

AOM Power Standards by Quarter (6/15/09)

	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Goal 1 Inquiry	1. Conduct experiments, collect, organize and analyze data	1. Conduct experiments, collect, organize and analyze data	1. Conduct experiments, collect, organize and analyze data	1. Conduct experiments, collect, organize and analyze data
Goal 2 Content	<p>Unit 1: Instruments of Astronomy</p> <p>1. Create a timeline of the history of people and the instruments they used to study space.</p> <p>2. Explain the various types of instruments and their applications to space exploration.</p> <p>Unit 2: Solar System</p> <p>3. Explain the formation and evolution of the solar system.</p> <p>4. Describe planetary motion based on Kepler's and Newton's Laws.</p> <p>5. Analyze the relationships between the sun, moon and Earth (e.g. phases, eclipses and tides)</p>	<p>Unit 3: Cosmology</p> <p>1. Identify different methods for determining intergalactic distances.</p> <p>2. Differentiate between different types of galaxies.</p> <p>3. Discuss stellar evolution.</p> <p>4. Explain how the process of spectral analysis is used to study stars.</p> <p>5. Categorize stars on the Hertzsprung Russell diagram</p>	<p>Unit 4: Oceanography</p> <p>1. Describe topographic features of the ocean floor</p> <p>2. Describe the composition of sea water with regards to salinity and density.</p> <p>3. Compare and contrast surface and sub-surface currents.</p> <p>Unit 5: Climatology</p> <p>4. Summarize the factors that determine climate.</p> <p>5. Explain how climate zones are characterized.</p>	<p>Unit 6: Meteorology</p> <p>1. Describe the composition and temperature structure of the atmosphere.</p> <p>2. Summarize the main types of clouds and their associated weather.</p> <p>3. Explain the relationship among air pressure, heat and winds.</p> <p>4. Describe the Coriolis effect and its influence on global winds.</p> <p>5. Interpret station model data, weather maps, and satellite images.</p>
Goal 3 Connections	1. Assess the validity of scientific data by analyzing the results, similar previous experimentation, possible misrepresentation of data, peer review, and potential sources of error.	1. Describe how scientific knowledge and theories may change with new information over time (e.g discovery of new planets and stars)	1. Analyze ways that humans affect the Earth and its resources.	Identify careers that require the knowledge of astronomy, oceanography and meteorology.