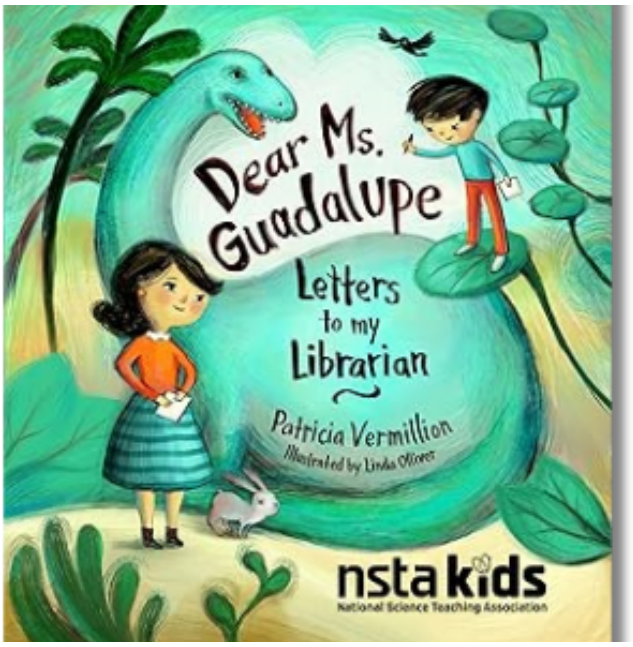


A CCSS & NGSS-Aligned Discussion & Project Guide for grades PK - 3

DEAR MS. GUADALUPE

ISBN-10: 0823452239
ISBN-13: 978-0823452231

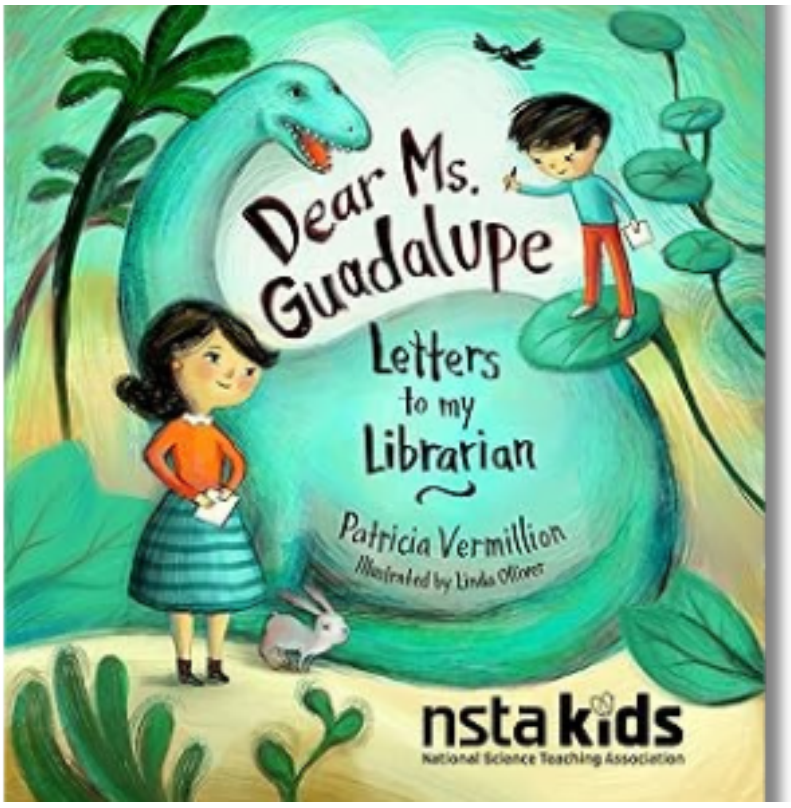
Written by Patricia Vermillion
Illustrated by Linda Olliver
Published by NSTA Kids

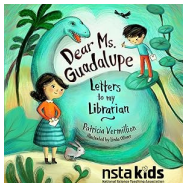
What do dinosaurs and librarians have in common? Curiosity, questions, and the power to inspire young minds. In Dear Ms. Guadalupe: Letters to My Librarian, children are introduced to the fascinating Technosaurus and the real-life work of paleontologist Dr. Sankar Chatterjee through a series of engaging letters from a student to the school librarian.

