

Pacing Guide for 7-12 Curriculum

Course Title: Earth & Space Science

Length of Course: 36 weeks

Week Number	Chapter	COS	Objectives	Strategies / Materials Needed
Week 1	Earth Science Course Introduction Lab Safety	Biology Item Specifications for the AHSGE #1: Select appropriate laboratory glassware, balances, time measuring equipment, and optical instruments to conduct an experiment.	SWBAT: Select appropriate laboratory glassware, balances, time measuring equipment, and optical instruments to conduct an experiment.	Lab Safety Equipment for demonstrations: Chemical shower, fire blanket, eyewash station, first aid kit, fire extinguisher, glassware, safety goggles, etc.
Week 2	Chapter 1: Introduction to Earth Science Section 1 What Is Earth Science? Section 2 Science as a Process Chapter Review and Assessment	N/A	Section 1- <ul style="list-style-type: none"> • Describe two cultures that contributed to modern scientific study. • Name the four main branches of Earth Science. • Discuss how Earth scientists help us understand the world around us. Section 2- <ul style="list-style-type: none"> • Explain how science is different from other forms of human endeavor. • Identify the steps that make up scientific methods. • Analyze how scientific thought changes as new information is collected. Explain how science affects society.	"Picture This" Activity: Identify the four main branches of Earth Science Earth Science Text Quick Lab: Sample Size & Accuracy, p. 12
Week 3	Chapter 2: Earth as a System Section 1 Earth: A Unique Planet Section 2 Energy in the Earth System Section 3 Ecology Chapter Review and Assessment	Biology Item Specifications for the AHSGE #13. Trace the flow of energy as it decreases through the trophic levels from producers to the quaternary level in food chains, food webs, and energy pyramids. Biology Item Specifications for the AHSGE #14. Trace biogeochemical cycles through the environment, including water, carbon, oxygen, and nitrogen.	Section 1: <ul style="list-style-type: none"> • Describe the size and shape of Earth. • Describe the compositional and structural layers of Earth's interior. • Identify the possible source of Earth's magnetic field. • Summarize Newton's law of gravitation Section 2: <ul style="list-style-type: none"> • Compare an open system with a closed system. • List the characteristics of Earth's four major 	"Open v. Closed Systems" Graphic Organizer activity Students create their own food chain & food web

			<p>spheres</p> <ul style="list-style-type: none"> Identify the two main sources of energy in the Earth system Identify four processes in which matter and energy cycle on Earth. <p>Section 3:</p> <ul style="list-style-type: none"> Define ecosystem. Identify three factors that control the balance of an ecosystem. Summarize how energy is transferred through an ecosystem. Describe one way that ecosystems respond to environmental change. 	
<i>Week 4</i>	<p>Chapter 2: Earth as a System Section 1 Earth: A Unique Planet Section 2 Energy in the Earth System Section 3 Ecology Chapter Review and Assessment</p>	<p>Biology Item Specifications for the AHSGE #13. Trace the flow of energy as it decreases through the trophic levels from producers to the quaternary level in food chains, food webs, and energy pyramids. Biology Item Specifications for the AHSGE #14. Trace biogeochemical cycles through the environment, including water, carbon, oxygen, and nitrogen.</p>	<p>Section 1:</p> <ul style="list-style-type: none"> Describe the size and shape of Earth. Describe the compositional and structural layers of Earth's interior. Identify the possible source of Earth's magnetic field. Summarize Newton's law of gravitation <p>Section 2:</p> <ul style="list-style-type: none"> Compare an open system with a closed system. List the characteristics of Earth's four major spheres Identify the two main sources of energy in the Earth system Identify four processes in which matter and energy cycle on Earth. <p>Section 3:</p> <ul style="list-style-type: none"> Define ecosystem. Identify three factors that control the balance of an ecosystem. Summarize how energy is transferred through an ecosystem. Describe one way that ecosystems respond to environmental change. 	<p>"Open v. Closed Systems" Graphic Organizer activity</p> <p>Students create their own food chain & food web</p>
<i>Week 5</i>	<p>Chapter 7: Resources and Energy Section 1 Mineral Resources Section 2 Nonrenewable Energy Section 3 Renewable Energy Section 4 Resources and Conservation Chapter Review and Assessment</p>	<p>COS 1. Describe sources of energy, including solar, gravitational, geothermal, and nuclear.</p>	<p>Section 1:</p> <ul style="list-style-type: none"> Explain what ores are and how they form. Identify four uses for mineral resources. Summarize two ways humans obtain mineral resources. <p>Section 2:</p> <ul style="list-style-type: none"> Explain why coal is a fossil fuel. Describe how petroleum and natural gas form and how they are removed. 	<p>Renewable Energy Projects: Students present projects based on one of the five types of renewable energies following project rubric. Methods of presentation may</p>

			<ul style="list-style-type: none"> Summarize the processes of nuclear fission and nuclear fusion. Explain how nuclear fission generates electricity. <p>Section 3:</p> <ul style="list-style-type: none"> Explain how geothermal energy may be used as a substitute for fossil fuels. Compare passive and active methods of harnessing energy from the sun. Explain how water and wind can be harnessed to generate electricity. 	include PowerPoint, model, poster, tri-board, etc.
<i>Week 6</i>	<p>Chapter 7: Resources and Energy</p> <p>Section 1 Mineral Resources</p> <p>Section 2 Nonrenewable Energy</p> <p>Section 3 Renewable Energy</p> <p>Section 4 Resources and Conservation</p> <p>Chapter Review and Assessment</p>	<p>COS 1. Describe sources of energy, including solar, gravitational, geothermal, and nuclear.</p>	<p>Section 1:</p> <ul style="list-style-type: none"> Explain what ores are and how they form. Identify four uses for mineral resources. Summarize two ways humans obtain mineral resources. <p>Section 2:</p> <ul style="list-style-type: none"> Explain why coal is a fossil fuel. Describe how petroleum and natural gas form and how they are removed. Summarize the processes of nuclear fission and nuclear fusion. Explain how nuclear fission generates electricity. <p>Section 3:</p> <ul style="list-style-type: none"> Explain how geothermal energy may be used as a substitute for fossil fuels. Compare passive and active methods of harnessing energy from the sun. Explain how water and wind can be harnessed to generate electricity. 	Renewable Energy Projects: Students present projects based on one of the five types of renewable energies following project rubric. Methods of presentation may include PowerPoint, model, poster, tri-board, etc.
<i>Week 7</i>	<p>Chapter 21: Movements of the Ocean</p> <p>Section 1 Ocean Currents</p> <p>Section 2 Ocean Waves</p> <p>Section 3 Tides</p> <p>Chapter Review and Assessment</p>	<p>COS 2. Describe effects on weather of energy transfer within and among the atmosphere, hydrosphere, biosphere, and lithosphere.</p> <ul style="list-style-type: none"> Describing the energy transfer related to condensation in clouds, precipitation, winds, and ocean currents Describing characteristics of the El Nino and La Nina phenomena 	<p>Section 1:</p> <ul style="list-style-type: none"> Describe how wind patterns, the rotation of Earth, and continental barriers affect surface currents in the ocean. Identify the major factor that determines the direction in which a surface currents circulates. Explain how differences in the density of ocean water affect the flow of deep currents. <p>Section 2:</p> <ul style="list-style-type: none"> Describe the formation of waves and the factors that affect wave size. Explain how waves interact with the coastline. 	<p>Ocean Currents diagramming worksheet</p> <p>Tidal Ranges worksheet</p> <p>Earth Science Text Maps in Action: Roaming Rubber Duckies, p. 542</p>

