Pond Connections
Discover New Mexico : Wildlife Education
A Program of New Mexico Department of Game and Fish
www.wildlife.state.nm.us/education/conservation-education/discover-new-mexico/

Common Core State Standards:

Language Standards K--5, Vocabulary, Acquisition and Use
Grades 4--5: 4. and c:
1. Determine or clarify the meaning of unknown and multiple-meaning words and phrases...choosing flexibly from a range of strategies.
   a. Use context as a clue to the meaning of a word or phrase
   b. Consult reference materials (e.g. dictionaries, glossaries, thesauruses) both print and digital to find the pronunciation and determine or clarify the precise meaning of key words and phrases

Reading Informational Text:
Grade 4—Key Ideas & Details/Integration of Knowledge & Ideas
1. Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.
7. Interpret information presented visually, orally, or quantitatively (e.g. charts, graphs, diagrams, time lines, animations or interactive elements on web pages) and explain how the information contributes to an understanding of the text in which it appears.

Grade 5—Integration of Knowledge and Ideas
7. Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.

Writing:
Grades 4 and 5—Research to Build and Present Knowledge/Range of Writing
7. Conduct short research projects that build knowledge through investigation of different aspects of a topic.
10. Write routinely over extended time frames (time for research, reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes and audiences.

New Mexico Science Standards:

Science---Strand II, Life Science Standard II, Benchmark 5. 1--4 4th grade Standards
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 habitat.
1. Explain that different living organisms have distinctive structures and body systems that serve specific functions (e.g., walking, flying, swimming).
3. Describe how roots are associated with the intake of water and soil nutrients and green leaves are associated with making food from sunlight (photosynthesis).
4. Describe the components of relationships among organisms in a food chain (e.g., plants are the primary source of energy for living systems).
5th grade Standards
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.
   1. Identify the components of habitats and ecosystems (producers, consumers, decomposers, predators).
   2. Understand how food webs depict relationships between different organisms.

6th grade Standards
Strand II Standard II BM1 PS1
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.
5---8 Benchmark I: Explain the diverse structures and functions of living things and the complex relationships between living things and their environments.
   1. Understand how organisms interact with their physical environments to meet their needs (i.e., food, water, air) and how the water cycle is essential to most living systems.
   2. Describe how organisms have adapted to various environmental conditions.

7th grade Standards
Strand II Standard II BM1 PS 1---6
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.
5---8 Benchmark I: Explain the diverse structures and functions of living things and the complex relationships between living things and their environments.
Populations and Ecosystems
   1. Identify the living and nonliving parts of an ecosystem and describe the relationships among these components.
   2. Explain biomes (i.e. aquatic, desert, rainforest, grasslands, tundra) and describe the New Mexico biome.
   3. Explain how individuals of species that exist together interact with their environment to create an ecosystem (e.g., populations, communities, niches, habitats, food webs).
   4. Explain the conditions and resources needed to sustain life in specific ecosystems.
   5. Describe how the availability of resources and physical factors limit growth (e.g., quantity of light and water, range of temperature, composition of soil) and how the water, carbon, and nitrogen cycles contribute to the availability of those resources to support living systems.
Biodiversity
   6. Understand how diverse species fill all niches in an ecosystem

8th grade Standards
Strand II Standard II BM1 PS1---3
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.
5---8 Benchmark I: Explain the diverse structures and functions of living things and the complex
relationships between living things and their environments.

1. Describe how matter moves through ecosystems (e.g., water cycle, carbon cycle).
2. Describe how energy flows through ecosystems (e.g., sunlight, green plants, food for animals).
3. Explain how a change in the flow of energy can impact an ecosystem (e.g., the amount of sunlight available for plant growth, global climate change).

Next Generation Science Standards:

Middle School Life Sciences—Ecosystems: Interactions, energy and Dynamics

MS—LS2—1, 2, 3, 4

MS—LS2---1 Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.

Science and Engineering Practices: Analyzing and Interpreting Data

Disciplinary core Ideas LS2.A: Interdependent Relationships in Ecosystems

Crosscutting Concepts: Cause and Effect

MS—LS2---2 Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

Disciplinary Core Ideas LS2.A: Interdependent Relationships in Ecosystems

Science and Engineering Practices: Constructing Explanations

Crosscutting Concepts: Patterns

MS—LS2---3 Develop a model to describe the cycling of matter and flow of energy among living and non-living parts of an ecosystem.

Science and Engineering Practices: Developing and using models

Disciplinary core Ideas LS2.B: Cycle of Matter and Energy Transfer in Ecosystems

Crosscutting Concepts: Stability and Change

MS—LS2---5 Evaluate competing design solutions for maintaining biodiversity and ecosystem services.


Disciplinary Core Ideas: Ecosystem Dynamics, Functioning and Resilience.

Crosscutting concepts: Stability and Change