Guide created by
Debbie Gonzales, MFA

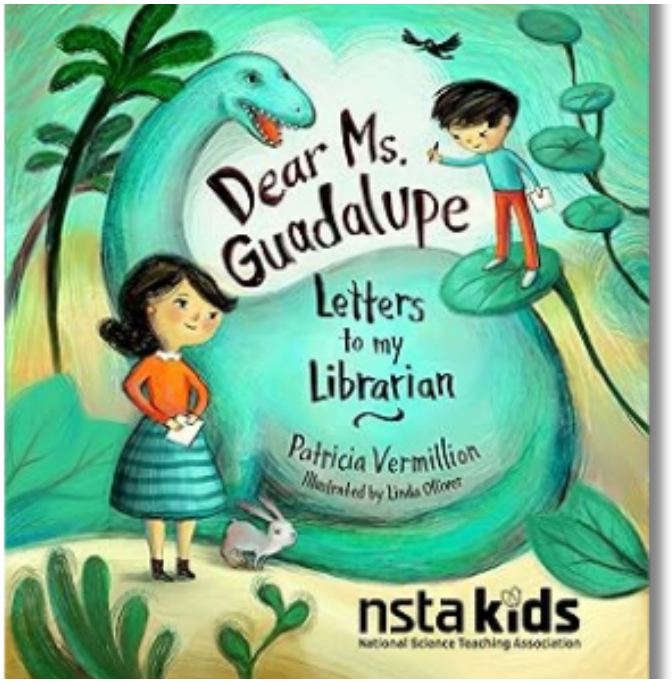
Guides by deb

Table of Contents





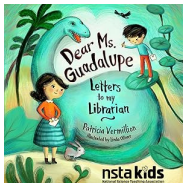
Consider The Front Cover



- What do you notice first on the cover? Who are the two main characters, and what are they doing? How does the dinosaur fit into the scene? Do you think it's real, imagined, or part of a story?
- Where do you think the story takes place? What do the plants and animals tell you about the setting?
- Based on the title Dear Ms. Guadalupe: Letters to My Librarian, what kind of story do you think this will be? What kinds of letters might a child write to a librarian? What might they be curious about?
- The book is published by NSTA Kids, a group that helps students learn about science through stories. How do you think science might be part of this story? What could the boy be learning about?

Meet Author Patricia Vermillion

- Ms. Vermillion says she got the idea for her book from letters her grandson wrote to an author. How do you think those letters might have inspired this story?
- Why do you think writers sometimes use real people or real events in their stories? Can you think of something in your life that could become a story idea?
- Joey's letters in the book—and the real letters that inspired them—help people share ideas and questions. How can writing letters or emails help us learn or connect with others today?
- Patricia Vermillion is both a librarian and an author. How might being a librarian help her write a story that teaches about science and research?



patriciavermillion.com

Meet Illustrator Linda Olliver

- What colors and shapes do you see on the cover? How do they make you feel about the story?
- What clues in the picture tell you that the story might include imagination or make-believe?
- The illustrator, Linda Olliver, also creates pictures for science books. How do you think she uses her art to help readers learn about nature, animals, or the past?
- If you were the illustrator of the picture book, what tools or materials would you use — markers, paint, or digital art — to create your own version of this book cover?

Discussion Questions

Below are discussion sections designed to prepare students for the hands-on activities in the guide. Each section begins with a kid-friendly definition, a connection to the book, and a set of scaffolded questions (from noticing → connecting → applying → reflecting).

Discovering Fossils (How Scientists Learn About the Past)

- **Definition:** Fossils are the preserved remains or impressions of ancient plants and animals. They help scientists, called paleontologists, learn what Earth was like long ago.

- **Book Connection:** In Dear Ms. Guadalupe, Joey dreams of becoming a paleontologist. His letters and drawings show how curiosity leads to real scientific questions about dinosaurs and their habitats.

- **Discussion Questions:**
  - What clues does Joey find that make him believe a dinosaur lives near his home?
  - How do paleontologists use fossils to learn about the past?
  - What kinds of tools might scientists use to study fossils today?
  - How do Joey's drawings and questions show scientific thinking?
  - What would you want to discover if you were a paleontologist?
  - Why is it important to study what lived on Earth before humans?

Changing Earth (How Land and Environments Transform Over Time)

- **Definition:** Earth's surface is always changing. Wind, water, and time reshape land, and living things adapt to these new environments.

- **Book Connection:** Ms. Guadalupe tells Joey that the Technosaurus lived in Texas when the land was wet — a reminder that Earth looked very different millions of years ago.

- **Discussion Questions:**
  - What was Texas like when the Technosaurus lived there?
  - How is that environment different from Texas today?
  - What natural forces can change the land over time?
  - How do fossils give us clues about ancient landscapes?
  - Can you name a place near you that has changed a lot over time?
  - How do you think Earth might change in the future?

Habitats and Survival (Where Living Things Find What They Need)

- **Definition:** A habitat is the place where a plant or animal lives. It provides food, water, shelter, and space for survival.

- **Book Connection:** Joey leaves carrots and peanut butter sandwiches by the creek for his "Texasaurus." Through his curiosity, he explores how animals find food in their environments.

- **Discussion Questions:**
  - What kind of habitat do you think the Technosaurus needed to survive?
  - Why didn't Joey's "Texasaurus" eat the peanut butter sandwich?
  - What kinds of animals might live in a creek habitat today?
  - How do plants and animals depend on one another?
  - How can humans help protect animal habitats near where they live?
  - If you could visit any ancient habitat, which one would you choose and why?

Letters and Learning (How Writing Helps Us Discover and Connect)

- **Definition:** Letters are a way to share ideas, questions, and discoveries with others. They help people learn, reflect, and build relationships.

- **Book Connection:** Joey writes to Ms. Guadalupe throughout the story, asking questions and sharing his discoveries. Their letters show how writing can help us explore science and express curiosity.

- **Discussion Questions:**
  - Why does Joey decide to write letters to Ms. Guadalupe?
  - How do their letters show respect, curiosity, and friendship?
  - What new information does Joey learn through writing?
  - How does writing help scientists share what they find?
  - Who would you write to if you wanted to share a discovery?
  - How can writing make you a better learner or observer?

Curiosity and Exploration (The Spirit of Asking Questions)

- **Definition:** Curiosity is the desire to learn more about something. Explorers and scientists use curiosity to make new discoveries about the world.

- **Book Connection:** Joey's curiosity drives the whole story — he observes footprints, makes predictions, and learns that science is about asking questions and revising ideas.

