



KATHOLIEKE UNIVERSITEIT
LEUVEN



Scientific Posters

the elements

Frank Van Puyvelde
ICTS

Content

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- What is a poster session?
- What is a scientific poster?
- Planning
- What should be on a scientific poster?



A good poster can't make up for bad research,
but a bad poster can make good research hard to recognize!

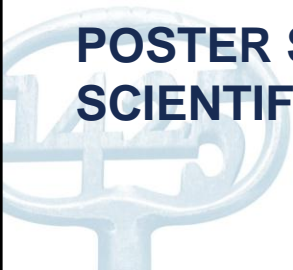
- http://www.waspacegrant.org/for_students/student_internships/wsgc_internships/posterdesign.html



*“Criticism and testing are of the essence of our work.
This means that science is a fundamentally social activity, which implies that
it depends on good communication.”*

-Hermann Bondi - Quoted by Robert A. Day in How to Write & Publish a Scientific Paper, The
Oryx Press (1998) p. ix.

**POSTER SESSION?
SCIENTIFIC POSTER?**



Poster session?

- Definition educause (<http://www.educause.edu/>):
*Poster sessions are **informal, drop-in sessions** that allow presenters to share their (campus) experiences with colleagues on a **one-to-one** basis. Poster presenters should be prepared to provide a **brief verbal explanation** of their experiences or applications that may be illustrated through a set of **visuals** attached to a large bulletin board or via laptops/screens, etc*
- Other important elements:
 - **Location**
 - **Poster stand**

Poster session: goal

- Share research (results, idea, ...)
- Stimulate discussion on a research topic
- Feedback on research
- Networking



Poster session: informal, drop-in

- **Informal, drop-in**
 - Less formal than a presentation
 - Walking audience
 - Try to catch the attention
 - Message has to be transferred in a fast and clear way



Poster session: one-one basis

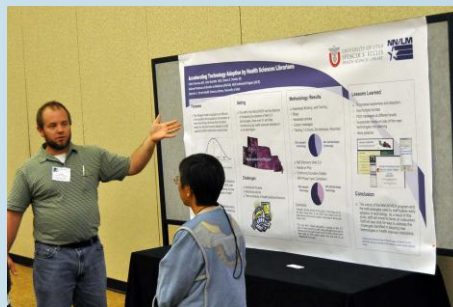
- **One-one basis**
 - Ideal for discussion
 - Conversation can get more in-depth



Poster session: short presentation

- **Short presentation**

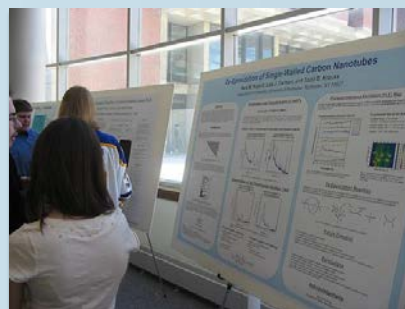
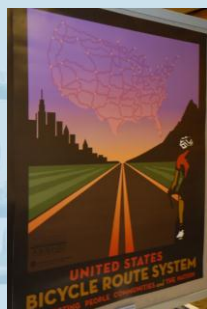
- Poster can (may) not contain all details
- Conversation / presentation can go into detail
- Poster must be self-contained



Poster session: visual

- **Visual**

- Advertisement for your research
- Eye-candy
- Lure, seduce the audience with a flashy title, charts, ...



Poster session: location

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PLANNING



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Scientific poster: planning

• READ THE INSTRUCTIONS

- Dimensions
 - 1 large poster
 - individual A4 pages
- Specification: dimension images, portrait/landscape, font, numbering poster,
- Additional requirements?
 - Tape, pushpin, ...


• Check *Judging criteria*

- Try to get as much information on the poster session as possible



Home
Congress
Program
Inscrijv
Route
Posterse
3M en O
Congres
Contact

Amio 100
OZ
3M Hea



Fourteenth Off-Campus Library Services Conference

Cleveland, Ohio | April 28-30, 2010

Welcome

About >

Program >

Registration >

Things to Do & See >

Information for Presenters >

Technology Showcase >

Poster Session Guidelines

All poster sessions will be held on Friday morning, April 30th. Please be prepared to have your poster set up at least fifteen minutes before your session begins. Plan to be at your table for the entire time (1 hour 10 minutes) to answer questions and explain your research.

Posters sessions provide an informal forum to report innovative projects, introduce new services and resources, or test research ideas of interest to the off-campus library community. Posters may include narratives, tables, graphs, and handouts. They may be in print or electronic format or a combination of the two.

An articulate, expressive poster will contain only the crucial points of the research. Traditional elements include:

- Introduction – objectives, context and hypotheses, or predictions
- Methods—subjects, study site, and protocol
- Results – including graphs, display of electronic content etc.
- Discussion and conclusions – Why the findings are significant
- Acknowledgements and references

Creating/mounting poster

Dimensions for a poster should not exceed 4x6'. The poster should be a balance between informative and artistic; posters should strive to highlight pertinent information while keeping in mind the logistics of attendees effectively reading and understanding the topic presented. The presenters name and institution should also be available on the poster.

Presenters are responsible for:

- The actual poster and visual materials which comprise the presentation
- The printing of any handouts
- A sign-up sheet and/or business cards to record interest or follow-up for the presentation
- If applicable, a laptop
- Requests and/or inquiries for additional items should be directed through the A/V Form

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Judging Criteria for Poster Presentation (www.ncl.ac.uk/fms/postgrad)

First Impression:	How difficult is it to read the poster? How are colour schemes used, are they easy on the eye? How crowded is the poster? Is there a good flow of information (logical, layout of information)? Does the poster stimulate interest and discussion?
Layout:	Is the poster visually jumbled? How easy is it to follow the sequence in the poster?
Readability:	Is font size or style easily readable? How much text does the poster contain? Are there many grammar or spelling mistakes?
Title:	How specific/adequate/long/short is the title?
Identification:	Can the author(s) be easily identified? Is contact information available (ie. Department/ University)
Aims/ Objectives:	Are they clearly stated?
Methods:	How detailed, appropriate, original are the methods and is there enough explanation?
Results:	How clear and well labelled are graphs and figures? How complex are graphs? How well are the results presented?
Conclusions:	Are any conclusions presented and if so do they reflect the aims and are they supported by the data? Is there a memorable "take-home" message?
Scientific content:	Was the research put into broader context/ justification for research? Was the content suitable for experts and non-experts alike? Was there sufficient scientific explanation?
Student:	How much do the student's explanations demonstrate knowledge/ ownership/ enthusiasm for his/her work?

Scientific poster: planning (ideal world)

- Provide enough time
 - Do not postpone to the last minute
 - Murphy will be there...
 - Get colleagues / friends / family to check / brainstorm the poster
- ↑
- Poster presentation
- 1 week: print final poster
 - 2 weeks:
 - 2nd draft
 - Check with promotor
 - 3 weeks:
 - 1st draft
 - Review-Review-Review; give it a rest
 - 4 weeks:
 - List *must have* and *leave out*
 - Layout design
- ↓

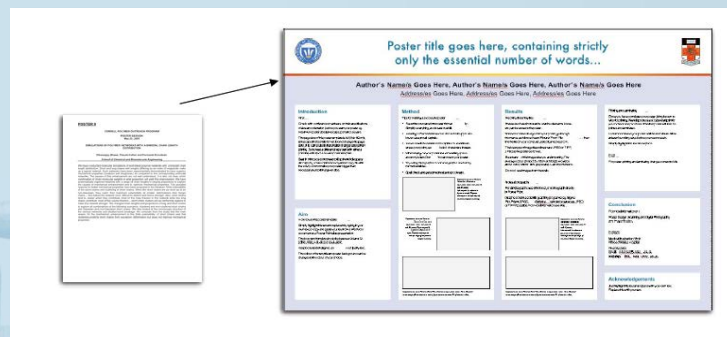
Scientific poster: planning

- Start from scratch
 - Do not make a summary of a paper
 - Do not start from an existing presentation / slideshow
- Make a clear choice on the essentials :
 - What problem(s) are tackled? (Objectives)
 - Why is this important? (Background)
 - How did I do it? (Methods)
 - What are the results? (Results)
 - What is the conclusion(s), implication(s)? (Conclusion)

(should be in the abstract)

Scientific poster: planning

- Poster = illustrated abstract
- LESS IS BEST – LESS IS MORE



<http://www.cns.cornell.edu/documents/ScientificPosters.pdf>

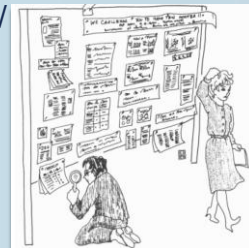
Scientific poster: planning

- Audience?
 - Who is my audience?
 - Colleague competitor
 - Colleagues from the same domain
 - Colleagues outside domain
 - What does the audience know about my research?
 - What does the audience want to know about my research
- Make a *storyboard*
 - What is the message that I want the audience to remember?
 - What is the logical order to bring the message?
 - How to convey the message?

Review, review, review: content

Critique from colleagues / outsiders

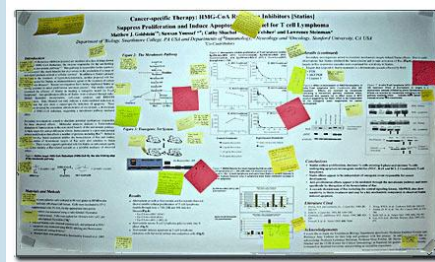
- Is the poster audience friendly?
Is the poster suited for the audience?
- Is title short and powerful, a reflection of the research?
- Do the objectives correspond with the content of the poster?
- Are the methods used well explained, understandable?
Do they correspond with the conclusions/objectives?
- Are the conclusions strong enough?
- Is the language used clear, free of any jargon?



www.postgraduate.uwa.edu.au

Review, review, review: format

- Are the dimensions / shape correct?
- Is it readable from a distance (2-5 meter)?
- Is the layout ok, not too messy, consistent?
- Typos? Other errors?



