

Presented by:

JoAnna Chocooj, MA Ed UCB, &
Amplify Professional Learning Specialist

Amplify Science - Transitional Kindergarten



AmplifyScience



THE LAWRENCE
HALL OF SCIENCE
UNIVERSITY OF CALIFORNIA, BERKELEY



Welcome!

- Please share your own “Fun Fact” with us!

Intro: JoAnna Chocooj

- 30+ year veteran teacher in SF Bay Area = small Urban district in Vallejo, CA
- Grew up in tiny desert town of Trona, CA, just south of Death Valley
- **FUN FACT:** Extended family live in SoCal so we would come visit several times per/year. So whenever I return it's like visiting family.



- I got this wonderful water/sand sensory table for my classroom from Lakeshore - we use in all 3 Amplify Science TK Units!

Dear teachers,

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

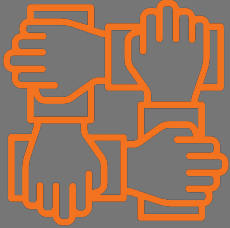
We are in your corner – extending your reach, saving you time, and enhancing your understanding of each student.

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



- **Participate actively: Engage at your comfort level - ask questions, discuss, share!**



- **Take care of yourself: if you need anything, please let us know!**



- **Manage your tech; make sure you have a note-catcher present: we're here to help you access all the resources!**



- **What is learned here, leaves here: let's get ready to teach!!**



Getting to know you...

- What successes have you had teaching Science?
- What challenge have you faced teaching Science
- What will be most helpful to you during our time together today?



Getting to know you...

- **What successes have you had teaching Amplify Science TK?**
- **What challenge have you faced teaching Amplify Science TK?**
- **What will be most helpful to you during our time together today?**

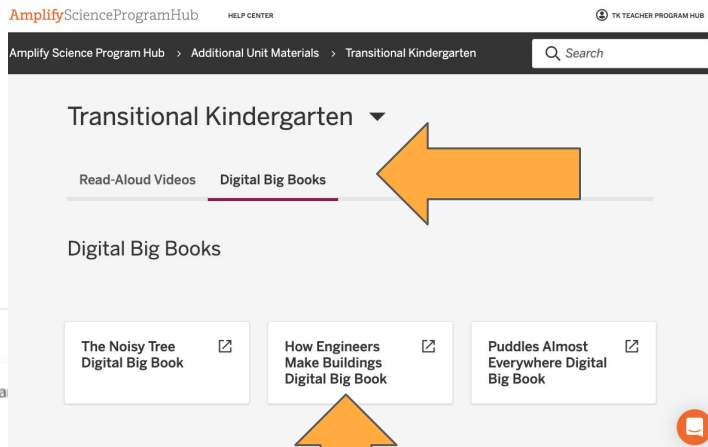
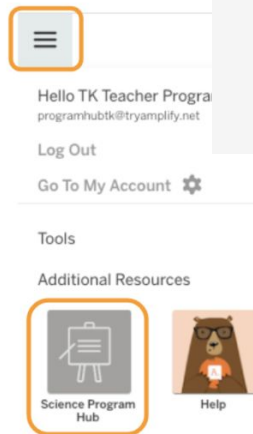
Amplify Science TK Program Hub Resources

Amplify Science TK Resources

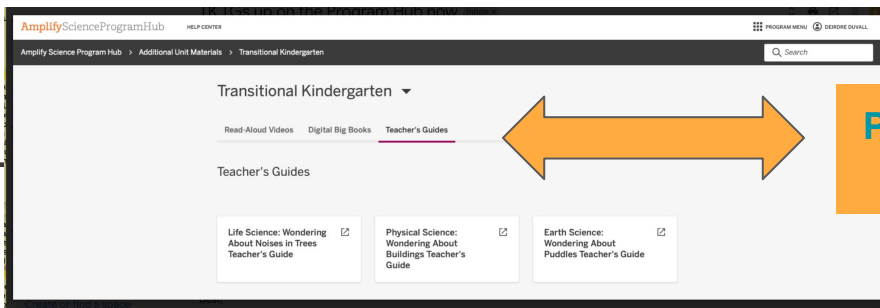
Accessing Digital Books and Read Alouds

1. Go to learning.amplify.com
2. Click "Log in with Amplify"
 - a. Username:
programhubTK@tryamplify.net
 - b. Password: **AmplifyNumber1**
3. Use the Global Navigation Bar to open the Science Program Hub
4. From the Program Hub> Open Additional Unit Resources
5. Click on Transitional Kindergarten
6. Explore the Read- Aloud videos and Digital Big Books

Welcome to Amplify.



Digital PAGE-TURNER PDFs of unit big books that can be projected for lesson focus on images, vocabulary, etc.



PDFs of ALL 3 Unit TGs!

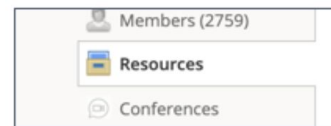
Join **Amplify Science** Schoology Group

Then go to the **red TK Resources Folder**

1. To join Amplify Science Schoology:

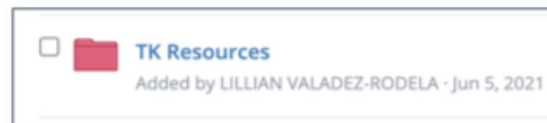
ES Group: W4PK-W466-63F5B

2. Click on the Resources folder on the left

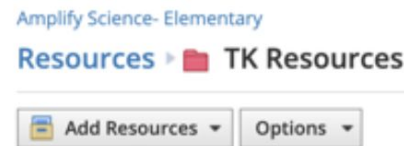


3. Scroll down the folder list & select the

red TK Resources folder.



4. Select TK resources to view or copy.



☐ Title



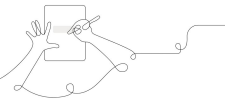
Plan for the Day



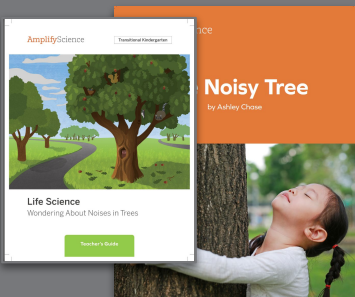
- **Introduction & Framing the day**

Participant Notebook

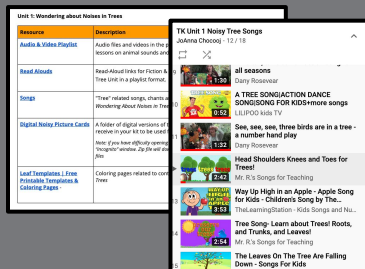
TK, Wondering About Buildings
Guided Unit Internalization Workshop



- **Navigation & Planning Units 2 & 3**



- **Amplify Science
New Curriculum
& TK Instructional
Approach**



- **Planning to Teach-
Additional Program
Resources**



- **Navigation & Planning Unit 1**



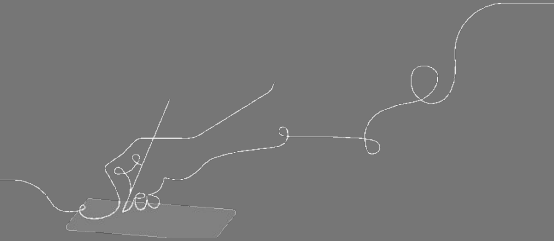
- **Closing**

Overarching Goals



- **Navigate the Amplify Science TK curriculum to understand the structure and resources at the Unit, Exploration and Activity levels.**
- **Become familiar with planning resources to prepare to teach Amplify Science TK to my students..**

e





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+

Amplify.

Amplify Science

Amplify Science TK Provides a Foundation to the NGSS:

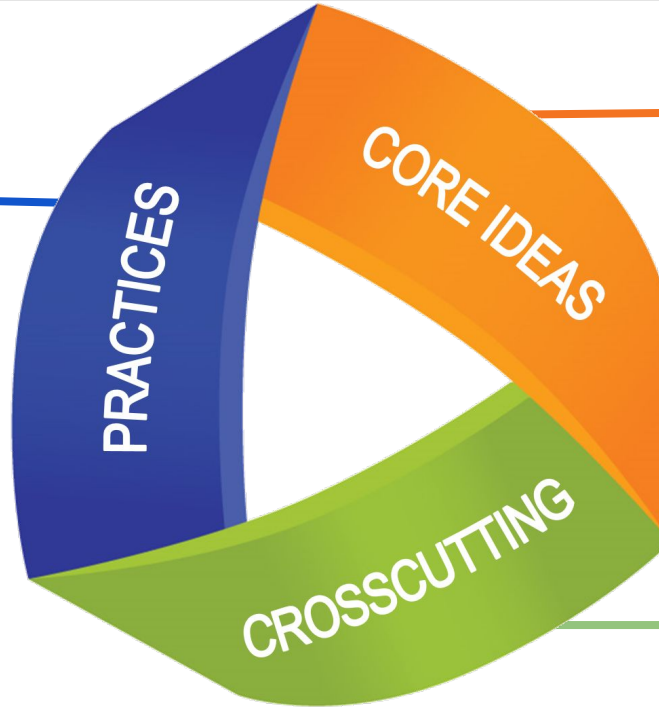


- **Phenomenon-based Learning**
- **3-dimensional**
- **Conceptual connections to K-5 NGSS & alignment with TK CA Preschool Foundations & Frameworks**

Figuring out Phenomena

Using 3-D teaching and learning

What scientists & students do to figure out the science.
Science and Engineering Practices



What scientists want to know & students figure out
Disciplinary Core Ideas

How scientists think - & students learning the habits that help them organize information
Crosscutting Concepts

Amplify Science TK Units

Precursors & Linkages & between NGSS & PLFFs



DCI's

(Science Topics)

- **Life Science**
- **Physical Science**
- **Earth & Space Science**

SEP's

(Best Practices)

(from Scientific Inquiry Topic)

- Wondering
- Comparing and Looking for Patterns
- Describing what happened
- Collecting Evidence
- Talking, writing & drawing about what we know, read and learn about new discoveries

CCC's

(Science Topics)

(from Scientific Inquiry Topic)

- **Cause & Effect**

(from MATH Topics)

- **Patterns**
- **Classification**



As you watch this video, listen carefully to how you know Emma is engaged in phenomena based learning?

What words or phrases does she repeat to let you know?

Use the chat feature to share your thoughts.



Kevin Butters
@chickensrevenge

Follow

My daughter is having awesome conversations with me about what she is learning in science! @AmplifyScience #RiseGI #LincolnShines



Parent: *"Emma, what are you learning about in Science?"*

Emma: *"All plants need water. Sometimes it rains in the desert. And we're figuring out why does the black one doesn't grow and the pink one and the white one does grow."*

Parent: *"But you don't..."*

Emma: *"And we ummm we figured out the one who had the ummm caterpillars. We already figured that one out cause no caterpillars were there. OK? The End!"*

Topic-based vs. Phenomenon-based

What's the difference?

Topic-based	Phenomenon-based
Animals in trees	Why are there noises coming from the tree in the park?
All about buildings	How can we make a play city with stable buildings?
Rocks and water	Why are there puddles in some places on the ground, but not in other places?

We are biomimicry engineers.



I'm a pinball engineer.



I'm a weather scientist.



We are aquarium scientists.



I'm a light and sound engineer.



We are ecologists.



I'm a meteorologist.



I'm a sky scientist.



DRAMATIC PLAY will
never be the same.
We are now officially:
TK Scientists!

We are geologists.



We are systems engineers.



I'm a conservation biologist.



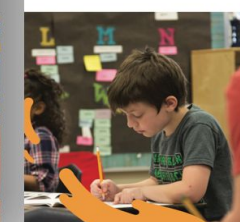
We are mathematicians.



I'm a food scientist.



I'm an astronomer.



I'm a water resource engineer.



TK Scope and Sequence



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**



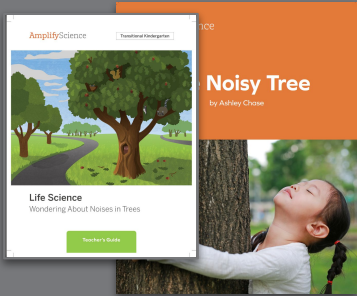
Plan for the Day



- Introduction & Framing the day

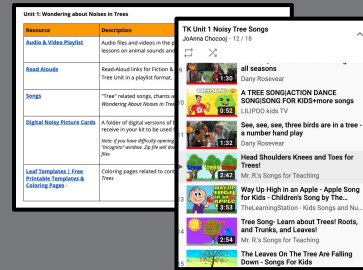


- Navigation & Planning Units 2 & 3



Amplify Science New Curriculum & TK Instructional Approach

- Navigation & Planning Unit 1

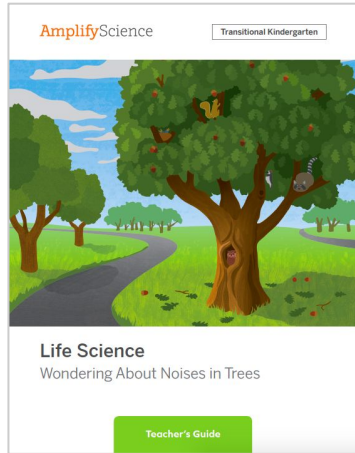


- Planning to Teach- Additional Program Resources

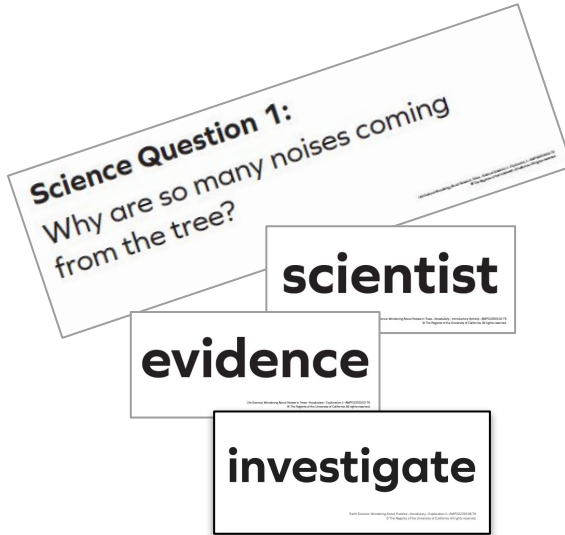


- Closing

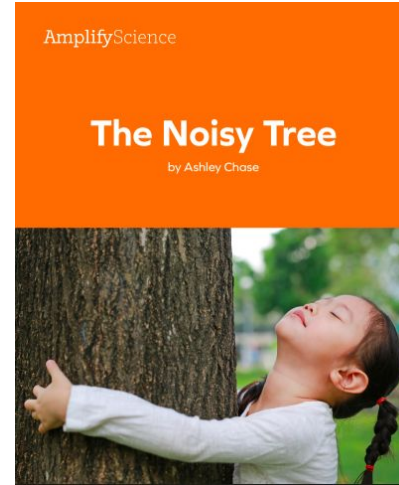
TK Unit Materials



**Teacher's
Guide**



**Classroom
Wall
Materials**



Big Book



Card Sets

TK Curriculum Materials

- Language Frames & Student CopyMasters
- Home Connections Copymasters
- Scientist Cards
- Extension Opportunities
- Visual Information Cards
- Playlists of Exploration Audio & Video Lesson Links; Songs & related Literature (refer to district for guidance on use)

Amplify Science ScientistProfile Cards



Shared Listening



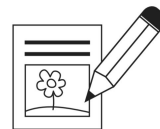
1.
Partner A shares.
Partner B listens.



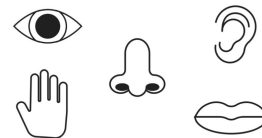
2.
Partner B repeats.
I heard you say...



3.
Partners switch.



draw and write



observe



think

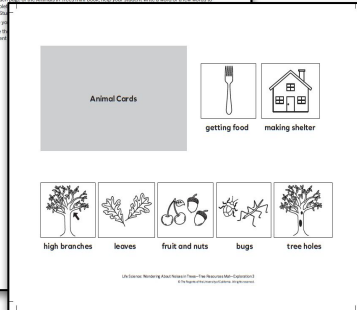
Name: _____ Date: _____

Home Connection: Mini-Book

We are conducting our science unit called *Oh Science: Wondering About Noises in Trees*. One of the important science practices that students have learned about is *observing*. Please help us extend this practice at home.

Directions:

1. Use each page of the *Animal Cards* to help your student write a word or a few words to complete the sentence.
2. Have your student draw a picture of the animal.
3. Discuss the student's drawing.



Unit 1: Wondering about Noises in Trees	
Resource	Description
Audio & Video Playlist	Audio files & lessons on a playlist
Read Alouds	Read-Aloud Tree Unit in
Songs	"Tree" related songs
Digital Noisy Picture Cards	A folder of digital pictures to use in your classroom. Note: if you have "recognition" files
Leaf Templates Free Printable Templates & Coloring Pages	Coloring pages

TK Unit 1 Noisy Tree Songs
JoAnna Chocooj - 12 / 18

all seasons

9. **A TREE SONG!** 1:30 Dany Rosevear

10. **A TREE SONG!** 10:52 LILIPPO kids TV

11. **See, see, see, three birds are in a tree - a number hand play** 1:32 Dany Rosevear

12. **Head Shoulders Knees and Toes for Trees!** 2:42 Mr. R's Songs for Teaching

13. **Way Up High in an Apple - Apple Song for Kids - Children's Song by The...** 9:53 TheLearningStation - Kids Songs and Nu...

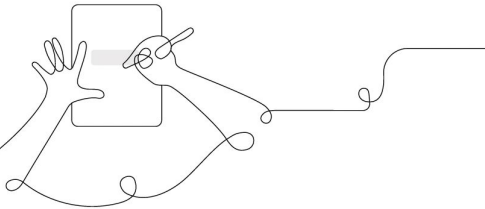
14. **Tree Song - Learn about Trees! Roots, and Trunks, and Leaves!** 2:54 Mr. R's Songs for Teaching

15. **The Leaves On The Tree Are Falling Down - Songs For Kids**

TK Unit 1 Participant Notebook

Participant Notebook

TK, Wondering About Noises in Trees
Unit Internalization



Amplify Science TK ACTIVITY Center Notes

UNIT: #1 #2 #3 NAME: _____ EXPLORATION: #1 #2 #3

Use this organizer to record notes on how to structure the Activities in your classroom for each Exploration. Decide where/how you will set up the stations (part of LA or Math, or general Learning Centers? Part of Free Choice Centers?), ideas for visual arts & music, extension & home opportunities

Station one:

Station Two:

Station Three:

Station Four:

Exploration Note Catcher

Unit Name:
Flexible Implementation Structure:

FOCUS AREAS	Introductory Activity	Exploration #1	Exploration #2	Exploration #3	Culminating Activity
Science Question					
What will students learn? (objectives)					
Key Vocabulary					
Multiple Modalities (Do, Talk, Read, Write, Visualize)					
Assessments and/or Differentiation Opportunities					

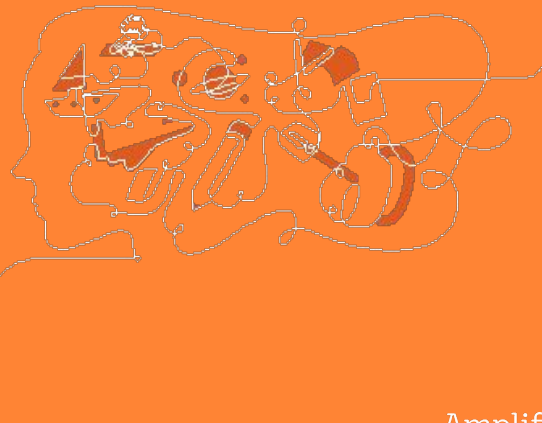
TK Planning Resources Notecatcher

TK Unit Notecatcher

TK Activities
NoteCatcher

Phenomenon-based Instruction

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



Amplify Science Instructional Approach

Transitional Kindergarten

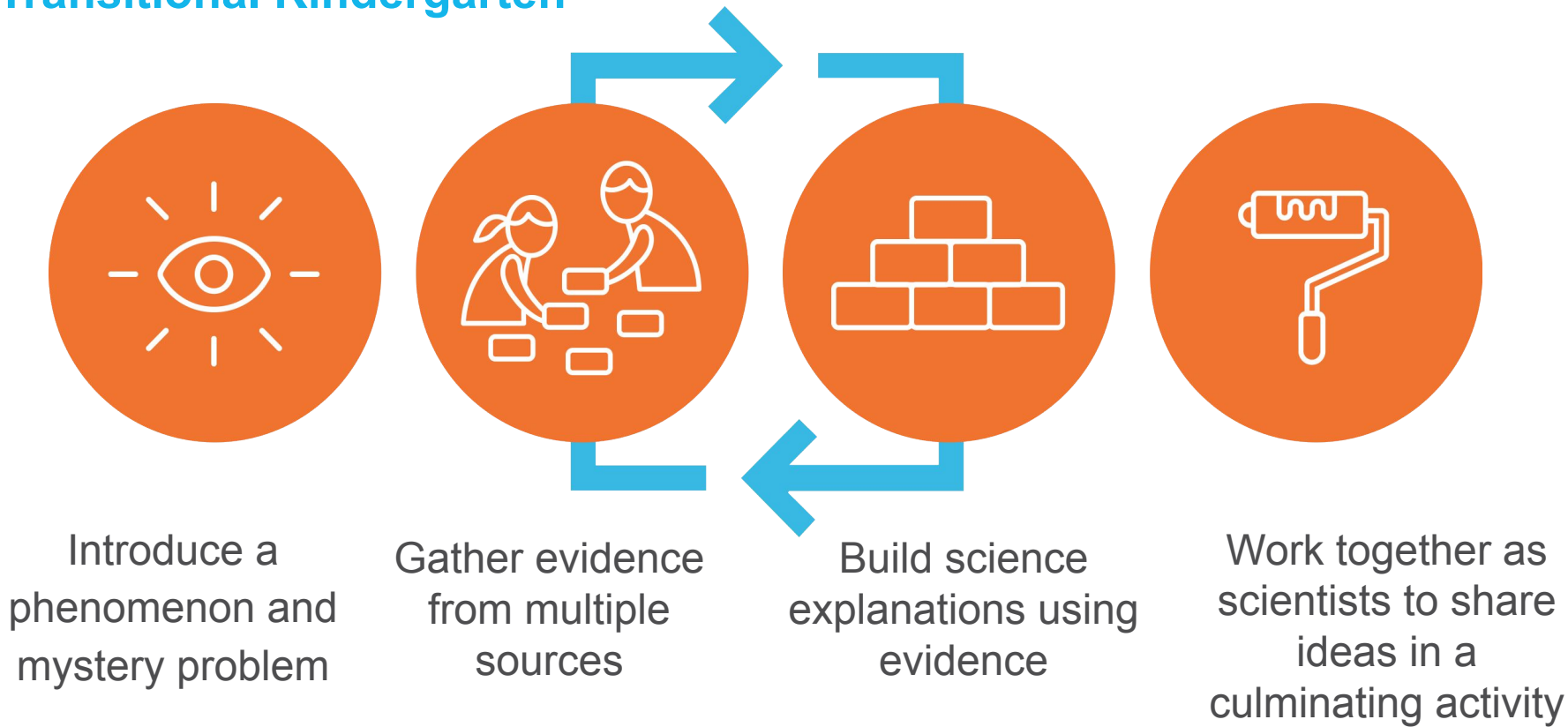
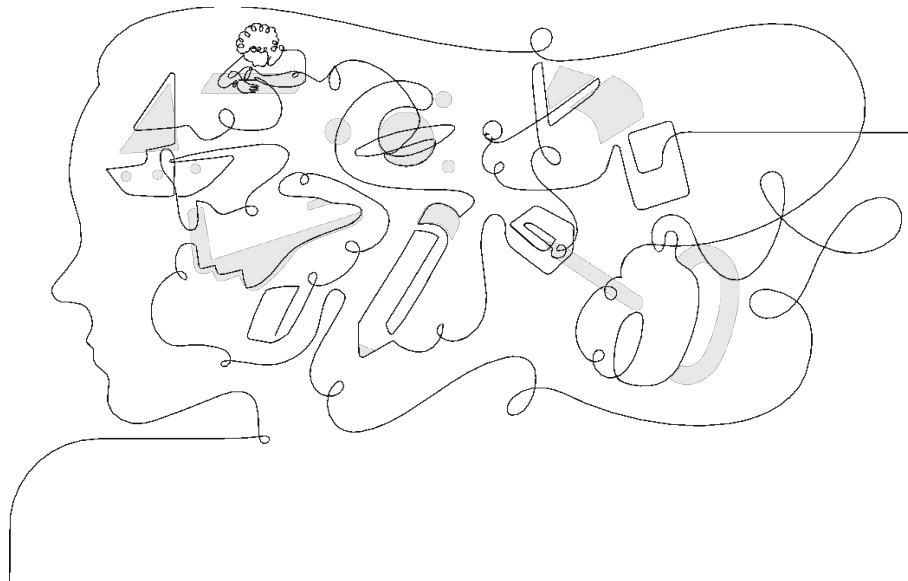


Figure out, not learn about...



