SCIENCE

Strand A: The Nature of Matter

Standard 1: The student understands that all matter has observable, measurable properties.

Benchmark
SC.A.1.3.1 The student identifies various ways in which substances differ (e.g., mass, volume, shape, density, texture, and reaction to temperature and light).

Strand D: Processes that Shape the Earth

Standard 1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the Earth.

Benchmarks
SC.D.1.3.1 The student knows that mechanical and chemical activities shape and reshape the Earth’s land surface by eroding rock and soil in some areas and depositing them in other areas, sometimes in seasonal layers.
SC.D.1.3.2 The student knows that over the whole Earth, organisms are growing, dying, and decaying as new organisms are produced by the old ones.
SC.D.1.3.3 The student knows how conditions that exist in one system influence the conditions that exist in other systems.
SC.D.1.3.4 The student knows the ways in which plants and animals reshape the landscape (e.g., bacteria, fungi, worms, rodents, and other organisms add organic matter to the soil, increasing soil fertility, encouraging plant growth, and strengthening resistance to erosion).

Standard 2: The student understands the need for protection of the natural systems on Earth.

Benchmarks
SC.D.2.3.1 The student understands that quality of life is relevant to personal experience.
SC.D.2.3.2 The student knows the positive and negative consequences of human action on the Earth’s systems.
Strand G: How Living Things Interact with Their Environment

Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in the environment.

Benchmarks
SC.G.1.3.4 The student knows that the interactions of organisms with each other and with the nonliving parts of their environments result in the flow of energy and the cycling of matter throughout the system.
SC.G.1.3.5 The student knows that life is maintained by a continuous input of energy from the sun and by the recycling of the atoms that make up the molecules of living organisms.

Standard 2: The student understands the consequences of using limited natural resources.

Benchmarks
SC.G.2.3.2 The student knows that all biotic and abiotic factors are interrelated and that if one factor is changed or removed, it impacts the availability of other resources within the system.
SC.G.2.3.3 The student knows that a brief change in the limited resources of an ecosystem may alter the size of a population or the average size of individual organisms and that long-term change may result in the elimination of animal and plant populations inhabiting the Earth.
SC.G.2.3.4 The student understands that humans are a part of an ecosystem and their activities may deliberately or inadvertently alter the equilibrium in ecosystems.

Strand H: The Nature of Science

Standard 1: The student uses the scientific processes and habits of mind to solve problems.

Benchmarks
SC.H.1.3.1 The student knows that scientific knowledge is subject to modification as new information challenges prevailing theories and as a new theory leads to looking at old observations in a new way.
SC.H.1.3.2 The student knows that the study of the events that led scientists to discoveries can provide information about the inquiry process and its effects.

Standard 2: The student understands that most natural events occur in comprehensible, consistent patterns.

Benchmark
SC.H.2.3.1 The student recognizes that patterns exist within and across systems.
**Strand B: Measurement**

Standard 2: The student compares, contrasts, and converts within systems of measurement.

**Benchmark**
MA.B.2.3.1 The student uses direct (measured) and indirect (nonmeasured) measures to compare a given characteristic in either metric or customary units.

**Strand D: Algebraic Thinking**

Standard 1: The student describes, analyzes, and generalizes a wide variety of patterns, relations, and functions.

**Benchmarks**
MA.D.1.3.1 The student describes a wide variety of patterns, relationships, and functions through models, such as manipulatives, tables, graphs, expressions, equations, and inequalities.
MA.D.1.3.2 The student creates and interprets tables, graphs, equations, and verbal descriptions to explain cause-and-effect relationships.

**Strand E: Data Analysis and Probability**

Standard 1: The student understands and uses the tools of data analysis for managing information.

**Benchmark**
MA.E.1.3.1 The student collects, organizes, and displays data in a variety of forms, including tables, line graphs, charts, bar graphs, to determine how different ways of presenting data can lead to different interpretations.

Standard 3: The student uses statistical methods to make inferences and valid arguments about real-world situations.

**Benchmark**
MA.E.3.3.1 The student formulates hypotheses, designs experiments, collects and interprets data, and evaluates hypotheses by making inferences and drawing conclusions based on statistics (range, mean, median, mode) and tables, graphs, and charts.
Strand A: Reading

Standard 1: The student uses the reading process effectively.

Benchmark
LA.A.1.3.3 The student demonstrates consistent and effective use of interpersonal and academic vocabularies in reading, writing, listening, and speaking.

Standard 2: The student constructs meaning from a wide range of texts.

Benchmarks
LA.A.2.3.4 The student uses a variety of reading materials to develop personal preferences in reading.
LA.A.2.3.5 The student locates, organizes, and interprets written information for a variety of purposes, including classroom research, collaborative decision making, and performing a school or real-world task.

Strand B: Writing

Standard 2: The student writes to communicate ideas and information effectively.

Benchmark
LA.B.2.3.1 The student writes text, notes, outlines, comments and observations that demonstrate comprehension of content and experiences from a variety of media.

Strand C: Listening, Viewing, and Speaking

Standard 1: The student uses listening strategies effectively.

Benchmarks
LA.C.1.3.1 The student listens and uses information gained for a variety of purposes, such as gaining information from interviews, following direction, and pursuing personal interest.
LA.C.1.3.4 The student uses responsive listening skills, including paraphrasing, summarizing, and asking questions for elaboration and clarification.

Standard 3: The student uses speaking strategies effectively.

Benchmarks
LA.C.3.3.2 The student asks questions and makes comments and observations that reflect understanding and application of content, processes, and experiences.
LA.C.3.3.3 The student speaks for various occasions, audiences, and purposes, including conversations, discussions, projects, and informational, persuasive, or technical presentations.
Social Studies

Strand B: People, Places, and Environments [Geography]

Standard 2: The student understands the interactions of people and the physical environment.

Benchmarks
SS.B.2.3.6 The student understands the environmental consequences of people changing the physical environment in various world locations.
SS.B.2.3.9 The student understands how the interaction between physical and human systems affects current conditions on Earth.

Strand C: Government and the Citizen [Civics & Government]

Standard 2: The student understands the role of the citizen in American democracy.

Benchmarks
SS.C.2.3.6 The student understands the importance of participation in community service, civic improvement, and political activities.
SS.C.2.3.7 The student understands current issues involving rights that affect local, national, or international political, social, and economic systems.