Connecting to the Next Generation Science Standards

**Standards**

**MS-ESS Earth and Human Activity**

**Performance Expectation(s)**

*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 activities outlined in this article are just one step toward reaching the performance expectations listed below.*

MS-ESS2-4. Develop a model to describe the cycling of water through Earth's systems driven by energy from the sun and the force of gravity.

MS-PS3-3. Apply scientific principles to design, construct, and test a device that either minimizes or maximizes thermal energy transfer.

**Science and Engineering Practices**

* Developing and Using Models (MS-ESS2-4)

**Classroom Connections**

In-person example: pencil and paper or physical model

Remote learning example: Scratch Project simulating the model with audio and written explanations

* Constructing Explanations and Designing Solutions (MS-PS3-3)

**Classroom Connections**

In-person example: building a cooler from cardboard and Sytrofoam

Remote learning example: Tinkercad 3D design with simulated Arduino Temperature Sensor

**Crosscutting Concepts**

**Energy and Matter (MS-ESS2-4,** **MS-PS3-3)**