Summit K12 Pacing Materials

Third Grade Science

SUMMIT K12

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Introduction

The Summit K12 pacing materials are intended to assist educators in planning and organizing science curriculum according to the Texas Essential Knowledge and Skills for 3rd grade. This guide provides a comprehensive timeline and framework based on state standards and serves as an optional resource that teachers and administrators may use in addition to or in support of any district-provided pacing guidelines.

All pacing materials are based on 40-minute class sessions. Please note that actual times will vary depending on scheduling considerations, the number of students, the amount of setup done ahead of time, the depth of class discussions, and your own needs and preferences.

Year at a Glance

Reporting Category	# of TEKS	Estimated Time Allotment
Matter and Energy	4	24 days
Force, Motion, and Energy	4	30 days
Earth and Space	8	52 days
Organisms and Environments	6	41 days
		148 days*

**Only 148 days have been planned out of the 180 school days, though this course includes more than enough material to cover the full 180 days of instruction. This was intended to account for beginning of year logistics, STAAR review, district and state testing, field trips, or any other interruptions to the daily cycle of instruction. Pacing should be adjusted according to student assessment data and district instructional priorities.*

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Scope and Sequence

Summit K12 has developed an optional year-long scope and sequence for schools and districts who wish to follow a set lesson progression that ensures all TEKS are covered within one school year. Within this framework, all grade-level TEKS have been organized into units of study with suggested time allotments for each TEKS. Each lesson guide includes key concepts, investigations, and activities to facilitate quality instruction for all learners.

Scientific and Engineering Practices and Recurring Themes and Concepts standards are integrated into lessons throughout the course and should be taught within the context of science content standards.

Teachers and administrators should adjust the instructional timeline according to student data and classroom needs. This scope and sequence was designed to be flexible, with extra time built in for concept and spiral review, in-depth discussions and investigations, and extension activities to support learners of all abilities.

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3rd Grade Science Units

Unit 1:
- 3.6A: Physical Properties
- 3.6B: States of Matter
- 3.6C: Heating and Cooling Matter

Unit 2:
- 3.6D: Combining Materials

Unit 3:
- 3.7A: Describing Forces
- 3.7B: Changing Position and Motion

Unit 4:
- 3.8A: Forms of Energy
- 3.8B: Speed and Mechanical Energy

Unit 5:
- 3.9A: Models of Sun, Earth, and Moon
- 3.9B: The Planets

Unit 6:
- 3.10A: Daily Weather

Unit 7:
- 3.10B: Characteristics of Soil
- 3.10C: Rapid Changes

Unit 8:
- 3.11A: Using Natural Resources
- 3.11B: Conserving Natural Resources
- 3.11C: The 3 R's

Unit 9:
- 3.12A: Migration, Hibernation, and Dormancy

Unit 10:
- 3.12B: Changes in a Food Chain
- 3.12C: Environmental Changes

Unit 11:
- 3.12D: Texas Fossils

Unit 12:
- 3.13A: Animals' Structures and Functions
- 3.13B: Animal and Plant Life Cycles

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Scope and Sequence

RC	Unit	TEKS	Suggested Instructional Time	Unit Total
RC1: Matter and Energy	1	**3.6A:** Physical Properties	7 days	17 days
		3.6B: States of Matter	5 days	
		3.6C Heating and Cooling Matter	5 days	
	2	**3.6D:** Combining Materials	7 days	7 days
RC2: Force, Motion, and Energy	3	**3.7A:** Describing Forces	8 days	8 days
		3.7B: Changing Position and Motion	8 days	
	4	**3.8A:** Forms of Energy	6 days	14 days
		3.8B: Speed and Mechanical Energy	8 days	
RC3: Earth and Space	5	**3.9A:** Models of the Sun, Earth and Moon	8 days	13 days
		3.9B: The Planets	5 days	
	6	**3.10A:** Daily Weather	7 days	7 days
	7	**3.10B:** Characteristics of Soil	8 days	16 days
		3.10C: Rapid Changes	8 days	
	8	**3.11A:** Using Natural Resources	6 days	16 days
		3.11B: Conserving Natural Resources	5 days	
		3.11C: The 3 R's	5 days	
RC4: Organisms and Environments	9	**3.12A:** Migration, Hibernation, and Dormancy	8 days	8 days
	10	**3.12B:** Changes in a Food Chain	7 days	15 days
		3.12C: Environmental Changes	8 days	
	11	**3.12D:** Texas Fossils	5 days	5 days
	12	**3.13A:** Animals' Structures and Functions	8 days	13 days
		3.13B: Animal and Plant Life Cycles	5 days	

