Crest Memorial School Curriculum and Pacing Guide	
Grade: Kindergarten	Subject Area: Science
Adoption Date: November 10, 2012	Revision Date: August 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.1

21st Century Skills

9.4.8.CT.1, 9.4.2.CT.2

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

Interdisciplinary Connection
SL.K.3, K.MD.A.1

Accommodations and Modifications	
Special Education	● IEP accommodations ● Highlight important/ key words ● Modify amount of independent practice ● Simplify questions / make multiple choice ● Read tests aloud ● Shorten assignments to focus on mastery concept
English Language Learners	● Create visual word wall with labels ● Highlight and define important vocabulary ● Ask yes/no questions ● Create a word map
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
Gifted and Talented	● Student Choice ● Ask students higher level questions ●Provide opportunities for open-ended, self-directed activities ●Give students opportunities to mentor other students

	●Offer higher-level learning opportunities ●Offer students opportunities to present their understanding of a topic in different ways
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	● Classroom Discussion ● Hands-On Activities ● Think-Pair-Share ● Teacher Observation
Summative	● Lesson Assessments ● End of Unit Drawings with Writing Descriptions
Benchmark	● Baseline Science Assessment
Alternative	● Science Journals

Pacing Guide	
Unit 1: Animal Needs	Number of days: 7 days
Unit 2: Plant Needs	Number of days: 7 days
Unit 3: Severe Weather	Number of days: 8 days
Unit 4: Weather Patterns	Number of days: 8 days
Unit 5: Sunlight & Warmth	Number of days: 6 days

Unit 6: Pushes & Pulls	Number of days: 6 days

Core Instructional Materials	Supplemental Materials
● Read aloud texts ● Mystery Science Online Portal ● Mystery Pack Hands-On Materials	● Science Journals ● Mystery Science Unit Supplies ● Classroom Easel with Chart Paper

Unit 1 Learning Goals
Students will use observations to understand the basic needs of animals.

Daily Targets	NJSLS Performance Expectations	Instructional Activities
● Day 1: Observe animal behaviors	● K-LS1-1, K-ESS2-2, K-LS1-1	● Act out animal behaviors “Eat Like an Animal” ● Students will pretend to be quail scratching in the dirt, racoons wading in the water, and woodpeckers pecking a log
● Day 2: Observe the Life Cycle of Butterfly	● K-LS1-1, K-ESS2-2, K-LS1-1	● Students will use Butterfly Larvae to observe the Life Cycle of a Butterfly ● Students will record the changes over time in their Science Journals
● Day 3: Observe the Life Cycle of Butterfly	● K-LS1-1, K-ESS2-2, K-LS1-1	● Students will use pasta pieces to make the Life Cycle of a Butterfly on a paper plate ● Students will label each part of the Life Cycle of a Butterfly
● Day 4: Observe the Life Cycle of Butterfly	● K-LS1-1, K-ESS2-2, K-LS1-1	● Students will create an activity book on the Life Cycle of a Butterfly
● Day 5: Act out Animal Habitats	● K-LS1-1, K-ESS2-2, K-LS1-1	● Students will listen to Who Lives There?

		● Students will pretend to be squirrels and learn about their habitats
● Day 6: Explore Animal Habitats to discover animal survival	● K-LS1-1, K-ESS2-2, K-LS1-1	● Students will work together to discover that all animals seek safety to survive ● Students will participate in the Gopher activity where they pretend to hide and scare away predators
● Day 7: Explore Animal Habitats around the CMS Community	● K-LS1-1, K-ESS2-2, K-LS1-1	●Students will listen for animal sounds and pretend to be woodpeckers ●Students will go for a Nature Walk around CMS and record their findings in their Science Journals

Unit 2 Learning Goals
Students will use observations to understand the basic needs of plants.

