3rd Grade Science

The purpose of this document is to clarify what students should know and be able to do each quarter (Q).

Competencies	Q 1	Q 2	Q 3	Q 4
C1 – Scientific Explanations The student analyzes and interprets information and is able to construct reasonable explanations from evidence.	**X**	**X**	**X**	**X**
C2 – Matter The student knows that matter has measurable and testable properties and can be classified by physical state, and recognizes that a mixture is created when two materials are combined.	**X**			
C3 – Force, Motion, and Energy The student explores forms of energy in everyday life and demonstrates how position and motion can be changed by pushing and pulling objects.		**X**		
C4 – Earth's Surface The student explores and records how soils are formed and investigates rapid changes in Earth's surface.		**X**		
C5 – Patterns in the Natural World The student compares day-to-day weather changes in different locations and demonstrates the relationship of the Sun, Earth, and Moon with models.			**X**	
C6 – Organisms and Environments The student describes the physical characteristics of environments, how organisms are affected by environmental changes, and how structures and functions enable organisms to survive in an environment.			**X**	**X**

Learning Progression for Competency 1: Scientific Explanations

The student communicates observations and write scientific explanations using evidence.

Developing	Progressing	Proficient	Advanced
Did not make a claim; or claim does not answer the question Did not provide evidence; or evidence does not support the claim	Claim does not completely answer the question Uses some evidence to support claim Evidence does not include specific data (exact words or numbers) to support claim Did not provide reasoning Reasoning does not connect the claim to the evidence	Claim completely answers the question Uses sufficient evidence to support claim Evidence includes specific data (exact words or numbers) to support claim Attempts to explain how the claim is connected to the evidence using a scientific concept	Claim completely answers the question Uses sufficient evidence to support claim Evidence includes only relevant specific data (exact words or numbers) to support claim Explains how the claim is connected to the evidence using a scientific concept

Success Criteria for Proficient in Scientific Explanation:

The student can:

- answer a question by making a claim.
- use specific data as evidence to support the claim.
- attempt to state a scientific principle or scientific idea that justifies how evidence supports the claim.

Learning Progression for Competency 2: Matter

The student knows that matter has measurable and testable properties and can be classified by physical state, and recognizes that a mixture is created when two materials are combined.

Developing	Progressing	Proficient	Advanced
Identifies the tool that is used to measure mass and state how mass is labeled Identifies the tool that is used to measure temperature and state how temperature is labeled Identifies what a magnet is and how it is used Identifies how to test for sinking and floating Describes and classifies samples of matter as solids and liquids Defines what a mixture is	Uses a balance to compare masses and identifies which item has more mass Uses a thermometer to measure and record temperature Identifies if an item is magnetic or not using a magnet Identifies if matter sinks or floats in water Describes and classifies samples of matter as solids, liquids, and gases Identifies if an ingredient or ingredients form a mixture or not	Measures, tests, and records properties of matter in an organized data table Describes and classifies samples of matter as solids, liquids, and gases Explores ingredients to create mixtures or non-mixtures and explain which are mixtures	Designs and implements a descriptive investigation to explore mass and record the data in a table, temperature and record the data in a table, magnetism and record the data in a table, and ability of objects to sink or float and record data in a data table. Designs a scientific model of the three states of matter and use it to explain the similarities and differences between the states including shape. Designs an investigation to explore mixtures and explain which are mixtures by identifying that a mixture is created when two materials are combined.

Success Criteria for Proficient in Matter:

The student can:

- measure, test, and record properties of matter in an organized data table.
  - mass
  - temperature
  - magnetism

- sink
- float

- describe and classify samples of matter as a solid, liquid or gas.
  - demonstrate solids have a definite shape
  - demonstrate liquids and gases take the shape of their container
- explain if indegredients are combined to create a mixture or a non-mixture.
  - identifying that a mixture is created when two materials are combined