- Discussion Questions:
  - What makes Joey a good scientist, even before he grows up?
  - How does his curiosity change throughout the story?
  - Why is it important for scientists to ask questions?
  - What clues help Joey learn that his "Texasaurus" might not be real?
  - When have you used curiosity to learn something new?
  - How can mistakes or surprises help us discover new ideas?

Discoveries Close to Home (Finding Nature in Our Own Backyards)

- **Definition:** Science doesn't always happen in faraway places — we can make discoveries right outside our doors by observing carefully.

- **Book Connection:** In the end, Joey realizes that his "dinosaur" is actually a rabbit. He discovers that real-life nature can be just as amazing as prehistoric creatures.

- **Discussion Questions:**
  - How does Joey's discovery about the rabbit change his thinking?
  - What does he learn about observation and evidence?
  - Why might a paleontologist be interested in animals living today?
  - What kinds of "discoveries" can you make near your home or school?
  - How can you be a scientist in your own neighborhood?
  - What lesson do you think Joey learned by the end of the story?

Fact or Fiction? The Dinosaur Debate

Overview
In this lesson, students learn to read like scientists by examining the difference between imagination and evidence in *Dear Ms. Guadalupe: Letters to My Librarian.*

Using the book's letter format, students identify Joey's playful beliefs about dinosaurs and Ms. Guadalupe's factual explanations.

The lesson culminates in a hands-on sorting activity where students place sentence strips—directly quoted from the book—onto a class T-Chart labeled Joey's Imagination and Scientific Facts.

This activity promotes close reading, discussion, and inquiry — bridging literacy and science in an authentic, interactive way.

Objective
- By the end of this lesson, students will be able to:
  - Distinguish between fictional and factual statements in a narrative text.
  - Use text evidence to support claims about scientific accuracy.
  - Explain how imagination can spark curiosity and lead to discovery.
  - Collaborate to analyze, sort, and justify reasoning using story excerpts.

Materials
- *Dear Ms. Guadalupe: Letters to My Librarian*, the book
- Fact vs. Fiction in the Prehistoric Eras T-Chart (Guide, pg. 17)
- Sentence Strips from the book (Guide, pgs. 18-20).

Procedure
- **Step 1: Engage — Reading Like a Scientist**
  - Read aloud the first two letters: June 3 and June 7.
  - Ask:
    - "What is Joey curious about?"
    - "How does Ms. Guadalupe help him learn more?"
  - Briefly discuss how Joey's ideas are creative but not always scientific.
  - Explain: "Today, we're going to look closely at Joey's letters and decide which parts are imagined and which are facts based on real science."

- **Step 2: Explore — The Sorting Challenge**
  - Introduce the Fact or Fiction? The Dinosaur Debate activity.
  - Display your T-Chart labeled:
    - Left: Joey's Imagination
    - Right: Scientific Facts
  - Hand out Sentence Strips to students or small groups.
  - One at a time, students read a strip aloud and decide where it belongs.
  - Encourage discussion:
    - "What makes you think it's a fact?"
    - "What clues in the book helped you decide?"
  - As you sort, tape or pin strips to the correct side of the chart.

- **Step 3: Explain — Text Evidence Talk**
  - Review the completed chart together.
  - Highlight how Ms. Guadalupe provides real facts and uses scientific vocabulary.
  - Discuss:
    - "How does Joey's curiosity help him learn?"
    - "What do scientists do when they have questions like Joey's?"
  - *Optional Connection*: Introduce the word "paleontologist" here and connect Joey's curiosity to real scientific inquiry.

- **Step 4: Elaborate — Independent or Partner Practice**
  - Distribute the Fact vs. Fiction T-Chart worksheet.
  - Students record 2–3 examples from the sentence strip activity.
  - They may add illustrations, notes, or direct quotes.
  - Encourage them to choose one example to explain in writing:
    - "This is a fact because…" or "This is Joey's imagination because…"

- **Step 5: Share — Writing Like a Scientist (and Storyteller)**
- Follow-Up Writing Activity and Class Sharing
  - After completing the T-Chart and group discussion, invite students to write a short reflective paragraph or letter that connects imagination and scientific thinking.
  - Their writing should show what they learned about how curiosity leads to discovery — just like Joey's letters to Ms. Guadalupe.
  - Prompt Options:
    - "Dear Ms. Guadalupe, Today I learned that scientists read carefully and look for facts. I used to think _____, but now I know _____. My imagination helped me wonder about _____."
    - "When I read like a scientist, I look for _____. Imagination helps me learn because _____."

- **Extensions**
  - **Art/ELA Integration:**
    - Students create Era Ecosystem Cards that pair a plant and an animal from their assigned era with a short description of how they interact.
  - **Library Collaboration:**
    - Librarian helps students locate nonfiction texts and multimedia about the three eras and fossils found in Texas.
  - **STEM Connection:**
    - Use fossil models or photos to explore how scientists match fossils to the correct era.

Mapping Earth's History – The Three Great Eras

Objective

To understand the Triassic, Jurassic, and Cretaceous eras as distinct periods in Earth's history — each with unique plants, animals, and habitats — and to identify when the Technosaurus lived.

By the end of Lesson 2: Mapping Earth's History — The Three Great Eras, students will be able to:

- Explain how Earth and its life forms evolved and changed over millions of years.
- Investigate the characteristics of each Mesozoic era using research, observation, and teamwork — like real paleontologists.
- Synthesize science and creativity by transforming their findings into visual and written forms.
- Recognize how *Dear Ms. Guadalupe: Letters to My Librarian* blends imagination, inquiry, and scientific discovery, helping readers see the connections between story and science.
- Demonstrate understanding through discussion, illustration, and reflection — showing both factual accuracy and creative expression.

