

1998 — NM45

New Mexico

Life Science
Standards,
DFI Software
and **Your School**

Grades 1 to 12



New Mexico Life Science Standards - Grades K-4



Standard 10: Students will know and understand the characteristics that are best for classifying organisms.

Benchmark	The Digital Frog	The Wetlands	The Rainforest
<i>Demonstrate awareness of living things</i>			
Single or multicellular with basic needs	Anatomy	Food Chain, Producers, Consumers, Decomposers Organism Screens,	Dependency Web, Human Impact
Surviving in environments that meet their needs	Ecology	Wetlands Conservation, Adaptations in a Bog	Dependency Web Niches
Structures that serve different functions in growth, survival & reproduction	Anatomy	Adaptations in a Bog, Organism Screens, Migration	Organism Screens, Web Game, Dependency Web, Niches
As part of systems such as food chains		Food Web, Food Chains, Trophic Levels, Producers, Consumers, Decomposers	Dependency Web, Niches
Capable of gathering information about themselves and their environments through senses	Biodiversity	The Food Web Game	Web Game, Niches, Human Impact, Impact Screens, Endangered Rainforest
As similar within species but unique as individuals	Biodiversity	Organism Screens, Food Chains	Dependency Web, Plants, Animals
Describe life cycles of plants and animals	Ecology, Life Cycle	Organism Screens, Migration	Organism Screens, Plant Study, Animal Study

New Mexico Life Science Standards - Grades K-4



Standard 11: Students will know and understand the synergy among organisms and the environments of the organisms.

Benchmark	The Digital Frog	The Wetlands	The Rainforest
<i>Students will:</i>			
Explain how an organism's patterns of behavior are related to its environment	Adopt a Pond	Organism Screens, Food Web	Dependency Web, Animal Study, Plant Study, Niches
Describe how all animals depend on plants for food either directly or indirectly		Food Chains, Web Energy, Web Game, Organism Screens	Dependency Web Niches
Describe how organisms cause changes in their environments		Organism Screens, Adaptations, Endangered Wetlands	Organism Screens, Human Impact, Impact Screens, Global Benefits
Describe a population	Biodiversity, Adopt a Pond	Organism Screens	Organism Screens, Animal Study, Plant Study
Describe an ecosystem	Biodiversity	The Bog Study, Endangered Wetlands, Nutrient Cycles, Wetland Mechanisms	Dependency Web, Botany, Mechanisms, Endangered Rainforest
Describe the impact humans have on other species	Adopt a Pond	Endangered Wetlands	Human Impact, Impact Screens, Endangered Rainforest
Describe various of resources such as food, fuel, and building materials		Food Chains, Photosynthesis, Organism Screens, Wetland Types, Wetland Mechanisms	Dependency Web, Botany, Endangered Rainforest, Niches
Describe features of resources such as nonrenewable resources are limited		Wetland Types, Endangered Wetlands	Endangered Rainforest, Mechanisms, Rainforests of the World
Describe basic human needs including air, food, water, safety and security			
Identify issues of responsibility for health			
Describe the elements essential to good health			

New Mexico Life Science Standards - Grades 5-8



Standard 10: Students will know and understand the characteristics that are best for classifying organisms.

Benchmark	The Digital Frog	The Wetlands	The Rainforest
<i>Use information about living things</i>			
The roles of structure and function in the organization of living systems		Food Chains, Web Game, Web Energy	Dependency Web, Botany
Cells as the fundamental unit of life	Respiration, Circulation		
The functions of cells which sustain life	Digestive system	Plant Adaptations	Plants, Botany
Cell division	Reproduction, Cellular Division		
The use of nutrients by cells	Digestive System	Photosynthesis, Plant Adaptations	
The role of heredity and environment in the characteristics of individual organisms		Adaptations in a Bog, Organism Screens	Biodiversity, Organism Screens
That small differences between offspring and parents may accumulate in succeeding generations and may or may not be advantageous to the species	Anatomy	Adaptations in a Bog, Organism Screens	Biodiversity, Organism Screens
Disease as a breakdown in the structure or functions of an organism			
Categorize organisms according to reproduction and other characteristics	Reproduction	Organism Screens	Organism Screens

New Mexico Life Science Standards - Grades 5-8



Standard 11: Students will know and understand the synergy among organisms and the environments of the organisms.

