

**RRRPS District Standards: SCIENCE**

**Grade 3**

<b>STRAND I: SCIENTIFIC THINKING AND PRACTICE</b>	
<i><b>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.</b></i>	
<b><u>NM State Benchmarks Grades K-4</u></b>	<b><u>RRPS Grade 3 Power Standards</u></b> <i>All benchmarks must be taught; Power Standards are consistently emphasized.</i>
<b><u>NM State Benchmark I-A: Grades K-4</u></b> Use scientific methods to observe, collect, record, analyze, predict, interpret, and determine reasonableness of data.	<b><u>Power Standard 1</u></b> Use scientific thinking and investigations to make observations, interpret data and communicate findings.
<b><u>NM Grade 3 Performance Standards</u></b> 1. Make new observations when discrepancies exist between two descriptions of the same object or phenomenon to improve accuracy. 2. Recognize the difference between data and opinion. 3. Use numerical data in describing and comparing objects, events, and measurements. 4. Collect data in an investigation and analyze those data. 5. Know that the same scientific laws govern investigations in different times and places (e.g., gravity, growing plants).	
<b><u>NM State Benchmark I-B: Grades K-4</u></b> Use scientific thinking and knowledge and communicate findings.	
<b><u>NM Grade 3 Performance Standards</u></b> 1. Use a variety of methods to display data and present findings. 2. Understand that predictions are based on observations, measurements, and cause-and-effect relationships.	
<b><u>NM State Benchmark I-C: Grades K-4</u></b> Use mathematical skills and vocabulary to analyze data, understand patterns and relationships, and communicate findings.	
<b><u>NM Grade 3 Performance Standards</u></b> 1. Use numerical data in describing and comparing objects, events, and measurements. 2. Pose a question of interest and present observations and measurements with accuracy. 3. Use various methods to display data and present findings and communicate results in accurate mathematical language.	
<b><u>Performance Indicators</u></b> A. Collect data from an investigation. B. Create a chart from data. C. Display data from an investigation. D. Communicate results from an investigation. E. Research a topic and present information and findings in a clear way.	

**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.***

**NM State Benchmarks Grades K-4**

**RRPS Grade 3 Power Standards**

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

**NM State Benchmark II-A: Grades K-4**

Recognize that matter has different forms and properties.

**Power Standard 2**

Determine the basic characteristics of matter, energy and forces.

**NM Grade 3 Performance Standards**

1. Identify and compare properties of pure substances and mixtures (e.g., sugar, fruit juice).
2. Separate mixtures based on properties (e.g., by size or by substance; rocks and sand, iron filings and sand, salt and sand).

**Performance Indicators**

- a. Identify and compare matter by observed properties.
- b. Identify sources of energy and how energy changes.
- c. Describe the forces of magnets.

**NM State Benchmark II-B: Grades K-4**

Know that energy is needed to get things done and that energy has different forms.

**NM Grade 3 Performance Standards**

1. Understand that light is a form of energy and can travel through a vacuum.
2. Know that light travels in a straight line until it strikes an object and then it is reflected, refracted, or absorbed.
3. Measure energy and energy changes (e.g., temperature changes).
4. Construct charts or diagrams that relate variables associated with energy changes (e.g., melting of ice over time).

**NM State Benchmark II-C: Grades K-4**

Identify forces and describe the motion of objects.

**NM Grade 3 Performance Standards**

1. Recognize that magnets can produce motion by attracting some materials (e.g., steel) and have no effect on others (e.g., plastics).
2. Describe how magnets have poles (N and S) and that like poles repel each other while unlike poles attract.
3. Observe that some forces produce motion without objects touching (e.g., magnetic force on nails).
4. Describe motion on different time scales (e.g., the slow motion of a plant toward light, the fast motion of a tuning fork).

