

Connecting to the *Next Generation Science Standards* (NGSS Lead States 2013)

<p>Standard</p> <p>MS-ESS1-4: Earth’s Place in the Universe</p> <p>The chart below makes one set of connections between the instruction outlined in this article and the <i>NGSS</i>. Other valid connections are likely; however, space restrictions prevent us from listing all possibilities.</p>	
<p>Performance Expectation</p> <p>MS-ESS1-4: Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history.</p>	
<p>Dimensions</p>	
<p>Science and Engineering Practices Analyzing and Interpreting Data</p> <p>Using Mathematics and Computational Thinking</p>	<p>Classroom Connections</p> <p>Students analyze and interpret data from the Paleobiology Database including taxa and geologic age data.</p> <p>Students use math to compute the passage of time over large geologic time scales.</p>
<p>Disciplinary Core Ideas ESS1.C: The History of Planet Earth The geologic time scale interpreted from rock strata provides a way to organize Earth’s history. Analyses of rock strata and the fossil record provide only relative dates, not an absolute scale.</p>	<p>Students discover how relative dating of rock strata provides a way to organize Earth’s history using fossil data from the Paleobiology Database.</p>
<p>Crosscutting Concepts Scale, Proportion, and Quantity</p> <p>Stability and Change</p>	<p>Students observe geologic time at various scales to study large quantities of Earth history.</p> <p>Students investigate geologic time through observations of stability and change in organisms as represented in the fossil record.</p>

Connections to the *Common Core State Standards* (NGAC and CCSSO 2010)

<p>Mathematics</p> <p>CCSS.Math.MP.2: Reason abstractly and quantitatively.</p>
