

# Synergy . . .

## **LEWIS AND CLARK PROCEED ON! The Commemorative Lewis and Clark Expedition continues the re-enactment of their Voyage of Discovery.**

After a winter in quarters at Fort Mandan, the re-enactment continues across the prairie westward. PRCST programs follow this Commemorative Expedition across the nation through the year 2006. Related programs and resources are planned and underway. (See summer workshops listed in the LASER Directions section.)

### Why teach about Lewis and Clark?

Their expedition of 1803-1806 from “Virginia to Oregon Pacific Coast allows students to be engaged in exciting projects and investigations that are connected to national and state educational content standards, and explore the following disciplines and topics”: *(from USGS)*

Physical geography  
Cultural geography  
Environmental studies  
History  
Mathematics  
Civics  
Economics



## **Have you visited the PRCST Lewis and Clark website?**

The Lewis and Clark Commemoration (2003-2006) expedition carries on, following the original trail westward as the explorers hunted for a viable waterway west. While this was not possible, there were many valuable resources and much information discovered and/or documented by this expedition. Integrating this study into the curriculum provides a venue for linking the natural and historical environments.

This engages students through current, relevant, and exciting events in the news of the day. Many academic standards and assessment anchors can be addressed as the re-enactment continues.

PRCST Advisory Board member Dr. Charles B. Greenberg maintains the website and serves as the primary author. Do go online at <http://lewisandclark.pittsburghlegacy.com>

And let us know how you can use this in your classroom.

This website focuses on providing accurate (cited) information about the scientific aspects of this expedition, as educators work to include scientific literacy in the classroom.

Use of the original journals of Lewis and Clark offers access to primary historical information, and helps to integrate a literacy connection in the curriculum – aligning with the reading anchors.

### **INTERACTIVE SITE COMING**

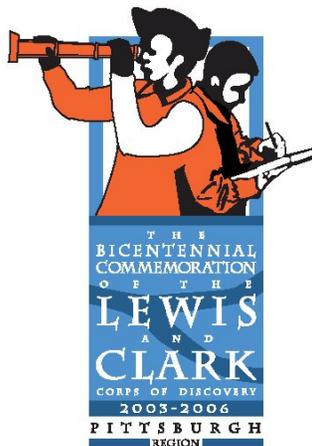
Thanks to a grant from the Laurel Foundation, a core of teachers is working to help develop an interactive component for the Lewis and Clark website. This site is planned for submitting teacher developed lesson plans, student engagement activities (webquests, games, puzzles etc.), and additional information about Native Americans.

### **Did you know?**

The Lewis and Clark Expedition was the first of many government surveys of natural resources in the American West. The U.S. Geological Survey (USGS) was established on March 3, 1879 in response to a report from the National Academy of Sciences, which has been asked by the Congress in 1878 to provide a plan for surveying and mapping the Territories of the United States that would secure the best possible results at the least possible cost. USGS celebrates 125 years of science for America.

Because of its origin in natural resource surveys and the similarity of the USGS mission to Thomas Jefferson's charge to Meriwether Lewis, the USGS can be seen as the organizational successor to Lewis and Clark. See

[www.usgs.gov/features/lewisandclark.html](http://www.usgs.gov/features/lewisandclark.html)



## **MAKING CONNECTIONS**

A new PRCST project will focus on the critical years following the French and Indian War. We are now observing the 250<sup>th</sup> Anniversary of this time. Pittsburgh and western Pennsylvania are pivotal areas with primary war sites, exhibits and displays. Some of these are:

- Fort Pitt: hosts a large and rich exhibit
- Fort Ligonier, Fort Necessity, Bushy Run and other sites offer tours, programs and information
- Senator John Heinz Pittsburgh Regional History Center and Historical Society of Western Pennsylvania: developing an extensive exhibit and related programming.

The PRCST program will build on the relevance and excitement of this 250<sup>th</sup> anniversary observation with a focus on the use of land following the war years, the cultural interactions, and the impact on the environment, again linking the natural and historical environments.