Materials

- *Dear Ms. Guadalupe: Letters to My Librarian*, the book
- Technosaurus Fact Box page from the book (for reference or projection)
- Discover Your Time Period! handouts (Guide, pgs. 22-27) – Triassic, Jurassic, Cretaceous
- Chart paper, butcher paper, or trifold display board for the class timeline
- Colored pencils, crayons, or markers
- Glue, scissors, tape (for timeline assembly)
- Reference materials (print or digital):
  - Nonfiction dinosaur or fossil books
  - Images of Earth's prehistoric environments
  - Age-appropriate online resources such as NASA Earth History, National Geographic Kids, or the Texas Tech Museum dinosaur pages

Procedure

- **Step 1 – Engage**
  - **Ask:**
    - "What do you notice about the time period when the Technosaurus lived?"
    - "How do scientists know what life was like millions of years ago?" Introduce the **Triassic**, **Jurassic**, and **Cretaceous** eras as parts of Earth's "dinosaur timeline."

- **Step 2 – Explore**
  - Create three student teams — one for each era.
  - Each team completes a My Era Sheet, researching and illustrating their time period using print or digital resources.
  - Each Discover Your Time Period! template should identify:
    - Time period (in millions of years)
    - Climate and geography
    - Plants and animals
    - Ecosystem features
    - Special events or changes (e.g., extinctions, new species)
    - Illustration or habitat drawing
    - Quick-write: "If I could visit this era, I'd see…"

- **Step 3 – Explain (Sharing Discoveries)**
  - Groups present one highlight from their era (e.g., "The first flying reptiles appeared!").
  - Create a classroom timeline on the wall showing all three eras in sequence, with sticky notes for animals, plants, and environments.
  - Label where Technosaurus belongs — near the start of the Triassic.

- **Step 4 – Explain (Creative Application)**
  - Students synthesize their learning by creating a Visual Timeline by collaborating to comprise a large class or individual chart showing each era with illustrations, captions, and time markers.

- **Extensions**
  - **Art/ELA Integration:**
    - Students create Era Ecosystem Cards that pair a plant and an animal from their assigned era with a short description of how they interact.
  - **Library Collaboration:**
    - Librarian helps students locate nonfiction texts and multimedia about the three eras and fossils found in Texas.
  - **STEM Connection:**
    - Use fossil models or photos to explore how scientists match fossils to the correct era.

Postcards from the Past – Letters to Joey

Overview
Students imagine they are paleontologists who have traveled back in time to study a prehistoric era of their choice (Triassic, Jurassic, or Cretaceous). From their chosen time period, they write three short letters or illustrated postcards to Joey, sharing what they observe, discover, and feel as scientists exploring the ancient world.

This lesson connects creative writing with science inquiry, blending literacy and paleontology in a way that feels personal and fun.

Objective
- Students will:
  - Identify key features of their chosen prehistoric era.
  - Write in the format of friendly letters or postcards, showing voice and curiosity.
  - Use sensory details and scientific vocabulary to describe the environment, plants, and animals.
  - Demonstrate understanding of how paleontologists learn from fossils and evidence.

Materials
- *Dear Ms. Guadalupe: Letters to My Librarian,* the book (for mentor text reference)
- Previously completed Discover Your Time Period! templates (Guide, pgs. 22-27)
- Blank postcards or cardstock templates
- Colored pencils, crayons, or markers
- Optional: stamps, stickers, or printed fossil images for decoration

Mini-Lesson: Setting the Scene
- **Reread excerpts** from Dear Ms. Guadalupe where Joey and Ms. Guadalupe exchange letters about dinosaurs.
  - Discuss: “How do letters help us share discoveries?”
  - “What kinds of facts did Joey and Ms. Guadalupe include?”
  - “What feelings do you notice in their writing?”
- **Review the Era Research Sheet.**
  - Students use their notes to “travel” back to that time.
  - Encourage them to imagine they’re there, notebook in hand, ready to report their findings.

Writing Task: Three Letters (or Postcards) to Joey

- **Letter 1 / Postcard 1: "Arrival!"**
  - Describe what it's like when you first arrive in your time period. What do you see, hear, and smell? What is the land like?
- **Letter 2 / Postcard 2: "Field Discovery!"**
  - Describe an exciting fossil find, animal sighting, or natural event. What clues help you understand how this creature lived?
- **Letter 3 / Postcard 3: "Message to the Future"**
  - Reflect on what you've learned and what message you want to send Joey about this era. What does your discovery tell us about Earth's past — or our world today?