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

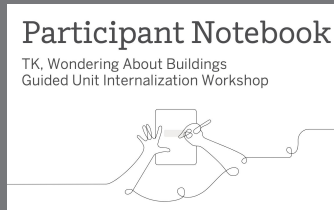




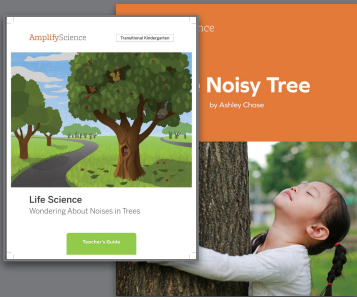
Plan for the Day



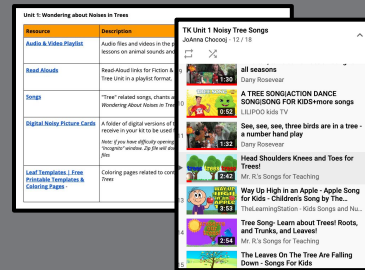
- Introduction & Framing the day



- Navigation & Planning Units 2 & 3



- Amplify Science New Curriculum & TK Instructional Approach



- Planning to Teach- Additional Program Resources

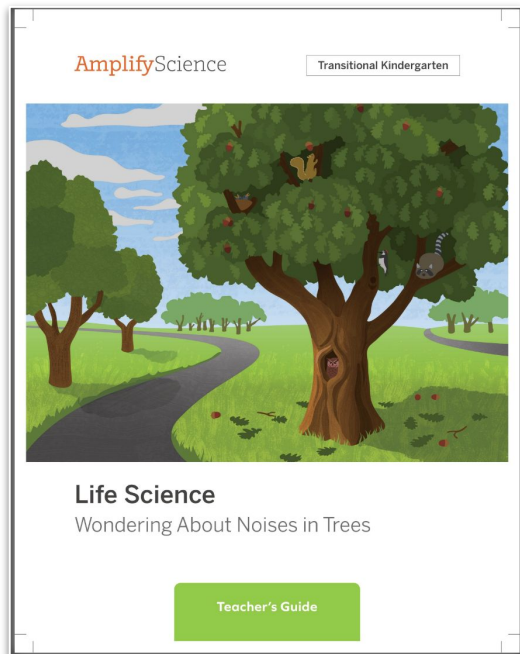


- Navigation & Planning Unit 1 - Unit Level



- Closing

TK Resource Reference Sheet



Unit resources

Unit overview	Brief description of the what, the why, and the how of the unit. It also gives an overview of the structure of the unit.
Instructional resources	Includes references, flexible implementation, description of routines, assessment opportunities, and supports.
Getting Ready to Teach	Snapshot of all the things you will need to prepare ahead of time that will save you time once you get going.
Materials and Prep	What materials you need and what is provided, as well as what you need to prepare before the start of the unit.
Preparation at a Glance	What you need to get ready broken down by activity as well as how long you can expect it to take.

Lesson-level resources

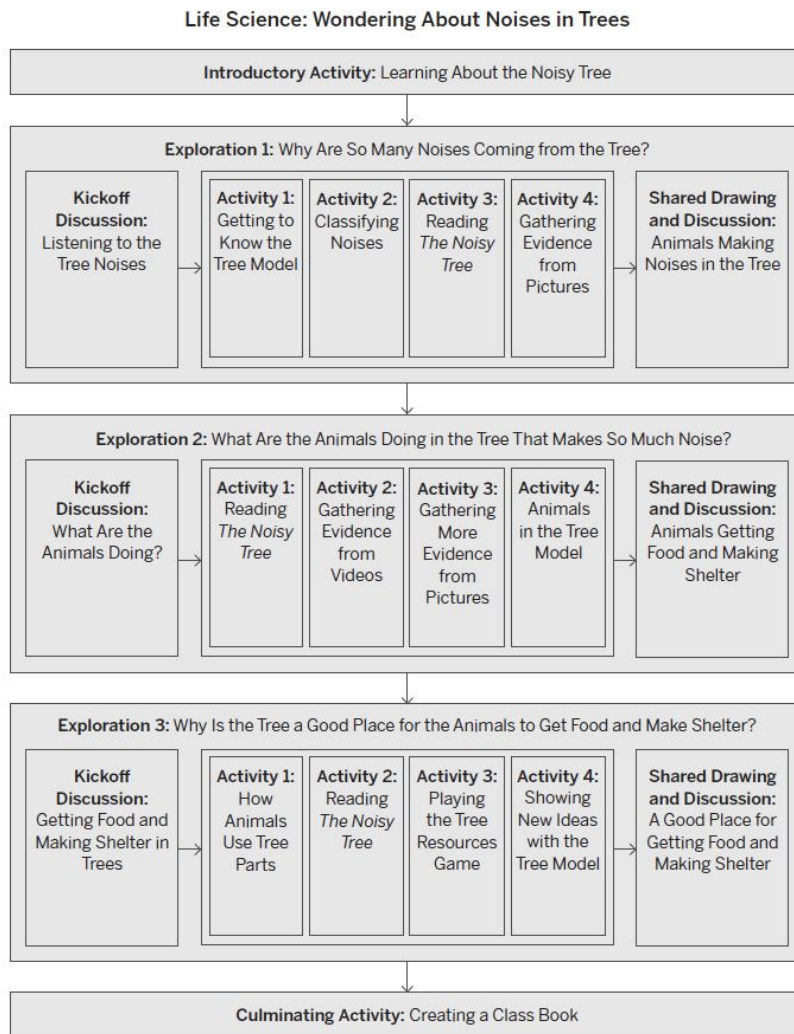
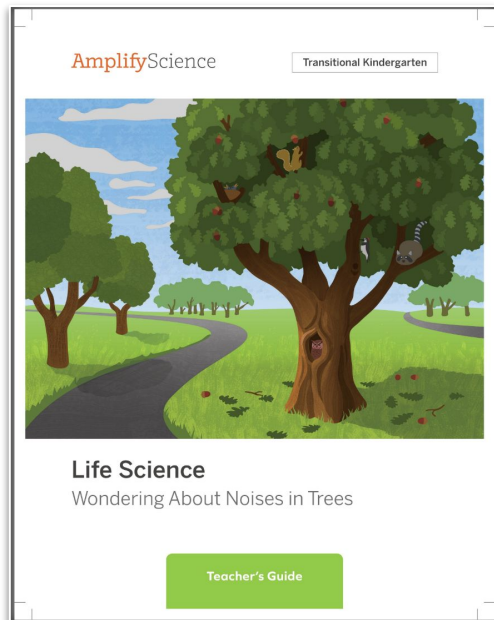
Lesson Overview	Brief description of what the activity will cover, the how and the why
Materials and Prep	Detailed instructions on how to prepare for this specific activity.
Activity Notes	The what, the why, and the how, including all steps you will go through and recommended teacher talk.
Teacher support	Instructional suggestions including extension opportunities and home connections
Flexible Implementation	Notes on how to structure the activities in the classroom
Model set ups	Set-ups for investigation materials, shared writing and shared drawings
Formative assessments	How to perform the assessment and what to look for in student performance, one per exploration





Unit Structure:

How will students figure out / solve the mystery?





Life Science

Wondering About Noises in Trees

[Teacher's Guide](#)

Unit Overview

PN Page 2

Planning for
the Unit

Life Science

Wondering About Noises in Trees

Unit Overview

In the *Life Science: Wondering About Noises in Trees* unit, students investigate the phenomenon of noises coming from a tree. They are challenged to solve the mystery of what's causing these noises and why. Students discover that many animals spend time in trees and that the noises from the tree are likely coming from animals. What are those animals doing in the tree to make so much noise? Students learn that animals can make noises in trees when they get food and make shelter for themselves or for their babies. For example, a woodpecker taps tree bark to get bugs to eat. Next, students investigate why the tree is a good place for the animals to get food and make shelter. They discover that trees have things that animals need, including food (fruit and nuts, seeds, leaves, and bugs), building materials, and places for shelter. In the course of solving the mystery of the noises from the tree, students are introduced to core ideas in life science, including needs of living things and dependence of animals on plants. The unit includes an emphasis on gathering evidence to construct and test students' ideas and sharing those ideas as scientists do. Students gather evidence for these ideas from a variety of sources: a book, photographs, sound recordings, and videos. They share their developing ideas through discussion, drawing, writing, movement, and use of the class Tree Model. Through the activities, students are exposed to the crosscutting concepts of *Patterns* and *Cause and Effect*. The context of noises from a tree provides a familiar and intriguing starting point for students to engage in doing science.

Unit Experience

Introductory Activity: Learning About the Noisy Tree

Exploration 1: Why Are So Many Noises Coming from the Tree?

Kickoff Discussion:
Listening to the Tree Noises

Activity 1:
Getting to Know the Tree Model

Activity 2:
Classifying Noises

Activity 3:
Reading *The Noisy Tree*

Activity 4:
Gathering Evidence from Pictures

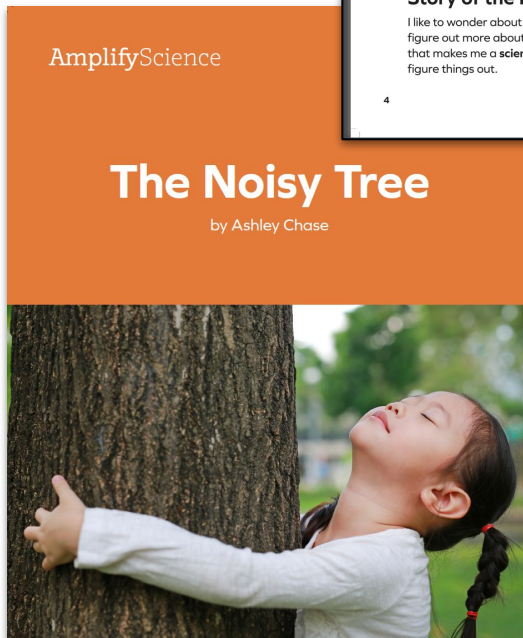
Shared Drawing and Discussion:
Animals Making Noises in the Tree

Unit Introductory Read Aloud: The Noisy Tree

- **Phenomenon:** noises coming from trees
- **Mystery students solve:** what causes these noises and why.
- **Role:** scientists
- **Vocabulary:** scientist, observe, evidence

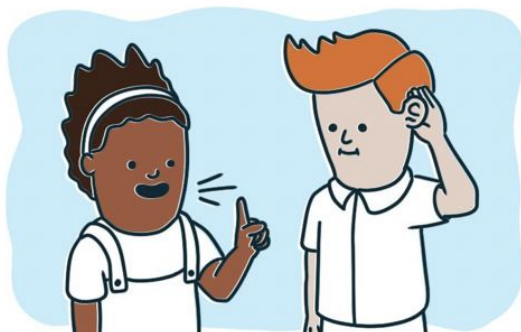
(TG: Introductory Activity Page 16-20)

34



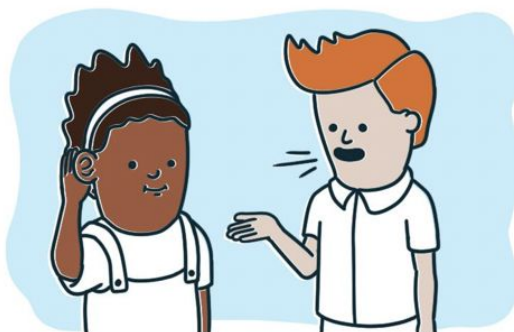
Share what you think might be making the noises in the tree.

Shared Listening



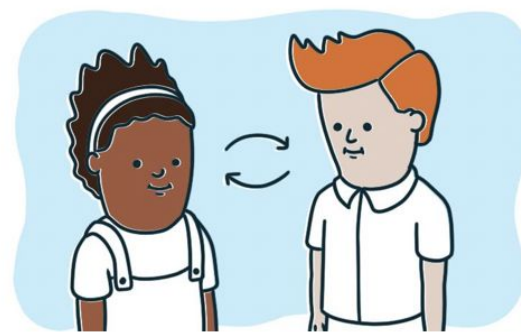
1.

Partner A shares.
Partner B listens.



2.

Partner B repeats.
I heard you say...



3.

Partners switch.

Guided Unit Internalization Planner

Part 1: Unit-level internalization

Unit title: Wondering About Noises in Trees

What is the phenomenon students are investigating in your unit?

There are many noises coming from the tree.

Exploration Questions:

1. Why are so many noises coming from the tree?
2. What are the animals doing in the tree that make so much noise?
3. Why is the tree a good place for the animals to get food and make shelter?

Student challenge:

What's causing the noises and why?

What science ideas do students need to figure out in order to explain the phenomenon?

Students figure out that animals can make noises in trees when they get food and make shelter for themselves and their babies. Students discover that trees have things animals need, including food, building materials, and places for shelter.

What evidence sources do students engage with across the unit?

the unit big book, pictures and illustrations, models, sound recordings, and videos, & most importantly, observing REAL TREES!

Science Question 1:

Why are so many noises coming from the tree?

Science Question 2:

What are the animals doing in the tree that makes so much noise?

Physical Science: Wondering About Noises in Trees: Science Question 1 - September 11 - AMP0000000111
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Science Question 3:

Why is the tree a good place for the animals to get food and make shelter?

Physical Science: Wondering About Noises in Trees: Science Question 1 - September 11 - AMP0000000111
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Life Science: Wondering About Noises in Trees

Introductory Activity: Learning About the Noisy Tree

Exploration 1: Why Are So Many Noises Coming from the Tree?

Kickoff Discussion:
Listening to the Tree Noises

Activity 1:
Getting to Know the Tree Model

Activity 2:
Classifying Noises

Activity 3:
Reading *The Noisy Tree*

Activity 4:
Gathering Evidence from Pictures

Shared Drawing and Discussion:
Animals Making Noises in the Tree

Exploration 2: What Are the Animals Doing in the Tree That Makes So Much Noise?

Kickoff Discussion:
What Are the Animals Doing?

Activity 1:
Reading *The Noisy Tree*

Activity 2:
Gathering Evidence from Videos

Activity 3:
Gathering More Evidence from Pictures

Activity 4:
Animals in the Tree Model

Shared Drawing and Discussion:
Animals Getting Food and Making Shelter

Exploration 3: Why Is the Tree a Good Place for the Animals to Get Food and Make Shelter?

Kickoff Discussion:
Getting Food and Making Shelter in Trees

Activity 1:
How Animals Use Tree Parts

Activity 2:
Reading *The Noisy Tree*

Activity 3:
Playing the Tree Resources Game

Activity 4:
Showing New Ideas with the Tree Model

Shared Drawing and Discussion:
A Good Place for Getting Food and Making Shelter

Culminating Activity: Creating a Class Book

AmplifyScience

Transitional Kindergarten



Life Science

Wondering About Noises in Trees

Teacher's Guide

AmplifyScience

The Noisy Tree

by Ashley Chase



Unit Structure and Timing



Entire Unit
300 minutes
(5 hours)

Introductory Activity (15 minutes)

Exploration 1 (90 minutes)

Exploration 2 (90 minutes)

Exploration 3 (90 minutes)

Culminating Activity (15 minutes)

Science Question 1:

Why are so many noises coming from the tree?

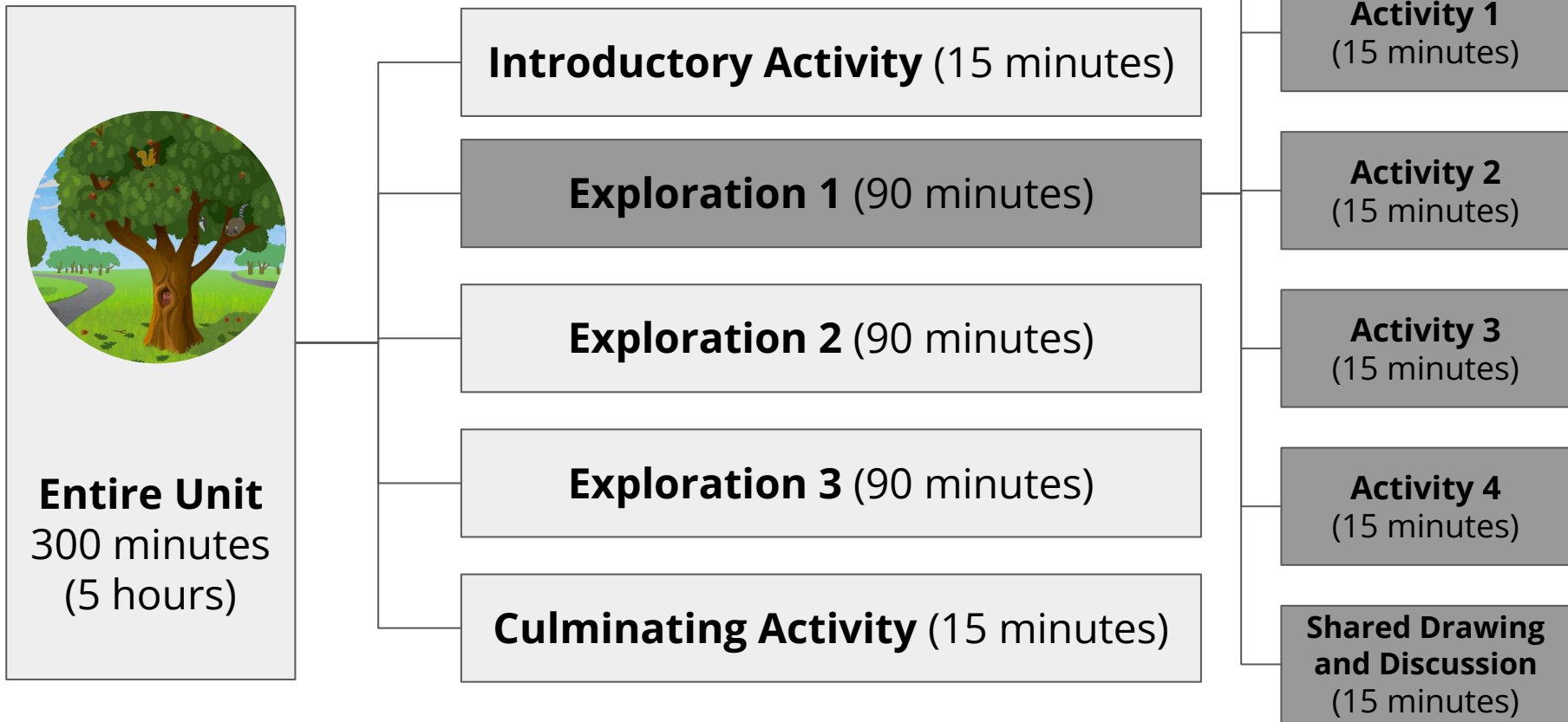
Science Question 2:

What are the animals doing in the tree that makes so much noise?

