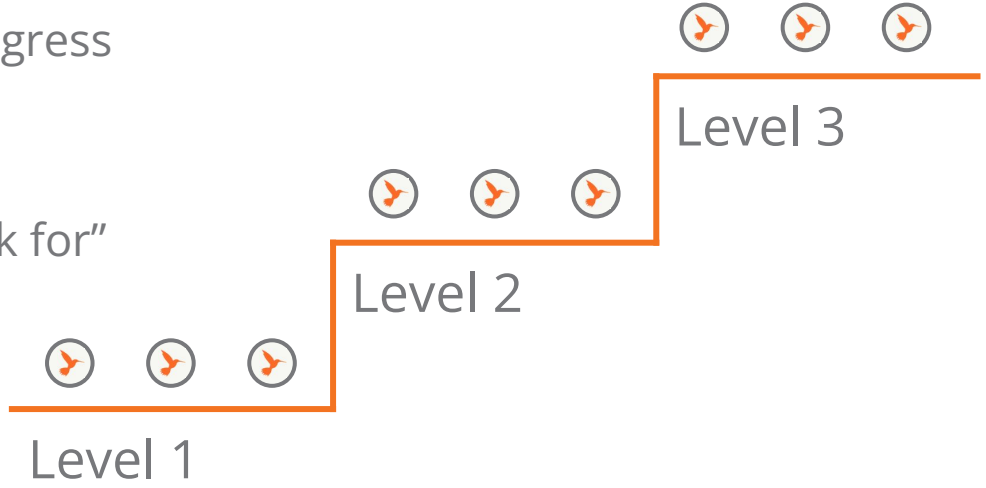
19

Now what? As students share their predictions with the class, repeat one or two that were based on the pictures or text. Highlight the way that students took what could be seen in the images and described in words to make their predictions. For example, you might say something such as, "I noticed Rosa pointed out what the girl in the book was wearing as she shared her prediction with her partner. She noticed the girl was not wearing a coat but still wearing a long-sleeve sweatshirt." Continue to support students in making predictions with the remainder of the book, and discuss examples as necessary.

Now what? As students share their predictions with the class, repeat one or two that were based on students' prior knowledge or experience. Highlight the way that students used their prior experience with observations of the nighttime sky to make their predictions. For example, you might say something such as *I heard Eduardo say that he predicted the children in the book would see lights on an airplane in the sky during the nighttime because he has seen lights on an airplane in the sky during the nighttime before. Eduardo used what he already knew to decide what he thought might happen.*

On-the-Fly Assessments

- Track student progress within a Progress Build level
- Embedded into instruction
- Assessment resource includes “Look for” and “Now what”



Where is the first On-the-fly assessment in your unit?

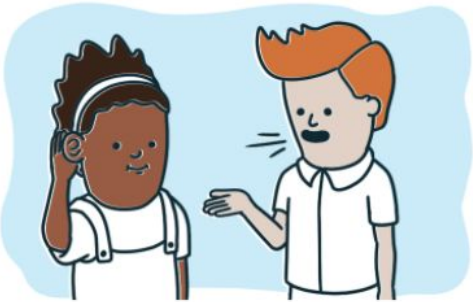
●Embedded Formative Assessments

Additional formative assessment information

Shared Listening

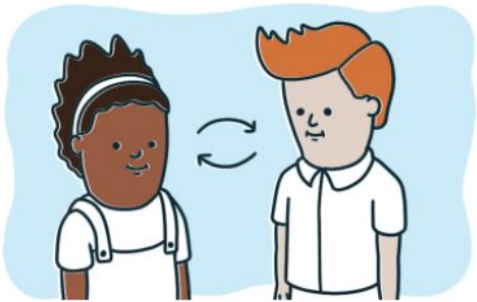
1.

Partner A shares.
Partner B listens.



2.

Partner B repeats.
I heard you say . . .

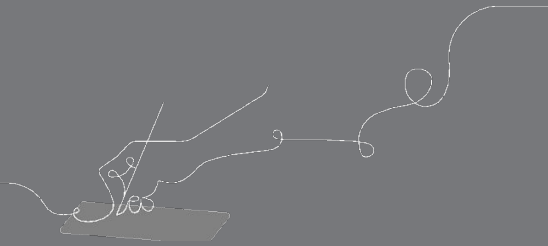


3.

Partners switch.

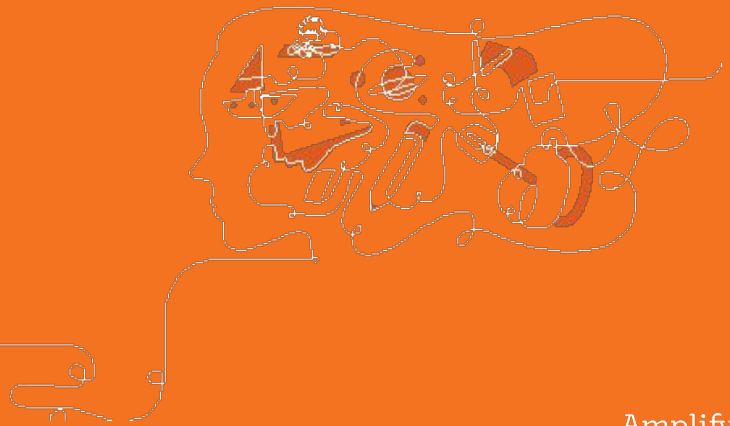
Self-Assessment: Share a new idea you learned.

Questions?
On-the-Fly Assessments



Formative Assessments

- Pre-Unit Assessment
- On-the-Fly Assessment
- ✔ Critical Juncture



Formative Assessment

TG pg 61 PN pg 41

Exploration 1 Activity 4

Look for

- Students who are developing an understanding of Science Idea 1 *Water flows down as far as it can go* -- will point to puddles in the lowest areas of their models.

- Students will be able to explain how water flows down to those places

What do you see puddles forming in the photos? Are they at the top of the slopes or the bottom of the slopes? Why do you think the water does that?


More About Puddles

Puddles are places where water has pooled on the ground. There can be puddles almost anywhere. Puddles are often at the bottom of a **slope**.

20 More About Puddles

More About Puddles 21

What types of back pocket questions might you use to elicit this from students?

Let's take a look at your rain model again> Where does the water flow to on the wax paper when you make it rain?

Formative Assessment

TG pg 47 PN pg 27

Partner Discussions: Shared-Listening Routines
EMBEDDED: Exploration 1, Activity 1, steps #9-10

Look for how students **communicate** their ideas with their partners. Consider the following:

- Do students clearly share their ideas with their partners?
- Do students refer to specific features they observe in the pictures?
- Do students provide a rationale for their ideas?

*Students who are **developing facility with communicating like a scientist will clearly share their ideas, refer to specific features of the pictures, and/or provide a rationale** for their thinking.*

Water always flows down as far as it can go; so a puddle may form at the bottom of a slope.

Formative Assessment - tracking data

Partner Discussions: Shared-Listening Routines Embedded: Exploration 1, Activity 1, steps #9-10

Shared Listening: What do you observe in the puddle pictures? Where are the puddles? Where aren't there any puddles?

Look for how students **communicate** their ideas with their partners. Consider the following:

- Do students clearly share their ideas with their partners?
- Do students refer to specific features they observe in the pictures?
- Do students provide a rationale for their ideas?

*Students who are **developing facility with communicating like a scientist will clearly share their ideas, refer to specific features of the pictures, and/or provide a rationale** for their thinking.*

What might you do to draw students' attention to details that they haven't noticed yet?

