

How to Give a Scientific Presentation

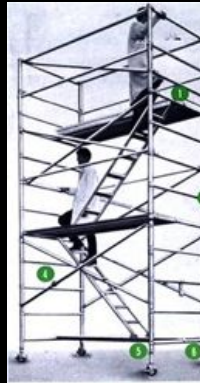
Modified after Stephanie Pfirman



<http://mstroud4.files.wordpress.com/2009/10/audienceparticipation.jpg>

Structure

- Intro/overview
- Research question(s)
- Methods





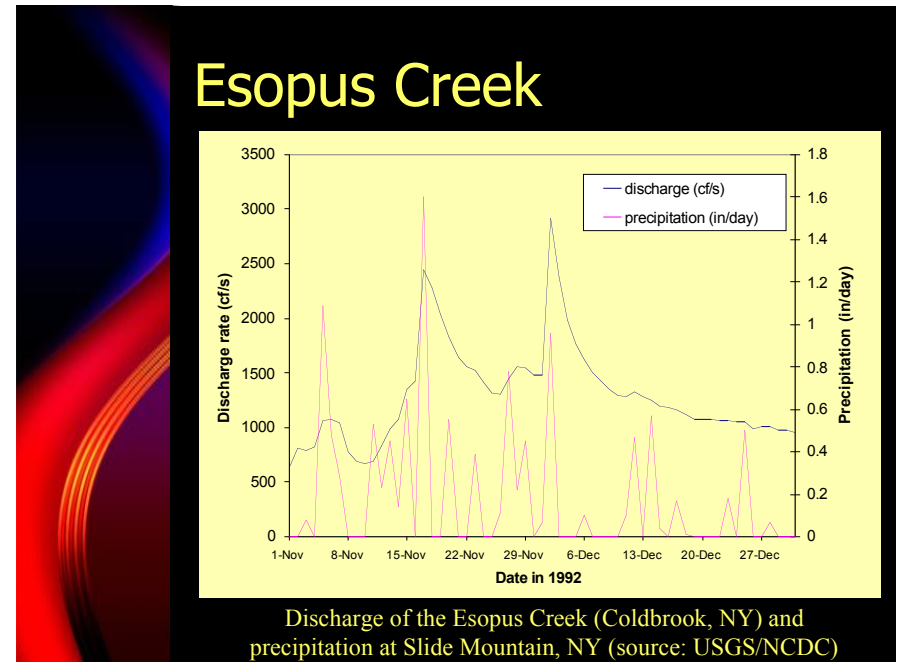
Structure

- Intro/overview
- Research question(s)
- Methods
- Results
 - Greatest hits
 - Figures

Esopus Creek

date	discharge (cf/s)	precipitation (in/day)	date	discharge (cf/s)	precipitation (in/day)
1-Nov	631	0	1-Dec	1480	0.07
2-Nov	808	0	2-Dec	2920	0.96
3-Nov	794	0.08	3-Dec	2380	0
4-Nov	826	0	4-Dec	1990	0
5-Nov	1060	1.09	5-Dec	1770	0
6-Nov	1080	0.48	6-Dec	1620	0.1
7-Nov	1040	0.28	7-Dec	1500	0
8-Nov	779	0	8-Dec	1420	0
9-Nov	686	0	9-Dec	1350	0
10-Nov	670	0	10-Dec	1290	0
11-Nov	696	0.53	11-Dec	1280	0.1
12-Nov	831	0.23	12-Dec	1330	0.47
13-Nov	985	0.45	13-Dec	1280	0
14-Nov	1080	0.14	14-Dec	1250	0.57
15-Nov	1350	0.65	15-Dec	1190	0.04
16-Nov	1430	0	16-Dec	1180	0
17-Nov	2440	1.6	17-Dec	1160	0.17
18-Nov	2280	0	18-Dec	1120	0.01
19-Nov	2040	0	19-Dec	1080	0
20-Nov	1830	0.55	20-Dec	1070	0
21-Nov	1650	0	21-Dec	1080	0
22-Nov	1560	0	22-Dec	1060	0
23-Nov	1520	0.39	23-Dec	1060	0.18
24-Nov	1410	0	24-Dec	1050	0
25-Nov	1320	0	25-Dec	1050	0.5
26-Nov	1310	0.11	26-Dec	986	0
27-Nov	1450	0.78	27-Dec	1010	0
28-Nov	1560	0.22	28-Dec	1010	0.07
29-Nov	1550	0.45	29-Dec	977	0
30-Nov	1480	0	30-Dec	972	0
			31-Dec	957	0

