

Topic: Earth and Space Science	
Included Standards: SC.8.E.5.3 SC.8.E.5.1 SC.8.E.5.2 SC.8.E.5.7	
Grade: 8th	
Score 4.0	<p>In addition to Score 3.0, the student will be able to make in-depth inferences and applications that go beyond what was taught.</p> <ul style="list-style-type: none"> • Research what would happen if hierarchical relationships or astronomical conditions were changed.
Score 3.0	<p>The student will understand the hierarchical relationships of objects in solar systems, galaxies and the universe.</p> <ul style="list-style-type: none"> • Performs complex skills: <ul style="list-style-type: none"> ○ Organize quantitative data to compare astronomical bodies to each other. ○ Compare and contrast distance, size and composition of astronomical bodies in the universe. ○ Compare and contrast the characteristics of objects in the solar system (gravitational force, distance from the sun, speed, movement, temperature, atmospheric conditions). ○ Compare and contrast various historical models of the solar system. ○ Compare and contrast the atmospheric conditions of different planets including the presence, absence, and/or relative thickness. <p>The student exhibits no major errors or omissions regarding the score 3.0 content.</p>
Score 2.0	<p>The student:</p> <ul style="list-style-type: none"> • Recognizes or recalls specific terminology: <ul style="list-style-type: none"> ○ Hierarchical relationships, astronomical bodies, solar system, galaxy, universe, light year, astronomical units, moons, stars, moons, asteroids, nebulae, galaxies, dwarf planets, comets, sun, gravitational force, geocentric, heliocentric, atmospheric conditions, Law of Universal Gravitation, model, orbit • Performs basic skills: <ul style="list-style-type: none"> ○ Recognize that there are enormous distances between objects in space. ○ Explain how the speed of light is used to measure distance in space. ○ Explain how astronomical bodies close to Earth are measured in AU units (distance between the Sun and Earth). ○ Recognize that the universe contains many billions of galaxies and that each galaxy contains many billions of stars. ○ Identify astronomical bodies (planets, stars, moons, asteroids, nebulae, galaxies, dwarf planets and comets). ○ Identify and or explain the role that gravity plays in the formation and motion of planets, stars, and solar systems. ○ Identify the relationship between a planet's distance from the sun and the length of its year. ○ Identify the relationship between a planet's distance from the sun and its average surface temperature. ○ Identify the different orbit shapes of astronomical bodies. <p>No major errors or omissions regarding the score 2.0 content.</p>
Score 1.0	With help, the student knows some of 2.0 and 3.0.
Score 0.0	Even with help, the student is unable to understand.

Topic: Earth and Space Science B	
Included Standards: SC.6.E.5.5 SC.6.E.5.6	
Grade: 8th	
Score 4.0	<p>In addition to Score 3.0, the student will be able to make in-depth inferences and applications that go beyond what was taught.</p> <ul style="list-style-type: none"> • Research additional properties and characteristics about stars.
Score 3.0	<p>The student will understand specific physical properties of stars.</p> <ul style="list-style-type: none"> • Performs complex skills: <ul style="list-style-type: none"> ○ Classify apparent magnitude (brightness), temperature (color), size, absolute brightness (luminosity) of stars. ○ Evaluate models of solar properties. <p>The student exhibits no major errors or omissions regarding the score 3.0 content.</p>
Score 2.0	<p>The student:</p> <ul style="list-style-type: none"> • Recognizes or recalls specific terminology: <ul style="list-style-type: none"> ○ Physical properties, apparent magnitude (brightness), temperature (color), size, absolute brightness (luminosity), rotation, convection, sunspots, solar flares, prominences, main sequence stars • Performs basic skills: <ul style="list-style-type: none"> ○ Describe apparent magnitude (brightness), temperature (color), size, absolute brightness (luminosity) of stars. ○ Explain solar characteristics, including rotation, structure of the Sun, convection, sunspots, solar flares, and prominences. <p>No major errors or omissions regarding the score 2.0 content.</p>
Score 1.0	With help, the student knows some of 2.0 and 3.0.
Score 0.0	Even with help, the student is unable to understand.

Topic: Earth and Space Science C	
Included Standards: SC.8.E.5.9	
Grade: 8th	
Score 4.0	<p>In addition to Score 3.0, the student will be able to make in-depth inferences and applications that go beyond what was taught.</p> <ul style="list-style-type: none"> • Research what would happen if the Moon, Sun and Earth changed relative positions.
Score 3.0	<p>The student will understand the impact of objects in space on each other.</p> <ul style="list-style-type: none"> • Performs complex skills: <ul style="list-style-type: none"> • Explain the impact of the Moon on the Earth (phases, tides, eclipses and relative positions). • Explain the impact of the Sun on the Earth (seasons, gravitational attraction, and relative position). <p>The student exhibits no major errors or omissions regarding the score 3.0 content.</p>
Score 2.0	<p>The student:</p> <ul style="list-style-type: none"> • Recognizes or recalls specific terminology: Sun, Earth, seasons, gravitational attraction, moon, phases, tides, eclipses, relative position, revolution, rotation • Performs basic skills: <ul style="list-style-type: none"> • Recognize the impact of the Moon on the Earth (phases, tides, eclipses and relative positions). • Recognize the impact of the Sun on the Earth (seasons, gravitational attraction, and relative position). <p>No major errors or omissions regarding the score 2.0 content.</p>
Score 1.0	With help, the student knows some of 2.0 and 3.0.
Score 0.0	Even with help, the student is unable to understand.