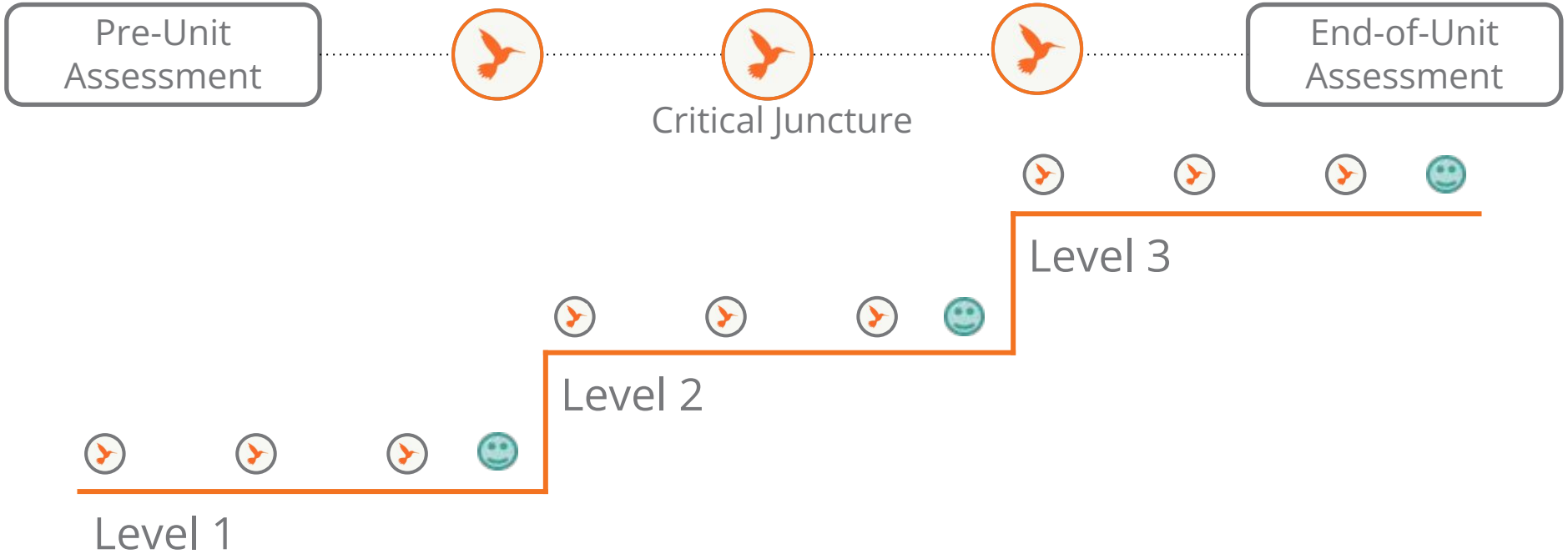
Grade 2: Plant and Animal Relationships
Lesson 2.1: Activity 4 Debriefing Plant Parts (OTF)

Look for 1: A plant is a system made up of different parts (leaves, stems, roots).

Look for 2: Each plant part has a unique role so that the plan can live and grow.

Student Name	Look for 1	Look for 2	Notes
Jennifer		X	Named roots as the only part that had a role in keeping the plant alive
Michael			
Trent	X	X	Didn't identify a plant as a system w/parts
Adelina			
Wanda		X	Didn't identify a plant as a system w/parts
Jonathan			
William			
Zena		X	Didn't identify a plant as a system w/parts
Chrisitne			
Dorothy	X	X	Didn't identify a plant as a system w/parts
Laura		X	Didn't describe parts as having unique roles
Shawn			
Anthony			
Tristian	X	X	Didn't identify a plant as a system w/parts

K-5 Assessment System

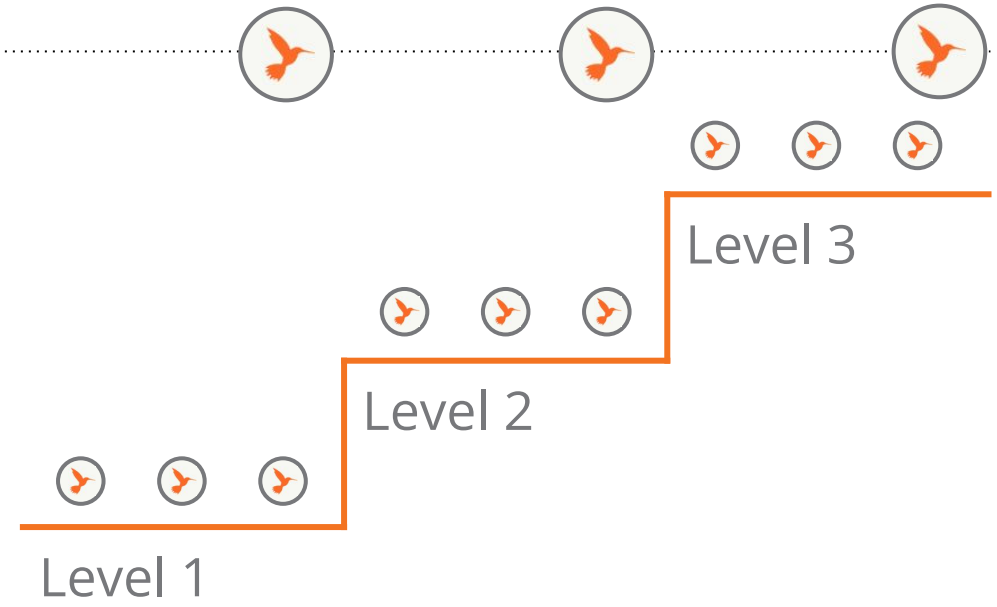


Amplify.

Critical Juncture Assessments

- Track student progress between Progress Build levels
- Embedded into instruction
- Assessment resource includes “Assess Understanding” and “Tailor Instruction”

Where do the Critical Juncture assessments appear?



Critical Juncture Assessments: Kindergarten

PB1: Surfaces get warm in sunlight

PB2:Temperature increases with time in sunlight.

PB3: Dark-colored surfaces get warmer in sunlight.

Level 1

Level 2

Level 3

Critical Juncture Assessments: Grade 1

PB1:The sun is visible in the daytime; stars are visible in the nighttime.

PB2:Facing or facing away from the sun changes what we see in the sky.

PB3: Earth spins.

PB4: Earth spins continuously.

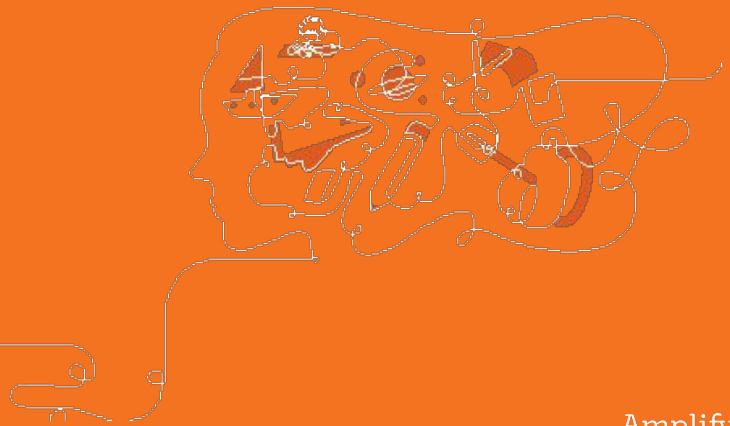
Level 1

Level 2

Level 3

Grade K Example

- Critical Juncture



Tailor instruction: If many students are not showing evidence of understanding that Earth's surface gets warmer when sunlight shines on it, we recommend offering additional instruction in Activity 3: Interpreting the Playground Temperature Data. After students have analyzed the playground temperature data, take some time to explicitly reexamine the Warming Model, and discuss what is different between nighttime and daytime.

Is Earth's surface **warmer** in the **daytime** or in the **nighttime**?

