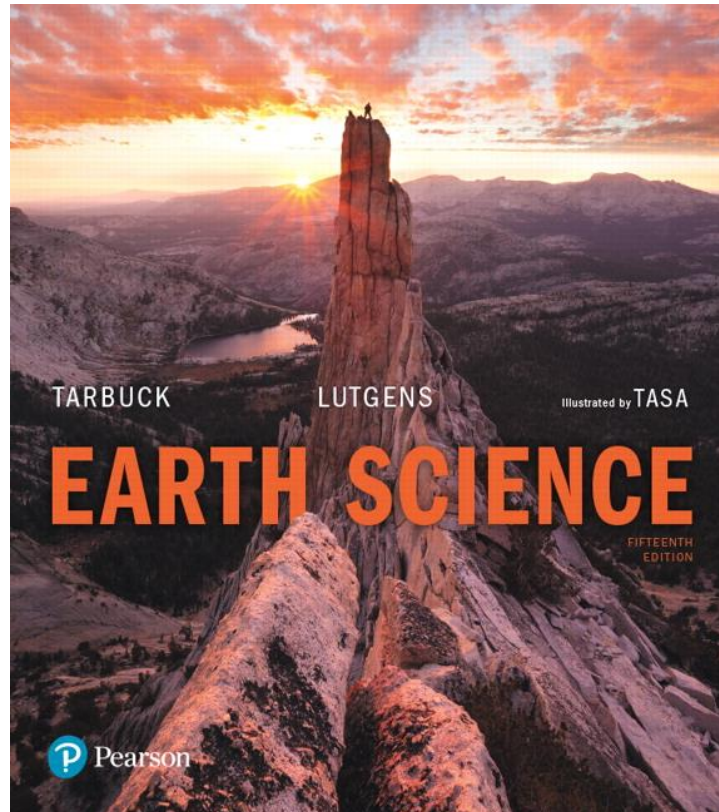


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To the
Next Generation Earth and Space Science
Performance Expectations
High School



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To the
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(HS.SS) Space Systems	
(HS-ESS1-1) Develop a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun's core to release energy that eventually reaches Earth in the form of radiation.	SE/TE: The Sun's Surface, 708 SmartFigure 23.22 Diagram of the Sun's structure, 708 The Sun's Interior, 709 The Source of Solar Energy, 709 Figure 23.25, Deep in the Sun's interior, a nuclear reaction..., 709 Key Terms: nuclear fusion, 713 23.5 Our Star: The Sun, Sketch the Sun's structure and describe each of its major layers. Summarize the process called the proton-proton chain reaction, 713
(HS-ESS1-2) Construct an explanation of the Big Bang theory based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe.	SE/TE: The Solar System Forms, 13-14 From the Big Bang to Heavy Elements, 377 The Big Bang Theory, 734 The First Stars, 734 Evidence for an Expanding Universe, 734-735 Figure 24.18 Cosmological redshifts, 735 SmartFigure 24.19 Raisin bread analogy for an expanding universe, 735 Predictions of the Big Bang Theory, 736 Concepts in Review, 24.5 The Universe, Big Bang Theory, 738
(HS-ESS1-3) Communicate scientific ideas about the way stars, over their life cycle, produce elements.	SE/TE: Hertzprung-Russell Diagrams (H-R Diagrams), 719-720

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(HS-ESS1-4) Use mathematical or computational representations to predict the motion of orbiting objects in the solar system.	SE/TE: Give It Some Thought, Question 5 Data Analysis, Questions, 3, 4, 6, 739
(HS.HE) History of Earth	
(HS-ESS1-5) Evaluate evidence of the past and current movements of continental and oceanic	SE/TE: 4.2 Continental Drift: An Idea Before Its Time,

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<p>(HS-ESS1-6) Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to</p>	<p>SE/TE: 12.4 Precambrian History: The Formation of Earth's Continents, 382</p>

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