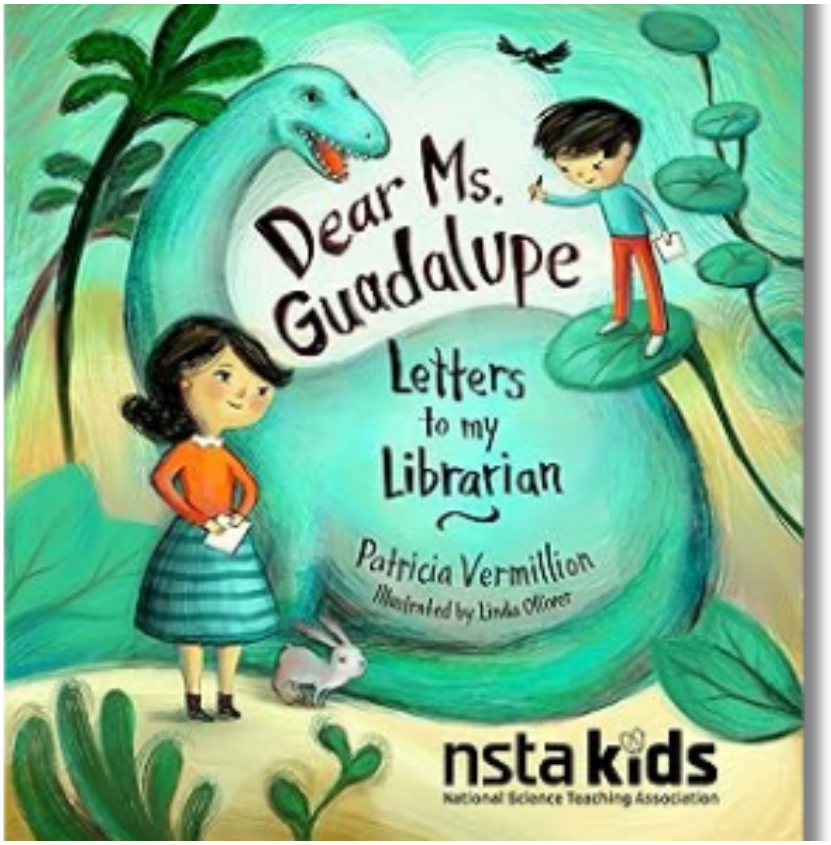
Optional Extension: Illustrated Postcards

- **Students may create front-and-back postcards:**
  - **Front:** Draw a vivid scene from their era — maybe a lush Jurassic forest, a sandy Cretaceous shoreline, or the wetlands of the Triassic.
  - **Back:** Write their message to Joey, using a friendly closing and signing their "paleontologist name."
- Tip: Have a classroom "Post Office from the Past." Students can "mail" their postcards into a display box labeled "Letters for Joey," and classmates can read and respond.

Discussion or Wrap-Up Prompt

- "If Joey wrote back to you, what would he want to know about your time period?"
- "How might your discoveries change what we know about dinosaurs today?"

Project Printables



Fact vs. Fiction in the Prehistoric Eras - T Chart

Joey's Imagination	*Scientific Facts*

Dear Ms. Guadalupe: Fact-Checking Joey's Letters Sentence Strips

Students use **sentence strips** featuring quotes and paraphrased ideas from *Dear Ms. Guadalupe* to decide whether each belongs in the **"Joey's Imagination"** column or the **"Scientific Facts"** column of the T-Chart.

"I think a dinosaur lives by the creek."

Source: June 3 – Joey

"He probably went out for breakfast."

Source: June 12 – Joey

"Do you know what dinosaurs eat?"

Source: June 12 – Joey

"I'm sure these footprints belong to the Texasaurus."

Source: June 20 – Joey

"Do you think the Texasaurus likes dinosaur jokes?"

Source: June 20 – Joey

"I left carrots by the creek. The Texasaurus must have liked them."

Source: July 2 – Joey

"I've decided to call the Texasaurus 'Chomp.'"

Source: June 15 – Joey

"I wonder why I never hear Chomp roar."

Source: July 15 – Joey

"I left Chomp a peanut butter sandwich, but it was still there."

Source: June 24 – Joey

"I think Chomp moved out and a rabbit moved in. I named him Dino-Mighty."

Source: August 1 – Joey

"Dinosaurs lived in forests, mountains, wetlands, and plains."

Source: June 7 – Ms. Guadalupe

"Some dinosaurs were meat-eaters (carnivores), while others were plant-eaters (herbivores)."

Source: June 17 – Ms. Guadalupe

"You mean the Technosaurus, not the Texasaurus."

Source: June 28 – Ms. Guadalupe

"The Technosaurus lived in Southwest Texas 225 million years ago when the land was wet."

Source: June 28 – Ms. Guadalupe

"It was an herbivore, a skinny dinosaur weighing 25 pounds."

Source: June 28 – Ms. Guadalupe

"I'm not sure who ate the carrots, but it wasn't a Technosaurus."

Source: July 10 – Ms. Guadalupe

"If the creek is home to a Technosaurus, you would hear a growl or hiss but not a roar."

Source: July 19 – Ms. Guadalupe

"Some animals are quiet and enjoy a good carrot now and then."

Source: July 19 – Ms. Guadalupe

"When you become a paleontologist, you'll learn many facts about dinosaurs."

Source: July 29 – Ms. Guadalupe

"The Technosaurus was an early two-legged, bird-hipped dinosaur."

Source: Technosaurus Fact Box

"Technosaurus lived during the Triassic Period, 225–220 million years ago."

Source: Technosaurus Fact Box

"Dr. Sankar Chatterjee discovered Technosaurus fossils in West Texas."

Source: Author's Note

"Technosaurus is included in the family Silesauridae, close relatives of early dinosaurs."

Source: Dr. Chatterjee's Note

Prehistoric Eras Labels

Triassic Era

Jurassic Era

Cretaceous Era

The Triassic Era: Discover Your Time Period!

Time period: _____

Climate and Geography: What did the world look like during this time? Was it hot or cold? Were there oceans, forests, or deserts?