Science Question 3:

Why is the tree a good place for the animals to get food and make shelter?

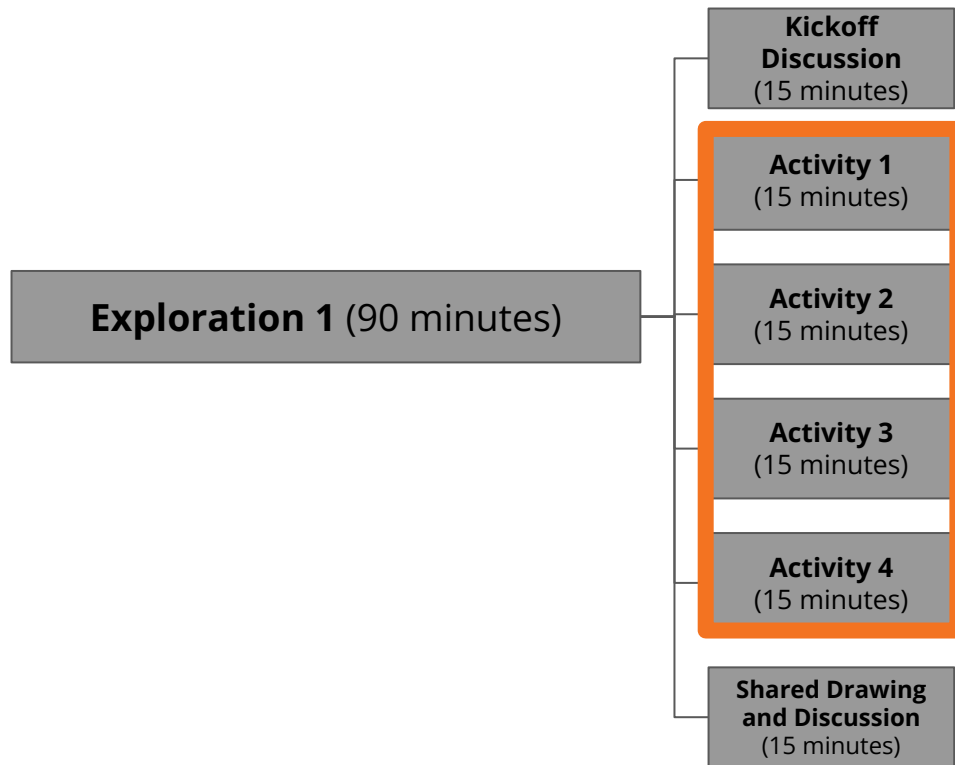
Exploration Timing



Explorations can be taught flexibly

The **four Activities** in an Exploration can:

- be taught full-group, small-group, or in centers
- be taught in any order
- be supplemented by additional instruction



Exploration Note Catcher: Unit **#1 #2 #3** NAME: Wondering About Noises in Trees

Flexible Implementation Structure:

FOCUS AREAS	Introductory Activity	Exploration #1	Exploration #2	Exploration #3	Culminating Activity
Science Question	What is making the sounds coming from the tree that the little girl in the story is hearing?	Why are there so many noises coming from the tree?	What are the animals doing in the tree that makes so much noise?	Why is the tree a good place for the animals to get food & shelter?	Classbook with individual student pages Self-reflection & Partner discussion Class & student/family tree projects
What will students learn? (objectives)	Scientists wonder about things & try to figure out more about them. Scientists use their senses to figure things out.	The noises are made by animals that are in the tree, or using the tree for some reason.	Animals make noises when they are making a shelter or home for themselves or their babies, or getting food for themselves or their babies.	Different kinds of trees have lots of different kinds of parts that are good for both food & shelter for different kinds of animals.	Scientists share (collaborate) & help each other learn.
Key Vocabulary	Scientist Observe				
Multiple Modalities (Do, Talk, Read, Write, Visualize)					
Assessments and/or Differentiation Opportunities					
Other Noticings					

PN Page 43



TK NoteCatcher



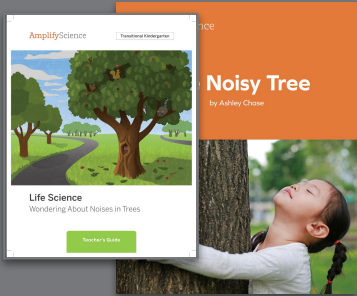
Plan for the Day



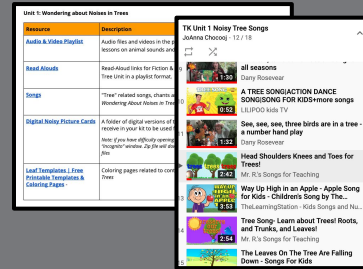
- Introduction & Framing the day



- Navigation & Planning Units 2 & 3



Amplify Science New Curriculum & TK Instructional Approach



- Planning to Teach- Additional Program Resources



- Navigation & Planning Unit 1 - Exploration Level



- Closing

Exploration Kickoff Discussion

Instructional Guide;

1. What
2. Why?
3. How? *Step- by- step*
4. Teacher Support

Kickoff Discussion

Life Science
Exploration 1

Kickoff Discussion: Listening to the Tree Noises

What?

The class reviews what happened in the first section of *The Noisy Tree* and then listens to sound recordings of noises that are similar to the ones the girl in the book heard. The class is introduced to Science Question 1 and discusses their initial ideas in response to this question.

Why?

Listening to noises like those described in the book deepens students' connection to the unit phenomenon and motivates them to figure out more about these sounds. Introducing and discussing Science Question 1 models how scientists approach a problem.

Teacher Support

Instructional Suggestion

Going Further: Embodying Tree Noises

If you have additional time, you may want to invite pairs of students to work with the Tree Model to recreate the phenomenon introduced in *The Noisy Tree*. One student could use the Tree Model to recreate noises they read about in the book and heard in the sound recordings. Students might choose to tap the tree, rustle the leaves, or vocalize the noises while their partners listen. After one partner has had a turn embodying the noises, the two can switch roles.

Instructional Suggestion

Going Further: Thinking More About Models

This activity engages students in the science and engineering practice of *Developing and Using Models*. Students' use of the Tree Model throughout the unit is authentic to one of the ways scientists use models—to show their ideas. The Tree Model, like many scientific models, is similar to the thing it represents in important ways and different in many other ways. While explicit instruction on modeling is beyond the scope of this unit, there are opportunities for deeper discussion around modeling. For example, consider bringing in real leaves and having students discuss the ways the leaves on the Tree Model are similar to and different from a real tree's leaves. Thinking about how models represent scientific ideas in this basic and concrete way prepares students to engage with more complex and abstract models in later grades.

Exploration One: Kickoff Discussion

Science Question #1: Why are so many noises coming from the tree?

Activities:

- Revisit The Noisy Tree
- Listening to noises
- Shared Listening Routine
 - **What ideas do you have about what is making the noises in the tree?**



I hear a tap-tap-tapping noise from high in the tree. I hear crunchy noises, like crinkling paper.

I wonder why those noises are coming from the tree. What's going on up there?

Exploration 1

Kickoff Discussion

Let's listen to some sounds!

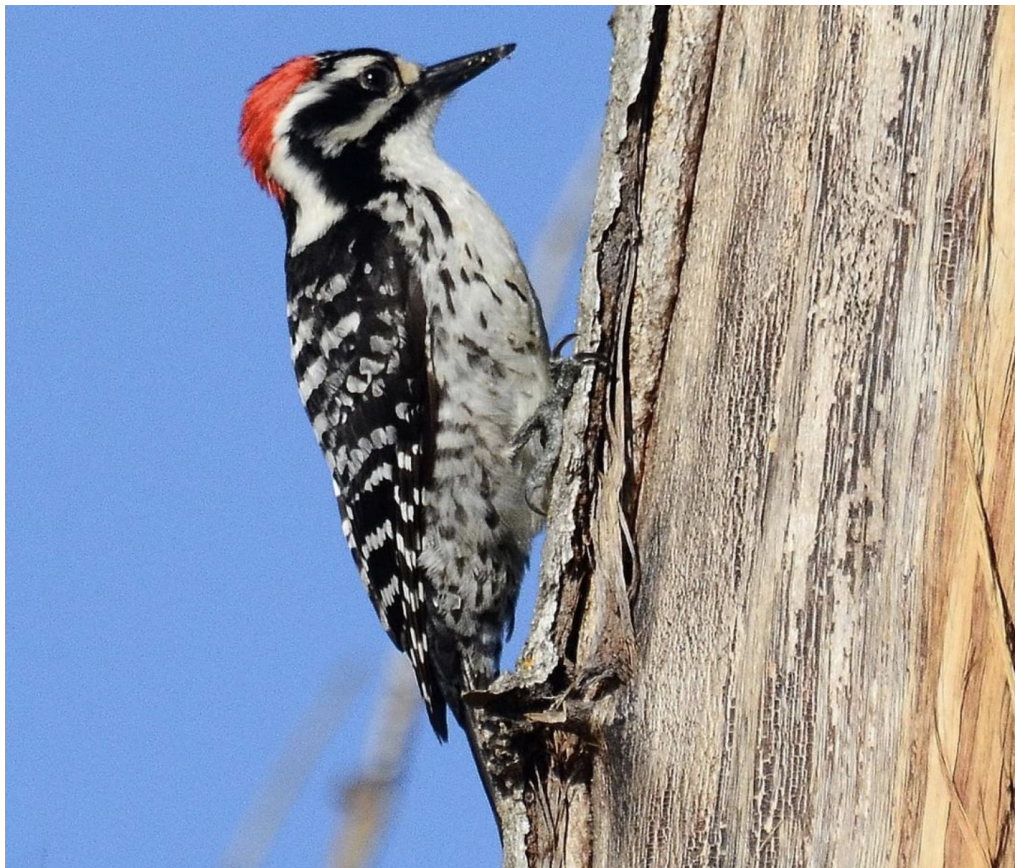


listen

Physical Science: Wondering About Buildings—Visual Directions Cards

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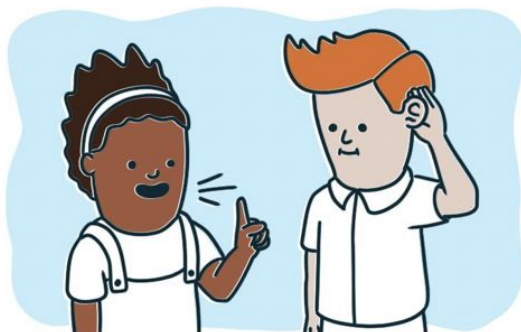
Sound #1: Tap-Tap-Tapping



Sound #2: Crunching noise

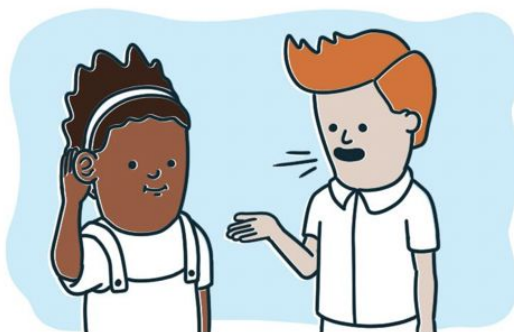


Shared Listening



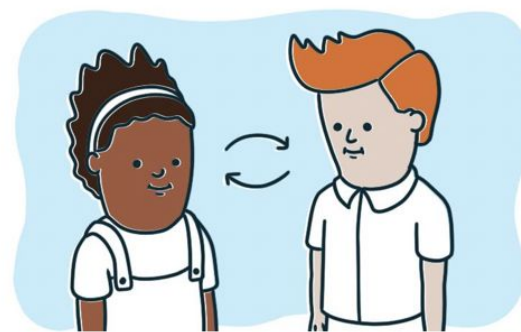
1.

Partner A shares.
Partner B listens.



2.

Partner B repeats.
I heard you say...



3.

Partners switch.

Let's Chat...

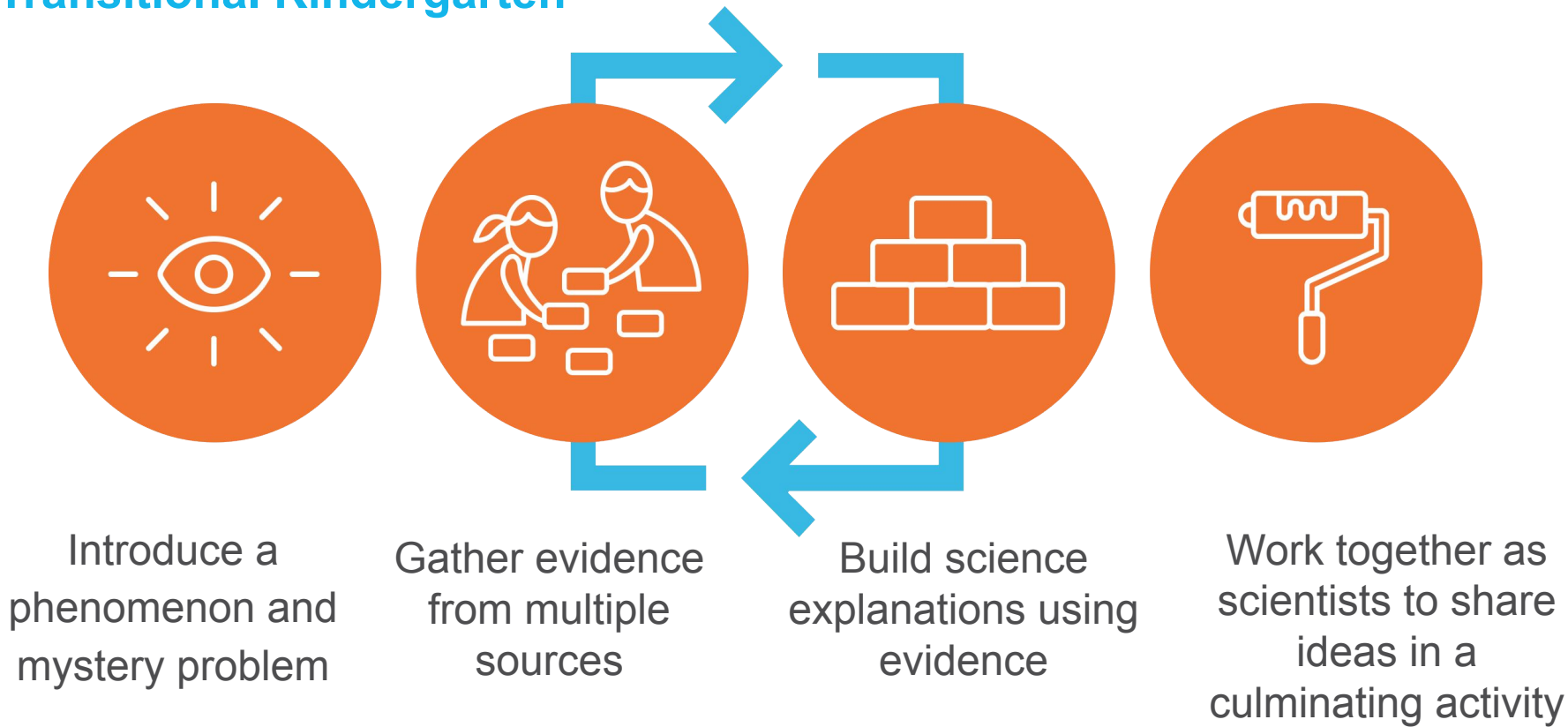


- **What prior knowledge might our students have or not have that will help or hinder them in forming conclusions about the noises they hear?**
- **How can you integrate & personalize the Instructional Routines in the Units to your own classroom layout & organizational structure?**



Amplify Science Instructional Approach

Transitional Kindergarten



Exploration Level - Activities

Overview:

- Lesson Brief
- Students Learn
- Activities at a Glance
- Vocabulary

Exploration 1 Overview

In this Exploration, students investigate Science Question 1: *Why are so many noises coming from the tree?* Exploration 1 begins with the Kickoff Discussion in which students listen to sound recordings of noises like those from the tree and share their initial ideas in response to Science Question 1. Four activities help students gather evidence about

Students are introduced to Activity 2, students listen to a recording of each sound. In Activity 3, students describe their observations. In Activity 4, students describe their observations. The class summarizes the class observations. Activity 1 is for students to use the evidence they have a lot of

es.

questions.

noises coming from the tree in Exploration 1.

Understanding of the unit.

Introductory Activity Overview

This Introductory Activity introduces students to the *Life Science: Wandering About Noises in Trees* unit and sets the stage for the Explorations to follow. The teacher reads aloud the first few pages of *The Noisy Tree*, which begins the story of a young girl who works like a scientist as she observes nature in her park. She hears mysterious noises from a tree and wonders what is going on. During the Read-Aloud, students are introduced to their role as scientists. After reading, students share their initial ideas about what could be making the noises in the tree. 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.

Students learn

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

Vocabulary

- scientist



Life Science

Wondering About Noises in Trees

Teacher's Guide

Exploration 1 Overview

Overview

Life Science
Exploration 1

Exploration 1 Overview

In this Exploration, students investigate Science Question 1: *Why are so many noises coming from the tree?* Exploration 1 begins with the Kickoff Discussion in which students listen to sound recordings of noises like those from the tree and share their initial ideas in response to Science Question 1. Four activities help students gather evidence about trees and possible sources of noises from a tree. In Activity 1, students are introduced to the Tree Model that they will use throughout the unit. In Activity 2, students listen to additional sound recordings and draw their ideas about the source of each sound. In Activity 3, the teacher reads aloud a new section of *The Noisy Tree*. In Activity 4, students observe a series of tree pictures and use a language frame to describe their observations. Exploration 1 ends with the Shared Drawing and Discussion in which the class summarizes and applies what they have learned. The purpose of Exploration 1 is for students to use science practices and ideas about patterns to figure out that trees often have a lot of animals in them and that animals make noises.

Students learn

- Trees often have lots of animals in them. Animals make noises.
- Trees have trunks, branches, and leaves.
- Scientists ask questions and gather evidence to answer their questions.
- Scientists draw, write, and talk to share their ideas.

Activities at a Glance

Kickoff Discussion: Listening to the Tree Noises

The teacher introduces Science Question 1: *Why are so many noises coming from the tree?* to motivate the activities students engage in throughout Exploration 1.

Activity 1: Getting to Know the Tree Model

Students are introduced to the Tree Model in order to build an understanding of the parts of a tree and to become familiar with a central resource of the unit.

PN Page 6



Part 2: Exploration-level internalization

Exploration 1
Question:

Why are so many noises coming from the tree?

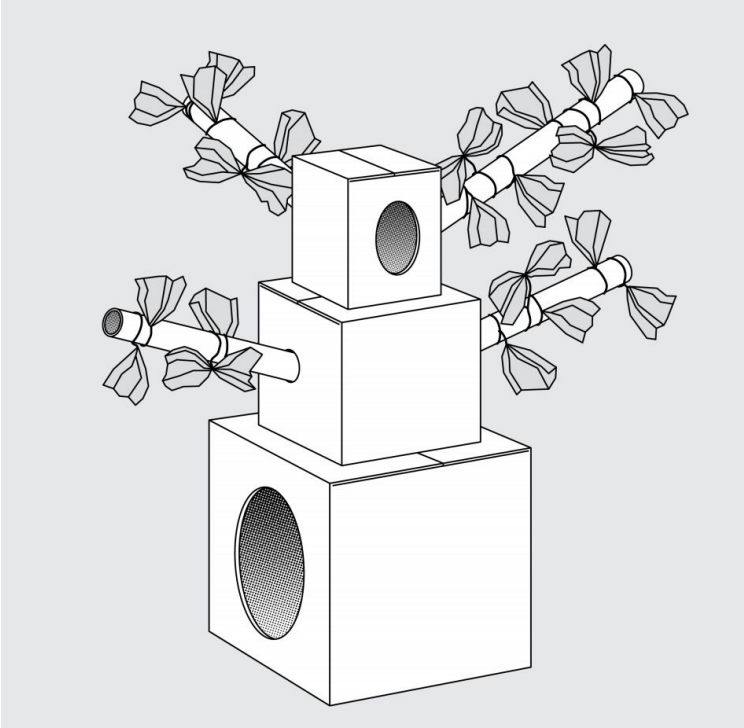
What do students learn in Exploration 1?

- Trees often have lots of animals in them. Animals make noises.
- Trees have trunks, branches, and leaves.
- Scientists ask questions and gather evidence to answer their questions.
- Scientists draw, write, and talk to share their ideas.

What is the purpose of Exploration 1?

The purpose of Exploration 1 is for students to use science practices and ideas about patterns to figure out that trees often have a lot of animals in them and that animals make noises.

Activity One: Tree Model



Activity Two: Listening to Recordings of Noises

Activity Three: The Noisy Tree

The Noisy Tree

by Ashley Chase



Activity Four: Tree Cards

Summary of Exploration 1

PN Pages 5-6



Activity 1: Getting to Know the Tree Model

Students are introduced to the Tree Model in order to build an understanding of the parts of a tree and to become familiar with a central resource of the unit.

Activity 2: Classifying Noises

Students listen to a series of sound recordings and make drawings of their ideas about the source of each noise. This activity supports students' preliminary understanding that many noises are made by animals.

Activity 3: Reading *The Noisy Tree*

The teacher leads a Read-Aloud of a new section of *The Noisy Tree* to introduce students to animals in the tree. This section of the book helps students understand how scientists make observations to gather evidence to help answer their questions.

Activity 4: Gathering Evidence from Pictures

Students describe what they observe in trees on the Tree Cards in order to gather evidence that many kinds of animals can be found in trees. Students use a language frame to practice sharing ideas like scientists do.

Shared Drawing and Discussion: Animals Making Noises in the Tree

The class participates in a shared drawing and an accompanying discussion to consolidate and apply their understanding of Science Idea 1: *Trees often have lots of animals in them. Animals make noises.*

[TK NoisyTree Unit Audio & Video Links](#)

[TK Unit 1 Noisy Tree Picture Cards ZIP File](#)

Exploration One: Activity Stations

How would you introduce & scaffold these activities in your classroom?

