

Toothpick Bridge Winners!

Dr. O'Brien's Class

- Westley Bridges, Alexander Burnham, Faith Cheng
- Bridge weight = 15 g
- Failure weight = 7037 g
- Efficiency = 46,913%

Ms. Hollingshed's Class

- Runyu Cai, Tyler Smith
- Bridge weight = 26.2 g
- Failure weight = 12.31 kg
- Efficiency = 46,984.7%

Dr. MacCarthy's Class

- Dakota, Rachel, Wesley, Brooke
- Bridge weight = 14 g
- Failure weight = 11.05 kg
- Efficiency = 78,714.3%

Dr. Lackey's Class

- Paige, Becca, Teryon, Elizabeth
- Bridge weight = 25 g
- Failure weight = 31.78 kg (did not break)
- Efficiency = 127,120.0%

Oral Presentation Guidelines

EGR 107

Lecture 5 Spring 2016

Oral Presentation Grading Rubric

Team _____					Grade:				
<p style="text-align: center; font-size: 2em; font-weight: bold;">Use this as a template to organize your presentation</p>					Excel (95)	Good (85)	Fair (75)	Weak (65)	Poor (55)
					Project Description and Objectives				
Design Criteria									
Description of Design Alternatives									
Feasibility/Merit Analysis									
Design Recommendation									
Testing									
Conclusions & Recommendations									
Visual Presentation									
Verbal Presentation									
Response to Questions									
Totals:									
Comments:									

Use this as a template to
organize your presentation

Don't forget an Intro Slide

Needs for Presentations in Engineering

- Introduce new ideas for approval
- Share a purpose/intent
- Persuade
- Convey information
- Communicate progress on project/process
- Demonstrate ideas/projects/products
- Wrap up a project



Know your audience

- What are the needs/desires?
- Their roles
- Their interest to the subject
- Distant or live audience
- Size
- Demographics
- Attitudes
- Knowledge



Types of presentations

- **Informative**

- focus on pertinent points
- introduce small amount
- repeat often

- **Persuasive**

- motivate and convince
- demonstrate a need
- provide proof/evidence
- show benefits

Convey the message visually and orally!

Choose words carefully:

- Organization keywords
- Short sentences
- Simple vocabulary
- Examples
- Paraphrase

PowerPoint isn't ALL

Simplicity

- few words on each slide
- bullet point list
- phrases
- talking points

GATEWAY

Simplicity

- Simplicity is helpful to keep from distracting the audience. If the slides are only to be used in presentation only, then words should be minimal and in simple short phrases.
- Use bullet points for listing. Don't try to overwhelm the slides with words because it is difficult to read and pulls the attention of the audience away from the speaker.
- A simple slide allows the speaker to use the key words as talking points, and the audience will tend to listen to the speaker instead of spending a lot of time reading the slides.
- If more in-depth information needs to be provided to the audience, consider distributing handouts of the slides with additional notes.

Introduction

Concern about anthropogenic climate change has stimulated research and investment into

- technologies that limit CO₂ emissions from the combustion of fossil fuels
- technologies that remove CO₂ directly from the atmosphere.

Near pure streams of CO₂ are produced

- from point sources or
- from the atmosphere

The methods for are

- retrofitting power plants to separate CO₂ from flue gas using various solvents,
- separating nitrogen from air prior to combustion to enable pure oxygen combustion
- employing the watergas-shift reaction in a gasification plant to enable hydrogen–oxygen combustion in a hydrogen gas turbine
- capturing CO₂ directly from the atmosphere using solvents with a chemical process designed to regenerate the solvents.

House, K.Z., House, C.H., Schrag, D.P., & Aziz, M.J. (2007) *Electrochemical acceleration of chemical weathering as an energetically feasible approach to mitigating anthropogenic climate change*. Environ.Sci.Technol. 2007,41,8464-8470.

Carbon capture and storage

Traditional methods

- Limit CO₂ emissions
- Remove CO₂ using solvents

Our method

- Enhance solubility of CO₂ in the ocean
- Neutralize CO₂ through reaction with Si rock.

Font and Transition

- If you use a small font, your audience won't be able to read what you have written.
- **CAPITALIZE ONLY WHEN NECESSARY. IT IS DIFFICULT TO READ.**
- Don't use complicated / distracting transitions.
- **Don't use a complicated font.** Stick to sans serif fonts (without twiddles) like arial, verdana and tahoma.

Using Color

- Using a font color that does not contrast with the background color is hard to read.
- Using color for decoration is **distracting** and **annoying**.
- Using a different color for each point is unnecessary.
 - Using a different color for secondary points is also unnecessary.
- **Trying to be creative can also be bad.**

Images

- Explain your use of images. Random images that have no obvious relationship to what you are saying are distracting.



- Do you need sound effects?

Background

- Avoid backgrounds that are distracting or difficult to read from.
- Always be consistent with the background that you use.

