Crest Memorial School Curriculum and Pacing Guide	
Grade: Second	Subject Area: Science
Adoption Date:	Revision Date: February 16, 2024

Mission and Vision Statements

Mission: All students will possess an understanding of scientific concepts and processes required for personal decision-making, participation in civic life, and preparation for careers in STEM fields (for those that chose).

Vision: Prepare students to become scientifically literate individuals who can effectively:

- Apply scientific thinking, skills, and understanding to real-world phenomena and problems;
- Engage in systems thinking and modeling to explain phenomena and to give a context for the ideas to be learned;
- Conduct investigations, solve problems, and engage in discussions;
- Discuss open-ended questions that focus on the strength of the evidence used to generate claims;
- Read and evaluate multiple sources, including science-related magazine and journal articles and web-based resources to gain knowledge about current and past science problems and solutions and develop well-reasoned claims; and
- Communicate ideas through journal articles, reports, posters, and media presentations that explain and argue.

Integration of Technology

9.4.2.TL.2, 9.4.2.TL.6

21st Century Skills

9.4.2.CT.3, 9.4.2.IML.4

Career Education
9.1.2.CAP.1, 9.2.5.CAP.1

Interdisciplinary Connection
SL.PE.2.1 SL.II.2.2

Accommodations and Modifications	
Special Education	● follow 504/IEP accommodations ● create visual Science word wall with labels ● highlight and define important vocabulary ● ask yes/no questions ● allow for use of pictures in science journal with dictation support
English Language Learners	● create visual word wall with labels ● highlight and define important vocabulary ● ask yes/no questions ● allow for use of pictures in science journal with dictation support
Students At-Risk of Failure	● Allow verbalization before writing ● Use audio materials when necessary ● Read tests aloud ● Restate, reword, clarify directions ● Re-teach concepts using small groups ● Provide educational “breaks” as necessary ● Chunking content into “digestible bites” ● Shorten assignments to focus on mastery concept ● Assignment, Project, and Assessment Modification Based on Individual Student Needs ● Use mnemonic devices
Gifted and Talented	● Student Choice ● Assignment, Project, and Assessment Modification Based on Individual Student Needs

Students with 504 Plans	● Allow verbalization before writing ● Use audio materials when necessary ● Read tests aloud ● Restate, reword, clarify directions ● Re-teach concepts using small groups ● Provide educational “breaks” as necessary ● Chunking content into “digestible bites” ● Shorten assignments to focus on mastery concept ● Use mnemonic devices

Assessments	
Formative	● Hands on activities ● Teacher Observation ● Discussion
Summative	● Lesson Assessments ● Unit Assessments
Benchmark	● Baseline science assessment
Alternative	● Performance Tasks ● Projects

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Unit 1 Learning Goals

SWBAT develop an understanding of the world's animal biodiversity
SWBAT explore animal classification and the traits that define each group
SWBAT understand how surrounding environments affect what organisms live in particular environments

Core Instructional Materials	Supplemental Materials
● Mystery Science Website ● Mystery Packs	● Science Journal ● Unit Projects

Daily Targets	NJSLS Performance Expectations	Instructional Activities
● Day 1: Generate observations and questions about phenomenon	2-LS4-1	● Introduce and explore anchoring phenomenon on Mystery Science (this will be worked on throughout the unit) ● Mystery science guided inquiry video ● Discussion
● Day 2: Generate observations and questions about phenomenon	2-LS4-1	● Review anchoring phenomenon ● Review guided inquiry video ● Hands on activity (See, Think, Wonder sheet)
● Day 3: Examine how scientists organize animals based on their characteristics	2-LS4-1	● Mystery Science exploration video ● Begin hands on activity (sort animals using traits)
● Day 4: Examine how scientists organize animals based on their characteristics	2-LS4-1	● Finish hands on activity (sort animals using traits) ● Anchor connection (discuss if the animal from the anchoring phenomenon is a bird, mammal, reptile, or invertebrate)

