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| *Grade Level:* | *Subject Area/Course* |
| **8th** | **Earth Science** |

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| ***Q & W*** | | ***CONTENT & SKILLS*** | ***STRATEGIES & RESOURCES*** | ***ASSESSMENTS/***  ***ACTIVITIES*** | ***STATE/NATIONAL STANDARDS*** |
| Q1  W1 | Methods of Science   * Scientific Inquiry and Steps * Scientific Laws and Theories * International System of Units | * Higher Order Questioning * Reciprocal Teaching | **Measurement Lab**  **Key Concept Builder**  **Understanding Science Worksheet**  **BrainPOP Video Clip**  **and Quiz** | 8.1.1.1.1 - Evaluate the reasoning in arguments in which fact and opinion are intermingled or when conclusions do not follow logically from the evidence given.  8.1.1.2.1 - Use logical reasoning and imagination to develop descriptions, explanations, predictions and models based on evidence.  8.1.3.3.1 - Explain how scientific laws and engineering principles, as well as economic, political, social, and ethical expectations, must be taken into account in designing engineering solutions or conducting scientific investigations.  8.1.3.4.2 - Determine and use appropriate safety procedures, tools, measurements, graphs and mathematical analyses to describe and investigate natural and designed systems in Earth and physical science contexts. |
| Q1  W2 | Scientific Inquiry and Scientific Measurement   * How are independent variables and dependent variables related? * How is Scientific Inquiry used in a real life scientific investigation? | * Higher Order Questioning * Non-Linguistic Representation * Direct Vocabulary Instruction | **Scientific Method Activity #1 (Nails)**  **Scientific Method Activity #2 (Fish)**  **Virtual Lab (Scientific Method)**  **Directed Reading Worksheet**  **Online Practice Test**  **Chapter Test** | 8.1.1.1.1 - Evaluate the reasoning in arguments in which fact and opinion are intermingled or when conclusions do not follow logically from the evidence given.  8.1.1.2.1 - Use logical reasoning and imagination to develop descriptions, explanations, predictions and models based on evidence.  8.1.3.3.2 - Understand that scientific knowledge is always changing as new technologies and information enhance observations and analysis of data. |
| Q1  W3 | Chapter 2.1 – Spherical Earth   * What are Earth’s major systems and how do they interact? * Why does Earth have a spherical shape? | * Direct Vocabulary Instruction * Higher Order Questioning * Graphic Organizer | **BrainPOP Video Clip**  **and Quiz**  **Density Lab**  **Key Concept Builder Worksheet**  **Online Personal Tutor Review (Density)**  **Online Assessment Quiz**  **Directed Reading Worksheet** | 8.3.1.1.1 - Recognize that the Earth is composed of layers, and describe the properties of the layers, including the lithosphere, mantle and core.  8.3.3.1.3 - Recognize that gravitational force exists between any two objects and describe how the masses of the objects and distance between them affect the force. |
| Q1  W4 | Chapter 2.2 – Earth’s Interior   * What are the interior layers of Earth’s * What evidence indicates that Earth has a solid inner core and a liquid outer core?   Chapter 2.3 – Earth’s Surface   * What are Earth’s major landforms and how do they compare? * What are the major landform regions of the United States? | * Reciprocal Teaching * Inference Chart * Reciprocal Teaching | **BrainPOP Video Clip**  **and Quiz**  **Concepts in Motion Animation**  **Online Assessment Quiz**  **Landforms Concept Map**  **Earth Layers Drawing**  **Virtual Lab (Landforms)**  **Vocabulary Quiz**  **Online Practice Test**  **Chapter Test** | 8.3.1.1.1 - Recognize that the Earth is composed of layers, and describe the properties of the layers, including the lithosphere, mantle and core.  8.2.1.2.2 - Distinguish between chemical and physical changes in matter. |
