Resources on De-Jargoning Your Talks

- American Geophysical Union's Watch Your Words
- De-Jargonizer: http://scienceandpublic.com/Home/About?whatIsIt

Research

- Jargon disrupts our ability to fluently process scientific information (even when definitions are provided).
- The use of jargon affects audience's identification with the science community, scientific interest, and perceived understanding.
- It may undermine our goals in engaging audiences.
- "Scientists and experts should use easy-to-understand language and clear communication when seeking to engage the intended audience with greater dialogue, participation, and inclusiveness."

  "The Effects of Jargon on Processing Fluency, Self-Perceptions, and Scientific Engagement," https://journals.sagepub.com/doi/full/10.1177/0261927X20902177

  "The contexts and dynamics of science communication and language," Journal of Language and Social Psychology, 36(1), 127-139. https://doi.org/10.1177/0261927X16663257

General Understanding of Planetary Science

Planetary scientists sharing their research with audiences need to know what to expect—will this audience already understand some of the fundamental concepts related to their work? Which terms will confuse audiences? What vocabulary will be familiar to groups of students?

Each audience is different. While inaccurate, generalizations can provide a starting point as you plan your presentation or activities.

An excellent way to prepare for engaging an audience is to plan your presentation or activities with input from members of that audience.

Generalizations about *Elementary Students'* (ages 5-10) knowledge

- Many students, even preschool students, know the names of the planets and their order.
- Many elementary students are not sure of the contents of our solar system and may think it includes other stars, galaxies, and even black holes.
- Many young elementary students (even up to 10 years old but commonly up to 7 years) may not understand that the Earth's rotation causes day and night.
- Many older elementary students (8 years and older) have heard that the planets revolve around the Sun, but may confuse rotation and revolution.
- Many older elementary students (8 years and older) have heard that the Moon orbits the Earth but may not know how long it takes.
- Most elementary students (8 years and older) have learned some of the Moon's phases.
- Most elementary students have difficulty understanding the reason for seasons and for the Moon's phases.
- Many elementary students have not learned characteristics of the planets (such as their size, mass, composition).

- Many elementary students have not learned about the moons around other planets in our solar system.

Generalizations about *Middle School Students'* (ages 11-14) knowledge

- Many students are not sure of the contents of our solar system and may think it includes other stars, galaxies, and even black holes.
- Many students may confuse rotation and revolution; some may think the Earth takes a day to orbit the Sun.
- Many students and adults have difficulty understanding the reason for seasons and for the Moon's phases.
- Some middle school students have learned some of the characteristics of planets (such as their size, mass, composition).
- Most middle school students know that the Earth has layers, including the core, mantle, and crust.
- Many students (and adults) do not know how to read or interpret a graph.
- Many students and adults don't have practice applying their mathematical knowledge to science.

Generalizations about *High School and Adult Audiences'* knowledge

- Audiences with a strong interest in space (such as amateur astronomy clubs or NASA volunteers) may be more familiar with NASA missions but less familiar with geology concepts.
- Most will know the names of the planets; some may not recall their order.
- Many will have issues with scales of objects in the solar system. They may not know how big or far away the planets are; they may think Mars is bigger than the Earth.
- Many confuse the solar system, the Milky Way galaxy, and the universe. This can cause confusion between exoplanets and objects within the solar system, the formation of the solar system and the Big Bang, and the expectation that exotic astronomical bodies are common place within the solar system.
- Most do not remember details about planetary characteristics, such as composition, temperature, and mass.
- Many can confuse science fiction with space exploration, and will assume that humans have traveled to Mars and even beyond the solar system.

Most audiences will not be familiar with common geological or astronomical abbreviations and terminology. Consider *replacing* planetary science abbreviations such as GA and KBO, and *define* other terms such as volatiles, ices, ice giants, silicates, mafic, felsic, Aeolian, fluvial, magnetosphere, Kuiper Belt, Oort Cloud, etc, *if you need to use them*.

Do's and Don'ts

- Do plan your presentation or activities with input from members of that audience.
- Don't use technical jargon or abbreviations.
- Do include relevant images to help the audience understand the concepts.
- Do not include graphs in presentations unless absolutely necessary.
- If your presentation includes a graph, spend time explaining the variables and significance of the graph.

For more information or suggestions, email us.