

A photograph of four people in a forest. On the left, a person in a dark sweater holds a branch with bright yellow moss. In the center, a person in a red plaid shirt and a bright yellow beanie looks upwards. To the right, a person in a blue shirt and a person in a teal jacket are looking down at something in their hands. The background consists of tall evergreen trees under an overcast sky.

# Oral Presentation; rules and pitfalls

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# Rules

followed by HHS GGGE, AGU, GSA, and many others

- 12 min talk time (cannot be exceeded under any circumstances; except grad defenses check with advisor)
- 3 min questions and answers + transition
- 12-15 slides
- Spend about 1 minute per slide



Include illustrations that support your story

# organization

- Motivation+intro [it is not known how far Moon is from Earth, to refine the orbital calculations an accurate distance needs to be known]
  - What is the question you try to answer
  - Why should anyone care about it
- Prior research
  - What is currently known about this topic [distance is about 400,000 km based on triangulation]
    - No need to review everything
- Field area
  - Where is your field work done, pertinent info about it
- Methods
  - How do you collect your data (field methods)[bounce a laser off the moon, measure time of travel]
  - How do you analyze your data (math+analyses)[speed of light is constant multiply this with the travel time]
- Results (for a proposal give expected results) [distance varies from 356,400-406,700 km]
  - Present your findings
  - (for a proposal: based on my preliminary analyses and the prior work the distance will likely be variable)
- Discussion
  - How do these results compare to other prior published results
- Conclusions [the distance to moon is not constant and varies between 356,400-406,700 km, this changes all the calculations on Moon and Earth orbits]
  - What is the take home message
- Acknowledgements [This research was possible thanks to the Moon Monkey who held the mirror in the moon]
  - Who do you want to recognize for helping you
  - Should be short and to the point
  - Seldom includes people who did not directly contribute to the research

The red text about the Moon is largely made up (not facts based) to illustrate what goes to each section

# No nos, and yes yeses

- Do not waste a slide for an outline, unless you plan to do something unexpected
- Intro+prior research needs to be short; Methods+results+conclusions should take most of the space
- Make sure to have a clear research question in your intro/motivation section
- Include important references in the text (name and year). Full references are seldom included at the end of the talk. They can be found in your written document.
- If your research clearly lends itself for hypothesis testing include the hypothesis in the intro+motivation
- Many geological studies do not lend themselves for clear hypothesis testing and therefore do not include such statement
- Just listing a name of a computer program is not an adequate explanation of methods (example: I will determine when the next large Earth quake will hit Los Angeles by using Excel spreadsheet. You need to explain the math or methods [the software just automates and simplifies the calculations and usually it's name is immaterial])

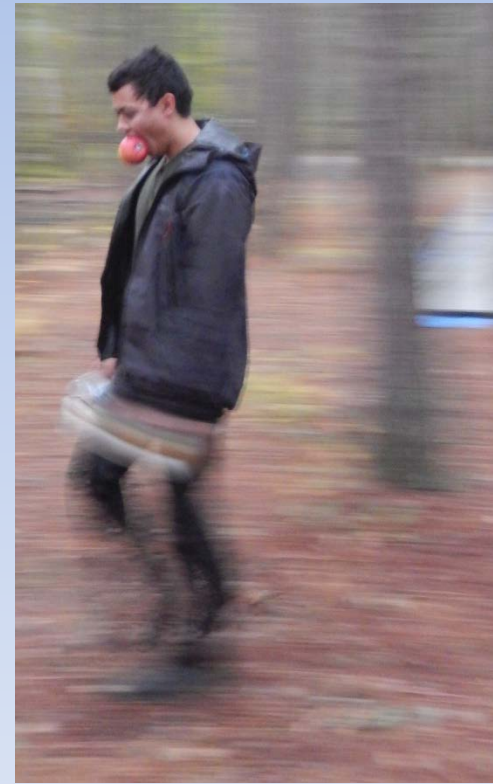
# Text and font

- Large enough font (this is 32, >28 easy to read, don't go under 20, this is 12)
- Small amount of text per slide (like this slide)
- Use bullets
- Use dark background (dark blue) and light lettering (yellow or white)

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# Talk and delivery

- Keep your **audience in mind** => explain the science so that everyone can understand at least the basics
- Face the audience
- Do **not** just **read the slides** out loud, but explain the bullets with simple clear manner
- Make **eye contact** with people in all sections of the room
- Mean what you say, **feel** your talk
- Do not stand behind the podium
  - Walk
  - Use your hands
  - (but don't go overboard with this)
- Know your stuff, be confident, but humble
- Use varying voice to emphasize and structure the talk
- Be **excited** about your topic!



