Summit K12 Pacing Materials

2nd Grade Science

SUMMIT K12

Table of Contents

Introduction. . . . 3
Scope and Sequence. . . . 4 - 5
Pacing Guide. . . . 6 - 7
Individual TEKS Pacing Guides. . . . 8 - 34

- Reporting Category 1: Matter and Its Properties. . . . 8
  - 2.6A: Properties of Matter. . . . 9
  - 2.6B: Physical Changes of Matter. . . . 10
  - 2.6C: Combining to Build. . . . 11
- Reporting Category 2: Force, Motion, and Energy. . . . 12
  - 2.7A: Collisions. . . . 13
  - 2.7B: Strength of Pushes and Pulls. . . . 14
  - 2.8A: Sound. . . . 15
  - 2.8B: Sound Levels. . . . 16
  - 2.8C: Using Sound to Communicate. . . . 17
- Reporting Category 3: Earth and Space. . . . 18
  - 2.9A: The Sun and the Moon. . . . 19
  - 2.9B: Objects in the Sky. . . . 20
  - 2.10A: The Movement of Rock and Soil. . . . 21
  - 2.10B: Weather. . . . 22
  - 2.10C: Severe Weather. . . . 23
  - 2.11A: Resources. . . . 24
  - 2.11B: Reduce, Reuse and Recycle. . . . 25
- Reporting Category 4: Organisms and Environments. . . . 26
  - 2.12A: Physical Characteristics of Environments. . . . 27
  - 2.12B: Food Chains. . . . 28
  - 2.12C: Pollination and Moving Seeds. . . . 29
  - 2.13A: Plant Structures. . . . 30
  - 2.13B: Structures and Behaviors of Animals. . . . 31
  - 2.13C: Animal Groups. . . . 32
  - 2.13D: Animal Life Cycles. . . . 33

SUMMIT K12

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 2nd 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 30-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 Its Properties	3	24 days
Force, Motion, and Energy	5	40 days
Earth and Space	7	46 days
Organisms and Environments	7	40 days
		150 days*

**Only 150 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.*

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.

SUMMIT K12

2nd Grade Science Units

Unit 1:
- 2.6A: Properties of Matter
- 2.6B: Physical Changes of Matter
- 2.6C: Combining to Build

Unit 2:
- 2.7A: Collisions
- 2.7B: Strength of Pushes and Pulls

Unit 3:
- 2.8A: Sound
- 2.8B: Sound Levels
- 2.8C: Using Sound to Communicate

Unit 4:
- 2.9A: The Sun and the Moon
- 2.9B: Objects in the Sky

Unit 5:
- 2.10A: The Movement of Rock and Soil
- 2.10B: Weather
- 2.10C: Severe Weather

Unit 6:
- 2.11A: Resources
- 2.11B: Reduce, Reuse, and Recycle

Unit 7:
- 2.12A: Physical Characteristics of Environments
- 2.12B: Food Chains

Unit 8:
- 2.12C: Pollination and Moving Seeds
- 2.13A: Plant Structures
- 2.13B: Structures and Behaviors of Animals