Benchmark	The Digital Frog	The Wetlands	The Rainforest
<i>Students will:</i>			
Identify organisms according to internal and external environmental regulation		Adaptations, Migration, Organism Screens	Dependency Web, Plant Study, Animal Study, Organism Screens
Describe how organisms obtain and use resources, grow, reproduce, and maintain a stable internal environment while living in a constantly changing external environment		Organism Screens, Migration, Web Game, Photosynthesis, Food Chains	Organism Screens, Dependency Web, Plant Study, Animal Study, Web Game, Niches
Predict behavior in relation to changes in an organism's internal and external environment		Organism Screens, Adaptations	Impact Screens, Organism Screens, Animal Study, Plant Study
Use knowledge of population characteristics to distinguish specific populations		Organism Screens, Web Game	Web Game, Organism Screens, Botany Screens, Biodiversity
Categorize organisms based on the function they serve within their ecosystem		Web Game, Food Web, Organism Screens, Trophic Levels	Dependency Web, Web Game, Organism Screens, Botany Screens
Examine the impact humans have on other species and natural systems over time		Endangered Wetlands, Wetland Types	Endangered Rainforest, Rainforest Mechanisms
Illustrate the impact that overpopulation might have on various regions of the world		Endangered Wetlands, Wetland Types	Endangered Rainforest, Rainforest Mechanisms
Analyze consumption of nonrenewable resources based on population factors (birth rate, death rate, density)		Wetland Mechanisms, Wetland Types	Endangered Rainforest, Rainforest Mechanisms
How almost all human cells contain two copies of 23 chromosomes	Reproduction		
Illustrate the role of personal control of basic needs on health outcomes			
Model responsible health behaviors for peers and others			
Demonstrate the impact of nutrition and exercise on personal health	Anatomy, Muscular, Respiration		

New Mexico Life Science Standards - Grades 9-12



Standard 10: Students will know and understand the characteristics that are best for classifying organisms.

Benchmarks	The Digital Frog	Wetlands	Rainforest
<i>Apply information about living things to themselves and their environment:</i>			
Cell structure and functions	Respiration		
The importance of cell membranes and the process of osmosis	Respiration, Circulation		
The functions of DNA and RNA in genes and the process of heredity	Cellular Division		
How almost all human cells contain two copies of 23 chromosomes	Reproduction		
How changes in DNA can result in the mutation of an organism	Cellular Division		
Apply the concepts of natural selection and genetic mutation to understand the diversity of living things	Mating Behavior	Organism Screens, Wetland Types	Dependency Web, Botany Screens, Organism Screens
Using biological classifications to sort organisms and understand how they are related		Organism Screens	Organism Screens, Botany Screens

New Mexico Life Science Standards - Grades 9-12



Standard 11: Students will know and understand the synergy among organisms and the environments of the organisms.

Benchmarks	The Digital Frog	Wetlands	Rainforest
<i>Students will:</i>			
Explain how specialized cells and structures in multicellular organisms can occur in response to environmental threats	Anatomy, Life Cycle		
Describe the impact on individual organisms by atoms and molecules among living and nonliving components of the biosphere	Anatomy	Nutrient Cycle	
Predict an organism's behavioral responses to internal changes and external stimuli as a function of inherited and acquired characteristics	Mating Behaviors, Life Cycle		
Predict changes in a population based on knowledge of the population	Ecology, Behavior, Adopt a Pond	Organism Screens	Organism Screens, Botany Screens
Apply the concepts of competition and cooperation to changes in an ecosystem	Biodiversity, Adopt a Pond	Food Web, Web Game	Dependency Web, Web Game
Predict the impact humans might have on species and environmental systems	Biodiversity, Adopt a Pond	Endangered Wetlands, Wetland Types	Endangered Rainforest, Rainforest Mechanisms
Analyze the impact of resource depletion in overpopulated areas on social and cultural norms	Adopt a Pond	Endangered Wetlands, Wetland Types	Endangered Rainforest, Rainforest Mechanisms
Predict the impact of recycling on resource depletion and environmental degradation	Adopt a Pond	Endangered Wetlands, Wetland Types	Endangered Rainforest, Rainforest Mechanisms
Evaluate the interaction of multiple factors such as risk, environment and desire on choices for meeting basic human needs	Adopt a Pond	Endangered Wetlands, Wetland Types, Food Web, Adaptations	Endangered Rainforest, Rainforest Mechanisms
Predict health outcomes for specific personal health choices			
Analyze the contribution of essential elements for good health			