| Q1  W5 | Chapter 3.1 – What is a Mineral?   * What is a Mineral? * What are the common rock-forming minerals? * How do minerals form? | * Direct Vocabulary Instruction * Inference Chart * Compare / Contrast Analysis | **Online Personal Tutor Review (Minerals)**  **Crystallization Lab #1 (Salts)**  **Crystallization Lab #2 (Borax)**  **Key Concepts Worksheet**  **Assessment Online Quiz** | 8.3.1.3.2 - Classify and identify rocks and minerals using characteristics including, but not limited to, density, hardness and streak for minerals; and texture and composition for rocks.  8.2.1.2.1 - Identify evidence of chemical changes, including color change, generation of a gas, solid formation and temperature change.  8.2.1.1.1 - Distinguish between a mixture and a pure substance and use physical properties including color, solubility, density, melting point and boiling point to separate mixtures and identify pure substances. |
| Q1  W6 | Chapter 3.2 – How are Minerals Identified?   * Why is it necessary to use more than one property for mineral identification? * What properties can you use to identify minerals? | * Non-Linguistic Representation * Venn Diagram * Compare / Contrast Analysis | **What my Mineral? Identification Lab**  **BrainPOP Video Clip**  **and Quiz**  **Online Personal Tutor Review (Mineral Identification)**  **Formation and Identification of Minerals Lab**  **Virtual Lab (Mineral Identification)**  **Assessment Online Quiz** | 8.3.1.3.2 - Classify and identify rocks and minerals using characteristics including, but not limited to, density, hardness and streak for minerals; and texture and composition for rocks.  8.2.1.2.2 - Distinguish between chemical and physical changes in matter.  8.2.1.1.2 - Use physical properties to distinguish between metals and non-metals. |
| Q1  W7 | Chapter 3.3 – Sources and Uses of Minerals   * How are minerals used in your daily life? * Why are minerals a valuable resource? | * Direct Vocabulary Instruction * Graphic Organizer * Attribute Wheel * Graphic Organizer | **BrainPOP Video Clip**  **and Quiz**  **Concepts in Motion Interactive Table**  **Common Uses of Minerals Lab**  **Assessment Online Quiz**  **Chapter 3 Vocabulary Quiz**  **Chapter 3 Directed Reading Worksheet**  **Online Practice Test**  **Chapter 3 Test** | 8.3.1.3.2 - Classify and identify rocks and minerals using characteristics including, but not limited to, density, hardness and streak for minerals; and texture and composition for rocks. |
| Q1  W8 | Chapter 4.1 – Rocks and the Rock Cycle   * How are Rocks Classified? * What is the Rock Cycle? | * Direct Vocabulary Instruction * Compare / Contrast Analysis * Inference Chart | **BrainPOP Video Clip**  **and Quiz**  **Concepts in Motion Animation (Rock Cycle)**  **Virtual Lab (Rock Cycle)**  **Online Assessment Quiz**  **Careers in Science Video Clip (Geologist)**  **Rock Cycle Model Lab** | 8.3.1.3.3 - Relate rock composition and texture to physical conditions at the time of formation of igneous, sedimentary and metamorphic rock.  8.1.3.2.1 - Describe examples of important  contributions to the advancement of  science, engineering and technology  made by individuals representing different groups and cultures at different times in history. |
| Q1  W9 | Chapter 4.2 – Igneous Rocks   * How do Igneous Rocks form? * What are the common types of Igneous Rocks?   Chapter 4.3 – Sedimentary Rocks   * How do Sedimentary Rocks form? * What are the three types of Sedimentary Rocks? | * Direct Vocabulary Instruction * Reciprocal Teaching * Inference Chart | **BrainPOP Video Clip**  **and Quiz**  **Rock Cycle Activity**  **Launch Lab (Rock Formation)**  **Mini Lab (Crystal Shapes)**  **Concepts in Motion (Interactive Table)**  **Online Quiz** | 8.3.1.3.3 - Relate rock composition and texture to physical conditions at the time of formation of igneous, sedimentary and metamorphic rock.  8.2.1.2.3 - Use the particle model of matter to explain how mass is conserved during physical and chemical changes in a closed system. |
