ASTRONOMY-TO-GO
The John J. McCarthy Observatory

LESSON: <u>A Celestia Tour of the Solar System</u>   **(5)**
   <u>A Stellarium View of The Night Sky</u>

CURRICULUM: Grade 6, (CT Std. 8.3) , Earth and the Solar System: How does the position of Earth in the solar system affect the conditions on our planet?

GUEST INSTRUCTOR: JJMO volunteer, or classroom teacher

TIME: About 40 minutes

LOCATION: SNIS Planetarium (best); classroom w/ projector screen (OK for JJMO)

TEACHING AIDS: The Celestia script "Tour of the Solar System" and the program Celestia, v. 1.3.2, are installed on the SNIS Planetarium computer. The latest version of the planetarium simulation program Stellarium, centered on New Milford, also installed on the Planetarium computer.

DESCRIPTION: Multimedia show with narration

The Celestia simulation program, similar to Star Trek, moves a "camera" through space. In this automatically run script in the Celestia program, we take a tour to the Sun and all the planets in the Solar System, several moons, an asteroid or two, and get an overall view of the Solar System with planetary orbits depicted, the Asteroid Belt visited, and a fun view of the Ecliptic Plane. A few properties of each planet, moon, etc. are shown on screen with the object – diameter, name, interesting facts.

The program Stellarium is an easy to use "planetarium" program that provides a view of a sector of the night sky as seen from New Milford or other selected location, either at the current computer time, or any time in the past or future that the operator inputs. Stars and their names, constellation lines & names, constellation figures (art), nebula, galaxies, etc. can be shown, or hidden. The view can be panned around the sky, and time can be sped up or slowed down (e.g., to demonstrate the motion of circumpolar stars due to Earth rotation). A nice way to introduce the night sky, and always a class favorite. Documentation is sparse, so an introduction to its use by a JJMO volunteer is advisable if you intend to use it yourself.

ASSESSMENT: Q & A period after, time permitting.
PEM 7/6/2005
Revised PEM/CA 2/2014