Template example

Design Structure and Template

- Common background or theme
- Logos, project name, pictures
- Standardize size, colors, fonts, style
- Simple, non distractive
- Use appropriate color contrast



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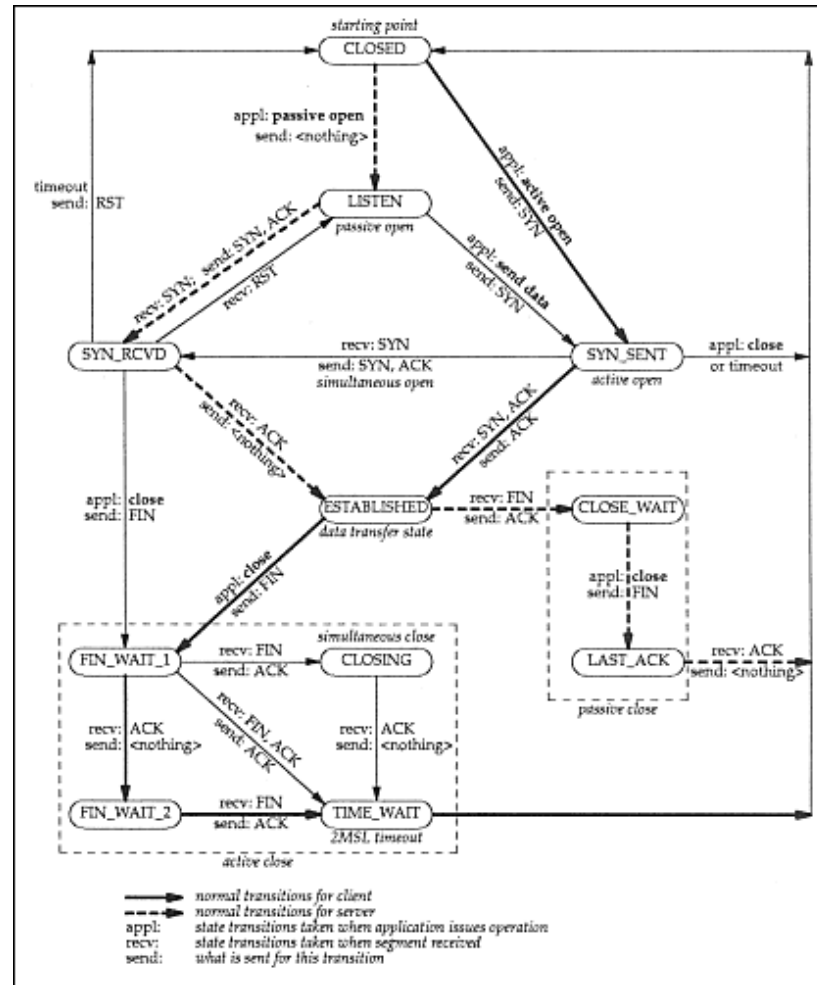
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Avoid using PowerPoint for small and intricate diagrams

