

Elon Musk and Space Exploration: Your Call to Space

Presentation date:

Practice presentation date:

Completed: In assigned groups of 2-3.

Elon Musk, CEO and Founder of SpaceX, a private American space transport services company, is looking for the best planet in our Solar System to colonize. As part of their research team, you have been tasked by Elon Musk to create a powerpoint to compare Earth to another planet or moon in our solar system, for a presentation on space exploration.

Learning Outcomes:

1. Recognize that the other eight known planets, which revolve around the Sun, have characteristics and surface conditions that are different from Earth, which will affect colonization ability; and identify examples of those differences.
2. Recognize that not only Earth, but other planets, have moons; and identify examples of similarities and differences in the characteristics of those moons.
3. Investigate Terraform processes, current research, and the potential to terraform your chosen planet.
4. Explore different occupations related to space exploration and travel.

Your powerpoint must include:

Part A: Background

Using books, Sky Science apps, or encyclopedias, research information about your planet so that you can answer:

- Where did the planet get its name?
- How was the planet formed or created? Write a paragraph that explains what you know.

As a presenter, you work for Elon Musk. What is your job title? What is your roles and responsibilities. You must introduce yourself at the start of the project.

Part B: Compare and Contrast

Using PowerPoint or Keynote, create a presentation that compares and contrasts the planet you have chosen to Earth.

Your presentation must include:

- At least 5 interesting facts or characteristics about your planet
- A table or chart comparing (to Earth) the
 - Size
 - Circumference
 - Diameter
 - Relative Size (in comparison to earth)
 - Distance from the Sun
 - Orbit time
 - Atmosphere components
 - Temperature
 - What planet is made of (composition)
 - What is the surface conditions?
 - Does the planet have moons?
 - Sources (please refer to rubric)
 - Your paragraph from Part A (at the end after sources)

Part C: Terraforming the Planet- Science Fiction meets Reality

Terraforming refers to the idea that we one day may be able to transform a planet so it is habitable for human life. Using research, expert opinions, and your IMAGINATION, provide 2-3 additional slides, stating what would have to happen to the planet for humans to be able to inhabit the earth and provide a imaginative solution to completing this task.

Rubric

	Level 4	Level 3	Level 2	Level 1
Understands and makes connections between concepts	<p>All of the following information has been provided: -Background paragraph -Compare and Contrast of Planet (Size, circumference, diameter, relative size, distance from the sun, orbit time, atmospheric conditions, temperature, composition, surface conditions, moons)</p> <p>Demonstrates above and beyond understanding of their planet.. Student has done independent research and provided information beyond what was provided in class.</p>	<p>All of the following information has been provided: -Background paragraph -Compare and Contrast of Planet (Size, circumference, diameter, relative size, distance from the sun, orbit time, atmospheric conditions, temperature, composition, surface conditions, moons)</p> <p>Demonstrates good understanding of their planet Good details are given, and quality is shown.</p>	<p>Most of the following information has been provided: -Background paragraph -Compare and Contrast of Planet (Size, circumference, diameter, relative size, distance from the sun, orbit time, atmospheric conditions, temperature, composition, surface conditions, moons)</p> <p>Demonstrates basic understanding of their planet Basic details are given. Bare minimum work.</p>	<p>Missing 3 or more of the following: -Background paragraph -Compare and Contrast of Planet (Size, circumference, diameter, relative size, distance from the sun, orbit time, atmospheric conditions, temperature, composition, surface conditions, moons)</p> <p>Does not demonstrate understanding of their planet.</p>
Analyzes and solves problems through scientific reasoning	<p>Terraform Section: Imaginative and creative, while calling upon expert opinions in the field. High degree of thought and research has gone into the solution.</p>	<p>Terraform Section: Imaginative solution, with a well thought out idea. Good attempt is made at using research to find a solution</p>	<p>Terraform Section: Basic solution. Some attempt is made at using research to find a solution.</p>	<p>Solution is not complete. No attempt at research to find a solution.</p>
Develops skills for inquiry and communication	<p>Sources: Sources are recorded at the end of the powerpoint. 8-10 sources are used from a variety of sources: Books, Websites, Encyclopedia Articles, Videos, Podcasts</p> <p>Powerpoint: Excellent neatness and organization of presentation. Titles, headings, bullets, and lists are all utilized. Images are connected to content and add to the presentation. Details are excellent, but concise.</p>	<p>Sources: Sources are recorded at the end of the powerpoint. 6-7 sources are used from a variety of sources: Books, Websites, Encyclopedia Articles, Videos, Podcasts</p> <p>Powerpoint: Very neat and strong organization of presentation. Titles, headings, bullets, and lists are utilized. Images are connected to content and add to presentation. Details are good, but could be edited.</p>	<p>Sources: Sources are recorded at the end of the powerpoint. 4-5 sources are used from one type (mostly websites).</p> <p>Powerpoint: Neat; information is mostly organized. Some attempt at titles, headings, bullets and lists are used. Images are somewhat connected to content and add to presentation. Details are basic, and could be edited.</p>	<p>Sources: Sources are used, but they are either not applicable, or not enough.</p> <p>Powerpoint: Messy and unorganized. No attempt at headings or titles. Images do not add to content or presentation. Details are not complete.</p>
Constructs meaning and makes connections through speaking	<p>Excellent enthusiasm is evident Presentation was rehearsed (essentially no reading, high level of eye contact, voice modulation). Presentation is interesting and creative. Audience is engaged because everyone is included, the presentation is interactive, and everyone can hear.</p>	<p>Good enthusiasm is evident. Presentation was rehearsed (minimal reading, high level of eye contact, voice modulation). Presentation is interesting and creative. Audience is engaged because everyone is included and everyone can hear.</p>	<p>Some enthusiasm evident. Presentation was somewhat rehearsed (reading, but made eye contact with the audience, attempt at voice modulation). Presentation is somewhat interesting or creative. Audience is engaged because everyone is included and everyone can hear.</p>	<p>Presentation has very little enthusiasm Presentation does not feel rehearsed (read product and/or did not make eye contact with the Audience) Presentation lacks audience interest because not all students could hear, or the audience was not engaged.</p>

Signed by Student _____ Date: _____