U.S. Curriculum Correlations by State

Texas

Grade 11

		Starry Night Lesson Plans *In order of relevance*
112.48. Astronomy		
4) Science concepts. The student knows scientific information about the Universe. The student is expected to:		
(A)	Observe and record data about lunar phases and uses that information to model the Earth, Moon, and Sun system; and	A4
(B)	Describe characteristics of galaxies.	H1 H2 I1
5) Science concepts. The student knows the scientific theories of the evolution of the Universe. The student is expected to:		
(A)	Research and analyze scientific empirical data on the estimated age of the Universe;	H2 H3
(B)	Research and describe the historical development of the Big Bang theory; and	H3 H2
(C)	Interpret data concerning the formation of galaxies and our Solar System.	F3 H1 H2
6) Science concepts. The student knows the characteristics and the life cycle of stars. The student is expected to:		
(A)	Describe nuclear reactions in stars;	F1 G2
(B)	Identify the characteristics of stars such as temperature, age, relative size, composition, and radial velocity using spectral analysis; and	G2 I1
(C)	Identify the stages in the life cycle of stars by examining the Hertzsprung-Russell diagram.	G2
7) Science concepts. The student knows how mathematical models, computer simulations, and exploration can be used to study the Universe. The student is expected to:		
(A)	Demonstrate the use of units of measurement in astronomy such as light year and astronomical units;	B2 G1 H3 H1 H2
(B)	Research and describe the historical development of the laws of universal gravitation and planetary motion and the theory of special relativity;	C2
(C)	Analyze a model that simulates planetary motion and universal gravitation;	C2
(D)	Identify the historical origins of the perceived patterns of constellations and their role in ancient and modern navigation; and	E1 E2 E3
(E)	Analyze the impact of the space program on the collection of data about the Earth and the Universe.	I1 I2 F1 H1

U.S. Curriculum Correlations by State

Texas Continued

		Starry Night Lesson Plans *In order of relevance*
8) Science concepts. The student knows the role of the Sun in our Solar System. The student is expected to:		
(A)	Identify the approximate mass, size, motion, temperature, structure, and composition of the Sun;	F1 F3 G2
(B)	Identify the source of energy within the Sun and explain that the Sun is the major source of energy for the Earth; and	F1
(C)	Describe the Sun's effects on the Earth.	F1 F2
9) Science concepts. The student knows that planets of different size, composition, and surface features orbit around the Sun. The student is expected to:		
(A)	Observe the night-time sky to determine movement of the planets relative to stars;	C2
(B)	Compare the planets in terms of orbit, size, composition, rotation, atmosphere, moons, and geologic activity;	B1 B2 C1 C2 C3
(C)	Identify objects, other than planets, that orbit the Sun; and	D1 D2 D3
(D)	Relate the role of gravitation to the motion of the planets around the Sun and to the motion of moons and satellites around the planets.	C2
10) Science concepts. The student knows how life on Earth is affected by its unique placement and orientation in our Solar System. The student is expected to:		
(A)	Compare the factors essential to life on Earth such as temperature, water, mass, and gases to conditions on other planets;	B1 C1 F1
(B)	Determine the effects of the Earth's rotation, revolution, and tilt on its environment; and	A2
(C)	Identify the effects of the Moon on tides.	A3