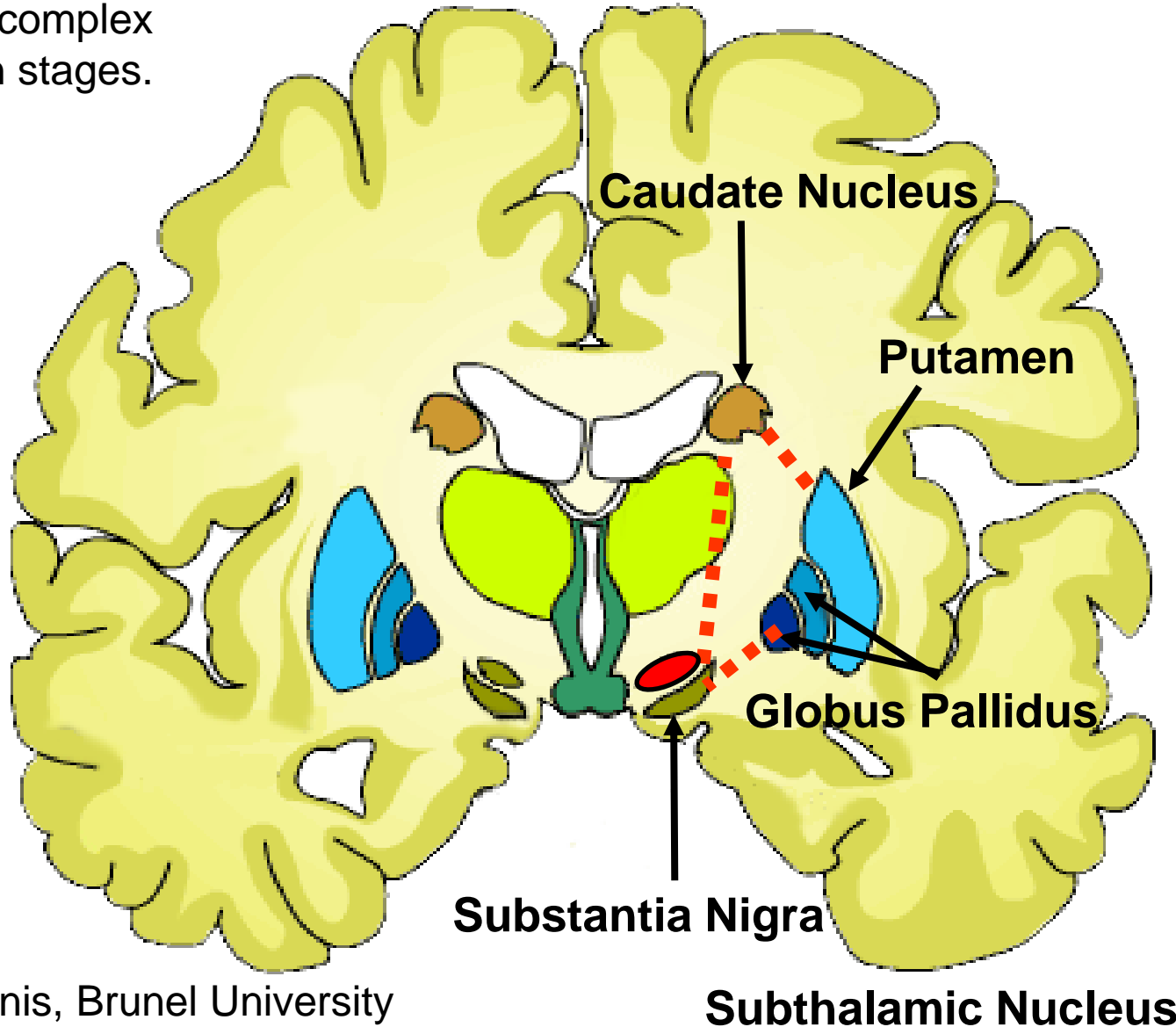


This would be better given as a handout.