Plants and Animals: What kinds of plants and animals lived here? Can you find out which ones were new or unique to this era?

Ecosystem Features: How did living things depend on each other? What kinds of habitats or food chains existed?

Special Events or Changes: Did anything big happen during this time—like extinctions, new species appearing, or continents moving?

Quick-Write: Pretend you're a young scientist visiting this time period. What do you see, hear, and feel? What discovery would you write to Ms. Guadalupe about?

The Triassic Era: Discover Your Time Period!

I**llustration or Habitat Drawing:** Draw what you imagine this time period looked like! Show the land, water, plants, and animals that lived there.

The Jurassic Era: Discover Your Time Period!

Time period: _____

Climate and Geography: What did the world look like during this time? Was it hot or cold? Were there oceans, forests, or deserts?

Plants and Animals: What kinds of plants and animals lived here? Can you find out which ones were new or unique to this era?

Ecosystem Features: How did living things depend on each other? What kinds of habitats or food chains existed?

Special Events or Changes: Did anything big happen during this time—like extinctions, new species appearing, or continents moving?

Quick-Write: Pretend you're a young scientist visiting this time period. What do you see, hear, and feel? What discovery would you write to Ms. Guadalupe about?

The Jurassic Era: Discover Your Time Period!

I**llustration or Habitat Drawing:** Draw what you imagine this time period looked like! Show the land, water, plants, and animals that lived there.

The Cretaceous Era: Discover Your Time Period!

Time period: _____

Climate and Geography: What did the world look like during this time? Was it hot or cold? Were there oceans, forests, or deserts?

Plants and Animals: What kinds of plants and animals lived here? Can you find out which ones were new or unique to this era?

Ecosystem Features: How did living things depend on each other? What kinds of habitats or food chains existed?

Special Events or Changes: Did anything big happen during this time—like extinctions, new species appearing, or continents moving?

Quick-Write: Pretend you're a young scientist visiting this time period. What do you see, hear, and feel? What discovery would you write to Ms. Guadalupe about?

The Cretaceous Era: Discover Your Time Period!

I**llustration or Habitat Drawing:** Draw what you imagine this time period looked like! Show the land, water, plants, and animals that lived there.

Educational Standards Alignment

This guide's discussion prompts and hands-on activities align with TEKS (Texas Essential Knowledge & Skills), SEL Competencies, Common Core State Standards (CCSS), and Next Generation Science Standards (NGSS). The alignment ensures that teachers can address multiple learning goals while fostering curiosity, critical thinking, and social-emotional growth.

Discussion Topics

Discovering Fossils (How Scientists Learn About the World)

TEKS:

- Science 4.10(C): Explore how fossils provide evidence of past living organisms and environments.
- Science 3.9(A–C): Describe and record changes to Earth's surface caused by natural events.
- ELAR 3.6(A), 4.6(A): Establish purpose for reading; make connections between texts and real-world knowledge.

CCSS:

- RL.3.1 / 4.1: Ask and answer questions to show understanding of a text.
- W.3.7 / 4.7: Conduct short research projects that build knowledge about a topic.

NGSS:

- 3-LS4-1: Analyze and interpret data from fossils to provide evidence of organisms and environments in Earth's past.
- 4-ESS1-1: Identify evidence from patterns in rock formations and fossils to explain landscape changes.

NCSS:

- Theme II – Time, Continuity, and Change: Examine how fossils reveal change over time.

Changing Earth (How Land and Environments Transform Over Time)

TEKS:

- Science 4.10(A): Explore and record how slow changes to Earth's surface occur.
- Science 3.9(A–C): Observe and describe changes caused by wind, water, and time.
- Social Studies 3.5(A–C): Describe how physical processes shape environments.

CCSS:

- RI.3.7 / 4.7: Use information from illustrations and text to understand scientific ideas.
- SL.3.1 / 4.1: Participate in discussions about scientific and historical changes.

NGSS:

- 4-ESS1-1: Evidence from rock layers and fossils shows how landscapes change.
- 3-ESS2-2: Obtain information to describe climates in different regions of the world.

NCSS:

- Theme III – People, Places, and Environments: Explore how the Earth's surface changes naturally over time.

Habitats and Survival (Where Living Things Find What They Need)

TEKS:

- Science 3.9(B): Identify and describe the flow of energy in a food chain and interactions in ecosystems.
- Science 4.9(A–C): Explore how organisms depend on and interact with each other and their environment.
- ELAR 3.11(A), 4.11(A): Write and discuss ideas that show understanding of topics studied.

CCSS:

- RI.3.2 / 4.2: Determine main ideas and explain how they are supported by details.
- W.3.2 / 4.2: Write informative texts that examine a topic and convey ideas clearly.

NGSS:

- 3-LS4-3: Construct arguments with evidence that organisms can survive only in environments where their needs are met.
- 3-LS4-4: Make a claim about how changes in an environment affect survival.

NCSS:

- Theme III – People, Places, and Environments: Understand how environments support living things.

Letters and Learning (How Writing Helps Us Discover and Connect)
TEKS:
- ELAR 3.11(A–D), 4.11(A–D): Compose correspondence using correct structure, detail, and tone.
- ELAR 3.12(A–C): Plan, draft, revise, and publish writing.
- ELAR 3.1, 4.1: Engage in conversations and presentations about topics studied.

CCSS:
- W.3.3 / 4.3: Write narratives to develop real or imagined experiences.
- SL.3.4 / 4.4: Report on a topic with appropriate facts and descriptive details.

