TCSS 6th Grade Science **Geology** Content Map

Unit Essential Question: How is the Earth constantly changing?	Standard(s): S6E5 a - j; S6E3 c

Concept 1: Layers of the Earth	Concept 2: Earth's Changing Features	Concept 3: Subsurface Topography
Lesson Essential Questions: 1. How are layers of the Earth different from one another? (temperature, density, composition) [S6E5a.]	Lesson Essential Questions: 2. How does the constant movement of lithospheric plates cause major geological events on the earth's surface? (Earthquakes, volcanoes, mountains) [S6E5e.]	Lesson Essential Questions: 3. How is the ocean floor like the surface of the Earth? (include how plate tectonics produce these features) [S6E3c]
Vocabulary 1: Essential* Core Crust Mantle Density Temperature Composition Supplemental** dense molten magma metallic geologic hot spots lithosphere radioactive decay convection currents Lithospheric plates uranium (inner core) geothermal energy Aesthenosphere (ductile) oceanic crust continental crust	Vocabulary 2: Essential* Geological Lithospheric Plates Supplemental** Fold Fault Pangaea Rifting Transform Volcanoes Divergent Subduction Earthquakes Normal fault Convergent Plate boundary Reverse fault Mid-ocean ridge Plate tectonics Strike-slip fault Mountain building Seafloor spreading Convection currents Hydrothermal vent	Vocabulary 3: Essential* Subsurface Topography Supplemental** Seamounts Trench Mountains Plains Abyssal plain Valleys Continental slope Geyers Subduction zone Mid-ocean ridge Continental plain Continental shelf Hydrothermal vents

*Essential Vocabulary are listed directly in the state standards. Essential Vocabulary should be included in the Word Wall and are assessable

**Supplemental Vocabulary are NOT listed directly in the state standards, but are listed in the state frameworks or other state document.

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Concept 4: Rocks	Concept 5: Surface Changes
Lesson Essential Questions: 4. What is the composition of rocks and how are they formed? [S6E5b, c, d.] 5. How do fossils show evidence of the changing surface and climate of the Earth? [S6E5g]	Lesson Essential Questions: 6. How do changes in the Earth's surface occur over time? (include how these processes affect the ocean as well) [S6E5f] 7. How is soil formed? (weathered rock and decomposed organic material) [S6E5h] 8. How does human activity affect the Earth's surface? [S6E5i and S6E5j]
Vocabulary 4: Essential* Fossil Rocks Climate Mineral Formation Composition Supplemental** geologic time Sedimentary crystallizes recrystallized Metamorphic decomposed physical history metamorphism deposit (deposition) environmental history chemical compound preserved (preservation) Principle of Superposition Cross-Cutting Relationships Principle of Uniformitarianism compacted foliation Rock cycle cemented stratigraphy lithification volcanic ash preservation fine-grained organic matter coarse-grained glassy delta silicate magma imprint hardness texture Igneous sediment vesicular	Vocabulary 5: Essential* Soil Deposition Weathered Rock Gravity Decomposed Volcanic Eruption Erosion Organic Material Supplemental** fossil fuels Horizon burrowing Weathering marine plants tree planting decomposition contour plowing particulate matter greenhouse effect ultraviolet radiation nitrous oxide (N2O) photosynthetic plants greenhouse gas (CO2) chlorofluorocarbons planting groundcovers oxidation Chemical pollutants exfoliation dissolution windbreaks strip planting conservation aerosol cans hydrocarbons global warming carbon monoxide thermal expansion ice (frost) wedging landslides cover crops hydrolysis natural gas water vapor crop rotation degradation marine algae carbon dioxide troposphere Mechanical ozone (O3) methane (CH4) nitrogen oxides oil gas coal solar sulfur slumps lichens terraces acid rain depletion capacity mulching petroleum

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