

## A presentation about giving a presentation

Laurel Schaider  
1.018/7.30J Final Lecture  
November 20, 2003

## Outline for today

- Components of an effective talk
- Visual guidelines
- Review
- Conclusions

## Components of presentation

- Set the stage
- Background
- State the question/hypothesis
- Describe your approach
- Sample data
- Conclusions

## Setting the stage

- You can have bullet points
- to tell the audience what
- you're going to talk about
- but what might be better
- is a picture to really
- set the stage

Picture of a fire along the side of a road.

Removed for copyright restriction.

See: <http://www.nifc.gov/gallery/manter.html>

How can this be prevented?

[www.nifc.gov](http://www.nifc.gov) - Sequoia National Forest California

<http://www.nifc.gov/gallery/manter.html>

What are we doing to rangeland genetic diversity?

<http://www.nau.edu/~envsci/sisk/courses/env440/SCBS/andy.htm>

Are we being  
affected by  
environmental  
estrogens?

[news.bbc.co.uk/1/hi/english/business/newsid\\_610000/610046.stm](http://news.bbc.co.uk/1/hi/english/business/newsid_610000/610046.stm)

[www.njeit.org/examples.htm](http://www.njeit.org/examples.htm)

<http://www.ecology.com/dr-jacks-natural-world/most-important-organism/>

## Introduction

- Why is your topic significant?
- What have other people studied about it?
- What is not known?

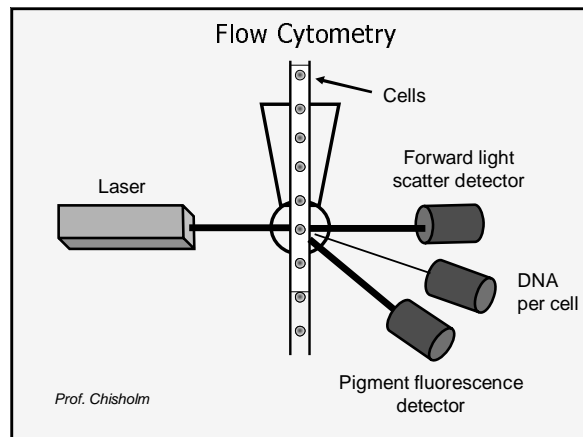
## State the Question/Hypothesis

- What is the major question or hypothesis you are testing?
- You can have 1 or 2 or 3, but not too many

What role do chelated metals play in total metal uptake?

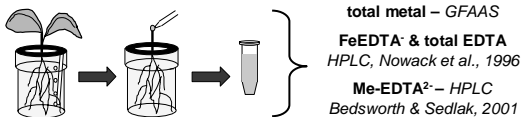
## Approach & methods

- Discuss approach
- Briefly include important methods
  - Site selection
  - Novel experimental techniques
  - Unfamiliar concepts
- Pictures are very helpful here!



## Methods

- Grow plants 4-6 weeks
- 2-3 days exposure metal-EDTA solutions



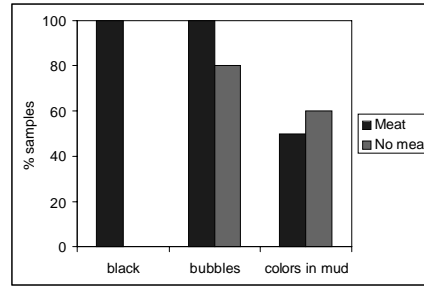
## Hypothesized results

- Graphs are really helpful
- Tables can be hard to read
- Just one or two examples... You don't have time to share all your hypothesized data

## Winogradsky data

	% black	% with bubbles	% with colors in mud
Meat	100	100	50
No Meat	0	80	60

## Winogradsky data

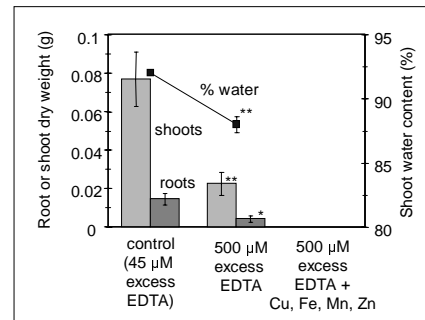


Potential further global emissions from fossil fuels (GtC)	Residence time of CO <sub>2</sub> in the atmosphere (yr)	Atmospheric CO <sub>2</sub> accumulation rate (GtC/yr)	Target reduction in atmospheric CO <sub>2</sub> over next 100 years (GtC)	Global annual CO <sub>2</sub> avoidance & capture target (GtC/yr)
650-4000 <sup>a</sup>	50-200 <sup>a</sup>	3.3 ± 0.2 <sup>a</sup>	Approx. 850 <sup>a</sup>	3.5 <sup>a</sup> (rise in emissions)

