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

- The chart below makes one set of connections between the instruction outlined in this article and the *NGSS*. Other valid connections are likely; however, space restrictions prevent us from listing all possibilities.
- The materials, lessons, and activities outlined in the article are just one step toward reaching the performance expectations listed below.

Standard

MS-ESS2: Earth's Systems
www.nextgenscience.org/dci-arrangement/ms-ess2-earths-systems
Begin by identifying the NGSS standard that represents the central purpose of your article's theme. Include a hyperlink to the standard.

Performance Expectation

MS-ESS2-2. Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.

DIMENSIONS *Examine the SEPs, DCIs, and CCCs associated with the Performance Expectation (PE) by looking for the PE code (in this case, MS-ESS2-2). Identify the SEPs, DCIs, and CCCs that best match what students are doing as described in your manuscript. Note that there may be occasions when the most appropriate SEPs or CCCs are not assigned to the PE.*	**CLASSROOM CONNECTIONS** *This is where you will describe what students are doing that address the SEPs, DCIs, and CCCs.*
Science and Engineering Practice	
Developing and Using Models Analyzing and Interpreting Data *The Science and Engineering Practice(s) (SEPs) are taken directly from the SEPs listed at the link provided in the standard box.* *Please limit the number of CCCs to no more than three.*	Students construct initial, revised, and final models to show how Axial Seamount was formed. Students analyze and interpret multiple data sets, including earthquake and radiometric data. They also determine which data to collect and analyze as they test their final models.. *For each SEP listed, describe what students are doing that addresses the SEP. This should be clearly described in the manuscript.*
Disciplinary Core Idea *(DCI)*	
ESS2-A. Earth Materials and Systems • The planet's systems interact over scales that range from microscopic to global in size, and they operate over fractions of a second to billions of years. These interactions have shaped Earth's history and will determine its future (MS-ESS2-2) *This information above is taken directly from the Disciplinary Core Idea(s) (DCIs) listed at the link provided in the standard box.* *List the appropriate DCI that corresponds to the PE (in this case, MS-ESS2-2).* *Generally, only one DCI is stated, although there may be occasions when it is necessary to include more than one DCI.*	Students discover the cycling of oceanic crust through mapping the Cascadia subduction zone and examining patterns in radiometric dating of the seafloor. *Describe what students are doing that addresses the DCI. This should be clearly described in the manuscript.*
Crosscutting Concept	
Patterns *The Crosscutting Concept(s) (CCCs) are taken directly from the CCCs listed at the link provided in the standard box.* *Please limit the number of CCCs to no more than three.*	Students discover plate boundaries through mapping recent earthquakes. *For each CCC listed, describe what students are doing that addresses the CCCI. This should be clearly described in the manuscript.*

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

ELA

CCSS.ELA-LITERACY.WHST.6-8.2: Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.

If appropriate, please list the ELA Common Core Standards that your manuscript incorporates. .

Math

CCSS.Math.MP.2: Reason abstractly and quantitatively.

If appropriate, please list the Mathematics Common Core Standards that your manuscript incorporates.

* *Note: A blank table is available for download at http://www.nsta.org/middleschool/msguidelines-scope.aspx*