Science

Strand H: The Nature of Science

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

Benchmarks
- SC.H.1.1.1 The student knows that in order to learn, it is important to observe the same things often and compare them.
- SC.H.1.1.3 The student knows that in doing science, it is often helpful to work with a team and to share findings with others.
- SC.H.1.1.5 The student uses the senses, tools, and instruments to obtain information from his or her surroundings.
- SC.H.1.2.2 The student knows that a successful method to explore the natural world is to observe and record, and then analyze and communicate the results.
- SC.H.1.2.3 The student knows that to work collaboratively, all team members should be free to reach, explain, and justify their own individual conclusions.

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

Benchmarks
- SC.H.2.1.1 The student knows that most natural events occur in patterns.
- SC.H.2.2.1 The student knows that natural events are often predictable and logical.

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

Benchmarks
- SCH.3.2.1 The student understands that people, alone or in groups, invent new tools to solve problems and do work that affects aspects of life outside of science.
- SC.H.3.2.2 The student knows that data are collected and interpreted in order to explain an event or concept.
- SC.H.3.2.3 The student knows that, through the use of science processes and knowledge, people can solve problems, make decisions, and form new ideas.
MATH

Strand A: Number Sense, Concepts, and Operations

Standard 1: The student understands the different ways numbers are represented and used in the real world.

Benchmarks
MA.A.1.2.2 The student understands the relative size of whole numbers, commonly used fractions, decimals, percents.
MA.A.1.2.3 The student understands concrete and symbolic representations of whole numbers, fractions, decimals, and percents in real-world situations.
MA.A.1.2.4 The student understands that numbers can be represented in a variety of equivalent forms using whole numbers, decimals, fractions, and percents.

Standard 3: The student understands the effects of operations on numbers and the relationship among these operations, selects appropriate operations, and computes for problem solving.

Benchmarks
MA.A.3.2.1 The student understands and explains the effects of addition, subtraction, and multiplication on whole numbers, decimals, and fractions, including mixed numbers, and the effects of division on whole numbers, including the inverse relationship of multiplication and division.
MA.A.3.2.2 The student selects the appropriate operation to solve specific problems involving addition, subtraction, and multiplication of whole numbers, decimals, and fractions, and division of whole numbers.
MA.A.3.2.3 The student adds, subtracts, and multiplies whole numbers, decimals, and fractions, including mixed numbers, and divides whole numbers to solve real-world problems, using appropriate methods of computing, such as mental mathematics, paper and pencil, and calculator.

Standard 5: The student understands and applies theories related to numbers.

Benchmark
MA.A.5.2.1 The student understands and applies basic number theory concepts, including primes, composites, factors, and multiples.

Strand D: Algebraic Thinking

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

Benchmarks
MA.D.1.1.1 The student describes a wide variety of classification schemes and patterns related to physical characteristics and sensory attributes, such as rhythm, sound, shapes, colors, numbers, similar objects, similar events.
MA.D.1.1.2 The student recognizes, extends, generalizes, and creates a wide variety of patterns and relationships using symbols and objects.
MA.D.1.2.1 The student describes a wide variety of patterns and relationships through models, such as manipulatives, tables, graphs, rules using algebraic symbols.
MA.D.1.2.2 The student generalizes a pattern, relation, or function to explain how a change in one quantity results in a change in another.
MA.D.2.2.2 The student uses informal methods, such as physical models and graphs to solve real-world problems involving equations and inequalities.
Strand E: Data Analysis and Probability

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

Benchmarks
MA.E.1.1.1 The student displays solutions to problems by generating, collecting, organizing, and analyzing data using simple graphs and charts.
MA.E.1.2.1 The student solves problems by generating, collecting, organizing, displaying, and analyzing data using histograms, bar graphs, circle graphs, line graphs, pictographs, and charts.
MA.E.1.2.3 The student analyzes real-world data to recognize patterns and relationships of the measures of central tendency using tables, charts, histograms, bar graphs, line graphs, pictographs, and circle graphs generated by appropriate technology, including calculators and computers.

Standard 2: The student identifies patterns and makes predictions from an orderly display of data using concepts of probability and statistics.

Benchmark
MA.E.2.2.2 The student predicts the likelihood of simple events occurring.

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

Benchmark
MA.E.3.2.1 The student designs experiments to answer class or personal questions, collects information, and interprets the results using statistics (range, mean, median, and mode) and pictographs, charts, bar graphs, circle graphs, and line graphs.
Strand A: Reading

Standard 1: The student uses the reading process effectively.

Benchmarks
LA.A.1.1.1 The student predicts what a passage is about based on its title and illustrations.
LA.A.1.1.3 The student uses knowledge of appropriate grade-, age-, and developmental-level vocabulary in reading.
LA.A.1.1.4 The student increases comprehension by rereading, retelling, and discussion.

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

Benchmarks
LA.A 2.1.1 The student determines the main idea or essential message from text and identifies supporting information.
LA.A.2.1.2 The student selects material to read for pleasure.
LA.A.2.1.3 The student reads for information to use in performing a task and learning a new task.

Strand B: Writing

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

Benchmarks
LA.B.2.1.1 The student writes questions and observations about familiar topics, stories, or new experiences.

Strand C: Listening, Viewing, and Speaking

Standard 1: The student uses listening strategies effectively.

Benchmarks
LA.C.1.1.1 The student listens for a variety of informational purposes, including curiosity, pleasure, getting directions, performing tasks, solving problems, and following rules.
LA.C.1.1.3 The student carries on a conversation with another person, seeking answers and further explanations of the other’s ideas through questioning and answering.

Standard 3: The student uses speaking strategies effectively.

Benchmarks
LA.C.3.1.1 The student speaks clearly and at a volume audible in large- or small-group settings.
LA.C.3.1.2 The student asks questions to seek answers and further explanation of other people’s ideas.

Strand D: Language

Standard 1: The student understands the nature of language.
Benchmark
LA.D.1.1.1 The student recognizes basic patterns in and functions of language (patterns such as characteristic sounds and rhythms and those found in written forms; functions such as asking questions, expressing oneself, describing objects or experience, and explaining).