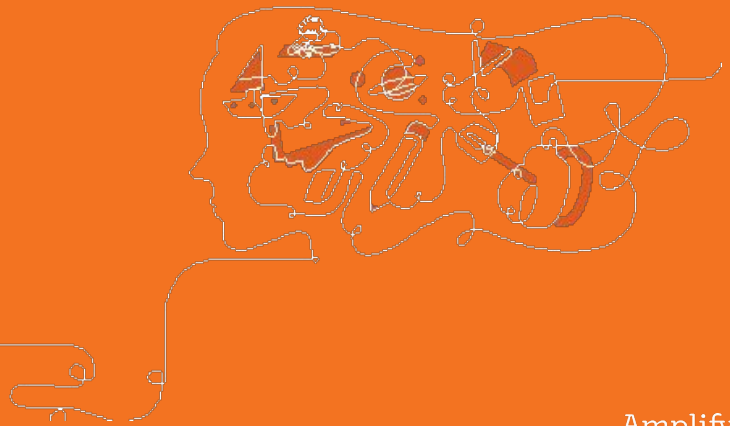
Point to the side of the room that shows what you think.

Think of the answer silently and then say it out loud after my signal.

What is making Earth's surface **warmer** in the daytime?

Grade 1 Example

- Critical Juncture



Tailor instruction: If many students are not showing evidence of this understanding, we recommend offering additional instruction in Lesson 2.1. In Activity 3 of Lesson 2.1, you can take time for a more focused review and instruction about daytime and nighttime. (See the Augmenting Instruction: Differentiating in Response to Critical Juncture Assessment note in the Teacher Support tab in that activity for details.) If a smaller number of your students are not showing evidence of understanding those ideas, you can lead a similar discussion with just those students, before or during Lesson 2.1.

Clipboard Assessment Tool: Talked-based Checks

Chapter 2: Clipboard Assessment Tool

Progress Build Level 1: When light from the sun shines on a surface, the surface gets warmer.

Question to ask students	Students who understand . . .
Lesson 2.3, Activity 2: Do you think this area will be warmer or cooler than the other one? Why do you think it will be warmer or cooler?	should predict that the area with sunlight shining on it will be warmer, and the area in shade, without sunlight shining on it, will be cooler.
Lesson 2.4, Activity 1: Is the surface in this picture warmer or cooler than the surface in the other picture?	should walk to the *warmer* card if sunlight is shining on the surface, or walk to the *cooler* card if sunlight is not shining on the surface (it is nighttime or in the shade).
Lesson 2.4, Activity 2: Is Earth's surface warmer in the daytime or in the nighttime? What is making Earth's surface warmer in the daytime?	should point to the *daytime* illustration, and say that light or sunlight shining on Earth's surface in the daytime makes it warmer.

Student's name	Notes

Sunlight and Weather: Solving Playground Problems (Grade K) 1

Grade K

Chapter 1: Clipboard Assessment Tool

Progress Build Level 1: We see different things in the sky during the daytime when the sky is bright and during the nighttime when the sky is dark. When it is daytime, we can see the sun. When it is nighttime, we can see the stars. At any given time, it is daytime for people in some places on Earth and nighttime for people in other places.

Questions to ask students	Students who understand . . .
Lesson 1.4, Activity 3 (Language Frame): Was it daytime or nighttime there? In _____, I observed _____, so it was _____.	should say that in places they observed the sun, it was daytime, and in places they observed a dark sky or stars, it was nighttime.
Lesson 1.5, Activity 2: It is daytime for Mya. What would Mya observe in the sky? It is nighttime for Rico. What would Rico observe in the sky? (Partners) Do you think Mya and Rico live in the same place or in different places? Why?	should say that Mya would observe the sun in a bright sky. should say that Rico would observe the stars in a dark sky. should say that Mya and Rico probably live in different places on Earth, because they see daytime and nighttime at the same time.

Student's name	Notes

Spinning Earth: Investigating Patterns in the Sky (Grade 1) 1

Grade 1

Amplify.

Keeping Track of Student Conversations
The Clipboard Tool

Work Time

Grade K and 1:
- Open Unit 3.
- Go to the lessons indicated in the table.
- Under Digital Resources, open the clipboard tool and browse.

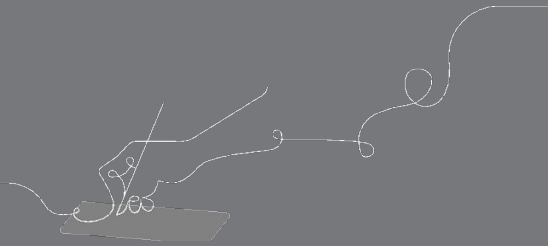
Transitional Kindergarten- PN
- Read the Exploration Overview-p. 9
- Read the Activities Summary-p.10
- Read the steps of Activity 4-p. 39-42, with a focus on step 16.

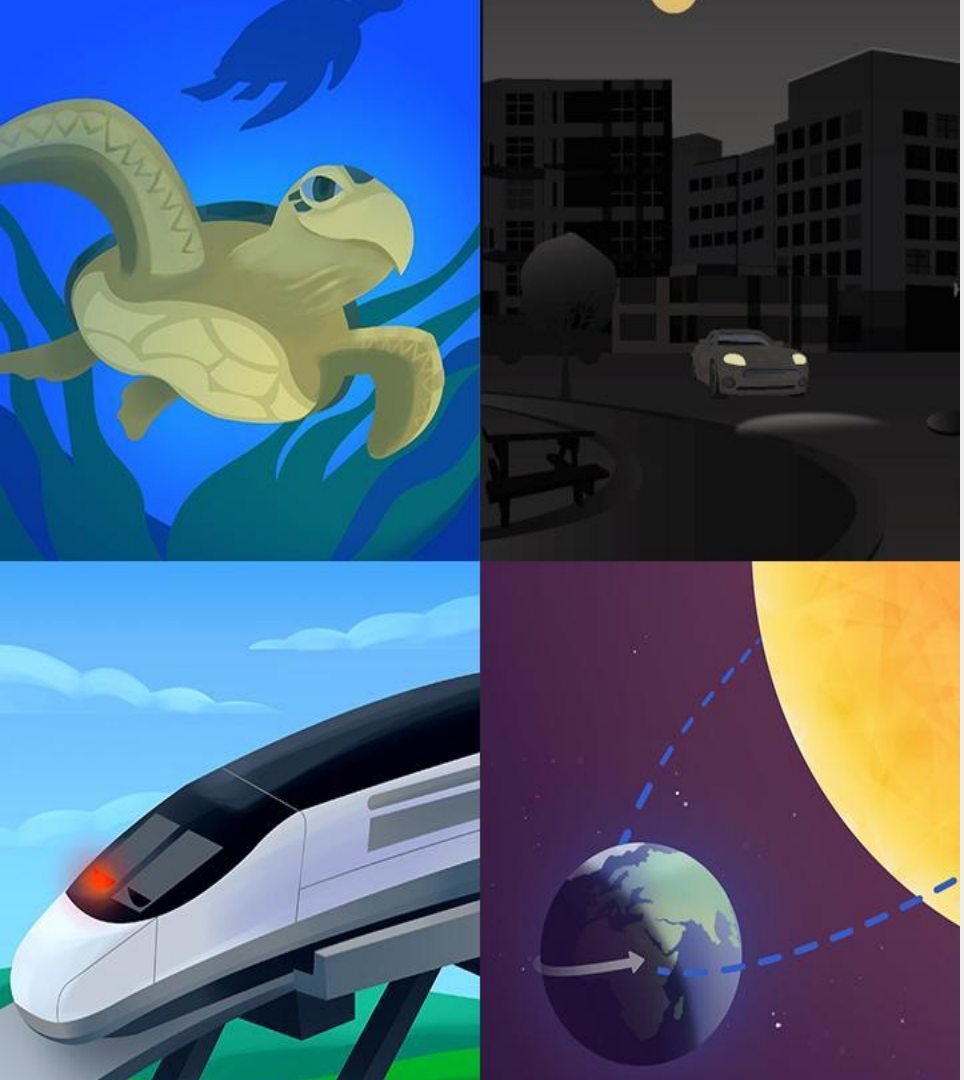
Kindergarten		
Progress Build	Lesson	Activity
Level 1	2.4	Act 2
Level 2	3.4	Act 2
Level 3	4.3	Act 1

First Grade		
Progress Build	Lesson	Activity
Level 1	1.5	Act 2
Level 2	2.4	Act 1
Level 3	3.6	Act 2
Level 4	4.4	Act 5

Questions?