			<ul style="list-style-type: none"> Identify the cause of destructive ocean waves. <p>Section 3:</p> <ul style="list-style-type: none"> Describe how the gravitational pull of the moon causes tides. Compare spring tides and neap tides. Describe how tidal oscillations affect tidal patterns. Explain how the coastline affects tidal currents. 	
Week 8	<p>Chapter 21: Movements of the Ocean</p> <p>Section 1 Ocean Currents</p> <p>Section 2 Ocean Waves</p> <p>Section 3 Tides</p> <p>Chapter Review and Assessment</p>	<p>COS 2. Describe effects on weather of energy transfer within and among the atmosphere, hydrosphere, biosphere, and lithosphere.</p> <ul style="list-style-type: none"> Describing the energy transfer related to condensation in clouds, precipitation, winds, and ocean currents <p>Describing characteristics of the El Nino and La Nina phenomena</p>	<p><i>SWBAT</i></p> <p>Section 1:</p> <ul style="list-style-type: none"> Describe how wind patterns, the rotation of Earth, and continental barriers affect surface currents in the ocean. Identify the major factor that determines the direction in which a surface currents circulates. Explain how differences in the density of ocean water affect the flow of deep currents. <p>Section 2:</p> <ul style="list-style-type: none"> Describe the formation of waves and the factors that affect wave size. Explain how waves interact with the coastline. Identify the cause of destructive ocean waves. <p>Section 3:</p> <ul style="list-style-type: none"> Describe how the gravitational pull of the moon causes tides. Compare spring tides and neap tides. Describe how tidal oscillations affect tidal patterns. Explain how the coastline affects tidal currents. 	<p>Ocean Currents diagramming worksheet</p> <p>Tidal Ranges worksheet</p> <p>Earth Science Text Maps in Action: Roaming Rubber Duckies, p. 542</p>
Week 9	<p>Chapter 22: The Atmosphere</p> <p>Section 1 Characteristics of the Atmosphere</p> <p>Section 2 Solar Energy and the Atmosphere</p> <p>Section 3 Atmospheric Circulation</p> <p>Chapter Review and Assessment</p>	<p>COS 2. Describe effects on weather of energy transfer within and among the atmosphere, hydrosphere, biosphere, and lithosphere.</p> <ul style="list-style-type: none"> Describing the energy transfer related to condensation in clouds, precipitation, winds, and ocean currents Describing characteristics of 	<p>Section 1:</p> <ul style="list-style-type: none"> Describe the composition of Earth's atmosphere Explain how two types of barometers work Identify the layers of the atmosphere. Identify two effects of air pollution. <p>Section 2:</p> <ul style="list-style-type: none"> Explain how radiant energy reaches Earth. Describe how visible light and infrared energy warm Earth. 	<p>Layers of the Atmosphere worksheet packet</p> <p>Earth Science Text Maps in Action: Absorbed Solar Radiation, p. 572</p> <p>Earth Science Text</p>

		<p>the El Nino and La Nina phenomena</p> <p>COS 4. Describe the production and transfer of stellar energies</p> <ul style="list-style-type: none"> Describing how the reception of solar radiation is affected by atmospheric and lithospheric conditions <p>Example: volcanic eruptions and greenhouse gases affecting reflection and absorption of solar radiation</p>	<ul style="list-style-type: none"> Summarize the processes of radiation, conduction, and convection. <p>Section 3:</p> <ul style="list-style-type: none"> Explain the Coriolis effect. Describe the global patterns of air circulation, and name three global wind belts. Identify two factors that form local wind patterns. 	<p>Science and Technology: Energy from the Wind, p. 573</p>
Week 10	<p>Chapter 22: The Atmosphere</p> <p>Section 1 Characteristics of the Atmosphere</p> <p>Section 2 Solar Energy and the Atmosphere</p> <p>Section 3 Atmospheric Circulation</p> <p>Chapter Review and Assessment</p>	<p>COS 2. Describe effects on weather of energy transfer within and among the atmosphere, hydrosphere, biosphere, and lithosphere.</p> <ul style="list-style-type: none"> Describing the energy transfer related to condensation in clouds, precipitation, winds, and ocean currents Describing characteristics of the El Nino and La Nina phenomena <p>COS 4. Describe the production and transfer of stellar energies</p> <ul style="list-style-type: none"> Describing how the reception of solar radiation is affected by atmospheric and lithospheric conditions <p>Example: volcanic eruptions and greenhouse gases affecting reflection and absorption of solar radiation</p>	<p>Section 1:</p> <ul style="list-style-type: none"> Describe the composition of Earth's atmosphere Explain how two types of barometers work Identify the layers of the atmosphere. Identify two effects of air pollution. <p>Section 2:</p> <ul style="list-style-type: none"> Explain how radiant energy reaches Earth. Describe how visible light and infrared energy warm Earth. Summarize the processes of radiation, conduction, and convection. <p>Section 3:</p> <ul style="list-style-type: none"> Explain the Coriolis effect. Describe the global patterns of air circulation, and name three global wind belts. Identify two factors that form local wind patterns. 	<p>Layers of the Atmosphere worksheet packet</p> <p>Earth Science Text Maps in Action: Absorbed Solar Radiation, p. 572</p> <p>Earth Science Text Science and Technology: Energy from the Wind, p. 573</p>
Week 11	<p>Chapter 23: Water in the Atmosphere</p> <p>Section 1 Atmospheric Moisture</p> <p>Section 2 Clouds and Fog</p> <p>Section 3 Precipitation</p> <p>Chapter Review and Assessment</p>	<p>COS 2. Describe effects on weather of energy transfer within and among the atmosphere, hydrosphere, biosphere, and lithosphere.</p> <ul style="list-style-type: none"> Describing the energy transfer related to condensation in clouds, precipitation, winds, and ocean currents Describing characteristics of the El Nino and La Nina phenomena 	<p>Section 1:</p> <ul style="list-style-type: none"> Explain how heat energy affects the changing phases of water. Explain what absolute humidity and relative humidity are, and describe how they are measured. Describe what happens when the temperature of air decreases to the dew point or below the dew point. <p>Section 2:</p> <ul style="list-style-type: none"> Describe the conditions that are necessary for clouds to form. 	<p>Cloud Construction Activity: Students use craft materials to make clouds and describe various conditions in which they form, altitudes at which they occur, and types of weather they may bring.</p>