● Day 5: Make observations of plants and animals to compare the diversity of different habitats	2-LS4-1	● Mystery Science exploration video ● Begin hands on activity (habitat journal)
● Day 6: Make observations of plants and animals to compare the diversity in different habitats	2-LS4-1	● Finish hands on activity (habitat journal) ● Anchor connection (discuss what animals sleep during the day and are awake at night)
● Day 7: Make observations of plants and animals to compare the diversity in different habitats	2-LS4-1	● Mystery Science exploration video ● Begin hands on activity (frog calls and types of frogs)
● Day 8: Make observations of plants and animals to compare the diversity in different habitats	2-LS4-1	● Finish hands on activity (frog calls and types of frogs) ● Anchor connection (discuss the sounds of the animal living in the cave)
● Day 9: Make observations and gather information about a situation people want to change.	K-2-ETS1-1. K-2-ETS1-2 K-2-ETS1-3.	● Mystery Science exploration video ● Begin hands on activity (designing a bird feeder)
● Day 10: Define a simple problem that can be solved through the development of a new or improved object or tool.	K-2-ETS1-1. K-2-ETS1-2 K-2-ETS1-3.	● Finish hands on activity (designing a bird feeder) ● Anchor connection (discuss where bats land and rest in Bracken Cave)
● Day 11: Unit assessment	2-LS4-1	● Administer unit assessment
● Day 12: Make observations of plants and animals to compare the diversity in different habitats	2-LS4-1	● Mystery Science unit review video ● Begin hands on activity (explore and compare two very different places where Mexican free tailed bats live)
● Day 13: Make observations of plants and animals to compare the diversity in different habitats	2-LS4-1	● Finish hands on activity (explore and compare two very different places where Mexican free tailed bats live)

Inclusive concepts
● Mystery Science allows for all types of learners to be fully engaged. It incorporates hands on activities, visuals, and step by step instruction that may be paused for learners working at a slower pace.

Unit 2 Learning Goals
SWBAT explore the needs of plants through hands on investigations **SWBAT explore how and why plants disperse its seeds** **SWBAT understand what seeds need in order to grow** **SWBAT understand what adult plants need in order to survive and thrive**

Core Instructional Materials	Supplemental Materials
● Mystery Science Website ● Mystery Packs	● Science Journal ● Unit Projects

Daily Targets	NJSLS Performance Expectations	Instructional Activities
● Day 1: Generate observations and questions about phenomenon	2-LS2-1.	● Introduce and explore anchoring phenomenon on Mystery Science (this will be worked on throughout the unit) ● Begin Mystery science guided inquiry video ● Discussion
● Day 2: Generate observations and questions about phenomenon	2-LS2-1.	● Review anchoring phenomenon ● Finish guided inquiry video ● Hands on activity (Superbloom cycle)
● Day 3: Observe how structure affects seed's function in dispersing away from a tree	2-LS2-2 K-2-ETS1-2 K-2-ETS1-3	● Mystery Science exploration video ● Begin hands on activity (develop three different models of seed structure)

● Day 4: Observe how structure affects seed's function in dispersing away from a tree	2-LS2-2 K-2-ETS1-2 K-2-ETS1-3	● Finish hands on activity (models of seed structures) ● Anchor connection (discuss the seeds of a dandelion)
● Day 5: Explore how the structure of seeds enable them to disperse with the aid of animals in their dispersal	2-LS2-2	● Mystery Science exploration video ● Begin hands on activity (animal models and travel worksheet)
● Day 6: Explore how the structure of seeds enable them to disperse with the aid of animals in their dispersal	2-LS2-2	● Finish hands on activity (animal models and travel worksheet) ● Anchor connection (discuss how and when seeds grow in Death Valley)
● Day 7: Plan and carry out an experiment	2-LS2-2	● Mystery Science exploration video ● Begin hands on activity (experiment on what plants need to grow)
● Day 8: Plan and carry out an experiment and analyze the data	2-LS2-2	● Finish hands on activity (experiment on what plants need to grow) ● Anchor connection (discuss how superblooms need light to grow)
● Day 9: Plan and conduct an experiment to see if plants need water and sunlight to grow	2-LS2-2	● Mystery Science exploration video ● Begin hands on activity (build your own experiment - water and sun)
● Day 10: Plan and conduct an experiment to see if plants need water and sunlight to grow	2-LS2-2	● Finish hands on activity (build your own experiment - water and sun) ● Anchor connection (discuss how different plants need different amounts of water and sunlight to grow)
● Day 11: Unit assessment	2-LS2-2	● Administer unit assessment
● Day 12: Explore how water is important to all living things	2-LS2-2	● Mystery Science unit review video ● Begin hands on activity (explore three different parts of Death Valley to see how living things obtain water)

