

*CPSG101 Science & Global Change First Year Colloquium II and Sophomore Colloquium
Field Trip: National Museum of Air & Space, Washington, DC
February 26, 2023*

Exploring the Planets (2nd Floor)

1) What fields of science and aspect(s) of aerospace science or technology are presented? Be specific.

The fields of science touched upon within this hall are primarily astronomy and geology. Technology presented is mainly robots, spacecraft, telescopes, and cameras.

2) What specific concepts, discoveries, or inventions are portrayed? Select three (3) such examples from EACH gallery.

Specific concepts touched upon are geologic processes upon other planets (plate tectonics, erosion, volcanic activity, and so on). Technologies mentioned are the Mars rovers Curiosity and Perseverance, along with spacecraft that have traveled to other celestial bodies (such as Voyager).

3) How does the gallery convey information relevant to 2 above: give specific examples of specimens, drawings, texts, graphics, etc.

In order to explain to laypeople how geologic processes work (both on Earth and other planets), an entire wall is dedicated to posters and diagrams. A few examples would be the poster that explains how plate tectonics work on Earth (and why they are seemingly absent from Venus), how ancient volcanic events on Venus have left marks upon the surface that can be seen with radar, and how flowing water millions of years ago have carved out river beds that can still be seen to this day.

4) What education level do you think the hall is aimed at, and why?

The hall seems to be aimed at all ages. The interactive exhibits aren't challenging but they're also not extremely easy, perfect for teenagers. Much of the information is extremely wordy, so it is hard to understand from a kid's perspective. Yet at the same time, the main part of the hall, the dual-screens in the middle, lay out the information in a manner simple enough for even a child to understand.

5) To what degree does the exhibit include "interactive components" (e.g., hands-on activities, computers, etc.)? [If the hall doesn't, please suggest an interactive component they could use!]

The hall had models of rocks you could touch and it had little interactive quizzes where you had to figure out which source of energy would work best in powering a rover/probe.

6) Do you find that the interactive components were effective at conveying the information? If yes, explain how (using specifics); if no, explain why not (again, using specifics). [If N/A, put N/A]

The interactive components were sufficient at their purpose. The interactive models of rocks and minerals were good examples for people to see how geologic processes outside of Earth compare and contrast to those on Earth. The interactive quizzes were pretty helpful at making one understand why some sources of energy are more suitable in specific situations compared to others.

Destination Moon (2nd Floor)

1) What fields of science and aspect(s) of aerospace science or technology are presented? Be specific.

Fields of science touched upon in this hall are physical, biological, and astronomical. Aspects of technology touched upon are mechanical and electrical and space engineering, medical support, and cameras.

2) What specific concepts, discoveries, or inventions are portrayed? Select three (3) such examples from EACH gallery.

Specific concepts touched upon were past human beliefs about life on the moon (such as the Chinese myth about a girl who drank the elixir of immortality and went to live there), rockets, and having people survive on the way to and within space.

3) How does the gallery convey information relevant to 2 above: give specific examples of specimens, drawings, texts, graphics, etc.

The gallery conveys information relevant to rockets through its life-size models of the modules, along with scale-models of various rockets used. The gallery conveys information about human survival on the way to and in space through examples of failures in engineering and the improvements necessary (such as the section on rocket hatches) and the suits necessary for space travel (as shown by the life-size model of an Apollo suit).

4) What education level do you think the hall is aimed at, and why?

The hall seems to be aimed at teenagers and adults under 60. Much of the information is given in the form of wordy posters, which makes it not too efficient at informing kids. The information is also mostly historical in nature, which wouldn't be particularly relevant for someone who lived through that age in history.

5) To what degree does the exhibit include “interactive components” (e.g., hands-on activities, computers, etc.)? [If the hall doesn’t, please suggest an interactive component they could use!]

The interactive section consists of a computer with a small quiz where you can make vital decisions that alter the space race and an astronaut’s journey.

6) Do you find that the interactive components were effective at conveying the information? If yes, explain how (using specifics); if no, explain why not (again, using specifics). [If N/A, put N/A]

Not really, the small quiz was accurate in information the results were interesting, but the process itself was quite boring, and too complex for younger children (I saw one who was about ten years old that had no idea what the quiz was about and where randomly pressing buttons).

One World Connected (2nd Floor)

1) What fields of science and aspect(s) of aerospace science or technology are presented? Be specific.

Fields of science touched upon are the geographical and radiowave sciences. Technologies touched upon are navigational aids, aero engineering, and satellite engineering.

2) What specific concepts, discoveries, or inventions are portrayed? Select three (3) such examples from EACH gallery.

Specific concepts touched upon were navigation in the modern-day and logistic transportation. Technologies touched upon were satellites.

3) How does the gallery convey information relevant to 2 above: give specific examples of specimens, drawings, texts, graphics, etc.

The gallery conveys information related to navigation through an exhibit related to GPS and how it works (along with how people formerly navigated in the past). The gallery conveys information about satellites through various scale models and posters that explain how we use them in our daily lives.

4) What education level do you think the hall is aimed at, and why?

The hall is aimed at children and teens. Most of the interactive exhibits were on the simpler end, and staff were there to explain to younger children how it worked. Yet there were still some posters that were quite wordy and would require a higher reading level to understand.

The hall isn't exactly aimed at adults (though it is still engaging for them), since most adults have seen these technologies be developed and implemented in their lifetimes.

5) To what degree does the exhibit include “interactive components” (e.g., hands-on activities, computers, etc.)? [If the hall doesn't, please suggest an interactive component they could use!]

The hall includes an interactive exhibit about how air pressure works and an interactive exhibit about how radios work.

6) Do you find that the interactive components were effective at conveying the information? If yes, explain how (using specifics); if no, explain why not (again, using specifics). [If N/A, put N/A]

The interactive components were effective at conveying the information. The one on air pressure explained how it affects boiling point and technologies (along with us). The one on radios was simple enough for even children to understand.

D) Astronomy is a difficult subject to portray in museums, and is a field in which new discoveries are being made all the time, sometimes greatly changing our previous understanding. How did the exhibit designers portray astronomical concepts and how (if at all) they tried to make updated information available to the visitors?

Exhibit designers portrayed astronomical concepts in terms of references that we could understand (charts depicting or talking about the solar system usually had the Earth as a reference point). The information was pretty up-to-date, and fields where new discoveries will be made were clearly stated to be works-in-progress (so instead of stating that there have been 5,000 exoplanets discovered to date, a number that would change within the year, the exhibit states something along the lines of 5,000+ exoplanets have been discovered, which accounts for future discoveries).