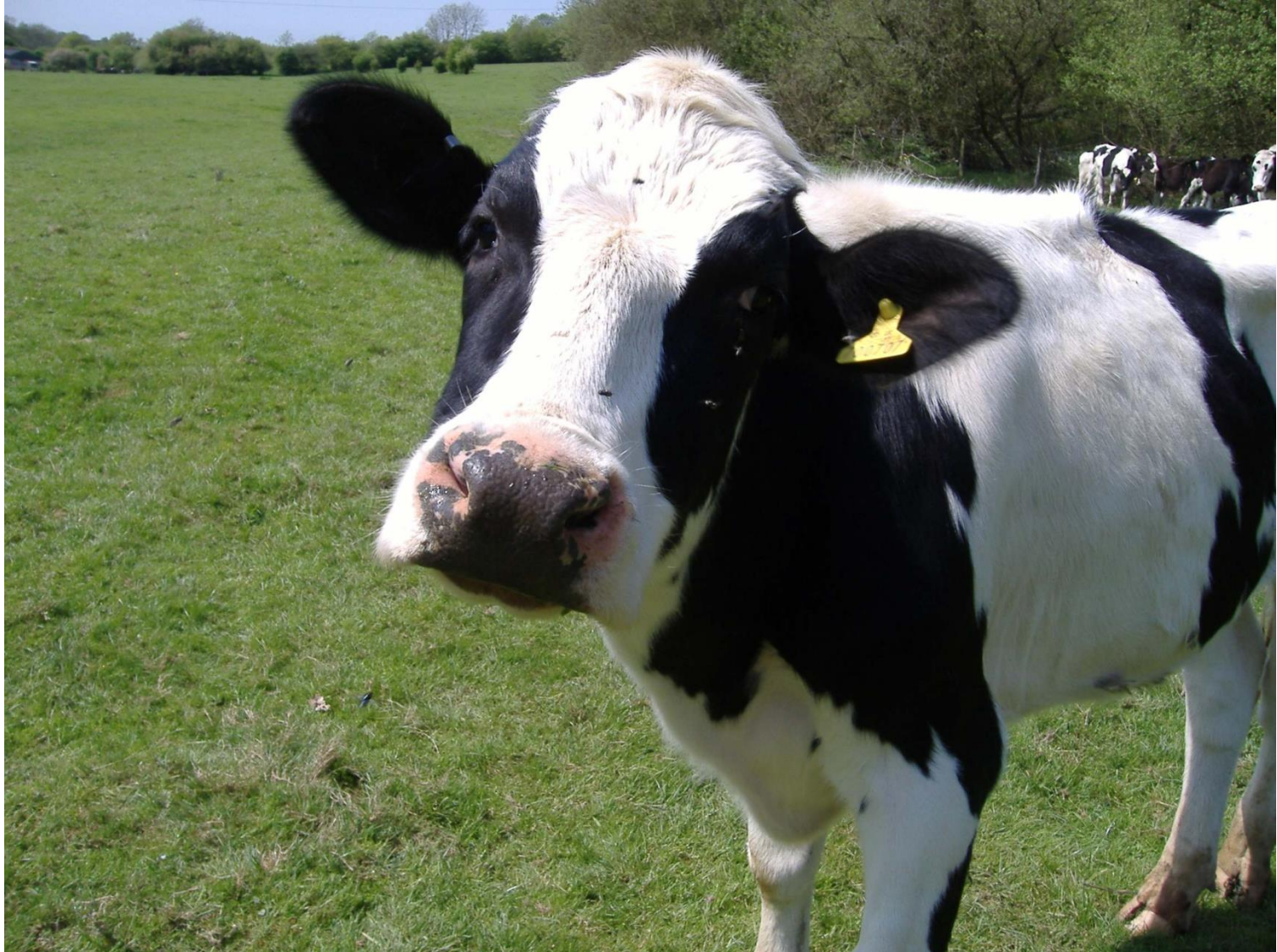


PowerPoint is ideal for presenting complex diagrams in stages.

