

Unit 3 – Learning Goals: Position of Earth in Solar System

Big Picture: Students should understand how Earth’s position in the solar system impacts the hydrosphere and the atmosphere		
Content Goals	Skills Goals	
Students will be able to: <ul style="list-style-type: none"> • Describe how electromagnetic radiation varies in wavelength and energy • Identify layers of the atmosphere and their respective properties (temperature and composition) • Explain why density and temperature vary in the layers of the atmosphere • Identify the causes of increased CO₂ in the atmosphere as explain the effects • Describe how distance and mass affect the force of gravity on the Earth and the moon • Explain why ocean tides occur • Explain why ocean tides vary due to the position of the Earth, moon, and sun • Compare heating of the Earth’s surface for areas covered in soil/rock, water, and ice. 	Students will be able to: <ul style="list-style-type: none"> • Graph data using graphing conventions in LHS EDR • Use information provided in charts and graphs to analyze patterns in data • Identify the topic and summarize the main idea in a scientific article or other type of text • Write a problem statement according to the LHS EDR • Write a hypothesis according to the LHS EDR 	
Assessment: How will mastery of content and skills be assessed? <ul style="list-style-type: none"> • Quizzes and tests on effect of moon and sun on Earth • Identification of topic and summary of main idea and significant supporting statements in evaluation of scientific text • Production of graphs • Written Problem Statement and Hypothesis 		
Content Vocabulary: Atmosphere Hydrosphere Electromagnetic radiation Electromagnetic spectrum Wavelength Frequency Troposphere Stratosphere	Mesosphere Thermosphere Exosphere Greenhouse effect Carbon sink Fossil fuel Photosynthesis Cellular respiration	Heat capacity Albedo Gravity Tide Spring tide Neap tide

