



World Space Week

World Space Week, 4-10 October 2005: School project: Design of a Mars Base

“The year is 2047! Journeys to Mars are now common. The United Nations Office for Outer Space Affairs (OOSA) has accepted the bid of the world community to coordinate the construction of the first ever permanent base on Mars to enable around twenty explorers to live and work on the planet Mars for one Martian year. The scientific objective of the mission is the detailed exploration of Mount Olympus. Each (terrestrial) week, the crew has to report its latest research findings to the terrestrial “Institute of Aerophysics” base located in Greenland. Now OOSA is asking the world’s best research teams to send their proposals for the first permanent base on Mars.”

OOSA invites all school classes from grades 5 - 8 (age 10-14) to participate in designing a base on Mars. Each participating class is asked to build a model of a Mars base that is suited to the conditions on Mars and that includes everything the researchers need to survive and work on Mars. After building the base, participating groups should submit a photo of the base and a short description of the base and its functions.

The photo of the model and the description of the Mars base must be sent to the following email address: worldspaceweek2005@unvienna.org by 11 November 2005. When sending the photo and description, please state the name and address of your school, the participating class and the name and contact address of the supervising teacher. The best projects will be displayed on the homepage of OOSA (<http://www.unoosa.org/>). Certificates of recognition will be provided to all participating classes.

World Space Week, which is observed annually from 4-10 October, is an international celebration of the contribution that space science and technology makes to the betterment of the human condition. During World Space Week, events and educational programmes related to space are held around the world. This week is the ideal time each year to get students excited about learning about space. The project can be carried out in different subjects such as physics, chemistry, biology, geography or visual arts. It can even be done on an interdisciplinary basis.

For questions, please contact the United Nations Office for Outer Space Affairs,
Email: worldspaceweek2005@unvienna.org

Useful links:

United Nations Office for Outer Space Affairs: <http://www.unoosa.org/>

World Space Week: <http://www.spaceweek.org/>

Austrian Space Agency: <http://www.asaspace.at/>

Hungarian Space Office: <http://www.hso.hu/>
 Slovak Commission for Research and Peaceful Use of Outer Space:
<http://www.space.savba.sk/>
 Slovenia: Science Office, Ministry of Education, Science and Sport:
<http://www.mszs.si/eng/science/default.asp>
 European Space Agency: <http://www.esa.int/>

Teachers can download the World Space Week Teacher Activity Guide and the World Space Week Heinlein Guide (in English) from Spaceweek International Association. Please visit <http://www.spaceweek.org/education.html>

Teachers are encouraged to provide online feedback after World Space Week at http://www.spaceweek.org/teacher_feedback.html

Annex: Mars Features

1. Orbit Data:

Period of revolution	686 days
Distance from sun	min. 206 m km max. 249 m km

2. Physical Data:

Equatorial diameter	6,794 km
Mass	6.419×10^{23} kg
Period of rotation	24 hrs. 37 min.
Gravity	3.72 m/s^2
Moons	Phobos and Deimos

3. Atmosphere & Weather:

Composition of atmosphere:	Carbon gas 95.3% Nitrogen 2.7% Argon 1.6% Oxygen 0.13% Water vapour 0.03%
Temperature	min. -133°C max. $+27^{\circ}\text{C}$
Mean atmospheric pressure	7 millibar
Top wind speed	250–360 km/h

More data about Mars: <http://www.marssociety.de/>, <http://www.marssociety.hu/>