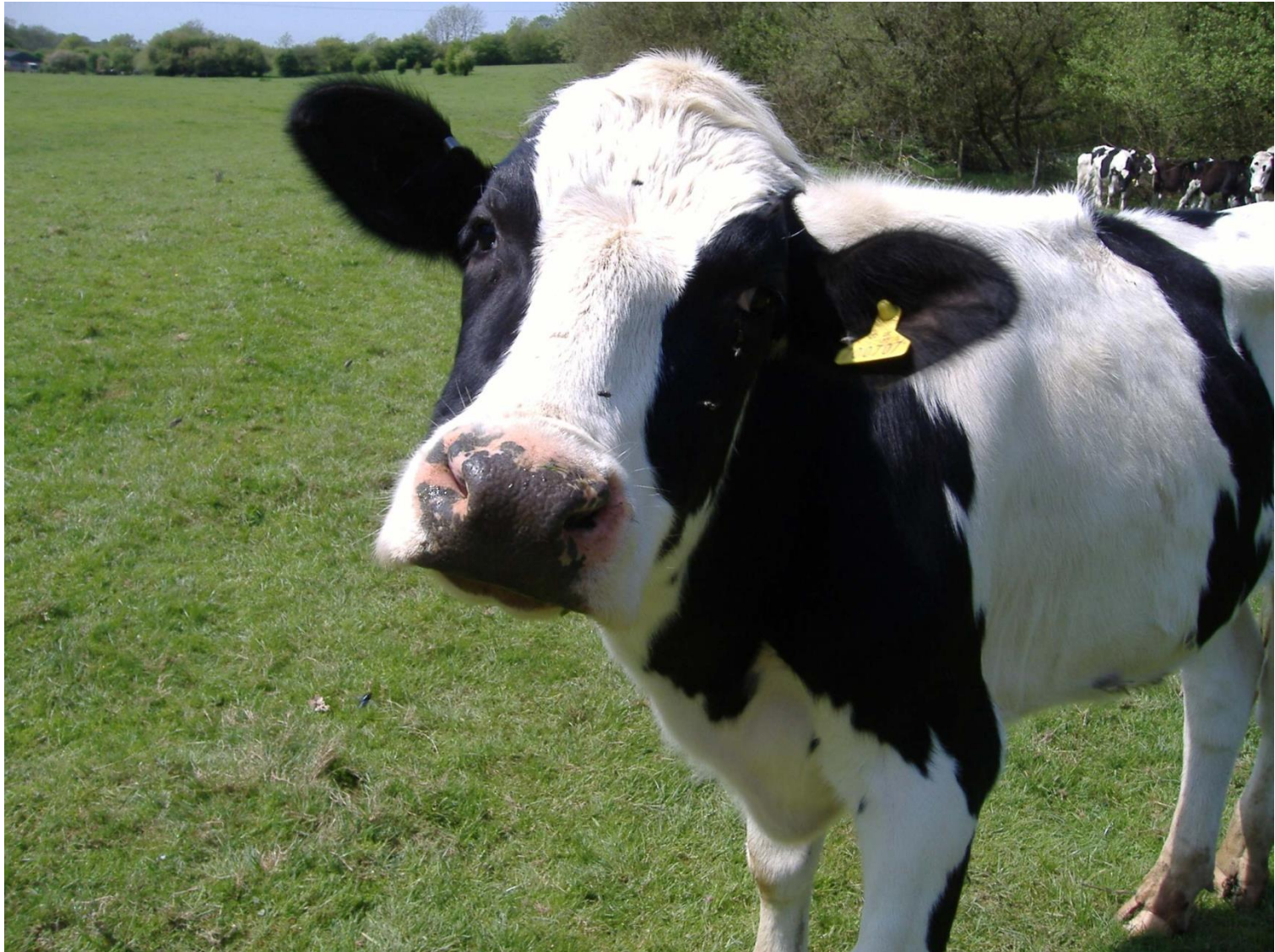
The Basal Ganglia



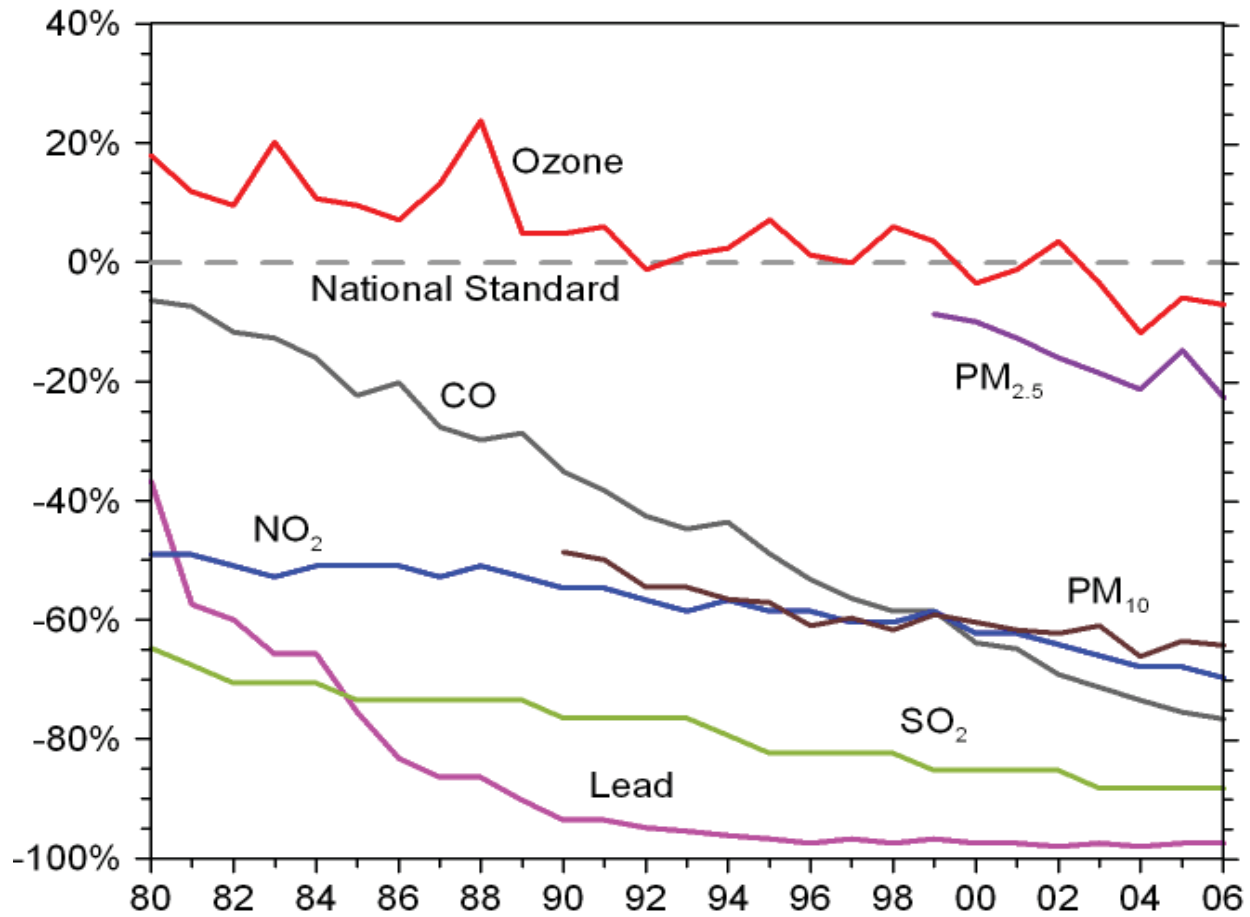
A Cow



Dairy Cows produce about 8 gal milk/day