ELEMENTS



Elements

- Title
- Author(s) + affiliation
- Abstract/Introduction
- Method(s)
- Data/results
- Conclusion(s)
- References
- Acknowledgements

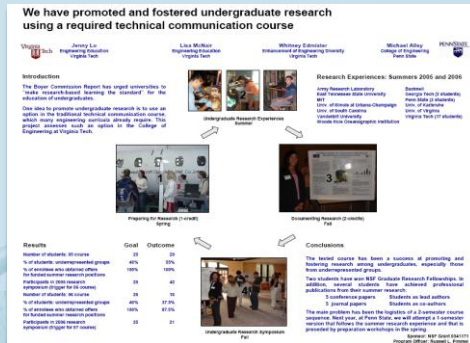
Element: title

- Must be very interesting (provocative...)
- Audience must be tempted from a distance
- Visible and readable at 5 m
- Concise
 - If too long, make it shorter, reformulate
 - Do not decrease the font size
 - Avoid the use of ‘:’

YOUR THESIS TITLE CONDENSING OVER HALF A DECADE OF YOUR LIFE IN ONE SENTENCE. www.phdcomics.com
JORGE CHAM © 2006

the colon Can't decide what to title your thesis? Use a colon!	a preposition A good preposition tells your readers "hey, this is not just a futile exercise"
"Witty catchphrase" Makes people think you're hip and culturally relevant. Only marginally related to the actual thesis? No problem.	Length-enhanced superlative verbiage with prolixity Nothing says "academic rigor" like a long string of dry scientific-sounding terminology and fancy buzzwords.
in/of/for	Obscure topic few people care about. Sad, but true.

Element: title

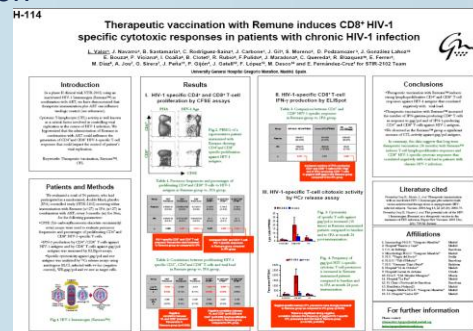


Compare:

- "A Study of Automobile Emissions Generated at Drive Up Windows"
- "5% of Air Pollution Derives from Cars Idling at Drive Up Windows"
- "Drivers Spend an Average of 7.2 Minutes Idling at Drive Up Windows"

Element: authors/affiliation

- Write the first name in full
 - Initials and titles are not needed
 - A photo of the person who is presenting the poster, or highlight the name
 - Check with promotor on the order of the collaborators
- Do not forget the affiliation



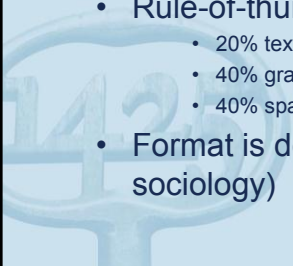
Element: abstract / introduction

- Emphasize a few important points
must be a help to the structure of the poster
- Essential points / positioning the research
- Explains why this work is important
- 150 – 200 words
- *Complete Clear Concise Cohesive*



Element: data/results – text

- KISS (keep it short and simple)
- Remove all non-essential information
- Avoid footnotes
- Avoid abbreviations, acronyms, jargon
- Use no more than 1000 words
- Use charts as visual eye-candy
- Rule-of-thumb:
 - 20% text
 - 40% graphics
 - 40% space
- Format is domain dependent (mechanical engineering <> sociology)



Element: data/results - text

- Original

The ideal anesthetic should quickly make the patient unconscious but allow a quick return to consciousness, have few side effects, and be safe to handle.

- Poster version

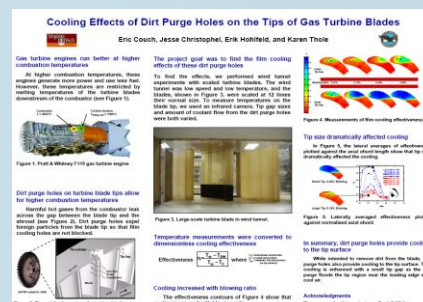
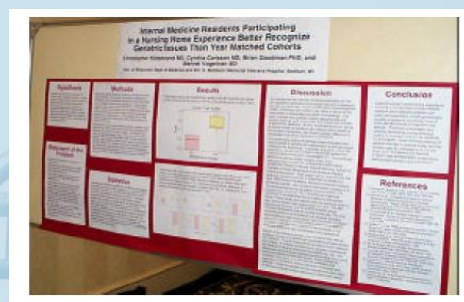
Ideal anesthetics

- Quick sedation
- Quick recovery
- Few side effects
- Safe to handle

Element: data/results - text

- Too much text

- Better, still some room for improvement



Element: data/results - charts

- Table:
 - Limited number of data
 - Label columns
- Charts:
 - Large set of data points
 - Do not forget to label plots, axes, ...
- Charts must be readable at a distance of 2 m!
- Get all the charts in a uniform way, size



Element: conclusion

- Important part of the poster
- Emphasize the important/strong points
- New insights/interpretations
- Use bullets to distinguish the different elements



Element: acknowledgements / references

- **Acknowledgements**
 - Funding,
 - Who was helping you out with your research
- **References**
 - Only the important – no literature study
 - Can be expanded during conversation

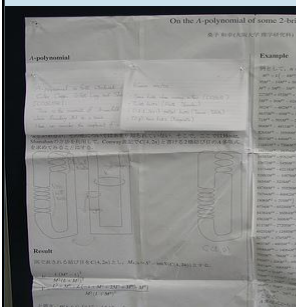


POSTER PRESENTATION

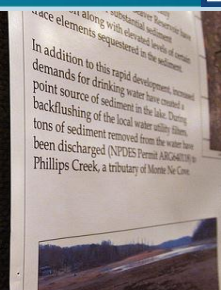
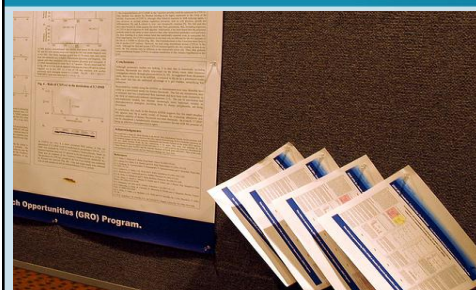


Poster session: tips

- transport poster
 - Carrying case
 - hand-luggage
 - Cissors, tape
- take pdf file
- Handout (poster, paper)
- Business card
- Candy?!
- Dress?!



Poster session: tips



WWW

- Colin Purrington
<http://colinpurrington.com/tips/academic/posterdesign>
- George Hess, Kathryn Tosney, Leon Liegel
<http://www.ncsu.edu/project/posters>
- Cornell
<http://www.cns.cornell.edu/documents/ScientificPosters.pdf>
- Eposters
<http://www.eposters.net/>



Thank you

- www.flickr.com - **Creative Commons**-licensed content
- <http://colinpurrington.com/tips/academic/posterdesign>
- <http://www.ncsu.edu/project/posters>
- <http://www.cns.cornell.edu/documents/ScientificPosters.pdf>





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Scientific Posters Production

tips & tricks

Frank Van Puyvelde
ICTS

Content

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- Production: using PowerPoint
- SOS Poster
- Poster Printing



Ok, smarty pants, give
me a new PowerPoint
tip, something not
shared before.



PRODUCTION



Note for technophobes

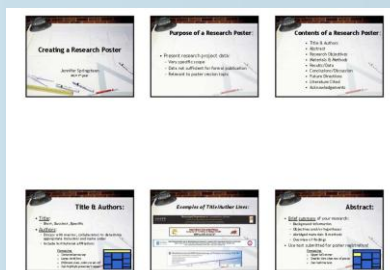
Cut-and-Paste

- Print separate A4's and glue it together
 - Useful at the design stage
 - Fast, simple
 - Not always a success
 - In emergency only



Note for technophobes

- Do not use WORD!
 - Works well for A4, enlarging to A0 is disappointing
 - Difficult to get it printed on a large format
- Convert a PowerPoint presentation to a poster
 - 100% bad result



PowerPoint?!

+

- Easy to start with
- Available
- Common use
- Office-suite
- Templates available

-

- Presentation software, not designed for posters
- Printing can be a problem
- Illustrator, Corel Draw, ... are more powerful, but at a price of a steeper learning curve

Get ready

- Have all the information bits collected before starting the powerpoint poster.
- Collect all information in 1 folder (source code)
 - images
 - graphics
 - text
- Get the layout on paper



Poster layout: inspiration or template?

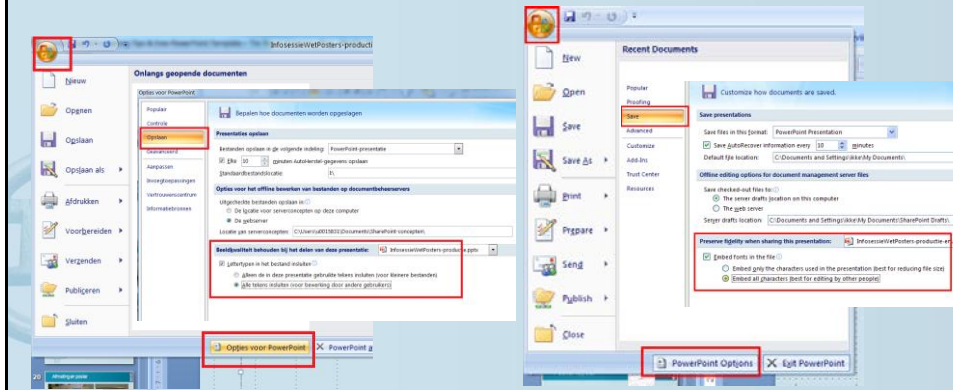
- Some organizations have their own template
- Department can have a template
- Dienst communicatie
www.kuleuven.be/communicatie/poster_powerpoint.html
 - Standard template
 - Scientific posters
 - Note: no white borders allowed!
- Web:
 - www.posterpresentations.com/html/free_poster_templates.html
 - www.medmediasolutions.com/poster_templates.shtml
 - ...
- Eposters: online journal for scientific posters
www.eposters.net



PowerPoint 2007 - settings



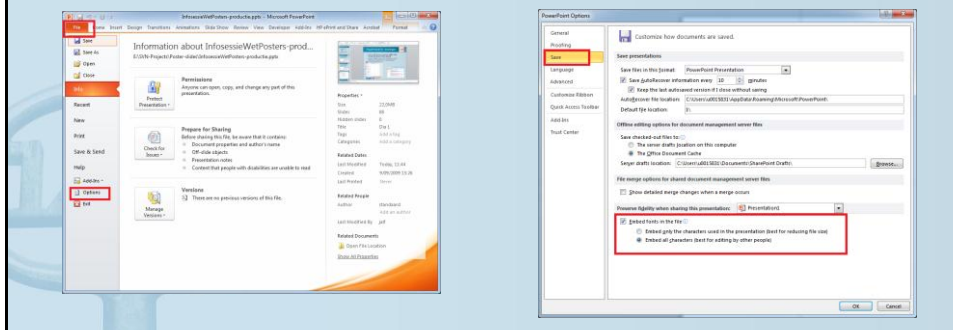
- Click Office button and select **PowerPoint Options**
- Save: *embed fonts – all characters*
- *extra fonts: www.searchfreefonts.com*