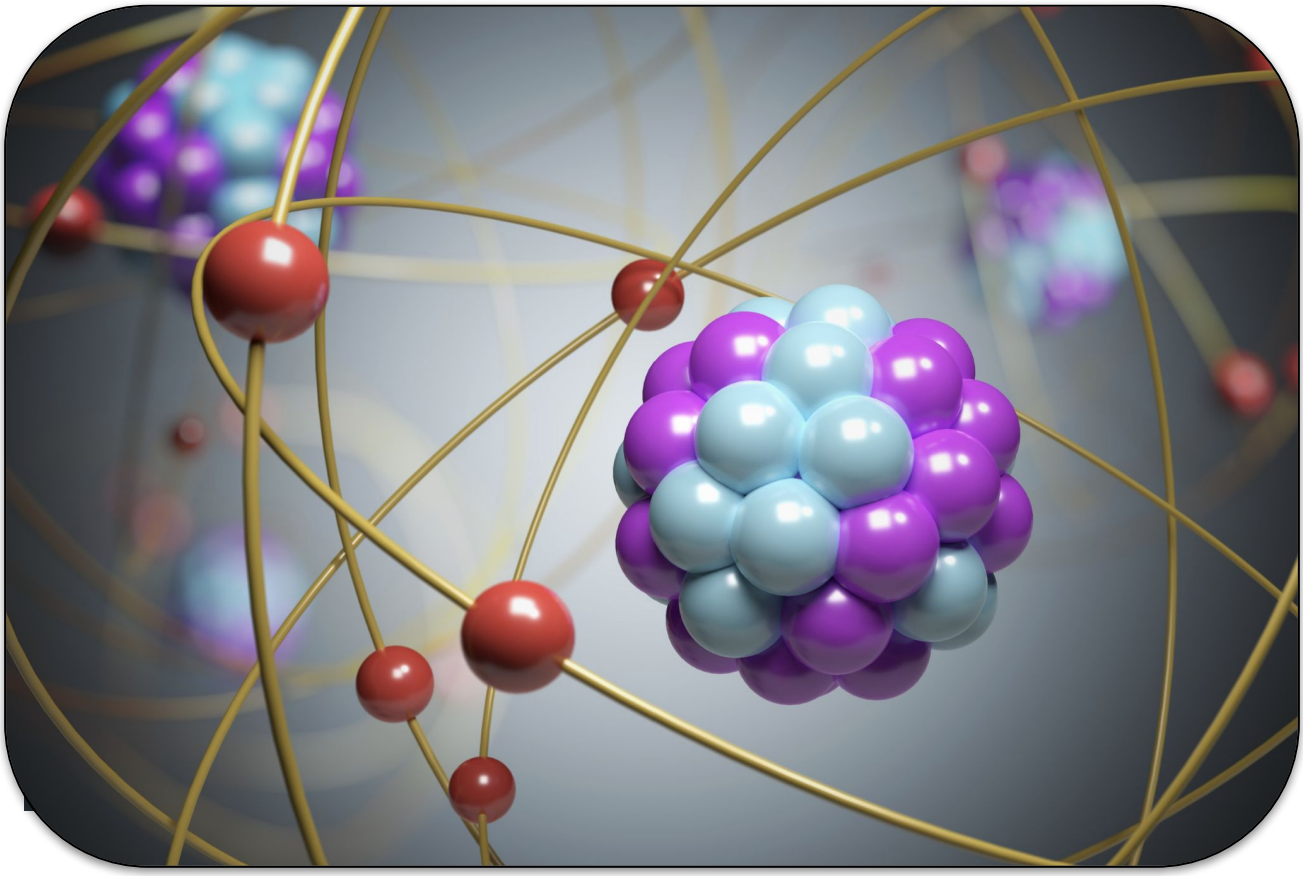
Pacing Guide

In addition to the Scope and Sequence, Summit K12 has also developed a Pacing Guide that can be adapted for teaching the Texas Essential Knowledge and Skills (TEKS) in any preferred order or according to a district provided scope and sequence. The Pacing Guide is arranged by reporting category and includes suggested instructional time for each TEKS, but the actual order of instruction is flexible and should be adjusted according to student needs and district priorities.

Summit K12 suggests introducing the fundamental concepts and principles of science prior to beginning instruction. To assist with this, the Scientific and Engineering Practices (SEPS) section of the LMS provides valuable resources that can be utilized at the teacher's discretion. Within the "Introduction to Science" unit, there are lessons on topics such as the definition of science, scientific conversations, and science notebooking. In addition, SEPS presentations are available to aid in teaching and practicing these skills.

Individual TEKS Pacing Guides

On pages 8-33, you will find more in depth pacing guides for each individual TEKS. Please note that the time allotment lists the estimated time it may take to complete each activity in the Lesson Guide. Please use your professional judgment to determine which activities are best suited for your students, while keeping in mind the recommended pacing located on page 7.



Reporting Category 1:
Matter and Energy

NOTE: The time allotment for each TEKS lists the estimated time it may take to complete each activity in the Lesson Guide. Please use your professional judgment to determine which activities are best suited for your students, while keeping in mind the recommended pacing located on pg. 6.

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3.6A Physical Properties

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Sorting Recyclable Material	30 minutes
	* Establish Relevance: Recycling Centers	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Temperature Exploration	45 minutes
	* Investigation: Finding the Mass	45 minutes
	* Investigation: Strength of Magnets	45 minutes
	* Investigation: Sink or Float?	45 minutes