Apple a day keeps Condor animated

# Figures, graphs, and tables

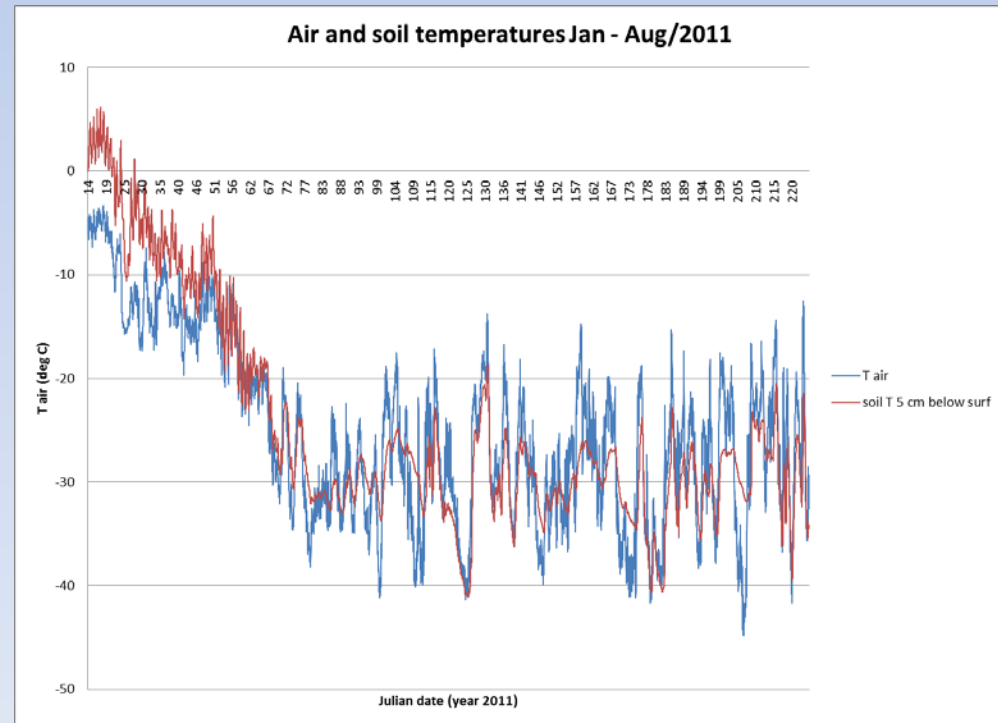
- Figures need to have caption, axes labels, and legible font
- verbally explain the axes and what the figure shows
- Explain what the audience is supposed to understand from the figure
- Avoid large tables with small font



Moraine Canyon Antarctica

1995-3498

siblo		babd		blank	
this	that	here	there	what	if
0.122	0.387	0.306	0.281	0.007	0.394
0.692	0.725	0.339	0.125	0.381	0.244
0.573	0.350	0.665	0.480	0.840	0.152
0.014	0.953	0.758	0.136	0.125	0.391
0.438	0.215	0.464	0.171	0.128	0.213
0.223	0.272	0.854	0.424	0.108	0.776
0.473	0.660	0.476	0.895	0.847	0.120
0.549	0.749	0.721	0.674	0.998	0.004
0.847	0.494	0.417	0.312	0.014	0.147
0.025	0.68	0.31	0.029	0.808	0.512
0.443	0.790	0.860	0.883	0.103	0.306
0.94	0.316	0.396	0.821	0.446	0.968
0.0885	0.277	0.364	0.333	0.408	0.604
0.552	0.489	0.939	0.61	0.737	0.903
0.855	0.528	0.937	0.616	0.237	0.177
0.831	0.955	0.187	0.861	0.47	0.987
0.973	0.144	0.696	0.486	0.538	0.669
0.677	0.008	0.917	0.061	0.209	0.416
0.227	0.880	0.497	0.552	0.385	0.489
0.681	0.938	0.353	0.648	0.293	0.788
0.698	0.968	0.672	0.282	0.829	0.142
0.055	0.829	0.317	0.649	0.51	0.252
0.123	0.182	0.166	0.413	0.463	0.157
0.448	0.196	0.976	0.808	0.976	0.468
0.802	0.182	0.539	0.167	0.635	0.223
0.502	0.877	0.198	0.293	0.474	0.073
0.106	0.776	0.287	0.607	0.916	0.070
0.94	0.044	0.116	0.612	0.59	0.585
0.270	0.265	0.278	0.039	0.889	0.920
0.085	0.19	0.724	0.141	0.689	0.245
0.666	0.268	0.954	0.895	0.597	0.302
0.651	0.758	0.649	0.586	0.314	0.807
0.008	0.014	0.080	0.607	0.125	0.321
0.237	0.491	0.422	0.491	0.484	0.48
0.188	0.644	0.305	0.962	0.472	0.756
0.33	0.46	0.775	0.542	0.461	0.74
0.207	0.945	0.684	0.272	0.920	0.579
0.865	0.633	0.658	0.788	0.904	0.817
0.871	0.445	0.053	0.988	0.167	0.557
0.671	0.92	0.275	0.46	0.187	0.21
0.385	0.633	0.272	0.467	0.696	0.975
0.147	0.092	0.755	0.877	0.895	0.966



# Take home message

- Clear, legible slides
- Exciting, animated delivery
- Proper use of illustrations/pictures
- Practice, practice, practice
  
- You will do great!