Poster Design

layout • fonts • science!
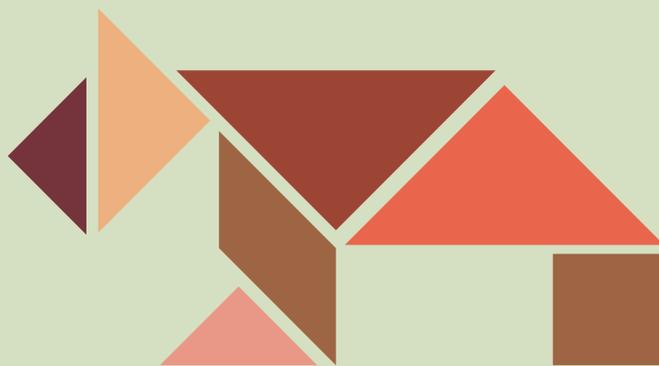
This is a how-to-guide for effectively presenting *scientific work* in the *poster medium*. The suggestions are simple to follow and broadly applicable to multiple fields of study.

Dimensions of Your Poster

Three Tiers of Content

Size Matters

Layout & Margins

Whitespace & spacing

Font Selection

Gray is the New Black

Choosing Color

Highlighting Keywords

Advertisement for Your Paper

D

DIMENSIONS OF YOUR POSTER

1.618

content width

content height

poster height

poster width

The Golden Ratio is often found in art and nature. It can be used to create pleasing, natural looking compositions.

To use it in creating your poster, let the ratio of the shorter side of the poster to the longer side be roughly 1:1.618. For example, if you are alotted a maximum size of 36 x 36, make a 22.25 x 36 poster.

The Golden Ratio can also be used to calculate the size of the content area, leaving sufficient space between the content and the edges of the poster.

The Golden Ratio appears everywhere, from Leonardo Da Vinci and the Parthenon, to shells and pinecones. This entire book was laid out using the Golden Ratio.

Three Tiers of Content

This Is Your Poster Title

Put a One or Two Sentence Description of Your Content Here. This Should be Easy to Read from 3-5 Feet Away.

Your poster should consist of three tiers of information. The formatting and the content of each tier reflect the audience who will consume it:

1. Visible from the back of room: The poster title.

2. Visible from the back of crowd that has gathered at your poster: A short summary or abstract of your work, and the main section headings.

3. Visible by those who, intrigued, have come up close to your poster: Everything else (sub headings, the body text, the tables, etc.)

Your poster summary is the 30 second pitch of your work, designed to lure people to your poster, and should generally be more concise than your paper abstract.

S

SIZE
MATTERS

The original Fibonacci sequence (start at 1):
5pt, 8pt, 13pt, 21pt, 34 pt, and 55pt

Aa   Aa   Aa   Aa   Aa   Aa

The Fibonacci sequence doubled (start at 2):
6pt, 10pt, 16pt, 26pt, 42 pt, and 68pt

Aa   Aa   Aa   Aa   Aa   Aa

Original and Doubled Combined:
6pt, 8pt, 10pt, 13pt, 16pt, 21 pt, 26pt, 34pt and 42pt

Aa Aa Aa Aa Aa Aa Aa Aa Aa Aa

The Golden Ratio should also be used to choose the font sizes for your content, including tables, graphs, and captions. The ratios of successive Fibonacci numbers F_n : F_{n+1} converge to the Golden Ratio. Therefore, you can visually approximate the Golden Ratio in your fonts by using values from the Fibonacci sequence, and from the sequence *either* doubled *or* tripled.

This book uses the original and doubled sequences: the page title is 42 point, the image text is 10 point, the body text is 16 point, and the text in the information boxes below is 13 point.

Strictly speaking, a font refers to a typeface with a particular size and weight. `Bolded Avenir in 10 point' and `italicized Avenir in 13 point' are actually different fonts.