Amplify Science TK ACTIVITY Center Notes

UNIT: **1 2 3**

Unit: **Noisy Tree**

EXPLORATION: **✓1 2 2**

Use this organizer to record notes on how to structure & scaffold the Activities in your classroom for each Exploration. Decide where/how you will set up the stations (part of LA or Math, or general Learning Centers? Part of Free Choice Centers?), ideas for visual arts & music, extension & home opportunities

Activity One:

Observe the tree model and think about how the students would make the different types of leaves and add them to the model. Discuss how the model is similar and different to a real tree.

Activity Two:

Listen to different noises and make drawings of ideas about what made each noise. Look for patterns in the data you've recorded.

Activity Three:

Read the next section of The Noisy Tree in which the girl makes new observations of the tree in the park.

Activity Four:

Observe pictures of trees and notice there are animals in many of the trees. Use the language frame to describe your observations.

Activity 1: Tree Model (e.g. Science Center)

Tree Walk - class around campus, families in their own backyards, neighborhoods or parks.

Collect Tree Realia

H2O/Sand Table of Realia

Other tree models

Tree Related Literature

Songs About Trees

Puppets

Activity 2: Classifying Noises

Use 12" X 18" size blackline masters for whole class game - sit in a circle, students all get cards, stand up when they hear their card's sound.

Use same images small group - have small copies, show kids 2 or 3 @ a time, have them pick which is making sound. They can color while they say name & repeat sound, drop images into prelabeled baggies. When finished, they each have a baggy to take home to play "guess the sound" with their family members.

Activity 3: Big Book Reading (whole class read aloud - rug area?)

Puppets to act out tree & animals

Tree Walk

Other tree-related literature read alouds, see Unit 1 Resource sheet.

Related poems, songs & finger plays, see Unit 1 Resource sheet.

Activity 4: Evidence from Pictures (whole class &/or small groups, language arts)

Leaf Realia for patterning

Language Frames - do whole class, then Small groups - set up sentence strips with images in folders/baskets for students to do with partners &/or small groups @ LA time.

Instructional Routines & Approach

Instructional Elements & Routines repeat throughout each unit to support students & teachers.

Language Frames Discussion
Routines

Looking at the same thing multiple times to
get different information

Visual Direction
Cards

Creating Physical Models to share ideas
& to make connections

Vocabulary Routines

Reenacting/creative play to make kinesthetic, visual
& auditory connections (songs, chants, visual arts)

Science Question Routines

Synthesizing information

Setting a Purpose for Activities
Routines

Focal pages in book (setting a purpose) -
Reading an Informational Text Routines

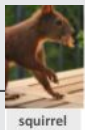
Shared-Listening & Discussion
Routines

Shared Writing & Drawing Routines

Language Frames Build Unit 1

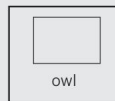
Language Frame 1

On one or two sentence strips, write the language frame shown below. Place the language frame in a pocket chart or attach it to a whiteboard with magnets. Place the cards in the pocket chart beneath the language frame. Make sure the cards are not revealed to students until you discuss them in Activity 3.



squirrel

There is a _____ in the tree.



owl



raccoon



bear



wasp



butterfly



bat



monkey



bird

Language Frame 2

On one or two sentence strips, write the language frame shown below. Place the language frame in a pocket chart or attach it to a whiteboard with magnets. Place the cards in the pocket chart beneath the language frame. Make sure the cards are not revealed to students until you discuss them in Activity 2.



squirrel

The _____ makes a _____ noise when it is _____



crunchy



making



xxx



xxx



xxx



xxx



xxx



Language Frame 3

On one or two sentence strips, write the language frame shown below. Place the language frame in a pocket chart or attach it to a whiteboard with magnets. Place the cards in the pocket chart beneath the language frame. Make sure the cards are not revealed to students until you discuss them in Activity 3.



squirrel



making shelter

The _____ is _____ in the tree because the tree has _____



leaves



getting



raccoon

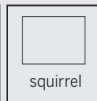
robin



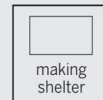
getting food



owl



squirrel



making shelter



honeybee



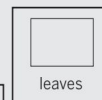
caterpillar



ant



woodpecker



leaves



high branches



bugs



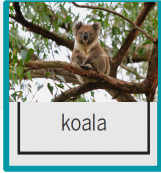
fruit and nuts



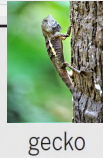
tree holes

Unit 1 Shared Drawing & Writing Build - Exploration 1

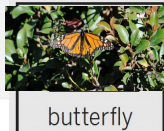
Science Question 1: *Why are so many noises coming from the tree?*



There is a koala in the tree.



There is a gecko in the tree.

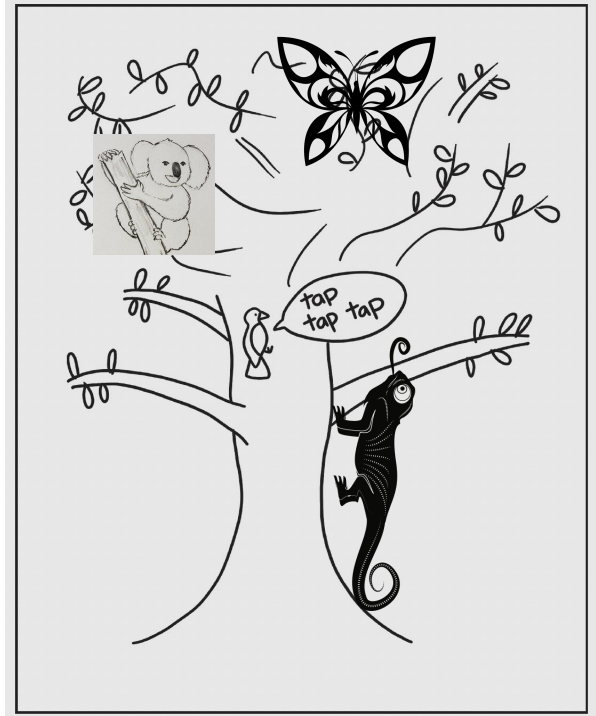


There is a butterfly in the tree.

There is a woodpecker in the tree.
There is a koala in the tree.
There is a gecko in the tree.
There is a butterfly in the tree.

Science Idea 1:

Trees often have lots of animals in them. Animals make noises.



Extension Opportunity

Teacher Support

Sesame Street: Nature Walk

Instructional Suggestion

Providing More Experience: Class Nature Walk

You can extend the Introductory Activity by taking a class nature walk if you have access to a natural or semi-natural area with trees. This area can be a part of the schoolyard, a small local park, or a larger protected area. Let students know that they will look and listen to figure out more about what is in, on, and around the trees. Guide students on a walk, pausing frequently to model looking and listening closely to the trees. For example, you can say, "I look closely at this tree, and I see leaves." "I look closely at these leaves, and I see that they have lines on them." "I listen closely to this tree, and I hear chirping." During the class nature walk, invite students to share any observations they make.

Instructional Suggestion

Providing More Experience: Home Connection

The Introductory Activity includes an optional Home Connection that introduces families to one of the science practices students will learn in this unit. Home Connections can encourage interaction and discussion between students and their families around science concepts, which is beneficial for student learning. The Home Connection: Observing Trees invites students and an adult to observe sights and sounds near a tree or several trees. Make one copy of the Home Connection: Observing Trees copymaster for each student to take home.



- **Realia:** Have students collect different kinds of leaves during tree observations & leaf walks. Sand Table for explorations? &/Or individual shoeboxes?
- **Math Center:** Observe & Sort leaves w/magnifying lenses
- **Art Center:** Have students make leaf rubbings of collected leaves. - Start w/just 1 color rubbings (have students sort old crayons by color, leaf activity next day).

JoAnna start here for Day 2, Thurs. 1/26/23



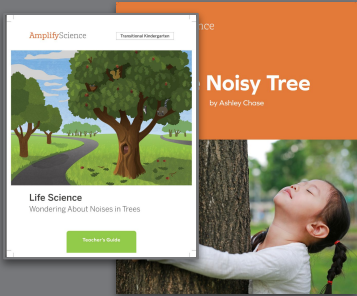
Plan for the Day



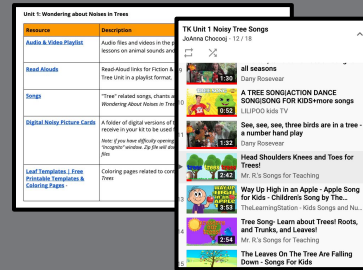
- Introduction & Framing the day



- Navigation & Planning Units 2 & 3



- Amplify Science New Curriculum & TK Instructional Approach



- Planning to Teach- Additional Program Resources



- Navigation & Planning Unit 1 - Exploration Level



- Closing

Science

observe

Trees

Taste

We use our **tongue**
to taste things.

senses

Sight

We use our **eyes**
to see things.

Touch

We use our **hands**
to touch things.

Smell

We use our **nose**
to smell things.

Hearing

We use our **ears**
to hear things.

Science Question 1:

Why are so many noises coming
from the tree?

scientist



Model



Real

horn

duck

bird

Example TK Science Wall

This fabulous science wall is from the 1st TK Science Unit, Life Science focus, "***Wondering Noises in Trees***" Implemented by Amplify Pilot TK Teacher Julie B.

Instructional Routines: Vocabulary Words & Science ?s

Julie began her back-to-school theme with the traditional TK/Kinder theme "*All About Me*"

Julie included her "*My 5 Senses*" science unit as part of "*All About Me*" theme.

She introduced Amplify Science **TK Vocabulary Routine** as part of "*My 5 Senses*"

Students began with learning vocabulary words **Senses** & the names for their 5 senses, & the word **OBSERVE**.

When she started TK ***Noises in Trees***, students had already practiced the **Vocabulary Routine** with these words multiple times & were ready to begin with the vocabulary words **SCIENTIST** and **COMPARE**, **Science Question #1 Routine**, & discussion of similarities & differences between Real & model trees..[Amplify Science Scientist Profile Cards](#)



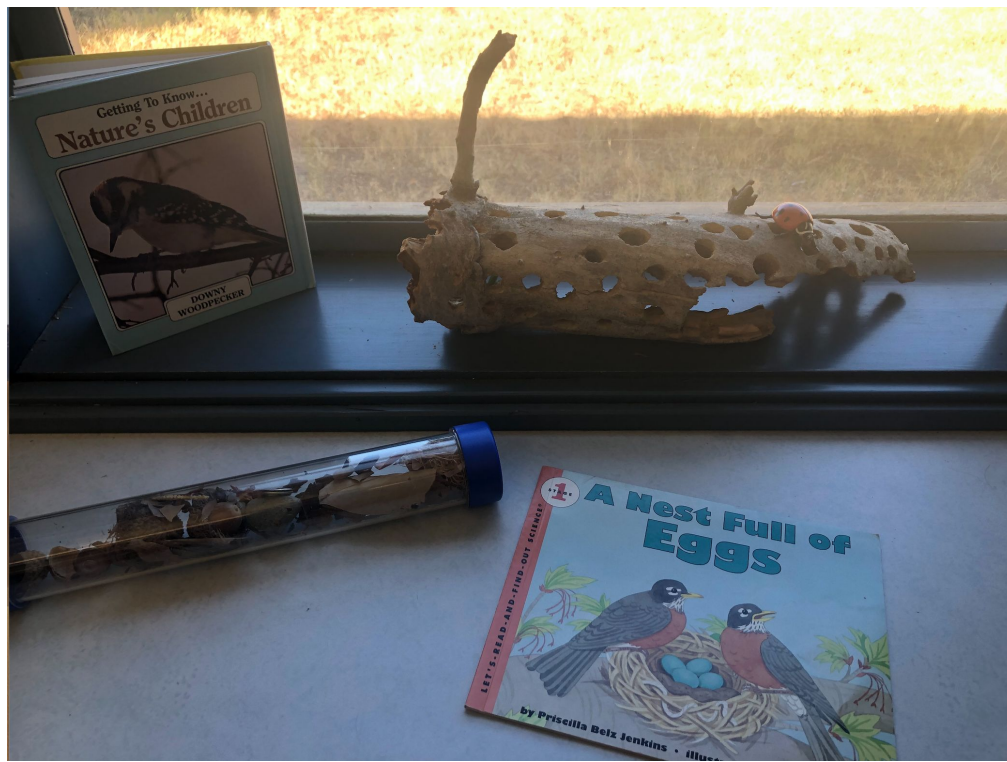
**PUPPETS: “Groot”
Tree Puppet for
example of
related Tree
Model Activities.
Animal Puppets
Beanie Babies, &
Tiny Stuffed
Animals to start
adding to **Model
Tree** in
**Exploration 2
Activities.****



Integrate Thematic Literature with Noisy Tree Unit
- Fiction, Non-Fiction, Songs, Chants & Poems to
build students' background knowledge

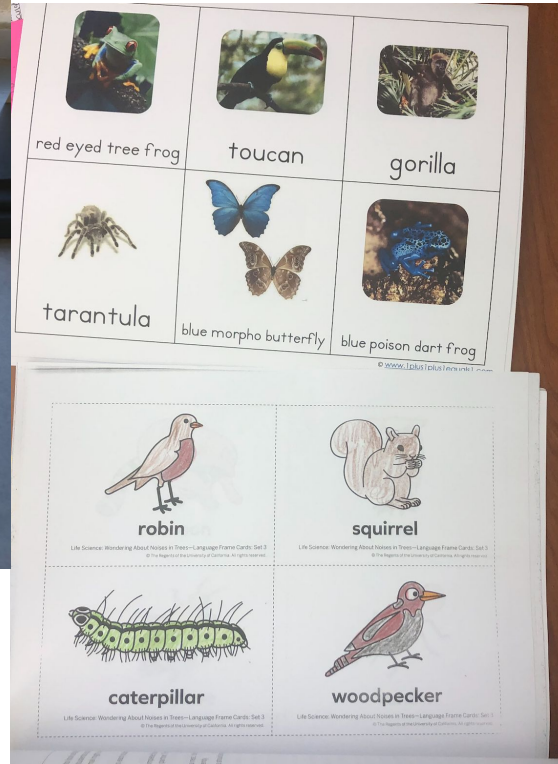
[TK Noisy Tree Read-Alouds](#) - new related read aloud YouTube
playlist: fiction, non-fiction, chants, socio-emotional, "tree"
related Read-Alouds in English & Spanish.





Sample Connected Read Alouds, Realia & Sensory Tube

Sample Language Frame & Sorting Cards



Language Frame cards can be used for whole class modeling of Activity on pocket chart, for partner or small group language frame practice @ individual language arts center time, or for math sorting practice (kinds of animals in trees, by what the animals are doing in the trees, etc.)



Extension Activities for Math Learning Centers &/or Free Choice Time Centers:

- Cut up & have students lightly sand during “My 5 Senses” - Touch. Then in Noisy Tree, use Tree Branch Pieces:
- Sorting - by size, height, shape, colors.
- Ordering: by size, by height.
- Patterning: ABAB - BIG little BIG little
- Touch-Counting practice

Lincoln Logs Construction Activities - include cards with sample model homes & buildings for more MODELING examples.



Extension Activities for Math Learning Centers &/or Free Choice Time Fine-Motor Centers:

- **Sorting Acorns**
- **Sorting Pinecones**
- **Sorting Tree related “stuff”** (also put in water/rice/sand table as Exploration Bin)
- **Lacing Wooden Beads &/or Buttons**
- **Calming Containers** w/Tree realia
- **Related Books** for Read Alouds &/or “Reading Time”
- **Notecards** for visualizations, math-sorting activities, & Drawing/Writing Center.

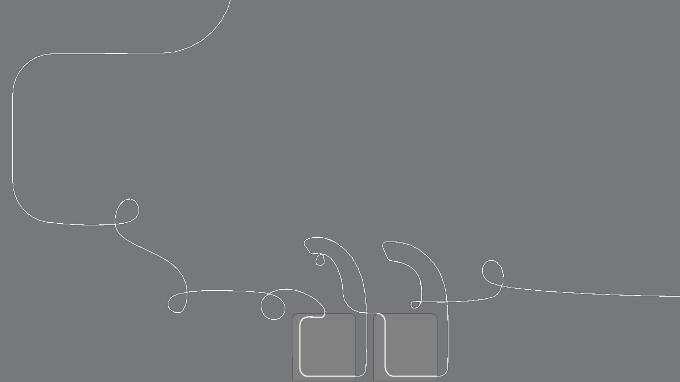
Exploration Two

Students gather evidence about different kinds of things that animals do in trees.



Animals in Trees: Framing Activity

- What do you hear?
- What do you picture?
- As you listen to the noises, write what you think it is and what makes you think that.



Animals in Trees

What do you hear? What do you picture?

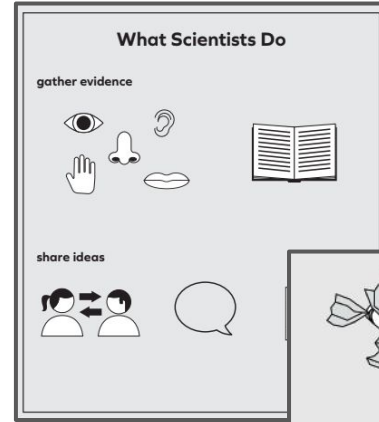


Instructional Routines:

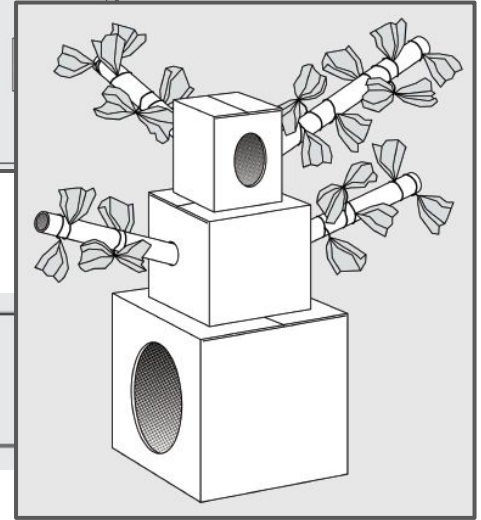
Repeated throughout the units

Building in differentiation!

- Charts
- Models
- Vocabulary
- Shared Listening & Speaking
- Shared Drawing & Writing
- Science Questions
- Language Frames
- Assessments



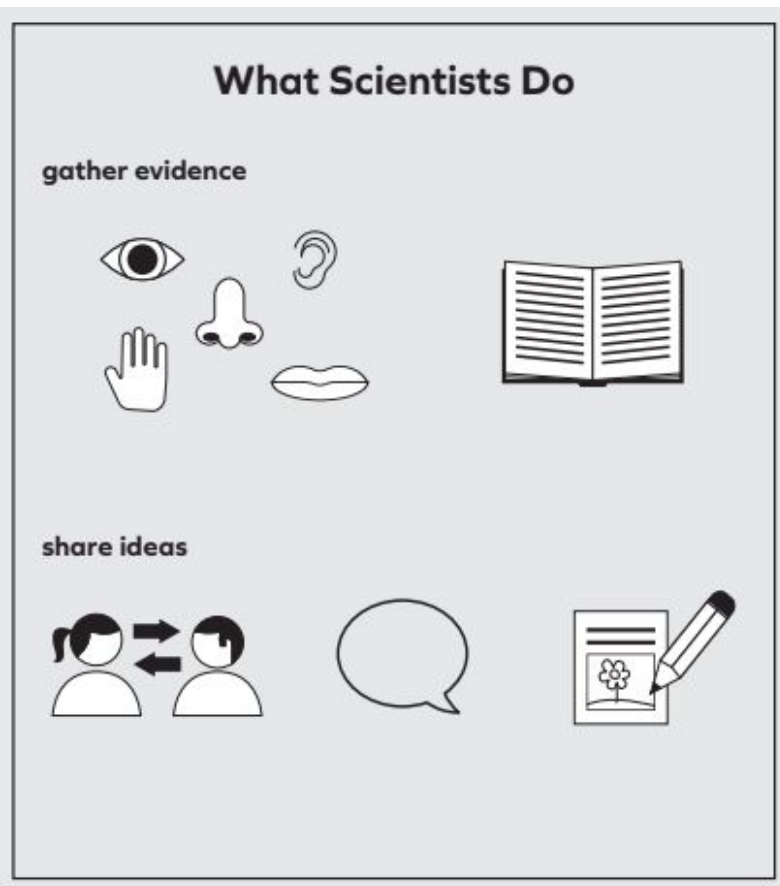
There is a _____ in the tree.



Charts

What Scientists Do

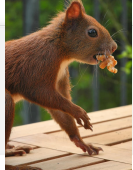
- Not only do students engage with learning science concepts, they are also learning about what scientists do.
- They engage as scientists throughout the unit and add to the chart as they go through.



Unit 1 Shared Drawing & Writing Build - Exploration 2

Science Question 2:

What are the animals doing in the tree that makes so much noise?



squirrel

The squirrel makes a crunchy noise when it is getting leaves to make a nest for shelter.



woodpecker

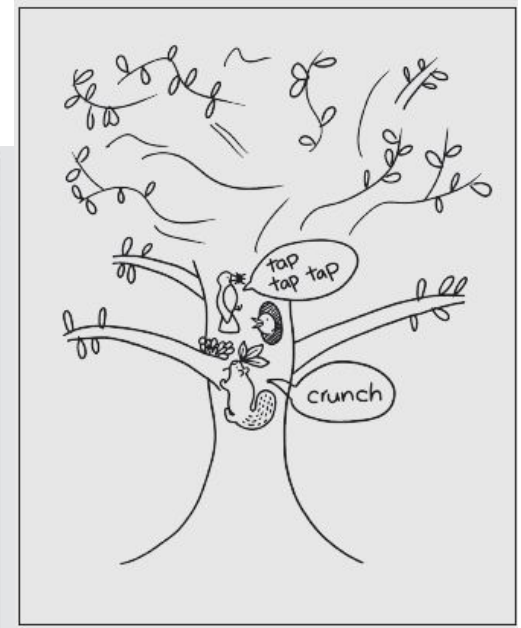
The woodpecker makes a tapping noise when it is getting food.

