

8.ESS2 Earth's Systems

- 8.ESS2.1 Analyze and interpret data to support the assertion that rapid or gradual geographic changes lead to drastic population changes and extinction events.
- 8.ESS2.2 Evaluate data collected from seismographs to create a model of Earth's structure.
- 8.ESS2.3 Describe the relationship between the processes and forces that create igneous, sedimentary, and metamorphic rocks.
- 8.ESS2.4 Gather and evaluate evidence that energy from the earth's interior drives convection cycles within the asthenosphere which creates changes within the lithosphere including plate movements, plate boundaries, and sea-floor spreading.
- 8.ESS2.5 Construct a scientific explanation using data that explains the gradual process of plate tectonics accounting for A) the distribution of fossils on different continents, B) the occurrence of earthquakes, and C) continental and ocean floor features (including mountains, volcanoes, faults, and trenches).

8.ESS3 Earth and Human Activity

- 8.ESS3.1 Interpret data to explain that earth's mineral, fossil fuel, and groundwater resources are unevenly distributed as a result of geologic processes.
- 8.ESS3.2 Collect data, map, and describe patterns in the locations of volcanoes and earthquakes related to tectonic plate boundaries, interactions, and hotspots.

Key Ideas and Details

- CCSS.ELA-LITERACY.RST.6-8.1 Cite specific textual evidence to support analysis of science and technical texts.
- CCSS.ELA-LITERACY.RST.6-8.2 Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.
- CCSS.ELA-LITERACY.RST.6-8.3 Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.

Craft and Structure

- CCSS.ELA-LITERACY.RST.6-8.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6-8 texts and topics.
- CCSS.ELA-LITERACY.RST.6-8.5 Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic.
- CCSS.ELA-LITERACY.RST.6-8.6 Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.

Integration of Knowledge and Ideas

- CCSS.ELA-LITERACY.RST.6-8.7 Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).
- CCSS.ELA-LITERACY.RST.6-8.8 Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.
- CCSS.ELA-LITERACY.RST.6-8.9 Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.

Range of Reading and Level of Text Complexity

- CCSS.ELA-LITERACY.RST.6-8.10 By the end of grade 8, read and comprehend science/technical texts in the grades 6-8 text complexity band independently and proficiently.