

# NEW MEXICO Grade 1 SCIENCE STANDARDS

## **Strand I: Scientific Thinking and Practice**

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

**K-4 Benchmark I:** Use scientific methods to observe, collect, record, analyze, predict, interpret, and determine reasonableness of data.

1. Make observations, develop simple questions, and make comparisons of familiar situations (e.g., What does the seed look like when it starts to grow?).
2. Describe relationships between objects (e.g., above, next to, below) and predict the results of changing the relationships (e.g., When that block moves, what will happen to the one next to it?).

**K-4 Benchmark II:** Use scientific thinking and knowledge and communicate findings.

1. Know that simple investigations do not always turn out as planned.

**K-4 Benchmark III:** Use mathematical skills and vocabulary to analyze data, understand patterns and relationships, and communicate findings.

1. Use numbers and mathematical language (e.g., “addition” instead of “add to,” “subtraction” instead of “take away”) to describe phenomena.

## **Strand II: Content of Science**

**Standard I (Physical Science):** Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.

**K-4 Benchmark I:** Recognize that matter has different forms and properties.

1. Observe that the three states of matter (i.e., solids, liquids, and gases) have different properties (e.g., water can be liquid, ice, or steam).
2. Describe simple properties of matter (e.g., hardness, flexibility, transparency).

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**K-4 Benchmark II:** Know that energy is needed to get things done and that energy has different forms.

1. Observe and describe how energy produces changes (e.g., heat melts ice, gas makes car go uphill, electricity makes TV work).

**K-4 Benchmark III:** Identify forces and describe the motion of objects.

1. Describe ways to make things move, what causes them to stop, and what causes a change of speed, or change of direction.
2. Observe that gravity makes things fall to the ground unless something holds them up.

## **Strand II: Content of Science**

**Standard II (Life Science):** Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.

**K-4 Benchmark I:** Know that living things have diverse forms, structures, functions, and habitats.

1. Know that living organisms (e.g., plants, animals) have needs (e.g., water, air, food, sunlight).
2. Know that living organisms (e.g., plants, animals) inhabit various environments and have various external features to help them satisfy their needs (e.g., leaves, legs, claws).
3. Describe the differences and similarities among living organisms (e.g., plants, animals).
4. Observe that living organisms (e.g., plants, animals) have predictable but varied life cycles.

**K-4 Benchmark II:** Know that living things have similarities and differences and that living things change over time.

1. Identify differences between living and nonliving things.
2. Recognize the differences between mature and immature plants and animals (e.g., trees/seedlings, dogs/puppies, cats/kittens).

**K-4 Benchmark III:** Know the parts of the human body and their functions.

1. Describe simple body functions (e.g., breathing, eating).
2. Describe the basic food requirements for humans.
3. Describe how some parts of human bodies differ from similar parts of other animals (e.g., hands and feet/paws; ears).

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## **Strand II: Content of Science**

**Standard III (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.

### **K-4 Benchmark I:** Know the structure of the solar system and the objects in the universe.

1. Observe the changes that occur in the sky as day changes into night and night into day.
2. Describe the basic patterns of objects as they move through the sky:
  - sun appears in the day
  - moon appears at night but can sometimes be seen during the day
  - sun and moon appear to move across the sky
  - moon appears to change shape over the course of a month.
3. Recognize that the sun, moon, and stars all appear to move slowly across the sky.

### **K-4 Benchmark II:** Know the structure and formation of Earth and its atmosphere and the processes that shape them.

1. Know that simple tools can be used to measure weather conditions (e.g., thermometer, wind sock, hand held anemometer, rain gauge) and that measurements can be recorded from day to day and across seasons.
2. Know that there are different climates (e.g., desert, arctic, rainforest).

## **Strand III: Science and Society**

**Standard I:** Understand how scientific discoveries, inventions, practices, and knowledge influence, and are influenced by, individuals and societies.

### **K-4 Benchmark I:** Describe how science influences decisions made by individuals and societies.

1. Know that germs can be transmitted by touching, breathing, and coughing, and that washing hands helps prevent the spread of germs.
2. Describe how science has assisted in creating tools (e.g., plows, knives, telephones, cell phones, computers) to make life easier and more efficient.
3. Describe how tools and machines can be helpful, harmful, or both (e.g., bicycles, cars, scissors, stoves).
4. Know that men and women of all ethnic and social backgrounds practice science and technology.