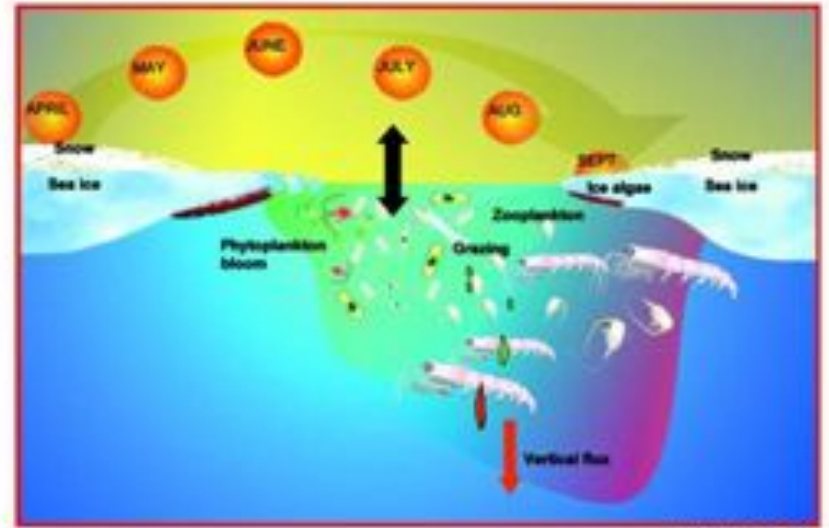
Discharge of the Esopus Creek (Coldbrook, NY) and precipitation at Slide Mountain, NY (source: USGS/NCDC)



Figures

- Keep `em simple
- Use logical colors
 - Blue = cold, red = warm, dark = little, bright = a lot
 - Invisible color
 - Meaning attached to colors
- Explain axes and variables
- Include reference (info and images)

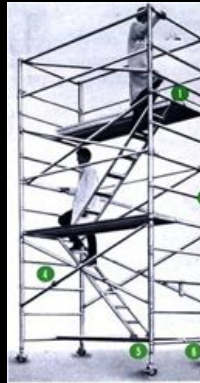
<http://www.cs.aau.dk/~luca/SLIDES/howtotalk-ru.pdf>



Wilmann et al., 2003

Structure

- Intro/overview
- Research question(s)
- Methods
- Results
 - Greatest hits
 - Figures
- Discussion
 - Expected results?
 - Put in context
 - What went wrong/how improve?
 - Future directions
- Summary/Conclusions
- References



Preparing the Presentation

- Average 1 slide per minute
- No sounds! Judicious use of animations
- Use 3-5 bullets per page
- Consistent appearance
- Spellingcheck

Fonts

Type size should be 20 points or larger*:

18 point

20 point

24 point

28 point

36 point

AVOID USING ALL CAPITAL LETTERS
UNLESS YOU WANT TO SHOUT AT
YOUR AUDIENCE

* References can be in 12-14 point font <http://www.fw.msu.edu/orgs/gso/documents/GSOWorkshopDocsSp2006/PresentationTipsinPowerPoint.ppt#307.6,Powerpoint basics: 1. What font to use>

Fonts (cont.)

- Sans-serif:
 - better for powerpoint presentations
- Serif:
 - better for large blocks of text (e.g., written presentations)

Color

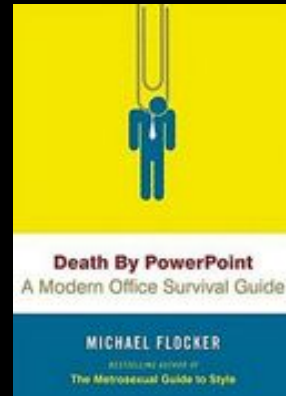
Dark letters against a light background
work best when the lights are on.

