SCIENCE

Strand A: The Nature of Matter

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

Benchmarks
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).
SC.A.1.3.3 The student knows that temperature measures the average energy of motion of the particles that make up the substance.
SC.A.1.3.5 The student knows the difference between a physical change in a substance (i.e., altering the shape, form, volume, or density) and a chemical change (i.e., producing new substances with different characteristics).

Strand B: Energy

Standard 1: The student recognizes that energy may be changed in form with varying efficiency.

Benchmark
SC.B.1.3.5 The student knows the processes by which thermal energy tends to flow from a system of higher temperature to a system of lower temperature.

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.
**Strand H: The Nature of Science**

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

**Benchmarks**

SC.H.1.3.4 The student knows that accurate record keeping, openness, and replication are essential to maintaining an investigator’s credibility with other scientists and society.

SC.H.1.3.5 The student knows that a change in one or more variables may alter the outcome of an investigation.

**Standard 3:** The student understands that science, technology, and society are interwoven and independent.

**Benchmark**

SC.H.3.3.1 The student knows that science ethics demand that scientists must not knowingly subject coworkers, students, the neighborhood, or the community to health or property risks.
MATH

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 C: Geometry and Spatial Sense

Standard 1: The student describes, draws, identifies, and analyzes two- and three-dimensional shapes.

Benchmark
MA.C.1.3.1 The student understands the basic properties of, and relationships pertaining to, regular and irregular geometric shapes in two and three dimensions.

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.

Benchmark
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.