Critical Juncture Assessments
TK Embedded Assessments



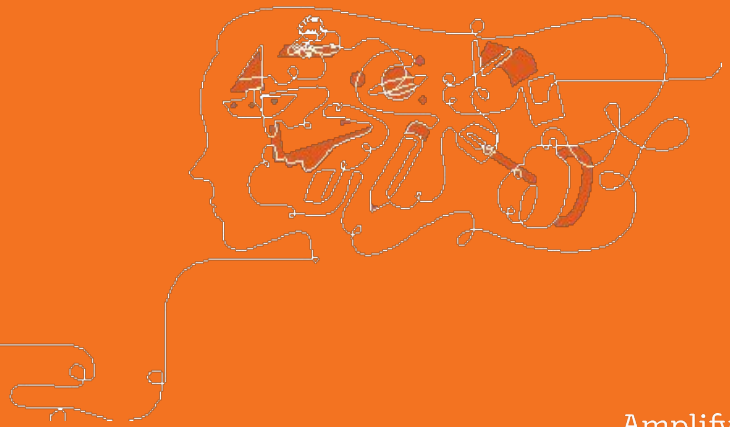


Plan for the day

- Introduction and Framing
- Unit Overview
- Formative Assessments
  - On-the-Fly Assessments
  - Critical Juncture
  - Self Assessments
- **End of Unit Assessments**
  - **TK Culminating Activity**
- Closing

Transitional Kindergarten

- Culminating Activity



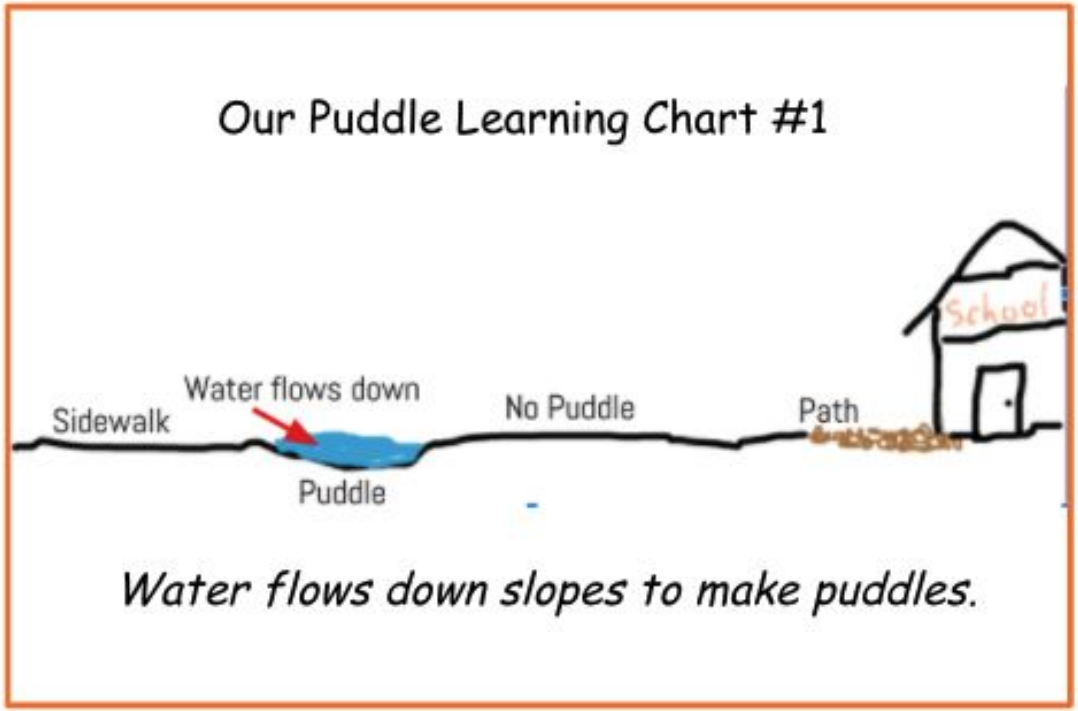
Amplify.

Unit 3 Shared Drawing & Writing Build - Exploration 1

Science Question 1: ***Why are there puddles on some parts of the sidewalk but not on other parts?***

The place **has** a puddle

because water flowed



Science Idea 1: Water flows down. It flows as far as it can go; so a puddle can form at the bottom of a slope.

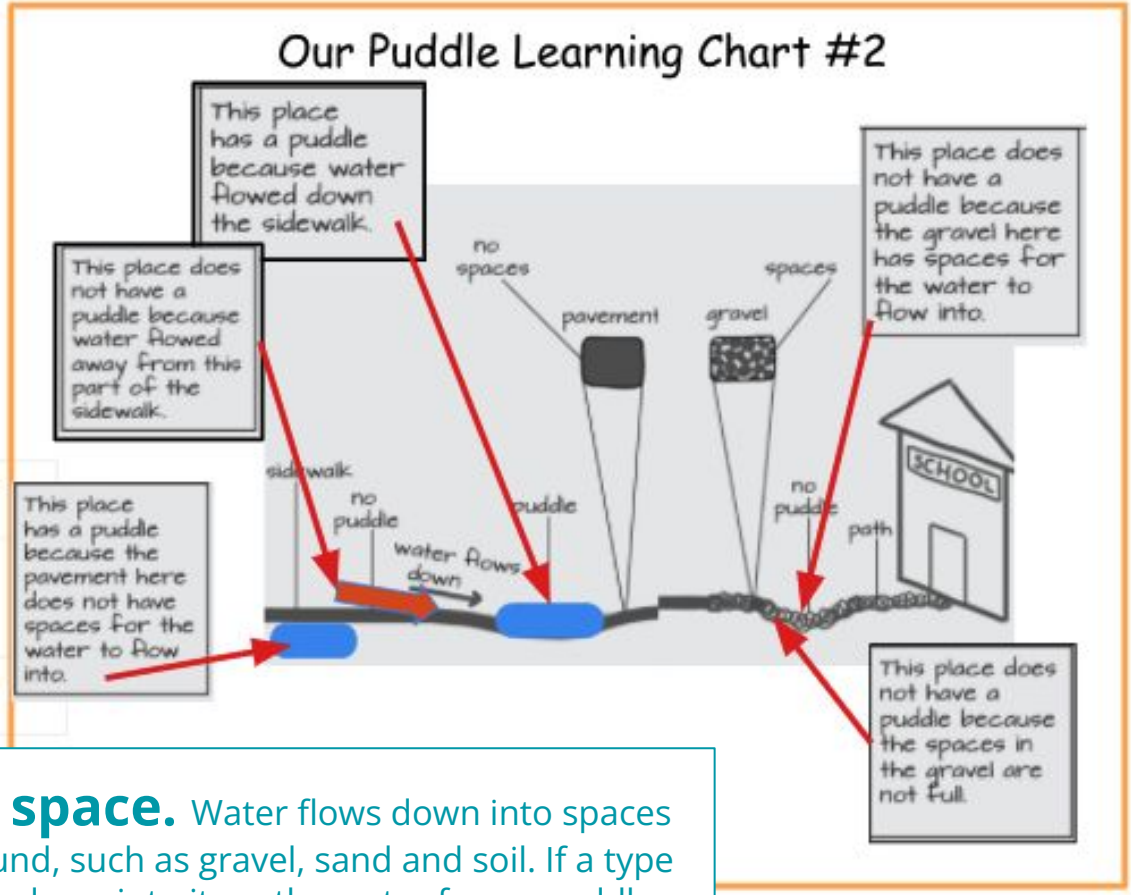
Unit 3 Shared Drawing & Writing Build - Exploration 2

Science Question 2: ***Why are there puddles on the sidewalk but not on the path?***

The place **has** a puddle because the

here **have spaces**

for the water to flow into.



