

# ***2003 REU Communications Workshop***



***“Delivering an effective scientific presentation”***

**Instructor: Todd C. McDevitt**

**June 24, 2003**

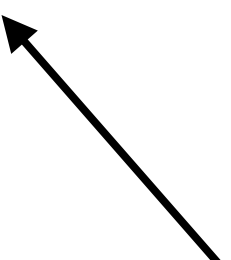
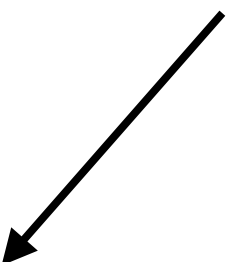
# Objective



Visual learners



Listening learners



*Appeal to both and get your point across*

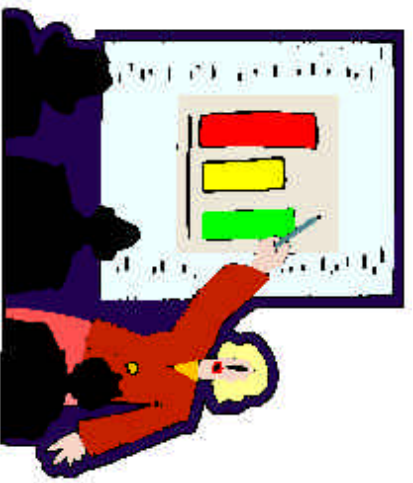
- People remember **10%** of what they hear
- Short-term memory retains **5-7** ideas

\*\* Adapted from Buddy Rathner's "Effective communication: the art of oral presentation" \*\*

# Significance

***“The skill of presenting an engaging and well-structured seminar often determines our professional reputation and future success...”***

Robert R.H. Anholt, Dazzle ‘Em With Style

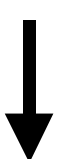


- May be first chance to associate name with face
- One shot to communicate ideas effectively

# What is the Purpose?

## **Not to:**

- Recite everything you know
- “Flex” your cranial muscle
- Present every detail



**BORING!**

## **It is to:**

- Give a feel for what you do
- Interest/stimulate the audience
- Provoke conversation/discussion

# Optimism for Success

*“The general standard is so low that you don’t have to be outstanding to stand out.”*

**You’ll watch many more than you ever have to give.**

**But keep in mind:**

*“A speech is a solemn responsibility. The man who makes a bad 30 minute speech to 200 people wastes only a half an hour of his own time. But he wastes **100 hours** of the audience’s time – more than 4 days – which should be a hanging offense.”*

Jenkin Lloyd Jones



# Preparation

The  to a presentation's success:

- 1) Create good slides
- 2) Rehearse delivery (alone & with audience)
- 3) Revise, revise, revise
- 4) Anticipate questions & the unexpected

***Lack of careful preparation is insulting!***

# Know your ...

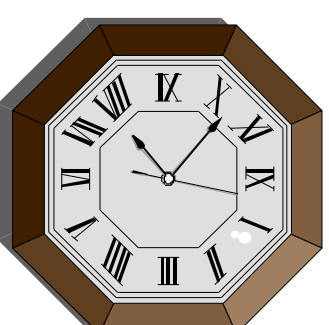
Objective: what do you want to say?



Audience: who are you talking to?



Time limit: how much info? what pace?



# Audience

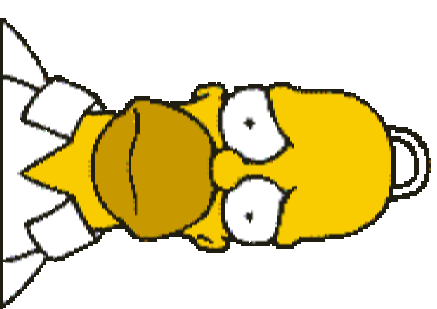
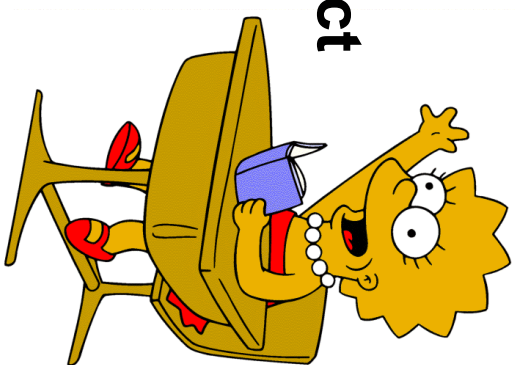
## What you want:

- Thoroughly understands your subject
- Eager to hear what you have to say
- Courteous and respectful
- Wide-awake, fully caffeinated

# WAKE UP!

## What you get:

- Don't know you or what you do
- Planning where they have to be next
- Focused on their talk after yours
- Annoying cell phone/beeper person
- Sleepy, non-attentive