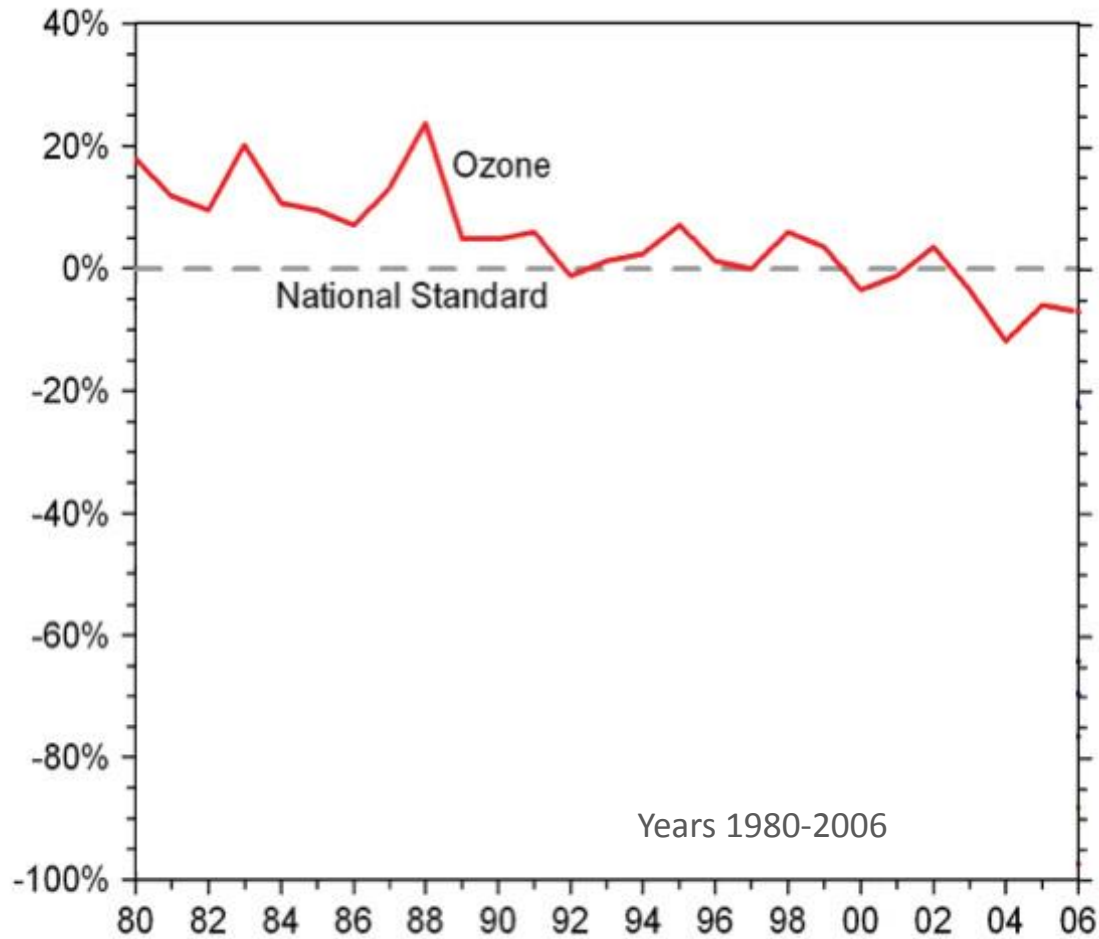


6 Principal Air Pollutants



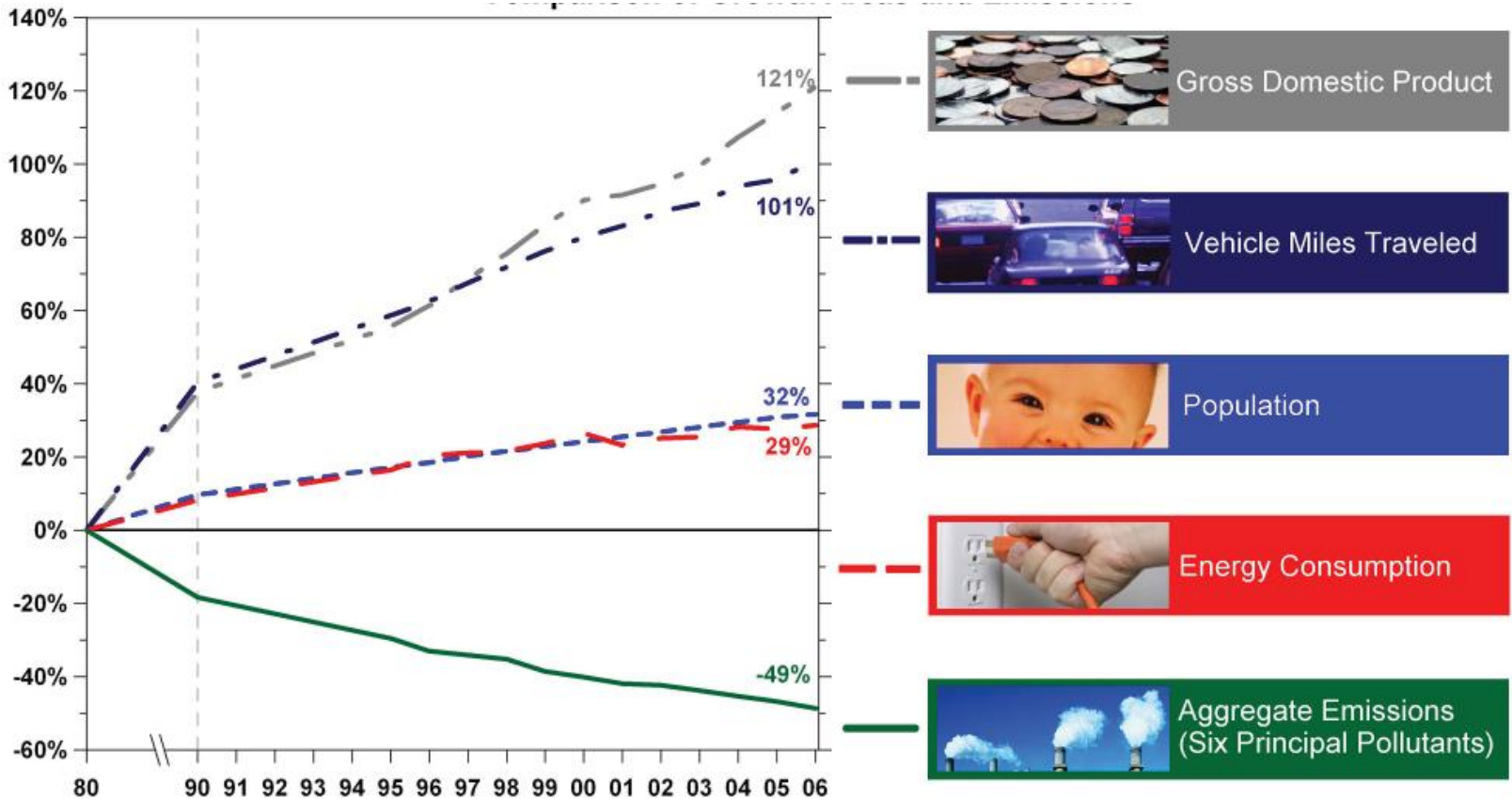
Ozone Down

Source: Environmental Protection Agency 2007 report
<http://www.epa.gov/airtrends/2007/>



GDP up, Emissions down

Source: Environmental Protection Agency 2006 report



Indicate scale in photos.

