

· A L O O : T H E S O L A R S Y S T E M ; M R . L U B E L L

## R E S E A R C H A N A S A M I S S I O N

As you may know, NASA manages hundreds of missions that explore the universe we live in. Many of these involve robotic probes that get sent to specific destinations in the solar system such that we might learn more about those places. Indeed, it is such missions that provide scientists with some of the most valuable data in the field. Consider, for example, having *actual* Mars dust to study rather than photographs of the surface taken from Earth. To more fully understand what goes into one of these missions, please consider the following:

1. *What mission should I choose?*

Each and every NASA mission has its own website. To help you pick your favorite, check out NASA's Lunar and Planetary Sciences site:

<http://nssdc.gsfc.nasa.gov/planetary/>

There, you will find links for each planet, and on each planet's page, links that lead to heaps of information on missions to that planet. Once you've decided on one, research it as you see fit.

2. *What are its science goals?*

Generally, a science mission has a handful of specific goals it is trying to achieve. This helps focus the mission, which is a good thing for scientists, NASA, and tax payers. Determine what exactly your mission seeks to discover.

3. *Who's in charge?*

Despite being robotic missions, there are still real people involved. Look up one of the lead scientists on your mission and research his/her background, job, and interests. Think about answering questions like: Where does this person work? What sort of work do they do? What did they do to get there? Have they done any notable or impressive things in the past?

4. *Why is this mission important?*

Yes, these missions are researching cool things. But why do we care about your particular mission? This can be related back to the mission's goals. Consider why those were the goals chosen and how they fit into the larger scheme of the field.

After you've completed your research, please **type** and **staple** a **paper between 3 and 4 pages in length** that summarizes your findings on each of the four issues listed above. Papers that are not typed or stapled will have points deducted. Please also provide a brief **bibliography** noting all sources used in your research. The projects are due in class on **Tuesday, September 26<sup>th</sup>**. If you need help with any aspect of the project, please feel free to contact me.

## Grading

Your NASA Mission projects will be graded on a scale of 1-20. I will be checking that they meet the following criteria, weighted as indicated:

- I. Content – you must address each of the four points listed on the assignment and provide references.
  - A. Adequate mention and basic summary of the mission details (3 points)
  - B. Full discussion of the scientific goals (4 points)
  - C. Ample description of the lead scientist (3 points)
  - D. Well thought out discussion of the relevance of your mission (4 points)
  - E. Bibliography/references provided in a proper manner (2 points)
- II. Style – good writing is important
  - A. Was the paper organized in a clear and logical manner? (2 points)
  - B. Was the language fluid or were ample spelling, grammar, punctuation, or other issues present? (2 points)
- III. Other
  - A. Your mission **must** be a mission specifically devoted to the Solar System. Also, it **must** be a **NASA mission** that is **robotic in nature**. Missions that involve astronauts or have been managed by a space agency other than NASA are not considered to be valid for this project. Failure to pick a mission that satisfies these requirements will result in a three-point deduction. If you are uncertain whether the mission you're interested in is acceptable, please send me an email.
  - B. If your paper does not meet the minimum requirement of 3 pages, you will have points deducted based on how short it is. I will judge length in comparison to the standard 12-point font with double spacing. Papers that exceed 4 pages are allowed, but will not be given any extra consideration. So, to save both you and I time and effort, please keep your text below that limit.
  - C. Unless you find them to be an integral part of your mission, please avoid getting bogged down in its technical details. Though such things as the spacecraft design and launch vehicle may be interesting, they are not necessarily the facts the project is asking you to focus on. Spending time on such things will generally affect the distribution of material in your paper in an adverse manner, thus potentially resulting in lost points.
  - D. I reserve the right to subtract points at will for factual inaccuracies and other grievances.