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

Standard

MS-ESS1 Earth's Place in the Universe

Performance Expectations

- The chart below makes one set of connections between the instruction outlined in today's presentation and the NGSS. Other valid connections are possible, however, time restrictions limit us from making all possible connections. Feel free to modify as you see fit.
- The materials, lessons, and activities, shared today are just one strategy toward reaching the performance expectation listed below.

MS-ESS1-3 Analyze and interpret data to determine scale properties of objects in the solar system.

DIMENSIONS

CLASSROOM CONNECTIONS

Disciplinary Core Ideas

MS-ESS1-B: Earth and the Solar System

The solar system consists of the sun and a collection of objects, including planets, their moons, and asteroids that are held in orbit around the sun by its gravitational pull on them. (MS-ESS1-2), (MSESS1-3)

Students will graph the density and diameter data of unknown objects to arrange them into groupings of similar objects

Crosscutting Concepts

Scale, Proportion, and Quantity

Time, space, and energy phenomena can be observed at various scales using models to study systems that are too large or too small. (MS-ESS1-3), (MS-ESS1-4)

Students will be able to use the scale model of the solar system objects to recognize the 4 types of planets – terrestrial, gas giant, ice giant, and dwarf.

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

ELA/Literacy WHST.6-8.1 Write arguments focused on discipline-specific arguments.

Cris L. DeWolf is a science teacher at Chippewa Hills High School, and editor of *The Michigan Earth Scientist*, the journal of the Michigan Earth Science Teachers Association. Lisa A. DeWolf is a tutor for at-risk students at Chippewa Hills High School. Both have worked with middle school age students at science camp Watonka in the Poconos of NE Pennsylvania for over 25 years.