	TEKS Video: Physical Properties	15 minutes
Apply and Extend	Activity: Measuring Mass	45 minutes
	Engineering Challenge: Ice Chest	45 minutes
	Research: Magnets in Our Everyday Lives	45 minutes
	Literacy Connection: Science Mill	30 minutes
	Study Guide: Physical Properties	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Sorting Recyclable Material	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Performance Task: Design an Efficient Sorting System	45 minutes

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3.6B States of Matter

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Bubbles	30 minutes
	* Establish Relevance: Classifying Bubbles	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: What Are The States Of Matter?	45 minutes
	* Investigation: Exploring States of Matter	30 minutes
	* Investigation: Matter Mystery Boxes	45 minutes
	* Investigation: Classifying Matter	45 minutes
	TEKS Video: States of Matter	15 minutes
Apply and Extend	Activity: Frayer Model	30 minutes
	Activity: States of Matter Card Sort	30 minutes
	Literacy Connection: What is Matter	30 minutes
	Study Guide: States of Matter	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Bubbles	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Writing: Classifying and Describing Matter	45 minutes

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3.6C Heating and Cooling Matter

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Geysers	30 minutes
	Establish Relevance: Changes in Matter	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Changes in Water	90 minutes
	* Investigation: Heat Changes Matter	45 minutes
	* Investigation: A Look at Condensation	45 minutes
	TEKS Video: Heating and Cooling Matter	15 minutes
Apply and Extend	Activity: Changes in Matter	30 minutes
	Literacy Connection: Glaciers: Earth's Frozen Giants	30 minutes
	Engineering Challenge: Soda Can Koozie	60 minutes
	Connection to STEM: HVAC Technician	30 minutes
	Study Guide: Heating and Cooling Matter	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Geysers	30 minutes
	* Connecting to the Anchoring Phenomenon	45 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Performance Task: Melting Candles	45 minutes