NGSS:
- Science Practices: Communicate information and explanations using written and oral formats.

NCSS:
- Theme VIII – Science, Technology, and Society: Explore how communication helps share discoveries and knowledge.

Curiosity and Exploration (The Spirit of Asking Questions)
TEKS:
- Science 3.2(A–D), 4.2(A–D): Ask questions, plan and conduct investigations, collect and record data.
- ELAR 3.6(A), 4.6(A): Make connections between texts and personal experiences to deepen understanding.

CCSS:
- SL.3.1 / 4.1: Engage effectively in collaborative discussions.
- W.3.8 / 4.8: Gather and recall relevant information from sources.

NGSS:
- Science & Engineering Practices: Asking questions, defining problems, and analyzing information to construct explanations.

NCSS:
- Theme I – Culture: Recognize how curiosity and learning shape how humans understand their world.

Discoveries Close to Home (Finding Nature in Our Own Backyards)
TEKS:
- Science 3.1(B), 4.1(B): Plan and implement investigations using safe practices.
- Science 3.9(B), 4.9(A): Observe how living things interact within local ecosystems.
- Social Studies 3.5(C): Describe how people interact with and adapt to their environment.

CCSS:
- W.3.7 / 4.7: Conduct short research projects to build knowledge about a topic.
- SL.3.5 / 4.5: Include drawings or visuals in presentations to enhance understanding.

NGSS:
- 3-LS4-3: Construct arguments about how organisms depend on their environments.
- 3-ESS3-1: Make a claim about how humans can protect the environment.

NCSS:
- Theme III – People, Places, and Environments: Examine how people learn from and care for their surroundings.

Lesson 1: Fact or Fiction? The Dinosaur Debate

TEKS:
Science (Grade 3)
- 3.9A: Observe and describe the physical characteristics of environments and how they support populations and communities of organisms.
- 3.9C: Describe environmental changes such as floods and droughts where some organisms thrive and others perish.
- 3.10A: Explore how fossils provide evidence about the types of organisms that lived long ago and the nature of the environment at that time.

English Language Arts and Reading (Grade 3)
- 3.6(E): Make connections to personal experiences, ideas in other texts, and society.
- 3.7(B): Explain the relationships among the major and minor characters.
- 3.7(D): Describe the interaction of characters, including their relationships and changes they undergo.
- 3.11(B): Develop drafts into a focused piece of writing by organizing with structure (beginning, middle, end).
- 3.12(A): Generate and clarify questions about research topics.
- 3.12(B): Locate and gather relevant information from print and digital sources.

Technology Applications (Grades 3–5)
- 3.3B: Use research skills and digital tools to collect and organize information.

Next Generation Science Standards (NGSS)
- 3-LS4-1: Analyze and interpret data from fossils to provide evidence of organisms and the environments in which they lived long ago.

Science and Engineering Practices: Asking questions, defining problems, and communicating information.

Common Core State Standards – English Language Arts (CCSS–ELA)
- CCSS.ELA-LITERACY.RL.3.1: Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for answers.
- CCSS.ELA-LITERACY.RL.3.3: Describe characters and explain how their actions contribute to the sequence of events.
- CCSS.ELA-LITERACY.SL.3.1: Engage effectively in collaborative discussions with peers and adults.
- CCSS.ELA-LITERACY.W.3.8: Recall information from experiences or gather information from print and digital sources to take notes and categorize information.

AASL Standards Framework for Learners
- Inquire 1.1.2: Use prior and background knowledge as context for new learning.
- Think 1.1.6: Read, view, and listen for information presented in any format to make inferences and gather meaning.
- Share 3.1.2: Participate in collaborative conversations to deepen understanding.

Extensions
Art/ELA Integration:
- Standards: NGSS 3-LS4-1; CCSS.RL.3.7; CCSS.W.3.2; AASL 4.1.3; TEKS 3.10A; 3.11B

Library Collaboration:
- Standards: AASL 1.3.4; AASL 3.1.2; CCSS.SL.3.5; CCSS.W.3.6; TEKS 3.12A–B

STEM Connection:
- Standards: NGSS 3-5-ETS1-1; CCSS.SL.3.1; AASL 1.1; TEKS 3.10A; 3.9A

Lesson 2: Mapping Earth's History — The Three Great Eras

TEKS:
Science (Grade 3)
- 3.9A: Observe and describe the physical characteristics of environments and how they support populations and communities of organisms.
- 3.10A: Explore how fossils provide evidence about the types of organisms that lived long ago and the nature of the environment at that time.
- 3.10B: Identify and compare patterns in the physical characteristics of organisms.

English Language Arts and Reading (Grade 3)
- 3.6(E): Make connections to personal experiences, ideas in other texts, and society.
- 3.12(B): Locate and gather relevant information from print and digital sources.

Technology Applications (Grades 3–5)
- 3.3B: Use digital research tools to collect and organize information.

Next Generation Science Standards (NGSS)
- 3-LS4-1: Analyze and interpret data from fossils to provide evidence of organisms and the environments in which they lived long ago.
- 3-ESS2-2: Obtain and combine information to describe climates in different regions of the world.

Science and Engineering Practices: Asking questions, analyzing data, and communicating information.

Common Core State Standards – English Language Arts (CCSS–ELA)
- CCSS.ELA-LITERACY.RI.3.7: Use information gained from illustrations and text to demonstrate understanding.
- CCSS.ELA-LITERACY.W.3.2: Write informative/explanatory texts to convey ideas clearly.
- CCSS.ELA-LITERACY.SL.3.1: Engage effectively in collaborative discussions.

