

BRUNSWICK HIGH SCHOOL
Science Standards of Learning
Curriculum Framework 2018/Pacing Guide
Ecology 2022-2023
Semesters 1 & 2

	SOL Standard	Target Week	Instructional Materials
Eco. 1	<p>Bio.1 The student will demonstrate an understanding of scientific and engineering practices by</p> <p>a. asking questions and defining problems</p> <p>b. planning and carrying out investigations</p> <p>c. interpreting, analyzing, and evaluating data</p> <p>d. constructing and critiquing conclusions and explanations</p> <p>e. developing and using models</p> <p>f. obtaining, evaluating, and communicating information</p>	<p>Week 1-3</p> <p>(Integrated throughout the semester)</p>	<p>Canva, Interactive Notebook, PHET, Interactive Online Link, Edpuzzle, Nearpod, Google Classroom, Google Forms, Quizizz, Pear Deck, Textbook, Powerpoint Presentation, Video Clips, Google Drive, Kahoot, Virtual Virginia, MasteryConnect Enhanced Scope & Sequence Modules Forms, Quizizz, Kahoot, Virtual</p>
Eco. 2	<p>The student will investigate and understand that there are levels of structural organization in living things. Key ideas include:</p> <p>a. patterns of levels of organization support life processes.</p>	Week 4-6	
Eco. 3	<p>The student will investigate and understand that biotic and abiotic factors affect an ecosystem. Key ideas include:</p> <p>a. matter moves through ecosystems via the carbon, water, and nitrogen cycles;</p> <p>b. energy flow is represented by food webs and energy pyramids; and</p> <p>c. relationships exist among producers, consumers, and decomposers.</p>		
Cover Standard	Unit/Benchmark Assessment		
Eco. 4	<p>The student will investigate and understand that populations in a biological community interact and are interdependent. Key ideas include</p> <p>a. relationships exist between predators and prey and these relationships are modeled in food webs;</p>	Week 7-8	

	b. the availability and use of resources may lead to competition and cooperation; c. symbiotic relationships support the survival of different species; and d. the niche of each organism supports survival.		
Eco. 5	The student will investigate and understand that adaptations support an organism's survival in an ecosystem. Key ideas include a. biotic and abiotic factors define land, marine, and freshwater ecosystems; and b. physical and behavioral characteristics enable organisms to survive within a specific ecosystem.	Week 9	
Cover Standard	Unit/Benchmark Assessment		
	SECOND NINE WEEKS		
Eco. 6	The student will investigate and understand that igneous, metamorphic, and sedimentary rocks can transform. Key ideas include a. Earth materials are finite and are transformed over time; b. the rock cycle models the transformation of rocks; and c. layers of Earth have rocks with specific chemical and physical properties	Week 10-11	
Eco. 7	The student will investigate and understand that ecosystems, communities, populations, and organisms are dynamic and change over time. Key ideas include a. organisms respond to daily, seasonal, and long-term changes; b. changes in the environment may increase or decrease population size; and c. large-scale changes such as eutrophication, climate changes, and catastrophic disturbances affect ecosystems.	Week 12-13	
Cover Standard	Unit/Benchmark Assessment		
Eco. 8	The student will investigate and understand that relationships exist between ecosystem dynamics and human activity. Key ideas include a. changes in habitat can disturb populations; b. disruptions in ecosystems can change species competition; and c. Variations in biotic and abiotic factors can change ecosystems.	Week 14	

Eco. 9	The student will investigate and understand that there are dynamic equilibria within populations, communities, and ecosystems. Key ideas include a. interactions within and among populations include carrying capacities, limiting factors, and growth curves; b. nutrients cycle with energy flow through ecosystems; c. ecosystems have succession patterns; and d. natural events and human activities influence local and global ecosystems and may affect the flora and fauna of Virginia.	Week 15-17	
All Standards	END OF TERM EXAM	Week 18	

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