

## Overview of Field Trip Activities

How long do you want to stay at the NRAO? Do you have other destinations on your field trip itinerary? As you plan a field trip for your students, feel free to mix and match these activities to meet your schedule. For most of these activities, we can handle a group size of 20. So, if you bring a large group, plan to stay longer as we will need to rotate smaller groups through more than one activity. Plan to spend a minimum of 2 hours with us to accomplish the NRAO tour, exhibit hall scavenger hunt, and a stop in the gift shop. If you want to use the Forty Foot Educational Telescope, which I highly recommend for students aged 10 and up, it's best if you spend the night.

Activity	Group Size	Duration	Description
NRAO Tour	65-80 depending on whether we use your buses or ours	About 1 hour/group	Includes a liquid nitrogen demonstration, a brief talk, a short film, and a tour of the telescopes
StarLab Planetarium	20	40 minutes/group	Constellations, Celestial Motions presentation
Radio Interference Detective	20	40 minutes/group	Students search the Science Center for sources of man-made radio waves—fun!
Exhibit Hall Concept Quest	40 or so	30-40 minutes/group	Students complete a scavenger hunt to answer science questions as they interact with our astronomy exhibits.
Solar Viewing— weather permitting	10 at a time	?	Using a solar projection telescope, a hydrogen alpha telescope, and a small radio telescope, students observe the sun to see sunspots, flares, and detect radio waves from the sun. This activity is best done while students are eating lunch or visiting the gift shop to prevent overcrowding at the telescope.
Gift Shop	20	30 minutes/group	Budget time for this—or you'll be late leaving! The gift shop is full of inexpensive science toys! *
Café/Lunch	40-50/shift	30-40 minutes	If you want to use the café with a large group, you must order box lunches or pizzas ahead of time. See our menu/order form for more info.
40 Foot Research	Maximum of 30 students during a one-night stay.  For students in grade 5 and up	overnight	The NRAO has developed simple research problems for small groups to complete during an overnight stay. NRAO staff will teach your students how to use the telescope and analyze data. Students will work in small group to complete the challenge. This involves late night observing! NRAO does not provide chaperones! ☺

\* Gift Bags. Don't have time for your students to shop? We now offer \$3.00 gift bags for elementary students. These must be pre-ordered. Here's what they get

1. Ultraviolet (UV) Bead Bracelet Kit, or Rocket Balloon Kit (if boys don't want the UV bracelets – Teachers—you could some great follow up activities with the UV beads!)
2. Rainbow Peeper – essentially a diffraction grating.
3. Postcard of the Green Bank Telescope
4. 2 NRAO Logo pencils
5. A Stretchy Alien