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3.6D Combining Materials

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: 3D Printed Homes	30 minutes
	Establish Relevance: What Materials Are Used To Build Homes?	20 minutes
Investigate and Learn **Suggested Activities*	* Engineering Design Process: Build A Home, Part 1 (Problem and Solutions)	60 minutes
	* Engineering Design Process: Build A Home, Part 2 (Design and Plan)	60 minutes
	* Engineering Design Process: Build A Home, Part 3 (Build)	60 minutes
	* Engineering Design Process: Build A Home, Part 4 (Test)	60 minutes
	* Engineering Design Process: Build A Home, Part 5 (Improve)	60 minutes
	* Engineering Design Process: Build A Home, Part 6 (Propose Solutions)	45 minutes
	TEKS Video: Combining Materials	15 minutes
Apply and Extend	Article: Different Home Structures	30 minutes
	Connection To Math: Building Costs	30 minutes
	Connection To STEM: Construction Engineers	30 minutes
	Research: Building Materials	45 minutes
	Study Guide: Combining Materials	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: 3D Printed Homes	20 minutes
	* Connecting to the Anchoring Phenomenon	30 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Performance Task: Building A Home In Alaska	30 minutes

Reporting Category 2:
Force, Motion, and Energy

NOTE: The time allotment for each TEKS lists the estimated time it may take to complete each activity in the Lesson Guide. Please use your professional judgment to determine which activities are best suited for your students, while keeping in mind the recommended pacing located on pg. 6.

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3.7A Describing Forces

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Toy Train	30 minutes
	* Establish Relevance: Playground Motion	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Magnets, Forces, and Toy Cars	45 minutes
	* Investigation: Gravity as a Force	45 minutes
	* Planning an Investigation: Ping Pong Inquiry	45 minutes
	TEKS Video: Describing Forces	15 minutes
Apply and Extend	Article: What is Force?	30 minutes
	What I Wonder About: Magnetism	30 minutes
	Activity: Push and Pull in Sports	30 minutes
	Writing: Forces in My Life	30 minutes
	Study Guide: Describing Forces	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Toy Train	30 minutes
	* Connecting to the Anchoring Phenomenon	30 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Performance Task: Forces	30 minutes

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3.7B Changing Position and Motion

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Rube Goldberg Machine	30 minutes
	Activity: Pushes and Pulls Cause Change	15 minutes
Investigate and Learn **Suggested Activities*	* Activity: Campus Walk	30 minutes
	* Activity: How to Plan a Descriptive Investigation	45 minutes
	* Investigation: Feel the Pull	45 minutes
	* Investigation: Pushing Toward the Target	45 minutes
	* Investigation: The Effect of a Push or Pull	2-3 days
	TEKS Video: Changing Position and Motion	15 minutes
Apply and Extend	Literacy Connection: Changing Position and Motion	30 minutes
	Virtual Investigation: Force and Motion	30 minutes
	Problem Solvers: Mechanical Engineers	30 minutes
	Writing: How I Use Push and Pull	30 minutes
	Study Guide: Changing Position and Motion	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Rube Goldberg Machine	30 minutes
	* Connecting to the Anchoring Phenomenon	30 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Engineering Challenge: Playground Engineering	60 minutes

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3.8A Forms of Energy

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Toaster	30 minutes
	* Establish Relevance: Home Energy	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Energy Inquiry	45 minutes
	* Investigation: Toys and Energy	45 minutes
	* Investigation: Classroom Energy	45 minutes
	Argumentation: Flow of Energy	90 minutes
	TEKS Video: Forms of Energy	15 minutes
Apply and Extend	Activity: Energy Scavenger Hunt	30 minutes
	Activity: Forms of Energy Card Sort	30 minutes
	Article: Mechanical Energy and Roller Coasters	30 minutes
	Research: Exploring Energy	45 minutes
	Study Guide: Forms of Energy	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Toaster	30 minutes
	* Connecting to the Anchoring Phenomenon	30 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Performance Task: Design a Tool	45 minutes

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3.8B Speed and Mechanical Energy