		<ul style="list-style-type: none"> Using data to analyze global weather patterns Examples: temperature, barometric pressure, wind speed and direction 	<ul style="list-style-type: none"> Explain the four processes of cooling that can lead to the formation of clouds. Identify the three types of clouds. Describe four ways in which fog can form. <p>Section 3:</p> <ul style="list-style-type: none"> Identify the four forms of precipitation. Compare the two processes that cause precipitation. Describe two ways that precipitation is measured. Explain how rain can be produced artificially. 	<p>Maps in Action: Annual Precipitation in the U.S., p. 598</p> <p>Impact on Society: Hail, p. 599 – Class Discussion</p>
Week 12	<p>Chapter 23: Water in the Atmosphere Section 1 Atmospheric Moisture Section 2 Clouds and Fog Section 3 Precipitation Chapter Review and Assessment</p>	<p>COS 2. Describe effects on weather of energy transfer within and among the atmosphere, hydrosphere, biosphere, and lithosphere.</p> <ul style="list-style-type: none"> Describing the energy transfer related to condensation in clouds, precipitation, winds, and ocean currents Describing characteristics of the El Nino and La Nina phenomena Using data to analyze global weather patterns Examples: temperature, barometric pressure, wind speed and direction 	<p>Section 1:</p> <ul style="list-style-type: none"> Explain how heat energy affects the changing phases of water. Explain what absolute humidity and relative humidity are, and describe how they are measured. Describe what happens when the temperature of air decreases to the dew point or below the dew point. <p>Section 2:</p> <ul style="list-style-type: none"> Describe the conditions that are necessary for clouds to form. Explain the four processes of cooling that can lead to the formation of clouds. Identify the three types of clouds. Describe four ways in which fog can form. <p>Section 3:</p> <ul style="list-style-type: none"> Identify the four forms of precipitation. Compare the two processes that cause precipitation. Describe two ways that precipitation is measured. Explain how rain can be produced artificially. 	<p>Cloud Construction Activity: Students use craft materials to make clouds and describe various conditions in which they form, altitudes at which they occur, and types of weather they may bring.</p> <p>Maps in Action: Annual Precipitation in the U.S., p. 598</p> <p>Impact on Society: Hail, p. 599 – Class Discussion</p>
Week 13	<p>Chapter 24: Weather Section 1 Air Masses Section 2 Fronts Section 3 Weather Instruments Section 4 Forecasting the Weather Chapter Review and Assessment</p>	<p>COS 3. Explain how weather patterns affect climate.</p> <ul style="list-style-type: none"> Explaining characteristics of various weather systems, including high and low pressure areas or fronts. Interpreting weather maps and symbols to predict changing weather conditions Identifying technologies used 	<p>Section 1:</p> <ul style="list-style-type: none"> Explain how an air mass forms. List the four main types of air masses. Describe how air masses affect the weather of North America. <p>Section 2:</p> <ul style="list-style-type: none"> Compare the characteristic weather patterns of cold fronts with those of warm fronts. Describe how a midlatitude cyclone forms. 	<p>Forecasting Weather; Weather Map; & Station Model Activity Students use weather applications on smart phones or computer and use weather forecasts</p>

		to obtain meteorological data	<ul style="list-style-type: none"> Describe the development of hurricanes, thunderstorms, and tornadoes. <p>Section 3:</p> <ul style="list-style-type: none"> Identify four instruments that measure lower-atmospheric weather conditions Describe how scientists measure conditions in the upper atmosphere Explain how computers help scientists understand weather. <p>Section 4:</p> <ul style="list-style-type: none"> Explain how weather stations communicate weather data. Explain how a weather map is created. Explain how computer models help meteorologists forecast weather. List three types of weather that meteorologists have attempted to control. 	<p>for three different cities in AL and then use map of state to draw station models representing forecasts. They then write a weather report and present.</p> <p>Weather Symbols Matching Game</p>
Week 14	<p>Chapter 24: Weather</p> <p>Section 1 Air Masses</p> <p>Section 2 Fronts</p> <p>Section 3 Weather Instruments</p> <p>Section 4 Forecasting the Weather</p> <p>Chapter Review and Assessment</p>	<p>COS 3. Explain how weather patterns affect climate.</p> <ul style="list-style-type: none"> Explaining characteristics of various weather systems, including high and low pressure areas or fronts. Interpreting weather maps and symbols to predict changing weather conditions Identifying technologies used to obtain meteorological data 	<p>Section 1:</p> <ul style="list-style-type: none"> Explain how an air mass forms. List the four main types of air masses. Describe how air masses affect the weather of North America. <p>Section 2:</p> <ul style="list-style-type: none"> Compare the characteristic weather patterns of cold fronts with those of warm fronts. Describe how a midlatitude cyclone forms. Describe the development of hurricanes, thunderstorms, and tornadoes. <p>Section 3:</p> <ul style="list-style-type: none"> Identify four instruments that measure lower-atmospheric weather conditions Describe how scientists measure conditions in the upper atmosphere Explain how computers help scientists understand weather. <p>Section 4:</p> <ul style="list-style-type: none"> Explain how weather stations communicate weather data. Explain how a weather map is created. Explain how computer models help meteorologists forecast weather. List three types of weather that meteorologists have attempted to control. 	<p>Forecasting Weather; Weather Map; & Station Model Activity</p> <p>Students use weather applications on smart phones or computer and use weather forecasts for three different cities in AL and then use map of state to draw station models representing forecasts. They then write a weather report and present.</p> <p>Weather Symbols Matching Game</p>
Week 15	<p>Chapter 25: Climate</p> <p>Section 1 Factors That Affect Climate</p>	<p>COS 2. Describe effects on weather of energy transfer within</p>	<p><i>SWBAT</i></p> <p>Section 1:</p>	<p>Climate Zones Activity – Group</p>