| Q1  W10 | Chapter 4.4 – Metamorphic Rocks   * How do metamorphic rocks form? * How do types of metamorphic rocks differ? | * Direct Vocabulary Instruction * Non-Linguistic Representation * Graphic Organizer * Compare / Contrast Analysis | **Rock Identification Lab**  **Concepts in Motion (Metamorphic Rocks)**  **Online Personal Tutor Review (Rocks)**  **Grain Size Lab**  **Online Quiz**  **Vocabulary Quiz**  **Directed Reading Worksheet**  **Online Practice Test**  **Chapter 4 Test** | 8.3.1.3.3 - Relate rock composition and texture to physical conditions at the time of formation of igneous, sedimentary and metamorphic rock. |
| Q2  W1 | Chapter 6.1 – The Erosion – Deposition Process   * How can erosion shape and sort sediment? * How are erosion and deposition related? * What features suggest whether erosion or deposition created a landform? | * Venn Diagram * Non-Linguistic Representation * Graphic Organizer * Direct Vocabulary Instruction | **Mini Lab (Weathering)**  **Online Personal Tutor Review (Erosion)**  **Online Quiz**  **Vocabulary** | 8.3.1.2.1 - Explain how landforms result from the processes of crustal deformation, volcanic eruptions, weathering, erosion and deposition of sediment.  8.3.1.2.2 - Explain the role of weathering, erosion and glacial activity in shaping Minnesota's current landscape. |
| Q2 W2 | Chapter 6.2 – Landforms Shaped by Water and Wind   * What are the stages of stream development? * How do water erosion and deposition change Earth’s surface? * How do wind erosion and deposition change Earth’s surface? | * Venn Diagram * Direct Vocabulary Instruction * Non-Linguistic Representation | **BrainPOP Video Clip**  **and Quiz**  **Launch Lab (Landforms)**  **Concepts in Motion (Rivers)**  **Mini Lab (Stalactites)**  **Virtual Lab (Erosion)**  **Online Quiz** | 8.3.1.2.1 - Explain how landforms result from the processes of crustal deformation, volcanic eruptions, weathering, erosion and deposition of sediment.  8.3.1.2.2 - Explain the role of weathering, erosion and glacial activity in shaping Minnesota's current landscape. |
| Q2  W3 | Chapter 6.3 – Mass Wasting and Glaciers   * What are some ways gravity shapes Earth’s surface? * How do glaciers erode Earth’s surface? | * Compare / Contrast Analysis * Non-Linguistic Representation | **BrainPOP Video Clip**  **and Quiz**  **Glacier Activity**  **Concepts in Motion (Glaciers)**  **Online Quiz**  **Vocabulary Quiz**  **Directed Reading Worksheet**  **Online Practice Test**  **Chapter Test** | 8.3.1.2.1 - Explain how landforms result from the processes of crustal deformation, volcanic eruptions, weathering, erosion and deposition of sediment.  8.3.1.2.2 - Explain the role of weathering, erosion and glacial activity in shaping Minnesota's current landscape. |
| Q2 W4 | Chapter 7.1 – The Continental Drift Hypothesis   * What evidence supports continental drift? * Why did scientists question the continental drift hypothesis? | * Non-Linguistic Representation * Direct Vocabulary Instruction * Graphic Organizer | **BrainPOP Video Clip**  **and Quiz**  **Plate Tectonics Lab**  **Concepts in Motion (Plate Movement)**  **Virtual Lab (Tectonics)**  **Online Quiz** | 8.3.1.1.3 - Recognize that major geological events, such as earthquakes, volcanic eruptions and mountain building, result from the slow movement of tectonic plates.  8.3.1.3.1 - Interpret successive layers of sedimentary rocks and their fossils to infer relative ages of rock sequences, past geologic events, changes in environmental conditions, and the appearance and extinction of life forms. |
| Q2  W5 | Chapter 7.2 – Development of a Theory   * What is seafloor spreading? * What evidence is used to support seafloor spreading? | * Direct Vocabulary Instruction * Non-Linguistic Representation * Reciprocal Teaching | **Launch Lab (Seafloor)**  **Concepts in Motion (Seafloor Spreading)**  **Mini Lab (Ocean Maps)**  **Online Quiz** | 8.3.1.1.3 - Recognize that major geological events, such as earthquakes, volcanic eruptions and mountain building, result from the slow movement of tectonic plates.  8.3.1.1.1 - Recognize that the Earth is composed of layers, and describe the properties of the layers, including the lithosphere, mantle and core. |
