

2nd 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 Explanation The student communicates observations and write scientific explanations using evidence.	X	X	X	X
C2 Matter The student classifies matter by physical properties, compares changes in materials caused by heating and cooling, and demonstrates actions that can be taken to change physical properties of materials.	X			
C3 Force, Motion, and Energy The student investigates the effects on objects by increasing or decreasing energy, and compares patterns of movement of objects over time.		X		
C4 Earth's Surface The student observes, describes, and compares rocks by size, texture, and color.		X		
C5 Patterns in the Natural World The student records and describes patterns in weather information and among objects in the sky.			X	
C6 Organisms and Environments The student recognizes the basic needs of organisms, and compares how the structures of plants and animals and behaviors of animals help meet their basic needs.			X	X

Learning Progression for Competency 1: Scientific Explanations

The student communicates observations and write scientific explanations using evidence.

Developing	Progressing	Proficient	Advanced
Makes an inaccurate claim Evidence is inappropriate or vague	Makes an accurate, but vague or incomplete claim Supports the claim, but does not include specific data	Makes an accurate and complete claim that answers the question Uses specific data (exact words and/or numbers) as evidence to support the claim	Makes an accurate and complete claim that answers the question Uses only relevant specific data (exact words and/ numbers) as evidence to support the claim Attempts to connect claim and evidence using scientific principles
<p>Success Criteria for Proficient in Scientific Explanation:</p> <p>The student can:</p> <ul style="list-style-type: none"> • answer a question by making a claim. • use specific data as evidence to support the claim. 			

Learning Progression for Competency 2: Matter

The student classifies matter by physical properties, compares changes in materials caused by heating and cooling, and demonstrates actions that can be taken to change physical properties of materials.

Developing	Progressing	Proficient	Advanced
Identifies the relative temperature of an object as hot or cold	Identifies the relative temperature of an object using the height of the red line on a thermometer as a point of reference	Classifies matter by its properties	Plans an investigation to test and record the relative temperature, texture, and flexibility of an object, and whether an object is a solid or a liquid
Identifies the physical properties rough or smooth, as texture	Identifies the physical properties of objects by texture such as; rough, smooth, fuzzy, slimy, grainy, gritty, sharp, etc.	Compares changes in materials	Plans an investigation to compare how objects change when they are heated or cooled
Identifies bending as the physical property of flexibility	Identifies an object as flexible or not flexible	Demonstrates how to change the physical properties of an object	Compares relevant differences in objects that have been cut, folded, sanded, or melted
Identifies the physical properties of a solid or a liquid	Identifies the physical properties of solids and liquids	Combines materials	Identifies the combined materials in a useful object and justify the selection of the materials and suggest additional materials that could be substituted
Predicts changes in some materials caused by heating and cooling	Predicts changes in materials caused by heating and cooling		
Demonstrates cutting, folding, sanding, and melting objects	Identifies the physical properties of an object that changed after it has been cut, folded, sanded, or melted		
Identifies properties of a material and its use			

	Identifies the properties of a material and justify how the properties of the material makes it useful		
<p>Success Criteria for Proficient in Matter:</p> <p>The student can:</p> <ul style="list-style-type: none"> • classify matter. <ul style="list-style-type: none"> o relative temperature o various textures o flexibility o physical state • compare changes in the physical properties of matter. <ul style="list-style-type: none"> o heating o cooling o cutting o folding o sanding o melting • combine materials so they can do things when put together that they could not do alone. <ul style="list-style-type: none"> o building a tower o building a bridge • justify the selection of the combined materials based on their physical properties. 			