	<p>Section 2 Climate Zones Section 3 Climate Change Chapter Review and Assessment</p>	<p>and among the atmosphere, hydrosphere, biosphere, and lithosphere.</p> <ul style="list-style-type: none"> Describing the energy transfer related to condensation in clouds, precipitation, winds, and ocean currents Describing characteristics of the El Nino and La Nina phenomena Using data to analyze global weather patterns Examples: temperature, barometric pressure, wind speed and direction <p>COS 3. Explain how weather patterns affect climate.</p> <ul style="list-style-type: none"> Explaining characteristics of various weather systems, including high and low pressure areas or fronts. Interpreting weather maps and symbols to predict changing weather conditions Identifying technologies used to obtain meteorological data 	<ul style="list-style-type: none"> Identify two major factors used to describe climate. Explain how latitude determines the amount of solar energy received on Earth. Describe how the different rates at which land and water are heated affect climate. Explain the effects of topography on climate. <p>Section 2:</p> <ul style="list-style-type: none"> Describe the three types of tropical climates. Describe the five types of middle-latitude climates. Describe the three types of polar climates. Explain why city climates may differ from rural climates. <p>Section 3:</p> <ul style="list-style-type: none"> Compare four methods used to study climate change. Describe four factors that may cause climate change. Identify potential impacts of climate change. Identify ways that humans can minimize their effect on climate change. 	<p>Presentations on various climates: flora, fauna, rainfall, temperature, etc.</p> <p>Watch the video The Day After Tomorrow to show potential effects of dramatic climate change.</p>
<p>Week 16</p>	<p>Chapter 25: Climate Section 1 Factors That Affect Climate Section 2 Climate Zones Section 3 Climate Change Chapter Review and Assessment</p>	<p>COS 2. Describe effects on weather of energy transfer within and among the atmosphere, hydrosphere, biosphere, and lithosphere.</p> <ul style="list-style-type: none"> Describing the energy transfer related to condensation in clouds, precipitation, winds, and ocean currents Describing characteristics of the El Nino and La Nina phenomena Using data to analyze global weather patterns Examples: temperature, barometric pressure, wind speed and direction <p>COS 3. Explain how weather patterns affect climate.</p> <ul style="list-style-type: none"> Explaining characteristics of 	<p>Section 1:</p> <ul style="list-style-type: none"> Identify two major factors used to describe climate. Explain how latitude determines the amount of solar energy received on Earth. Describe how the different rates at which land and water are heated affect climate. Explain the effects of topography on climate. <p>Section 2:</p> <ul style="list-style-type: none"> Describe the three types of tropical climates. Describe the five types of middle-latitude climates. Describe the three types of polar climates. Explain why city climates may differ from rural climates. <p>Section 3:</p> <ul style="list-style-type: none"> Compare four methods used to study climate change. 	<p>Climate Zones Activity – Group Presentations on various climates: flora, fauna, rainfall, temperature, etc.</p> <p>Watch the video The Day After Tomorrow to show potential effects of dramatic climate change.</p>

		<p>various weather systems,, including high and low pressure areas or fronts.</p> <ul style="list-style-type: none"> Interpreting weather maps and symbols to predict changing weather conditions Identifying technologies used to obtain meteorological data 	<ul style="list-style-type: none"> Describe four factors that may cause climate change. Identify potential impacts of climate change. Identify ways that humans can minimize their effect on climate change. 	
Week 17	<p>Chapter 26: Studying Space Section 1 Viewing the Universe Section 2 Movements of the Earth Chapter Review and Assessment</p>	<p>COS 6. Explain the length of a day and of a year in terms of the motion of Earth.</p> <ul style="list-style-type: none"> Explaining the relationship of the seasons to the tilt of Earth's axis and its revolution about the sun <p>COS 8. Explain the terms astronomical unit and light year</p> <p>COS 10. Identify scientists and their finding relative to Earth and space, including Copernicus, Galileo, Kepler, Newton, and Einstein.</p> <ul style="list-style-type: none"> Identifying classical instruments used to extend the senses and increase knowledge of the universe, including optical telescopes, radio telescopes, spectroscopes, and cameras <p>COS 12. Describe challenges and required technologies for space exploration.</p> <ul style="list-style-type: none"> Identifying long-term human space travel needs, including life support Identifying applications of propulsion technologies needed for space information gathering <p>Examples: Mars Explorativo Rover, Cassini spacecraft and Huygens probe, Gravity Probe B</p> <p>Identifying benefits to the quality of life that have been achieved through space</p>	<p>Section 1:</p> <ul style="list-style-type: none"> Describe characteristics of the universe in terms of time, distance, and organization. Identify the visible and nonvisible parts of the electromagnetic spectrum. Compare refracting telescopes and reflecting telescopes. Explain how telescopes for nonvisible electromagnetic radiation differ from light telescopes <p>Section 2:</p> <ul style="list-style-type: none"> Describe two lines of evidence for Earth's rotation. Explain how the change in apparent positions of constellations provides evidence of Earth's rotation and revolution around the sun. Summarize how Earth's rotation and revolution provide a basis for measuring time . Explain how the tilt of Earth's axis and Earth's movement cause seasons. 	<p>Space Exploration Research Project & Timeline: Students research the dates of significant events in space travel/space research history and make a timeline of scientific discoveries, exploration, technological advances etc.</p> <p>Types of Telescopes: Students diagram various types of telescopes and discuss how they are used to view and study space</p>