There is a woodpecker in the tree.

The woodpecker makes a tapping noise when it is getting food.

There is a squirrel in the tree.

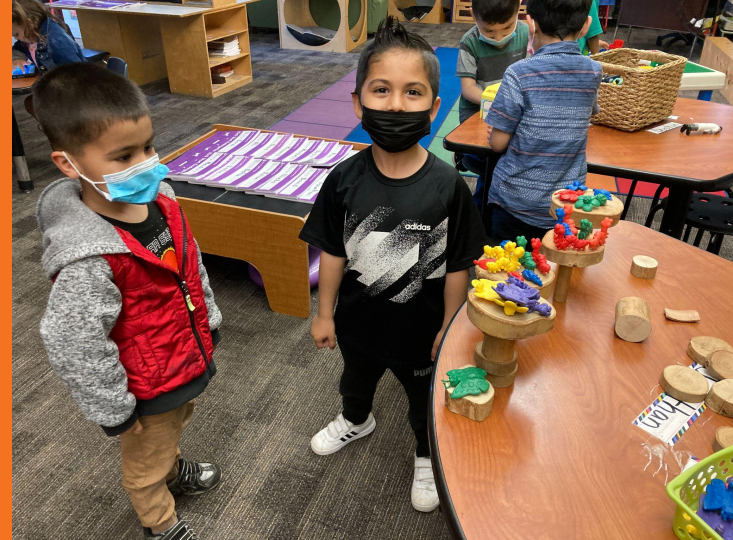
The squirrel makes a crunchy noise when it is getting leaves to make a nest for shelter.



Science Idea 2: Animals in trees can make noises when they get food and make shelter for themselves or their babies.



How can we incorporate old & new materials to add to our Activities & students' experiences? Tree made w/crumpled paper bag "bark" & leaves turning from summer green to fall colors. Using tree branch rounds to demonstrate animals in trees!



Exploration Three






Students gather evidence about why trees are good places for animals to get food and make shelter.

Unit 1 Shared Drawing & Writing Build - Exploration 3

Science Question 3:

Why is the tree a good place for the animals to get food and make shelter?

The  is  in the tree,

because the tree has .

There is a woodpecker in the tree.

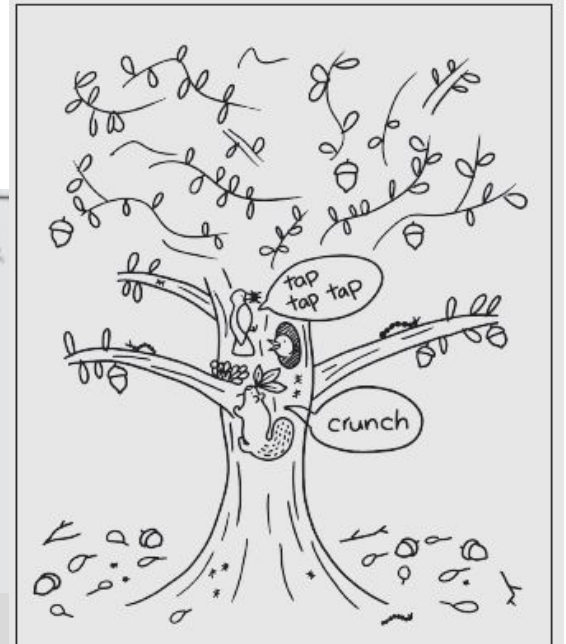
The woodpecker makes a tapping noise when it is getting food.

The woodpecker is getting food in the tree because the tree has bugs.

There is a squirrel in the tree.

The squirrel makes a crunchy noise when it is getting leaves to make a nest for shelter.

The squirrel is in the tree because the tree has leaves.



Science Idea 3: Trees are good places for animals to get food and make shelter because trees have things that animals need.

Assessments in TK

Assessment Opportunities

```
graph TD; A[Assessment Opportunities] --> B[Formative & Embedded Assessments]; A --> C[End-of Unit Culminating-Summative Assessments]; B --> D["• 1 per Exploration (Unit 1: 1.3, 2.3, 3.4)"]; B --> E["• Look for:"]; E --> E1["○ Ability to answer Exploration Science Questions"]; E --> E2["○ Express understanding of Science Ideas"]; E --> E3["○ Demonstrate Science Practices"]; C --> F["• Look for :"]; F --> F1["○ Students ability to reflect on and apply their learning"];
```

Formative & Embedded Assessments

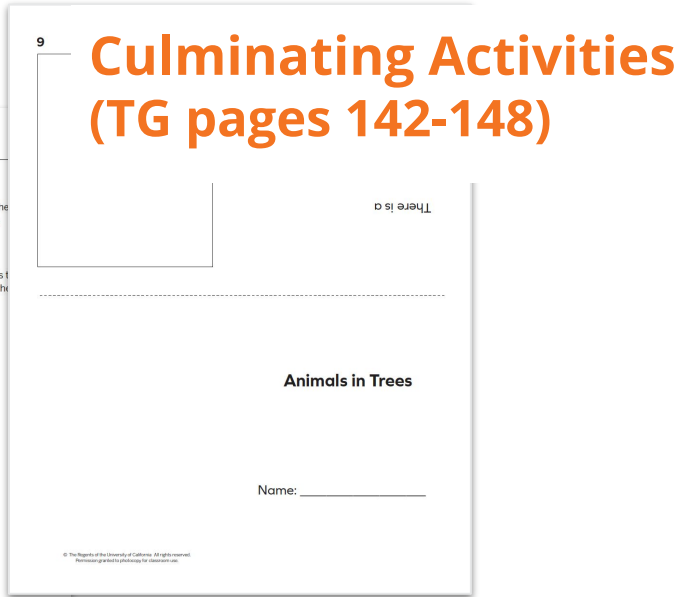
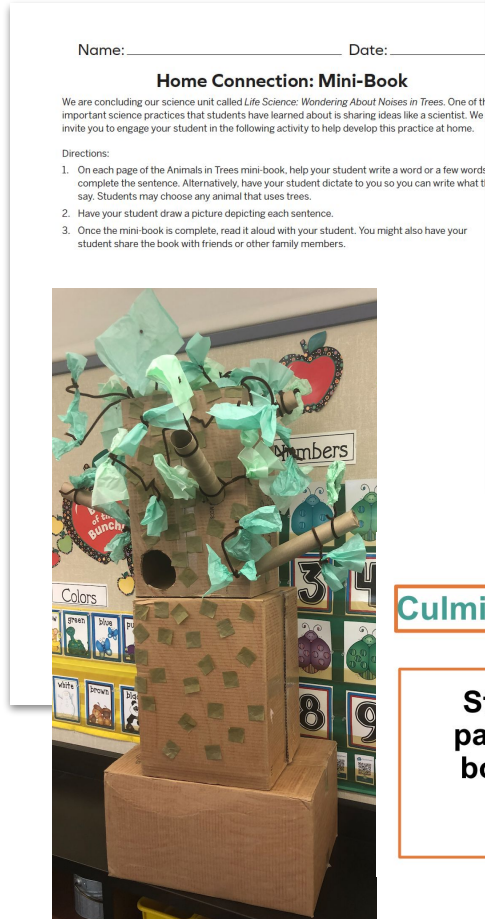
- **1 per Exploration** (Unit 1: 1.3, 2.3, 3.4)
- **Look for:**
 - Ability to answer Exploration Science Questions
 - Express understanding of Science Ideas
 - Demonstrate Science Practices

End-of Unit Culminating-Summative Assessments

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

Culminating Activities:

- Reflect on their work as TK Scientists
- Review learning throughout the unit -
- Create **Animals in Trees** Class-Book about how animals use trees with individual student pages.
- Make individual **Student Mini-books** to send home to families for students share their learning with them.
- Share/post in both Class-Book and Mini-book family photos/video clips in class online gallery.
- If students have made their own tree models, have them bring to share in class - or share via photos &/or short video clips in Class Gallery of projects on Classroom or School-site websites



Culminating Activity

Students create pages for a class book about how animals use trees.



Amplify Science TK ASSESSMENTS

UNIT: #1 #2 #3 NAME: _____ EXPLORATION: #1 #2 #3

What is the **Formative Assessment** in this Exploration?

Activity Title:

What are the students doing?

What is the teacher looking for?

What can you do if students aren't making the connections?

UNIT CULMINATING ACTIVITY = SUMMATIVE ASSESSMENT OPPORTUNITY

Class Book - Individual Student Pages.
What are the students doing?

What is the teacher looking for?

Student Conversations/Self-Assessments
What are the students doing?

What is the teacher looking for?

What are the **Embedded Assessment** opportunities in this Exploration?

Activity #

Activity #

Activity #

Collaboration/Planning: Assessments TK Planning Notebook

Questions to answer:

- What is the formative assessment in this Exploration?
- What assessment opportunities are embedded in the Activity?
- What evidence can I collect of student progress and understanding?
- How could I use this information to inform my instruction?








Collaborative Resources

Through working with real Amplify Science TK teachers, JoAnna, our TK expert, has put together some collaborative resources that connect to the unit!

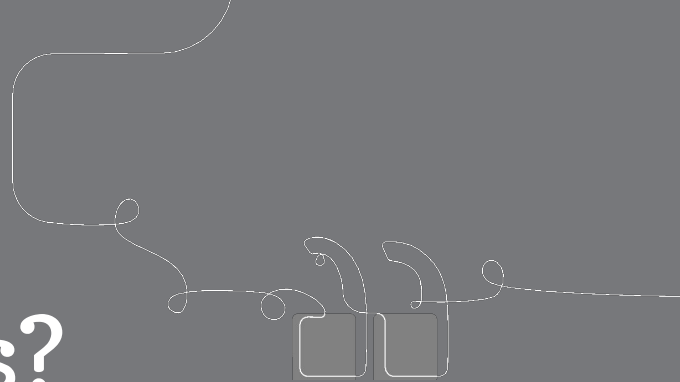
Wondering About Noises In Trees Resources

Unit 1: Wondering about Noises in Trees	
Resource	Description
Audio & Video Playlist	Audio files and videos in the playlist format for Exploration Activity lessons on animal sounds and behaviors.
Read Alouds	Read-Aloud links for Fiction & Non-Fiction related literature to the Noisy Tree Unit in a playlist format.
Songs	"Tree" related songs, chants and poems in a playlist format for TK Unit 1 <i>Wondering About Noises in Trees</i>
Digital Noisy Picture Cards	A folder of digital versions of the Noisy Picture Cards you will receive in your kit to be used for recording observations. <i>Note: if you have difficulty opening this link, please try opening it in an "incognito" window. Zip file will download automatically.</i>
Leaf Templates Free Printable Templates & Coloring Pages	Coloring pages related to content in the Noisy Tree Unit.

TK Unit 1 Noisy Tree Songs
JoAnna Chocooj - 12 / 18

-  **all seasons**
Dany Rosevear
-  **A TREE SONG(ACTION DANCE SONG)**
LILIPOO kids TV
-  **See, see, see, three birds are in a tree - a number hand play**
Dany Rosevear
-  **Head Shoulders Knees and Toes for Trees!**
Mr. R.'s Songs for Teaching
-  **Way Up High in an Apple - Apple Song for Kids - Children's Song by The...**
TheLearningStation - Kids Songs and Nu...
-  **Tree Song- Learn about Trees! Roots, and Trunks, and Leaves!**
Mr. R.'s Songs for Teaching
-  **The Leaves On The Tree Are Falling Down - Songs For Kids**

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



Closing goals reflection

3

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

- Navigate the Amplify Science TK curriculum to understand the structure and resources at the Unit, Exploration and Activity levels.
- Become familiar with planning resources to prepare to teach Amplify Science TK to my students.

5-6: I'm still not sure how I'm going to do this?

7-8: I have some good ideas but still have a lot of questions.

9-10: I have a solid plan for how to plan to make this work!



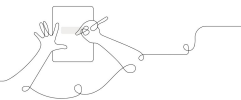
Plan for the Day



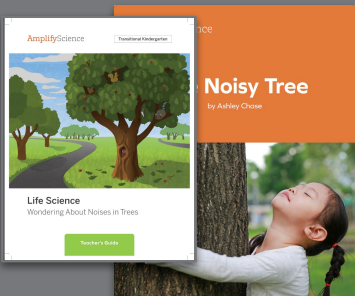
- Introduction & Framing the day

Participant Notebook

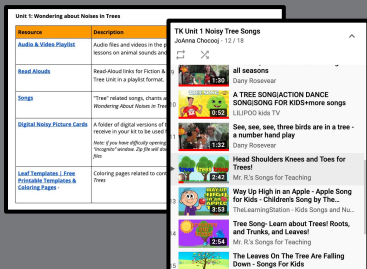
TK, Wondering About Buildings
Guided Unit Internalization Workshop



- Navigation & Planning Units 2 & 3



- Amplify Science
New Curriculum & TK Instructional Approach



- Planning to Teach- Additional Program Resources



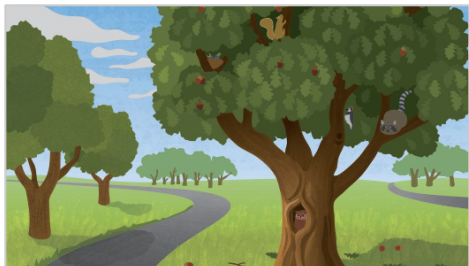
- Navigation & Planning Unit 1 - Unit Level



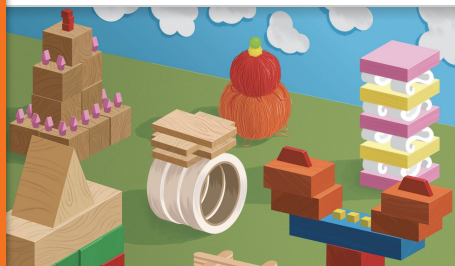
- Closing

Amplify Science TK

Course Structure



Life Science:
Wondering About
Trees



Physical Science:
Wondering About
Buildings



Earth Science:
Wondering About
Puddles

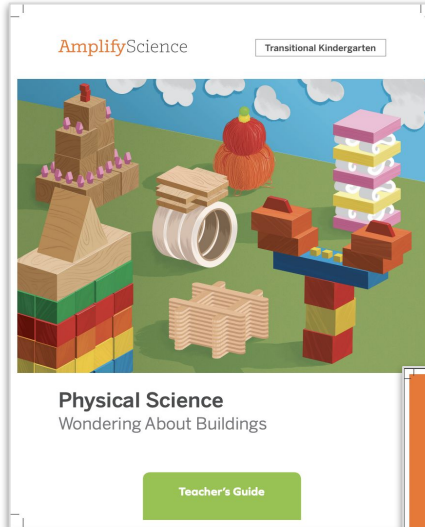
Number of Lessons: 20 lessons per unit

Time: 15 mins per lessons

Instructional Time: 4 - 6 weeks per unit - **Flexible Implementation**

TK Curriculum Materials

Home Connections Copymasters



**Science
Wall
Materials
for
classroom
or online
postings**

Science Question 1:
What makes a building stable?

compare

engineer

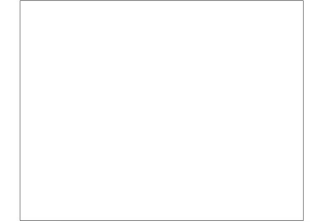
stable

Name: _____ Date: _____
Home Connection 1: Making a Play Building

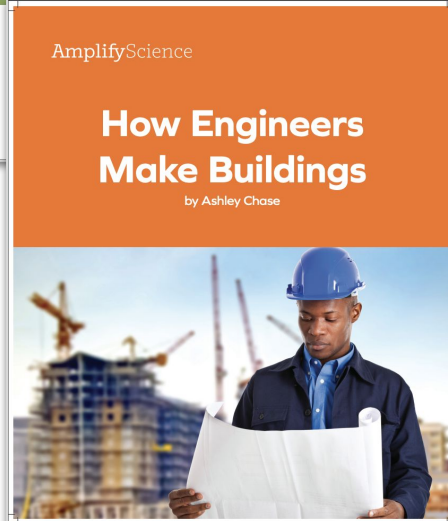
We are concluding our science unit called Physical Science: Wondering About Buildings. Your student has learned that the shape of a building and the kinds of pieces used to make a building affect how stable the building is. We invite you to engage your student in the following activity at home to help reflect on these ideas.

Directions:

1. Help your student select building materials (e.g., blocks, toys, containers) to make a play building. Ask your student questions about the building they will make. For example:
 - What shape will you make the building?
 - Which pieces do you think will work well for making a stable building?
 - Why do you think those pieces will work well for making a stable building?
2. Have your student make a play building.
3. Have your student draw a picture of the building in the box below.



**Student
Copymasters**



**Print Teacher's
Guide**

Unit Big Book



Unit Picture Cards

9

I am an engineer.

My Stable Building

Name: _____

Amplify.

Physical Science: Wondering About Buildings

Introductory Activity: Let's Be Engineers of a Play City

Science Question 1: What makes a building stable?

Physical Science: Wondering About Buildings - Science Question 1 - Copyright © 2019 by the Regents of the University of California. All rights reserved.

Exploration 1: What Makes a Building Stable?

Kickoff Discussion:
Sharing Initial Ideas About Stability

Activity 1:
Embodying Stability

Activity 2:
Reading *How Engineers Make Buildings*

Activity 3:
Exploring Stability with Objects

Activity 4:
Making Tall and Stable Towers

Shared Drawing and Discussion:
The Shape of Stable Buildings

Science Question 2: What are stable buildings made of?

Physical Science: Wondering About Buildings - Science Question 2 - Copyright © 2019 by the Regents of the University of California. All rights reserved.

Exploration 2: What Are Stable Buildings Made Of?

Kickoff Discussion:
Considering Pieces of Buildings

Activity 1:
Observing a Time-Lapse Video

Activity 2:
Reading *How Engineers Make Buildings*

Activity 3:
Comparing Pieces

Activity 4:
Making Towers with Different Kinds of Pieces

Shared Drawing and Discussion:
Recording Engineer's Notes About the Pieces of Stable Buildings

Science Question 3: How can we make sure our buildings are stable?

Physical Science: Wondering About Buildings - Science Question 3 - Copyright © 2019 by the Regents of the University of California. All rights reserved.

Exploration 3: How Can We Make Sure Our Buildings Are Stable?

Kickoff Discussion:
Reflecting on Stable Buildings

Activity 1:
Putting Together Ideas

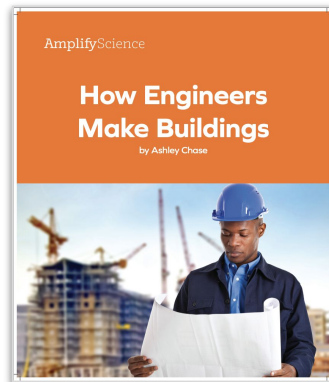
Activity 2:
Reading *How Engineers Make Buildings*

Activity 3:
Putting Together Ideas to Make Towers

Activity 4:
Engaging in the Design Cycle

Shared Drawing and Discussion:
Using Engineer's Notes to Put Together Ideas

Culminating Activity: Making a Play City



Guided Unit Internalization Planner

Part 1: Unit-level internalization

Unit title:

Wondering About Buildings

What is the phenomenon students are investigating in your unit?

In a play city made by a class at another school, some buildings stayed up, while other buildings fell down.

Exploration Questions:

1. What makes a building stable? 2. What are stable buildings made of? 3. How can we make sure our buildings are stable?

Student challenge:

to create their own play city with stable buildings

What science ideas do students need to figure out in order to explain the phenomenon?

Students discover that the shape of a building affects its stability (e.g., many stable buildings have flat bottoms and are bigger at the bottom). They figure out that buildings are made of pieces and that the kinds of pieces a building is made of can affect its stability. Students synthesize ideas about how a building's shape and the kinds of pieces used to make a building affect its stability.

What evidence sources do students engage with across the unit?

the unit big book, hands-on experiences making buildings, kinesthetic investigations, a time-lapse video, discussion, and drawing/writing



Introductory Activity: Let's Be Engineers of a Play City

What?

The teacher displays two pictures of a play city that was created by another class in which some buildings stayed up, and some fell down. The teacher also reads aloud pages 4–12 of *How Engineers Make Buildings* and introduces students to their role as engineers. Students share their initial ideas about how to make a building that stays up.

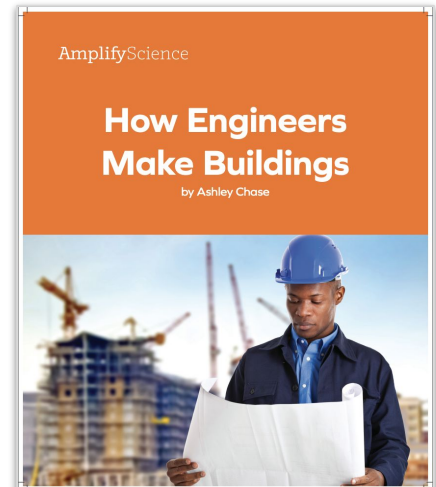
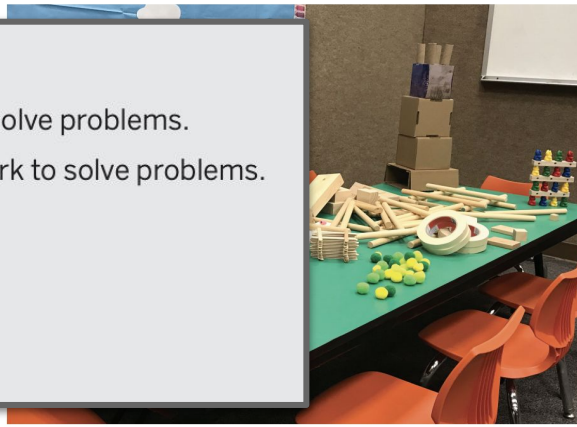


Students learn

- Engineers make things to solve problems.
- Engineers learn as they work to solve problems.

