

Alignment Document

State of Wisconsin And Aventa Learning Biology

Biology

2005-2007 Benchmark Blueprint

State Standard Number	State Standard Area / Description	Unit Name	Course Topic Description
C.12	Science Inquiry		
C.12.1	When studying science content, ask questions suggested by current social issues, scientific literature, and observations of phenomena, build hypotheses that might answer some of these questions, design possible investigations, and describe results that might emerge from such investigations	The Nature of Science and Biology Photosynthesis and Cellular Respiration Genetics Genetics Genetics	Science and the Scientific Method Enzyme Lab The Chromosome Theory of Inheritance Biotechnology Lab DNA Lab
C.12.2	Identify issues from an area of science study, write questions that could be investigated, review previous research on these questions, and design and conduct responsible and safe investigations to help answer the questions		
C.12.3	Evaluate the data collected during an investigation, critique the data-collection procedures and results, and suggest ways to make any needed improvements	Photosynthesis and Cellular Respiration Photosynthesis and Cellular Respiration	Enzyme Lab Photosynthesis Lab
C.12.4	During investigations, choose the best data-collection procedures and materials available, use them competently, and calculate the degree of precision of the resulting data		
C.12.5	Use the explanations and models found in the earth and space, life and	Photosynthesis and Cellular Respiration	Enzyme Lab

	environmental, and physical sciences to develop likely explanations for the results of their investigations	Photosynthesis and Cellular Respiration	Photosynthesis Lab
C.12.6	Present the results of investigations to groups concerned with the issues, explaining the meaning and implications of the results, and answering questions in terms the audience can understand		
C.12.7	Evaluate articles and reports in the popular press, in scientific journals, on television, and on the Internet, using criteria related to accuracy, degree of error, sampling, treatment of data, and other standards of experimental design		
F.12	Life and Environmental Science		
0	The Cell		
F.12.1	Evaluate the normal structures and the general and special functions of cells in single-celled and multiple-celled organisms	Cell Structure Cell Structure Plant Structure Animal Organization	Section 1: Cell Features The Cell Membrane Plant Organs, Tissues, and Cells Animal Tissues
F.12.2	Understand how cells differentiate and how cells are regulated	Genetics Animal Organization	The Chromosome Theory of Inheritance The Reproductive Cycle and Human Development
0	The Molecular Basis of Heredity		
F.12.3	Explain current scientific ideas and information about the molecular and genetic basis of heredity	Genetics Genetics Genetics	DNA Lab RNA Lab The Chromosome Theory of Inheritance
F.12.4	State the relationships between functions of the cell and functions of the organism as related to genetics and heredity	Genetics Genetics	Protein Synthesis How Proteins are Made
0	Biological Evolution		
F.12.5	Understand the theory of evolution, natural selection, and biological classification	Evolution Evolution Biological Diversity	Descent With Modification Evolution and Genetics Section 1: Taxonomy
F.12.6	Using concepts of evolution and heredity, account for changes in species and the diversity of species, include the influence of these	Evolution	Evolution Lab

	changes on science, e.g. breeding of plants or animals		
0	The Interdependence of Organisms		
F.12.7	Investigate how organisms both cooperate and compete in ecosystems	Population Ecology Population Ecology	Biomes Lab Community and Ecosystem Dynamics
F.12.8	Using the science themes, infer changes in ecosystems prompted by the introduction of new species, environmental conditions, chemicals, and air, water, or earth pollution	Population Ecology	The Biosphere and Mass Extinctions
0	Matter, Energy and Organization in Living Systems		
F.12.9	Using the science themes, investigate energy systems (related to food chains) to show how energy is stored in food (plants and animals) and how energy is released by digestion and metabolism	Population Ecology Population Ecology	The Biosphere and Mass Extinctions Community and Ecosystem Dynamics
F.12.10	Understand the impact of energy on organisms in living systems	Population Ecology Population Ecology	Community and Ecosystem Dynamics The Biosphere and Mass Extinctions
F.12.11	Investigate how the complexity and organization of organisms accommodates the need for obtaining, transforming, transporting, releasing, and eliminating the matter and energy used to sustain an organism	Plant Structure Animal Organization	Plant Hormones, Nutrition, and Transport Animal Organ Systems and Homeostasis
0	The Behavior of Organisms		
F.12.12	Trace how the sensory and nervous systems of various organisms react to the internal and external environment and transmit survival or learning stimuli to cause changes in behavior or responses	Animal Organization Plant Structure	The Nervous and Endocrine Systems Plant Hormones, Nutrition, and Transport