		<p>advances Examples: cellular telephone, GPS</p> <ul style="list-style-type: none"> Identifying new technology used to gather information, including spacedraft, observatories, space-based telescopes, and probes 		
<i>Week 18</i>	Midterm Review and Exam	All previously covered objectives	All previously covered objectives	Jeopardy Review Games, Study Guides, etc.
<i>Week 19</i>	<p>Chapter 27: Planets of the Solar System Section 1 Formation of the Solar System Section 2 Models of the Solar System Section 3 The Inner Planets Section 4 The Outer Planets Chapter Review and Assessment</p>	<p>COS 5. Discuss various theories for the origin, formation, and changing nature of the universe and our solar system.</p> <ul style="list-style-type: none"> Explaining the nebular hypothesis for formation of planets, the big bang theory, and the steady state theory Relating Hubble's law to the concept of an ever-expanding universe Describing the impact of meteor, asteroid, and comet bombardment on planetary and lunar development. <p>COS 10. Identify scientists and their findings relative to Earth and space, including Copernicus, Galileo, Kepler, Newton, and Einstein.</p> <ul style="list-style-type: none"> Identifying classical instruments used to extend the senses and increase knowledge of the universe, including optical telescopes, radio telescopes, spectroscopes, and cameras 	<p>Section 1:</p> <ul style="list-style-type: none"> Explain the nebular hypothesis of the origin of the solar system. Describe how the planets formed. Describe the formation of the land, the atmosphere, and the oceans of Earth. <p>Section 2:</p> <ul style="list-style-type: none"> Compare the models of the universe developed by Ptolemy and Copernicus. Summarize Kepler's three laws of planetary motion. Describe how Newton explained Kepler's laws of motion. <p>Section 3:</p> <ul style="list-style-type: none"> Identify the basic characteristics of the inner planets. Compare the characteristics of the inner planets. Summarize the features that allow Earth to sustain life. <p>Section 4:</p> <ul style="list-style-type: none"> Identify the basic characteristics that make the outer planets different from terrestrial planets. Compare the characteristics of the outer planets. Explain why Pluto is different from the other eight planets. 	<p>Group Research on Inner and Outer Planets, and then present research, diagrams, interesting facts to class in presentation format.</p> <p>Maps in Action: MOLA Map of Mars, p. 716</p>
<i>Week 20</i>	<p>Chapter 27: Planets of the Solar System Section 1 Formation of the Solar System Section 2 Models of the Solar System Section 3 The Inner Planets Section 4 The Outer Planets Chapter Review and Assessment</p>	<p>COS 5. Discuss various theories for the origin, formation, and changing nature of the universe and our solar system.</p> <ul style="list-style-type: none"> Explaining the nebular hypothesis for formation of 	<p>Section 1:</p> <ul style="list-style-type: none"> Explain the nebular hypothesis of the origin of the solar system. Describe how the planets formed. Describe the formation of the land, the atmosphere, and the oceans of Earth. 	<p>Group Research on Inner and Outer Planets, and then present research, diagrams, interesting facts to</p>

		<p>planets, the big bang theory, and the steady state theory</p> <ul style="list-style-type: none"> • Relating Hubble's law to the concept of an ever-expanding universe • Describing the impact of meteor, asteroid, and comet bombardment on planetary and lunar development. <p>COS 10. Identify scientists and their findings relative to Earth and space, including Copernicus, Galileo, Kepler, Newton, and Einstein.</p> <ul style="list-style-type: none"> • Identifying classical instruments used to extend the senses and increase knowledge of the universe, including optical telescopes, radio telescopes, spectroscopes, and cameras 	<p>Section 2:</p> <ul style="list-style-type: none"> • Compare the models of the universe developed by Ptolemy and Copernicus. • Summarize Kepler's three laws of planetary motion. • Describe how Newton explained Kepler's laws of motion. <p>Section 3:</p> <ul style="list-style-type: none"> • Identify the basic characteristics of the inner planets. • Compare the characteristics of the inner planets. • Summarize the features that allow Earth to sustain life. <p>Section 4:</p> <ul style="list-style-type: none"> • Identify the basic characteristics that make the outer planets different from terrestrial planets. • Compare the characteristics of the outer planets. • Explain why Pluto is different from the other eight planets. 	<p>class in presentation format.</p> <p>Maps in Action: MOLA Map of Mars, p. 716</p>
<p>Week 21</p>	<p>Chapter 28: Minor Bodies of the Solar System Section 1 Earth's Moon Section 2 Movements of the Moon Section 3 Satellites of Other Planets Section 4 Asteroids, Comets, and Meteoroids Chapter Review and Assessment</p>	<p>COS 5. Discuss various theories for the origin, formation, and changing nature of the universe and our solar system.</p> <ul style="list-style-type: none"> • Explaining the nebular hypothesis for formation of planets, the big bang theory, and the steady state theory • Relating Hubble's law to the concept of an ever-expanding universe • Describing the impact of meteor, asteroid, and comet bombardment on planetary and lunar development. 	<p>Section 1:</p> <ul style="list-style-type: none"> • List four kinds of lunar surface features. • Describe the three layers of the moon. • Summarize the three stages by which the moon formed. <p>Section 2:</p> <ul style="list-style-type: none"> • Describe the shape of the moon's orbit around Earth • Explain why eclipses occur. • Describe the appearance of four phases of the moon. • Explain how the movements of the moon affect tides on Earth. <p>Section 3:</p> <ul style="list-style-type: none"> • Compare the characteristics of the two moons of Mars. • Describe how volcanoes were discovered on Io. • Name one distinguishing characteristic of each of the Galilean moons. • Compare the characteristics of the rings of Saturn with the rings of the other outer planets. <p>Section 4:</p>	<p>Quick Lab: Liquid & Solid Cores, p. 722</p> <p>Maps in Action: Lunar Landing Sites, p.752</p> <p>Watch the video Apollo 13 and discuss the successes and failures of space travel to the moon.</p>

			<ul style="list-style-type: none"> Describe the physical characteristics of asteroids and comets. Describe where the Kuiper belt is located. Compare meteoroids, meteorites, and meteors. Explain the relationship between the Oort cloud and comets. 	
Week 22	<p>Chapter 28: Minor Bodies of the Solar System</p> <p>Section 1 Earth's Moon</p> <p>Section 2 Movements of the Moon</p> <p>Section 3 Satellites of Other Planets</p> <p>Section 4 Asteroids, Comets, and Meteoroids</p> <p>Chapter Review and Assessment</p>	<p>COS 5. Discuss various theories for the origin, formation, and changing nature of the universe and our solar system.</p> <ul style="list-style-type: none"> Explaining the nebular hypothesis for formation of planets, the big bang theory, and the steady state theory Relating Hubble's law to the concept of an ever-expanding universe Describing the impact of meteor, asteroid, and comet bombardment on planetary and lunar development. 	<p><i>SWBAT</i></p> <p>Section 1:</p> <ul style="list-style-type: none"> List four kinds of lunar surface features. Describe the three layers of the moon. Summarize the three stages by which the moon formed. <p>Section 2:</p> <ul style="list-style-type: none"> Describe the shape of the moon's orbit around Earth Explain why eclipses occur. Describe the appearance of four phases of the moon. Explain how the movements of the moon affect tides on Earth. <p>Section 3:</p> <ul style="list-style-type: none"> Compare the characteristics of the two moons of Mars. Describe how volcanoes were discovered on Io. Name one distinguishing characteristic of each of the Galilean moons. Compare the characteristics of the rings of Saturn with the rings of the other outer planets. <p>Section 4:</p> <ul style="list-style-type: none"> Describe the physical characteristics of asteroids and comets. Describe where the Kuiper belt is located. Compare meteoroids, meteorites, and meteors. Explain the relationship between the Oort cloud and comets. 	<p>Quick Lab: Liquid & Solid Cores, p. 722</p> <p>Maps in Action: Lunar Landing Sites, p.752</p> <p>Watch the video Apollo 13 and discuss the successes and failures of space travel to the moon.</p>
Week 23	<p>Chapter 29: The Sun</p> <p>Section 1 Structure of the Sun</p> <p>Section 2 Solar Activity</p> <p>Chapter Review and Assessment</p>	<p>COS 4. Describe the production and transfer of stellar energies</p> <ul style="list-style-type: none"> Describing how the reception of solar radiation is affected by atmospheric and lithospheric conditions <p>Example: volcanic eruptions and</p>	<p>Section 1:</p> <ul style="list-style-type: none"> Explain how the sun converts matter into energy in its core. Compare the radiative and convective zones of the sun. Describe the three layers of the sun's atmosphere. 	<p>The Sun Fill-in-the-Blank worksheet</p> <p>Maps in Action: SXT Composite Image of the Sun, p. 772</p>