# Starting Off on a Good Foot

Audience wants to like you and be **entertained**

- 1) **Enthusiasm** for topic (smile)
- 2) Stay within the time limit
- 3) Be respectful of others
- 4) Prepare exciting presentation



An **offended** audience may turn against you

- 1) Appropriate behavior (dress, manner of speech)
- 2) Arrogance, overconfidence
- 3) Poor presentation delivery
- 4) Running over time



# Organizing a Scientific Talk

- 1) Title - title, author(s), organization  
- omit an “Outline” slide  
**< 5%**
- 2) Introduction  
- Background (previous work, rationale)  
- Objectives (specific aims & hypothesis)  
**15-25%**
- 3) Materials & Methods - protocols  
**25-35%**
- 4) Results & Discussion  
**25-35%**
- 5) Conclusion - summary of work  
**5%**
- 6) Future Work - new directions, what's left  
**5%**
- 7) Acknowledgments - people, funding  
**< 5%**

# Main Components of Talk

## Introduction

- grab the **ATTENTION** of the audience
- start general → narrow to focus
- present related/relevant background material
- ***state hypothesis/objective of study***

## Main Body

- Methods & Results
- clearly explain experimental procedures
- present the data; ***relate main findings***

## Ending

- Conclusions, Acknowledgments
- ***repeat main findings, relate back to hypothesis***
- future directions/implications of results

# Main Components of Talk

## Introduction

*“Tell them what you’re **going to tell them**”*

*Repetition is a good thing.*

## Main Body

*Repetition is a good thing.*

*“**Tell them**”*

*Repetition is a good thing.*

*Repetition is a good thing.*

## Ending

*Repetition is a good thing.*

*“Tell them what you’ve **told them**”*

# Motivation

***2 minutes*** to capture the audience's attention

- Why is it important?
- What's the big deal?
- What makes it interesting/novel?

## EXAMPLES!



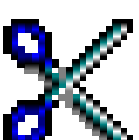
*Your motivation needs to become the audience's motivation to pay attention*

# Focus

What is the **one thing** you want people to remember?

Does **every slide** contribute to that?

No, then cut or trim it.



**BE SPECIFIC!**

# Keys to Effective Slides

- Comprehend in less than **1 minute**
- Specific purpose or conclusion for each slide
- Visually stimulating (graphics/images vs. text)
- Contains all of the essential information
- Good use of space; no cramming or waste of space
- ***Don't read the slide! Minimize text & summarize***

# Slide Format: Color Scheme

- Usually one of the first decisions to be made
  - background, font, images/schematics
  - consistency throughout (more professional)
- **Choose wisely** - some colors limit what you can use

## General Rule:

Lights on darks OR darks on lights (*contrast!*)

Use: white, yellow, pastels  
Avoid: black, red, blue

Use: black, red, blue, purple  
Avoid: white, yellow, pastels

“easy on the eyes”, not too distracting or harsh

“... *looks good on computer, but ...*”



# Slide Format: Font

- Big enough to see in the back of the room

**36 point, 24 point, 20 point, 16 point, 12 point, 8 point**

*General rule: **1” on screen per 30 feet viewing distance***

- Using “**BOLD**” makes text easier to see

**36 point, 24 point, 20 point, 16 point, 12 point, 8 point**

- Simple styles like:

Times      Arial      Helvetica

- Underline, *italicize*, **shadow** or **color** to highlight

# Slide Format: Templates

- Can make a presentation look more **professional**  
BUT, can also be **distracting**
- Several templates come loaded with Powerpoint
- Can create your own as well  
Avoid having to format slides individually

# Slide Format: Space

**Enlarge** to fill wasted space

*Try to center or balance everything*

**Indication of preparation  
& professionalism**

Use spacing to buffer objects

**Align lists & figures**

**Maintain organization**

**Be consistent with **sizing****

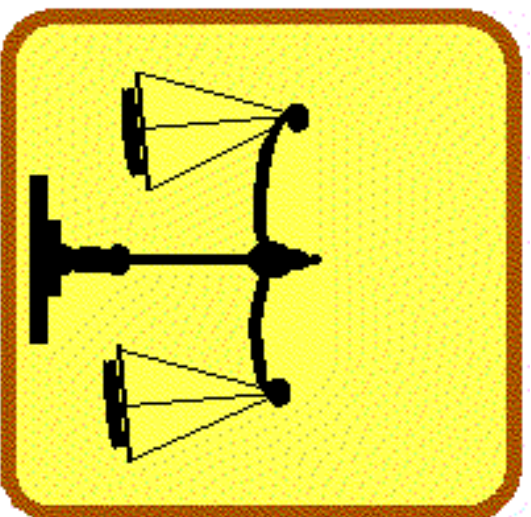
**Avoid being too close to the **edges****