Unit 9:
- 2.13C: Animal Groups
- 2.13D: Animal Life Cycles

SUMMIT K12

Scope and Sequence

RC	Unit	TEKS	Suggested Instructional Time	Unit Total
RC1: Matter and Its Properties	1	**2.6A:** Properties of Matter	8 days	24 days
		2.6B: Physical Changes of Matter	8 days	
		2.6C: Combining to Build	8 days	
RC2: Force, Motion, and Energy	2	**2.7A:** Collisions	8 days	16 days
		2.7B: Strength of Pushes and Pulls	8 days	
	3	**2.8A:** Sound	8 days	24 days
		2.8B: Sound Levels	8 days	
		2.8C: Using Sound to Communicate	8 days	
RC3: Earth and Space	4	**2.9A:** The Sun and the Moon	6 days	12 days
		2.9B: Objects in the Sky	6 days	
	5	**2.10A:** The Movement of Rock and Soil	8 days	22 days
		2.10B: Weather	6 days	
		2.10C: Severe Weather	8 days	
	6	**2.11A:** Resources	6 days	12 days
		2.11B: Reduce, Reuse, Recycle	6 days	
RC4: Organisms and Environments	7	**2.12A:** Physical Characteristics of Environments	6 days	12 days
		2.12B: Food Chains	6 days	
	8	**2.12C:** Pollination and Moving Seeds	8 days	18 days
		2.13A: Plant Structures	5 days	
		2.13B: Structures and Behaviors of Animals	5 days	
	9	**2.13C:** Animal Groups	5 days	10 days
		2.13D: Animal 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 6.

Reporting Category 1:
Matter and Its Properties

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.

SUMMIT K12

2.6A Properties of Matter

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Peanut Butter	30 minutes
	* Establish Relevance: How is this Similar?	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Lumpy, Bumpy, Scratchy, Smooth	45 minutes
	* Investigation: Bend, Twist, and Stretch	45 minutes
	* Investigation: Hot or Cold?	45 minutes
	* Investigation: Solid or Liquid?	90 minutes
	E-Book: Properties of Matter	10 minutes
Apply and Extend	Activity: Odd One Out	30 minutes
	Writing: What is the Matter?	30 minutes
	Literacy Connection: All About Chemists	30 minutes
	Activity: How Is Matter Used?	30 minutes
	Study Guide: Properties of Matter	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Peanut Butter	30 minutes
	* Connecting to the Anchoring Phenomenon	30 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: Classifying Matter	30 minutes

SUMMIT K12

2.6B Physical Changes of Matter

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Ice Sculptures	30 minutes
	* Establish Relevance: Discussion Changing Matter	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Kirigami Design	30 minutes
	* Investigation: Sanding	45 minutes
	* Investigation: Changes Caused by Melting and Freezing	90 minutes
	E-Book: Physical Changes of Matter	10 minutes
Apply and Extend	Inquiry: This to That	45 minutes
	Activity: Melting and Freezing Picture Pass	30 minutes
	Literacy Connection: The First Ice Hotel	30 minutes
	Research STEM Careers: Carpentry	45 minutes
	Study Guide: Physical Changes of Matter	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Ice Sculptures	30 minutes
	* Connecting to the Anchoring Phenomenon	30 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: Frozen Pops	60 minutes

SUMMIT K12

2.6C Combining to Build

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Bird Nest	30 minutes
	Establish Relevance: Comparing Nests	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Making New Objects	45 minutes
	* Engineering Design Process: Build an Animal Home, Part 1	30 minutes
	* Engineering Design Process: Build an Animal Home, Part 2	30 minutes
	* Engineering Design Process: Build an Animal Home, Part 3	45 minutes
	* Engineering Design Process: Build an Animal Home, Part 4	45 minutes
	* Engineering Design Process: Build an Animal Home, Part 5	30 minutes
	E-Book: Combining to Build	15 minutes
Apply and Extend	Activity: Exploring Tangrams	30 minutes
	Investigation: Noodle Bridges	60 minutes
	Literacy Connection: Artificial Coral Reefs	30 minutes
	Research STEM Careers: Construction	45 minutes
	Study Guide: Combining to Build	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Bird Nest	30 minutes
	* Connecting to the Anchoring Phenomenon	30 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: Small Units and New Objects	45 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.