		greenhouse gases affecting reflection and absorption of solar radiation	<ul style="list-style-type: none"> Section 2: Explain how sunspots are related to powerful magnetic fields on the sun. Compare prominences, solar flares, and coronal mass ejections. Describe how the solar wind can cause auroras on Earth. 	Impact on Society: The Genesis Mission, p. 773
Week 24	Chapter 29: The Sun Section 1 Structure of the Sun Section 2 Solar Activity Chapter Review and Assessment	<p>COS 4. Describe the production and transfer of stellar energies</p> <ul style="list-style-type: none"> Describing how the reception of solar radiation is affected by atmospheric and lithospheric conditions <p>Example: volcanic eruptions and greenhouse gases affecting reflection and absorption of solar radiation</p>	<p>Section 1:</p> <ul style="list-style-type: none"> Explain how the sun converts matter into energy in its core. Compare the radiative and convective zones of the sun. Describe the three layers of the sun's atmosphere. <p>Section 2:</p> <ul style="list-style-type: none"> Explain how sunspots are related to powerful magnetic fields on the sun. Compare prominences, solar flares, and coronal mass ejections. Describe how the solar wind can cause auroras on Earth. 	<p>The Sun Fill-in-the-Blank worksheet</p> <p>Maps in Action: SXT Composite Image of the Sun, p. 772</p> <p>Impact on Society: The Genesis Mission, p. 773</p>
Week 25	Chapter 30: Stars, Galaxies, and the Universe Section 1 Characteristics of Stars Section 2 Stellar Evolution Section 3 Star Groups Section 4 The Big Bang Theory Chapter Review and Assessment	<p>COS 4. Describe the production and transfer of stellar energies</p> <ul style="list-style-type: none"> Describing how the reception of solar radiation is affected by atmospheric and lithospheric conditions <p>Example: volcanic eruptions and greenhouse gases affecting reflection and absorption of solar radiation</p> <p>COS 7. Explain techniques for determining the age and composition of Earth and the universe.</p> <ul style="list-style-type: none"> Using radiometric age methods to compute the age of Earth Using expanding universe measurements to determine the age of the universe Identifying techniques for evaluating the composition of objects in space <p>COS 9. Relate the life cycle of stars to the H-R Diagram</p>	<p>Section 1:</p> <ul style="list-style-type: none"> Describe how astronomers determine the composition and temperature of stars. Explain why stars appear to move in the sky. Describe one way astronomers measure the distance to stars. Explain the difference between absolute magnitude and apparent magnitude. <p>Section 2:</p> <ul style="list-style-type: none"> Describe how a protostar becomes a star. Explain how a main-sequence star generates energy. Describe the evolution of a star after its main-sequence stage. <p>Section 3:</p> <ul style="list-style-type: none"> Describe the characteristics that identify a constellation. Describe the three main types of galaxies. Explain how a quasar differs from a typical galaxy. <p>Section 4:</p> <ul style="list-style-type: none"> Explain how Hubble's discoveries lead to an understanding that the universe is expanding. 	<p>How The Universe Works Documentary Series</p> <p>Constellation Identification Activities: crossword, wordsearch, reference maps, p. 886-887</p>

		<ul style="list-style-type: none"> Explaining indicators of motion by the stars and sun in terms of the Doppler effect and red and blue shifts Describing the relationship of star color, brightness, and evolution to the balance between gravitational collapse and nuclear fusion COS 11. Describe pulsars, quasars, black holes, and galaxies. 	<ul style="list-style-type: none"> Summarize the big bang theory. List evidence for the big bang theory. 	
Week 26	<p>Chapter 30: Stars, Galaxies, and the Universe</p> <p>Section 1 Characteristics of Stars</p> <p>Section 2 Stellar Evolution</p> <p>Section 3 Star Groups</p> <p>Section 4 The Big Bang Theory</p> <p>Chapter Review and Assessment</p> <p>Chapter 8: The Rock Record</p> <p>Section 1 Determining Relative Age</p> <p>Section 2 Determining Absolute Age</p> <p>Section 3 The Fossil Record</p> <p>Chapter Review and Assessment</p>	<p>COS 4. Describe the production and transfer of stellar energies</p> <ul style="list-style-type: none"> Describing how the reception of solar radiation is affected by atmospheric and lithospheric conditions <p>Example: volcanic eruptions and greenhouse gases affecting reflection and absorption of solar radiation</p> <p>COS 7. Explain techniques for determining the age and composition of Earth and the universe.</p> <ul style="list-style-type: none"> Using radiometric age methods to compute the age of Earth Using expanding universe measurements to determine the age of the universe Identifying techniques for evaluating the composition of objects in space <p>COS 9. Relate the life cycle of stars to the H-R Diagram</p> <ul style="list-style-type: none"> Explaining indicators of motion by the stars and sun in terms of the Doppler effect and red and blue shifts Describing the relationship of star color, brightness, and evolution to the balance between gravitational collapse and nuclear fusion 	<p>Section 1:</p> <ul style="list-style-type: none"> Describe how astronomers determine the composition and temperature of stars. Explain why stars appear to move in the sky. Describe one way astronomers measure the distance to stars. Explain the difference between absolute magnitude and apparent magnitude. <p>Section 2:</p> <ul style="list-style-type: none"> Describe how a protostar becomes a star. Explain how a main-sequence star generates energy. Describe the evolution of a star after its main-sequence stage. <p>Section 3:</p> <ul style="list-style-type: none"> Describe the characteristics that identify a constellation. Describe the three main types of galaxies. Explain how a quasar differs from a typical galaxy. <p>Section 4:</p> <ul style="list-style-type: none"> Explain how Hubble's discoveries lead to an understanding that the universe is expanding. Summarize the big bang theory. <p>List evidence for the big bang theory.</p> <p>Section 1:</p> <ul style="list-style-type: none"> State the principle of uniformitarianism. Explain how the law of superposition can be used to determine the relative age of rocks. Compare three types of unconformities. Apply the law of crosscutting relationships to determine the relative age of rocks. 	<p>How The Universe Works Documentary Series</p> <p>Constellation Identification Activities: crossword, wordsearch, reference maps, p. 886-887</p> <p>Law of Superposition & Law of Crosscutting Activity</p> <p>Types of Unconformities Diagram Activity</p> <p>Quick Lab: Radioactive Decay, p. 194</p> <p>Trace Fossils Activity</p>