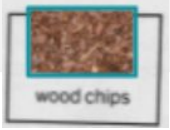
Science Idea 2: Water needs space. Water flows down into spaces in the ground. There are different types of ground, such as gravel, sand and soil. If a type of ground doesn't have spaces, water can't flow down into it, so the water forms puddles.

Unit 3 Shared Drawing & Writing Build - Exploration 3

Science Question 3: ***Why are there puddles on the paths sometimes?***

The place **has** a puddle

because the spaces in the



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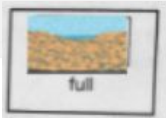
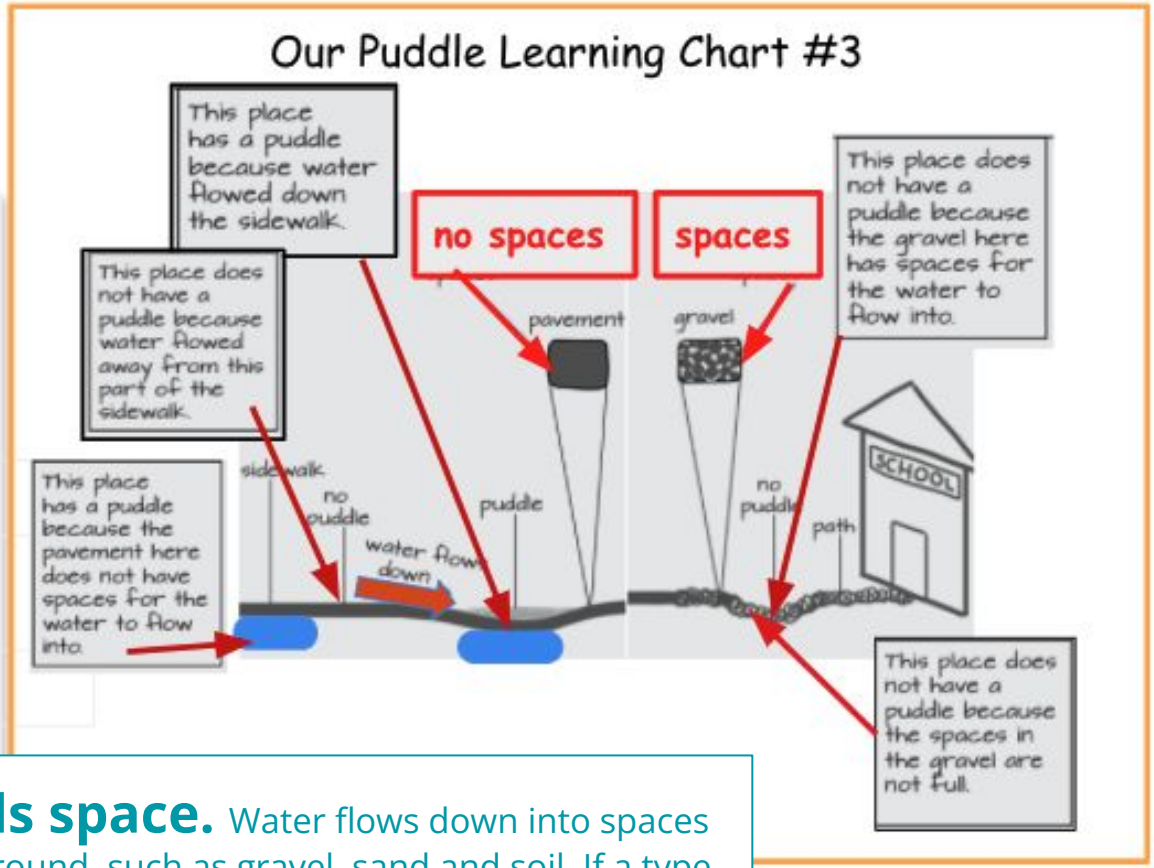
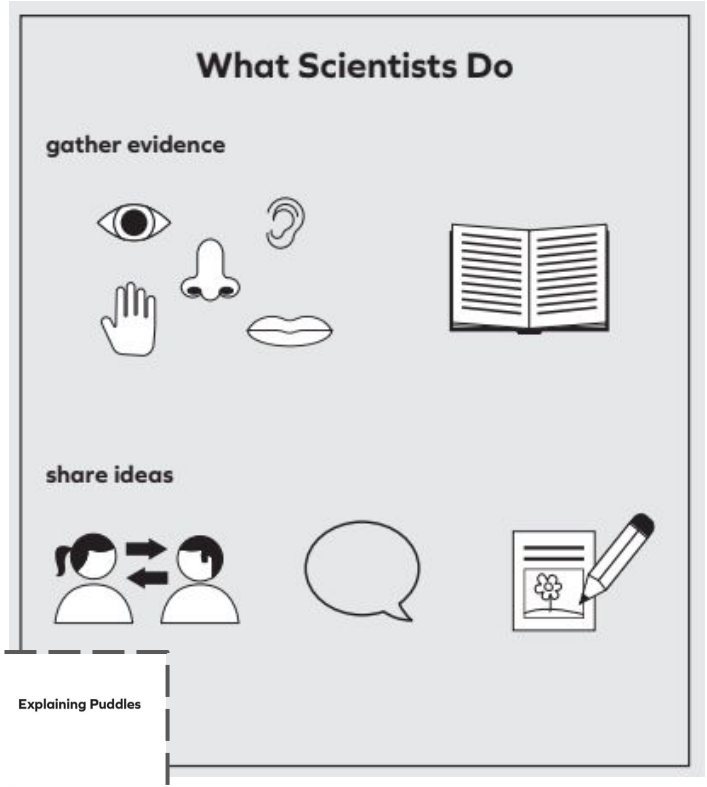


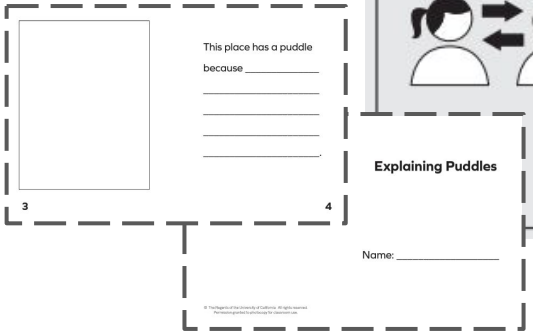


<u>Science Idea 3</u>: Water needs space. Water flows down into spaces in the ground. There are different types of ground, such as gravel, sand and soil. If a type of ground doesn't have spaces, water can't flow down into it, so the water forms puddles.

