A Guide to Exoplanets

By Winston Wright
Introduction

• Exoplanet – planetary body outside of the known solar system.
• More than 800 have been classified as actual exoplanets.
Significance

• Studying exoplanets could give scientist better understanding of Earth.
• Exploration and potential human colonization of planets.
Popular Exoplanets (Solar Systems)

- Alpha Centauri - About 4.2 light years
- Gliese 581 – 20.22 light years
Detecting Exoplanets

The Radial Velocity Method

ESO Press Photo 22e/07 (25 April 2007)

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Data on Exoplanets

• Record data about the different solar system
• Prepare experiments for future probes to different exoplanets.
Habitable Zone

- Search for “Earth Like” exoplanets.
- Rocky land formation and vast amounts of water.

Colored image of surface of Titan

Artist depiction of Earth Like planet
Terraformation

• Artificially recreate Earth's environment and atmosphere on another planet.
• Multiple theoretical approaches have been considered.
Terraformation cont.
Works Cited


- [http://www.youtube.com/watch?v=BNlfNe12BKE](http://www.youtube.com/watch?v=BNlfNe12BKE)

- [http://herschel.cf.ac.uk/results/gliese-581](http://herschel.cf.ac.uk/results/gliese-581)


- [http://upload.wikimedia.org/wikipedia/commons/3/33/ESO_-The_Radial_Velocity_Method_%28by%29.jpg](http://upload.wikimedia.org/wikipedia/commons/3/33/ESO_-The_Radial_Velocity_Method_%28by%29.jpg)

- [http://www.nasa.gov/mul9media/imagegallery/image_feature_793.html](http://www.nasa.gov/mul9media/imagegallery/image_feature_793.html)
Activity

• A privatized aerospace company has assigned two groups of scientist with the task of picking an exoplanet to send a probe to in the next decade.

• The two planetary candidates are:
  Gliese 581
  Alpha Centauri

• Use what you have learned today (and further research) to determine which of the two planetary systems would be best to send a probe to in the next decade.
• 10 minute presentation/conversation