



Alignment Document
State of Iowa and Aventa Learning Biology Credit Recovery

Biology Credit Recovery

Strands	Standards	Benchmarks	Unit Name	Course Topic Description
1 Science as Inquiry		1.1 Identifies questions and concepts that guide scientific investigations.	The Nature of Science and Biology	The Scientific Method Lab
			Photosynthesis and Cellular Respiration	Enzyme Lab
			Photosynthesis and Cellular Respiration	Photosynthesis Lab
			Plant Structure	Plant Structure Lab
			Plant Structure	Flowers, Fruits, and Seeds Lab
			Animal Organization	Virtual Pig Dissection Lab
		1.2 Designs and conducts scientific investigations.		
		1.3 Uses technology and mathematics to improve investigations and communications.	The Nature of Science and Biology	The Scientific Method Lab
		1.4 Formulates and revises scientific explanations and models using logic and evidence.	The Nature of Science and Biology	The Scientific Method Lab
			Photosynthesis and Cellular Respiration	Enzyme Lab
		Photosynthesis and Cellular Respiration	Photosynthesis Lab	

			Evolution	Evolution Lab
			Genetics	Biotechnology Lab
		1.5 Recognizes and analyzes alternative explanations and models.	Evolution	Descent With Modification
			History of Life on Earth	The Birth of a Planet and Establishment of Life
		1.6 Communicates and defends a scientific argument.	History of Life on Earth	The Birth of a Planet and Establishment of Life
		1.7 Understands about scientific inquiry.	The Nature of Science and Biology	Science and the Scientific Method
			The Nature of Science and Biology	The Scientific Method Lab
3 Life Science		3.1 Understands and applies knowledge of the cell.	Cell Structure	Section 1: Cell Features
			Cell Structure	The Cell Membrane
			Cell Structure	Chromosomes and Cell Reproduction
			Cell Structure	Meiosis and Sexual Reproduction
			Cell Structure	Mitosis Lab
			Cell Structure	Meiosis Lab
		3.2 Understands and applies knowledge of the molecular basis of heredity.	Genetics	DNA Lab
			Genetics	RNA Lab
			Genetics	Biotechnology Lab
			Genetics	Unit Exam
		3.3 Understands and applies knowledge of biological evolution.	Evolution	Descent With Modification
			Evolution	Evolution and Genetics

			Evolution	Evolution Lab
		3.4 Understands and applies knowledge of the inter-dependence of organisms.	Ecology	Community and Ecosystem Dynamics
		3.5 Understands and applies knowledge of matter, energy, and organization in living systems.	Ecology	The Biosphere and Mass Extinctions
		3.6 Understands and applies knowledge of the behavior of organisms.	Ecology	Unit Exam
			Plant Structure	Plant Hormones, Nutrition, and Transport
	A Students can understand and apply skills used in scientific inquiry.	A.1 Understand and apply the processes and skills of scientific inquiry		
		A.2 Analyze and interpret scientific information		
	B Students can understand concepts and relationships in biological science.	B.1 Make inferences and predictions using fundamental biological concepts	The Nature of Science and Biology	The Scientific Method Lab
			Photosynthesis and Cellular Respiration	Enzyme Lab
			Photosynthesis and Cellular Respiration	Photosynthesis Lab
		B.2 Analyze biological investigations		
		B.3 Analyze and evaluate the adequacy and accuracy of biological information		
	C Students can understand concepts and relationships in Earth/space sciences.	C.1 Make inferences and predictions using fundamental Earth/space concepts		
		C.2 Analyze Earth/space investigations		
		C.3 Analyze and evaluate the adequacy and accuracy of Earth/space information		
	D Student can understand concepts and relationships in physical science.	D.1 Make inferences and predictions using fundamental physical science concepts		
		D.2 Analyze physical science investigations		
		D.3 Analyze and evaluate the adequacy and accuracy of physical science information		