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

5-ESS2 Earth Systems
https://www.nextgenscience.org/5-ess2-earths-systems

Begin by identifying the standard that represents the central purpose of your article's theme. Include a hyperlink to the standard based on the K–12 DCI Arrangement.
Note that most manuscripts address only one standard.

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. **Include this text in all K–5 NGSS tables.**

In preschool situations, use the following text: The materials/lessons/activities outlined in this article are intended for use in preK classrooms. Science experiences in preK by their nature are foundational and relate to early elements in learning in learning progressions that facilitate later learning in K–12 classrooms. As the *NGSS* performance expectations are for K–12, we have not included specific performance expectations but have identified the disciplinary core ideas that are addressed to show the link between these foundational experiences and students' later learning.

Performance Expectation

5-ESS2-1: Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact

As you work on the SEPs, DCIs, and CCs, consider how they address the performance expectation.

Dimension **All wording in this column must be verbatim from NGSS (DCI arrangement).**	Connections to Classroom Activity **Everything entered in this column must refer directly to explanations provided in the manuscript, the connections should not be inferred.** **Describe what students are doing that addresses each dimension.**
Science and Engineering Practices	**Describe what students are doing that addresses each Practice. This should be clearly described in the manuscript, not inferred.**
Developing and Using Models Using Mathematics and Computational Thinking Constructing Explanations and Designing Solutions **There are many possible practices**	• Students construct models of storm water runoff • Students construct explanations regarding the movement of water in the models • Students measure and observe characteristics of the drainage area in the schoolyard • Students calculate the effective size and depth of the rain garden; use calculations and observations to plan a rain garden to reduce storm water flow **Although other connections may be explained, use only those that are most germane.**

addressed in lessons. Select only those that are the most germane and important in supporting the target learning.	
Disciplinary Core Idea	
ESS2.C: Roles of Water in Earth's Surface Processes. • These systems interact in multiple ways to affect Earth's surface materials and processes. **In the case of a DCI, provide the complete statement from NGSS. (SEPs and CCs should include only the title of the dimension.)** **Note that most manuscripts will have only one DCI listed.** ETS1.C: Possible solutions need to be tested in order to determine which of them best solves the problem, given the criteria an the constraints. **If your manuscript includes an engineering investigation, there should be an engineering DCI along with the science DCI in this section.** **If your manuscript is focused on engineering, provide an engineering standard and complete the table based on engineering dimensions. Include a science DCI.**	• Students evaluate the landscape around the school. • Students design, build, and test a rain garden to mitigate storm water runoff. **Describe what students are doing that addresses each DCI. This should be clearly described in the manuscript, not inferred.**
Crosscutting Concepts	

Systems and System Models	• Students use models to draw and explain components of the watershed, the interaction of these components, and the impacts of local runoff the watershed as a system.
Scale, Proportion, and Quantity	• Students measure the drainage area and plan rain garden size to scale.
	Although other connections may be explained, use only those that are most germane. **Describe what students are doing that addresses each CC. This should be clearly described in the manuscript, not inferred.**

Note: A blank table is available for download at http://www.nsta.org/elementaryschool/msguidelines-sc.aspx.