| Q2  W6 | Chapter 7.3 – The Theory of Plate Tectonics   * What is the theory of plate tectonics? * What are the three types of plate boundaries? * Why do tectonic plates move? | * Direct Vocabulary Instruction * Non-Linguistic Representation * Graphic Organizer * Inference Chart | **Launch Lab (Density)**  **Concepts in Motion (Plate Boundaries)**  **Online Personal Tutor Review (Plates)**  **Online Quiz**  **Vocabulary Quiz**  **Directed Reading Worksheet**  **Online Practice Test**  **Chapter Test** | 8.3.1.1.3 - Recognize that major geological events, such as earthquakes, volcanic eruptions and mountain building, result from the slow movement of tectonic plates.  8.3.1.1.2 - Correlate the distribution of ocean trenches, mid-ocean ridges and mountain ranges to volcanic and seismic activity. |
| Q2  W7 | Chapter 9.1 – Earthquakes   * What is an earthquake? * Where do earthquakes occur? * How do scientists monitor earthquake activity? | * Direct Vocabulary Instruction * Non-Linguistic Representation * Higher Order Questioning | **BrainPOP Video Clip**  **and Quiz**  **Earthquake Lab**  **Concepts in Motion (Waves)**  **Mini Lab (Epicenters)**  **Online Personal Tutor Review (Earthquakes)**  **Mercalli Scale Lab**  **Online Quiz** | 8.3.1.1.2 - Correlate the distribution of ocean trenches, mid-ocean ridges and mountain ranges to volcanic and seismic activity.  8.2.3.1.1 - Explain how seismic waves transfer energy through the layers of the Earth and across its surface. |
| Q2  W8 | Chapter 9.2 – Volcanoes   * How do volcanoes form? * What factors contribute to the eruption style of a volcano? * How are volcanoes classified? | * Attribute Wheel * Direct Vocabulary Instruction * Inference Chart * Compare / Contrast Analysis | **Science Video Clip (Volcanoes)**  **Launch Lab (Volcano Shapes)**  **Concepts in Motion (Volcano Types)**  **Virtual Lab (Volcanoes)**  **Online Quiz** | 8.3.1.1.2 - Correlate the distribution of ocean trenches, mid-ocean ridges and mountain ranges to volcanic and seismic activity.  8.2.3.1.1 - Explain how seismic waves transfer energy through the layers of the Earth and across its surface.  8.3.1.2.1 - Explain how landforms result from the processes of crustal deformation, volcanic eruptions, weathering, erosion and deposition of sediment. |
| Q2  W9 | Chapter 9.2 Volcanoes   * How do volcanoes form? * What factors contribute to the eruption style of a volcano? * How are volcanoes classified? | * Direct Vocabulary Instruction * Higher Order Questioning * Attribute Wheel | **Vocabulary Quiz**  **Directed Reading Worksheet**  **Online Practice Test**  **Chapter Test** | 8.3.1.1.2 - Correlate the distribution of ocean trenches, mid-ocean ridges and mountain ranges to volcanic and seismic activity.  8.2.3.1.1 - Explain how seismic waves transfer energy through the layers of the Earth and across its surface. |
| Q2  W10 | Chapter 12.1 – Describing Earth’s Atmosphere   * How did Earth’s atmosphere form? * What is Earth’s atmosphere made of? * What are the layers of the atmosphere? * How do air pressure and temperature change as altitude increase? | * Attribute Wheel * Inference Chart * Direct Vocabulary Instruction * Higher Order Questioning | **Launch Lab (Air Pressure)**  **Concepts in Motion (Atmospheric Layers)**  **Video Clip (Auroras)**  **Virtual Lab (Atmosphere)**  **Online Quiz** | 8.3.2.2.1 - Describe how the composition and structure of the Earth's atmosphere affects energy absorption, climate, and the distribution of particulates and gases.  8.1.3.4.1 - Use maps, satellite images and other data sets to describe patterns and make predictions about local and global systems in Earth science contexts. |