Culminating Activities - Summative Assessments

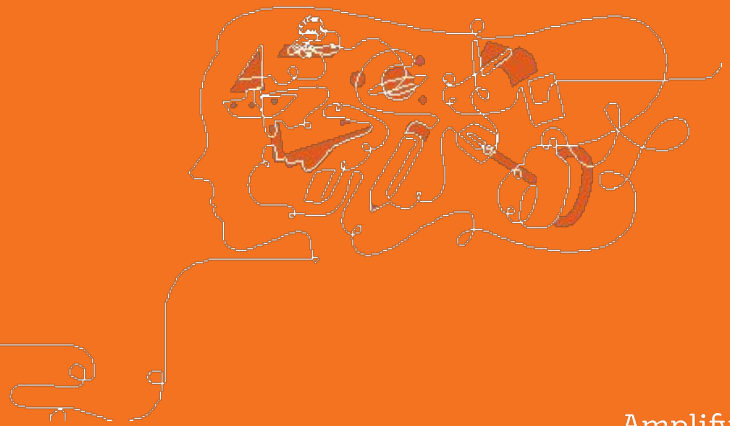
- Self-Reflection Student Conversations:
  - Work as Scientists
  - Unit Science Content
- Optional: Home Connection Minibooks (do in class &/or @ home, to share with families
- Classbook: Drawing & writing *Wondering About Puddles* classbook
  - Individual Student pages





Kindergarten & Grade 1

- End of Unit Assessment



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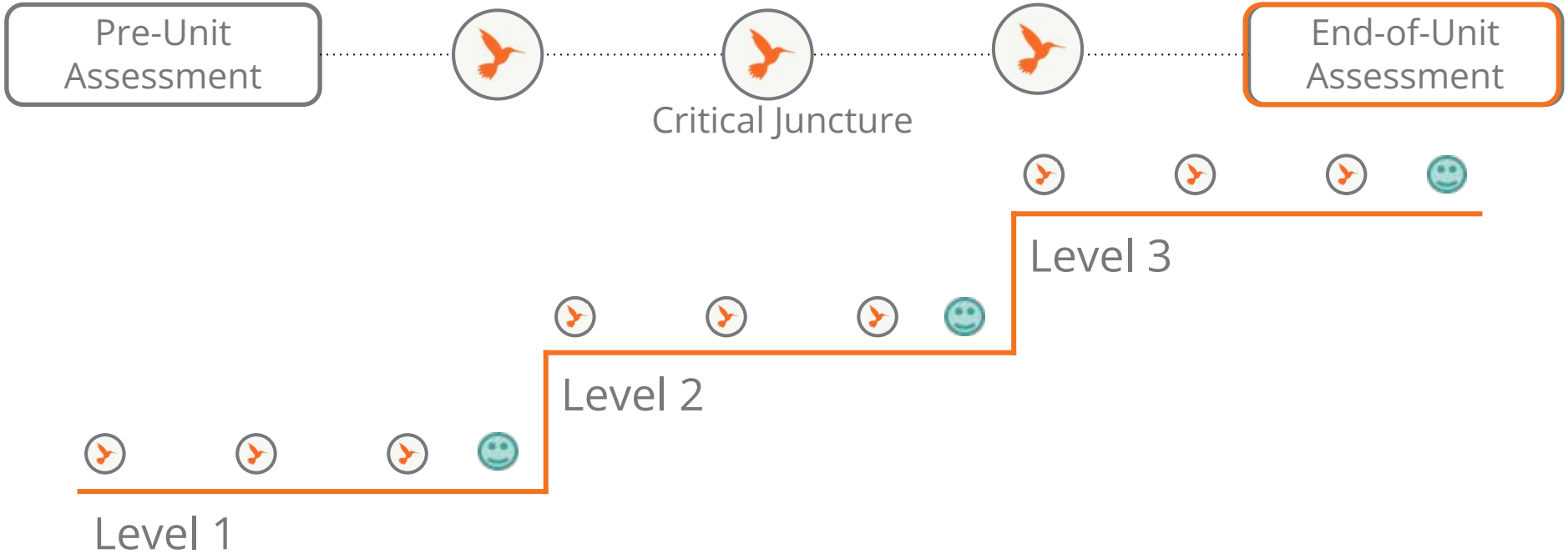
K-5 Assessment System



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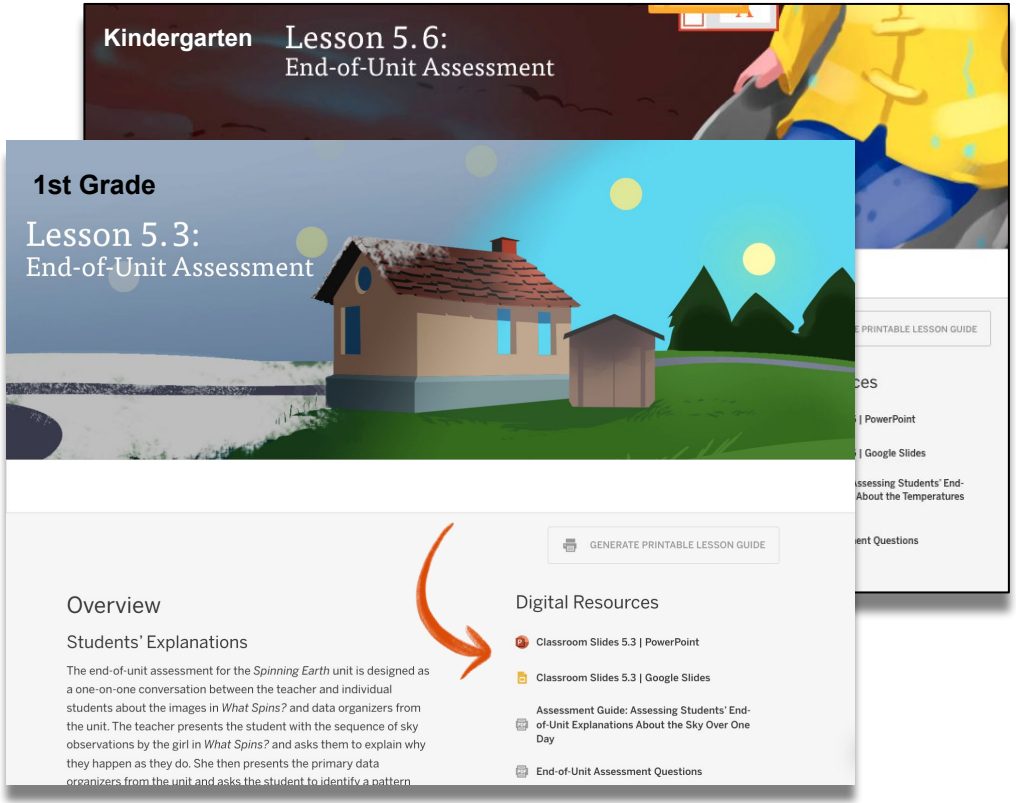
End-of-Unit Assessment

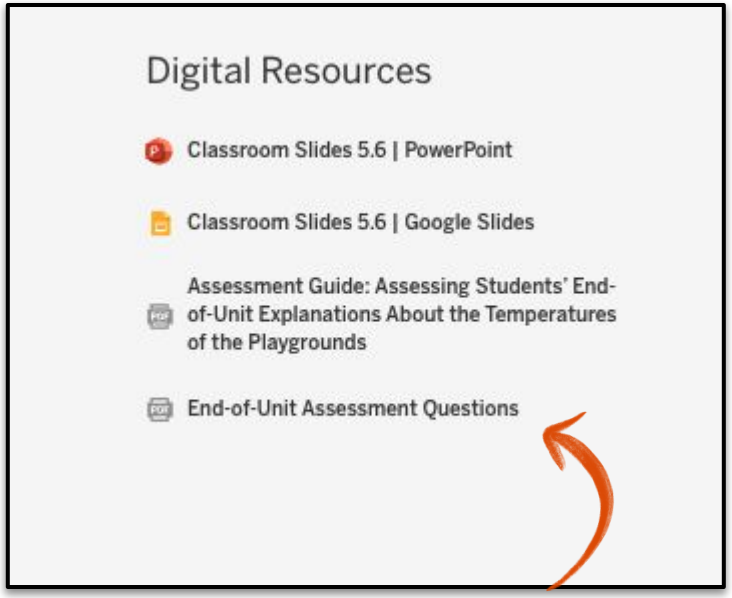
3-dimensional assessment opportunity

- Summative assessment of mastery of science concepts
- Formative assessment of Science and Engineering Practices