● Day 13: Explore how water is important to all living things	2-LS2-2	● Finish hands on activity (explore three different parts of Death Valley to see how living things obtain water)

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Unit 3 Learning Goals
SWBAT explore how water shapes the Earth's surface **SWBAT construct and use models of mountains to demonstrate that water flows downhill** **SWBAT understand that water transforms huge rock into tiny grains of sand** **SWBAT determine the cause of erosion** **SWBAT design solutions to problems caused by erosion**

Core Instructional Materials	Supplemental Materials
● Mystery Science Website ● Mystery Packs	● Science Journal ● Unit Projects

Daily Targets	NJSLS Performance Expectations	Instructional Activities
● Day 1: Generate observations and questions about phenomenon	2-ESS2-2	● Introduce and explore anchoring phenomenon on Mystery Science (this will be worked on throughout the unit) ● Begin Mystery science guided inquiry video ● Discussion
● Day 2: Generate observations and questions about phenomenon	2-ESS2-2	● Review anchoring phenomenon ● Finish guided inquiry video ● Hands on activity (explore why two rivers

		look different)
● Day 3: Develop and use a model to discover an important principle about how rivers work	2-ESS2-2 2-ESS2-3	● Mystery Science exploration video ● Begin hands on activity (develop a model of the Earth's surface)
● Day 4: Develop and use a model to discover an important principle about how rivers work	2-ESS2-2 2-ESS2-3	● Finish hands on activity (develop a model of the Earth's surface) ● Anchor connection (discuss where rivers start, come together, and end)
● Day 5: Investigate the effects of rocks tumbling in a river	2-ESS2-2	● Mystery Science exploration video ● Begin hands on activity (Be a river activity)
● Day 6: Investigate the effects of rocks tumbling in a river	2-ESS2-2	● Finish hands on activity (be a river activity) ● Anchor connection (discuss how rocks can change the color of beaches)
● Day 7: Explain why severe weather events are more likely in certain regions	2-ESS1-1 2-ESS2-2	● Mystery Science exploration video ● Begin hands on activity (flash flood finder)
● Day 8: Explain why severe weather events are more likely in certain regions	2-ESS1-1 2-ESS2-2	● Finish hands on activity (flash flood finder)
● Day 9: Make hypothesis and investigate the causes of canyons	2-ESS1-1	● Mystery Science exploration video ● Begin hands on activity (landform models experiment)
● Day 10: Make hypothesis and investigate the causes of canyons	2-ESS1-1	● Finish hands on activity (landform models experiment) ● Anchor connection (discuss erosion and water color)
● Day 11: Compare multiple solutions to prevent erosion	2-ESS2-1 K-2-ETS1-1 K-2-ETS1-2. K-2-ETS1-3	● Mystery Science exploration video ● Begin hands on activity (design a way to stop erosion
● Day 12: Compare multiple solutions to	2-ESS2-1	● Finish hands on activity (design a way to

prevent erosion	K-2-ETS1-1 K-2-ETS1-2. K-2-ETS1-3	stop erosion) ● Anchor connection (discuss how Milk River got its color)
● Day 13: Unit assessment	2-ESS1-1 2-ESS2-2	● Administer unit assessment
● Day 14: Understand why the lengths of rivers are difficult to measure	2-ESS1-1 2-ESS2-2	● Mystery Science unit review video ● Begin hands on activity (map out two rivers to determine which is shortest)
● Day 15: Understand why the lengths of rivers are difficult to measure	2-ESS1-1 2-ESS2-2	● Finish hands on activity (map out two rivers to determine which is shortest)