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Mountain Coaster	30 minutes
	* Establish Relevance: Speed	15 minutes
Investigate and Learn **Suggested Activities*	* Engineering Challenge: Rubber Band Racers	225 minutes
	* Investigation: Down the Hill	50 minutes
	* Planning an Investigation: Speed and Mechanical Energy Inquiry	130 minutes
	TEKS Video: Speed and Mechanical Energy	15 minutes
Apply and Extend	Investigation: Off to the Races	30 minutes
	Activity: Relating Speed and Energy	30 minutes
	Literacy Connection: Mechanical Energy and Collisions	30 minutes
	Connection to STEM Career: Roller Coaster Designer	30 minutes
	Study Guide: Speed and Mechanical Energy	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Mountain Coaster	30 minutes
	* Connecting to the Anchoring Phenomenon	30 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Performance Task: Need for Speed	45 minutes

Reporting Category 3:
Earth and Space

NOTE: The time allotment for each TEKS lists the estimated time it may take to complete each activity in the Lesson Guide. Please use your professional judgment to determine which activities are best suited for your students, while keeping in mind the recommended pacing located on pg. 6.

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3.9A Models of the Sun, Earth, and Moon

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Moon in the Daytime Sky	30 minutes
	* Establish Relevance: Sun, Earth, and Moon Relationship	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Movement of the Sun, Earth, and Moon	45 minutes
	* Stations: Exploring Sun, Earth, and Moon Models	65 minutes
	* Engineering Challenge: Modeling Orbits	90 minutes
	TEKS Video: Models of the Sun, Earth, and Moon	15 minutes
Apply and Extend	Activity: Making a Model	30 minutes
	Literacy Connection: Nicolaus Copernicus	30 minutes
	Virtual Investigation: Gravity and Orbits	30 minutes
	Investigation: Exploring a Solar Eclipse	45 minutes
	Study Guide: Models of the Sun, Earth, and Moon	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Moon in the Daytime Sky	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Performance Task: Moon in the Daytime Sky	45 minutes

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3.9B The Planets

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Planets	30 minutes
	* Establish Relevance: Planets	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Order of Planets	45 minutes
	* Investigation: Modeling Scale and Proportion	45 minutes
	* Investigation: Solar System in My Pocket	45 minutes
	* Field Investigation: Solar System in the Schoolyard	45 minutes
	TEKS Video: The Planets	15 minutes
Apply and Extend	Research: Earth is Habitable	45 minutes
	Science Around You: Win a Trip to Space Camp!	30 minutes
	Activity: Card Sort—The Planets	30 minutes
	Connection to STEM Career: Astronomers	30 minutes
	Study Guide: The Planets	20 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Planets	30 minutes
	* Connecting to the Anchoring Phenomenon	30 minutes
	Concept Mastery Assessments	20 mins each
	Vocabulary Mastery	15 minutes
	Performance Task: Solar System Model	45 minutes

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3.10A Daily Weather

** Additional time required*

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Weather in Different Places	30 minutes
	Establish Relevance: Day-To-Day Weather	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Measuring and Comparing Weather	45 minutes*
	* Activity: Comparing Weather Across Texas	45 minutes
	* Writing: Interpreting Our Weather Data	45 minutes
	* Research: Weather in National Parks	45 minutes
	TEKS Video: Daily Weather	15 minutes
Apply and Extend	Activity: Compare and Contrast Weather Postcards	30 minutes
	Literacy Connection: Weather in Different Places	30 minutes
	Writing: Weather Claim, Evidence, Reasoning	30 minutes
	Engineering Challenge: Building a Thermometer	60 minutes
	Study Guide: Daily Weather	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Weather in Different Places	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Performance Task: Weather Around the World	45 minutes

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3.10B Characteristics of Soil

** Additional time required*

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Composting	30 minutes
	* Establish Relevance: Characteristics of Soil	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Soil Profiles	45 minutes
	* Investigation: Shake, Rattle, and Roll - Soil Formation	45 minutes
	* Investigation: Breaking It Down - Vermicomposting	40 minutes*
	* Investigation: Soil Detectives	45 minutes
	TEKS Video: Characteristics of Soil	15 minutes
Apply and Extend	Field Investigation: Exploring Soil in Our Schoolyard	30 minutes
	Research: Vermicomposting	60 minutes
	Activity: Benefits of Earthworms	30 minutes
	Activity: Soil Formation Sequence Map	30 minutes
	Literacy Connection: How is Soil Formed?	30 minutes
	Study Guide: Characteristics of Soil	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Composting	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Argumentation: Soil Formation	90 minutes

