Science Planning

**Unit 1: Structure and Motion Within the Solar System (6-8 weeks)**

**Week 7.5 Big Idea: Planets stay in an orbital pattern around the sun.**

Week 7.5 – 10/14 – 10/16

10/15 Field trip to Clark Planetarium!

10/16 - YWBAT develop an understanding of why planets stay in an orbital pattern around the sun.

Success is: investigating the relationship between gravitational force and distance.

Phenomena: Our planets orbit the sun in their own orbital positions.

* Discussion: Why do our planets orbit the sun in their own, unique orbital positions?
* Demonstration: washers on the end of a string. One string will have heavy washers, while one will have lighter ones. Teacher revolves the heavy washers above her head as the students count the revolutions made. Then, teacher shortens the string and repeats the process. Repeat with lighter washers.
  + Students record data on guided notes
* Students use data to answer questions
  + Discuss question two
* Model the simulator: basics of how to use it, how to zoom, where planet x is and how to manipulate it, and where to find the data and graphs. <http://lasp.colorado.edu/education/outerplanets/orbit_simulator/>
* Students get on Chromebooks in pairs to investigate the relationship between gravitational force and distance as they answer the guiding questions.