## U. S. Curriculum Correlations by State

## Kentucky

| | Starry Night Lesson Plans<br>*In order of relevance* |
|---|---|
| **Grades 8, 9, 10, 11**<br>**Earth and Space Science**<br>**Energy in the Earth System** | |
| SC-H-2.1.1 Earth Systems have sources of energy that are internal and external to the Earth. The Sun is the major external source of energy. Two primary sources of internal energy are the decay of radioactive isotopes and the gravitational energy from Earth's original formation. | F1 |
| SC-H-2.1.2 Heating of Earth's surface and atmosphere by the Sun drives convection within the atmosphere and oceans, producing winds and ocean currents. | F1 A2 |
| **The Formation and Ongoing Changes of the Earth** | |
| SC-H-2.3.1 The Sun, Earth, and rest of the Solar System formed approximately 4.6 billion years ago from a nebular cloud of dust and gas. | F3 B1 B2 C1 C2 C3 D1 D2 D3 |
| **The Formation and Ongoing Changes of the Universe** | |
| SC-H-2.4.1 The Big Bang Theory and observational measurements that support it place the origin of the Universe at a time between 10 and 20 billion years ago, when the Universe began in a hot dense state. According to this theory, the Universe has been expanding since then. | H1 H2 H3 I1 I2 |
| SC-H-2.4.2 Early in the history of the Universe, the first atoms to form were mainly hydrogen and helium. Over time, these elements clump together by gravitational attraction to form trillions of stars. | G1 G2 F3 |
| SC-H-2.4.3 Stars have life cycles of birth through death that are analogous to those of living organisms. During their lifetimes, stars generate energy from nuclear fusion reactions that create successively heavier chemical elements. Some stars explode at the end of their lives, and the heavy elements they have created are blasted out into space to form the next generation of stars and planets. | G1 G2 F3 |