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3.10C Rapid Changes

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Rapid Changes	30 minutes
	* Establish Relevance: Rapid Changes that Change the Earth's Surface	15 minutes
Investigate and Learn **Suggested Activities*	* Activity: Rapid Changes	30 minutes
	* Investigation: Volcanoes	45 minutes
	* Investigation: Earthquakes	45 minutes
	* Investigation: Landslides	50 minutes
	TEKS Video: Rapid Changes	15 minutes
Apply and Extend	Connection to STEM Career: Volcanologist	30 minutes
	Activity: What Caused The Change?	30 minutes
	Activity: Cause and Effect - Rapid Changes to Earth	30 minutes
	Activity: Odd One Out	30 minutes
	Activity: Effects of Moving Water	30 minutes
	Study Guide: Rapid Changes	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Rapid Changes	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Performance Task: Earthquake-Resistant Homes	60 minutes

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3.11A Using Natural Resources

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Wood	30 minutes
	* Establish Relevance: Using Natural Resources	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Exploring Natural Resources	45 minutes
	* Engineering Challenge: Road Construction	45 minutes
	* Stations: Natural Resources	60 minutes
	TEKS Video: Using Natural Resources	15 minutes
Apply and Extend	Connection to STEM Career: Natural Resource Specialist	30 minutes
	Writing: Natural Resources	30 minutes
	Argumentation: What's It Made From?	90 minutes
	Activity: Natural Resource Frayer Model	30 minutes
	Study Guide: Using Natural Resources	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Wood	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Performance Task: Natural Resources Connections	45 minutes

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3.11B Conserving Natural Resources

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Planting a Tree	30 minutes
	* Establish Relevance: How Can We Conserve Natural Resources?	15 minutes
Investigate and Learn **Suggested Activities*	* Stations: Conservation	60 minutes
	* Activity: Ways I Can Conserve	45 minutes
	TEKS Video: Conserving Natural Resources	15 minutes
Apply and Extend	Connection to STEM Career: Conservationist	30 minutes
	Presentation: The Best Choice	30 minutes
	Study Guide: Conserving Natural Resources	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Planting A Tree	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Performance Task: Natural Resources CER	45 minutes

3.11C The 3 R's

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Lake Pollution	30 minutes
	* Establish Relevance: The 3 R's	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: How Much Trash Do You Make?	45 minutes
	* Engineering Challenge: Repurpose Challenge	90 minutes
	TEKS Video: The 3 R's	15 minutes
Apply and Extend	Literacy Connection: Applying the 3 R's	30 minutes
	Presentation: Can We Recycle It?	30 minutes
	Study Guide: The 3 R's	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Lake Pollution	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Performance Task: Sustainable Swap	45 minutes

Reporting Category 4:
Organisms and Environments

NOTE: The time allotment for each TEKS lists the estimated time it may take to complete each activity in the Lesson Guide. Please use your professional judgment to determine which activities are best suited for your students, while keeping in mind the recommended pacing located on pg. 6.

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3.12A Migration, Hibernation, and Dormancy

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Plant Behavior	30 minutes
	* Establish Relevance: Migration, Hibernation, Dormancy	30 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Dormancy	45 minutes
	* Investigation: Migration	45 minutes
	* Activity: Plant and Animal Behaviors	45 minutes
	TEKS Video: Migration, Hibernation, Dormancy	15 minutes
Apply and Extend	Activity: Visual Vocabulary	30 minutes
	Activity: Hibernation or Migration?	30 minutes
	Literacy Connection: Jane Goodall	30 minutes
	Research: Hibernation	90 minutes
	Study Guide: Migration, Hibernation, Dormancy	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Plant Behavior	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Performance Task: Plant and Animal Behaviors	45 minutes

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3.12B Changes in a Food Chain