- Look at prior lesson
- Gallery Walk with artifacts

Locate End of Unit Assessment





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End-of-Unit Assessment Guide

Work time

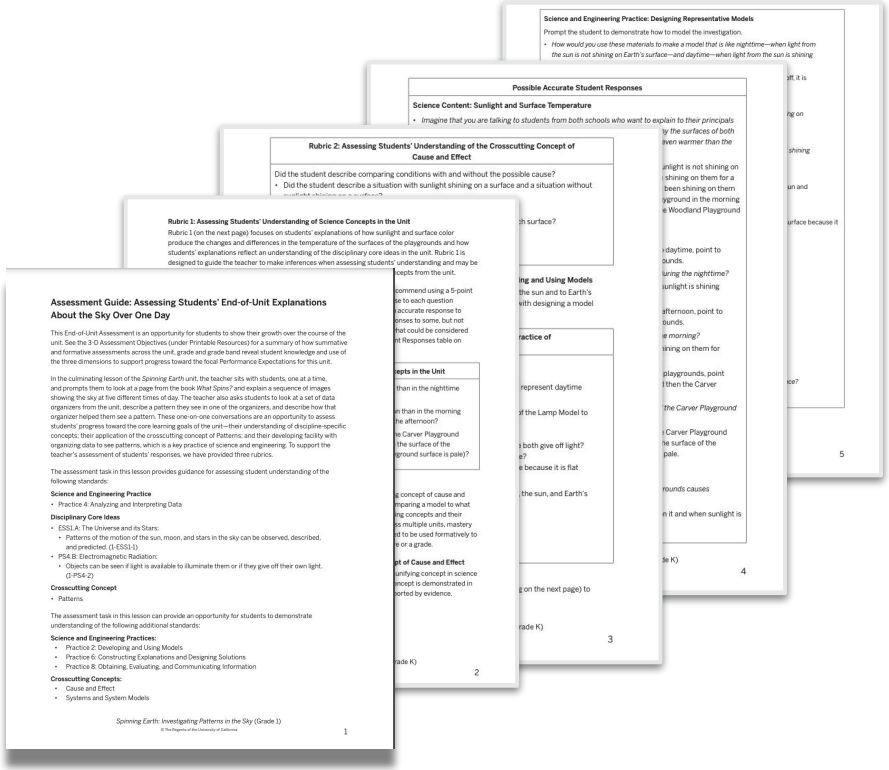
Grades K and 1

Open and skim your End-of-Unit Assessment and Assessment Guide

- Kindergarten: Lesson 5.6
- First Grade : Lesson 5.3

Transitional K

- Read pages 172-173 in TG.
- Read the steps of the Culminating Activities.
- Then focus on Class book on pages 178-182.



Assessment Guide: Assessing Students' End-of-Unit Explanations About the Sky Over One Day

This End-of-Unit Assessment is an opportunity for students to show their growth over the course of the unit. See the 3-D Assessment Objectives (under Printable Resources) for a summary of how summative and formative assessments across the unit, grade and grade band reveal student knowledge and use of the three dimensions to support progress toward the focal Performance Expectations for this unit.

In the culminating lesson of the *Spinning Earth* unit, the teacher sits with students, one at a time, and prompts them to look at a page from the book *What Spins?* and explain a sequence of images showing the sky at five different times of day. The teacher also asks students to look at a set of data organizers from the unit, describe a pattern they see in one of the organizers, and describe how that organizer helped them see a pattern. These one-on-one conversations are an opportunity to assess students' progress toward the core learning goals of the unit—their understanding of discipline-specific concepts; their application of the crosscutting concept of Patterns; and their developing facility with organizing data to see patterns, which is a key practice of science and engineering. To support the teacher's assessment of students' responses, we have provided three rubrics.

The assessment task in this lesson provides guidance for assessing student understanding of the following standards:

Science and Engineering Practice
- Practice 4: Analyzing and Interpreting Data

Disciplinary Core Ideas
- ESS1.A: The Universe and its Stars:
  - Patterns of the motion of the sun, moon, and stars in the sky can be observed, described, and predicted. (1-ESS1-1)
- PS4.B: Electromagnetic Radiation:
  - Objects can be seen if light is available to illuminate them or if they give off their own light. (1-PS4-2)

Crosscutting Concept
- Patterns

The assessment task in this lesson can provide an opportunity for students to demonstrate understanding of the following additional standards:

Science and Engineering Practices:
- Practice 2: Developing and Using Models
- Practice 6: Constructing Explanations and Designing Solutions
- Practice 8: Obtaining, Evaluating, and Communicating Information

Crosscutting Concepts:
- Cause and Effect
- Systems and System Models

Spinning Earth: Investigating Patterns in the Sky (Grade 1)

1

Rubric 1: Assessing Students' Understanding of Science Concepts in the Unit

Rubric 1 (on the next page) focuses on students' explanations of how sunlight and surface color produce the changes and differences in the temperature of the surfaces of the playgrounds and how students' explanations reflect an understanding of the disciplinary core ideas in the unit. Rubric 1 is designed to guide the teacher to make inferences when assessing students' understanding and may be

2

Rubric 2: Assessing Students' Understanding of the Crosscutting Concept of Cause and Effect

Did the student describe comparing conditions with and without the possible cause?
- Did the student describe a situation with sunlight shining on a surface and a situation without

3

Possible Accurate Student Responses

Science Content: Sunlight and Surface Temperature
- *Imagine that you are talking to students from both schools who want to explain to their principals*

4

Science and Engineering Practice: Designing Representative Models

Prompt the student to demonstrate how to model the investigation.
- *How would you use these materials to make a model that is like nighttime—when light from the sun is not shining on Earth's surface—and daytime—when light from the sun is shining*

5

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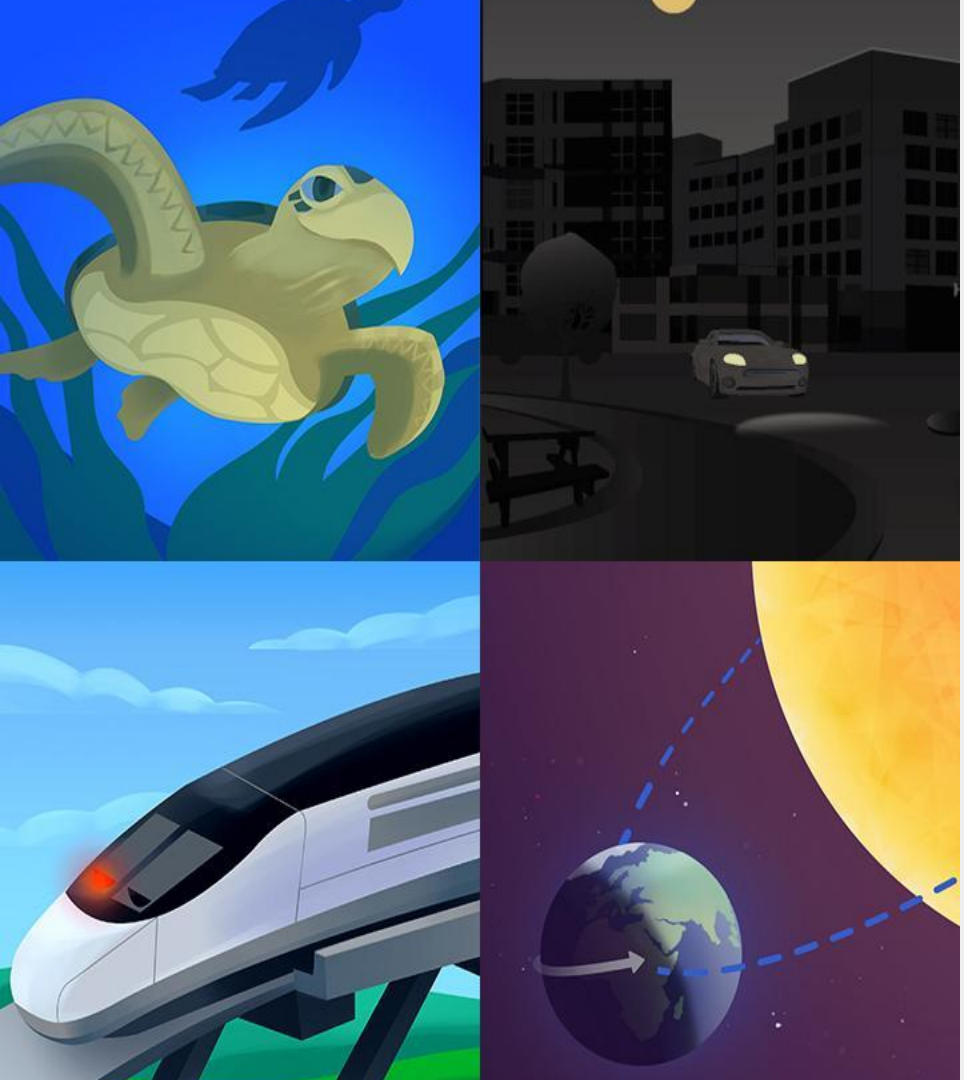