		<p>COS 11. Describe pulsars, quasars, black holes, and galaxies.</p>	<ul style="list-style-type: none"> Section 2: <ul style="list-style-type: none"> Summarize the limitations of using the rates of erosion and deposition to determine the absolute age of rock formations. Describe the formation of varves. Explain how the process of radioactive decay can be used to determine the absolute age of rocks. Section 3: <ul style="list-style-type: none"> Describe four ways in which entire organisms can be preserved as fossils. List five examples of fossilized traces of organisms. <p>Describe how index fossils can be used to determine the age of rocks.</p>	
<p>Week 27</p>	<p>Chapter 8: The Rock Record Section 1 Determining Relative Age Section 2 Determining Absolute Age Section 3 The Fossil Record Chapter Review and Assessment</p>	<p>COS 7. Explain techniques for determining the age and composition of Earth and the universe.</p> <ul style="list-style-type: none"> Using radiometric age methods to compute the age of Earth Using expanding universe measurements to determine the age of the universe Identifying techniques for evaluating the composition of objects in space 	<p>Section 1:</p> <ul style="list-style-type: none"> State the principle of uniformitarianism. Explain how the law of superposition can be used to determine the relative age of rocks. Compare three types of unconformities. Apply the law of crosscutting relationships to determine the relative age of rocks. <p>Section 2:</p> <ul style="list-style-type: none"> Summarize the limitations of using the rates of erosion and deposition to determine the absolute age of rock formations. Describe the formation of varves. Explain how the process of radioactive decay can be used to determine the absolute age of rocks. <p>Section 3:</p> <ul style="list-style-type: none"> Describe four ways in which entire organisms can be preserved as fossils. List five examples of fossilized traces of organisms. Describe how index fossils can be used to determine the age of rocks. 	<p>Law of Superposition & Law of Crosscutting Activity</p> <p>Types of Unconformities Diagram Activity</p> <p>Quick Lab: Radioactive Decay, p. 194</p> <p>Trace Fossils Activity</p>
<p>Week 28</p>	<p>Chapter 10: Plate Tectonics Section 1 Continental Drift Section 2 The Theory of Plate Tectonics Section 3 The Changing Continents Chapter Review and Assessment</p>	<ul style="list-style-type: none"> N/A 	<p>Section 1:</p> <ul style="list-style-type: none"> Summarize Wegener's hypothesis of continental drift. Describe the process of sea-floor spreading. Identify how paleomagnetism provides support for the idea of sea-floor spreading. Explain how sea-floor spreading provides a mechanism for continental drift. 	<p>Underwater Geology Video on Sea-Floor Spreading and Hydrothermal Vents</p> <p>Plate Boundary Diagram Activity,</p>

			<ul style="list-style-type: none"> Section 2: Summarize the theory of plate tectonics. Identify and describe the three types of plate boundaries. List and describe three causes of plate movement. Section 3: Identify how movements of tectonic plates change Earth's surface. Summarize how movements of tectonic plates have influences climates and life on Earth. Describe the supercontinent cycle. 	<p>Table 1, p. 251</p> <p>Maps in Action: Locations of Earthquakes in S. America, 2002-2003, p. 268</p> <p>Impact on Society: The Mid-Atlantic Ridge, p. 269</p>
Week 29	<p>Chapter 10: Plate Tectonics</p> <p>Section 1 Continental Drift</p> <p>Section 2 The Theory of Plate Tectonics</p> <p>Section 3 The Changing Continents</p> <p>Chapter Review and Assessment</p>	N/A	<p>SWBAT</p> <p>Section 1:</p> <ul style="list-style-type: none"> Summarize Wegener's hypothesis of continental drift. Describe the process of sea-floor spreading. Identify how paleomagnetism provides support for the idea of sea-floor spreading. Explain how sea-floor spreading provides a mechanism for continental drift. Section 2: Summarize the theory of plate tectonics. Identify and describe the three types of plate boundaries. List and describe three causes of plate movement. Section 3: Identify how movements of tectonic plates change Earth's surface. Summarize how movements of tectonic plates have influences climates and life on Earth. Describe the supercontinent cycle. 	<p>Underwater Geology Video on Sea-Floor Spreading and Hydrothermal Vents</p> <p>Plate Boundary Diagram Activity, Table 1, p. 251</p> <p>Maps in Action: Locations of Earthquakes in S. America, 2002-2003, p. 268</p> <p>Impact on Society: The Mid-Atlantic Ridge, p. 269</p>
Week 30	<p>Chapter 12: Earthquakes</p> <p>Section 1 How & Where Earthquakes Happen</p> <p>Section 2 Studying Earthquakes</p> <p>Section 3 Earthquakes and Society</p> <p>Chapter Review and Assessment</p>	N/A	<p>Section 1:</p> <ul style="list-style-type: none"> Describe elastic rebound. Compare body waves and surface waves. Explain how the structure of Earth's interior affects seismic waves. Explain why earthquakes generally occur at plate boundaries. Section 2: Describe the instrument used to measure and record earthquakes. 	<p>Quick Lab: Seismographic Record, p. 302</p> <p>Modified Mercalli Intensity Scale Diagram Activity: Students draw pictures to represent an</p>

