

NPS and NASA Teacher Workshop: Making the Sun-Earth Connection



Join the National Park Service (NPS) and National Aeronautics and Space Administration (NASA) for an exciting hands-on workshop that offers teachers a variety of ways to explore the Sun-Earth system with their K-8th grade students! Also explore how the Sun influences the native plants and reptiles of the Santa Monica Mountains, and learn about the Sun-Earth connections of the Chumash.

Date: July 9-10, 2009

Time: 10:00 am -6:30 pm on 7/9 and
10:00 am – 6:15 pm on 7/10

Location: Santa Monica Mountains National Recreation Area, Thousand Oaks, CA

Registration and Materials Fee: A non-refundable \$35.00 materials fee is required of all participants in advance of the workshop. Please see registration form for more details.

Registration Deadline: Friday, June 26, 2009. Workshop is filled on a first come, first served basis.

Continuing Professional Education (CPE) Credit: One (1) credit is available through California Lutheran University for this course. There is an \$80.00 fee which will be collected on the first day of the workshop payable to California Lutheran University. Registration forms will be available and completed at the workshop. Continuing Professional Education Credits are not applicable to credentials or graduate programs. They are designed to meet the continuing education requirements for teachers in California. Not all districts will accept these credits for salary allocation. Participants are responsible for checking with their district's salary allocation department and/or their collective bargaining agreement for information on the applicability of these credits.

Course Details: Ruth Paglierani, Coordinator for Public Programs, and Greg Schultz, Education/Outreach Scientist and Teacher Educator, from the Center for Science Education at the Space Sciences Lab, University of California, Berkeley, will present a wide variety of hands-on curriculum-based lessons and activities including:



Sun-Earth Science: The Astronomy of Seasons

“Reasons for Seasons” GEMS Guide

- Name the Season
- Sun-Earth Survey
- Trip to the Sun
- What Shape is Earth’s Orbit?

Break Out Sessions

Session One (Grades 5-8): More Seasons Activities

- Living with a Star Activities
- Temperatures, and Day and Nights Around the World

Session Two (Grades K-4): Eye on the Sky

- Eye on the Sky Curriculum Overview
- Table Top Eclipse
- UV Beads
- Sun-Earth-Moon Model
- Create Sun Books

The Sun’s influence on the land and the Chumash will also be explored. Speakers are scheduled to discuss:

Seasons in the Sun: Plant Growth and Survival in the Mediterranean Climate

(This is an indoor and outdoor session with a short walk.)

- Mediterranean Biome of Southern California
- Relationship of light, heat and water loss in plants
- Plant energy budgets
- Plant challenges and adaptations for managing light and heat
- Vegetation distribution patterns as determined by light and heat

Sunbathers of the Santa Monica Mountains...How Do Reptiles Stay Warm?

(This is an indoor and outdoor session.)

- Common reptiles of the Santa Monica Mountains
- Thermoregulation of reptiles

California’s First Sun Watchers

- Three-dimensional sun symbol activity
- Shell rattle activity and sun stories of the Chumash

Archaeoastronomy

- Sun watching and solar practices
- Burrow Flat (Chumash) site
- Sun lore of the Chumash and other American Indians

For more information: Contact Lisa Okazaki, Education Specialist, 805-370-2348, ext. 203, or lisa_okazaki@nps.gov.



Santa Monica Mountains National Recreation Area
2009 Teacher Workshop Registration Form

NPS and NASA Teacher Workshop:
Making the Sun-Earth Connection
July 9-10, 2009

Registration Information

A valid registration includes this completed form (2 pages) and payment of the \$35.00 materials fee. A separate registration form is required for each participant.

Registration deadline is Friday, June 26, 2009.

- Please make your \$35.00 check payable to Western National Parks Association.
- Mail registration form and check to:
Santa Monica Mountains National Recreation Area
Attn: Education Programs, Barbara Applebaum or Lisa Okazaki
401 West Hillcrest Drive
Thousand Oaks, CA 91360
- Fees are non-refundable.
- We cannot hold reservations without payment.
- Workshops are filled on a first come, first served basis.

Participant Information

Participant Name _____ Grade You Teach _____

Mailing Address _____

School _____ School District _____

School Address _____

Home Phone # _____ Cell Phone # _____

Work Phone # _____ E-mail Address _____

How did you hear about the workshop? _____

Do you have any accessibility needs that we should be aware of? _____

Continuing Professional Education (CPE) Credit

Continuing Professional Education credit is available through California Lutheran University. Registration for CPE credit will take place on the first day of the workshop.

Are you taking the workshop for Continuing Professional Education Credit? Yes ___ No ___
(continued)

Pre-Workshop Questions

What have you traditionally taught in science? _____

How much time per week do you spend teaching science? _____

Are you a Science Resource Specialist? _____

Do you train other teachers? Yes ___ No ___

For more information

Contact Lisa Okazaki, Education Specialist, at 805- 370-2348, ext. 203, or lisa_okazaki@nps.gov.