

Correlation to Nevada Science Standards – Life Sciences

Title: **CORD Biology: Science in Context, CORD/South-Western Educational Publishing, © 2000**

Publisher: **South-Western Educational Publishing, A Thomson Learning Company.**

Standards		Page References
LIFE SCIENCES		
Content Standard 6.0: Structure and Function — <i>Students understand that all life forms, at all levels of organization, use specialized structures and similar processes to meet life’s needs.</i>		
Life Cycles and Disruptions	6.12.1 Explain how disease disrupts the equilibrium that exists in a healthy organism.	ST: Cpt. 15:pp539-569. LM PP 168-175
Structures, Functions, and Systems	6.12.2 Explain how the human body has a specialized anatomy and physiology composed of a hierarchical arrangement of differentiated cells .	ST: Cpt. 2: PP 39-77; Cpt 3: PP 81-115 Cpt 14: PP 500-505 LM pp23-32 ; PP 33-45; PP 162-167
Environment, Energy, and Cellular Functions	6.12.3 Investigate and describe how food molecules are broken down through a series of chemical reactions to provide energy and the material to make new molecules.	ST : Cpt 13 PP 463-494 LM PP 153-161
Cellular Organization	6.12.4 Investigate and describe how every cell is covered by a cell membrane and most cells also have specialized parts for the transport of materials, energy, transfer, protein building, waste disposal, information feedback, and movement.	ST: Cpt 2 sect. 2.2 & 2.3 PP 53-73 LM PP 23-32
Plant Structures and Functions	6.12.5 In photosynthesis , plants and many microorganisms use solar energy to combine molecules of carbon dioxide and water to form energy rich compounds and oxygen.	ST: Cpt 20 sec. 20.1, 20.2 & 20.3 PP 692-708 LM PP 213-218
Content Standard 7.0: Internal and External Influences on Organisms — <i>Students understand that organisms respond to internal and external influences.</i>		
Influences on Behavioral Patterns	7.12.1 Investigate and describe how some broad patterns of behavior exhibited by animals have evolved to ensure survival of the species.	ST: Cpt.6 PP 189-233. Cpt 10 sec 10.3 PP 368-380 LM PP 75-83, PP 119-127
Origins of Behavioral Patterns	7.12.2 Investigate and describe how plant and animals have mechanisms that allow them to respond to changes in their environment.	ST: Cpt 22 PP 737-761. Cpt 23 PP 764-794 LM: pp227-234; 235-245
Stimulus and Behavior	7.12.3 Investigate and describe how multicellular animals have nervous systems that receive input through sensory organs and generate behavioral responses.	ST: Cpt 1 sec 1.4 PP 24-31; Cpt 2. Sec 2.2 & 2.3 PP 45-73 LM pp13-22, 23-32
Disease	7.12.4 Explain how certain viral diseases make the body vulnerable to multiple infectious agents and cancerous cells by destroying critical cells of the immune system.	ST: Cpt 7 sec 7.2,7.3,& 7.4 PP 249-267 LM pp84-97
Content Standard 8.0: Heredity and Diversity — <i>Students understand that life forms are diverse, and that they pass some characteristics to their offspring.</i>		
Inherited Traits	8.12.1 Explain how all body cells in an organism are developed from a single cell and contain essentially identical genetic instructions. Explain how different parts of the instruction are used in different kinds of cells.	ST Cpt 4 PP 119-151 LM PP 46-52
Variation and Classification	8.12.2 Explain how relatedness among organisms can be estimated from the similarity of their DNA sequences.	ST: Cpt 5 PP 157-181 LM PP 53-74

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Standards		Page References
of Organisms		
Content Standard 8.0: Heredity and Diversity —(continued)		
Variation	8.12.3 Investigate and describe how sorting and recombination of genes in sexual reproduction results in a great variety of possible gene combinations.	ST: Cpt 16 PP 573-603; Cpt 5 sec 5.3 & 5.4 PP 173-181 LM PP 176-186; PP 53-74
Reproduction	8.12.4 Explain how genetic information from parents is encoded in DNA molecules and provides instruction for assembling protein molecules.	ST: Cpt 16, sec 16.2 & 16.3 PP 578-598 LM PP 176-186
Patterns of Inheritance	8.12.5 Investigate and describe how patterns of inheritance are described by laws of segregation and independent assortment.	ST: Cpt 5, sec 5.1, 5.2, 5.3, 5.4 PP 158-181 LM PP 53-74
Diversity of Species	8.12.6 Explain how diversity of species and variation among organisms within a species increase the chances for survival of life when large changes occur in the environment.	ST: Cpt 6 sec 6.1, 6.2 6.3, PP 190-212 LM PP 75-83
Mutations	8.12.7 Explain how gene mutations may be caused by a variety of influences, when mutations occur in sex cells, they can be passed on to offspring.	ST: Cpt 5, sec 5.4 PP 177-181 LM PP 53-74
Content Standard 9.0: Evolution: The Process of Biological Change — <i>Students understand that life forms change over time.</i>		
Common Ancestry	9.12.1 Investigate and describe the basic idea of the theory of biological evolution is that through genetic and/or environmental influences the Earth's present-day species developed from earlier, distinctly different, but common ancestors.	ST: Cpt 6 PP 189-233 LM PP 75-83
Natural Selection	9.12.2 Explain the fossil record of ancient life forms by applying the idea of natural selection and its evolutionary consequences.	ST: Cpt 6 sec 6.2 PP 195-200 LM PP 75-83
Adaptation	9.12.3 Simulate and explain how the adaptation of a species can occur over many generations because of the unique characteristics that favor those individuals in an environment.	ST: Cpt 6, sec 6.3 PP 201-213 LM PP 75-83
Evidence for the theory of Evolution	9.12.4 Explain how the classification of species is based on similarities (e.g., structural, genetic, molecular) which indicate evolutionary relationships.	ST: Cpt 6 sec 6.5 sec 6.5, PP 220-228 LM PP 75-83
Extinction	9.12.5 Explain how the extinction of species is a common occurrence and fossil records indicate that most species that have lived on the earth no longer exist.	ST: Cpt 23 PP 764-794 LM PP 235-253
Influences on Evolution	9.12.6 Investigate and describe how the process of evolution is driven by genetic and environmental influences.	ST: Cpt 6 PP- 189-233 LM PP 75-83
Life Origins	9.12.7 Explain how there is evidence that at least a billion years ago, cells with nuclei existed allowing the evolution of increasingly complex multicellular organisms.	ST: Cpt 7 PP 237-272 LM pp84-97