Color

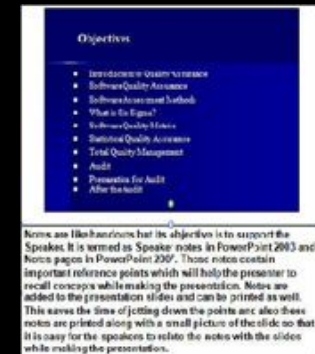
But mama likes light colors against a
dark background

Be prepared

- Set up early
- Backups
- Dress snappily



Notes



www.com.msu.edu/.../powerpoint/printing.htm

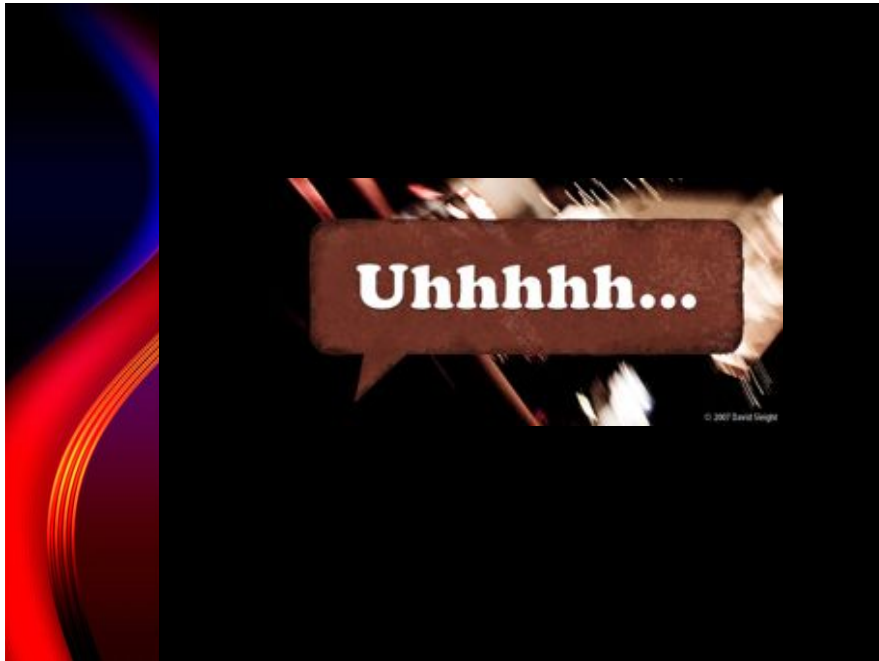


*"I need someone well versed in the art of torture—
do you know PowerPoint?"*

Rehearsing

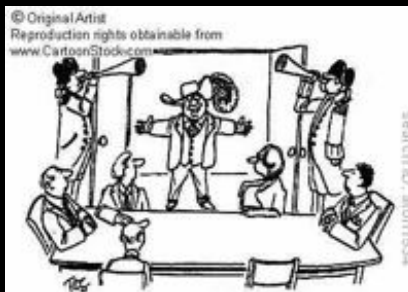
- Practice out loud
 - You discover what you don't understand
 - You come up with better phrasings and ways to describe things
 - Stay within the time limit
 - The more rehearsing, the better!
 - Uptalking

<http://www.fw.msu.edu/orgs/gso/documents/GSOWorkshopDocsSp2006/TipsforGivingaScientificPresentation.pdf>



Giving the Presentation

- Starting out is the hardest part
 - To get going, memorize the first few lines



Buddy believed that successful presentations began with the entrance.

Giving the Presentation

- Experienced speakers:
 - Speak freely and look directly at audience
- Inexperienced speakers:
 - Put outline and key points of your presentation on your slides



- Look at people, not slides, during presentation
- Stand where the figures can be seen
- Be enthusiastic
- Don't worry about stopping to think
- Don't rush
 - Figure out which slide is your half-way mark and use that to check your time

www.clarityrules.org

Giving the Presentation (cont.)

- Don't apologize
- Pointer etiquette



www.laylaland.org

Ending



- Announce the ending
- Come back to the big picture
- Future directions

<http://www.cs.aau.dk/~luca/SLIDES/howtotalk-ru.pdf>

Questions and Answers



- Identifies parts the audience did not understand
- Helps you see something from a new perspective
- You can repeat the question
- Keep answers short
- Anticipate and prepare for potential questions
 - Have extra slides ready (e.g., methods, instrumentation)

<http://www.erp.wisc.edu/profdev/Talkhandout05.doc>
<http://www.firekills.gov.uk/seniors/cool/howstart/images/howstart.gif>