Lab-Aids Correlations for
Idaho Content Standards for Earth Science

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This document is intended to show how the *EDC Earth Science – Revised (EDC-R),* materials align with Idaho Content Standards for Science for Earth Science.

ABOUT OUR PROGRAMS

Lab-Aids has maintained its home offices and operations in Ronkonkoma, NY, since 1963. We publish over 200 kits and core curriculum programs to support science teaching and learning, grades 6-12. All core curricula support an inquiry-driven pedagogy, with support for literacy skill development and with assessment programs that clearly show what students know and are able to do as a result of program use. All programs have extensive support for technology and feature comprehensive teacher support. For more information, please visit https://www.lab-aids.com/edc.

ABOUT *EDC EARTH SCIENCE*

EDC Earth Science – Revised (EDC-R), Copyright 2021, is a full year, activity-driven high school earth science course developed by the Education Development Center (EDC), with support from the National Science Foundation, and is fully aligned to the *Next Generation Science Standards (*NRC and Lead States, 2013). *EDC Earth Science* is designed around the belief that students are capable of rigorous and in-depth explorations in science when given adequate support, structure, and motivation for learning.

EDC Earth Science features the following design components:

- In-depth treatment of content based on recommendations in NGSS and representative state frameworks
- Developmentally appropriate lessons featuring Earth Science concepts that build on previous learning and prepare students for more advanced courses
- Using historical, newsworthy, and fictionalized stories to draw students into the earth science content, to motivate them to acquire the knowledge for solving problems, and to serve as a framework around which students build conceptual understanding
- Differentiated instructional strategies and activities that help students construct meaning from their experiences and that serve as bridges between concrete and abstract thinking
- Support for developing literacy skills and the use of formative assessment techniques

Each chapter of EDC: Earth Science is a cluster of activities that addresses a specific set of concepts and skills. The amount of class time for each chapter will vary. A chapter may range from one to four weeks of classroom sessions. Not shown here are two project-oriented shorter chapters that open and close the course, which taken together require 2-4 weeks for completion. This provides up to 32 weeks of actual instructional time, plus an additional 4 weeks for assessment and related activities.

EDC Earth Science		
Unit Title	*Core Science Content*	*Suggested Time*
1 Hydrosphere: Water in Earth's Systems	Water cycle; surface water, groundwater, assessing and protecting water supplies, Global patterns of ocean circulation; how wind and density differences drive ocean currents; global conveyor belt; El Niño	3-4 weeks
2 Atmosphere and Climate	Climate and weather; influence of latitude, atmospheric circulation, proximity to ocean, elevation, land features, and prevailing winds on regional climate, energy balance, albedo effect, greenhouse effect, carbon cycle, positive and negative feedback loops; Paleoclimatology, climate proxies, climate change in Earth's past, Milankovitch cycles, tectonic processes that influence climate, human impact on climate	5-8 weeks
3 Earth's Place in the Universe	Life and death of stars, solar nebular condensation hypothesis, Kepler's Laws, Earth's interior structure and composition, internal sources of heat energy, seismic waves, introduction to plate tectonic theory, driving forces of plate movement	3-4 weeks
4 Plate Tectonics	Transform-fault boundaries, earthquakes, physical and computer models Subduction zones, volcanoes, formation of igneous rocks, field-measurement technologies for volcano monitoring seafloor spreading, paleomagnetism, plate tectonics summary, landforms associated with plate boundaries	5-7 weeks
5 The Rock Cycle	Erosion and deposition, deltaic processes, formation of sedimentary rock, The nature of rocks and minerals, rock cycle	3-6 weeks
6 Earth's Resources	The geologic processes by which mineral ores are formed; mineral extraction and processing, fossil fuel formation, petroleum resources and exploration technologies	3-6 weeks

ABOUT THE LAB-AIDS CITATIONS

This correlation is intended to show selected locations in NAC student materials that support the Idaho Content Standards for Earth Science. It is not an exhaustive list; other locations may exist that are not listed here.

Citations included in the correlation document are as follows:

Unit title	*Earth's Place in the Universe*
Chapter number: relevant pages	Ch 8: 200-203, 212-215, RS 8.0*

*RS = Resource Supplement included in the Teacher's Guide

Standard	Location in EDC Earth Science Unit, Chapter 3: Page(s) #
HS-ESS-1 – Earth's Place in the Universe	
HS-ESS-1.1 Students who demonstrate understanding can: **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.**	*Earth's Place in the Universe* Ch 8: 200-203, 212-215, Resource Supplement 8.0
HS-ESS-1.2 Students who demonstrate understanding can: **Construct an explanation of the current model of the origin of the universe based on astronomical evidence of light spectra, motion of distant galaxies, and composition of matter in the universe.**	*Earth's Place in the Universe* Ch 8: 200-206, Resource Supplement 8.0
HS-ESS-1.3 Students who demonstrate understanding can: **Communicate scientific ideas about the way stars, over their life cycle, transform elements.**	*Earth's Place in the Universe* Ch 8: 200-201
HS-ESS-1.4 Students who demonstrate understanding can: **Use mathematical or computational representations to predict the motion of orbiting objects in the solar system.**	*Earth's Place in the Universe* Ch 8: 208-209
HS-ESS-1.5 Students who demonstrate understanding can: **Evaluate evidence of the past and current movements of continental and oceanic crust and the theory of plate tectonics to explain the ages of crustal rocks.**	*Plate Tectonics* Ch 10: 256-260; Ch 12: 342-347 *The Rock Cycle* Ch 14: 399-401, 415-426
HS-ESS-1.6 Students who demonstrate understanding can: **Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history.**	*Earth's Place in the Universe* Ch 8: 195-199, 203-206 *The Rock Cycle* Ch 14: 415-426
HS-ESS-2 – Earth's Systems	
HS-ESS-2.1 Students who demonstrate understanding can: **Develop a model to illustrate how Earth's internal and surface processes operate at different spatial and temporal scales to form continental and ocean-floor features.**	*Earth's Place in the Universe* Ch 9: 241-244 *Plate Tectonics* Ch 10: 250-279; Ch 11: 289-322, Resource Supplement 11.1; Ch 12: 336-345, 350-352 *The Rock Cycle* Ch 13: 363-389; Ch 14: 415-426, RS 14.1
HS-ESS-2.2 Students who demonstrate understanding can: **Analyze geoscience data to make the claim that one change to Earth's surface can create feedbacks that cause changes to other Earth systems.**	*Hydrosphere: Water in Earth's Systems* Ch 3: 66-70, 72-76 *Atmosphere and Climate*

