

Mississippi
Middle School

Starry Night Lesson Plans
In order of relevance

Grade 5

7. Investigate the Earth as a part of the solar system. (E, P)	A1-A5	B1-B2	C1-C4	E3	E4	I2
a. Explore how the Earth's motion defines the day and the year and influences the phases of the moon and eclipses.	A1-A5	E3	E4			
b. Explain how gravity influences the action of the tides.	A3					
c. Explain and illustrate how the tilt of the Earth's axis and Earth's revolution around the Sun create the seasons.	A2	E3	E4			

Grade 6

7. Investigate the Earth in relation to the solar system. (E, P)	A1-A5	B1-B2	C2	F3	E3	E4
a. Demonstrate how the Earth's motion influences the day, year, phases of the moon, and eclipses.	A1	A2	A4	A5	E3	E4
b. Explore how gravity influences the motion of all celestial bodies.	B1	C2	F3	G3	I2	
c. Demonstrate how the tilt of the Earth's axis and Earth's revolution around the sun create the seasons.	A2	E3	E4			

Grade 7

7. Explain the causes of lunar phases, eclipses, and Earth's seasons. (E)	A1-A5	E3	E4			
a. Distinguish between radiating objects (the sun and the stars) and reflecting objects (the planets and their moons).	F1-F3	G2	C1-C4	D1-D3		
b. Characterize lunar phases in terms of their appearance, their visibility at a given time of day or night, and their progression through time.	A4					
c. Illustrate the relationship between lunar phases and the phase angle between the sun and the moon as seen from Earth.	A4					
d. Illustrate the alignments of the Earth, the moon, and the sun, which give rise to solar and lunar eclipses and explain why these eclipses do not occur every month.	A5					
e. Explain how the position of the earth in relation to the sun has an effect on seasonal weather changes.	A2	E3				

Mississippi
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In order of relevance

Grade 8

7. Describe the appearance and nature of our galaxy and the universe. (E)	G1-G3 H1-H2
a. Explain the relationship between distance and light-travel time (light year).	G1
b. Identify and describe deep-sky objects visible from Earth (diffuse nebulae, galactic and globular clusters, planetary nebulae, supernova remnants, "spiral nebulae").	G1-G2 F3 C1 C3 D1 D2 H1-H2
c. Identify and describe the Milky Way as the galaxy to which we belong.	H1
d. Identify and describe our galaxy in terms of its components (core of older stars, spiral arms of gas and dust with younger stars, halo, "dark matter") and our location within it.	G1-G3 H1-H2
e. Identify and describe "spiral nebulae" as distant galaxies.	H2
f. Identify and describe different types of galaxies in terms of their shape (spiral, barred spiral, elliptical, irregular) and level of activity.	H2