# Images vs. Text

In a paper, rely heavily on the text, with supporting figures

In a presentation, rely on the **VISUALS**, with supporting text

Text



Images

# Slide Content: Text

**KEEP IT TO A MINIMUM!**

- Try to use bullet points more than sentences

## When to use it:

<b>Titles</b>	<b>Citations</b>
<b>Labels/legends</b>	<b>Conclusions</b>
<b>Experimental details</b>	

## What to avoid:

**Intro & Conclusions** - lots of full sentences  
**Methods & Results** - all of the gory details  
**Acknowledgments** - reading everyone's name

# Slide Content: Images

## MAXIMIZE USAGE!

- Remember visual snapshots of presentations

### What to use:

Schematics	Cartoons
Images	Flow charts
Graphs	Movies

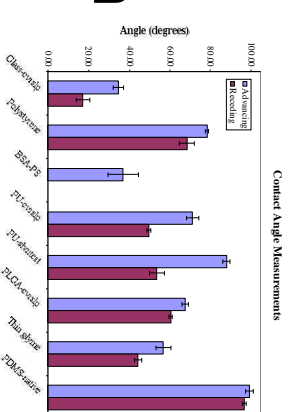
### What to avoid:

Large tables - graph data; compare trends  
Too much data on one slide  
Overly “animated” (use sparingly)

# Formatting Figures

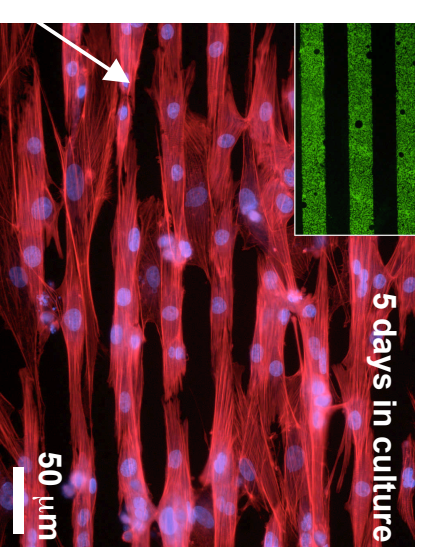
## Graphs - label the axis (BIG, bold font)

- data points large enough to see
- don't overload data on single graph
- include a legend



## Images - scale bar (or objective size)

- avoid pixelation and “fuzziness”
- arrows to highlight features
- labels (on or next to)



# Slide Content: ‘Borrowed’ Images

- Try to cite all material and data from others

*Paper: Johnson et al, Science, 248:134-8, 2001.*

*Slide: Johnson et al, Science, 2001.*

- Citing publications lends credibility to unpublished work
- Internet facilitates easy access to information
  - Easy to ‘**borrow**’ images & figures

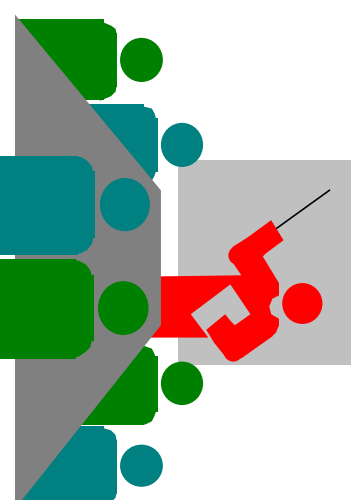


# Delivery

- Posture** Stand up straight; don't fidget, sway, bounce
- Gestures** Use, but don't overuse (i.e. laser pointer)
- Voice** Loud enough, face audience, steady pace
- Eye contact** Look at audience members, don't focus in 1 spot
- AV** Know the equipment; get there early & check
- Confidence** Anxious, but excited; don't apologize

*Audience wants you to be  
entertaining & informative*

**RELAX, RELAX, RELAX**



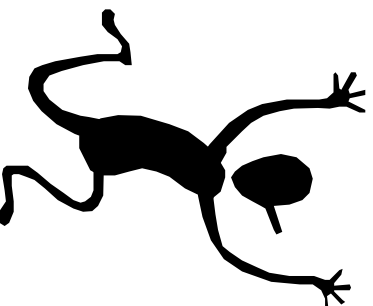
# Running Short on Time

## Do's

- 1) Speed up talking
- 2) Highlight most pertinent material; gloss over details
- 3) Skip slides, if necessary

## Don'ts

- 1) Continue at same pace
- 2) PANIC!
- 3) Completely skip the conclusion



# Controlling the Q & A

- 1) **Listen** carefully to the question being asked
- 2) Acknowledge the validity of the question
- 3) **REPEAT**, the question in your own words
- 4) Try to directly answer the question
- 5) Don't guess, mislead or stray from question
- 6) Be as **brief** as possible