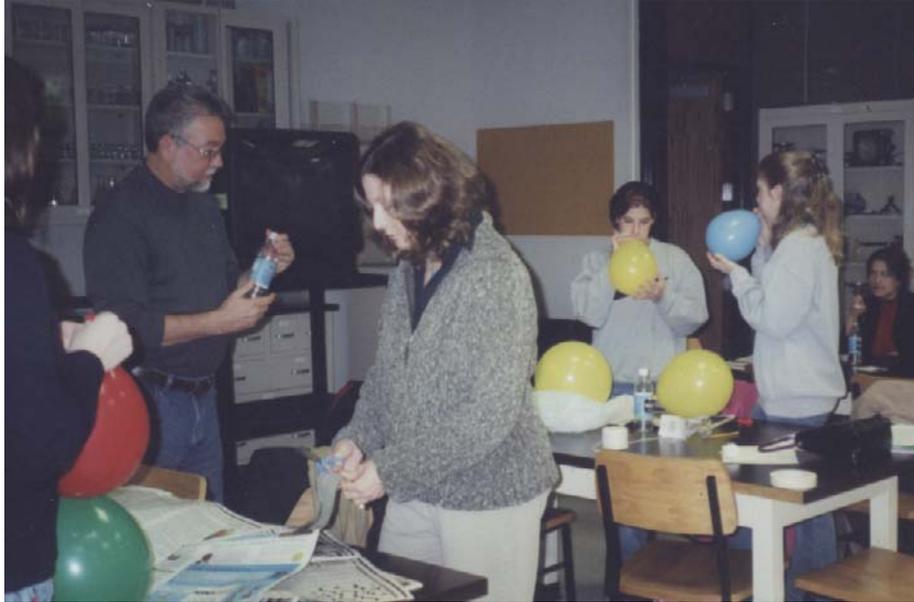
Many changes occurred during the years 1763-1775, a pivotal time for the building of our nation. A major focus on the French and Indian War is often followed by a focus on the American Revolution. The transitional years provide a rich area for study and understanding of the related events and their consequences. This is a time often overlooked. Yet it offers a sequential historical bridge and basic information that lends itself to study across disciplines with many integrative activities.

If you are interest in participating in this project and teach social studies, science, and/or history see the summer workshop schedule in the LASER Directions section and contact Jane Konrad at [konrad@pitt.edu](mailto:konrad@pitt.edu) or call 412/648-7315.

## **EXPLORATION : GOING INTO THE UNKNOWN AN ANALOGY**

Study of the Mars exploration/space science offers an analogy for the Lewis and Clark explorations. Some knowledge was available as a basis for the exploration, but there was much to be discovered. Certainly the Mars rovers provided unusual findings beyond those expected from earlier exploration.

PRCST offered a Space Science workshop in December where teachers participated in hands-on activities ranging from space travel to landings on Mars, presented by Ken Harrasty, Brownsville Area HS. A fine comparison of the geology of Mars to that of Earth was presented by Magdalena Gill, geologist.



## **SUN-EARTH CONNECTIONS**

Prepare for Sun-Earth Day: Ancient Observatories March 21, 2005 and for Earth Day April 22, 2005 by exploring the Sun-Earth connections. One of the exciting NASA displays and sessions at the December PSTA Conference in Hershey was a presentation by Dennis Christopher demonstrating a sun spot viewer.

Although we have passed the maximum sunspot part of the cycle (usually 11 years), participants were able to view some sunspots during a hands-on activity.



Participants in the PRCST summer workshop in June will receive a Sun-Earth Day Kit with materials that remain viable as resources for classroom utilization. One of the main goals of Sun-Earth Day is an opportunity to learn more about the Sun's connection to the Earth through images, cultural parallels and activities that Native Americans have used to share Sun-Earth science through several generations.

This relates well to the experiences of Lewis and Clark as they traveled west and met many different Indian Tribes. Visit <http://sunearthday.nasa.gov/> for a wealth of information, activities, and images.



Viewing sunspots during a NASA presentation at PSTA in December – Hershey, PA