Vocabulary

- engineer
- stable



Exploration Note Catcher

Unit Name:

Flexible Implementation Structure:

FOCUS AREAS	Introductory Activity	Exploration #1	Exploration #2	Exploration #3	Culminating Activity
Science Question					
What will students learn? (objectives)					
Key Vocabulary					
Multiple Modalities (Do, Talk, Read, Write, Visualize)					
Assessments and/or Differentiation Opportunities					

Exploration Note Catcher

Unit Name: **Unit 2, Wondering About Buildings**

Flexible Implementation Structure:

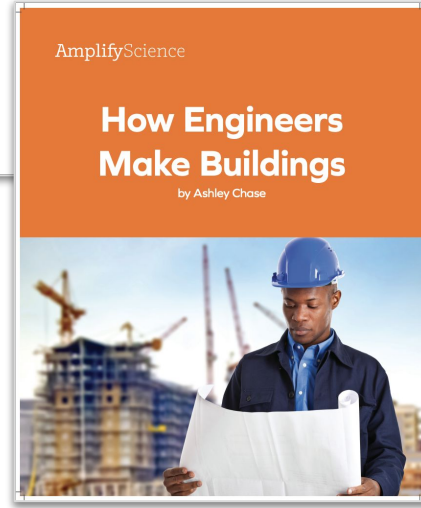
FOCUS AREAS	Introductory Activity	Exploration #1	Exploration #2	Exploration #3	Culminating Activity
Science Question	Intro students to ?: 1) How do we make stable buildings for our play city? 2) Their role as engineers.	What makes a building stable?	What are stable buildings made of?	How can we make sure our buildings are stable?	Can I make a stable building for our class play city?
What will students learn? (objectives)	Engineers make things to solve problems. Engineers learn as they work to solve problems.	The shape of a building affects how stable it is. Objects with flat bottoms are usually more stable than objects with curved bottoms. Objects that are bigger or the same size @ the bottom & the top, are usually more stable than objects that are bigger on top. Engineers gather evidence to answer questions as they learn about the problems they're working to solve. Engineers talk, draw & write to share ideas			
Key Vocabulary	Engineer Stable	Engineer Stable Observe Compare Evidence			
Multiple Modalities (Do, Talk, Read, Write, Visualize)	Talking, Reading, Visualizing	Activity 1: Kinesthetic (body poses) Act. 2: Reading Big Book Act. 3: Kinesthetic/visual (object observations) Act. 4: Kinesthetic/visual (building block towers)			
Assessments and/or Differentiation Opportunities	Observations opportunities for Concepts of Print, for comfort levels with participation, & for verbal	Act. 3 Formative Assessment Opportunity (step 9) & Culminating Act.: Shared drawing & writing, & self evaluation conversations			

Kickoff Discussion: Sharing Initial Ideas About Stability

What?

The class reviews what they read about engineers in the first section of *How Engineers Make Buildings*. They are introduced to Science Question 1 and discuss their initial ideas in response to this question.

Engineering Question 1: What makes a building stable?



Summary of Exploration 1

Activity 1: Embodying Stability

Students make a kinesthetic connection to stability by trying and comparing different poses they make with their bodies.

Activity 2: Reading *How Engineers Make Buildings*

The class observes and discusses pictures of different buildings in a new section of *How Engineers Make Buildings* in order to gather evidence about what stable buildings are like.

Activity 3: Exploring Stability with Objects

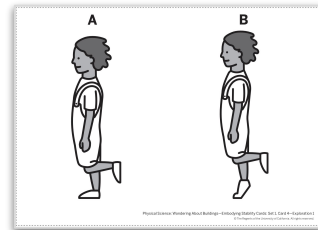
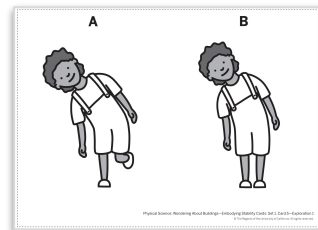
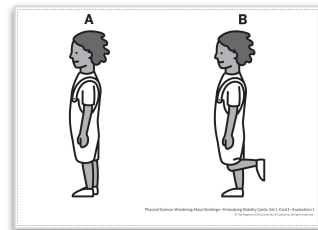
Students observe and compare the stability of differently shaped objects, which provides evidence that certain aspects of an object's shape contribute to its stability.

Activity 4: Making Tall and Stable Towers

Using blocks, students figure out how to make stable towers. They then use a language frame to practice sharing their ideas about characteristics of stable buildings.

Shared Drawing and Discussion: The Shape of Stable Buildings

The class participates in a shared drawing and an accompanying discussion to consolidate and apply their understanding of Science Idea 1: *The shape of a building affects how stable the building is.*

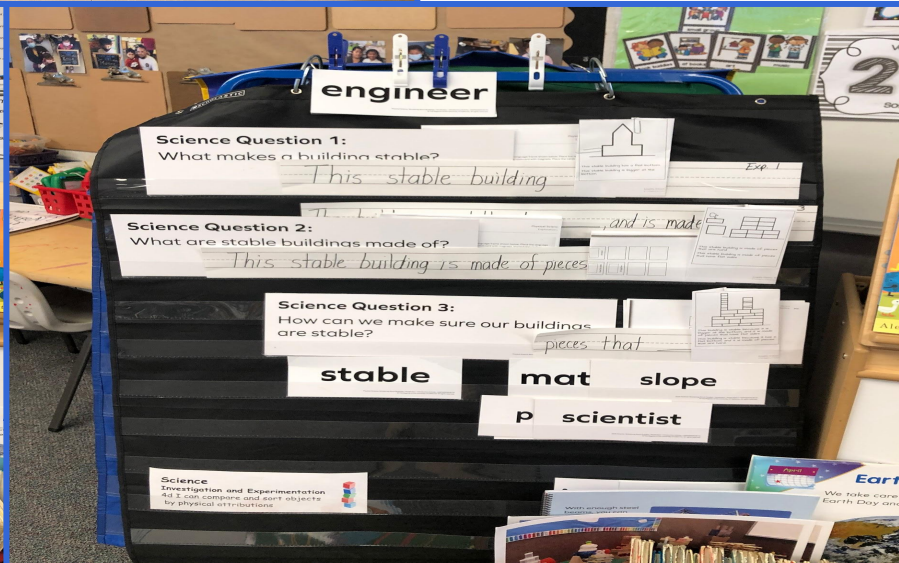
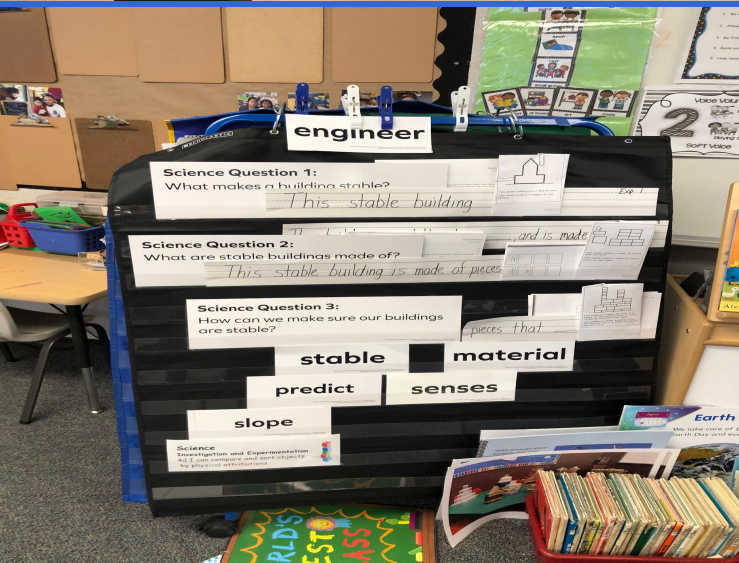




Engineering/Science Wall

On a pocket chart!

- Vocabulary
- Engineering & Science Questions/Concepts
- Real Engineers





Students working with different kinds of building materials. What physical properties are they figuring out?



Students working with different kinds of building materials. What physical properties are they figuring out?



REAL TK EXAMPLES: Read & Discuss Slide & related ?s:

More wonderful Activity Examples from our Pilot Teachers!

- *How would these kinds of Activities help in our Differentiation for our students across the Explorations of the Unit?*
- *What will we add to them to provide more scaffolding & support during in-person instruction?*

Students working with different kinds of building materials. What physical properties are they figuring out?

Family Engagement

Introductory Activity (TG pages 22-23)

For building at school and at home:

- What materials will we want students to use?
- How will we distribute them?
- What materials might students have at home to use?
- Set Guidelines? i.e., recycled &/or craft materials, but no prefab models from Michael's?
- Other suggestions for family engagement...

Name: _____ Date: _____

Home Connection: Observing Buildings

We are beginning a new science unit called *Physical Science: Wondering About Buildings*. In this unit, students will think about how the shape of a building and the pieces a building is made of help make it stable. We invite you to engage your student in the following activity to consider these ideas at home.

Directions:

1. Go on a brief walk with your student to observe buildings. Together, you might observe homes, stores, schools, libraries, or a variety of other building types.
2. Encourage your student to describe the buildings they observe.
3. Have your student choose one building to observe in greater detail.
4. Ask your student to share their observations about the shape of the building.
5. Ask your student to share their observations about what the building is made of.
6. Record your student's responses to the questions below.
7. In the box on the next page, have your student draw the building they chose.

What did you observe about the shape of the building?

What did you observe about what the building is made of?

Physical Science: Wondering About Buildings—Introductory Activity

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Time: _____ Date: _____

Home Connection: Observing Buildings (continued)

Physical Science: Wondering About Buildings—Introductory Activity

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Family Engagement

● Culminating Activity Part 1 - Classroom and Home Settings

- Ask students to present their building to small group &/or whole class
- Ask them to explain why their building is stable, & what building materials they used
- Ask families to take a photo or vid clip to share with class
- Post photos & vids in class gallery or school website
- Invite other classes to “tour” TK building/city gallery

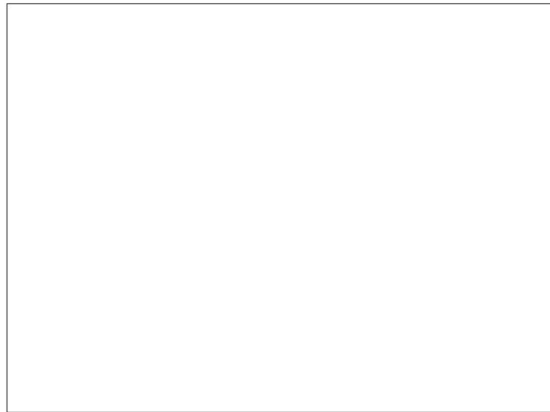
Name: _____ Date: _____

Home Connection 1: Making a Play Building

We are concluding our science unit called *Physical Science: Wondering About Buildings*. Your student has learned that the shape of a building and the kinds of pieces used to make a building affect how stable the building is. We invite you to engage your student in the following activity at home to help reflect on these ideas.

Directions:

1. Help your student select building materials (e.g., blocks, toys, cups, containers) to make a play building. Ask your student questions about the building they will make. For example:
 - What shape will you make the building?
 - Which pieces do you think will work well for making a stable building?
 - Why do you think those pieces will work well for making a stable building?
2. Have your student make a play building.
3. Have your student draw a picture of the building in the box below.



Physical Science: Wondering About Buildings—Culminating Activity

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Name: _____ Date: _____

Home Connection 2: My Stable Building Mini-Book

The activity for this Home Connection refers to the play building your student made in Home Connection 1: Making a Play Building.

Directions:

1. Let your student know that they are going to create a book about the play building they made.
 2. Read page 1 of the mini-book to your student. Then, have your student draw a picture in the box on page 2 to depict this sentence.
 3. On pages 3–5, help your student write a few words to complete each sentence, describing something about the shape of their building and the pieces they used that make their building stable. For example:
 - Page 3: *I made a stable building. My stable building has a flat bottom.*
 - Page 4: *My stable building is made of pieces that fit together.*
 - Page 5: *My building is stable because it has a flat bottom, and it is made of pieces that fit together.*
- Alternatively, have your student dictate to you so you can record what they say. Have your student draw pictures in the boxes on pages 3, 4, and 6 to depict these sentences.
4. Once the mini-book is complete, read it aloud with your student. You might also have your student share the book with friends or other family members.

Family Engagement Culminating Activity - Part 2 (TG pages 150-151)



- Complete in class, &/or Send home little books to families for students to complete with them
- Distribute little books to families - then ask them take photo/vid clip of student reading to family.
- Have students share/read their books to small group or whole class.

9

I am an engineer.

My Stable Building

Name: _____

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5

My building is stable because it _____ and it is made of pieces that _____.

My stable building is made of pieces that _____.

4

Collaborative Resources

Through working with real Amplify Science TK teachers, JoAnna, our TK expert, has put together some collaborative resources that connect to the unit!

[TK Resources Page:](#) [Wondering About Buildings](#)

Collaborative Resources

These resources have been collected and put together by JoAnna Chocooj in collaboration with real TK teachers of Amplify Science. These are not official Amplify Science materials but connect to the Amplify Science Units.

Trainer: JoAnna Chocooj

Contact Information: jchocooj@amplify.com

Unit 2: *Wondering About Buildings*

Resource	Description
TK Unit 2 Buildings: ReadAlouds	Read-Aloud links for Fiction & Non-Fiction related literature to the <i>Wondering about Buildings</i> Unit. Different versions/readers of several books so you can pick the ones that match your class' & student's needs.
TK Unit 2 Building & Construction Songs	A playlist of songs that have connections to the themes in <i>Wondering about Buildings</i> . Songs in English and Spanish. Different versions of several songs so you can pick the ones that match your class' & student's needs.
TK Unit 2 Building Videos	A playlist of time-elapased videos of co

TK Image Links for Explorations: [TK Unit 2 Image LI](#)

TK Planning Notebook

[Planning Note Catchers](#)

Notecatchers for Unit, Exploration and Activity level planning, Differentiation and Assessment.

Unit 2 Catcher	Exploration 1	Exploration 2	Exploration 3

The screenshot shows a YouTube playlist titled "TK Unit 2 Buildings - Songs" created by JoAnna Chocooj. The playlist is public and contains 22 videos. The first few videos visible are:

- "I Live in a City by Malvina Reynolds" (1:40)
- "My Little House | Rooms in a House | Nursery Rhymes | Bird's Music & Kids Rhymes" (2:22)
- "Parts Of The House - Learning Songs Collection For Kids And Children | Happy Kids" (1:11)
- "The Tiny House Song Movie.wmv" (2:31)
- "My little house" (1:57)
- "Yo Tengo Una Casita (I Have a Little House) | Spanish Action Songs for Kids" (2:54)
- "Yo tengo una casita - Spanish Nursery Rhyme" (1:18)
- "CantaJuego - In English I Have a Little House" (1:01)
- "La casita childrens song" (6:31)



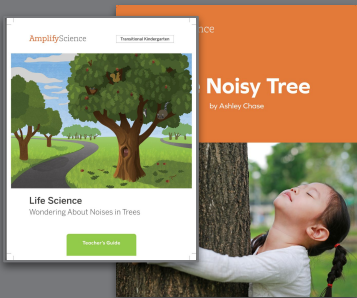
Plan for the Day



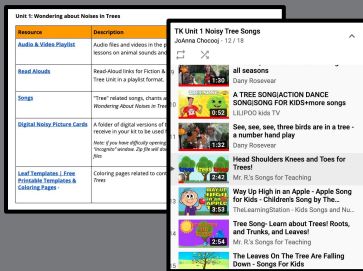
- Introduction & Framing the day



- Navigation & Planning Units 2 & 3



- Amplify Science New Curriculum & TK Instructional Approach



- Planning to Teach- Additional Program Resources



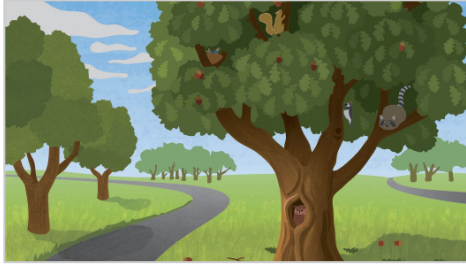
- Navigation & Planning Unit 1 - Unit Level



- Closing

Amplify Science TK

Course Structure



Life Science:
Wondering About
Trees



Physical Science:
Wondering About
Buildings



Earth Science:
Wondering About
Puddles

Number of Lessons: 20 lessons per unit

Time: 15 mins per lessons

Instructional Time: 4 - 6 weeks per unit - **Flexible Implementation**

Amplify Science

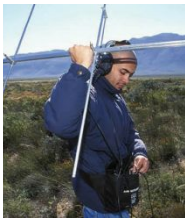
Transitional Kindergarten

Earth Science

Wondering About Puddles

Teacher's Guide

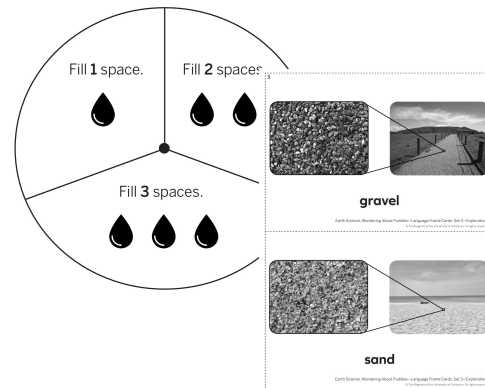
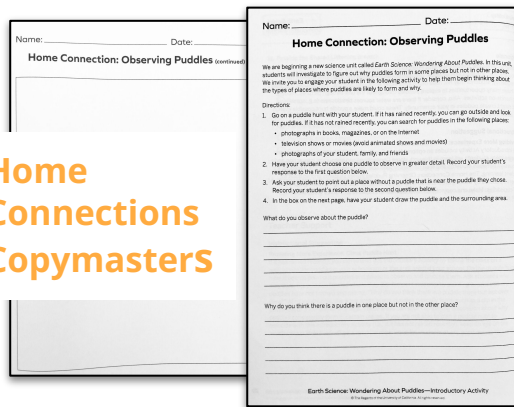
Amplify Science ScientistProfile Cards



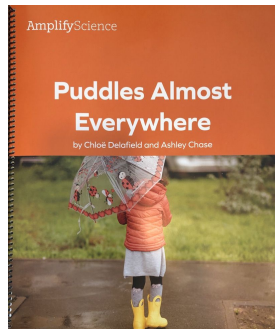
Why are there puddles on some parts of the sidewalk but not on other parts?

investigate

Unit 3 Resource Sheet



Print Teacher's Guide



Looking for Puddles

I love walking to school with my dad on rainy days. We try to find puddles on the ground.



The sidewalk has puddles in some places, but not in other places. I step in all the puddles on the sidewalk.

Unit Big Book - hard copy & online

Puddle Picture Cards
*Find on your LAUSD
Schoology Page*

Language Frames & Student Copymasters - hard copy & online

Guided Unit Internalization Planner

Part 1: Unit-level internalization

Unit title: Wondering About Puddles

What is the phenomenon students are investigating in your unit?

There are puddles in some places but not in others along a girl's walk to school.

Exploration Questions:

1. Why are there puddles on some parts of the sidewalk - but not on other parts?
2. Why are there puddles on the sidewalk - but not on the path?
3. Why are there puddles on the path sometimes?

Student challenge:

Where and why puddles do and do not form?

What science ideas do students need to figure out in order to explain the phenomenon?

Students figure out that water flows down as far as it can, so puddles are likely to form at the bottom of slopes. Then they figure out that some ground types (like gravel) have spaces for water to flow down into, which initially keeps puddles from forming. While other ground types (like pavement) do not have spaces so puddles form. Finally, students figure out that more rain can cause water to fill the spaces in ground like gravel, causing puddles to form in places where they initially had not formed.

What evidence sources do students engage with across the unit?

The unit big book, pictures and illustrations models, indoor and outdoor hands-on investigations, discussions, drawing and writing, unit videos and related literature.