Plan for the day

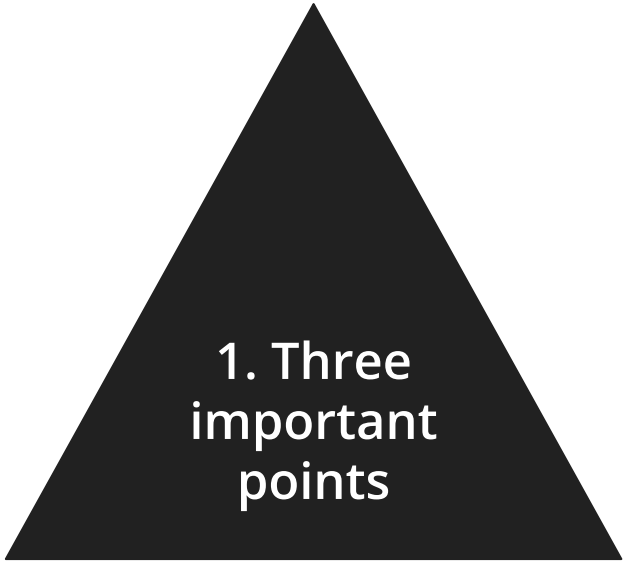
- Introduction and Framing
- Unit Overview
- Formative Assessments
  - On-the-Fly Assessments
  - Critical Juncture
  - Self Assessments
- End of Unit Assessments
- **Closing**

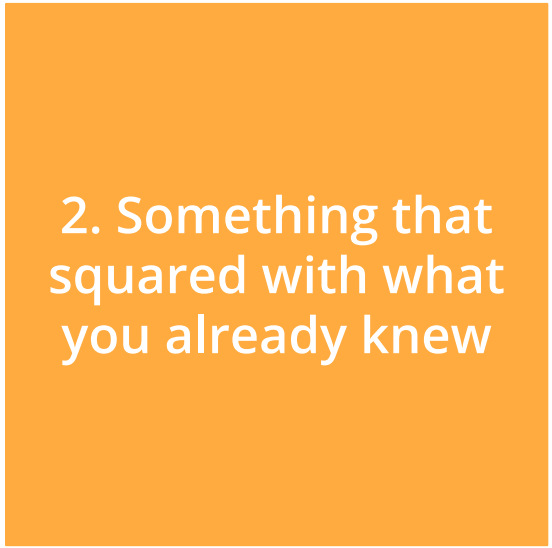
Overarching goals

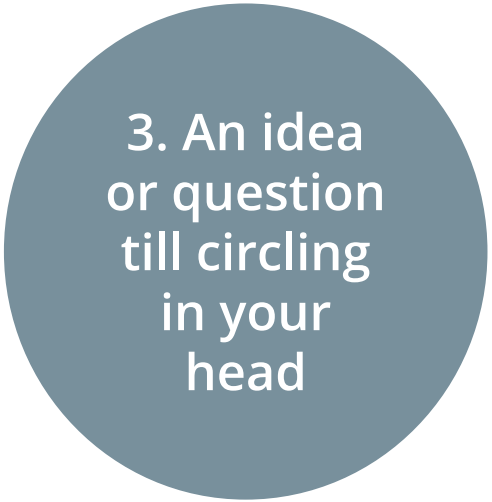
By the end of this workshop, you will be able to:

- ❑ **Describe the overall structure of the Assessment System**
- ❑ **Describe the overall structure and purpose the Formative Assessments.**
- ❑ **Understand the Critical Juncture and End of Unit assessment.**
- ❑ **Understand how the formative assessments build to the summative assessment.**

Reflection


1. Three important points


2. Something that squared with what you already knew


3. An idea or question till circling in your head

LAUSD Microsite- https://amplify.com/lausd-science

Welcome to Amplify Science!

This site contains supporting resources designed for the LAUSD Amplify Science adoption for grades TK–8.

- Access the Amplify Science Program Hub (To help orient you to the new design, watch this video and view this reference guide.)
- Find out more about Amplify Science@Home
- Share the Caregiver Hub (Eng/Span) with your families
- For LAUSD ES Teachers- Amplify Science & Benchmark Advance Crosswalk
- Instructional guidance for a Responsive Relaunch of Amplify Science in 21-22

Click the button below to preview the digital Teacher's Guide, and check back for exciting updates to this site!

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Additional resources

Welcome, caregivers!

We hope you enjoy learning more about Amplify Science and what students are learning in science this year.

Para acceder a este sitio en español haga clic aquí.

Amplify welcomes you and your learner to the Science program for the new school year. We are very excited to provide you with exceptional learning opportunities through Science. Below are resources and helpful guides for enabling your student to have the most productive experience with our platform throughout the year.

Contact Us

TOP RATED BY EDREPORTS

Grades 6-8

Additional resources and ongoing support

Customer Care

Seek information specific to enrollment and rosters, technical support, materials and kits, and teaching support, weekdays 7AM-10PM EST and weekends 10AM-6PM EST.

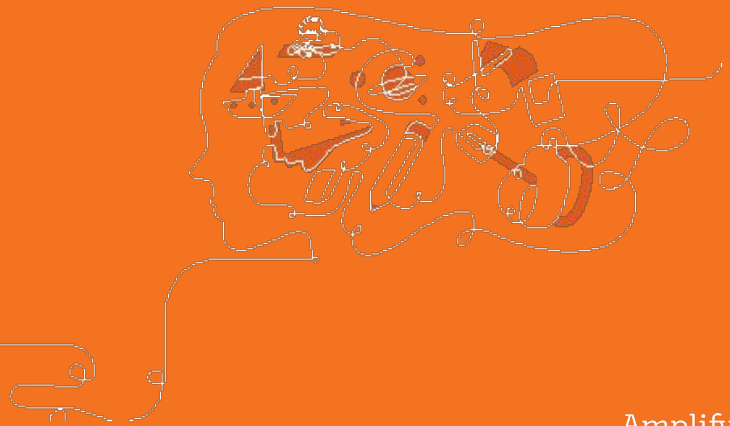
help@amplify.com

800-823-1969

Amplify Chat

Thank You!

Transitional K, Kindergarten, and Grade 1 Assessments



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