

GRADE 4 – SCIENCE

Performance Level Descriptors

ADVANCED

At this level and grade, New Mexico students should be able to:

- Explain abstract concepts and processes in Life, Physical, and Earth and Space Sciences including changes of state, relationships among organisms in their habitat and physical adaptation to the environment, the structure of the solar system through observations, and the structure of Earth
- Apply an understanding of scientific inquiry, including the ability to distinguish between testable and un-testable processes
- Make appropriate inferences from observations and understand that theories can change based on new information and discoveries
- Analyze and evaluate data, understand relationships, and communicate findings by applying mathematical and scientific skills, vocabulary, and tools
- Construct and interpret charts, tables, and graphs to describe results, draw conclusions, make inferences, and to solve problems and applications
- Examine and interpret how science influences decisions made by individuals and societies.

PROFICIENT

At this level and grade, New Mexico students should be able to:

- Describe basic concepts and processes in Life, Physical, and Earth and Space Sciences including changes of state, relationships among organisms in their habitat and physical adaptation to the environment, the structure of the solar system through observations, and the structure of Earth
- Demonstrate a beginning understanding of scientific inquiry, including the ability to distinguish between testable and un-testable processes
- Make appropriate inferences from observations and the ability to analyze data, understand relationships, and communicate findings using basic mathematical and scientific skills, vocabulary, and tools.
- Interpret charts, tables, and graphs to describe results, draw conclusions and to solve problems and applications
- Explain how science influences decisions made by individuals and societies.

NEARING PROFICIENCY

At this level and grade, New Mexico students should be able to:

- Identify initial concepts and processes in Life, Physical, and Earth and Space Sciences including changes of state, relationships among organisms in their habitat and physical adaptation to the environment, the structure of the Solar System through observations, and the structure of Earth

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- Recognize the process of scientific inquiry including the ability to distinguish between testable and un-testable processes and the ability to make observations
- Record data, recognize relationships, and communicate findings using beginning mathematical and scientific skills, vocabulary, and tools
- Use charts and graphs to describe results and to draw conclusions
- List ways science has influenced decisions made by individuals and societies.

BEGINNING STEP

At this level and grade, New Mexico students should be able to:

- Recognize some simple concepts in Life, Physical, and Earth and Space Sciences
- Recognize the process of scientific inquiry, including the ability to make observation
- Measure data and state findings using some simple mathematical and scientific skills, vocabulary, and tools
- Identify a chart or graph
- List a few ways science has influenced decisions made by individuals and societies.

Grade 7 – SCIENCE

Performance Level Descriptors

ADVANCED

At this level and grade, New Mexico students should be able to:

- Extend science process skills
- Analyze and refine the experimental design of a scientific investigation using appropriate models
- Make predictions based on the relationship between variables in a scientific investigation
- Compare life science processes in an ecosystem and the effects of the environment on organisms within the ecosystem
- Compare the structure and function of plant and animal cells, and the effects of Earth's systems on organisms over time
- Compare forces and motions that act on the human body and how science relates to current medical and health issues.

PROFICIENT

At this level and grade, New Mexico students should be able to:

- Extend and refine science process skills
- Evaluate the experimental design of a scientific investigation using appropriate models
- Explain the relationship between variables in a scientific investigation
- Describe life science processes in an ecosystem and the effects of the environment on organisms within the ecosystem
- Describe the structure and function of plant and animal cells, and the effects of Earth's systems on organisms over time
- Explain forces and motions that act on the human body and how science relates to current medical and health issues.

NEARING PROFICIENCY

At this level and grade, New Mexico students should be able to:

- Extend and refine science process skills
- Describe the experimental design of a scientific investigation
- Select models to show the relationship between variables in a scientific investigation
- Identify life science processes in an ecosystem and the effects of the environment on organisms within the ecosystem
- Identify the structure and function of plant and animal cells, and the effects of Earth's systems on organisms over time
- Describe forces and motions that act on the human body and how science relates to current medical and health issues.

BEGINNING STEP

At this level and grade, New Mexico students should be able to:

- Extend science process skills
- Identify the experimental design of a scientific investigation
- Recognize models that show the relationship between variables in a scientific investigation
- Recognize life science processes in an ecosystem and the effects of the environment on organisms within the ecosystem
- Know the structure and functions of plant and animal cells, and the effects of Earth's systems on organisms over time
- Identify forces and motions that act on the human body and how science relates to current medical and health issues.