| Q3  W1 | Chapter 12.2 – Energy Transfer in the Atmosphere   * How does energy transfer from the Sun to Earth and the atmosphere? * How is the air circulation patterns within the atmosphere created? | * Non-Linguistic Representation * Reciprocal Teaching * Direct Vocabulary Instruction * Graphic Organizer | **Launch Lab (Air Mass)**  **Concepts in Motion (Greenhouse Effect)**  **Online Personal Tutor Review (Convection)**  **Mini Lab (Temperature Inversion)**  **Online Quiz**  **Conduction Lab** | 8.3.2.1.3 - Explain how heating of the Earth's surface and atmosphere by the sun drives convection within the atmosphere and hydrosphere producing winds, ocean currents and the water cycle, as well as influencing global climate.  8.3.2.2.1 - Describe how the composition and structure of the Earth's atmosphere affects energy absorption, climate, and the distribution of particulates and gases. |
| Q3  W2 | Chapter 12.3 – Air Currents   * How does uneven heating of Earth’s surface result in air movement? * How are air currents on Earth affected by Earth’s spin? * What are the main wind belts on Earth?   Chapter 12.4 – Air Quality   * How do humans impact air quality * Why do humans monitor air quality? | * Non-Linguistic Representation * Attribute Wheel      * Direct Vocabulary Instruction * Graphic Organizer | **Video Clip (Wind)**  **Launch Lab (Air Movement)**  **Coriolis Lab**  **Online Personal Tutor Review (Wind Belts)**  **Online Quiz**  **Vocabulary Quiz**  **Directed Reading Worksheet**  **Online Practice Test**  **Chapter Test** | 8.3.2.2.1 - Describe how the composition and structure of the Earth's atmosphere affects energy absorption, climate, and the distribution of particulates and gases.  8.1.3.3.3 - Provide examples of how advances in technology have impacted the ways in which people live, work and interact.  8.3.2.2.3 - Relate global weather patterns to patterns in regional and local weather.  8.2.1.2.4 - Recognize that acids are compounds whose properties include a sour taste, characteristic color changes with litmus and other acid/base indicators, and the tendency to react with bases to produce a salt and water.  8.3.4.1.2 - Recognize that land and water use practices can affect natural processes and that natural processes interfere and interact with human systems. |
| Q3  W3 | Chapter 13.1 – Describing Weather   * What is weather? * What variables are used to describe weather? * How is weather related to the water cycle? | * Direct Vocabulary Instruction * Higher Order Questioning * Inference Chart * Compare / Contrast Analysis | **BrainPOP Video Clip**  **and Quiz**  **Launch Lab (Clouds)**  **Dew Point and Humidity Lab**  **Online Personal Tutor Review (Precipitation)**  **Online Quiz** | 8.3.2.3.2 - Describe how the water cycle distributes materials and purifies water.  8.3.2.3.1 - Describe the location, composition and use of major water reservoirs on the Earth, and the transfer of water among them. |
| Q3  W4 | Chapter 13.2 - Weather Patterns   * What are two types of pressure systems? * What drives weather patterns? * Why is it useful to understand weather patterns? * What are some examples of severe weather? | * Non-Linguistic Representation * Direct Vocabulary Instruction * Venn Diagram * Higher Order Questioning * Graphic Organizer | **Video Clip (Hurricanes)**  **Launch Lab (Air Pressure)**  **Mini Lab (Pressure)**  **Concepts in Motion (Fronts)**  **Concepts in Motion (Tornadoes)**  **Tornado Lab**  **Online Quiz** | 8.3.2.2.3 - Relate global weather patterns to patterns in regional and local weather.  8.3.2.2.2 - Analyze changes in wind direction, temperature, humidity and air pressure and relate them to fronts and pressure systems. |
| Q3  W5 | Chapter 13.3 – Weather Forecasts   * What instruments are used to measure weather variables? * How are computer models used to predict the weather? | * Non-Linguistic Representation * Compare / Contrast Analysis | **Weather Map Lab**  **Concepts in Motion (Maps)**  **Mini Lab (Station Models)**  **Virtual Lab (Weather Maps)**  **Vocabulary Quiz**  **Directed Reading Worksheet**  **Online Practice Test**  **Chapter Test** | 8.1.3.4.1 - Use maps, satellite images and other data sets to describe patterns and make predictions about local and global systems in Earth science contexts.  8.1.3.3.3 - Provide examples of how advances in technology have impacted the ways in which people live, work and interact. |
