



Science: Biology Semester 1 Final Assessment Blueprint			
Year: 2024-2025		Method of Delivery: Online	
Subject: Science		Administration Window: December 9-19	

Resources
Biology Curriculum Map

Standards At-A Glance		
Standard	Number of Items	Standard Description
ES.9-12.7a	1	Students know the carbon cycle of photosynthesis and respiration and the nitrogen cycle.
SCI.6-8.MS-ESS2-4	1	Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.
SCI.7.7.E1U1.5		Construct a model that shows the cycling of matter and flow of energy in the atmosphere, hydrosphere, and geosphere.
SCI.9-12.HS.L1U1.20	6	Ask questions and/or make predictions based on observations and evidence to demonstrate how cellular organization, structure, and function allow organisms to maintain homeostasis.
SCI.9-12.HS.L2U1.21	7	Obtain, evaluate, and communicate data showing the relationship of photosynthesis and cellular respiration; flow of energy and cycling of matter.
SCI.9-12.HS.L2U3.18		Obtain, evaluate, and communicate about the positive and negative ethical, social, economic, and political implications of human activity on the biodiversity of an ecosystem.
SCI.9-12.HS+B.L1U1.4	3	Develop and use models to explain the interdependency and interactions between cellular organelles.
SCI.9-12.HS+B.L1U1.6		Develop and use models to show how transport mechanisms function in cells.
SCI.9-12.HS+B.L1U1.7		Develop and use models to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms (plant and animal).
SCI.9-12.HS+B.L1U1.9	3	Develop and use a model to communicate how a cell copies genetic information to make new cells during asexual reproduction (mitosis).
SCI.9-12.HS+B.L2U1.1	1	Develop a model showing the relationship between limiting factors and carrying capacity, and use the model to make predictions on how environmental changes impact biodiversity.
SCI.9-12.HS+B.L2U1.3		Use mathematics and computational thinking to support claims for the cycling of matter and flow of energy through trophic levels in an ecosystem.
SCI.9-12.HS-LS1-2	1	Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.
SCI.9-12.HS-LS1-3	2	Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.
SCI.9-12.HS-LS2-2	6	Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.
SCI.9-12.HS-LS2-4	2	Use a mathematical representation to support claims for the cycling of matter and flow of energy among organisms in an ecosystem. Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.

* Some items may be tagged to more than one standard.

Depth of Knowledge	
DOK	Number of Items
Level 1: Recall	5
Level 2: Skill/Concept	26
Level 3: Strategic Thinking	2

Item Types Included		
Type	Number of Items	Description
EBSR	1	Evidence-Based Selected Response - Answer a two-part question in which Part B provides text evidence for the answer in Part A
MC	26	Multiple Choice - Select one answer
MR	6	Multiple Response - Select all the correct answers