SUMMIT K12

2.7A Collisions

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Water Balloons	30 minutes
	Establish Relevance: Objects Push on Each Other	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Collisions	45 minutes
	* Investigation: Down the Ramp Part 1	30 minutes
	* Investigation: Down the Ramp Part 2	45 minutes
	* Activity: Cause and Effect of Collisions	45 minutes
	E-Book: Collisions	15 minutes
Apply and Extend	Activity: Colliding Objects	45 minutes
	Investigation: Flour Power	30 minutes
	What I Wonder About: Collisions	45 minutes
	Literacy Connection: Bicycle Helmets Take a Test	30 minutes
	Engineering Challenge: Design a Helmet	60 minutes
	Study Guide: Collisions	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Water Balloons	30 minutes
	* Connecting to the Anchoring Phenomenon	30 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: The Effects of a Collision	30 minutes

SUMMIT K12

2.7B Strength of Pushes and Pulls

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Rowing Team	30 minutes
	* Establish Relevance: Spinning Tops	30 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Ramps	45 minutes
	* Investigation: Catapults	45 minutes
	* Plan an Investigation: Strength of Force	90 minutes
	E-Book: Strength of Pushes and Pulls	10 minutes
Apply and Extend	Activity: Modeling Strength of Force	30 minutes
	Writing: Comparing Strength of Force	30 minutes
	Engineering Challenge: Swings	45 minutes
	Literacy Connection: Punkin Chunkin and Trebuchets	30 minutes
	Study Guide: Strength of Pushes and Pulls	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Rowing Team	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: Table Tennis	45 minutes

SUMMIT K12

2.8A Sound

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Tuning Forks	30 minutes
	Establish Relevance: Sound in My Life	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: What Causes Sound?	45 minutes
	* Investigation: Volume Inquiry	45 minutes
	* Investigation: Sound Travels	45 minutes
	* Investigation: Sound and Matter	45 minutes
	E-Book: Sound	10 minutes
Apply and Extend	Activity: Sound and Me	30 minutes
	Writing: Comparing Sounds	30 minutes
	Literacy Connection: How Do We Hear?	30 minutes
	Connection to STEM: Design an Instrument	45 minutes
	Study Guide: Sound	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Tuning Forks	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: Making Music	30 minutes

SUMMIT K12

2.8B Sound Levels

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Whistle	30 minutes
	Establish Relevance: How Loud Is It?	30 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Pitch and Sound	30 minutes
	* Activity: Sound in Everyday Life	30 minutes
	* Activity: Volume in School	45 minutes
	* Activity: Changing Sound Challenge	30 minutes
	E-Book: Sound Levels	10 minutes
Apply and Extend	Activity: Levels of Sound Scenarios	30 minutes
	Literacy Connection: Headphones	30 minutes
	Activity: What I Wonder About Levels of Sound	30 minutes
	Study Guide: Sound Levels	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Whistle	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: Using Sound	30 minutes

SUMMIT K12

2.8C Using Sound to Communicate

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Talk Tubes	30 minutes
	* Establish Relevance: Communication	15 minutes
Investigate and Learn **Suggested Activities*	* Engineering Design Process: Build a Communication Device, Part 1	30 minutes
	* Engineering Design Process: Build a Communication Device, Part 2	30 minutes
	* Engineering Design Process: Build a Communication Device, Part 3	45 minutes
	* Engineering Design Process: Build a Communication Device, Part 4	45 minutes
	* Engineering Design Process: Build a Communication Device, Part 5	45 minutes
	E-Book: Using Sound to Communicate	10 minutes
Apply and Extend	Activity: Sound Solves Problems	60 minutes
	Literacy Connection: E-Book - Sound Waves	30 minutes
	Connection To STEM Career: Sound Engineers	30 minutes
	Literacy Connection: Communication Over the Years	30 minutes
	Study Guide: Using Sound to Communicate	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Talk Tubes	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: Party Line	30 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.

