

**“Eye on the Sky” Lesson:** How Can the Little Moon Hide the Giant Sun? *Exploring Size and Distance*

[http://eyeonthesky.org/lessonplans/12sun\\_littlemoon.html](http://eyeonthesky.org/lessonplans/12sun_littlemoon.html)

### ***Suggested Modifications***

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Imagination Station Science Museum is a small, interactive science and technology center located in downtown Wilson, North Carolina. The mission of Imagination Station is to stimulate an interest in science and technology while improving the quality of science education through dynamic hands-on science learning, interactive exhibits, and outreach programs for people of all ages, especially children.

Our museum serves over 35,000 students each year through in-house visitation and/or outreach to area schools. As a result, we have had to modify many of our inquiry-based programs to better serve all learners. Below is a list of standard practices that we follow to help make our programs more accessible for students with special needs (adapted from <http://www.as.wvu.edu>). Furthermore, prior to group visits to the museum or outreach to schools, our educators will ask the lead teacher of any other modifications that may be needed during the program (such as Assistive Learning Devices):

- Make inquiry programs “kit based” so as to reduce the amount of materials available to students at one time;
- Maintain eye contact throughout verbal instructions;
- Have students work in cooperative groups;
- Make directions clear and concise;
- Use overhead projector to enforce directions;
- Thoroughly describe all materials and equipment being used during a lesson;
- Find materials that are very tactile.

Imagination Station has recently used the “How Can the Little Moon Hide the Giant Sun?” lesson during astronomy programs for students in grades 1-4 as a tool to explore size and distance of planetary objects. We used the following modifications to better serve various groups with special needs (suggested modifications adopted from *Astronomy Education Review*, Volume 2, Issue 2, Sep 2003-Jan 2004):

- Use balls with continents clearly marked (i.e. small globes) – this reduces the level of abstraction and provides a greater similarity to Earth’s features.
- Squish balls with a 4” diameter with continents raised – soft texture makes handling the balls more pleasant for students who are overwhelmed by certain kinds of tactile sensations (tactile-defensive)
- Use ping-pong balls as the larger ball in the activity; use a Styrofoam ball as the smaller one on a wooden dowel to assist visually impaired students with discoveries on relative sizes

Other suggestions include:

- Use larger balls with raised beads along the continent margins (e.g. beach ball size with Velcro or fabric beads added to margins)