Crest Memorial School Curriculum and Pacing Guide	
Grade: 4th	Subject Area: Science
Adoption Date:	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.2: Create a document using a word processing application. 9.4.2.TL.4: Navigate a virtual space to build context and describe the visual content.

21st Century Skills
9.3.12.AG-ANI.6 Classify, evaluate and select animals based on anatomical and physiological characteristics.

Career Education
9.4.5.CI.2: Investigate a persistent local or global issue, such as climate change, and collaborate with individuals with diverse perspectives to improve upon current actions designed to address the issue

Interdisciplinary Connection
- W.IW.4.2.A Introduce a topic clearly and group related information in paragraphs and sections; include formatting (e.g., headings), text features (e.g., illustrations, diagrams, captions) and multimedia when useful to aid in comprehension.

Accommodations and Modifications	
Special Education	● follow 504/IEP accommodations ● create visual word wall with labels ● highlight and define important vocabulary ● ask yes/no questions ● provide sentence frames or sentence stems ● allow for use of pictures in science journal with dictation support ● create a word map
English Language Learners	● create visual word wall with labels ● highlight and define important vocabulary ● ask yes/no questions ● provide sentence frames or sentence stems ● allow for use of pictures in science journal with dictation support ● 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 ● Use mnemonic devices
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

	●Give students opportunities to teach other students ●Offer higher-level learning opportunities ●Offer students opportunities to present their understanding of a topic in different ways ● 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	● Lesson quick checks (Exit tickets and notebook checks) ● Teacher Observation
Summative	● Oral place presentation ● End of section quizzes
Benchmark	● Project-based learning project
Alternative	● Performance Tasks ● Projects

Pacing Guide	
Unit Title	Number of days
What is Science and how do living things on Earth interact?	36
What patterns can be found on Earth and in space?	33

What is matter and how can chemistry be seen in daily life?	33
What is energy, electricity and magnetism?	21

Unit Learning Goals
Unit 1: Students will be able to use science to describe and understand the basics of life on Earth.

Core Instructional Materials	Supplemental Materials
● Textbook ● Online benchmark assessment resource ● Mystery Science lessons ● Notebook	● Topic-focused webquests ● Hands-on manipulatives ● Video ● Mystery Science videos

Daily Targets	NJSLS Performance Expectations	Instructional Activities
● Day 1-6: Understand what Science is and how it affects their lives.	3-5-ETS1	● Research and investigate different ways that science is a part of our every-day life. Watch Mystery Science Mini-lessons and complete discussion questions/STEM building activities.
● Day 7-15: Understand how living things interact with their environment	4-LS1 and 2	● Research and prepare a presentation independently with a poster visual with teacher assistance.
● Day 16-24: Evaluate how an alteration or change in an ecosystem can cause changes throughout the environment over time	4-LS1 and 2	● Compare and contrast the life cycle of a butterfly to various other organisms' life cycles in a class created nature show.
● Day 25-36: Analyze how organisms change	4-LS1 and 2	● Research the needs of an animal-habitat,

as they go through their life cycle		food, and characteristics

Inclusive concepts
● Our vision is to leverage current events in science to foster a classroom environment where students develop a strong sense of character, inclusivity, and cultural competence. By engaging with contemporary scientific issues, students will enhance their understanding of the world and their role in it, building empathy, respect, and responsibility.

Unit Learning Goals
Unit 2:Students will be able to identify and understand Earth's biomes and how they are similar or different to other planets in our Solar System.

Core Instructional Materials	Supplemental Materials
● Textbook ● Online benchmark assessment resource	● Topic-focused webquests ● Two Distance learning tours

Daily Targets	NJSLS Performance Expectations	Instructional Activities
● Day 1-6: Research the major biomes of the Earth and what are the characteristics of each (such as food chains and weather)	4-ESS1-2	● Create a Biome Display of one biome of the Earth. Include animals, plants, food chain, weather, etc. See other student work on biomes.
● Day 7-15: Understand the patterns of soil, minerals and rocks/fossils on Earth	4-ESS1-1	● Conduct research and create trading cards of the solar system. Compare the different planets of the solar system
● Day 16-27: Evaluate other planets like the	4-PS2-1	● Research environmental interactions and

Earth and understand what patterns can be identified in space		impacts between humans and the Earth.
● Day 28-33: Evaluate other planets like the Earth and understand what patterns can be identified in space	4-ESS3-1 4-ESS3-2	● Research and discuss different negative and positive ways in which humans can change the environment.

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Unit Learning Goals
Unit 3: Students will be able to understand how to describe, measure and use different matter and elements common.

Core Instructional Materials	Supplemental Materials
● Textbook ● Online benchmark assessment resource	● Topic-focused webquests ● Two Distance learning tours

Daily Targets	NJSLS Performance Expectations	Instructional Activities
● Day 1-9: Understand how matter can be described and measured.	5-PS1-3	● Design and carry out an experiment to test and observe different materials' properties.
● Day 10-18: Analyze when water changes to a solid does it change its mass.	5-PS1-2	● Complete several Mystery Science experiments to explain how properties of

		objects change.
● Day 19-30: Evaluate what happens when mixing baking soda and vinegar, Mentos and Soda and/or food coloring and Milk.	5-PS1-4	● Classify various objects by their properties and charts.
● Day 31-33: Analyze the periodic table and understand how we use the information it provides	4-SL1-2	● Research and understand how different materials are used.

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Unit Learning Goals
Unit 4: Students will be able to describe and use electricity and magnetism to describe how energy works.

Core Instructional Materials	**Supplemental Materials**
● Textbook ● Online benchmark assessment resource	● Topic-focused webquests ● Two Distance learning tours

Daily Targets	**NJSLS Performance Expectations**	**Instructional Activities**
● Day 1-6: Create ways to make that bulb light up	4-PS3-4	● Use a magnet to test whether objects are magnetic or not

● Day 7-12: Understand what you can do with a magnet	4-PS3-3	● Create an electrical circuit.
● Day 13-18: Evaluate how electricity and magnetism are transformed	4-PS3-4	● Test and correct electrical circuits.
● Day 19-21: Explore how energy is a part of our daily lives.	4-PS3-1, 2, 3 and 4	● PhET online labs.

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