● Day 1: Explore Parts of a Plant	● K-LS1-1	● Students will be introduced to plant parts ● Students will participate in a Plant Dance Kinesthetic activity where they observe and model plant parts
● Day 2: Explore Parts of a Plant and make a connection to a Kinesthetic Activity	● K-LS1-1	● Students will draw the parts of a plant in their Science Journals ● Students will participate in a Plant Dance Kinesthetic activity where they observe and model plant parts
Day 3: Investigate Plants	● K-LS1-1	● Students will participate in a Sprout a Seed activity and record answers in their Science Journals
Day 4: Investigate Plants	● K-LS1-1	● Students will finalize their Sprout a Seed activity and observe root growth
Day 5: Explore the Life Cycle of a Pumpkin Seed	● K-LS1-1	● Students will examine the life cycle of a Pumpkin Seed in preparation for the Pumpkin Patch Field Trip

		● Students will taste a pumpkin seed
Day 6: Create a Pumpkin Seed Mosaic	● K-LS1-1	● Students will create a Pumpkin Seed mosaic ● Students will share their mosaics with their classmates and discuss why their mosaic is special
Day 7: Sequence the Life Cycle of a Pumpkin Seed	● K-LS1-1	● Students will sequence the Life Cycle of a Pumpkin Seed using pictures and assemble on a sentence strip

Unit 3 Learning Goals
Students will explore various types of weather and describe the characteristics of weather.

● Day 1: Discuss how to prepare for a storm	● K-ESS2-1, K-ESS3-2	● Students will listen to How Can You Get Ready for a Storm? ● Class discussion ● Students will complete a follow-up activity worksheet
● Day 2: Observe a weather report	● K-ESS2-1, K-ESS3-2	● Students will predict what the weather will be like the next school day ● Teacher will show students a “Weather Report for Kids!”
● Day 3: Complete a weather report	● K-ESS2-1, K-ESS3-2	● Students will examine their weather predictions ● Teacher will check weather report ● Students will complete a follow-up activity worksheet that demonstrates their understanding of the weather report

● Day 4: Discuss the characteristics of watching a storm outside	● K-ESS2-1, K-ESS3-2	● Students will listen to Have You Ever Watched a Storm?

		● Class discussion ● Students will complete a follow-up activity worksheet
Day 5: Create a “Breeze Buddy”	● K-ESS2-1, K-ESS3-2	● Students will make a “Breeze Buddy” that lets them explore how windy it is outside ● Teacher will assist Students with their “Breeze Buddy” ● Class discussion
Day 6: “Breeze Buddy” follow-up and activity worksheet	● K-ESS2-1, K-ESS3-2	● Students will draw their “Breeze Buddy” when “the soft wind blew” and when “the strong wind blew” ● Students will share their findings with a Partner ● Students will share their favorite part of activity with Teacher
Day 7: Begin to observe and draw weather patterns	● K-ESS2-1, K-ESS3-2	● Students will listen to How Many Different Kinds of Weather Are There? ● Students will discuss the weather outside for three days ● Teacher and Student led discussion ● Record findings on weather chart
Day 8: Finish observing and drawing weather patterns	● K-ESS2-1, K-ESS3-2	● Students will draw their favorite weather on a follow-up activity worksheet ● Students will share their favorite weather with their Peers

Unit 4 Learning Goals
Students will identify daily and seasonal weather patterns. Students will use seasonal weather patterns to explain mysteries about the weather.

● Day 1: Discuss what to wear for the weather	● K-ESS2-1, K-ESS2-2	● Students will listen to How Do You Know What Do Wear for the Weather?

		● Class discussion ● Students will complete a follow-up activity worksheet
● Day 2: Draw appropriate clothes for the weather	● K-ESS2-1, K-ESS2-2	● Students will work in Collaborative Groups and make a poster that depicts what types of clothes to wear on a “rainy day,” a sunny day,” and a “snowy day.” ● Students will present their findings to the class
● Day 3: Record the weather on a “Weather Window” sheet	● K-ESS2-1, K-ESS2-2	● Students will circle appropriate answers to the daily weather forecast on their “Weather Window” sheet for four days ● Teacher will discuss and make connections to appropriate clothing for these specific weather days
● Day 4: Connect types of weather to the seasons (Winter, Spring, Summer, and Fall)	● K-ESS2-1, K-ESS2-2	● Students will listen to What Will the Weather be like on my Birthday? ● Class discussion ● Students will complete a follow-up activity worksheet
● Day 5: Connect types of weather to the seasons (Winter, Spring, Summer, and Fall)	● K-ESS2-1, K-ESS2-2	● Students will look for weather patterns to determine the correct order of the seasons ● Students will work with a Partner to sequence the seasons and answer questions ● Class discussion
● Day 6: Discover the weather pattern and season on your Birthday	● K-ESS2-1, K-ESS2-2	● Students will write their Birthday on a post-it note with their name ● Students will help Teacher assemble “Birthday Season Wheel” ● Students will discover the weather pattern and name the season on their Birthday ● Class discussion ● Students and Teacher will compare and contrast KO’s and KM’s “Birthday Season Wheel”
● Day 7: Discover why Spring is the best time	● K-ESS2-1, K-ESS2-2	● Students will listen to Why Do Birds Lay

