U. S. Curriculum Correlations by State

Indiana

Grades 9-12 **Earth and Space Sciences I** **Standard 1- Principles of Earth and Space Science** **The Universe**	**Starry Night Lesson Plans** *In order of relevance*
ES1.1 Understand and discuss the nebular theory concerning the formation of Solar Systems. Include in the discussion the role of planetesimals and protoplanets.	F1 F2 F3 D1 D2 D3
ES.1.2 Differentiate between the different types of stars found on the Hertzsprung-Russell Diagram. Compare and contrast the evolution of stars of different masses. Understand and discuss the basics of the fusion processes that are the source of energy of stars.	G2 F1
ES.1.3 Compare and contrast the differences in size, temperature, and age between our Sun and other stars.	G2
ES.1.4 Describe Hubble's Law. Identify and understand that the "Big Bang" theory is the most widely accepted theory explaining the formation of the Universe.	H3 H2
ES.1.5 Understand and explain the relationship between planetary systems, stars, multiple-star systems, star clusters, galaxies, and galactic groups in the Universe.	H1 H2 H3 G1 B1
ES.1.6 Discuss how manned and unmanned space vehicles can be used to increase our knowledge and understanding of the Universe.	I1 I2
ES.1.7 Describe the characteristics and motions of the various kinds of objects in our Solar System, including planets, satellites, comets, and asteroids. Explain that Kepler's laws determine the orbits of the planets.	C1 C2 C3 D1 D2 D3
ES.1.8 Discuss the role of sophisticated technology, such as telescopes, computers, space probes, and particle accelerators, in making computer simulations and mathematical models in order to form a scientific account of the Universe.	I1 I2