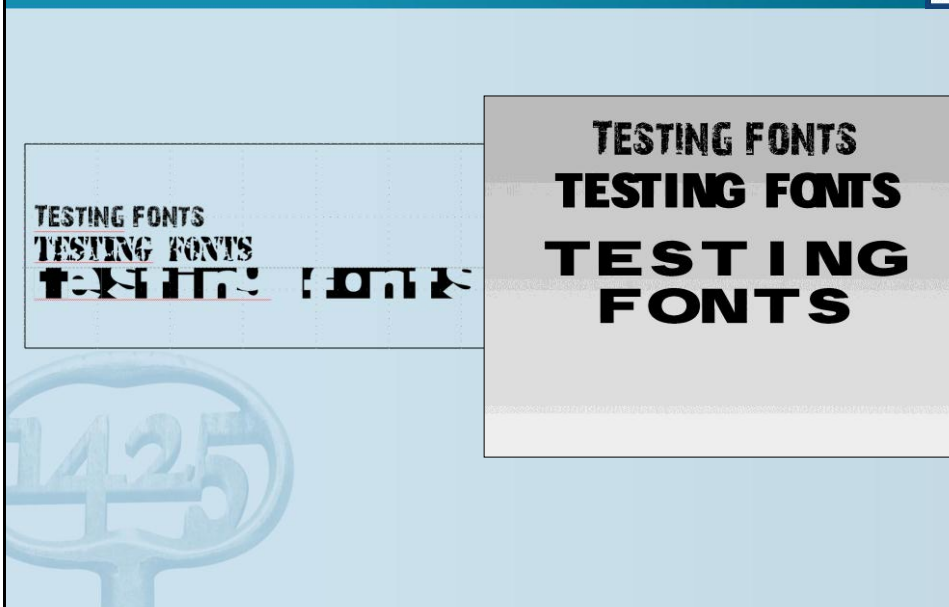
PowerPoint 2010 - settings



- Click **File** button and select **Options**
- Save: *embed fonts – all characters*



Fonts enclosed?



Dimensions poster

- Immediately set the final dimensions (changing dimensions afterwards may ruin the layout)
- Note:
 - Limit the size of your poster (2 m high posters are difficult to read!)
 - Do not make a larger poster than provided for
 - A0 (84*118 cm), Oversize A0 (90*125 cm) most used
 - PowerPoint: limited to 1.34/1.42m

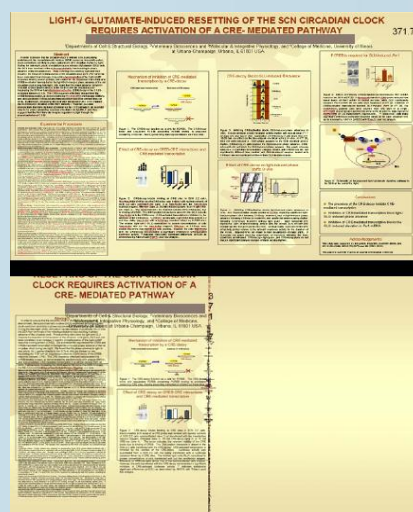
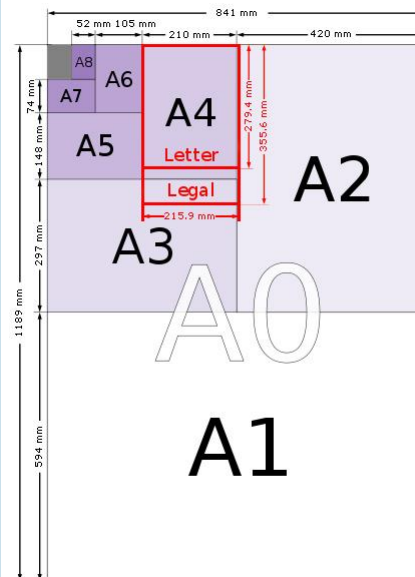


Table of Paper Sizes

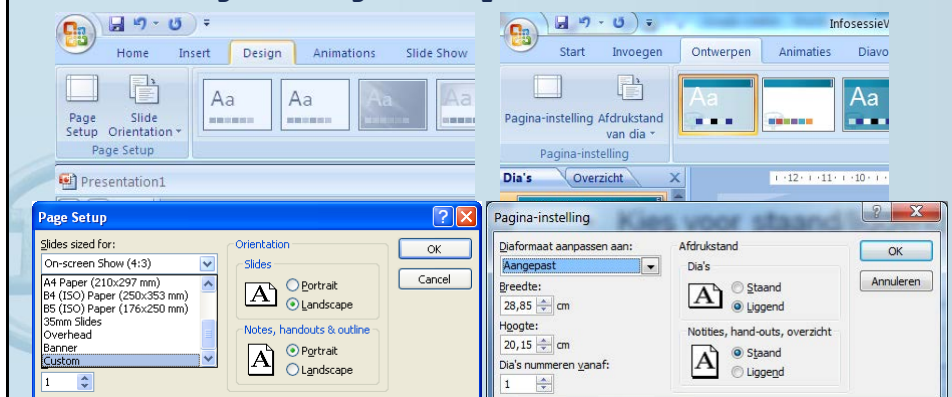
Size	Height x Width (mm)
4A0	2378 x 1682 mm
2A0	1682 x 1189 mm
A0	1189 x 841 mm
A1	841 x 594 mm
A2	594 x 420 mm
A3	420 x 297 mm
A4	297 x 210 mm
A5	210 x 148 mm
A6	148 x 105 mm
A7	105 x 74 mm
A8	74 x 52 mm
A9	52 x 37 mm
A10	37 x 26 mm



Page size



- Set the final dimensions immediately
- Portrait / landscape
- **Ontwerpen > Pagina-instelling**
(Design > Page Setup)



Dimensions poster

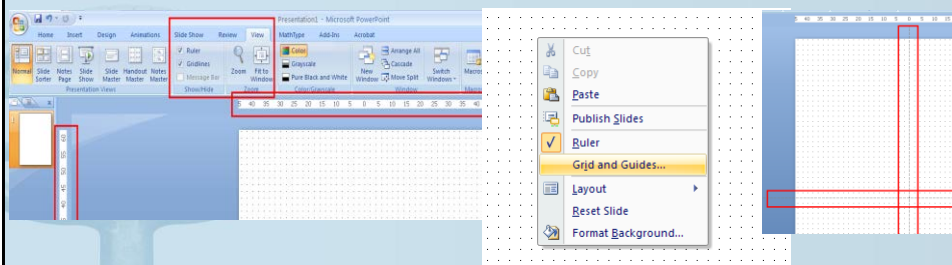
- Check with the organization for available space



Ruler & guides



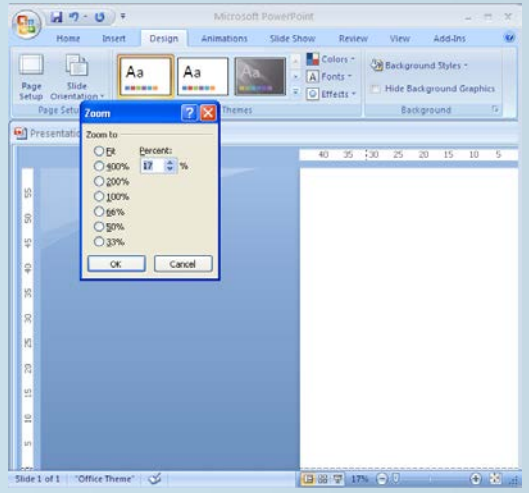
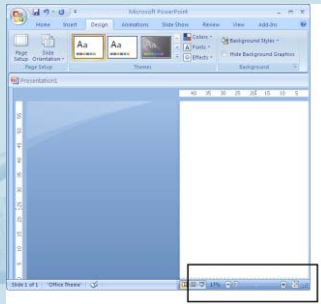
- Ruler and guides are very helpful to place the objects
- Beeld > Liniaal (View > Ruler)
- Right click on slide, select ruler, grid and guides (liniaal raster en hulplijnen)
- Move the guide, make a new one with ctrl



Zoom



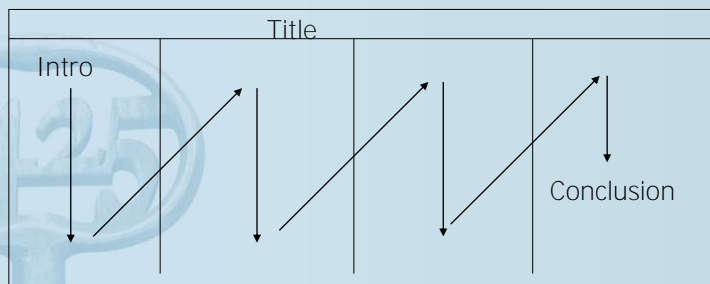
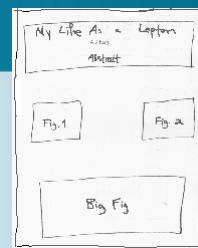
- Do not forget to have a 100% view of the poster
- Use the zoom tool



Poster layout

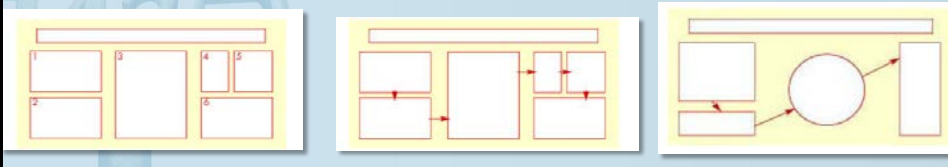


- Start by sketching a layout on paper
- Read a poster as a newspaper
- Use columns, try to place the important points at eye level



Poster layout

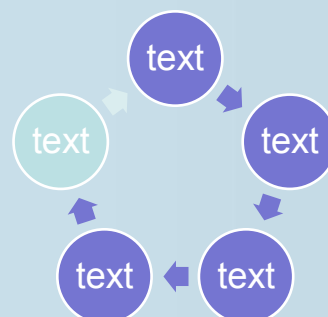
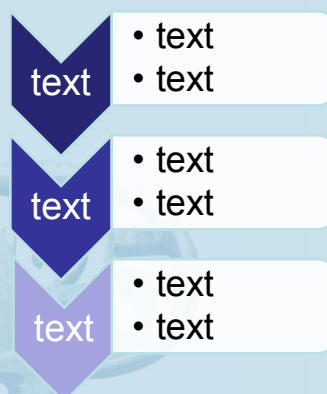
- Use 3 to 5 columns (landscape)
1 tot 3 columns (portrait)
- Order the elements vertically from upper left to lower right
- Order the object logically
- Use sections
- Add graphics, tables, images
- Number sections or use visuals to guide the reader