SUMMIT K12

2.9A The Sun and the Moon

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Seeing the Moon	30 minutes
	Establish Relevance: Does the Moon Shine?	30 minutes
Investigate and Learn **Suggested Activities*	* Investigation: The Sun Is a Star	30 minutes
	* Field Investigation: Warmth of the Sun	45 minutes
	* Investigation: Moonlight	60 minutes
	* Activity: Modeling the Sun, Earth, and Moon System	30 minutes
	E-Book: The Sun and the Moon	10 minutes
Apply and Extend	Activity: The Sun's Effect	30 minutes
	Writing: I Used to Think the Moon…	45 minutes
	Literacy Connection: The Far Side of the Moon	30 minutes
	Investigation: UV Light	45 minutes
	Study Guide: The Sun and the Moon	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Seeing the Moon	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: Sun, Earth, and Moon System	30 minutes

SUMMIT K12

2.9B Objects in the Sky

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Different Views	30 minutes
	* Establish Relevance: The Power of Telescopes	30 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Why Use a Tool?	30 minutes
	* Field Investigation: Observing Objects	45 minutes
	* Activity: Modeling Space Telescopes	30 minutes
	E-Book: Objects in the Sky	10 minutes
Apply and Extend	Literacy Connection: Exploring Space	30 minutes
	Activity: Make a Telescope	45 minutes
	Connection to STEM Career: Astronomers	30 minutes
	Study Guide: Objects in the Sky	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Different Views	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: Altered Appearance	30 minutes

2.10A The Movement of Rock and Soil

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Water in a Pond	30 minutes
	Establish Relevance: Discussion	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Water, Soil, and Rocks	45 minutes
	* Investigation: Wind, Soil, and Rocks	60 minutes
	* Investigation: The Strength of Wind and Water	45 minutes
	* Field Investigation: Erosion at School	45 minutes
	E-Book: The Movement of Rocks and Soil	15 minutes
Apply and Extend	Literacy Connection: The Movement of Soil and Rock	30 minutes
	Graphic Organizer: Wind and Water Move Rock and Soil	30 minutes
	Writing: Sandwich Harbour	30 minutes
	What I Wonder About: Erosion	30 - 60 minutes
	Study Guide: The Movement of Rock and Soil	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Water in a Pond	30 minutes
	* Connecting to the Anchoring Phenomenon	30 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Engineering Challenge: Save the Beaches	60 minutes

2.10B Weather

** additional time required*

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Sunny to Stormy	30 minutes
	Establish Relevance: The Weather Today	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Measuring Temperature	40 minutes*
	* Investigation: Measuring Precipitation	40 minutes*
	* Activity: Weather Patterns	40 minutes*
	* Activity: Weather Quilts	45 minutes
	E-Book: Weather	10 minutes
Apply and Extend	Activity: Graphing Weather Information	30 minutes
	Literacy Connection: Precipitation Around the World	30 minutes
	Connection to STEM Career: Meteorologists	30 minutes
	Field Investigation: Weather Station	50 minutes*
	Study Guide: Weather	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Sunny to Stormy	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: Was the Forecast Correct?	30 minutes

SUMMIT K12

2.10C Severe Weather

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Signs of Severe Weather	30 minutes
	Establish Relevance: Severe Weather Stories	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Thunderstorms and Tornadoes	40 minutes
	* Investigation: Hurricanes	40 minutes
	* Investigation: Severe Winter Weather	40 minutes
	* Investigation: Floods	40 minutes
	E-Book: Severe Weather	10 minutes
Apply and Extend	Activity: Mapping Severe Weather	30 minutes
	What I Wonder About: Severe Weather	45 minutes
	Literacy Connection: Staying Safe in Severe Weather	30 minutes
	Connection to STEM: Evaluate a Design Solution for Floods	45 minutes
	Study Guide: Severe Weather	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Signs of Severe Weather	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: Most Likely to …	30 minutes

