

X - PLORING SCIENCE

SPACE WEBQUEST

EARTH AND MARS - BLUE VS. RED

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~ INTRODUCTION ~

The year is 2204. Frantic panic explodes on to the streets as NASA reveal the planet's greatest fears. The planet Earth is in a direct collision course with a large meteor. The presidents of all the major countries of the world call for a mass evacuation of the planet, to make for the safer planet of Mars.

Colonisation of the Red planet began in 2196 after the USA landed their Space Bus Columbus on the Red soils four years earlier, building gigantic enclosed space stations capable



of housing approx one billion humans and two of each species of animal on the Earth. The European's has cleverly dubbed it "America's Arc"!!

But now without it, the human race would be gone. This meteor was an Earth Killer.

[Click here to view your task.](#)

~ TASK ~

For your task, you must come back to the present. You must use the Internet and other resources to research about the Red Planet, Mars. Use the links on the Resources page to compare the Planet Earth with that Planet Mars. What are the main differences between them? Is the Red Planet able to support life, as we know it? What are the chances of such a disaster actually happening? Would the building of huge space stations as proposed be realistic?

You must present your findings in a poster, a report, a newsletter, brochure, website or slide show. Microsoft PowerPoint® and Publisher® will help produce professional looking presentations.

Your project must include but is not limited to:

1. Information on future means of space travel, the possible designs, propulsion systems, launching and re-entry and info on future of the space shuttle.
2. What the following terms mean: **Geosynchronous orbit, Relativity, Newton's Laws of Motion, Phobos and Deimos, Exobiology**
3. Appearance of Mars from Earth.
4. Atmosphere of Mars and its ability to contain water and oxygen.
5. The missions to Mars, their findings, some pictures and information.
6. Mars' surface and interior.
7. Differences between Earth and Mars.
8. Information on meteors and asteroids, and the possibility of such a disaster occurring.
9. Life on other planets – the possibilities!!!
10. Ten interesting facts about Mars, we may not already know!
11. Your own design for a Space Station for Mars able to contain such huge amounts of people.



[Click here to see how you should carry out your task](#)

~ PROCESS ~

1. Form a group of 2 or 3 students.
2. You have 5 class periods to finish the project.
3. Fill out [Research Summary Page](#) as you search the web– this will include brief information about your finding and all the Internet links you have found based on the research.
4. You should not limit the information on your newsletter to what is required. Use your imagination and make your presentation as visual as possible. Don't forget, you can include this in your TY Portfolio.
4. Don't limit yourself just to the web. Look at encyclopaedias, magazines, newspaper articles and books.
5. In you project, include your own opinion about life on other planets in a small article.
6. Produce the project on Microsoft Publisher®, PowerPoint® or any other program, making it as visual and colourful as possible.



~ RESOURCES ~

General Search Tools:

[Encarta](#)

[Google](#)

[Alta Vista](#)

[Worldbook](#)

Space and Mars Links

[Nasa Kids Website](#)

[Nasa Space Quest](#)

[Amazing Space](#)

[Space Camp](#)

[The Space Place](#)

[Starchild](#)

[Space Kids](#)

Exploring Planets in the Classroom

[Exploration of Mars](#)

[Mars Rover Imagery](#)

[Destination Mars](#)

[Exploring Mars](#)

[How Mars Works](#)

[Life on Mars](#)

[Search for life on mars](#)

[BBC Exploring Mars](#)

[Exploratorium](#)

[Exploring the Red Planet](#)

~ EVALUATION ~

Your project will be assessed under the following guidelines.