			<ul style="list-style-type: none"> Summarize the method scientists use to locate an epicenter. Describe the scales used to measure the magnitude and intensity of earthquakes. Section 3: Discuss the relationship between tsunamis and earthquakes. Describe two possible effects of a major earthquake on buildings. List three safety techniques to prevent injury caused by earthquake activity. Identify four methods scientists can use to forecast earthquake risks. 	<p>environment for each level of intensity on the scale, Table 1, p. 304</p> <p>Earthquake Video</p>
<i>Week 31</i>	<p>Chapter 12: Earthquakes</p> <p>Section 1 How & Where Earthquakes Happen</p> <p>Section 2 Studying Earthquakes</p> <p>Section 3 Earthquakes and Society</p> <p>Chapter Review and Assessment</p>	N/A	<p>Section 1:</p> <ul style="list-style-type: none"> Describe elastic rebound. Compare body waves and surface waves. Explain how the structure of Earth's interior affects seismic waves. Explain why earthquakes generally occur at plate boundaries. <p>Section 2:</p> <ul style="list-style-type: none"> Describe the instrument used to measure and record earthquakes. Summarize the method scientists use to locate an epicenter. Describe the scales used to measure the magnitude and intensity of earthquakes. <p>Section 3:</p> <ul style="list-style-type: none"> Discuss the relationship between tsunamis and earthquakes. Describe two possible effects of a major earthquake on buildings. List three safety techniques to prevent injury caused by earthquake activity. Identify four methods scientists can use to forecast earthquake risks. 	<p>Quick Lab: Seismographic Record, p. 302</p> <p>Modified Mercalli Intensity Scale Diagram Activity: Students draw pictures to represent an environment for each level of intensity on the scale, Table 1, p. 304</p> <p>Earthquake Video</p>
<i>Week 32</i>	<p>Chapter 13: Volcanoes</p> <p>Section 1 Volcanoes and Plate Tectonics</p> <p>Section 2 Volcanic Eruptions</p> <p>Chapter Review and Assessment</p>	N/A	<p>Section 1:</p> <ul style="list-style-type: none"> Describe the three conditions under which magma can form. Explain what volcanism is. Identify three tectonic settings where volcanoes form. Describe how magma can form plutons. <p>Section 2:</p> <ul style="list-style-type: none"> Explain how the composition of magma affects volcanic eruptions and lava flow. 	<p>Quick Lab: Changing Melting Point, p. 321</p> <p>Connection To Geology: Sea-Floor Formation, p. 322</p> <p>Forming Volcanoes</p>

			<ul style="list-style-type: none"> Describe the five major type of pyroclastic material. Identify the three main types of volcanic cones. Describe how a caldera forms. List three events that may signal a volcanic eruption. 	<p>Activity: Students construct volcanoes based on the types of volcanoes and present to class, Table 1 p. 328</p> <p>Quick Lab: Volcanic Cones, p. 329</p>
Week 33	<p>Chapter 13: Volcanoes</p> <p>Section 1 Volcanoes and Plate Tectonics</p> <p>Section 2 Volcanic Eruptions</p> <p>Chapter Review and Assessment</p>	N/A	<p>Section 1:</p> <ul style="list-style-type: none"> Describe the three conditions under which magma can form. Explain what volcanism is. Identify three tectonic settings where volcanoes form. Describe how magma can form plutons. <p>Section 2:</p> <ul style="list-style-type: none"> Explain how the composition of magma affects volcanic eruptions and lava flow. Describe the five major type of pyroclastic material. Identify the three main types of volcanic cones. Describe how a caldera forms. List three events that may signal a volcanic eruption. 	<p>Quick Lab: Changing Melting Point, p. 321</p> <p>Connection To Geology: Sea-Floor Formation, p. 322</p> <p>Forming Volcanoes Activity: Students construct volcanoes based on the types of volcanoes and present to class, Table 1 p. 328</p> <p>Quick Lab: Volcanic Cones, p. 329</p>
Week 34	<p>Chapter 3: Models of the Earth</p> <p>Section 1 Finding Locations on Earth</p> <p>Section 2 Mapping Earth's Surface</p> <p>Section 3 Types of Maps</p> <p>Chapter Review and Assessment</p>	<p>COS 6. Explain the length of a day and of a year in terms of the motion of Earth.</p> <ul style="list-style-type: none"> Explaining the relationship of the seasons to the tilt of Earth's axis and its revolution about the sun 	<p>Section 1:</p> <ul style="list-style-type: none"> Distinguish between latitude and longitude. Explain how latitude and longitude can be used to locate places on Earth's surface. Explain how a magnetic compass can be used to find directions on Earth's surface. <p>Section 2:</p> <ul style="list-style-type: none"> Explain two ways that scientists get data to make maps. Describe the characteristics and uses of three types of map projections. Summarize how to use keys, legends, and scales to read maps. <p>Section 3:</p>	<p>Topographic Map Practice Acitivity</p> <p>Maps in Action: Topographic Map of the Desoaltion Watershed, p. 76</p> <p>Eye on the Environment: Mapping Life on Earth</p>

			<ul style="list-style-type: none"> • Explain how elevation and topography are shown on a map. • Describe three types of information shown in geologic maps • Identify two uses of soil maps. 	
<i>Week 35</i>	<p>Chapter 3: Models of the Earth Section 1 Finding Locations on Earth Section 2 Mapping Earth's Surface Section 3 Types of Maps Chapter Review and Assessment</p>	<p>COS 6. Explain the length of a day and of a year in terms of the motion of Earth.</p> <ul style="list-style-type: none"> • Explaining the relationship of the seasons to the tilt of Earth's axis and its revolution about the sun 	<p>Section 1:</p> <ul style="list-style-type: none"> • Distinguish between latitude and longitude. • Explain how latitude and longitude can be used to locate places on Earth's surface. • Explain how a magnetic compass can be used to find directions on Earth's surface. <p>Section 2:</p> <ul style="list-style-type: none"> • Explain two ways that scientists get data to make maps. • Describe the characteristics and uses of three types of map projections. • Summarize how to use keys, legends, and scales to read maps. <p>Section 3:</p> <ul style="list-style-type: none"> • Explain how elevation and topography are shown on a map. • Describe three types of information shown in geologic maps • Identify two uses of soil maps. 	<p>Topographic Map Practice Activity</p> <p>Maps in Action: Topographic Map of the Desolation Watershed, p. 76</p> <p>Eye on the Environment: Mapping Life on Earth</p>
<i>Week 36</i>	Final Review and Exam	All previously covered objectives	All previously covered objectives	<p>Final Review and Exam</p> <p>Jeopardy Review Games, Study Guides, etc.</p>