

# Planet Tours

## NATIONAL SCIENCE EDUCATION STANDARDS

- Content Standard in 5-8 Earth and Space Science (Earth in the solar system)
- Content Standard in 5-8 Physical Science (Properties of objects and materials)

## MARTIAN MONUMENTS

A couple of centuries from now, a family vacation might include visits to monuments at Chryse Planitia, Utopia Planitia, and, of course, Ares Vallis — the Valley of Mars. Wearing pressure suits to provide air and protect them from the frigid Martian temperatures, the visitors would wander among some of the most important artifacts on Mars — the Viking landers of the 1970s, and Mars Pathfinder of the 1990s.

No one can say for sure whether humans will ever settle on Mars — or travel to the Red Planet at all, for that matter. But it's almost certain that if our descendants DO colonize Mars, they'll turn the landing sites of historic space missions into parks or monuments.

Here in the United States, national monuments showcase the beach where the Wright brothers flew the first airplane...the path that Lewis and Clark followed through the western wilderness...and the section of track that completed the transcontinental railroad. It's a good bet that the first Mars exploration sites will receive the same honors.

Preserving an old spacecraft on Mars will be challenging. Dust storms could damage the landers, or even bury them beneath the red Martian soil. And since Mars has no protective ozone layer, ultraviolet energy from the Sun could damage the craft, too. Eventually, Mars Pathfinder and the Sojourner rover might need to be moved indoors — to protect them from the Martian environment they helped explore.

*Planning to take a vacation soon? Visit Phobos! Small and cozy, Phobos orbits the fourth planet from the Sun in less than eight hours. From your observation deck on Phobos, you will have a superb view of Mars. You will see its mountains, polar ice caps, and the largest volcano in the solar system. Call your cosmic travel agent today!*

*Try this creative activity to help your students explore the solar system in an imaginative manner.*

## PREPARATION

Use StarDate or Universo CDs or printed materials such as *StarDate Guide to the Solar System* or the StarDate/Universo websites to find information about solar system objects. As an aid, provide some examples of real travel brochures or websites with travel ads available for students to preview. For secondary classrooms, a good resource is *Active Physics: Sports* by Arthur Eisenkraft (ISBN 1-891629-04-02).

## ACTIVITY

Break the class into teams that will research one planetary body (if you have a large number of teams, you can include some of the moons of the solar system, or comets and asteroids). The students use the information they collect to create travel posters, brochures, or television or radio commercials for their object.

Each project should include real facts about the solar system object, but may use “far-out” features to form the basis of unusual recreation opportunities. When everyone is finished, each team presents its product to the rest of the class.

## ASSESSMENT

Develop a grading rubric for different grades, keeping in mind the standards. In addition to “facts” about solar system objects, the rubric should ascertain whether students use physical data to make comparisons. Making comparisons is the key to learning science in this activity. Some teachers may be comfortable with allowing the students to design the rubric for their class after they have started the project; others may want to pass the rubric out at the beginning of the assignment. One teacher had students make PowerPoint presentations and gave extra credit for working some mythology and images into the presentation.



*Future tourists may visit the crater Stickney (at top left) on Phobos, one of the moons of Mars.*

## **Planet Tours**

**Subjects:** Our Solar System

**Grade Levels:** 6-8

In this creative activity, students learn about an object in our solar system and create a travel brochure or advertisement to attract future space tourists to their exotic destination. Engages students with both facts and imagination.

### **Texas Essential Knowledge and Skills**

Science, 6-8:

§112.18 grade 6 (b) - (11) (A) describe the physical properties, locations, and movements of the Sun, planets, Galilean moons, meteors, asteroids, and comets.

§112.19 grade 7 (b) - (9) (A) analyze the characteristics of objects in our solar system that allow life to exist such as the proximity of the Sun, presence of water, and composition of the atmosphere