

**Advisory Curriculum Council
Curriculum Guide**

In Stage 1, please complete the columns in blue (Topic, Pacing, Unit, Standards, Essential Questions and Enduring Understandings, and Vocabulary and Concepts). In Stage 3, please complete the columns in green (Learning Targets, Materials, Assessments). Add additional rows as needed.

Course Name:	Earth Science
Course Number:	0442
Level:	11-12

Topic	Pacing	Unit	Standards	Essential Questions and Enduring Understandings	Learning Targets	Vocabulary and Concepts	Materials	Assessments
HYDROSPHERE: WATER IN EARTH'S SYSTEMS	10 days	1 Chapter 2	ESS2.A: Earth Materials and System ESS2.C: The Roles of Water in Earth's Surface Processes ESS3.A: Natural Resources	Where does your water come from?		Water cycle; surface water, groundwater, assessing and protecting water supplies		
Local Connections: Regional Climate	4 days	2 Chapter 4	ESS2.A: Earth Materials and System ESS2.C: The Roles of Water in Earth's Surface Processes ESS2.D: Weather and Climate ESS2.E: Biogeology	What natural forces could propel you across the ocean from the coast of Peru to the Polynesian Islands?		Climate and weather; influence of latitude, atmospheric circulation, proximity to ocean, elevation, land features, and prevailing winds on regional climate		
The Bigger Picture: Global Climate	10 days	2 Chapter 5	ESS2.A: Earth Materials and System	How does your local climate compare with that of another part of		Energy balance, albedo effect, greenhouse effect, carbon cycle,		

			ESS2.D: Weather and Climate	the world, and why are the climates different?		positive and negative feedback loops		
The Longest Experiment: Climate Change in Earth's History	9 days	2 Chapter 6	ESS1.B: The Earth and the solar system ESS2.A: Earth Materials and System ESS2.C: The Roles of Water in Earth's Surface Processes ESS2.D: Weather and Climate ESS2.E: Biogeology	What are the natural factors that have caused climate to change so much in Earth's past?		Paleoclimatology, climate proxies, climate change in Earth's past, Milankovitch cycles, tectonic processes that influence climate, human impact on climate		
Stars, Planets, and Everything in Between: Solar System Origins	10 days	3 Chapter 8	ESS1.A: The Universe and Its Stars ESS1.B: The Earth and the solar system ESS1.C: The History of Planet Earth ESS2.E: Biogeology	How do you make a solar system?		Solar system formation, Kepler's Laws, radioactive dating, life cycle of stars, spectroscopy		
Journey to the Center of the Earth: Exploring Earth's Interior	11 days	3 Chapter 9	ESS1.C: The History of Planet Earth ESS2.A: Earth Materials and System ESS2.B: Plate Tectonics and Large-Scale System Interactions	What would a journey to the center of Earth really be like?		Earth's interior structure and composition, internal sources of heat energy, seismic waves, introduction to plate tectonic theory, driving forces of plate movement		
On Shaky Ground: Earthquakes and Transform Boundaries	11 days	4 Chapter 10	ESS1.C: The History of Planet Earth ESS2.A: Earth Materials and System	Will another large earthquake happen in California?		Transform-fault boundaries, earthquakes, physical and computer models, earthquake forecasting		

			ESS2.B: Plate Tectonics and Large-Scale System Interactions					
Sleeping Dragons? Subduction-Zone Volcanoes	14 days	4 Chapter 11	ESS1.C: The History of Planet Earth ESS2.A: Earth Materials and System ESS2.B: Plate Tectonics and Large-Scale System Interactions ESS2.C: The Roles of Water in Earth's Surface Processes	Should the new development on the flanks of Mount Rainier be approved?		Subduction zones, volcanoes and types of volcanic eruptions, technologies for volcano monitoring, data analyses		
Clues on the Ocean Floor: Divergent Boundaries	8 days	4 Chapter 12	ESS1.C: The History of Planet Earth ESS2.A: Earth Materials and System ESS2.B: Plate Tectonics and Large-Scale System Interactions	How do continents break up and new oceans form?		Seafloor spreading, paleomagnetism, plate tectonics summary, landforms associated with plate boundaries		
A Solid Foundation: Building Earth's Crust	7 days	5 Chapter 14	ESS1.C: The History of Planet Earth ESS2.C: The Roles of Water in Earth's Surface Processes	What can observations of Earth's crust tell you about the history of Earth?		The nature of rocks and minerals, rock cycle, relative dating, Earth's history		
Hidden Treasures in Rocks: Mineral Resources	3 days	5 Chapter 15	ESS2.C: The Roles of Water in Earth's Surface Processes ESS3.A: Natural Resources	What does it take to be successful in finding, mining, and processing minerals?		The geologic processes by which mineral ores are formed, mineral prospecting, mineral extraction and		

						processing		
The Mystery of the Rub' al-Kahli: Energy Resources in Earth's Crust	7 days	6 Chapter 16	ESS3.A: Natural Resources	Why is there oil in the Middle East?		Fossil fuel formation, petroleum resources and exploration technologies		