

RRRPS District Standards: SCIENCE

Grade 2

STRAND I: SCIENTIFIC THINKING AND PRACTICE

NM State Content Standard I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.

<p><u>NM State Benchmarks Grades K-4</u></p>	<p><u>RRPS Grade 2 Power Standard</u> <i>All benchmarks must be taught; Power Standards are consistently emphasized.</i></p>
<p><u>NM State Benchmark I-A: Grades K-4</u> Use scientific methods to observe, collect, record, analyze, predict, interpret, and determine reasonableness of data.</p>	<p>I. Communicate observations, predictions and scientific thinking while working independently or with a group.</p>
<p><u>NM Grade 2 Performance Standards</u> Conduct simple investigations (e.g., measure the sizes of plants of the same kind that are grown in sunlight and in shade). 1. Use tools to provide information not directly available through only the senses (e.g., magnifiers, rulers, thermometers). 2. Make predictions based on observed patterns as opposed to random guessing. 3. Follow simple instructions for a scientific investigation.</p>	<p><u>Performance Indicators:</u></p> <ol style="list-style-type: none"> a. Through discussions, students will share observations and ideas with partners, small group, and entire class. b. Draw and label detailed pictures of observations. c. Discuss and/or write accurate observations. d. Measure length, weight and temperature with tools and record observations (simple charts or diagrams).
<p><u>NM State Benchmark I-B: Grades K-4</u> Use scientific thinking and knowledge and communicate findings.</p>	
<p><u>NM Grade 2 Performance Standards</u> 1. Understand that in doing science it is often helpful to work with a team and share findings. 2. Make accurate observations and communicate findings about investigations.</p>	
<p><u>NM State Benchmark I-C: Grades K-4</u> Use mathematical skills and vocabulary to analyze data, understand patterns and relationships, and communicate findings.</p>	
<p><u>NM Grade 2 Performance Standards</u> 1. Record observations on simple charts or diagrams. 2. Measure length, weight, and temperature with appropriate tools and express those measurements in accurate mathematical language.</p>	

STRAND II: CONTENT OF SCIENCE

NM State Content Standard II (Physical Science): Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.

<p><u>NM State Benchmarks Grades K-4</u></p>	<p><u>RRPS Grade 2 Power Standards</u> <i>All benchmarks must be taught; Power Standards are consistently emphasized.</i></p>
<p><u>NM State Benchmark II-A: Grades K-4</u> Recognize that matter has different forms and properties.</p>	<p>II. Conclude that living and non-living things change. (Benchmarks II-A, II-B, II-C, III-B, IV-A, IV-B)</p>
<p><u>NM Grade 2 Performance Standards</u> 1. Observe that properties of substances can change when they are mixed, cooled, or heated (e.g., salt dissolves in water, ice melts). 2. Describe the changes that occur when substances are heated or cooled and change from one state of matter to another (i.e., solid, liquid, and gas).</p>	<p><u>Performance Indicators:</u></p> <p>Draw connections between mature and immature living things. (caterpillar to butterfly, chick to penguin, etc.) <i>Resource: Lesson 5 in Biodiversity (CHOL)</i> and label seasons. <i>Resource: pg. 2&3 student booklet in Changes (CHOL)</i></p>
<p><u>NM State Benchmark II-B: Grades K-4</u> Know that energy is needed to get things done and that energy has different forms.</p>	<p>e-f. Recognize that the moon appears different during the month. <i>Resource: pg. 1 in student booklet in Changes (CHOL)</i></p>
<p><u>NM Grade 2 Performance Standards</u> 1. Describe how heat can be produced (e.g., burning, rubbing, mixing some substances). 2. Know that heat moves more rapidly in thermal conductors (e.g., metal pan) than in insulators (e.g., plastic handle). 3. Describe the usefulness of some forms of energy (e.g., electricity, sunlight, wind, sound) and how energy (e.g., heat, light,) can affect common objects (e.g., sunlight warms dark objects, heat melts candles). 4. Observe that sound is made by vibrating objects and describe it by its pitch and loudness. 5. Recognize that moving objects carry energy (kinetic energy).</p>	<p>Describe that substances can change when mixed, cooled, or heated. (flour, sugar, cocoa, salt, ice, oil, rubbing alcohol, etc.) <i>Resource: lesson 3&4, Changes (CHOL)</i> Observe that fungi is living, but not a plant or animal. <i>Resource: pg. 9, Biodiversity (CHOL)</i></p> <p>c. Predict and test materials that attract and repel using magnets and electrically charged materials. b. Recognize that moving objects carry energy and that an objects motion is affected by pushing and pulling.</p>
<p><u>NM State Benchmark II-C: Grades K-4</u> Identify forces and describe the motion of objects.</p>	
<p><u>NM Grade 2 Performance Standards</u> 1. Describe how the strength of a push or pull affects the change in an object’s motion (e.g., how a big or small push affects how high a swing rises). 2. Observe that electrically charged materials and magnets attract and repel each other, and observe their effects on other kinds of materials.</p>	

STRAND II: CONTENT OF SCIENCE

NM State Content Standard III (Life Science): Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.