**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.***

<p><b><u>NM State Benchmarks Grades K-4</u></b></p>	<p><b><u>RRPS Grade 3 Power Standards</u></b>  <i>All benchmarks must be taught; Power Standards are consistently emphasized.</i></p>
<p><b><u>NM State Benchmark III-A: Grades K-4</u></b>          Know that living things have diverse forms, structures, functions, and habitats.</p>	<p><b><u>Power Standard 3</u></b>          Describe the adaptability of living things and determine how they interact with the environment as groups and individuals.</p>
<p><b><u>NM Grade 3 Performance Standards</u></b></p> <ol style="list-style-type: none"> <li>1. Know that an adaptation in physical structure or behavior can improve an organism’s chance for survival (e.g., horned toads, chameleons, cacti, mushrooms).</li> <li>2. Observe that plants and animals have structures that serve different functions (e.g., shape of animals’ teeth).</li> <li>3. Classify common animals according to their observable characteristics (e.g., body coverings, structure).</li> <li>4. Classify plants according to their characteristics (e.g., tree leaves, flowers, seeds).</li> </ol>	<p><b><u>Performance Indicators</u></b></p> <ol style="list-style-type: none"> <li>A. Classify living things by characteristics.</li> <li>B. Identify beneficial and detrimental changes to the environment caused by living things.</li> <li>C. Associate health with proper nutrition and resistance to disease.</li> </ol>
<p><b><u>NM State Benchmark III-B: Grades K-4</u></b>          Know that living things have similarities and differences and that living things change over time.</p>	
<p><b><u>NM Grade 3 Performance Standards</u></b></p> <ol style="list-style-type: none"> <li>1. Identify how living things cause changes to the environments in which they live, and that some of these changes are detrimental to the organism and some are beneficial.</li> <li>2. Know that some kinds of organisms that once lived on Earth have become extinct (e.g., dinosaurs) and that others resemble those that are alive today (e.g., alligators, sharks).</li> </ol>	
<p><b><u>NM State Benchmark III-C: Grades K-4</u></b>          Know the parts of the human body and their functions.</p>	
<p><b><u>NM Grade 3 Performance Standards</u></b></p> <ol style="list-style-type: none"> <li>1. Know that bacteria and viruses are germs that affect the human body.</li> <li>2. Describe the nutrients needed by the human body.</li> </ol>	

**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.***

**NM State Benchmarks Grades K-4**

**RRPS Grade 3 Power Standards**

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

**NM State Benchmark IV-A: Grades K-4**

Know the structure of the solar system and the objects in the universe.

**Power Standard 4**

Identify the structure and formation of Earth and determine its relationship within the solar system.

**NM Grade 3 Performance Standards**

1. Describe the objects in the solar system (e.g., sun, Earth and other planets, moon) and their features (e.g., size, temperature).
2. Describe the relationships among the objects in the solar system (e.g., relative distances, orbital motions).
3. Observe that the pattern of stars stays the same as they appear to move across the sky nightly.
4. Observe that different constellations can be seen in different seasons.
5. Know that telescopes enhance the appearance of some distant objects in the sky (e.g., the moon, planets).

**Performance Indicators**

- A. Describe orbital motion, rotations, and revolutions of objects in the solar system.
- B. Describe the benefits of using a telescope when observing objects in the night sky.
- C. Identify the different forms of water in the water cycle.
- D. Identify Earth's structures and the processes that cause changes to the Earth.

**NM State Benchmark IV-B: Grades K-4**

Know the structure and formation of Earth and its atmosphere and the processes that shape them.

**NM Grade 3 Performance Standards**

1. Know that Earth's features are constantly changed by a combination of slow and rapid processes that include the action of volcanoes, earthquakes, mountain building, biological changes, erosion, and weathering.
2. Know that fossils are evidence of earlier life and provide data about plants and animals that lived long ago.
3. Know that air takes up space, is colorless, tasteless, and odorless, and exerts a force.
4. Identify how water exists in the air in different forms (e.g., in clouds and fog as tiny droplets; in rain, snow, and hail) and changes from one form to another through various processes (e.g., freezing/condensation, precipitation, evaporation).

**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 3 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.

**Power Standard 5**

Examine how scientific discoveries impact society and the environment.

**NM Grade 3 Performance Standards**

1. Describe how food packaging (e.g., airtight containers, date) and preparation (heating, cooling, salting, smoking, drying) extend food life and the safety of foods (e.g., elimination of bacteria).
2. Know that science produces information for the manufacture and recycling of materials (e.g., materials that can be recycled [aluminum, paper, plastic] and others that cannot [gasoline]).
3. Know that naturally occurring materials (e.g., wood, clay, cotton, animal skins) may be processed or combined with other materials to change their properties.
4. Know that using poisons can reduce the damage to crops caused by rodents, weeds, and insects, but their use may harm other plants, animals, or the environment.

**Performance Indicators**

- A. Identify ways of preserving food and which provide the healthiest choice.
- B. Compare products, which can be recycled with those that cannot.
- C. Describe the effects of pesticides and herbicides on plants, animals, and the environment.