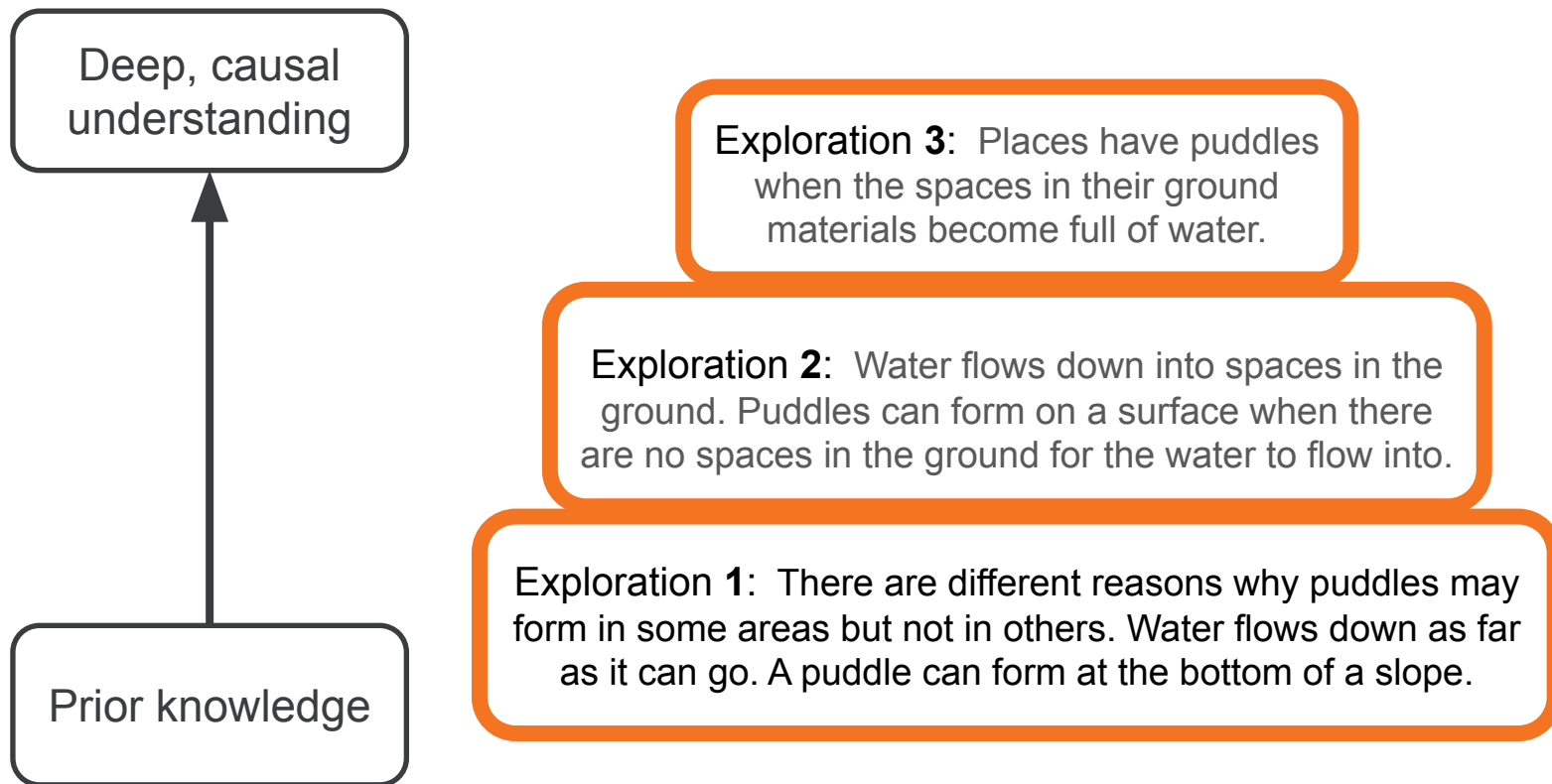




FOCUS AREAS	Introductory Activity	Exploration #1	Exploration #2	Exploration #3	Culminating Activity
Science Question	Intro students to ?: 1) Why are there puddles in some places, but not in other places? 2) Their role as scientists.	Why are there puddles on some parts of the sidewalk but not on other parts?	Why are there puddles on the sidewalk but not on the path?	Why are there puddles on the path sometimes?	What new ideas and questions do I have related to what we learned about puddles?
What will students learn? (objectives)	Engineers make things to solve problems. Engineers learn as they work to solve problems.	Water flows down as far as it can go. A puddle can form at the bottom of a slope. Scientists ask questions and gather evidence to answer their questions. Scientists plan before they investigate. Scientists talk, draw & write to share ideas			
Key Vocabulary	Scientist Observe	Evidence Investigate Flow Slope			
Multiple Modalities (Do, Talk, Read, Write, Visualize)	Talking, Reading, Visualizing	Activity 1: Reading Big Book Read, Talk, Visualize Act. 2: Outdoor Puddle Investigation - Do, Talk Act. 3: Indoor Observation of Water Flow Model - Visualize, Talk, Draw/Write Act. 4: Puddle Investigation using Ground Model and Language Frame - Do, Talk			
Assessments and/or Differentiation Opportunities	Observations opportunities for Concepts of Print, for comfort levels with participation, & for verbal expression.	Act. 4 Formative Assessment Opportunity (step 16) & Culminating Act.: Shared drawing & writing, & self-evaluation conversations			
Other Noticings					

TK Unit
NoteCatcher

Progression of Wondering About Puddles



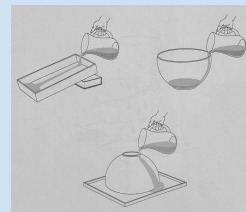
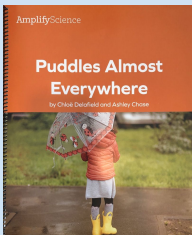
Gathering Evidence

Wondering About Puddles

Unit Science Question: *Something Puzzling About Puddles*
(where and why puddles do and do not form?)

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

Exploration 1 Evidence

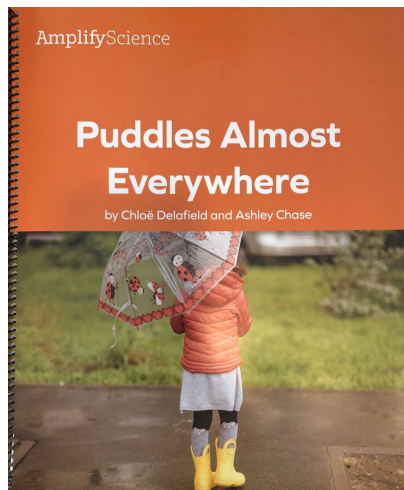


TK Unit 3 Puddles
Activity Puddles & Rain
Videos

Students learn that water flows down as far as it can go; a puddle can form at the bottom of a slope.

Exploration 1 Kickoff Discussion: **Puddles Almost Everywhere**

What? The class reviews what happened in the first section of *Puddles Almost Everywhere* (Unit Intro Activity). Students are introduced to Science Question 1 & discuss their initial ideas in response to this question, which deepens their connection to the unit phenomenon. It encourages them to wonder more about puddles, & discussing Science Question 1 models how scientists approach a investigating a problem.



Science Question 1:

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

evidence

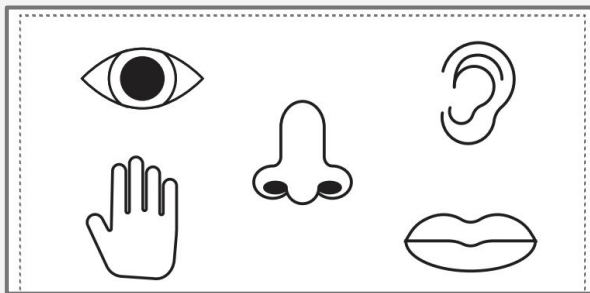
Wondering about Puddles Classroom Wall

Wondering about Puddles

Science Question 1:

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

Earth Science Wondering About Puddles—Science Question 1—Illustration—AMPS00000276
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Vocabulary

scientist



observe

Physical Science Wondering About Raindrops—Vocabulary—AMPS00000276
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evidence

Physical Science Wondering About Raindrops—Vocabulary—AMPS00000276
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Summary of Exploration 1

Unit TG pg 29

Activity 1: Reading *Puddles Almost Everywhere*

The teacher leads a Read-Aloud from the reference section of *Puddles Almost Everywhere*. Students observe and discuss the puddles in the book and on the Puddle Cards to build background knowledge about puddles, and they gather initial evidence about why there are puddles in some places but not in other places.

Activity 2: Investigating Puddles Outside

Students plan and conduct an outdoor investigation of water on pavement to gather evidence about why puddles form on some parts of pavement but not on other parts.

Activity 3: Observing and Recording How Water Flows

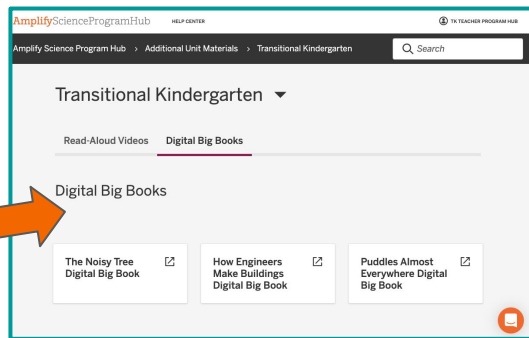
Students observe three demonstrations of flowing water to gather evidence that water flows down as far as it can go and pools when it cannot go down any farther. Students record observations in their Science Notebooks to express their developing understanding of this idea.

Activity 4: Investigating Puddles with a Model

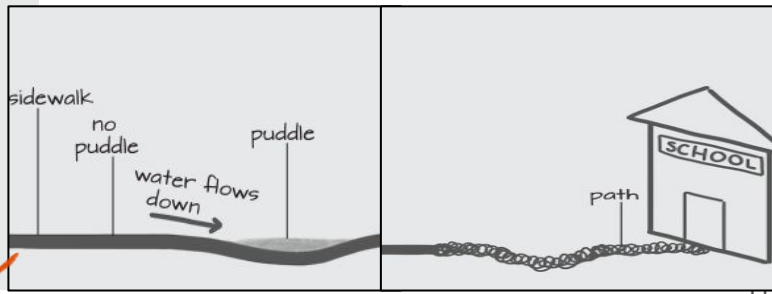
Students create models of the ground and pour water over them. They then observe and discuss where puddles form in their models in order to gather evidence and make sense of how puddles form at the bottom of slopes.

Shared Drawing and Discussion: Water Flows Down

The class participates in a shared drawing and an accompanying discussion to consolidate and apply their understanding of Science Idea 1: *Water flows down as far as it can go.*



Suggestion: LAUSD see slides of Puddle Cards to project images for better student viewing in Amplify Science Schoology folder

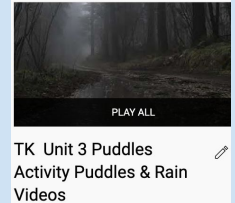
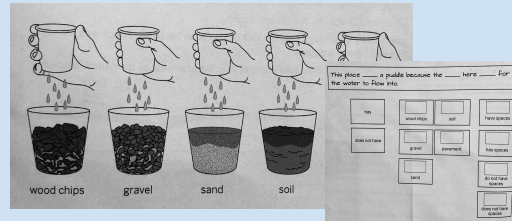
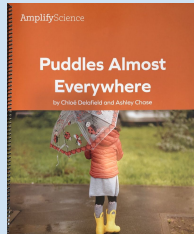


Wondering About Puddles: Gathering Evidence

Unit Science Question: *Something Puzzling About Puddles*
(where and why puddles do and do not form?)

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

Exploration 2 Evidence



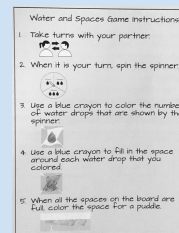
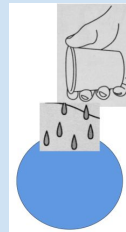
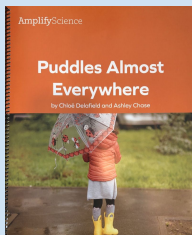
Water flows down into spaces in the ground. There are different types of ground, such as gravel, sand and soil. Some types of ground have spaces in them, others do not. If a type of ground does not have spaces, water cannot flow down into it, so the water forms puddles.

Wondering About Puddles: Gathering Evidence

Unit Science Question: *Something Puzzling About Puddles*
(where and why puddles do and do not form?)

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

Exploration 3 Evidence



TK Unit 3 Puddles
Activity Puddles & Rain
Videos

If the spaces in the ground are full, more water cannot flow down into those spaces. Puddles can form on types of ground with underground spaces if those spaces become full.

Interdisciplinary Connections

How can you connect to...

- Reading
- Language Development
- Writing
- Math
- Social Studies
- Art
- Dramatic Play/Music/PE/SEL

TK Planning Notebook

Amplify Science TK ACTIVITY Center Notes

UNIT: 1 2 3

Unit: Wondering About Puddles

EXPLORATION: 1 2 3

Use this organizer to record notes on how to structure & scaffold the Activities in your classroom for each Exploration. Decide where/how you will set up the stations (part of LA or Math, or general Learning Centers? Part of Free Choice Centers?), ideas for visual arts & music, extension & home opportunities

Activity 1: Big Book Reading (whole class read aloud - rug area?) & **Evidence from Pictures** (whole class &/or small groups, language arts)

Related literature for expanding students' background knowledge of topic (see unit playlists)

Related songs for expanding students' vocabulary & concept development.

Activity 2: Investigating Puddles Outside (hands-on, small groups? Whole class with partners?)

Water Table for pouring/mixing/measuring play & practice.

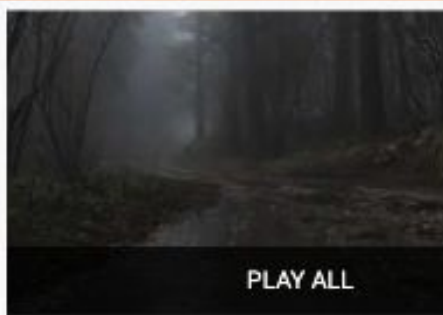
"Water Painting" - use large & small paint brushes to paint with water outside on patio, sidewalk, other pavement areas.

Activity 3: Observing & Recording How Water Flows - Teacher Demonstration & Science Notebooks (start with shared writing? Whole class or small group writing center or language arts centers? Individual "Science Notebooks" &/or individual pages to insert into SN later?)

Related videos of puddles & rain (see unit playlists)

Activity 4: Investigating Puddles with Model (hands-on partners, small groups?) followed with Language Frame practice &/or Science Notebook entry pages)

Water Table for pouring/mixing/measuring play & practice.



TK Unit 3 Puddles Activity Puddles & Rain Videos

11 videos • 54 views • Last updated on J
2021

Public ▾



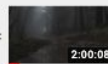
Rain and Puddle video links for Amplify
Science TK Unit 3 "Wondering About
Puddles" Exploration Activity lessons.



Background informational
videos for (especially may be
useful for students without a lot of
prior personal experience).

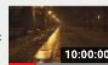


≡ SORT



Relaxing Sound of Rain Forest Puddles 2 Hours / Light Rain and Rain Drops Falling From Trees

Relaxing Sounds Of Nature



Quiet Night in the Park with Relaxing Sounds of Rain Falling Down the Empty Alleys, Puddles & Leaves

Relax Sleep ASMR



Chill video of Rain water dripping into a puddle

Nari_Soma



RAIN AND PUDDLE RAINSTORM (NO COPYRIGHT VIDEO)

Wutaili Nostalgia



Best Friends - a kid, a dog and a puddle

Julian Burrett



Kids Playing in Puddles

Kids Are Awesome



Kids riding bikes after rain and running in puddles

Where To Next, Dad?



Most Satisfying Video on the Planet (Vehicles Splashing Rain Water through Puddle)

Abhishek Jantre



Ducks playing in Backyard Puddle

Meagan Weidner, Krazyquilts



Fitz the Elephant Calf Plays in a Puddle

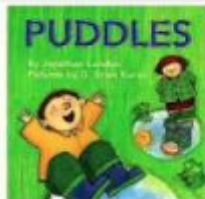
LouisvilleZoo



Miniature Pot Belly Pigs- Froliccing in Mud Puddle to cool off at Martha Clara Vinyards Riverhead,NY

scorpionsunbreakable

TK Unit 3: Puddles and Rain videos
for **Wondering About Puddles**



PLAY ALL

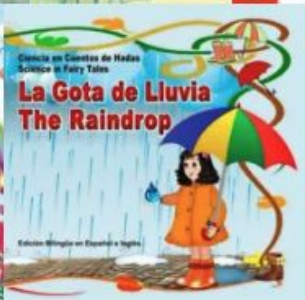
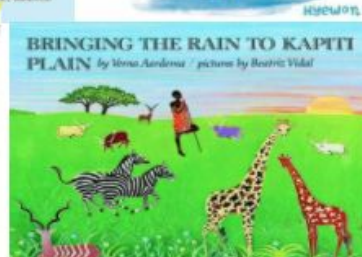
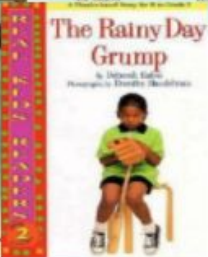
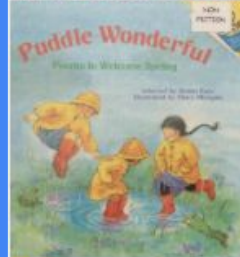
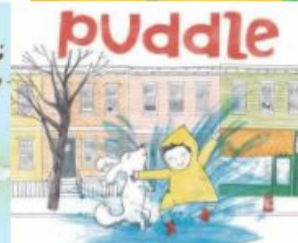
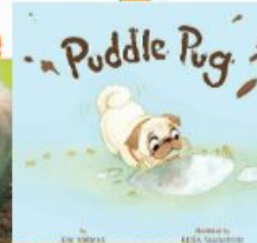
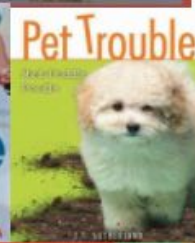
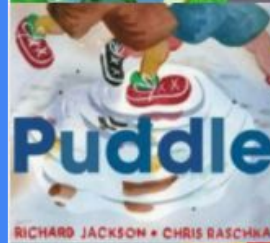
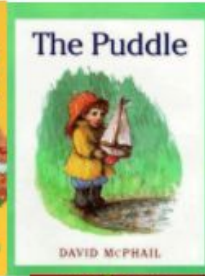
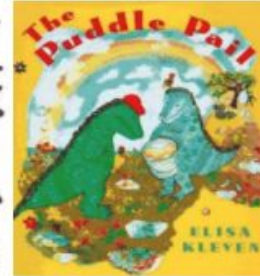
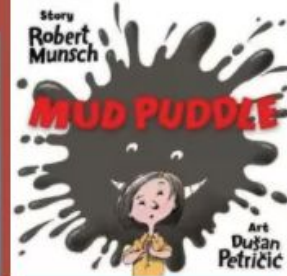
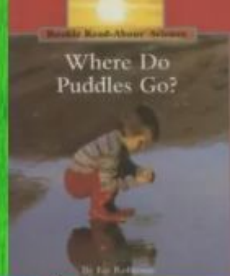
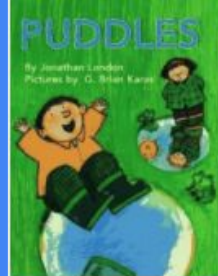
TK Unit 3 PUDDLES - Read Alouds

22 videos • 90 views • Updated today

Public ▾



TK Amplify Science Unit 3: "Wondering About Puddles" Unit Read-Alouds of related fiction & non-fiction literature and songs to download & share with your students.



TK Unit 3 Thematic Literature integrated with Wondering About Puddles: Both Nonfiction and Fiction ReadAlouds for Language Arts related unit literature.



TK Unit 3 Puddles - Songs

13 videos • No views • Updated today

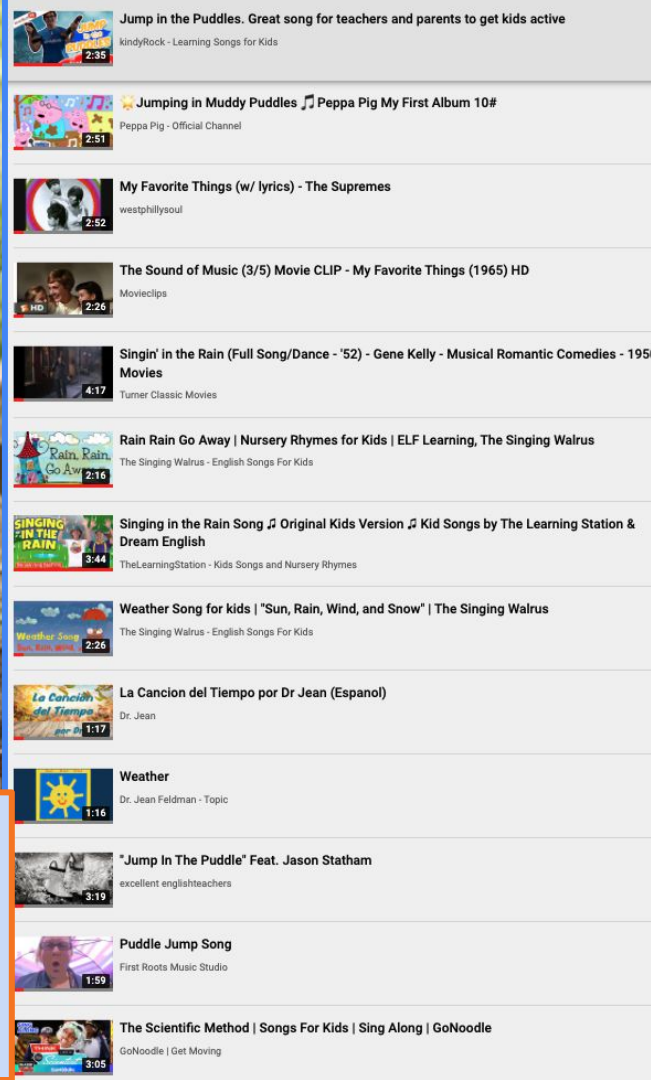
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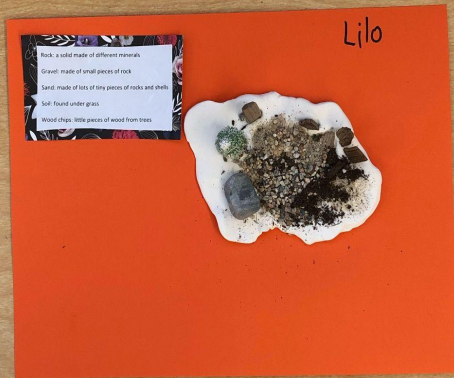
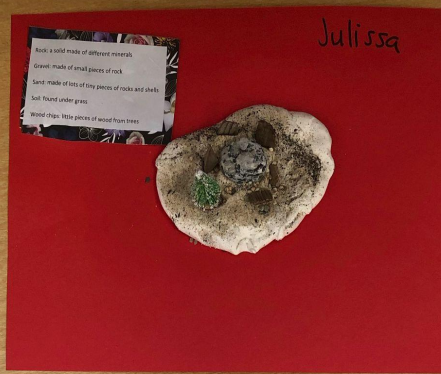


Classic and engaging songs & chants about puddles & rain to build vocabulary & have fun!

