

Program Topics and Activities

(Note: Activities will be facilitated by library staff.)

Comets: Harbingers of Doom, or Cool Astronomical Spectacles?

Dr. Mark Matney, Space Debris Scientist

Dr. Matney is a planetary scientist and modeling lead for the Orbital Debris Program Office. Matney's work involves all aspects of orbital debris research including measurements, modeling, and mitigation.

Demonstration: create a model of a comet with dry ice, using directions for [Recipe for a Comet](#).



From the Moon and Back Again

Dr. Julie Stopar, Lunar Scientist

Dr. Stopar is a lunar geologist studying impact craters, volcanoes, and polar water-ice. She is a co-investigator on the Lunar Reconnaissance Orbiter Camera team and an avid future mission planner.

Demonstration: model impact craters, using directions from [Crater Creations](#).



How To Be an Interplanetary Explorer

Dr. Candice Bedford, Mars Scientist

Dr. Bedford studies sedimentary and volcanic processes that provide insight into the ancient and modern geology of Mars. She is a collaborator on the Mars Curiosity Rover's CheMin and ChemCam instruments, and a member of the SAND-E Mars analog mission science team.

Activity: lead a virtual version of the [Mars Match Game](#) with a [powerpoint](#) we provide.



Planetary Defenders

Dr. Edgard G. Rivera-Valentín, Planetary Scientist

Dr. Rivera-Valentín uses the world's most powerful radio/radar telescope, the Arecibo Observatory in Puerto Rico, to study near-Earth asteroids and other Solar System bodies. Ed is also a team member of NASA's Near-Earth Object Surveillance Mission.

Activity: lead a virtual game of [Space Rocks](#), with the [powerpoint](#) we provide.



Roving on Mars

Dr. Elizabeth Rampe, Exploration Mission Scientist

Dr. Rampe studies Mars geology and mineralogy and is the deputy principal investigator of the CheMin instrument on the Mars Science Laboratory Curiosity rover. She also supports human analog missions and scientists' incorporation in extravehicular activities.

Activity: use a robotic mouse and a map of Mars to program around hazards OR have patrons plan a route using a map.



Searching for Life on Mars

Dr. Svetlana Shkolyar, Astrobiologist

Dr. Shkolyar works at NASA Goddard Space Flight Center with laser-based tools for Mars rovers to study our ability to detect life.

Activity: [Searching for Life](#), which can be conducted as a demonstration, during which patrons will make observations and share conclusions.

