

1 st Grading Period	2 nd Grading Period
<p>Classroom Procedures, Introductions, Lab Safety Protocols, Capturing Kids Hearts Activities, etc.</p> <p>Review from elem and JH</p> <ul style="list-style-type: none"> Identify the planets in Earth's solar system Describe locations and movements of Sun, planets, and moons Proximity of planets to the Sun <p>Size of the Solar System Size of the Universe</p> <ul style="list-style-type: none"> Compare size, scale, distance of Earth to Moon, Sun, planets (A.6A-B) AU and light years (A.6E) <p>Ancient History of Astronomy</p> <ul style="list-style-type: none"> Ancient astronomy of cultures: Stonehenge, The Great Pyramids (Star Clocks), Anasazi (Medicine Wheel), Arabic, Aztec, Mayans, Native Americans (A.4A) Aid to navigation, agriculture, and architecture (A.4A, 4C) Predict seasons and other astronomical events (A.4A) <p>History of Modern Astronomy</p> <ul style="list-style-type: none"> The Geocentrists (A.3D, 4B) <ul style="list-style-type: none"> Aristotle Eratosthenes Ptolemy The Heliocentrists (A.3D, 4B) <ul style="list-style-type: none"> Copernicus Brahe and Kepler – planetary motion Galileo Newton Mitchell Leavitt Cannon Einstein Telescope invention (A.4C, 4D) Contributions of modern astronomy (A.4D) Newton's Law of Universal Gravitation (A.9C) 	<p>History of Modern Astronomy (continued)</p> <ul style="list-style-type: none"> The Geocentrists (A.3D, 4B) <ul style="list-style-type: none"> Aristotle Eratosthenes Ptolemy The Heliocentrists (A.3D, 4B) <ul style="list-style-type: none"> Copernicus Brahe and Kepler – planetary motion Galileo Newton Mitchell Leavitt Cannon Einstein Telescope invention (A.4C, 4D) Contributions of modern astronomy (A.4D) Newton's Law of Universal Gravitation (A.9C) <p>Inner Solar System</p> <ul style="list-style-type: none"> Earth (and the Moon) <ul style="list-style-type: none"> The Sun, Moon and Earth System (A.5A) Phases of the Moon (A.7A, B) Earth's tilt and the Seasons (A.8A-D) Eclipses (solar and Lunar) (A.7C) Tides (A.7D) Factors essential for life on Earth Inner Planets (A.9A-C) <ul style="list-style-type: none"> Orbit, Size, Composition, Rotation, Natural satellites, Geological activity Comparison to Earth Asteroids (A.9D) Law of Gravitation with natural and artificial satellites (A.9C) <p>Review & Midterm Exam, or Project</p>
3 rd Grading Period	4 th Grading Period
<p>Outer Solar System and Comets</p> <ul style="list-style-type: none"> Outer Planets (A.9A-C) <ul style="list-style-type: none"> Orbit, Size, Composition, Rotation, Natural satellites, Geological activity Comparison to Earth Comets (A.9D) Kuiper Belt objects (A.9D) <p>The Night Time Sky and Larger Outer Cosmos Objects</p> <ul style="list-style-type: none"> Stars (A.5B-C) <ul style="list-style-type: none"> Identification and location Naming constellations Compare scale, distance of stars, galaxies, and the Milky Way Galaxy (A.6C) AU and light years in relation to stars, constellations, and outer cosmos objects (A.6E) Large Outer Cosmos Objects <ul style="list-style-type: none"> Nebulas: Super Nova and Planetary Nebulas (A.13A-C) Galaxies: Spiral, Elliptical, and Irregular, and Quasars (A.12A-C) <p>Our Sun and Other Stars</p> <ul style="list-style-type: none"> Difference between apparent and absolute magnitude (A.6D) The Sun and Stars (A.11A-G) <ul style="list-style-type: none"> Characteristics of main sequence stars Formation and normal life of a star Death of stars White dwarf, neutron stars, and black hole comparisons Interpreting light Electromagnetic spectrum H-R Diagram 	<p>Our Sun and Other Stars</p> <ul style="list-style-type: none"> The Sun and Stars (A.11A-G) <ul style="list-style-type: none"> Characteristics of main sequence stars Formation and normal life of a star Death of stars White dwarf, neutron stars, and black hole comparisons Interpreting light Electromagnetic spectrum H-R Diagram Our Sun (A.10A-D) <ul style="list-style-type: none"> Composition of the Sun Mass and fusion Sunspots and Coronal Mass Ejections Flares and Magnetic Storms <p>History of Space Exploration</p> <ul style="list-style-type: none"> Programs (A.14A-D) <ul style="list-style-type: none"> Mercury Program Gemini Program Apollo Program Sky Lab Space Shuttle Program International Space Station (ISS) Observations (A.14D) <ul style="list-style-type: none"> Hubble telescope Kepler Space telescope Contributions to science (A.4D) <p>The Future of Space Exploration</p> <ul style="list-style-type: none"> Space travel technology (A.14A) <ul style="list-style-type: none"> Propulsion Sensors Control and Guidance Life Support Possible Future Missions (A.14E) Manned Space Exploration (A.14A) <ul style="list-style-type: none"> Requirements Objectives <p>Review/Semester Exam/Final Project</p>

Process Standards are taught throughout the school year.