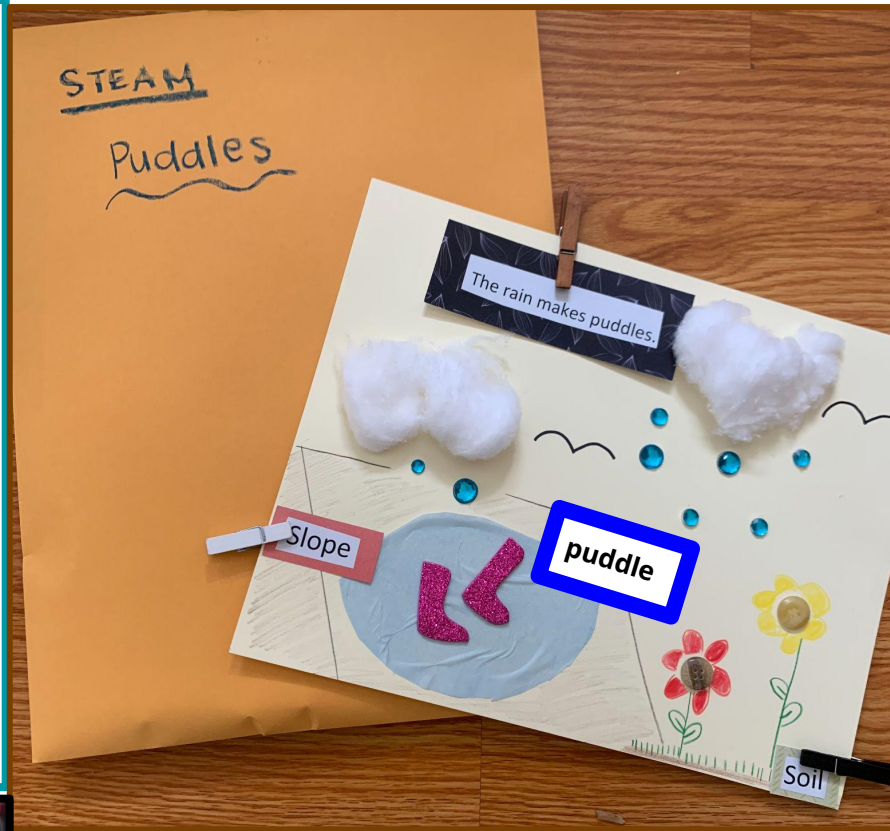
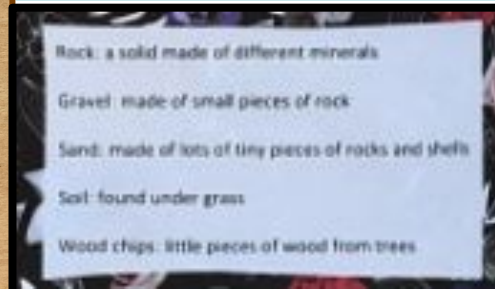


TK Unit 3: Thematic children's songs, rhymes & chants, and classic video clips integrated with Wondering About Puddles.





This wonderful art project helps students examine what makes up different kinds of ground materials when they're dry. Once they've felt their different textures with their hands, looked at them with magnifying lenses, and created their art project, it's ready to put into cups. See: **Exploration 2, Especially Activities 1 & 4.** Then just add water!



This creative project makes a hands-on demonstration of puddle formation illustrating **unit vocabulary** of "**rain**," "**puddle**," "**slope**" and "**soil**."

DIY Edible Soil Layers - to accompany Unit 3, Exploration 2, especially Activity 4



- Let's see if we can figure out if the pieces are the same size or are they different sizes?
- Are there spaces between the pieces?
- What could fill up the spaces?

- Discuss: which pieces are bigger and which ones are smaller?
- Put big ones in first!
- Then gradually add smaller ones and GENTLY SHAKE CUP.
- The pieces should filter down.
- Then add the next smaller ingredients.
- What do we find out about the smallest sprinkles?
- Where do they go?
- ***We know that water always flows down as far as it can go. Do you think it will be more like the gummy worms? Or more like the sprinkles?***



Art project where students explore different ingredients in sand. Use magnifying lenses for them to closely examine different particles, & then add water to see what happens (do puddles form?) before creating their picture. It accompanied a book from the pilot teacher's language arts curriculum, but it would complement any desert life story. Tie in with Unit desert "puddle pictures"

- The same kind of "sand analysis" could be done creating a beach scene.

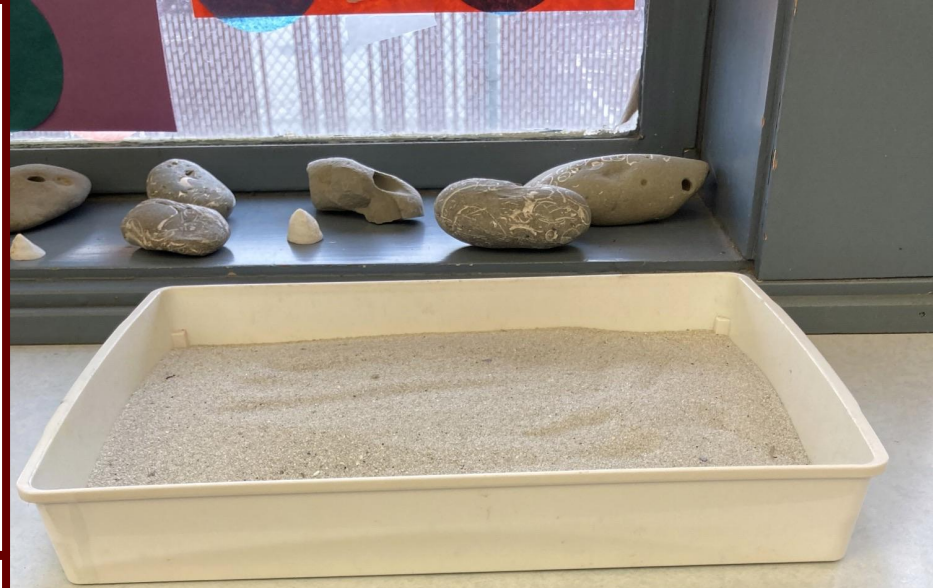
Integrated, thematic curriculum: how can we tie-in our science unit into language arts, art, cooking, music, pe?



After observing what happens to water when it's poured into the cups of sand/sandbox, Exploration 2, make this fun art project using Christmas tree ball ornaments, creates a beach scene with layers of sand and tiny shells.

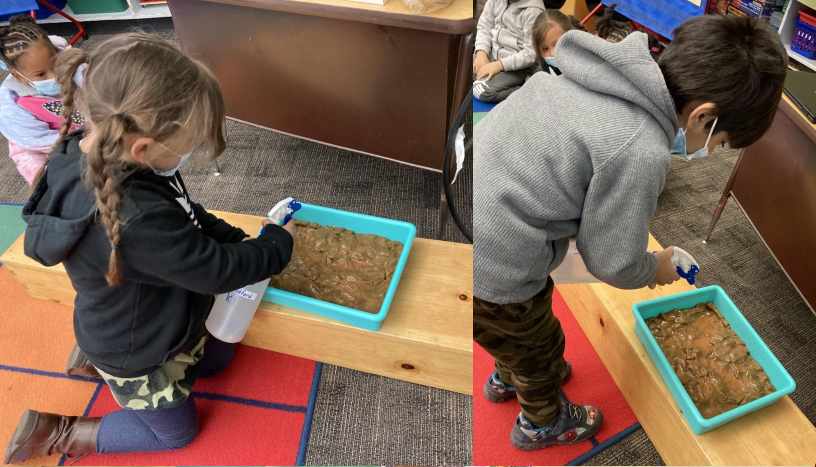


SOILS



Material Planning:
How do we
arrange
earth
materials for
student
interactions?





**How do our
students
interact the
various
materials?**

**Observing
Investigating
Comparing
Contrasting
Discussing**





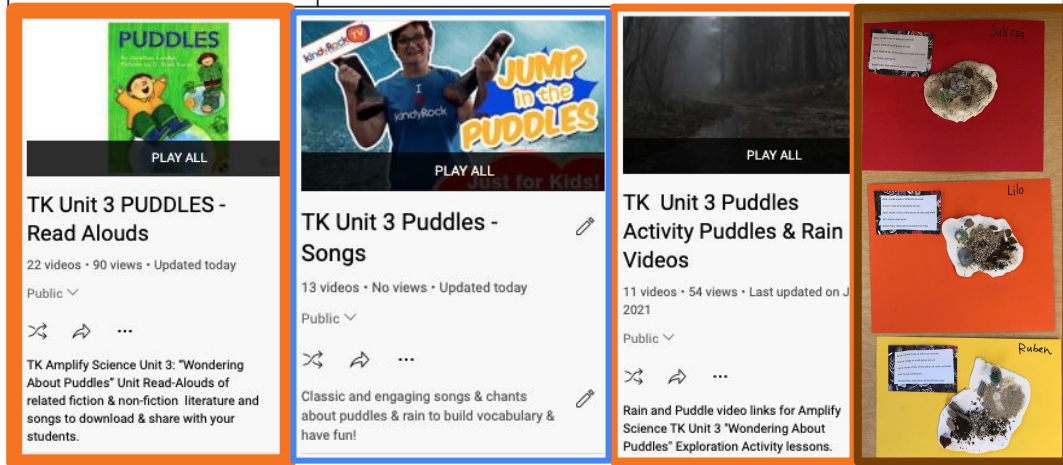
Real Puddles Outside! How does what we've learned in our classroom soil & water Exploration Activities translate into understanding about our real world experiences?

Collaborative Resources

Through working with real Amplify Science TK teachers, JoAnna, our TK expert, has put together some collaborative resources that connect to each of our TK units!

If you find new books, songs or videos to use with the unit, please email suggestions to jchocooj@amplify.com so she can add them to our collaborative playlists.

Resource	Description
Read Alouds	Read-Aloud links for Fiction & Non-Fiction related literature to the <i>Wondering about Puddles</i> Unit.
Songs	A playlist of songs that have connections to the themes in <i>Wondering about Puddles</i> .
Puddle Activity Videos Water Activity Video	A playlist of videos involving activities in and around puddles. Video activity that connects to Exploration 1, Activity 4.
Art Project Examples	Ideas for related art projects.





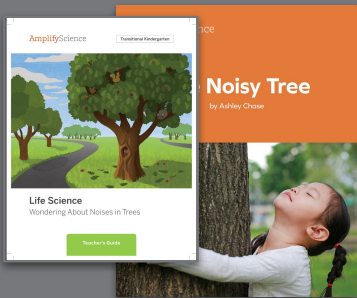
Plan for the Day



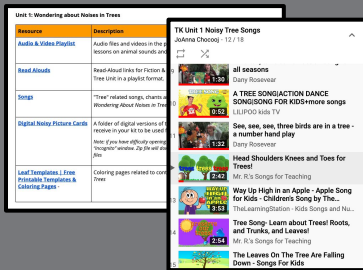
- Introduction & Framing the day



- Navigation & Planning Units 2 & 3



- Amplify Science New Curriculum & TK Instructional Approach



- Planning to Teach- Additional Program Resources



- Navigation & Planning Unit 1 - Unit Level

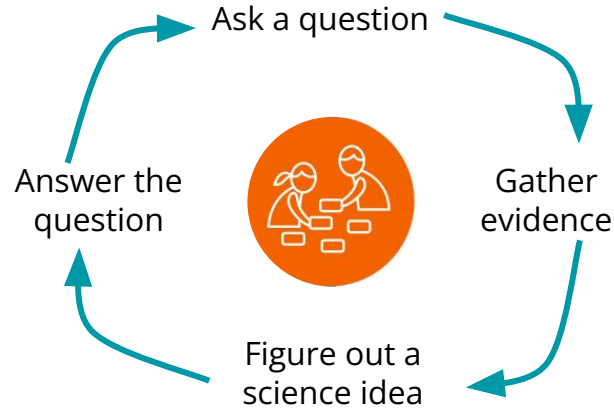


- Closing

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 !**

TK & UTK - Developmental Considerations

- **Engaging, relatable context for learning**
- **Short activities**
- **Varied modalities**
- **Repeated routines**
- **Supportive teacher modeling and leading**
- **Experience and exposure to science**



Additional References

- Science Background
- Language and Literacy
- Standards Connections
- Teacher Support -
 - Instructional Suggestions



Planning for the Unit

Unit Overview

Structure of the Unit

Science Background

Language and Literacy

About the Book: *The Noisy Tree*

Unit Glossary

Standards Connections

Instructional Resources

Getting Ready to Teach

Teacher Support

Instructional Suggestion

Going Further: Embodying Tree Noises

If you have additional time, you may want to invite pairs of students to work with the Tree Model to recreate the phenomenon introduced in *The Noisy Tree*. One student could use the Tree Model to recreate noises they read about in the book and heard in the sound recording. Students might choose to tap the tree, rustle the leaves, or vocalize the noises while their partners listen. After one partner has had a turn embodying the noises, the two can switch roles.

Instructional Suggestion

Going Further: Thinking More About Models

This activity engages students in the science and engineering practice of *Developing and Using Models*. Students' use of the Tree Model throughout the unit is authentic to one of the ways scientists use models—to show their ideas. The Tree Model, like many scientific models, is similar to the thing it represents in important ways and different in many other ways. When explicit instruction on modeling is beyond the scope of this unit, there are opportunities for deeper discussion around modeling. For example, consider bringing in real leaves and having students discuss the ways the leaves on the Tree Model are similar to and different from a real tree's leaves. Thinking about how models represent scientific ideas in this basic and concrete way prepares students to engage with more complex and abstract models in later grades.

- **Realia:** Have students collect different kinds of leaves during tree observations & leaf walks. Sand Table for explorations? &/Or individual shoeboxes?
- **Math Center:** Observe & Sort leaves w/magnifying lenses
- **Art Center:** Have students make leaf rubbings of collected leaves. - Start w/just 1 color rubbings (have students sort old crayons by color, leaf activity next day).

Assessments in TK

Assessment Opportunities

These assessment opportunities are available in all 3 Science TK Units

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?

Physical Science: Wondering About Puddles - Science Question 1 - Exploration 1 - AMP00000001-12
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Physical Science: Wondering About Puddles - Science Question 2 - Exploration 2 - AMP00000001-12
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Earth Science: Wondering About Puddles

Introductory Activity: Something Puzzling About Puddles

Exploration 1: Why Are There Puddles on Some Parts of the Sidewalk but Not on Other Parts?

Kickoff Discussion:
Discussing Puddles on the Sidewalk

Activity 1:
Reading Puddles Almost Everywhere

Activity 2:
Investigating Puddles Outside

Activity 3:
Observing and Recording How Water Flows

Activity 4:
Investigating Puddles with a Model

Shared Drawing and Discussion:
Water Flows Down



Exploration 2: Why Are There Puddles on the Sidewalk but Not on the Path?

Kickoff Discussion:
Observing the Path

Activity 1:
Observing Different Types of Ground

Activity 2:
Reading Puddles Almost Everywhere

Activity 3:
Investigating Puddles on Different Types of Ground

Activity 4:
Investigating Water Flowing into the Ground

Shared Drawing and Discussion:
Water Flows into Spaces in the Ground



Exploration 3: Why Are There Puddles on the Path Sometimes?

Kickoff Discussion:
Reading About Puddles on the Path

Activity 1:
Investigating Puddles on Wet Ground

Activity 2:
Investigating Puddles and Spaces in the Ground

Activity 3:
Playing the Water and Spaces Game

Activity 4:
Reading Puddles Almost Everywhere

Shared Drawing and Discussion:
Spaces in the Ground Can Get Full



Culminating Activity: Creating a Class Book

AmplifyScience

Puddles Almost Everywhere

by Chloé Delafield and Ashley Chase



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.

Amplify Science TK ASSESSMENTS

UNIT: #1 #2 #3 NAME: _____ EXPLORATION: #1 #2 #3

What is the **Formative Assessment** in this Exploration?

Activity Title:

What are the students doing?

What is the teacher looking for?

What can you do if students aren't making the connections?

UNIT CULMINATING ACTIVITY = SUMMATIVE ASSESSMENT OPPORTUNITY

Class Book - Individual Student Pages.
What are the students doing?

What is the teacher looking for?

Student Conversations/Self-Assessments
What are the students doing?

What is the teacher looking for?

What are the **Embedded Assessment** opportunities in this Exploration?

Activity #

Activity #

Activity #

Collaboration/Planning:

Assessments

TK Planning Resources Notecatcher

Questions to answer:

- What is the formative assessment in this Exploration?
- What assessment opportunities are embedded in the Activity?
- What evidence can I collect of student progress and understanding?
- How could I use this information to inform my instruction?

TK Program Overview Website

AmplifyScience

Transitional Kindergarten
(TK)

Program overview

Program developers

Program components and features

Access and equity

Resources



TK National Program Guide

Resources

- FAQs
- Correlations

BIG BOOKS

- Life Science (*The Noisy Tree*) read aloud
- Earth Science (*Puddles Almost Everywhere*) read aloud
- Physical Science (*How Engineers Make Buildings*) read aloud

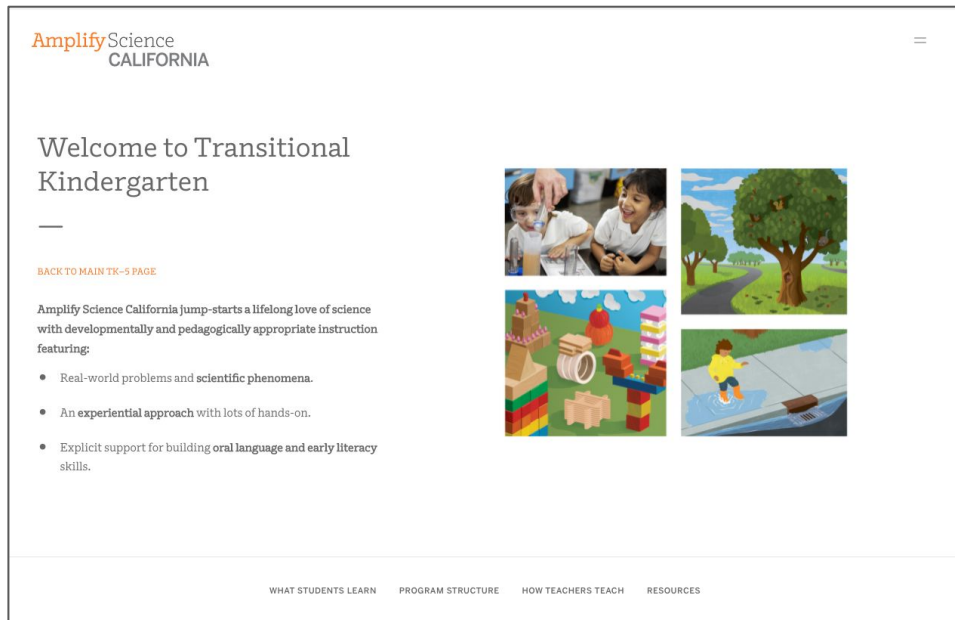
COPYMASTERS

- Life Science Copymasters
- Earth Science Copymasters
- Physical Science Copymasters



California TK Site

- What Students Learn
- Program Structure
- How Teachers Teach
- Resources



Closing goals reflection

3

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

- **Navigate the Amplify Science TK curriculum to understand the structure and resources at the Unit, Exploration and Activity levels.**
- **Become familiar with planning resources to prepare to teach Amplify Science TK to my students.**

5-6: I'm still not sure how I'm going to do this?

7-8: I have some good ideas but still have a lot of questions.

9-10: I have a solid plan for how to plan to make this work!

Professional Learning Workshop

Los Angeles Unified School District



Title: Assessments in Amplify Science for TK

Time: 6 hours, onsite (8:00 - 3:00 p.m.)

Recommended Audience: LAUSD TK elementary teachers

Session Description: In this session participants learn about the structure and purpose of the varied assessment opportunities through the lens of Unit 2 in the Amplify Science TK curriculum. Through the unit's embedded assessments, participants deepen their understanding of learning progressions and the embedded opportunities for collecting, analyzing, and responding to student assessment data. Participants will engage in model lessons, followed by collaborative and independent planning.

DATE : 1/28/23

Location: Harrison ES
3529 City Terrace Dr.
Los Angeles, CA. 90063

Closing Reflection

Based on our work today, share:

Head: something you'll keep in mind

Heart: something you're feeling

Feet: something you're planning to do

Your feedback matters!

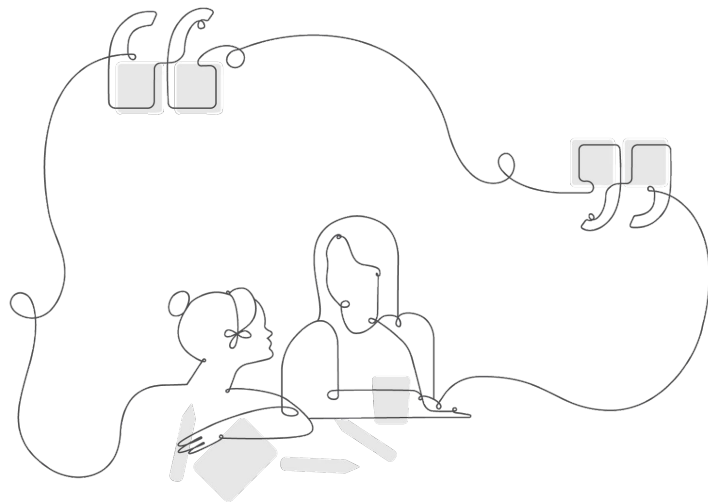
Survey

Facilitation

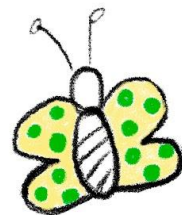
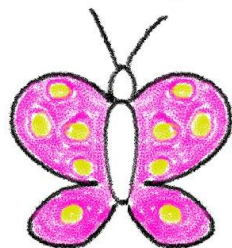
Session design

Final Question: Is there anything else you would like us to know?

- Curriculum
- Materials
- Enrollment and licensing
- And more!



Thank
you





**THE
EXPERT
IN ANYTHING
WAS
ONCE A BEGINNER**