Standard	Location in EDC Earth Science Unit, Chapter 3: Page(s) #
	Ch 4: 102-106; Ch 5: 115-135, Resource Supplement 5.0; Ch 6: 155-164
HS-ESS-2.3 Students who demonstrate understanding can: **Develop a model based on evidence of Earth's interior to describe the cycling of matter by thermal convection.**	*Earth's Place in the Universe* Ch 9: 241-244 *Plate Tectonics* Ch 11: 317-319; Ch 12: 342-352
HS-ESS-2.4 Students who demonstrate understanding can: **Use a model to describe how variations in the flow of energy into and out of Earth's systems result in variations in climate.**	*Hydrosphere: Water in Earth's Systems* Ch 3: 66-76 *Atmosphere and Climate* Ch 4: 94-98; Ch 5: 115-123; Ch 6: 165-178 *Earth's Place in the Universe* Ch 8: Resource Supplement 8.2
HS-ESS-2.5 Students who demonstrate understanding can: **Plan and conduct an investigation of how the chemical and physical properties of water contribute to the mechanical and chemical mechanisms that affect Earth materials and surface processes.**	*Hydrosphere: Water in Earth's Systems* Ch 2: 24-35, Ch3: 58-76 *Atmosphere and Climate* Ch 4: 99-103; Ch 5: 116-124, 133-135; Ch 6: 165-175
HS-ESS-2.6 Students who demonstrate understanding can: **Develop a model to describe the cycling of carbon among the hydrosphere, atmosphere, geosphere, and biosphere.**	*Atmosphere and Climate* Ch 5: 124-135; Ch 6: 160-163
HS-ESS-2.7 Students who demonstrate understanding can: **Construct an argument based on evidence about the simultaneous coevolution of Earth's systems and life on Earth.**	*Hydrosphere: Water in Earth's Systems* Ch 2: 36-40 *Atmosphere and Climate* Ch 5: 127-135, R Resource Supplement 5.1; Ch 6: 165-178 *Earth's Place in the Universe* Ch 8: RS 8.1 *The Rock Cycle* Ch 13: 387-389; Ch 14: 425-426 *Earth Resources* Ch 15: 447-453; Ch 16: 479-485

Standard	Location in EDC Earth Science Unit, Chapter 3: Page(s) #
HS-ESS-3 – Earth and Human Activity	
HS-ESS-3.1 Students who demonstrate understanding can: **Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate have influenced human activity.**	*Hydrosphere: Water in Earth's Systems* Ch 2: 18-20, 38-40 *Plate Tectonics* Ch 10: 250-253, 283-284; Ch 11: 290-292, 321-322 *The Rock Cycle* Ch 13: 358-361, 387-389, RS 13.1 *Earth Resources* Ch 15: 432-435, 444-456; Ch 16: 461-468, 479-485
HS-ESS-3.2 Students who demonstrate understanding can: **Evaluate competing design solutions for developing, managing, and utilizing energy and mineral resources based on cost-benefit ratios.**	*Earth Resources* Ch 16: 482-484, Resource Supplement 16.1
HS-ESS-3.3 Students who demonstrate understanding can: **Illustrate relationships among management of natural resources, the sustainability of human populations, and biodiversity.**	*Hydrosphere: Water in Earth's Systems* Ch 2:18-23 *Atmosphere and Climate* Ch 5: 127-132; Ch 6: 165-178 *Earth Resources* Ch 16: 463-467
HS-ESS-3.4 Students who demonstrate understanding can: **Evaluate or refine a scientific or technological solution that mitigates or enhances human influences on natural systems.**	*Hydrosphere: Water in Earth's Systems* Ch 2: 38-40 *The Rock Cycle* Ch 13: 387-389 *Earth Resources* Ch 15: 447-453, RS 15.2; Ch 16: 479-481
HS-ESS-3.5 Students who demonstrate understanding can: **Analyze geoscience data and the results from global climate models to make an evidence-based explanation of how climate variability can affect Earth's systems on a global and regional scale.**	*Atmosphere and Climate* Ch 6: 165-178
HS-ESS-3.6 Students who demonstrate understanding can: **Communicate how relationships among Earth systems are being influenced by human activity.**	*Atmosphere and Climate* Ch 5: 127-135; Ch 6: 165-175