Poster layout

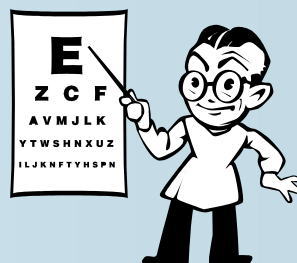


- SmartArt can help
- Caution: Boring uniformity



Font: dimensions (lower bound)

- Title: 96 pt
- Author: 72 pt
- Affiliation: 36-48 pt
- Section header: 36 pt
- Text: 24 pt
- Use standard fonts
less problems when printing
- Easy to read:
Arial, Calibri, Tahoma,
Verdana



Font

- The quick brown fox jumps over the lazy dog -Arial-
- The quick brown fox jumps over the lazy dog -calibri-
- The quick brown fox jumps over the lazy dog -tahoma-
- The quick brown fox jumps over the lazy dog -verdana-
- The quick brown fox jumps over the lazy dog -courier-
- The quick brown fox jumps over the lazy dog -times new roman-
- The quick brown fox jumps over the lazy dog -bodoni poster-
- The quick brown fox jumps over the lazy dog -comic-
- *The quick brown fox jumps over the lazy dog* -vivaldi-
- *The quick brown fox jumps over the lazy dog* -curlz-
- **The quick brown fox jumps over the lazy dog** -ravie-

Title

Title

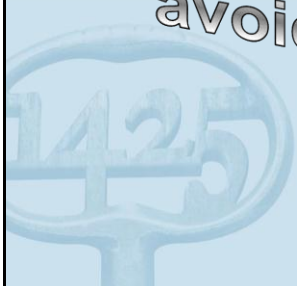
- < 6 words, capital letters only allowed
- Careful with capital letters only, too busy



Text

- Emphasis
 - Use **bold** instead underline. – use moderately -
 - Use different font, fontsize, color
 - Avoid italics
- Be uniform, consistent in dimensions, style and font

avoid wordart



Text: emphasis

2. What are Singlet States?

Consider a system with two spin 1/2 nuclei with identical **resonance frequencies**. The matrix representation of the spin Hamiltonian is not diagonal in the Zeeman product basis, indicating that the Zeeman product states $|I\rangle$, $|I'\rangle$, $|I''\rangle$ and $|I'''\rangle$ are not all **eigenstates** of the Hamiltonian, H . By selecting a **different** basis, called the **singlet-triplet** basis, the Hamiltonian is diagonalized. The triplet states are:

$$\begin{aligned} |T+1\rangle &= |I\rangle \\ |T0\rangle &= \frac{1}{\sqrt{2}}(|I'\rangle + |I''\rangle) \\ |T-1\rangle &= |I'''\rangle \end{aligned}$$

And the singlet state is:

$$|S0\rangle = \frac{1}{\sqrt{2}}(|I'\rangle - |I''\rangle)$$

The important feature of this system is that the singlet state is a **completely disconnected** eigenstate [3].

$$\langle S0|H|T0\rangle = \frac{1}{2}(\langle I' - I''|) H (\langle I' + I''\rangle) = 0$$

Thus, populations in the singlet state are trapped and there are no allowed transitions in or out of the singlet state. The result is that hyperpolarized populations in the singlet state are stored and their lifetime increased.

vis.duke.edu/scientific_poster_workshop

2. What are Singlet States?

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Thus, populations in the singlet state are trapped and there are no allowed transitions in or out of the singlet state. The result is that hyperpolarized populations in the singlet state are stored and their lifetime increased.

Text

- Align
 - Align (text and text blocks) provides a sense of order
 - Align left, do not use justify
- Layout
 - 7-8 words per line
 - Limit the size of a text line, make it easy for the reader
 - Keep the same column width
 - Use space
 - Use bullets

Align: center

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John Smith, MD¹; Jane Doe, PhD²; Frederick Smith, MD, PhD^{1,2}
¹University of Affiliation, ²Medical Center of Affiliation



ABSTRACT

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RESULTS

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Figure 1. Label in 24pt Arial



Figure 2. Label in 24pt Arial



Chart 1. Label in 24pt Arial

	A	B	C	D
Patient 1				
Patient 2				
Patient 3				
Patient 4				

Table 1. Label in 24pt Arial

DISCUSSION

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CONCLUSIONS

Click here to insert your Conclusions text. Type it in or copy and paste from your Word document or other source.

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3. The line spacing is set to add one-half of a line height after each entry. Select 'Format', 'Line Spacing' to adjust line setting.

Align: justify

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Align: left

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Figure 2. Label in 24pt Arial




Chart 1. Label in 24pt Arial


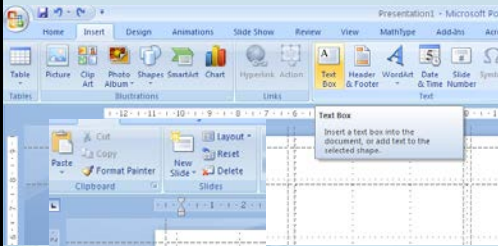
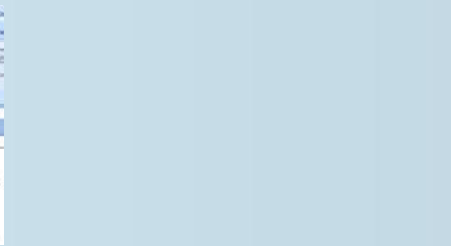



Table 1. Label in 24pt Arial

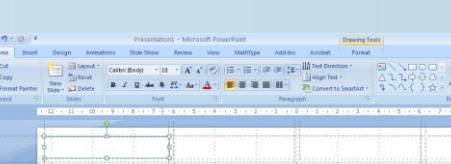
Text

- 2 ways:
 - Start text box and let it grow as you type
 - Fix the width of a textbox (drag a text box and set the width)









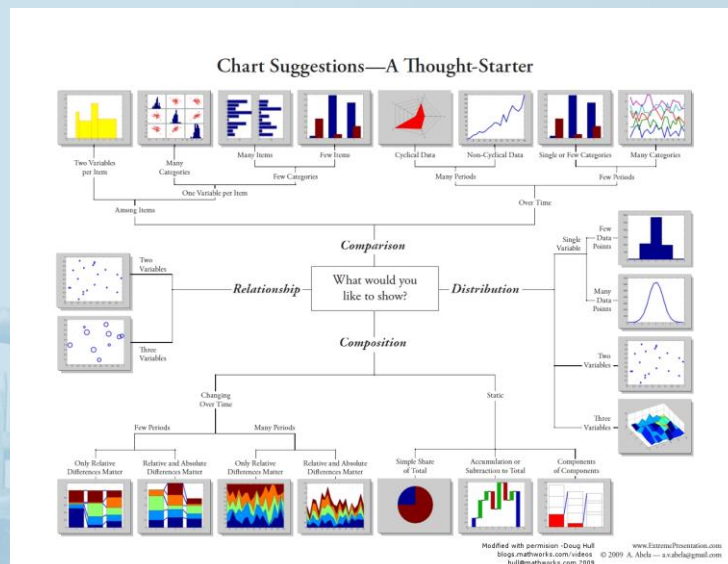
Charts

- Get the correct representation
- Useful info:
 - www.juiceanalytics.com/writing/chart-selection-art-and-science/
 - www.juiceanalytics.com/chart-chooser/
 - www.ncsu.edu/labwrite/res/gh/gh-graphtype.html



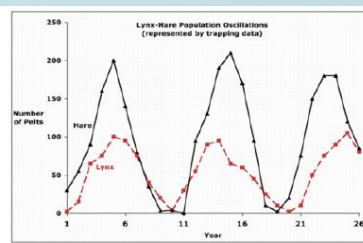
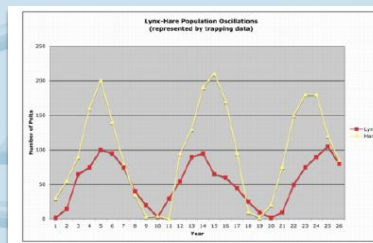
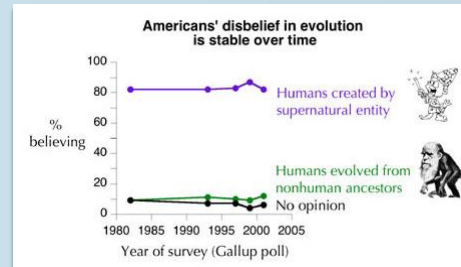
What chart?

- Andrew Abela: extremepresentation.typepad.com/blog/2006/09/choosing_a_good.html



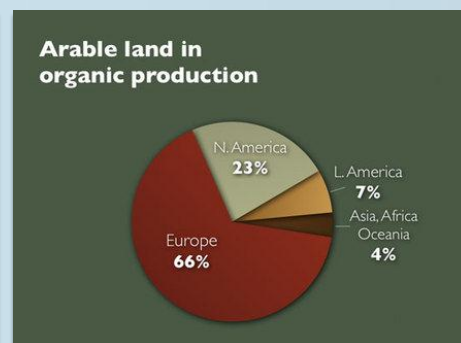
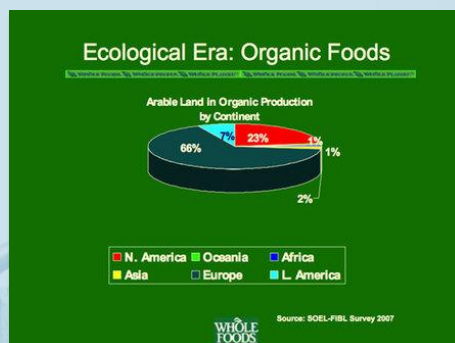
Charts

- Background usually has no added value
- Put information near the plot, no legend
- No gridlines
- Y-label horizontally