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Unit Learning Goals

Core Instructional Materials	**Supplemental Materials**
● Mystery Science Website ● Mystery Packs	● Science Journal ● Unit Projects

Daily Targets	**NJSLS Performance Expectations**	**Instructional Activities**
● Day 1: Generate observations and questions about phenomenon	2-PS1-1 2-PS1-2	● Introduce and explore anchoring phenomenon on Mystery Science (this will be

	2-PS1-3	worked on throughout the unit) ● Begin Mystery science guided inquiry video ● Discussion
● Day 2: Generate observations and questions about phenomenon	2-PS1-1 2-PS1-2 2-PS1-3	● Review anchoring phenomenon ● Finish guided inquiry video ● Hands on activity (beat the heat worksheet)
● Day 3: Analyze data obtained from testing different materials	2-PS1-2 K-2-ETS1-1 K-2-ETS1-2	● Mystery Science exploration video ● Begin hands on activity (make a hat to keep a person cool on a desert island)
● Day 4: Analyze data obtained from testing different materials	2-PS1-2 K-2-ETS1-1 K-2-ETS1-2	● Finish hands on activity (make a hat to keep a person cool on a desert island ● Anchor connection (discuss rigid and flexible materials)
● Day 5: Analyze data obtained from testing different materials	2-PS1-1 2-PS1-2	● Mystery Science exploration video ● Begin hands on activity (make mittens out of different materials to find out which have insulating property)
● Day 6: Analyze data obtained from testing different materials	2-PS1-1 2-PS1-2	● Finish hands on activity (make mittens out of different materials to find out which have insulating property) ● Anchor connection (discuss materials that are insulators and conductors)
● Day 7: Plan and conduct an experiment and analyze the data	2-PS1-2 2-PS1-4	● Mystery Science exploration video ● Begin hands on activity (experiment: what kind of candy melts and doesn't melt)
● Day 8: Plan and conduct an experiment and analyze the data	2-PS1-2 2-PS1-4	● Finish hands on activity (experiment: what kind of candy melts and doesn't melt) ● Anchor connection (discuss materials that melt and don't melt for foundry workers)
● Day 9: Make observation and design an invention that would improve the lives of people	K-2-ETS1-1	● Mystery Science exploration video ● Begin hands on activity (become an inventor)

● Day 10: Make observation and design an invention that would improve the lives of people	K-2-ETS1-1	● Finish hands on activity (become an inventor) ● Anchor connection (discuss transparent materials used by foundry workers)
● Day 11: Examine how large structures are built from smaller pieces	2-PS1-3 K-2-ETS1-3	● Mystery Science exploration video ● Begin hands on activity (build a tower out of index cards and paper clips)
● Day 12: Examine how large structures are built from smaller pieces	2-PS1-3 K-2-ETS1-3	● Finish hands on activity (build a tower out of index cards and paper clips) ● Anchor connection (discuss how materials are changed from one form to another)
● Day 13: Plan and conduct an investigation and classify materials	2-PS1-1 2-PS1-2	● Mystery Science exploration video ● Begin hands on activity (mystery mud tester worksheet)
● Day 14: Plan and conduct an investigation and classify materials	2-PS1-1 2-PS1-2	● Finish hands on activity (mystery mud tester worksheet) ● Anchor connection (discuss what foundry workers need to wear to stay safe)
● Day 15: Unit assessment	2-PS1-4	● Administer unit assessment
● Day 16: Make and record observations of changes in material	2-PS1-4	● Mystery Science unit review video ● Begin hands on activity (recycle with fire worksheet)
● Day 17: Make and record observations of changes in material	2-PS1-4	● Finish hands on activity (recycle with fire worksheet)

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