for babies to be born		Eggs in the Spring? ● Class discussion ● Students will complete a follow-up activity worksheet
● Day 8: Discover why Spring is the best time for babies to be born	● K-ESS2-1, K-ESS2-2	● Students will “Build a Bird Nest” to discover how birds change their environment ● Students will compare and contrast their bird nest homes in Collaborative Groups ● Class discussion

Unit 5 Learning Goals
Students will explore how sunlight warms the Earth’s surface. Students will explore shade and how it reduces the warming effect of the Sun.

● Day 1: Discuss why it is important to use shade to stay cool	● K-PS3-1, K-PS3-2, K-2-ETS1-1	● Students will listen to How Could You Walk Barefoot Across Hot Pavements without Burning Your Feet? ● Class discussion ● Students will complete a follow-up activity worksheet
● Day 2: Design a shade structure for Farmer Josie and come up with a solution to her problem	● K-PS3-1, K-PS3-2, K-2-ETS1-1	● Students will draw an imagined solution for Josie’s problem and share their findings with their Partners
● Day 3: Discuss experiences with hot and cold weather	● K-PS3-1, K-PS3-2, K-2-ETS1-1	● Students will listen to Chill City ● Class discussion ● Students will complete a follow-up activity worksheet
● Day 4: Discuss experiences with hot and cold weather	● K-PS3-1, K-PS3-2, K-2-ETS1-1	● Students will learn about a real city where the sun never shines in winter ● Students will experiment with different types of materials (opaque, transparent, and

		reflective) to figure out how to reflect light
● Day 5: Observe the path of the sun in the Summer and the Winter	● K-PS3-1, K-PS3-2, K-2-ETS1-1	● Students will listen to Why Does it Get Cold in Winter? ● Class discussion ● Students will complete a follow-up activity worksheet
● Day 6: Observe the path of the sun in the Summer and the Winter	● K-PS3-1, K-PS3-2, K-2-ETS1-1	● Students will solve a mystery and participate in a Mysterious Melting Marshmallow activity where they discover what makes marshmallows melt ● Class discussion ● Students will complete a follow-up activity worksheet

Unit 6 Learning Goals
Students will explore pushes and pulls. Students observe and investigate what happens when the strength of those pushes and pulls are changed.

● Day 1: Discover how pushes and pulls are involved in any kind of work	● K-PS2-1	● Students will “Be a Digging Machine” and pretend to use shovels and excavators to dig a big hole for a swimming pool in Collaborative Groups ● Students will draw a machine doing work and discuss their drawings with their Partners
● Day 2: “Act out” favorite machines	● K-PS2-1	● Students will listen to Why Do Builders Need So Many Machines? ● Practice using work words to describe what the machines are doing ● Class discussion ● Students will complete a follow-up activity worksheet
● Day 3: Experiment with force	● K-PS2-1	● Students will participate in a “Don’t Crush That House” activity where they experiment with force to knock down a wall of cups ● Students will draw a wrecking ball doing

		work and discuss their drawings with their Partners
● Day 4: Determine the difference between pushes and pulls	● K-PS2-2	● Students will listen to How Can You Knock Down the Most Bowling Pins? ● Act out bowling to determine the difference between pushes and pulls ● Class discussion ● Students will complete a follow-up activity worksheet
● Day 5: Experiment how pushes change speed	● K-PS2-2, K-2-ETS1-1, K-2-ETS1-2, K-2-ETS1-3	● Students will participate in a “Boulder Bounce” activity where they come up with a solution to a problem in a “Tiny Town” ● Students will record their findings in their Science Journals and discuss their findings with their Partners
● Day 6: Be an Inventor	● K-2-ETS1-1	● Students will create an Invention that can do work ● This final project will take (3) Science Lessons to complete ● Students will present their final project to their classmates

Inclusive concepts
● The Science Community allows for all levels to work together at their individual pace and level.