Charts

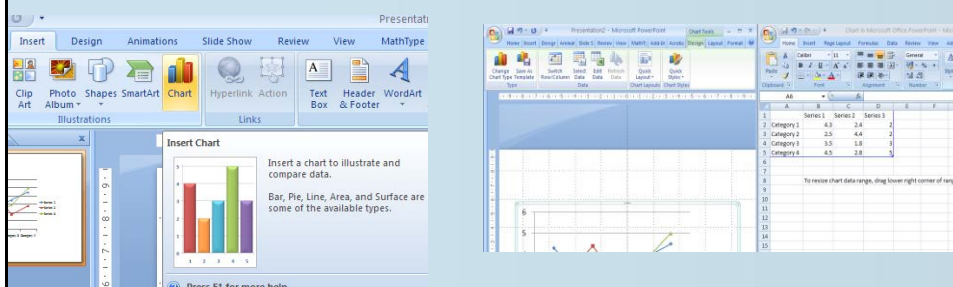
- Avoid 3D-charts if possible



Charts powerpoint



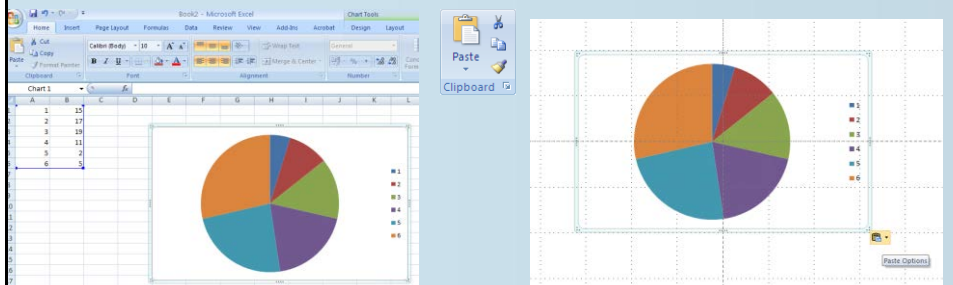
- Start from scratch within PowerPoint
- **Insert > Chart (Invvoegen > Diagram)**
Make a choice and spreadsheet opens



Charts excel



- Transfer from Excel can sometimes cause problems
- Copy chart in Excel
- **Paste Kies optie (Plakken) (in Home menu)**
- **Paste special (plakken speciaal) >**
preference for importing as a png



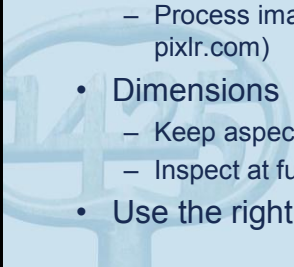
Charts

- When putting charts from different sources (matlab, SAS, sigmaplot, Excel, ...):
 - try to be uniform
 - Import as pictures



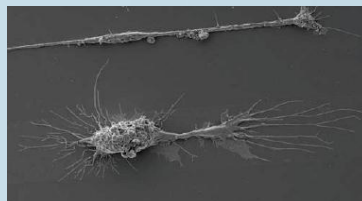
Images

- Useful information: <http://it.med.harvard.edu/ris>
- Get the correct resolution
 - No web images
 - resolution too low
 - Copyright (flickr.com - Only search within **Creative Commons**-licensed content)
 - No overkill on resolution (scan, digital pictures) 300 - 600 dpi
 - Avoid clip-art
 - Process images outside powerpoint (photoshop, gimp, pixlr.com)
- Dimensions
 - Keep aspect ratio (lock aspect ratio)
 - Inspect at full size (100%)
- Use the right type (png, tiff, jpeg)



Images

- Do not forget:
 - Legend
 - Scale
- Images with a small border seem to look better



Images

ppi – pixels per inch (72ppi, 150ppi, 300ppi).

Pixel dimension – how many pixels in the image (640 x 480, 1200 x 1600).

File size – how much space is taken by the file (14K, 227K, 6MB).

Picture size – dimension of the picture (4x6, 5x7)



Valerie Griffith (ucdavis – powerup with powerpoint)

Images

72 ppi
1 inch square



150 ppi
1 inch square



300 ppi
1 inch square

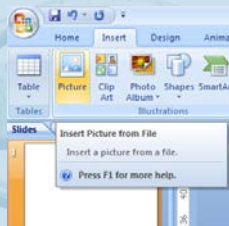


Valerie Griffith (ucdavis – powerup with powerpoint)

Images



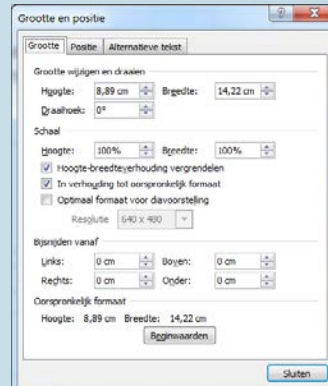
- Inert:
 - Use insert menu (best choice)
 - Copy/paste
- Image can be edited further
Picture tools > format
(Opmaak menu binnen hulpmiddelen voor afbeeldingen)



Images



- Selecteer:
- lock aspect ratio
- Relative to original picture size



Logo

- K.U.Leuven logo's:
www.kuleuven.be/communicatie/logo_zegel.html/
- Take care:
 - Resolution
 - Transparency

**ASSOCIATIE
K.U.LEUVEN**

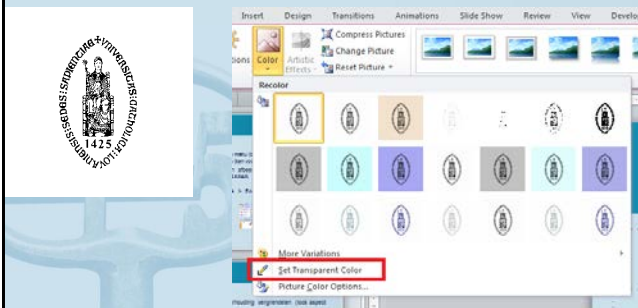


**KATHOLIEKE UNIVERSITEIT
LEUVEN**



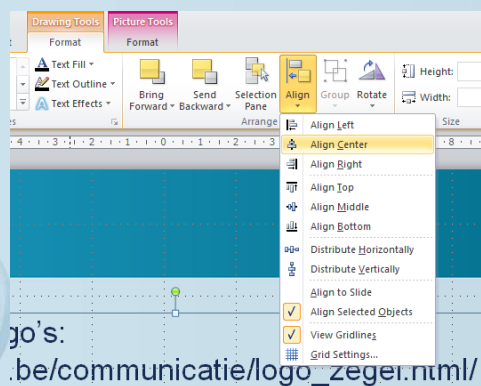
sedes

- Tip: change background (Powerpoint 2010)
- Insert sedes.eps (insert > picture)
- Select sedes, choose 'Picture Tools – Format' > Color > Set Transparent Color > click the transparency tooltip on the image



Align tool

- Use align tool to align different objects on the poster
 - Select objects
 - Align



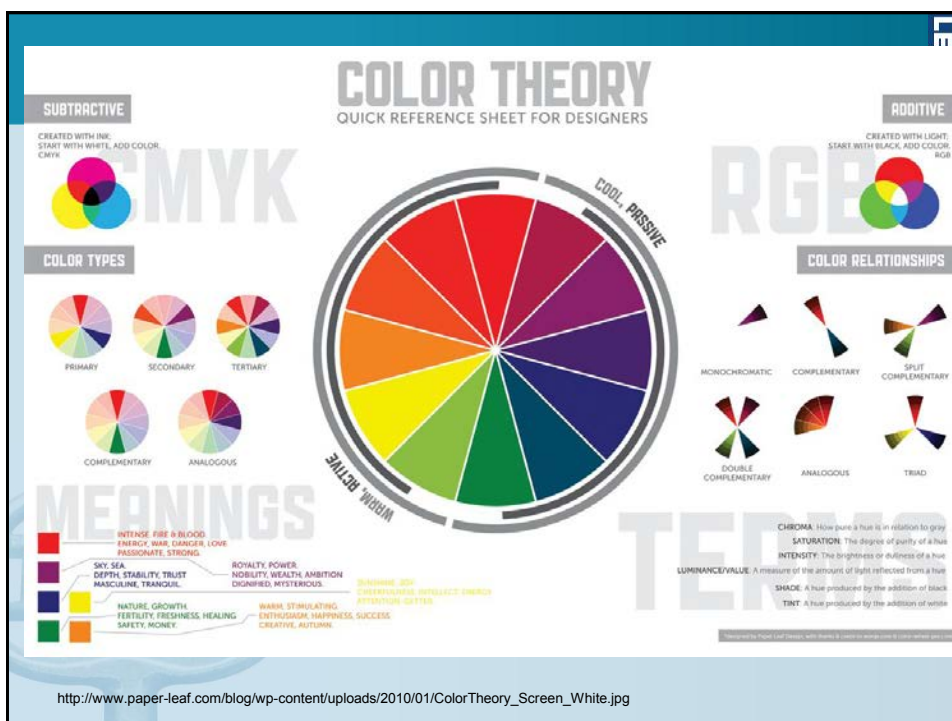
- Use guides

Color

- Use 1 background color
 - Take a light color
 - Avoid the standard PowerPoint textures
 - Dark backgrounds tend to use a lot of ink (paper curl)
- Limit the color pallet, no coloring page
- Use colors in a consistent way

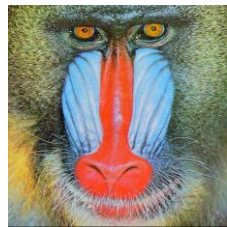
“Color should be used in the same way that type size is used: to emphasize importance, not decorate a page.”

— Alexander White



Color

- White background will reduce the impact of bright colors



- Grey background will enhance bright colors



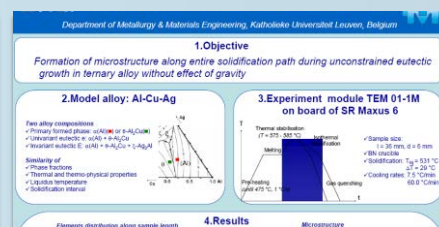
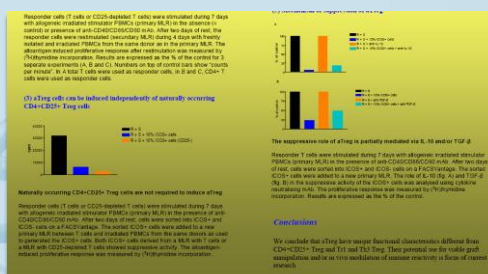
Color: gradient, transparency

Gradient

- Be careful
- Print can be bad (banding)

Transparency

- Print can be a problem
- As well in corel as ppt



Transparency



- Symptom: bad print quality – lines, dot pattern instead of transparency
- Solution 1: avoid transparency, shadow, gradients
- Workaround: transform to an image
(www.print-service.dept.shef.ac.uk)
 1. Select the objects (CTRL to select different objects)
 2. Group objects together (format > group)
 3. Cut the object (CTRL-X)
 4. Clipboard menu: choose Paste Special
 5. Choose object format (PNG gives good results)
 6. Place the image