| Q3  W6 | Chapter 14.1 – Climates of Earth   * What is Climate? * Why is one climate different from another? * How are climates classified? | * Non-Linguistic Representation * Compare / Contrast Analysis * Inference Chart | **Concepts in Motion (Climates)**  **Vocabulary**  **Specific Heat Lab**  **Online Quiz** | 8.3.2.1.2 - Recognize that oceans have a major effect on global climate because water in the oceans holds a large amount of heat.  8.3.4.1.2 - Recognize that land and water use practices can affect natural processes and that natural processes interfere and interact with human systems. |
| Q3  W7 | Chapter 14.2 – Climate Cycles   * How has climate varied over time? * What causes seasons? * How does the ocean affect climate? | * Non-Linguistic Representation * Graphic Organizer | **Launch Lab (Axis)**  **Online Personal Tutor Review (Seasons)**  **Concepts in Motion (Seasons)**  **Online Quiz** | 8.3.2.1.1 - Explain how the combination of the Earth's tilted axis and revolution around the sun causes the progression of seasons.  8.3.2.1.3 - Explain how heating of the Earth's surface and atmosphere by the sun drives convection within the atmosphere and hydrosphere producing winds, ocean currents and the water cycle, as well as influencing global climate.  8.1.3.4.1 - Use maps, satellite images and other data sets to describe patterns and make predictions about local and global systems in Earth science contexts. |
| Q3  W8 | Chapter 14.3 – Recent Climate Change   * How can human activities affect climate? * How are predictions for future climate change made? | * Direct Vocabulary Instruction * Inference Chart | **BrainPOP Video Clip**  **and Quiz**  **Virtual Lab (Climate Change)**  **Online Quiz**  **Vocabulary Quiz**  **Directed Reading Worksheet**  **Online Practice Test**  **Chapter Test** | 8.3.2.2.1 - Describe how the composition and structure of the Earth's atmosphere affects energy absorption, climate, and the distribution of particulates and gases.  8.1.3.2.1 - Describe examples of important contributions to the advancement of science, engineering and technology made by individuals representing different groups and cultures at different times in history.  8.1.3.3.3 - Provide examples of how advances in technology have impacted the ways in which people live, work and interact.  8.3.4.1.1 - Describe how mineral and fossil fuel resources have formed over millions of years, and explain why these resources are finite and non-renewable over human time frames. |
| Q3  W9 | Chapter 19.1 – Observing the Universe   * How do scientists use the electromagnetic spectrum to study the universe? * What types of telescopes and technology are used to explore space? | * Higher Order Questioning * Compare / Contrast Analysis * Venn Diagram | **Video Clip (Universe)**  **Launch Lab (Lenses)**  **Telescope Lab**  **Mini Lab (Light)**  **Online Personal Tutor Review (Electro-Magnetic Spectrum)**  **Online Quiz** | 8.1.3.4.1 - Use maps, satellite images and other data sets to describe patterns and make predictions about local and global systems in Earth science contexts. |
| Q3  W10 | Chapter 19.2 – Early History of Space Exploration   * How are rockets and artificial satellites used? * Why do scientists send both crewed and un-crewed missions into space? * What are some ways that people use space technology to improve life on Earth? | * Direct Vocabulary Instruction * Inference Chart * Graphic Organizer | **Video Clip (Space Shuttle)**  **Launch Lab (Rockets)**  **Balloon Rocket Races**  **Concepts in Motion (Spaceflight)**  **Virtual Lab (Space)**  **Online Quiz** | 8.1.1.1.1 - Evaluate the reasoning in arguments in which fact and opinion are intermingled or when conclusions do not follow logically from the evidence given.  8.1.1.2.1 - Use logical reasoning and imagination to develop descriptions, explanations, predictions and models based on evidence. |