SUMMIT K12

2.11A Resources

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Treehouse	30 minutes
	* Establish Relevance: Concept Attainment—Resources	30 minutes
Investigate and Learn **Suggested Activities*	* Activity: Resources Card Sort	30 minutes
	* Field Investigation: Resources Around Us	45 minutes
	* Activity: Using Natural Resources	30 minutes
	* Writing: Comparing Natural and Manmade Resources	60 minutes
	E-Book: Resources	10 minutes
Apply and Extend	Activity: Resources Mind Map	30 minutes
	Activity: Model How Resources Are Used	30 minutes
	Literacy Connection: Metalwork	30 minutes
	Activity: Odd One Out	30 minutes
	Research: What I Wonder About Resources	30 minutes
	Study Guide: Resources	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Treehouse	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: Resources Book	30 minutes

SUMMIT K12

2.11B Reduce, Reuse, Recycle

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Landfill	30 minutes
	* Establish Relevance: Can This Be Used Again?	30 minutes
Investigate and Learn **Suggested Activities*	* Activity: How Long Until It's Gone?	45 minutes
	* Activity: What Is the Human Impact?	30 minutes
	* Activity: How to Limit the Impact	30 minutes
	* Argumentation: Limiting the Human Impact	60 minutes
	Ebook: Reduce, Reuse, Recycle	15 minutes
Apply and Extend	Activity: Trash or Treasure?	30 minutes
	Connection to Art: Upcycled Artwork	30 minutes
	Literacy Connection: Composting to Conserve	30 minutes
	Connection to STEM Career: Product Engineers	30 minutes
	Study Guide: Reduce, Reuse, Recycle	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Landfill	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: My Conservation Plan	30 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.

SUMMIT K12

2.12A Physical Characteristics of Environments

* additional time required

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Greenhouse	30 minutes
	* Establish Relevance: Different Environments	15 minutes
Investigate and Learn **Suggested Activities*	* Activity: Patterns in Environments	30 minutes
	* Field Investigation: The Environment Outside	90 minutes
	* Investigation: The Effect of Rainfall	60 minutes*
	* Argumentation: Flowers for a Garden	60 minutes
	E-Book: Physical Characteristics of Environments	10 minutes
Apply and Extend	Activity: The Best Environment	30 minutes
	What I Wonder About: Environments	60 minutes
	Literacy Connection: Supporting Plants and Animals	30 minutes
	Connection to STEM Career: Environmental Scientists	30 minutes
	Study Guide: Physical Characteristics of Environments	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Greenhouse	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: How Does It Survive?	30 minutes

SUMMIT K12

2.12B Food Chains

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Ladybug and Aphids	30 minutes
	Establish Relevance: Organism Dependence	15 minutes
Investigate and Learn **Suggested Activities*	* Activity: Patterns in Food Chains	45 minutes
	* Investigation: What Is the Flow of Energy?	45 minutes
	* Stations: Exploring Food Chains	75 minutes
	* Activity: Creating a Food Chain	45 minutes
	E-Book: Food Chains	10 minutes
Apply and Extend	Activity: Modeling the Flow of Energy	30 minutes
	Planning a Field Investigation: Food Chains Outside	60 minutes
	Literacy Connection: Plants Are Producers	30 minutes
	Connection to STEM Career: Park Rangers	30 minutes
	Investigation: Producers and Consumers	45 minutes
	Study Guide: Food Chains	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Ladybug and Aphids	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: Food Chain Systems	60 minutes

SUMMIT K12

2.12C Pollination and Moving Seeds

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Dandelions	30 minutes
	Establish Relevance: New Plants	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: The Plants Can't Move	60 minutes
	* Activity: Exploring Seed Structures	30 minutes
	* Investigation: Seed Dispersal	45 minutes
	* Investigation: Pollination Systems	45 minutes
	* Activity: Pollination Partners	45 minutes
	E-Book: Pollution and Moving Seeds	10 minutes
Apply and Extend	Activity: Seeds and Pollen on the Move	45 minutes
	Literacy Connection: Plants with Seeds	45 minutes
	Writing: Comparing Pollination Systems	45 minutes
	Plan a Field Investigation: Seeds Outside	45 minutes
	Engineering Challenge: Build a Garden Tool	90 minutes
	Study Guide: Pollination and Moving Seeds	30 minutes
valuate **Suggested Activities*	* Explaining the Investigative Phenomenon: Dandelions	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: What If There Were No Bees?	45 minutes