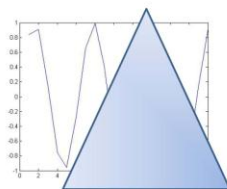
support.microsoft.com/kb/815001/en-us

Transparency



Test met semi-transparantie

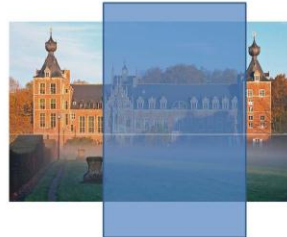
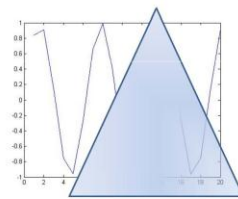
- Dit is tekst



Transparency

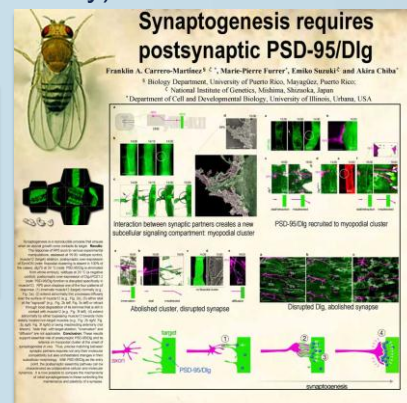
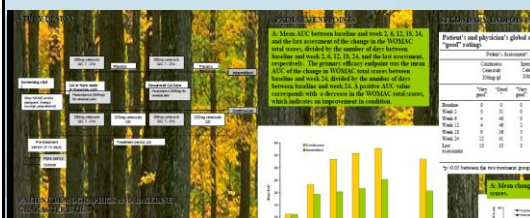
Test met semi-transparantie gegroepeerd + figuur

- Dit is tekst



Color: background image

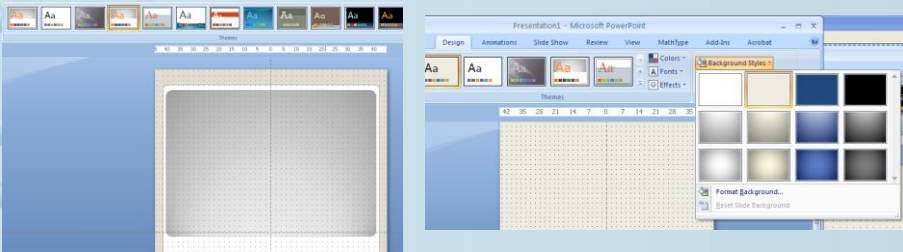
- Usually disappoints
- Keep it really on the background!
- Print can be a problem (transparency)



Background



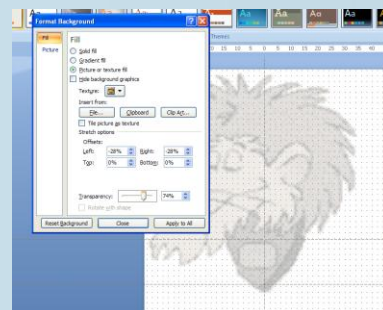
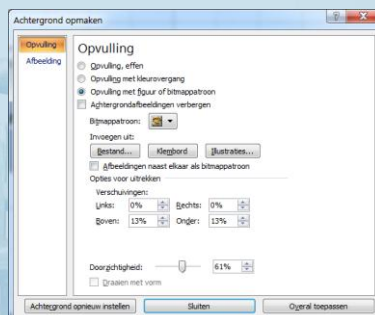
- grays and muted/pale colors help foreground information stand out (cool colors)
- Keep backgrounds subtle; no busy backgrounds
- Different options in PowerPoint
- **Design > Themes (Ontwerpen > Thema's)**
- **Background Styles (Ontwerpen > Achtergrondstijlen > Achtergrond opmaken)**



Background



- Picture in background
- **Achtergrond opmaken > Opvulling met figuur (Format Background > Picture fill)**
- Change transparency



Contrast

- Text blocks on white or pale background, dark fonts
- Use dark background / light letters for title, section headers
- Color blindness?!
Red/green combinations

<http://www.vischeck.com/vischeck/vischeckImage.php>



Contrast

- Use clear contrasts
- Text shadow can disappoint
- Must be legible at 2m

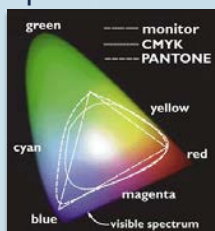
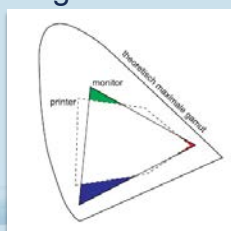
- Solid
- Gradient
- Photograph
- Graphic

- Solid
- Gradient
- Photograph
- Graphic

- Solid
- Gradient
- Photograph
- Graphic

Color: print

- The color on the computer screen is not the color that will be printed!
- Range screen > range printer



- Red, Green, and Blue are "additive colors"
- Cyan, Magenta and Yellow are "subtractive colors".



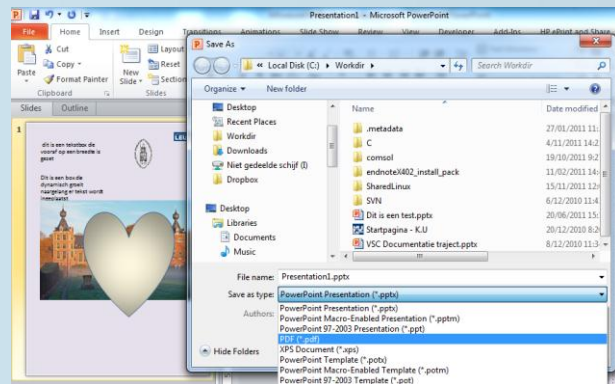
PDF

- ICTS plotter service
admin.kuleuven.be/icts/services/plotter/
- Submit a poster as PDF
- Important:
 - Poster in PDF should have the correct dimensions
 - Check the PDF file (is everything on the poster, typo's, ...)
- Print dimensions: print on a roll 90 cm width!

PDF – Microsoft 2010 - saveas



- Menu: File
- **Save As > PDF**
- **Save as type** choose **PDF**.

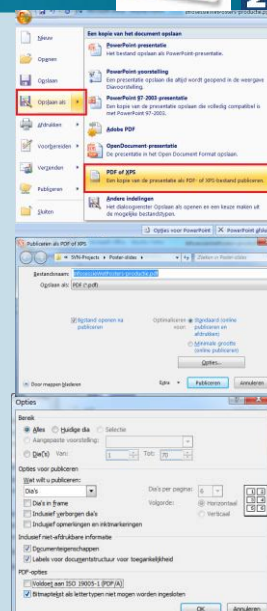


PDF – Microsoft 2007 - saveas



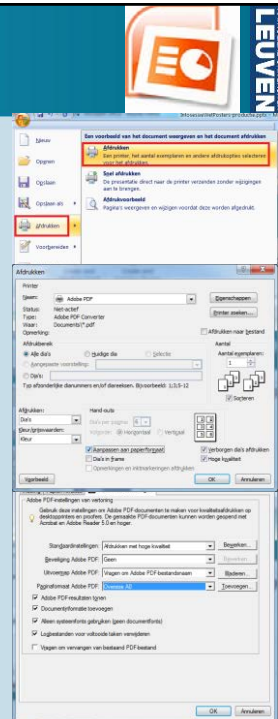
Seems to give good results

- **Microsoft Office Button**, select **Save As > PDF or XPS (Opslaan als > PDF of XPS)**
- **Save as type (Opslaan als type)** choose **PDF**.
- **Optimize for (Optimaliseren voor): Standard**
- More options: do not use PDF/A (transparency problems)
- **Publish (Publiceren)**



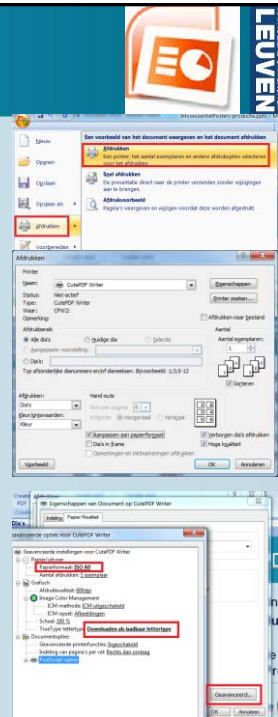
PDF – adobe - print

- If Adobe Acrobat is installed – this should give the best result – from version 8 on
- **Microsoft Office Button**, select **Print (Afdrukken)**
- Choose **Adobe PDF** from the list and change **Properties (Eigenschappen)**
- Settings:
 - High quality
 - Set the correct page size
- check **Scale to fit paper (Aanpassen aan papierformaat)**
- **OK**



PDF – cutePDF - print

- If cutePDF is installed
- **Microsoft Office Button**, select **Print (Afdrukken)**
- Choose **cutePDF** from the list and change **(Properties) (Eigenschappen)**
- **Advanced settings (Geavanceerde Instellingen)** :
 - Download font
 - Set correct page size
- Check **Scale to fit paper (Aanpassen aan papierformaat)**
- **OK**



Transfer the poster

- More info on admin.kuleuven.be/icts/services/plotter/ftp-transfer_en.html

Problems?

- Try to use only 1 computer
- Stick with 1 software version






DESIGN PRINCIPLES

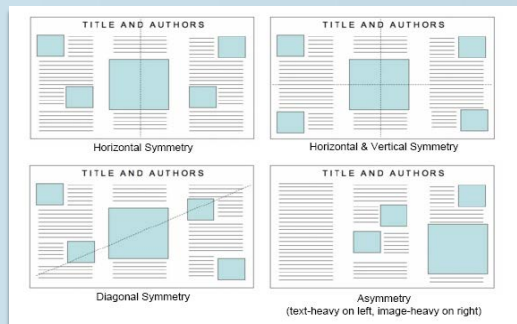
Principles of Graphic Design

Source:

