OPTIONS FRMS Science 7 B		Scope and Sequence
Unit	**Lesson**	**Objectives**
Minerals and Rocks		
	Rocks and the Rock Cycle	
		Describe the properties used to identify rocks.
		Identify the three main groups of rocks.
		Identify the ways in which rocks change as they move through the rock cycle.
	Sedimentary Rocks	
		Identify ways in which sedimentary are formed.
		Distinguish the three types of sedimentary rocks.
	Metamorphic Rocks	
		Identify the steps of metamorphic rock formation.
		Differentiate types of metamorphic rocks.
	Igneous Rocks	
		Identify the steps of igneous rock formation.
		Describe the characteristics used to classify igneous rocks.
	Relative Dating	
		Describe the law of superposition.
		Explain how geologists determine the relative age of rocks.
		Explain how fossils are used to date rocks.
	Absolute Dating	
		Explain what happens during radioactive decay.
		Explain how geologists determine the absolute age of rocks.
	Minerals	

OPTIONS FRMS Science 7 B		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Describe the properties used to identify minerals.
		Explain how minerals are formed.
		Identify uses of minerals.
	Lab: Mineral and Rock Classification	
		Classify minerals and rocks by their observable properties.
		Classify rocks by their process of formation.
The Changing Earth		
	Weather Forecasting	
		Describe basic elements of meteorology.
		Describe what information can be gained from a weather map.
	Lab: Weather Patterns	
		Identify weather systems and fronts utilizing a weather map.
		Examine the influence of atmospheric conditions on weather patterns.
		Utilize weather station data to analyze weather patterns.
	Factors That Affect Climate	
		Explain what causes seasons.
		Explain how various factors affect weather and climate.
	Earth's Interior	
		Explain how geologists learn about Earth’s interior.
		Compare and contrast the three main layers of Earth.
	Forces in Earth's Crust	
		Explain how stress in the crust affects Earth’s surface.

OPTIONS FRMS Science 7 B		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Explain why faults form in particular areas.
		Identify land features that result from plate movement.
	Continental Drift	
		Explain continental drift.
		Describe evidence that supports continental drift.
	Plate Tectonics	
		Explain the theory of plate tectonics.
		Identify the major tectonic plates.
		Distinguish the three types of plate boundaries.
		Relate plate tectonics to the formation of landforms.
	Characteristics of the Seafloor	
		Describe the process of seafloor spreading.
		Describe evidence that supports seafloor spreading.
		Explain what occurs at deep-ocean trenches.
	Lab: Plate Boundaries and Movement	
		Differentiate between the major types of plate boundaries.
		Describe the role of mantle convection in plate movement.
		Examine how plate movements cause changes in Earth's surface.
		Compare and contrast the plate movements that cause earthquakes and volcanic eruptions.
	Earthquakes	
		Describe the causes of an earthquake.
		Explain how the energy of an earthquake travels.

OPTIONS FRMS Science 7 B		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Describe methods used to measure earthquakes.
		Explain how geologists locate the epicenter of an earthquake.
	Volcanoes	
		Identify the reasons why Earth’s volcanic regions are located in certain areas.
		Explain what happens when a volcano erupts.
		Distinguish the two types of volcanic eruption.
		Describe the three stages of volcanic activity.
		Explain how volcanoes create various landforms.
	Weathering and Soil	
		Distinguish between mechanical and chemical weathering.
		Identify factors that affect the rate of weathering.
		Describe the characteristics of soil.
		Explain how soil is formed.
		Classify different types of soil.
	Water and Wind Erosion	
		Identify features that are formed by water erosion and deposition.
		Identify causes of groundwater erosion.
		Explain how glaciers and waves cause erosion and deposition.
		Describe the effects of wind erosion and deposition.
	Lab: Modeling Water Erosion	
		Identify factors that affect erosion and deposition by rivers.
		Model stream processes and observe stream behavior.

OPTIONS FRMS Science 7 B		Scope and Sequence
Unit	**Lesson**	**Objectives**
	Unit Test	
Organisms and the Environment		
	Spheres of Earth	
		Distinguish the four major parts of the Earth system.
		Explain how Earth’s four spheres interact.
	Living Things and the Environment	
		Differentiate between a habitat and a niche.
		Examine biotic and abiotic factors in the environment.
		Identify the levels of organization within an ecosystem.
	Cycles of Matter	
		Examine how carbon cycles through an ecosystem.
		Analyze the importance of the nitrogen cycle.
		Identify the processes involved in the water cycle.
	Interactions among Living Things	
		Differentiate competition, predation, and cooperation.
		Distinguish among the three types of symbiotic relationships.
	Lab: Owl Pellets	
		Dissect an owl pellet and examine the contents.
		Identify an owl's prey based on the contents of an owl pellet.
	Energy Flow in Ecosystems	
		Explain the roles of producers, consumers, and decomposers in an ecosystem.
		Identify producers, consumers, and decomposers in food chains and food webs.

OPTIONS FRMS Science 7 B		Scope and Sequence
Unit	**Lesson**	**Objectives**
		Examine the movement of energy through an ecosystem in food chains and food webs.
		Analyze the transfer of energy through the trophic levels in an energy pyramid.
	Populations	
		Identify factors that affect population size.
		Identify limiting factors that affect a population in a given environment.
	Unit Test	
Natural and Artificial Environmental Change		
	Succession	
		Compare primary and secondary succession.
		Contrast pioneer species and climax community.
	Lab: Ecological Succession	
		Explore the process of ecological succession in a microhabitat.
		Conduct a controlled experiment to test a hypothesis.
		Recognize sampling methods commonly used in ecology.
	Human Impact on the Environment	
		Identify examples of short-term human-induced environmental changes.
		Identify examples of long-term human-induced environmental changes.
		Assess the impact of human-induced environmental changes on organisms, populations, and species.
	Biodiversity	
		Identify how biodiversity contributes to the sustainability of an ecosystem.
		Identify the factors that affect biodiversity.
		Identify some factors that can threaten biodiversity.

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Unit	**Lesson**	**Objectives**
		Examine ways to protect biodiversity.
	Climate Change	
		Identify events that can cause short-term and global climate change.
		Explain how human, biologic, and geologic activities can influence climate.
	Unit Test	
Earth's Energy Resources		
	Energy on Earth	
		Distinguish between renewable and nonrenewable resources.
		Identify renewable and nonrenewable resources.
		Identify advantages and disadvantages of various energy sources.
Cumulative Exam		
	Cumulative Exam Review	
	Cumulative Exam	