

Title:	Distance and Beyond
Grade(s):	4 th and 5 th Grade
Subject(s):	Science
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Overview:	This lesson teaches students about the distances between the planets and the sun.
Content Standards:	<p>SC (4) 10. Describe components of our solar system</p> <p>SC (5) 11. Compare distances from the sun to planets in our solar system</p> <p>MA (4) 1. Demonstrate number sense by comparing and ordering decimals to hundredths and whole numbers 999,999.</p> <p>MA (4) 17. Represent numerical data using tables and graphs, including bar graphs and line graphs.</p>
Local/National Standards:	NCTM Apply appropriate techniques and formulas to
Primary Learning Objectives:	NAS determine measurement. Earth and the solar system Students will be able to compare and contrast the planets in the solar system. Students will model the distance of each planet from the sun.
Additional Learning Objectives:	See above primary learning objectives.
Approximate Duration of Lesson:	120 mins/ 3 days
Materials and Equipment:	<p>Internet Access, Science Journals, Pencils, Yarn, Yard Sticks, Rulers, Chart Paper, Markers, and the book <i>How Much is a Million</i> by David M. Schwartz.</p> <p>giant pumpkin, uncooked orzo pasta, large blueberry, small grape, pea or navy bean, large mango or potato, large unpeeled orange or cantaloupe or coconut, plum, kiwi or lime</p> <p>Computers with Internet Access, Promethean Board, Excel.</p>
Technology Resources Needed:	
Background/ Preparation:	<p>The following sites will provide background knowledge on the solar system:</p> <p>www.kids.nineplanets.org</p> <p>www.lpi.usra.edu/education/explore/solar_system/activities</p> <p>http://www.youtube.com/watch?v=BZ-qLUIj_A0&feature=fvwp&NR=1</p>
Procedures/Activities:	<p>Step 1 Complete a read aloud with the book <i>How Much is a Million</i> by David M. Schwartz. This book provides the students with understanding of large numbers.</p> <p>Step 2 The teacher will pass out the average distance from the Sun chart. Also lead the students to create a scale of one inch=one million miles and complete the Distance on Model chart.</p> <p>Step 3 Once the teacher has checked for understanding of</p>

the chart he/she will then divide students into groups to work collaboratively to measure the distances of the planets from the sun according to the scale model.

Step 4

The students will use the internet to research information about the planets of the solar system. Student will choose a way to present their planets. The teacher will give each group appropriate food representative for each planet and Sun for students to measure.

Step 5

Students will choose Glogster or British Council Comics to create a presentation about the Solar System

Attachments:

The teacher will give the students the **Raft Assignment Sheet** : Role, Audience, Format, Topic- **Role (reporter)** **Audience (peer group/self)** **Format (journal, song lyric)** **Topic (related to the essential question)**

Assessment Strategies:
Extension:

Collaborative Group Work and Completion of Average Distance from the Sun Chart.

Remediation:

Students will complete a chart activity and use the information to create bar and line graphs focusing on the diameters of the planet. Students with learning disabilities will work with peer tutors, be provided with additional mini breaks to prevent over stimulation, and use word processor instead of hand writing assignments.