SUMMIT K12

2.13A Plant Structures

* additional time required

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: From Seed to Fruit	30 minutes
	Establish Relevance: Plant Survival Structures	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Grass and Radishes	30 minutes*
	* Activity: Same Structures, Different Plant	40 minutes
	* Investigation: Plant Parts Have Jobs	30 minutes
	* Investigation: Plant Survivor	30 minutes
	E-Book: Plant Structures	10 minutes
Apply and Extend	Activity: Matchy Plant Pairs	30 minutes
	Writing: Plant Structure Comparison	40 minutes
	Activity: Plant System	30 minutes
	Connection to STEM Career: Plant Doctor	20 minutes
	Study Guide: Plant Structures	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: From Seed to Fruit	30 minutes
	* Connecting to the Anchoring Phenomenon	30 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: Bob the Botanist	45 minutes

SUMMIT K12

2.13B Structures and Behaviors of Animals

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Brown Birds	30 minutes
	Establish Relevance: How Do Animals Meet Their Basic Needs?	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Taking In Air	30 minutes
	* Investigation: Obtaining Food	45 minutes
	* Investigation: Finding Water	45 minutes
	* Writing: Carnivore vs. Herbivore	45 minutes
	E-Book: Structures and Behavior of Animals	15 minutes
Apply and Extend	Activity: Odd One Out	30 minutes
	Engineering Challenge: Mouth Modeling	45 minutes
	Literacy Connection: Specialized Structures	30 minutes
	Research: Interesting Animals	45 minutes
	Study Guide: Structures and Behaviors of Animals	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Brown Birds	30 minutes
	* Connecting to the Anchoring Phenomenon	30 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: Animal Survival	30 minutes

SUMMIT K12

2.13C Animal Groups

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: African Wild Dog Pack	30 minutes
	Establish Relevance: Benefits of Living in a Group	15 minutes
Investigate and Learn **Suggested Activities*	* Investigation: Me vs. We	30 minutes
	* Activity: Build a Herd	60 minutes
	* Writing: Gorillas and Termites Case Study	45 minutes
	* Field Investigation: Lion Pride and Fish School	60 minutes
	E-Book: Animal Groups	10 minutes
Apply and Extend	Literacy Connection: Caribou Migration	45 minutes
	Activity: Ants Work Together	30 minutes
	Activity: Animal Group Roles	30 minutes
	Connection to STEM Career: Anthropologists	30 minutes
	Study Guide: Animal Groups	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: African Wild Dog Pack	30 minutes
	* Connecting to the Anchoring Phenomenon	30 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: Pod Life	45 minutes

SUMMIT K12

2.13D Animal Life Cycles

Lesson Section	Activity	Time Allotment
Engage and Establish Relevance **Suggested Activities*	* Exploring the Investigative Phenomenon: Same or Different?	30 minutes
	Establish Relevance: Life Cycles	30 minutes
Investigate and Learn **Suggested Activities*	* Activity: Butterfly Life Cycle Model	60 minutes
	* Activity: Frog Life Cycle Model	45 minutes
	* Investigation: Comparing Patterns	30 minutes
	E-Book: Animal Life Cycles	10 minutes
Apply and Extend	Literacy Connection: Herpetologist	30 minutes
	Activity: Life Cycle Sorting Mat	20 minutes
	Connection to Art: Life Cycle Model	30 minutes
	Study Guide: Animal Life Cycles	30 minutes
Evaluate **Suggested Activities*	* Explaining the Investigative Phenomenon: Same or Different?	30 minutes
	* Connecting to the Anchoring Phenomenon	15 minutes
	Concept Mastery Assessment	20 minutes
	Vocabulary Mastery	15 minutes
	Performance Task: How Will It Change?	30 minutes