| Q4  W1 | Chapter 19.3 – Recent and Future Space Missions   * What are goals for future space exploration? * What conditions are required for the existence of life on Earth? * How can exploring space help scientists learn about Earth? | * Venn Diagram * Reciprocal Teaching * Attribute Wheel | **Video Clip (Space Missions)**  **Online Quiz**  **Vocabulary Quiz**  **Directed Reading Worksheet**  **Online Practice Test**  **Chapter Test** | 8.1.3.2.1 - Describe examples of important contributions to the advancement of science, engineering and technology made by individuals representing different groups and cultures at different times in history.  8.1.3.3.2 - Understand that scientific knowledge is always changing as new technologies and information enhance observations and analysis of data.  8.1.3.3.3 - Provide examples of how advances in technology have impacted the ways in which people live, work and interact. |
| Q4  W2 | Chapter 20.1 – Earth’s Motion   * How does Earth move? * Why is Earth warmer at the equator and colder at the poles? * Why do seasons change as Earth moves around the Sun? | * Direct Vocabulary Instruction * Compare / Contrast Analysis * Graphic Organizer | **Launch Lab (Earth)**  **Mini Lab (Orbital Speed)**  **Concepts in Motion (Earth’s Tilt)**  **Online Personal tutor Review (Seasons)**  **Online Quiz** | 8.3.2.1.1 - Explain how the combination of the Earth's tilted axis and revolution around the sun causes the progression of seasons.  8.3.3.1.2 - Describe how gravity and inertia keep most objects in the solar system in regular and predictable motion.  8.3.3.1.3 - Recognize that gravitational force exists between any two objects and describe how the masses of the objects and distance between them affect the force.  8.3.3.1.5 - Use the predictable motions of the Earth around its own axis and around the sun, and of the moon around the Earth, to explain day length, the phases of the moon, and eclipses. |
| Q4  W3 | Chapter 20.2 – Earth’s Moon   * How does the Moon move around Earth? * Why does the Moon’s appearance change? | * Attribute Wheel * Graphic Organizer * Direct Vocabulary Instruction * Higher Order Questioning | **Launch Lab (Moon Phases)**  **Concepts in Motion (Moon Formation)**  **Mini Lab (Moon Formation)**  **Concepts in Motion (Moon Phases)**  **Virtual Lab (Moon Phases)**  **Online Quiz** | 8.3.3.1.5 - Use the predictable motions of the Earth around its own axis and around the sun, and of the moon around the Earth, to explain day length, the phases of the moon, and eclipses.  8.3.3.1.4 - Compare and contrast the sizes, locations, and compositions of the planets and moons in our solar system. |
| Q4  W4 | Chapter 20.3 – Eclipses and Tides   * What is a solar eclipse? * What is a lunar eclipse? * How do the Moon and the Sun affect Earth’s oceans? | * Direct Vocabulary Instruction * Inference Chart * Venn Diagram * Higher Order Thinking * Direct Vocabulary Instruction * Compare and Contrast Analysis | **BrainPOP Video Clip and Quiz**  **Launch Lab (Shadows)**  **Mini Lab (Eclipses)**  **Concepts in Motion (Eclipses)**  **Online Quiz**  **Vocabulary Quiz**  **Directed Reading Worksheet**  **Online Practice Test**  **Chapter Test** | 8.3.3.1.5 - Use the predictable motions of the Earth around its own axis and around the sun, and of the moon around the Earth, to explain day length, the phases of the moon, and eclipses.  8.3.3.1.3 - Recognize that gravitational force exists between any two objects and describe how the masses of the objects and distance between them affect the force. |
| Q4  W5 | Chapter 21.1 – The Structure of the Solar System   * How are the inner planets different from the outer planets? * What is an astronomical unit and why is it used? * What is the shape of a planet’s orbit? | * Direct Vocabulary Instruction * Inference Chart * Graphic Organizer | **BrainPOP Video Clip and Quiz**  **Launch Lab (Solar System)**  **Concepts in Motion (Planets)**  **Concepts in Motion (Distances)**  **Online Personal Tutor Review (Gravity)**  **Mini Lab (Orbits)**  **Virtual Lab (Planets)**  **Online Quiz** | 8.3.3.1.4 - Compare and contrast the sizes, locations, and compositions of the planets and moons in our solar system.  8.3.3.1.2 - Describe how gravity and inertia keep most objects in the solar system in regular and predictable motion. |