CRITERIA	MARKS
Definitions	10
Space Travel Details	10
Appearance Description	5
Atmosphere	10
Interesting Facts	10
Life on Other Planets (Facts)	5
Life on Other Planets (Opinion)	5
Asteroids and Meteors	5
Space Station	10
Presentation	10
Originality	10
Team Effort	10
Total Marks	100

[Click here for Conclusions](#)

~ CONCLUSION ~

One-day planet Earth may face such a disaster and nearby planets that seem so far away now may prove to be mankind's only hope of survival. Space, the Universe and even the Milky Way are so vast; it is very hard to explain. We will never be able to answer many of the questions we have about the Universe, how it works, how big it is, how it was formed, how life began? These are all wonders of nature. We may not be able to answer them fully, but we have a huge number of theories about these enigma's/ Why don't you use some of the links to find out what you can about the questions you have?

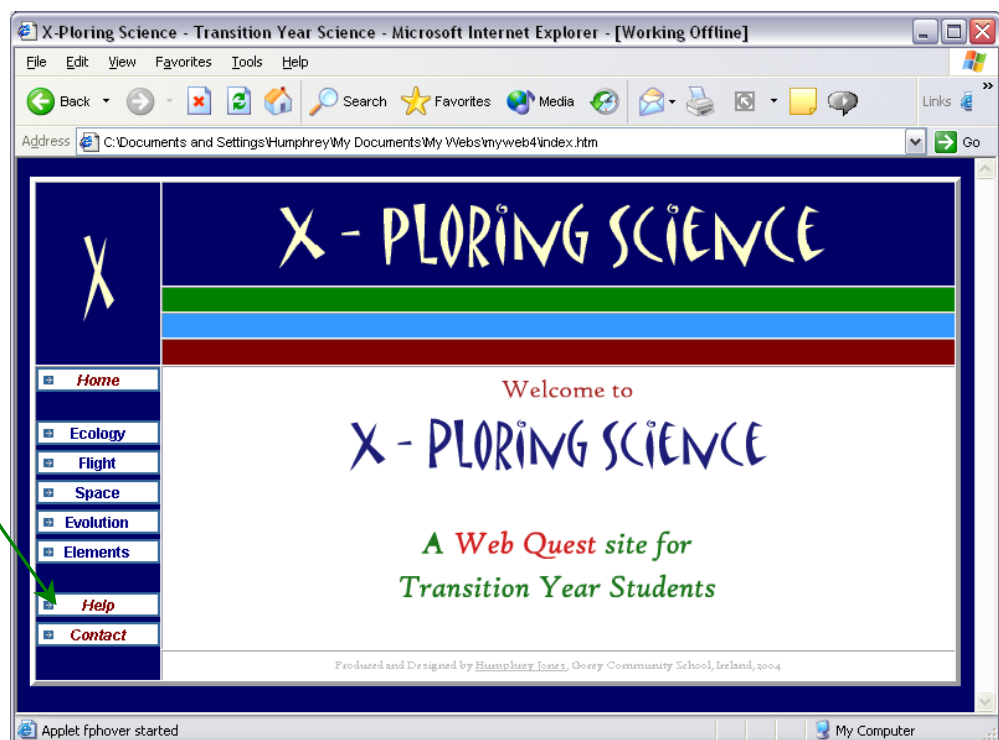


~ TEACHER GUIDELINES ~

The space webquest allows students combine imagination with fact as they explore the Internet and other resources to research the Red Planet. It opens up a number of questions about space and time, the universe and space travel. As a teacher, the webquest can be used to introduce a number of physics principles. It can also allow for greater discussion on space, the origin of life or any other area of interest. The webquest is self-explanatory, but a number of things can make it easier for both teacher and student.

1. Print out the [Research Summary Page](#) for each student or group.
2. Give some input into the use of Microsoft Publisher®
3. Emphasis the assessment procedures and stress the importance of originality and teamwork.
4. Place a time line on the project. 5 class periods is the recommended allocated time.

● For More information visit the [Help](#) section in the main site.



SPACE WEBQUEST

EARTH AND MARS – BLUE VS. RED

RESEARCH SUMMARY PAGE

Student Name:	
Definitions:	
Atmosphere	
Physical Appearance	
Life on Other Planets	
Interesting Facts	
Missions to Mars	
Space Travel (Shuttle)	
Space Station	
The Future	