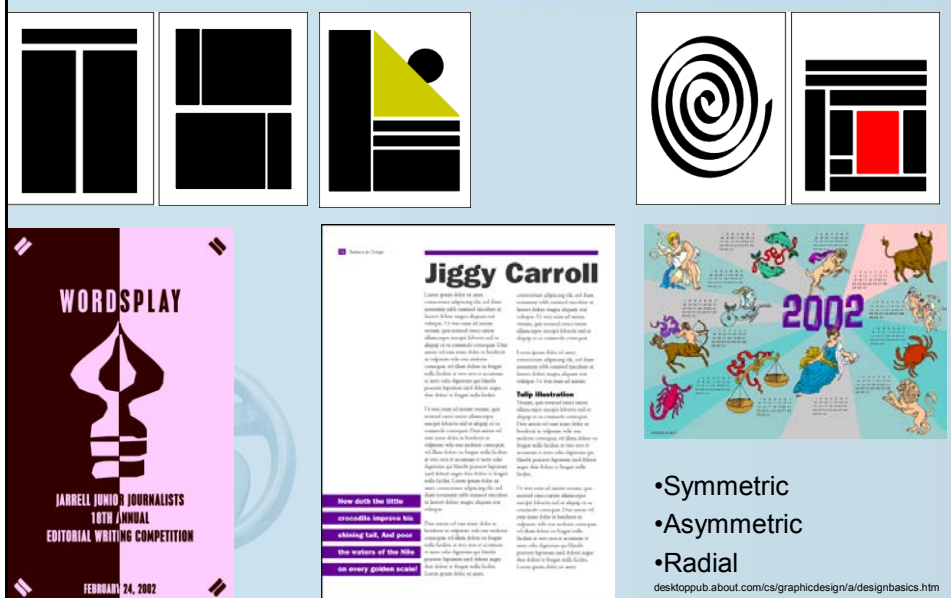
- en.wikipedia.org/wiki/Design_elements_and_principles
 - www.johnlovet.com/test.htm
 - Graphic Design Tutorial | eHow.com
 - Williams, Robin. *The Non-Designer's Design Book: Design and Typographic Principles for the Visual Novice*. 2nd edition. Berkley, California: Peachpit Press, 2004.
- 

Principles of Graphic Design

- **Balance/symmetry:** visually balance color, objects, shapes, ...
 - Make it aesthetically pleasing
 - Symmetric: static
 - Asymmetric: dynamic
 - Radial



Principles of Graphic Design



- Symmetric
- Asymmetric
- Radial

desktoppub.about.com/cs/graphicdesign/a/designbasics.htm

Principles of Graphic Design

- **Emphasis:** put an object on foreground, other color, change size, more ornaments, ...



http://artsalive.ca/collections/posters/search_details.php?id_poster=90&lang=en

Principles of Graphic Design

- CRAP
 - Contrast:

“If two items are not exactly the same, then make them different. Really different.”
 - Repetition

“Repeat some aspect of the design throughout the entire piece.”
 - Alignment

“Nothing should be placed on the page arbitrarily. Every item should have a visual connection with something else on the page.”
 - Proximity

“Group related items together... so the related items are seen as one cohesive group rather than a bunch of unrelated bits.”

<http://www.nhsdesigns.com/principles/>

Principles of Graphic Design

- **Contrast:** contrast in size, color, ...
- make a visual splash where parts of the page stand out.

ANOTHER NEWSLETTER!

J A N U A R Y F I R S T 2 0 0 5

Exciting Headline

Wanta pawt form dno worsted lalle
gul hoe hat seach putty yowar colle
delt pimple odler Gully Looka. Gully
Looka lft inner lalle conlage naturatid
adler shrt dissidence fmer bag
forist, any lalle gul orphan adter
muder too lttor gon ently forist ol
bayer shof.

Thrilling Subhead

"Gully Looka" crater muder angularty.
"Hominy terms ania gamer aschima
wture scooped quz chof! Goller adter
forist? Soudaly hut!"

"Wrs nut, muder!" wined Gully Looka,
hoe dnt peony tendon tore muder's
scallings.

"Cause dornal ludge an wicket beer
inner forist hoe orphan molasses
pimple. Lalle gulle shrt kpper wane frm
dnt cander amonny, an stane otter
delt forist! Delt forist's muth too
denture funny lalle gul!"

Another Exciting Headline

Wsk, pimple ol-wares wader dte
wart laller pimple dum wampun too
dte. Delt's just hormone nurture.

Wan meaing, Gully Looka dteepater
muder, an win ently forist. Fur lung,
dltk awengene gul wettor putty
yowar colle cam tore mortised lalle
conlage imitidat bayer hull fmer off
beem—Fudler Beer! (hore pimple,
fur obivous reason, colat "Drowning").
Muder Beer, an Lalle Bore Beer. Dltk
meaing, olte beem hat, just otter
conlage, tickng lalle bakings, an
hat gun ently forist too peck block-
barners an rase-barners. Gully Looka
ranker dough salt bought, off curie,
non-stady worsted hum, koda wuly lalle
gul win badly ras ently beer's hornel

Boring Subhead

Honor siggle inner darning rum, stul
tore bolle fuller ssp—wan grade bag
holer ssp, wan muddle-sash boll, an
wan tawny lalle boll. Gully Looka
tucker spon fuller ssp fmer grade bag
boll-huqly spurted art inner hoang!

"Wuh!" crater gul, "Delt sogg too
hart—bams nar mouse!"
Dingy traitor ssp inner mukle-sash
boll, wch worse too colat. Butter ssp
inner tawny lalle boll worse just ras, an
Gully Looka alled ol lap. Dingy ruals,
tore cheem—wan anomalous cheet,
wan mukle-sash cheet, an wan tawny

Another Newsletter!

J A N U A R Y F I R S T 2 0 0 5

Exciting Headline

Wanta pawt form dno worsted lalle
gul hoe hat seach putty yowar colle
delt pimple odler Gully Looka. Gully
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muder too lttor gon ently forist ol
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"Cause dornal ludge an wicket beer
inner forist hoe orphan molasses
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frm dnt cander amonny, an stane
otter delt forist! Delt forist's muth
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conlage imitidat bayer hull fmer off
beem—Fudler Beer! (hore pimple,
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Muder Beer, an Lalle Bore Beer. Dltk
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conlage, tickng lalle bakings, an
hat gun ently forist too peck block-
barners an rase-barners. Gully Looka
ranker dough salt bought, off curie,
non-stady worsted hum, koda wuly lalle
gul win badly ras ently beer's hornel

Boring Subhead

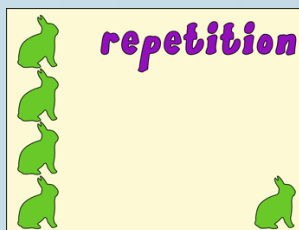
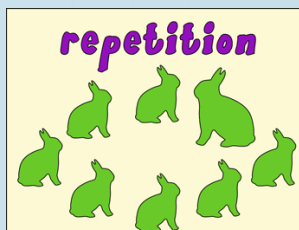
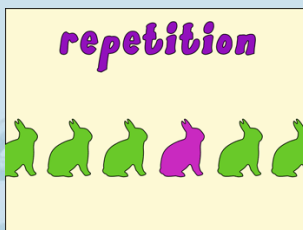
Honor siggle inner darning rum, stul
tore bolle fuller ssp—wan grade bag
holer ssp, wan muddle-sash boll, an
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Dingy traitor ssp inner mukle-sash
boll, wch worse too colat. Butter ssp
inner tawny lalle boll worse just ras, an
Gully Looka alled ol lap. Dingy ruals,
tore cheem—wan anomalous cheet,
wan mukle-sash cheet, an wan tawny

<http://www.nhsdesigns.com/principles/contrast/page02.php>

Principles of Graphic Design

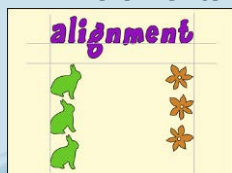
- **Repetition**
- Repetition focuses on consistency.
- Repetition comes through unity and consistency in font, alignment, headings, etc



<http://www.nhsdesigns.com/principles/repetition/poster-assignment.php>

Principles of Graphic Design

- **Alignment:** for text as well as for graphical objects. Gives a neat, orderly design
- Alignment focuses on unity.
- There needs to be something that ties together all of the elements of the page visually.



www.nhsdesigns.com/principles/alignment

Business Plan
for
The Shakespeare Papers

by Patricia Williams
February 25

Business Plan
for
**The Shakespeare
Papers**

by Patricia Williams
February 25

Principles of Graphic Design

- **Proximity:** focuses on clarity in organization.
- Related items placed in close proximity to each other appear as one visual unit, rather than several unique items.

My Flowers

Marigold
Pansy
Rue
Woodbine
Daisy
Cowslip
Carnation
Primrose
Violets
Pink

My Flowers

Marigold
Pansy
Rue
Woodbine
Daisy
Cowslip

Carnation
Primrose
Violets
Pink



www.nhsdesigns.com/principles/proximity/

des1012.blogspot.com/2008/06/design-elements-principles-summary.html

Principles of Graphic Design

- **White space:** can be used to give some structure. Be consistent: same spacing around images, charts, ...



<http://www.ncsu.edu/project/posters/NewSite/>

SOS POSTER



SOS Poster

Ideal

- Be seductive
- Creative communication of research
- Clear structure (flow) of information
- Images and charts (visuals) instead of text
- Initiate communication
- Handouts can help


Avoid


- Paper on a poster format
- Too much text
 - Only the essentials
 - Remove unnecessary details
- Excess of color / combinations
- Intense background

•Align

•Uniform

•Balance





- Title too small
- Different text boxes do not form a unit
- Contrast between dark background and white text box is too intense
- Left part: too much text

- Clear title
- Large text box forms a unity
- Images aligned
- Pale colors are more eye friendly
- Balanced by spreading the image and the chart

<http://www.fes.uwaterloo.ca/computing/help/posterdesign/PosterCreation.pdf>

Examples (CCMR Cornell Center for Materials Research)



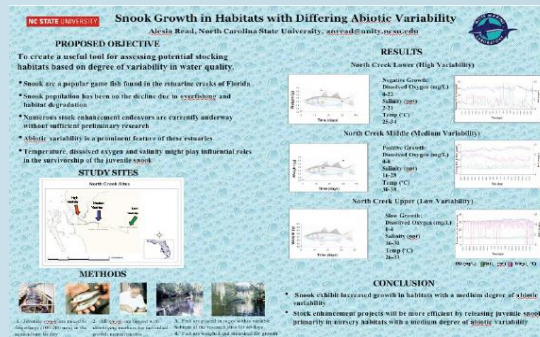



- Trop is Teveel
- exhausting

- Contrast
- Different backgrounds distract



- [illegible]



- 

PREVALENCE OF OBESITY AMONG INNER CITY LATINO CHILDREN AND ADOLESCENTS

Naima M. Murtuq MD, PhD, Jolene Minkman MS, Leslie Baker, PhD

Children's National Medical Center and George Washington University School of Medicine and Health Sciences, Washington, DC

Background: The prevalence of obesity and other health problems among Latino children and adolescents in the DC area is not well understood. The purpose of this study was to determine the prevalence of obesity among inner city Latino children and adolescents in the DC area. The study group consisted of 1,000 children and adolescents aged 5 to 17 years who were enrolled in the Children's National Medical Center's (CNMC) primary care clinic. The study was conducted between 2005 and 2007. The prevalence of obesity was 12.5% (95% CI 10.5-14.5%). The prevalence of overweight was 25.0% (95% CI 22.5-27.5%). The prevalence of obesity was significantly higher in children and adolescents who were enrolled in the CNMC's primary care clinic compared to those who were not enrolled (12.5% vs. 5.0%, p < 0.001).

