

Congruence with the NGSS

Unit Title: **Mapping the Earth**

Science and Engineering Practices (SEPs)

SEPS	Activities
Asking Questions and Defining Problems	<ul style="list-style-type: none"> ● Scotese Paleomap Project ● Investigating Map Projections
Developing and Using Models	<ul style="list-style-type: none"> ● Investigating Map Projections ● Topographic Maps Activity ● Earth’s Varied Topography ● Geologic Maps (Utah State University)
Planning and Carrying Out Investigations	<ul style="list-style-type: none"> ● Balloon and Kite ● World of Change ● Seafloor Shape and Features
Analyzing and Interpreting Data	<ul style="list-style-type: none"> ● Earth’s Varied Topography ● Geologic Maps (Utah State University) ● Seafloor Spreading Centers: The Life Cycle of the Seafloor ● Exercise to Introduce Google Earth and Geologic Landforms
Using Mathematics and Computational Thinking	<ul style="list-style-type: none"> ● Seafloor Shape and Features
Constructing Explanations and Designing Solutions	<ul style="list-style-type: none"> ● Investigating Map Projections ● Geologic Maps (Utah State University) ● A New Era for Earth Science
Engaging in Argument from Evidence	<ul style="list-style-type: none"> ● Investigating Map Projections
Obtaining, Evaluating and Communicating Information	<ul style="list-style-type: none"> ● Investigating Map Projections ● Earth’s Varied Topography ● Geologic Maps (Utah State University) ● What’s Really Under the Ocean

Scientific Knowledge is based on Empirical Evidence	<ul style="list-style-type: none"> Seafloor Spreading Centers: The Life Cycle of the Seafloor
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Disciplinary Core Ideas (DCIs)

DCIs	Activities
ESS1C: The History of Planet Earth	<ul style="list-style-type: none"> Scotese Paleomap Project
ESS2B: Plate Tectonics and Large-Scale Systems	<ul style="list-style-type: none"> Scotese Paleomap Project

Cross Cutting Concepts (CCCs)

CCCs	Activities
Patterns	<ul style="list-style-type: none"> Topographic Maps Activity Earth's Varied Topography Geologic Maps (Utah State University)
Scale, Proportion, and Quantity	<ul style="list-style-type: none"> Investigating Map Projections Earth's Varied Topography Seafloor Spreading Centers: The Life Cycle of the Seafloor
Stability and Change	<ul style="list-style-type: none"> Scotese Paleomap Project
Interdependence of Science, Engineering and Technology	<ul style="list-style-type: none"> Balloon and Kite Mapping
Influence of Engineering, Technology and Science on Society and the Natural World	<ul style="list-style-type: none"> Exercise to Introduce Google Earth and Geologic Landforms Balloon and Kite Mapping