| Q4  W6 | Chapter 21.2 - The Inner Planets   * How are the inner planets similar? * Why is Venus hotter than Mercury? * What kind of atmospheres do the inner planets have? | * Direct Vocabulary Instruction * Inference Chart * Non-Linguistic Representation * Reciprocal Teaching | **Video Clip (Inner Planets)**  **Launch Lab (Temperature)**  **Vocabulary**  **Online Quiz** | 8.3.3.1.4 - Compare and contrast the sizes, locations, and compositions of the planets and moons in our solar system. |
| Q4  W7 | Chapter 21.3 – The Outer Planets   * How are the outer planets similar? * What are the outer planets made of?   Chapter 21.4 – Dwarf Planets and Other Objects   * What is a dwarf planet? * What are the characteristics of comets and asteroids? * How does an impact crater form? | * Direct Vocabulary Instruction * Reciprocal Teaching * Higher Order Questioning * Inference Chart * Graphic Organizer | **Launch Lab (Outer Planets)**  **Video Clip (Outer Planets)**  **Vocabulary**  **Online Quiz**  **Solar System Scale Activity**  **Vocabulary Quiz**  **Directed Reading Worksheet**  **Online Practice Test**  **Chapter Test** | 8.3.3.1.4 - Compare and contrast the sizes, locations, and compositions of the planets and moons in our solar system.  8.3.3.1.3 - Recognize that gravitational force exists between any two objects and describe how the masses of the objects and distance between them affect the force.  8.3.3.1.4 - Compare and contrast the sizes, locations, and compositions of the planets and moons in our solar system. |
| Q4  W8 | Chapter 22.1 – The View from Earth   * How do astronomers divide the night sky? * What can astronomers learn about stars from their light? * How do scientists measure the distance and the brightness of objects in the sky? | * Direct Vocabulary Instruction * Compare and Contrast Analysis * Attribute Wheel * Inference Chart | **Online Personal Tutor Review (Electro-Magnetic Spectrum)**  **Mini Lab (Spectroscope)**  **Vocabulary**  **Skill Practice (Constellations)**  **Online Quiz** | 8.3.3.1.1 - Recognize that the sun is a medium-sized star, one of billions of stars in the Milky Way galaxy, and the closest star to Earth.  8.3.3.1.4 - Compare and contrast the sizes, locations, and compositions of the planets and moons in our solar system. |
| Q4  W9 | Chapter 22.2 – The Sun and Other Stars   * How do stars shine? * How are stars layered? * How does the Sun change over short periods of time? * How do scientists classify stars? | * Direct Vocabulary Instruction * Attribute Wheel * Graphic Organizer * Graphic Organizer | **Sunspot Lab**  **Mini Lab (Sun’s Layers)**  **Virtual Lab (H-R Diagram)**  **H-R Diagram Activity**  **Online Quiz** | 8.3.3.1.1 - Recognize that the sun is a medium-sized star, one of billions of stars in the Milky Way galaxy, and the closest star to Earth. |
| Q4  W10 | Chapter 22.3 – Evolution of Stars   * How do stars form? * How does a star’s mass affect its evolution? * How is a star matter recycled in space?   Chapter 22.4 – Galaxies and the Universe   * What are the major types of galaxies? * What is the Milky Way, and how is it related to the solar system? * What is the Big Bang Theory? | * Compare and Contrast Analysis * Higher Order Thinking * Inference Chart * Graphic Organizer | **Launch Lab (Stars Lifecycle)**  **Mini Lab (Black Holes)**  **Poster Project (Stellar Evolution)**  **Concepts in Motion (Big Bang Theory)**  **Online Quiz**  **Vocabulary Quiz**  **Directed Reading Worksheet**  **Online Practice Test**  **Chapter Test** | 8.3.3.1.1 - Recognize that the sun is a medium-sized star, one of billions of stars in the Milky Way galaxy, and the closest star to Earth.  8.3.3.1.1 - Recognize that the sun is a medium-sized star, one of billions of stars in the Milky Way galaxy, and the closest star to Earth. |