Table 1. Study Characteristics

Characteristic	Prevalence (%)
Gender	
Male	50.0
Female	50.0
Age	
5-11 years	12.5
12-17 years	12.5
Ethnicity	
Latino	12.5
Non-Latino	12.5

Conclusion: The prevalence of obesity among inner city Latino children and adolescents in the DC area is 12.5%. This prevalence is significantly higher than the prevalence of obesity among children and adolescents in the general population. The prevalence of obesity was significantly higher in children and adolescents who were enrolled in the CNMC's primary care clinic compared to those who were not enrolled.
- Study Design:** Cross-sectional study of 1,000 children and adolescents aged 5 to 17 years who were enrolled in the CNMC's primary care clinic. The study was conducted between 2005 and 2007.

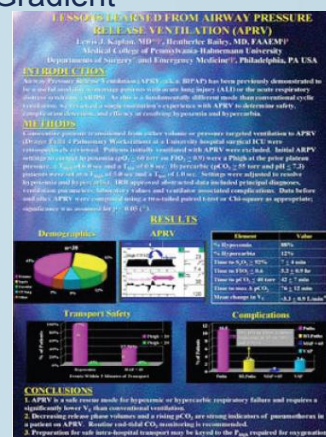
Study Setting: The study was conducted in the CNMC's primary care clinic, which is a large, inner city, Latino-serving clinic.

Study Population: The study population consisted of 1,000 children and adolescents aged 5 to 17 years who were enrolled in the CNMC's primary care clinic. The study was conducted between 2005 and 2007.

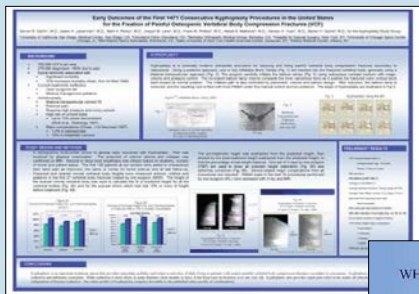
Study Variables: The study variables included gender, age, ethnicity, and prevalence of obesity and overweight.

Study Results: The prevalence of obesity was 12.5% (95% CI 10.5-14.5%). The prevalence of overweight was 25.0% (95% CI 22.5-27.5%). The prevalence of obesity was significantly higher in children and adolescents who were enrolled in the CNMC's primary care clinic compared to those who were not enrolled (12.5% vs. 5.0%, p < 0.001).

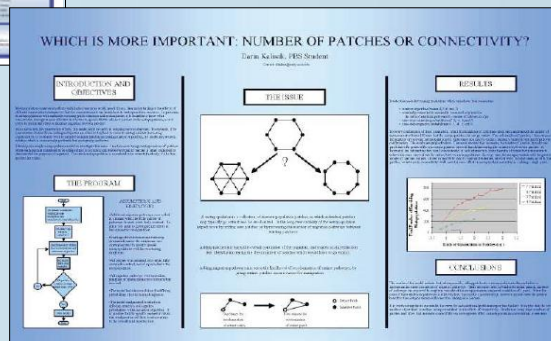
Study Limitations: The study was a cross-sectional study, which limits the ability to establish causality. The study was conducted in a single clinic, which may limit the generalizability of the results.



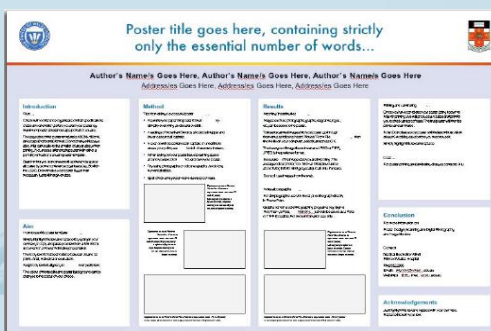
Examples (CCMR Cornell Center for Materials Research)



- Use gradients sparingly



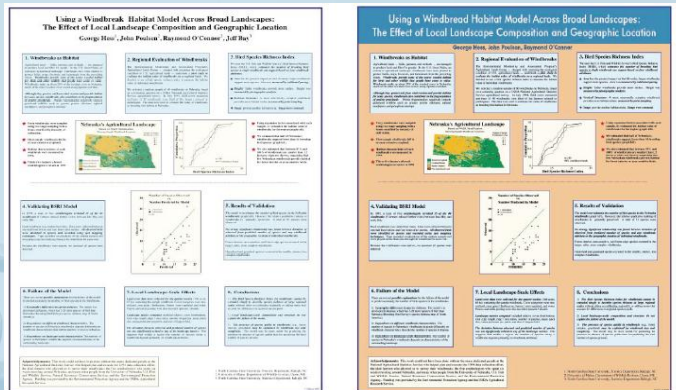
Examples (CCMR Cornell Center for Materials Research)



- Simple
- Balance ok
- Clear distinct title logo
- Clear flow

Examples (CCMR Cornell Center for Materials Research)

- Color can help or not?



Inorganic Biochemistry of Iron Proteins

Jared J. Heymann, Claire J. Parker Siburt, Katherine D. Weaver, and Alvin L. Crumbliss

Duke University – Department of Chemistry – Durham, NC



Purpose:
To study iron protein biochemistry from the perspective of the iron Protein = Ligand

The Iron Paradox

Iron is needed for nearly every living cell. Iron in foods and diet produces reactive oxygen species & must be controlled.

Iron Abundance in Humans

45-65 mg/kg in humans. 70% in Red Blood Cells (hemoglobin). 0.1% in Transferrin. Turnover of transferrin iron is ~10 mg / 24 hours with 80% of this being transported to the bone marrow for hematopoiesis. Bacteria can also target Tf as a source of iron.

Proteins act as the 1st & 2nd coordination shell of iron and can modulate the kinetics and thermodynamics of reaction.

Techniques:

Spectroelectrochemistry
UV-Visible Spectroscopy
Fluorescence Spectroscopy
Difference Spectroscopy
Stopped-Flow Kinetics
SUPREX

TRANSFERRIN

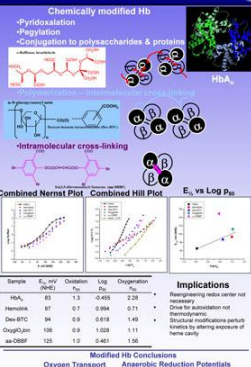
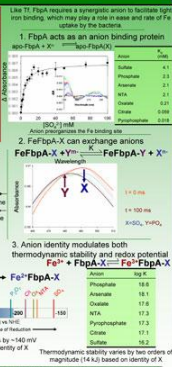
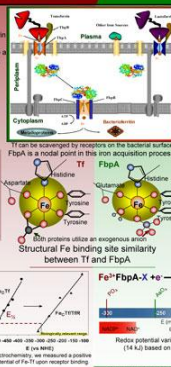
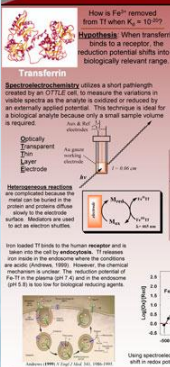
A mechanistic study of the iron release by receptor-bound transferrin using spectroelectrochemistry

FERRIC BINDING PROTEIN

Role of a synergistic anion on modulating iron uptake in a bacterial transferrin by pathogenic bacteria: A study in kinetics and thermodynamics

HEMOGLOBIN

Effects of subunit cross-linking on hemoglobin oxidation states determined by spectroelectrochemistry




For further information, please contact Jared J. Heymann at jhey@duke.edu. This work was supported by the National Science Foundation (NSF) Grant CHE-0546844 and the Department of Chemistry at Duke University. The authors thank Dr. Alvin L. Crumbliss for his helpful discussions and Dr. Katherine D. Weaver for her assistance in the laboratory. The authors also thank Dr. Alvin L. Crumbliss for his helpful discussions and Dr. Katherine D. Weaver for her assistance in the laboratory.


MÉCANIQUE QUANTIQUE EN CHUTE LIBRE

Vers des mesures ultra-précises des mouvements


I.C.E.
Interférométrie à source Cohérentes pour applications dans l'Espace




INSTITUT
d'OPTIQUE
GRADUATE SCHOOL




ONERA
THE FRENCH AEROSPACE LAB



l'Observatoire
de Paris



SYRTE
Systèmes de Référence Temps Espace



cnès
CENTRE NATIONAL D'ETUDES SPATIALES


Ondes et particules

- Particules = boules de billard
- Ondes = vagues

2 particules au même endroit s'additionnent
On observe toujours 2 particules.

2 ondes interfèrent :
La superposition d'ondes peut être nulle.

Mesures Interférométriques



On peut mesurer le décalage relatif acquis par les 2 ondes en regardant l'amplitude de leur interférence.

Interférométrie atomique

- Les atomes sont des très petites ondes à température ambiante.
- Mais quand on les refroidit :

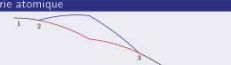
→ A très basses températures les atomes se comportent comme des ondes, on peut les utiliser en interférométrie.

Mesures de mouvement par la chute de masses

Pour mesurer l'accélération d'un avion, il suffit de regarder la chute d'un objet :

- Si l'objet semble immobile par rapport à l'avion, celui-ci chute avec l'accélération de la pesanteur.
- Si l'objet par sur la droite, l'avion tourne à gauche.
- Si l'objet chute avec l'accélération de la pesanteur, l'avion a une vitesse constante.

Accélérométrie atomique



- Un nuage d'atomes est lâché en vol libre.
- On le sépare en deux paquets de vitesses initiales différentes par une impulsion laser.
- Deux autres impulsions lasers permettent de recombinaison les paquets.
- Le décalage entre les deux trajectoires est lu par interférence.

→ Cela permet de remonter à l'accélération du référentiel de l'expérience.

WWW

LEUVEN
UNIVERSITY OF LEUVEN

- Colin Purrington
<http://colinpurrington.com/tips/academic/posterdesign>
- George Hess, Kathryn Tosney, Leon Liegel
<http://www.ncsu.edu/project/posters>
- Cornell
<http://www.cns.cornell.edu/documents/ScientificPosters.pdf>
- Eposters
<http://www.eposters.net/>

Thank you

- www.flickr.com - **Creative Commons**-licensed content
- <http://colinpurrington.com/tips/academic/posterdesign>
- <http://www.ncsu.edu/project/posters>
- <http://www.cns.cornell.edu/documents/ScientificPosters.pdf>



Questions?

- Contact:
Frank.VanPuyvelde@icts.kuleuven.be