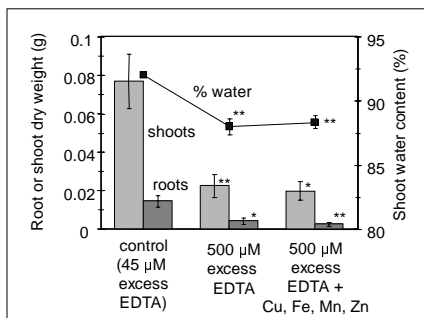
  

CO <sub>2</sub> Storage Option	Approx. Global Capacity (GtC)	Total Cost <sup>b</sup> (\$/tC)	Residence Time (years)	Sequestration Rate (GtC/yr)	Ecological Risks	Other Benefits	Deployment Status
Southern Ocean Fe-Fertilisation	152	113 <sup>c</sup>	Varies with duration of ocean fertilisation	1.52 (100 year average) <sup>d</sup>	Hypoxia, HABs, change in species composition	Stimulates fish production?	BRUNEX 1 & II, SORREE, and CARUSO field experiments
Deep Ocean Injection or Diffusion	> 1,000	>300 <sup>e</sup> (4.1) <sup>e</sup>	100-1000 <sup>e</sup>	Optimal rate to be determined	Ecosystem disruption due to CO <sub>2</sub> acidity <sup>f</sup>	None	DOE Testing off Kona Island in 2001-2002 <sup>g</sup>
Ocean Aquifers	100 <sup>h</sup> -220 <sup>h</sup>	50-60 <sup>h</sup> (4.7) <sup>h</sup>	Site specific <sup>h</sup>	>0.001 <sup>h</sup> (not yet maximized)	Groundwater impact, leakage to benthic zone	None	Commercial pilot at Sleipner in North Sea
Depleted Oil & Gas Reservoirs	180 <sup>i</sup>	(8.2) <sup>i</sup>	Up to 1,000,000 <sup>i</sup>	Site specific	Groundwater impact, land subsidence, subsidence	Extends value of reservoir site	
Agro-forestry	50-100 <sup>j</sup> (About 200 Mha suitable globally for this practice)	10 <sup>j</sup> -80 <sup>j</sup> (Depends on land & water cost, & value of product)	> 100 (Depends on management strategy)	1.2 <sup>j</sup> (2.2C/ha-yr) <sup>j</sup> (3.9-7.7C/ha-yr) <sup>k</sup>	Introduction of alien species, monoculturing, land/water use conflicts <sup>l</sup>	Biofuels and other products, wildlife habitat, watershed management.	J1 project in Sotelo Te, Mexico <sup>m</sup> . Farm management in USA for CO <sub>2</sub> .
Enhanced Oil Recovery	>16.6 <sup>n</sup>	40-60 <sup>n</sup>	Up to 1,000,000 <sup>n</sup>	0.4 <sup>n</sup>	Groundwater impact, land subsidence, subsidence	Increased oil recovery	Commercial use in North Sea & West Texas <sup>o</sup> .
Coal-bed CH <sub>4</sub>	(a) 1.4-4.1 (b) 18-22 (c) 40 <sup>p</sup>	(a) ~55 (b) ~55 (c) 350-450 <sup>p</sup>	Up to 1,000,000 <sup>p</sup>	Site specific	Low risk	Recovery of methane	Commercial pilots in New Mexico and Australia.

## Effects of excess EDTA



## Effects of excess EDTA



## Conclusions & Implications

- Tell them what you told them
- Re-iterate why it matters

## Planning content

- Consider knowledge of audience
- Consider what makes an interesting story
- Ask rhetorical questions
- You can't say everything that's in your proposal!

## General hints on effective visuals

- Concise
- Font
- Color

## General hints on effective visuals

- Don't use more words than are necessary
- Choose a font style and size that will allow your audience to see the words clearly
- While colors can be very useful, choose carefully and don't over-do it.

## Bullet points

- Watch out for alignment of bullets
- There should be a space between bullet and first word
- And second line should be aligned
- And there should be space between points
- This will make the words easier to read
- But you shouldn't have this many words in the first place, this is more as an example

## Bullet points

- Watch out for alignment of bullets
- There should be a space between bullet and first word
- And second line should be aligned
- And there should be space between points
- This will make the words easier to read
- But you shouldn't have this many words in the first place, this is more as an example

## Beware the flying bullet

- Some people like the bullet points
- To come flying in one-by-one
- This can be interesting and amusing
- But sometimes is distracting
- Plus people sometimes like to have time to read over all the points at their leisure

This is in size 40 font

This is in size 35 font

This is in size 30 font

This is in size 25 font

This is in size 20 font

This is in size 16 font

This is in size 12 font

This is in size 8 font

Fonts without serifs are easier to read than fonts with serifs. Serifs are those little lines like you have in Times New Roman font. This is in Arial Font size 20.

