

New Jersey
Middle School

Starry Night Lesson Plans
In order of relevance

Science Standard 9: All students will gain an understanding of the origin, evolution, and structure of the universe.

Grade 6

5.9.6 A - Earth, Moon, Sun System

1. Explain how the motions of the Earth, Sun, and Moon, define units of time including days, months, and years	A1-A5	E3	E4
2. Recognize that changes in the Earth's position relative to the Sun produce differing amounts of daylight seasonally.	A2		

5.9.6 B - Solar System

1. Using models, demonstrate an understanding of the scale of the solar system that shows distance and size relationships among the Sun and planets.	B1-B2	C1-C4	D1-D3	I2
2. Recognize that the Sun's gravitational pull holds the planets in their orbits and that the planets' gravitational pull holds their Moons in their orbits.	C2	F3		

5.9.6 C - Stars

1. Observe and record short-term and long-term changes in the positions of the constellations in the night sky.	E1-E4			
2. Observe that the planets appear to change their position against the background of stars.	C2	E3	E4	

5.9.6 D - Galaxies and Universe

1. Recognized that images of celestial objects can be magnified and seen in greater detail	H1-H2 I2	C1 F2	C3	C4
2. Observe and record short-term and long-term changes in the night sky.	A1-A5	E1-E4	C1-C4	

Grade 8

5.9.8 A - Earth, Moon, Sun System

1. Investigate the Earth, Moon, and Sun as a system and explain how the motion of these bodies results in the phases of the Moon and eclipses.	A4	A5		
2. Explain how the regular and predictable motions of the Earth and Moon produce tides.	A3			
3. Explain how the tilt, rotation, and orbital pattern of the Earth relative to the Sun produce seasons and weather patterns.	A2			

5.9.8 B - Solar System

1. Describe the physical characteristics of the planets and other objects within the solar system and compare Earth to the rest of the planets.	C1-C4	D1-D3	I2	
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5.9.8 C - Stars

1. Understand that the Sun is a star and that it shares characteristics with other stars.	F1-F3	G1-G3	F1-F3	
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5.9.8 D - Galaxies and Universe

1. Know that the universe consists of many billions of galaxies, each including billions of stars.	H1-H2			
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