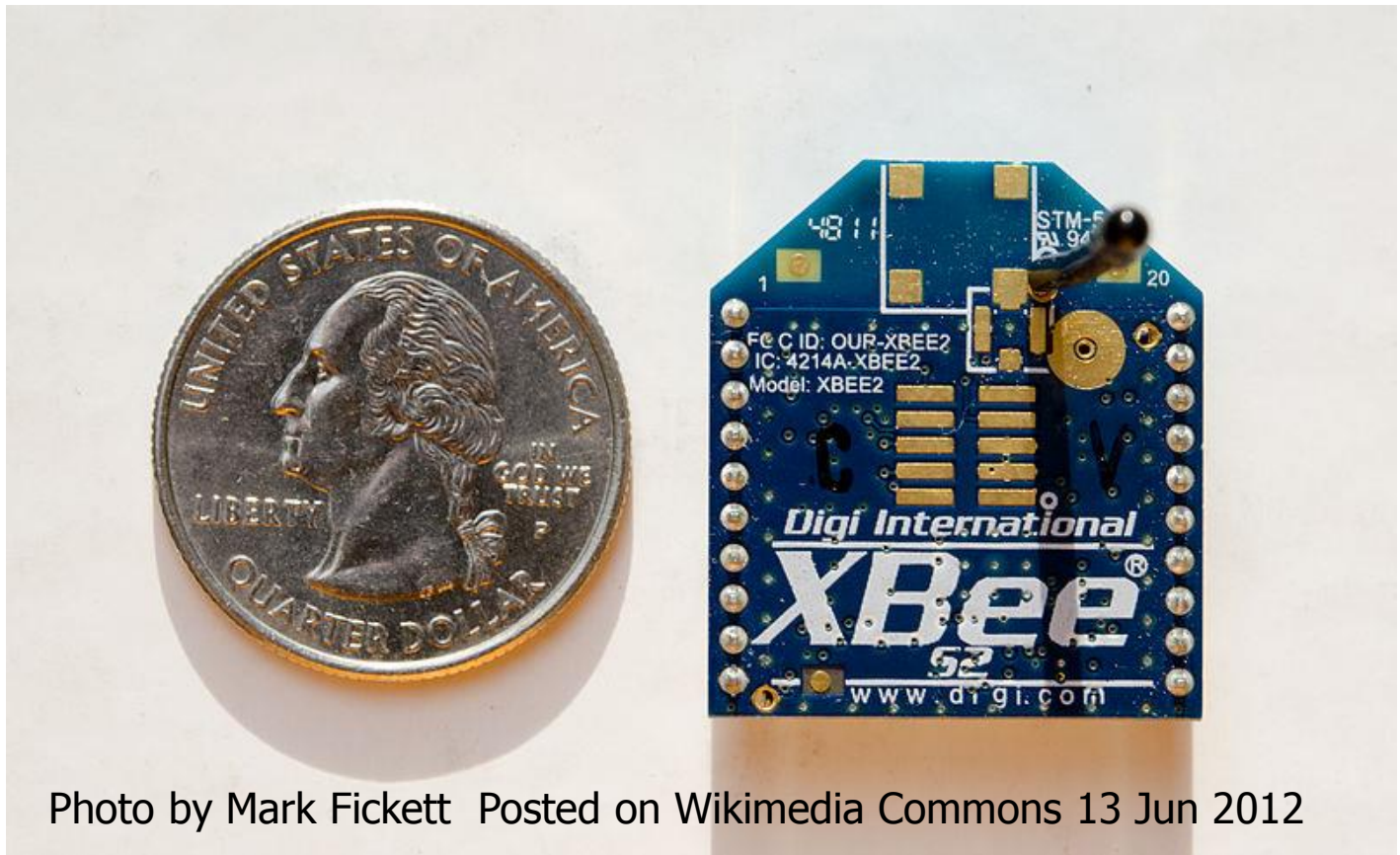


Photo by Mark Fickett Posted on Wikimedia Commons 13 Jun 2012

Ppt = vehicle; You = driver!

Don't

- Read slides
- Use complex slides
- Use unintelligible slides
- Use irrelevant or distracting slides
- Rush through slides

Non Verbal Communication

Visual signals

- clothing
- gestures
- expressions
- stance



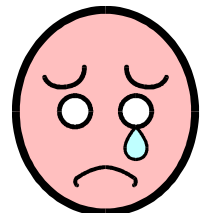
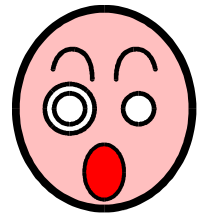
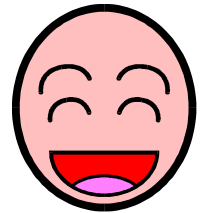
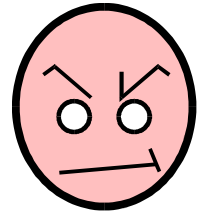
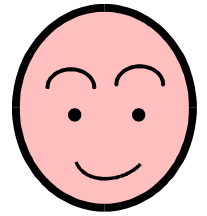
Vocal signals

- volume
- speed
- pitch
- pauses



Non-verbal Visual Do's

- Dress professionally
 - Dress appropriately for occasion
 - Dress with colors that compliment
 - Dress for comfort
- Eye communication
 - Keep eye contact with audience
 - Vary your target
 - Complete a thought or idea
- Facial Expression



Non verbal visual Do's

- **Posture and movement**
 - stand upright, hold shoulders squarely
 - open posture
 - don't sway
 - keep movements smooth, natural
- **Gestures**
 - emphasize point
 - use purposefully and sparingly
 - vary gestures
 - palms open and upward



Non-verbal Vocal Do's

- Pitch
- Volume
- Rate
- Emphasis
- Pause



Do's for Preparing the Presentation

- **Check slides for accuracy and organization**
- **Learn to use the equipment before making the presentation**
- **Have pointers, pens, etc.**
- **Have backup copies of slides or handouts**
- **Practice, practice, practice**

Do's for Giving the Presentation

- Speak clearly and loudly
- If you are introduced, thank the moderator
- Make a smooth transition between speakers
- Spend little time changing slides
- Have a slide on the screen at all times
- Tell in advance if you are to change topics
- Use a pointer
- Keep with the times allocated to you

Don'ts for Giving the Presentation

- Talk to the screen
- Stand in front of the screen
- Use your hand as a pointer
- Point at the audience
- Put your hands in your pocket
- Look at watch



Don'ts for Giving the Presentation

- Use phrases such as “ah”, “um” or “ok”
- Use terms that are not defined
- Read material directly from the slides
- Switch back to previously shown slides
- Use material in which you cannot answer questions

Nerves complicate things

Most important:

- Take time to prepare.
- Plan how to hand off between group members.
- Practice - with a critical audience.

Nerves: A BIG help:

- Check out the space beforehand.
- Practice in that space.

Five final suggestions for slide presentations

- Number slides
- Keep font large and dark
- Include a guide showing where you are in the talk
- Have a backup plan (Handouts? Chalk talk?)
- Be prepared for questions
 - Prepare answers
 - Prepare slides

Include full references at the end

- Adair, J. (1987). **Effective teambuilding**. London: Pan Books.
- Hendry, G.D., Hyde, S.J. & Davy, P. (2005). Independent student study groups. **Medical Education** Vol. 39 Issues 7, pp.672–679.
- Hughes, I.E. & Large, B.J. (1993). Staff and Peer-Group Assessment of Oral Communication. **Studies in Higher Education**, Vol. 18, Issue 3, pp.379-385.
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- Kerr, N.L. (1983). Motivation losses in small groups: A social dilemma analysis. **Personality and Social Psychology**, 45, 819-828.
- Knight, P & Yorke, M. (2006). **Embedding employability into the curriculum** [Online] Available at http://www.heacademy.ac.uk/resources.asp?process=full_record§ion=generic&id=338 [Last accessed 15 March 2007].
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Questions/Comments?