AASL Standards Framework for Learners
- Inquire 1.1.3: Develop and refine questions for new understanding.
- Think 1.1.6: Read, view, and listen for information to gather meaning.
- Share 3.1.2: Participate in collaborative conversations to deepen understanding.

Extensions
Art/ELA Integration:
- Standards: NGSS 3-LS4-1; CCSS.W.3.2; AASL 4.1.3; TEKS 3.10A–B

Library Collaboration:
- Standards: AASL 1.3.4; CCSS.SL.3.5; TEKS 3.12B

STEM Connection:
- Standards: NGSS 3-5-ETS1-1; CCSS.SL.3.1; TEKS 3.10A

Lesson 3: Postcards from the Past

Reading & Comprehension
- TEKS 3.6(A), 4.6(A), 5.6(A) — Establish purpose for reading, draw on prior knowledge, and make connections to personal experiences.
- TEKS 3.7(A–C), 4.7(A–C) — Analyze literary elements including theme, setting, and character interactions.
- TEKS 3.10(A), 4.10(A) — Explain author's purpose and message.
- TEKS 3.13(A–B), 4.13(A–B) — Identify and synthesize information across texts; make inferences and support with evidence.
- CCSS.ELA-LITERACY.RL.3.1 / 4.1 — Ask and answer questions to demonstrate understanding of a text.
- CCSS.ELA-LITERACY.RL.3.2 / 4.2 — Recount stories and determine central messages or themes.

Writing
- TEKS 3.11(A–D), 4.11(A–D) — Compose literary and informational texts with appropriate structure, detail, and tone.
- TEKS 3.12(A–C), 4.12(A–C) — Engage in the writing process: plan, draft, revise, edit, and publish.
- CCSS.ELA-LITERACY.W.3.3 / 4.3 — Write narratives to develop real or imagined experiences using descriptive details.
- CCSS.ELA-LITERACY.W.3.7 / 4.7 — Conduct short research projects that build knowledge about a topic.

Research and Inquiry
- TEKS 3.13(A–E), 4.13(A–E) — Use research skills to gather, evaluate, and present information from multiple sources.
- CCSS.ELA-LITERACY.W.3.8 / 4.8 — Gather information from print and digital sources; take notes and categorize ideas.

Oral and Written Conventions
- TEKS 3.10(A–D), 4.10(A–D) — Apply correct grammar, capitalization, punctuation, and spelling.
- CCSS.ELA-LITERACY.L.3.1 / 4.1 — Demonstrate command of conventions of standard English grammar and usage.

Speaking & Listening
- TEKS 3.1, 4.1, 5.1 — Engage actively in discussions by listening, responding, and sharing ideas.
- CCSS.ELA-LITERACY.SL.3.1 / 4.1 — Engage effectively in collaborative discussions about grade-level topics and texts.

Science

Earth and Space Science
- TEKS 3.9(A–C) — Observe and describe the processes that change Earth's surface over time.
- TEKS 4.10(C) — Explore how fossils provide evidence of past living organisms and environments.
- NGSS 3-LS4-1 — Analyze and interpret data from fossils to provide evidence of organisms and environments in Earth's past.
- NGSS 4-ESS1-1 — Identify evidence from rock formations and fossils to explain landscape changes over time.

Life Science
- TEKS 3.9(B) — Identify and describe the flow of energy in a food chain and interactions in ecosystems.
- NGSS 3-LS4-3 — Construct arguments with evidence that organisms can survive only in environments that meet their needs.

Scientific Investigation and Reasoning
- TEKS 3.2(A–D), 4.2(A–D) — Plan and conduct descriptive investigations; collect and record data using tools and models.
- NGSS Practices — Asking questions, using models, constructing explanations, communicating findings.

Social Studies

NCSS Themes
- Theme II: Time, Continuity, and Change — Examine how fossils and historical evidence reveal change over time.
- Theme III: People, Places, and Environments — Explore how geography and climate influence living things.
- Theme VIII: Science, Technology, and Society — Investigate how scientific discoveries shape our understanding of history.

TEKS Connections
- 3.5(A–C) — Describe how human and natural processes influence environments.
- 4.6(A–B) — Identify how physical environment affects human activity and settlement patterns.
- 5.24(A–B) — Analyze how advances in science and technology have impacted society, past and present.

Visual Arts

Art and Creative Expression
- TEKS 3.1(A), 4.1(A), 5.1(A) — Develop and organize ideas from direct observation and imagination.
- TEKS 3.2(A), 4.2(A), 5.2(A) — Experiment with media and techniques to produce original artwork.
- NCAS VA:Cr1.1.3a / 4a — Generate and conceptualize artistic ideas and work.

Art Reflection & Connection
- TEKS 3.4(A), 4.4(A) — Relate visual art to history, science, and culture.
- NCAS VA:Re7.2.3a / 4a — Analyze how art reflects and connects to time periods and environments.

Cross-Curricular Competencies

- Inquiry-Based Thinking: Students pose questions, gather evidence, and communicate findings.
- Creativity & Voice: Writing as a "paleontologist" builds empathy, imagination, and audience awareness.
- Interdisciplinary Literacy: Integrates reading, research, and science through creative formats.
- Cultural & Scientific Awareness: Connects literacy with paleontology, Texas geology, and natural history.