

U. S. Curriculum Correlations by State

South Carolina

EARTH SCIENCE: Scientific Inquiry

STANDARD ES-1: The student will demonstrate an understanding of how scientific inquiry and technological design, including mathematical analysis, can be used appropriately to pose questions, seek answers, and develop solutions.

ES-1.1 Apply established rules for significant digits, both in reading scientific instruments and in calculating derived quantities from measurement.

ES-1.2 Use appropriate laboratory apparatuses, technology, and techniques safely and accurately when conducting a scientific investigation.

ES-1.3 Use scientific instruments to record measurement data in appropriate metric units that reflect the precision and accuracy of each particular instrument.

ES-1.4 Design a scientific investigation with appropriate methods of control to test a hypothesis (including independent and dependent variables), and evaluate the designs of sample investigations.

ES-1.5 Organize and interpret the data from a controlled scientific investigation by using mathematics (including calculations in scientific notation, formulas, and dimensional analysis), graphs, tables, models, diagrams, and/or technology.

ES-1.6 Evaluate the results of a controlled scientific investigation in terms of whether they refute or verify the hypothesis.

ES-1.7 Evaluate conclusions based on qualitative and quantitative data (including the impact of parallax, instrument malfunction, or human error) on experimental results.

ES-1.8 Evaluate a technological design or product on the basis of designated criteria (including cost, time, and materials).

ES-1.9 Communicate and defend a scientific argument or conclusion.

ES-1.10 Use appropriate safety procedures when conducting investigations.

Starry Night Lesson Plans

In order of relevance

These objectives are embedded, as appropriate, within Starry Night's hands-on activities, computer exercises, and SkyGuide tutorials.

All Starry Night lesson plans and computer exercises.

All Starry Night lesson plans and computer exercises.

These objectives are embedded, as appropriate, within Starry Night's hands-on activities, computer exercises, and SkyGuide tutorials.

All Starry Night lesson plans and computer exercises.

U. S. Curriculum Correlations by State

South Carolina Continued

EARTH SCIENCE: Scientific Inquiry

STANDARD ES-2: Students will demonstrate an understanding of the structure and properties of the Universe.

ES-2.1 Summarize the properties of the Solar System that support the theory of its formation along with the planets.

Starry Night Lesson Plans *In order of relevance*

F3 B1 C1 C2 C3 D1 D2

ES-2.2 Identify properties and features of the Moon that make it unique among other moons in the Solar System.

A3 C3 A5 A4

ES-2.3 Summarize the evidence that supports the Big Bang Theory and the expansion of the Universe (including the red shift of light from distant galaxies and the cosmic background radiation).

H3 H2 I1

ES-2.4 Explain the formation of elements that results from nuclear fusion occurring within stars or supernova explosions.

F1 G2

ES-2.5 Classify stars by using the Hertzsprung-Russell diagram.

G2

ES-2.6 Compare the information obtained through the use of x-ray, radio, and visual (reflecting and refracting) telescopes.

I1 I2

ES-2.7 Summarize the life cycles of stars.

G2 F3

ES-2.8 Explain how gravity and motion affect the formation and shapes of galaxies (including the Milky Way).

H1 H2 H3 G1

ES-2.9 Explain how technology and computer modeling have increased our understanding of the Universe.

I1 I2 C3