**Design a Space Station**

**Core Lab 11-3B Grade Nice Science**

*CONGRATULATIONS!*  You have been selected to begin immediate development of a new space station to get you to MARS !!!

Design a self-sufficient space station that is going to keep you safe for a 1-year round-trip to Mars.

How would you design a space station that is safe for people to live in, taking into account all the environmental effects of being in space (including solar radiation, solar storms, and temperature control, among others)?

You can complete this project on your own or work in a group. Group size can be between two to four in size, no more. In groups, assign a job to each member of your design , such as communication and protection, food and nutrients, energy systems, waste disposal, etc.

**Procedure:**

1. Working in groups, identify the major environmental factors that a space station needs to protect against.

2. Research to find technology that will help protect people and equipment from the factors you identified.

3. Design components of a space station that uses the technologies you identified in step 2 to keep people and equipment safe.

4. List the resources that will need to be present to allow astronauts to live and work on a space station.

5. Build a model or create a diagram to show how you will obtain and dispose of the resources and to explain how the protective elements of your space station work.

This project will require you to research your topic online at home. If you don’t have Internet access, join a group with someone that does. Some class time will be made available as well.

Your design will need a write-up explaining each part of the design. A paragraph or two will be fine for each part. Include the URL of any website you make use of in your research.

The following is a list of some web sites that could help. There are many that you can use. This document has been put on my weebly site to make accessing the websites easier. (Simply click the link)

<http://www.nasa.gov/mission_pages/station/main/iss_construction.html>

<http://en.wikipedia.org/wiki/Space_station#Architecture>

<http://www.scifiideas.com/sfi/technology/10-space-station-concepts/>

<http://www.msnucleus.org/membership/html/k-6/as/benviron/6/asbe6_3a.html>

**Due Date**: I’d like the paper and models/designs passed in by **November 30.**