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Hawk	30 minutes
	* Establish Relevance: Who Eats What?	15 minutes
Investigate and Learn **Suggested Activities*	* Activity: Flow of Energy In Food Chains	45 minutes
	* Activity: Classroom Food Chains (Part 1)	45 minutes
	* Investigation: Removing Part of the Food Chain	45 minutes
	* Activity: Classroom Food Chains (Part 2)	45 minutes
	TEKS Video: Changes in a Food Chain	15 minutes
Apply and Extend	Literacy Connection: The Wolves of Yellowstone	30 minutes
	Activity: Modeling a Prairie Food Chain	30 minutes
	Writing: Removing Part of the Food Chain	30 minutes
	Research: Food Chains	60 minutes
	Study Guide: Changes in a Food Chain	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Hawk	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Performance Task: Food Chains	45 minutes

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3.12C Environmental Changes

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Ants in Flood Waters	30 minutes
	* Establish Relevance: Floods and Droughts	15 minutes
Investigate and Learn **Suggested Activities*	* Discussion: Move, Thrive and Perish Mini-Lesson	30 minutes
	* Investigation: Plant and Animal Responses to Floods	45 minutes
	* Investigation: Plant and Animal Responses to Drought	45 minutes
	* Investigation: Plant and Animal Responses to Wildland Fires	45 minutes
	TEKS Video: Environmental Changes	15 minutes
Apply and Extend	Activity: Effects of Environmental Changes	30 minutes
	Connection to STEM Career: Restoration Ecologist	30 minutes
	Writing: Plant and Animal Responses	30 minutes
	Literacy Connection: The Impact of Drought	30 minutes
	Study Guide: Environmental Changes	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Ants in Flood Waters	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Performance Task: Natural Changes to the Environment	45 minutes

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3.12D Texas Fossils

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Plant Fossil	30 minutes
	* Establish Relevance: Fossils	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Fossil Formation	45 minutes
	* Investigation: Texas Fossils	45 minutes
	* Activity: What Do Fossils Say?	45 minutes
	TEKS Video: Texas Fossils	15 minutes
Apply and Extend	Literacy Connection: Exploring Dinosaur Valley State Park	30 minutes
	Connection to STEM Career: Geochemist	30 minutes
	Writing: Fossil Formation	30 minutes
	What I Wonder About: Texas Fossils	30 minutes
	Study Guide: Texas Fossils	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Plant Fossil	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Performance Task: Fossils - Evidence of the Past	45 minutes

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3.13A Animals' Structures and Functions

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Giraffe	30 minutes
	* Establish Relevance: Structure and Function	15 minutes
Investigate and Learn **Suggested Activities*	* Activity: Surviving the Savanna	45 minutes
	* Stations: Structure and Function	60 minutes
	* Engineering Challenge: Building Animal Structures	60 minutes
	TEKS Video: Animal Structures and Functions	15 minutes
Apply and Extend	Activity: What's the Function?	30 minutes
	Literacy Connection: Kingfisher	30 minutes
	Writing: Animal Diagram	30 minutes
	Activity: Help! I Got Lost in the Woods!	30 minutes
	Study Guide: Animals' Structures and Functions	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Giraffe	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Performance Task: Animal Designs	60 minutes

3.13B Animal and Plant Life Cycles

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Beetle and Crickets	30 minutes
	* Establish Relevance: Comparing Life Cycles	15 minutes
Investigate and Learn **Suggested Activities*	* Activity: Exploring Life Cycles	45 minutes
	* Investigation: Life Cycles of Insects	45 minutes
	* Investigation: Plant Life Cycles	45 minutes
	TEKS Video: Animal and Plant Life Cycles	15 minutes
Apply and Extend	Activity: Life Cycle Match It Up	30 minutes
	Literacy Connection: Biologist	30 minutes
	Writing: Comparing Life Cycles	30 minutes
	Connection to STEM Career: Entomologist	30 minutes
	Study Guide: Animal and Plant Life Cycles	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Beetles and Crickets	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessments	20 min each
	Vocabulary Mastery	15 minutes
	Performance Task: Creating a Life Cycle Diagram	60 minutes