First Nine Weeks		
Week(s)	Topics & Objectives	Standards
1	1. Apply inquiry-based and problem-solving processes and skills to scientific investigations. a. Conduct a scientific investigation demonstrating safe procedures and proper care of laboratory equipment. (DOK 2) • Safety rules and symbols • Proper use and care of the compound light microscope, slides, chemicals, etc. • Accuracy and precision in using graduated cylinders, balances, beakers, thermometers, and rulers. Formulate questions that can be answered through research and experimental design. Apply the components of scientific processes and methods in classroom and laboratory investigations (e.g., hypotheses, experimental design, observations, data analyses, interpretations, theory development).	1a,b,c 1. Apply inquiry-based and problem-solving processes and skills to scientific investigations. a. Conduct a scientific investigation demonstrating safe procedures and proper care of laboratory equipment. (DOK 2) Safety rules and symbols Proper use and care of the compound light microscope, slides, chemicals, etc. Accuracy and precision in using graduated cylinders, balances, beakers, thermometers, and rulers. b. Formulate questions that can be answered through research and experimental design. (DOK 3) c. Apply the components of scientific processes and methods in classroom and laboratory investigations (e.g., hypotheses, experimental design, observations, data analyses, interpretations, theory development).
2	Construct and analyze graphs (e.g., plotting points, labeling x-and y-axis,	1d,e,f Construct and analyze graphs (e.g., plotting points, labeling x-and y-axis, creating appropriate titles and legends for circle, bar, and line graphs). (DOK 2) e. Analyze procedures, data, and conclusions to determine the scientific validity of research. (DOK 3)

	creating appropriate titles and legends for circle, bar, and line graphs). Analyze procedures, data, and conclusions to determine the scientific validity of research Recognize and analyze alternative explanations for experimental results and to make predictions based on observations and prior knowledge.	f. Recognize and analyze alternative explanations for experimental results and to make predictions based on observations and prior knowledge
3	Communicate and defend a scientific argument in oral, written, and graphic form.	1g make predictions based on observations and prior knowledge. (DOK 3) g. Communicate and defend a scientific argument in oral, written, and graphic form.
4	2. Develop an understanding of the relationship of ecological factors that effect an ecosystem. a. Compare ways in which the three layers of the biosphere change over time and their influence on an ecosystem's ability to support life. Explain the flow of matter and energy in ecosystems. (DOK 2) • Interactions between biotic and abiotic factors • Indigenous plants and animals and their roles in various ecosystems • Biogeochemical cycles within the environment	2a,b 2. Develop an understanding of the relationship of ecological factors that effect an ecosystem. a. Compare ways in which the three layers of the biosphere change over time and their influence on an ecosystem's ability to support life.Explain the flow of matter and energy in ecosystems. (DOK 2) Interactions between biotic and abiotic factors Indigenous plants and animals and their roles in various ecosystems Biogeochemical cycles within the environment

5	Predict the impact of the introduction, removal, and reintroduction of an organism on an ecosystem	2c Predict the impact of the introduction, removal, and reintroduction of an organism on an ecosystem.
6	Develop a logical argument explaining the relationships and changes within an ecosystem. (DOK 2) • How a species adapts to its niche • Process of primary and secondary succession and its effects on a population • How changes in the environment might affect organisms	2d Develop a logical argument explaining the relationships and changes within an ecosystem. (DOK 2) How a species adapts to its niche Process of primary and secondary succession and its effects on a population How changes in the environment might affect organisms
7	Explain the causes and effects of changes in population dynamics (e.g., natural selection, exponential growth, predator/prey relationships) to carrying capacity and limiting factors.	2e Explain the causes and effects of changes in population dynamics (e.g., natural selection, exponential growth, predator/prey relationships) to carrying capacity and limiting factors.
8	Research and explain how habitat destruction leads to the loss of biodiversity. Compare and contrast the major biomes of the world's ecosystems, including location, climate, adaptations and diversity	2f,g Research and explain how habitat destruction leads to the loss of biodiversity. (DOK 2) g. Compare and contrast the major biomes of the world's ecosystems, including location, climate, adaptations and diversity.
9	Research and explain how habitat destruction leads to the loss of biodiversity. Compare and contrast the major biomes of the world's ecosystems, including	3a,b,c 3. Discuss the impact of human activities on the environment, conservation activities, and efforts to maintain and restore ecosystems. a. Summarize the effects of human activities on resources in the local environments. (DOK 2) Sources, uses, quality, and conservation of water Renewable and nonrenewable resources Effects of pollution (e.g., water, noise, air, etc.) on the ecosystem b. Research and evaluate the impacts of human activity and technology on the

	location, climate, adaptations and diversity	lithosphere, hydrosphere and atmosphere and develop a logical argument to support how communities restore ecosystems. (DOK 3) c. Research and evaluate the use of renewable and nonrenewable resources and critique efforts to conserve natural resources and reduce global warming in the United States including (but not limited) to Mississipp
Second Nine Weeks		
Week(s)	Topics & Objectives	Standards
10		
11		
12		
13		
14		
15		
16		
17		

18		

Third Nine Weeks		
Week(s)	Topics & Objectives	Standards
19		
20		
21		
22		
23		
24		
25		

26		
27		
Fourth Nine Weeks		
Week(s)	Topics & Objectives	Standards
28		
29		
30		
31		
32		
33		
34		

35		
36		