Fonts without serifs are easier to read than fonts with serifs. Serifs are those little lines like you have in Times New Roman font. This is in Comic Sans MS Font size 20.

Fonts without serifs are easier to read than fonts with serifs. Serifs are those little lines like you have in Times New Roman font. This is in Tahoma Font size 20.

Fonts without serifs are easier to read than fonts with serifs. Serifs are those little lines like you have in Times New Roman font. This is in Times New Roman Font size 20.

Fonts without serifs are easier to read than fonts with serifs. Serifs are those little lines like you have in Times New Roman font. This is in Palatino Font size 20.

Colors can be used very effectively.

Contrasting colors make a more dramatic effect than really similar colors, which might not show up as different.

Some colors show up better than others.

Too many colors, well, are just too many colors.

Of course, color choice depends on your background.

Contrasting colors make a more dramatic effect than really similar colors, which might not show up as different.

Some colors show up better than others.

Too many colors, well, are just too many colors.

## Speaking of backgrounds

- Dark backgrounds with light writing can be really nice

- Problems:

- Sometimes harder to make handouts
- Wastes a lot of ink if you want to photocopy
- Can darken a room

Beware of really busy or textured backgrounds

These can be distracting

And also make the text harder to read

## There are many pre-set options

- Some are interesting
- Some are distracting
- Choose carefully

## Engaging the audience

- Eye contact
- Pace
- Content – Who's your audience?

PRACTICE!

**biosphere**

**ecosystem**

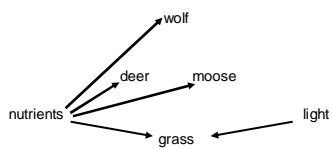
**community**

**population**

**organism**

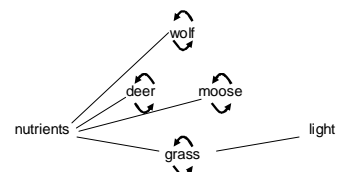
## Organism

Metabolisms: sources of C, energy, e<sup>-</sup>  
heterotrophs  
photoautotrophs and chemolithoautotrophs



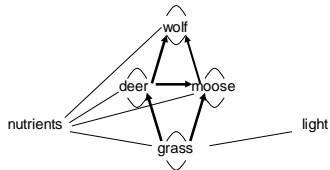
## Population

Population growth  
Intraspecific competition



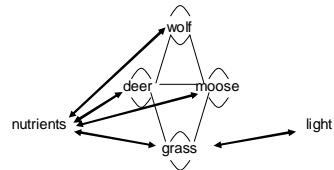
## Community

Interspecific competition  
 Predation  
 Food webs



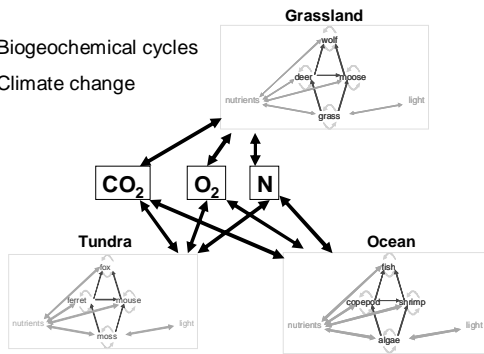
## Ecosystem

Productivity  
 Limiting nutrients  
 Life ↔ Surroundings



## Biosphere

Biogeochemical cycles  
 Climate change



## What else is ecology?

- Different biomes
  - Tropical ecology, marine ecology, etc.
- Different organisms
  - Plants, microbes, animals
- Population & community ecology
- Evolutionary ecology

## Want to learn more?

Department of Organismic & Evolutionary  
 Biology

Evolution of Plant Life in Geologic Time  
 Biological Oceanography  
 Tropical Insect Systematics  
 Global Change Biology  
 Topics in Marine Biology  
 Nature and Regulation of Marine Ecosystems  
 Forest Ecology

Ecology is a science

Ecology is a science  
...but ecological principles can be applied  
to other aspects of our lives

*Thanks Sagol Gracias Shukriya  
Merci Tashakkur Danke Takk  
Salamat Arigato Komapsumnida  
Xie xie Spasibo Tack Khawpkhun  
Vinaka Köszönöm Asante Nandri  
Ngiyabonga Cám ón Dakujem  
Tapadh leat Dhannvaad Kongoi  
Gratia Makasih Dankie Shukran*