NM State Benchmarks Grades K-4

RRPS Grade 2 Power Standard

All benchmarks must be taught; Power Standards are consistently emphasized.

NM State Benchmark III-A: Grades K-4

Know that living things have diverse forms, structures, functions, and habitats.

NM Grade 2 Performance Standards

1. Observe that diversity exists among individuals within a population.
2. Observe and describe various shapes of fungi.
3. Know that bacteria and viruses are germs.

NM State Benchmark III-B: Grades K-4

Know that living things have similarities and differences and that living things change over time.

NM Grade 2 Performance Standards

1. Explain that stages of the life cycle are different for different animals (e.g., mouse, cat, horse, butterfly, frog).
2. Observe that many characteristics of the offspring of living organisms (e.g., plants or animals) are inherited from their parents.
3. Observe how the environment influences some characteristics of living things (e.g., amount of sunlight required for plant growth).

NM State Benchmark III-C: Grades K-4

Know the parts of the human body and their functions.

NM Grade 2 Performance Standards

1. Identify a variety of human organs (e.g., lungs, heart, stomach, brain).
2. Know that various nutrients are required for specific parts and functions of the body (e.g., milk for bones and teeth, protein for muscles, sugar for energy).
3. Identify the functions of human systems (e.g., respiratory, circulatory, digestive).

STRAND II: CONTENT OF SCIENCE

NM State Content Standard IV (Earth and Space Science): Understand the structure of Earth, the solar system, and the universe, the interconnections among them, and the processes and interactions of Earth's systems.

<p><u>NM State Benchmarks Grades K-4</u></p>	<p><u>RRPS Grade 2 Power Standards</u> <i>All benchmarks must be taught; Power Standards are consistently emphasized.</i></p>
<p><u>NM State Benchmark IV-A: Grades K-4</u> Know the structure of the solar system and the objects in the universe.</p>	<p>III. Identify characteristics of rocks and soil. (Benchmarks IV-B)</p>
<p><u>NM Grade 2 Performance Standards</u></p> <ol style="list-style-type: none"> 1. Observe that the phase of the moon appears a little different every day but looks the same again after about four weeks. 2. Observe that some objects in the night sky are brighter than others. 3. Know that the sun is a star. 	<p><u>Performance Indicators:</u></p> <ol style="list-style-type: none"> a. Perform various experiments to identify characteristics of rocks and soil (ball, smear, settling, sifting) b. Recognize that soil is made of weathered rock and or organic materials.
<p><u>NM State Benchmark IV-B: Grades K-4</u> Know the structure and formation of Earth and its atmosphere and the processes that shape them.</p>	<p><i>Resource: Teacher's Guide Soils and rocks from CHOL</i></p>
<p><u>NM Grade 2 Performance Standards</u></p> <ol style="list-style-type: none"> 1. Know that rocks have different shapes and sizes (e.g., boulders, pebbles, sand) and that smaller rocks result from the breaking and weathering of larger rocks. 2. Understand that rocks are made of materials with distinct properties. 3. Know that soil is made up of weathered rock and organic materials, and that soils differ in their capacity to support the growth of plants. 4. Recognize the characteristics of the seasons. 	

STRAND III: SCIENCE AND SOCIETY

NM State Content Standard V: Understand how scientific discoveries, inventions, practices, and knowledge influence, and are influenced by, individuals and societies.

NM State Benchmarks Grades K-4

RRPS Grade 2 Power Standards

All benchmarks must be taught; Power Standards are consistently emphasized.

NM State Benchmark V-A: Grades K-4

Describe how science influences decisions made by individuals and societies.

IV. Know that scientific discoveries influence healthy living. (Benchmark III-C, V-A)

NM Grade 2 Performance Standards

1. Describe ways to prevent the spread of germs (e.g., soap, bleach, cooking).
2. Know that science has ways to help living things avoid sickness or recover from sickness (e.g., vaccinations, medicine) and adult supervision is needed to administer them.
3. Know that some materials are better than others for making particular things (e.g., paper, cardboard, plastic, metal, fiberglass, wood).
4. Understand that everybody can do science, invent things, and formulate ideas.
5. Know that science has discovered many things about objects, events, and nature and that there are many more questions to be answered.

Performance Indicators:

Demonstrate proper hand washing techniques to prevent the spread of germs.
 Draw and label a balanced meal and describe how it helps parts of the body. (digestive, skeletal and circulatory systems)
 List and describe healthy choices that help functions of their body. (respiratory, circulatory, skeletal and digestive systems) *Resource: Healthy Science curriculum from CHOL.*