L
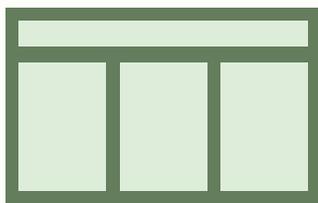
LAYOUT
& MARGINS
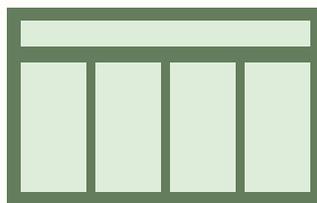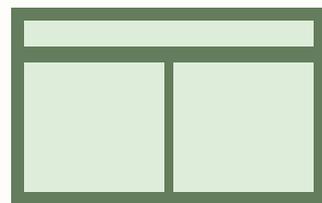
3-Column   4-Column   2-Column
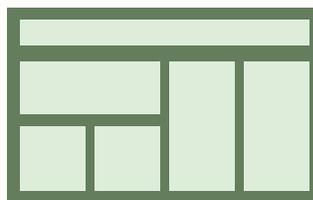
Uneven Columns   Column Spanning

A grid-based layout guides the flow of information by leading the eye top to bottom and left to right.

The columns should not be so wide that the reader must move her head side to side to read one column, but neither should they be so narrow that reading becomes difficult. Margins between columns should be wide enough that the content separation is visually clear.

Column content - headings, tables, text, or graphical elements - should span that column exactly, and not be smaller than the column width.

If you choose to do uneven columns, as in the above graphic, the total width of the double column should be the width of the two smaller columns (plus spacing.)

WHITESPACE & SPACING

Avoid the temptation to fill up every square inch of space, as this makes it difficult to consume the content. Your audience should be able to visually identify your poster's sections before starting to read.

Spacing may also be used if you wish to cluster related sections together, like in the above graphic. Group text blocks, as with areas 1 and 2, or mix text and graphical elements, as with areas 4 and 5.

To help visually reinforce your sections and bolster the space between columns, text blocks should be justified and aligned left. Edit your text to avoid "orphans" - single words at the end of a paragraph that appear by themselves on a new line - as well as unnecessary hyphenations.

Use whitespace rather than borders to separate elements. Use borders only when necessary, such as for showing an algorithm.

FONT SELECTION

Blackletter
Goudy Text

Oldstyle
Adobe Jenson

Script
Mistral

Transitional
Baskerville

Modern
Didot

Square Serif
Rockwell

Sans Serif
News Gothic

Decorative
Curlz

For presentation media such as posters, sans serif fonts are the most legible. Avoid fancy, decorative or script fonts!

Choose one font to use throughout (optionally, pick a secondary font for the poster title). Avoid ALL CAPS, though for header text you may choose to use SMALL CAPS. To stress content, use either **bold** or *italic* (not both). Do not underline text, as this greatly reduces legibility.

Some great sans serif fonts to choose from are: Avenir, Gill Sans, Helvetica, Myriad Pro, Optima, and Univers. This book is typeset using Avenir, with titles in Trajan.

A sans serif font lacks the small projections at the end of a stroke.

GRAY IS THE NEW BLACK

Your main text should not be in black. Use dark gray instead (a great gray to use is 80% gray, which is black at 20% brightness). This naturally visually segments your poster into sections, and allows someone at the back of the crowd to quickly scan your poster and easily read all of the headings. Graphical elements on your poster will also pop more.

Use the regular version of your chosen font in black for header text, and a lighter version (in dark gray) for body text, as this book does.

People can differentiate grays at brightness increments of roughly 20%. Therefore, content that is not as central might use 80% gray for titles and 60% gray for content.

C
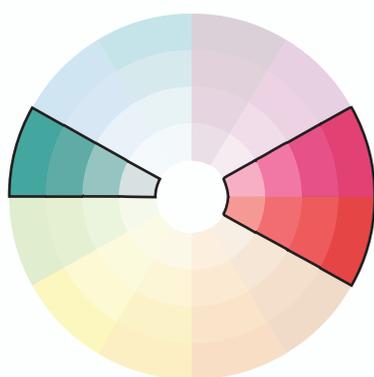
CHOOSING COLOR

Left
Compliment
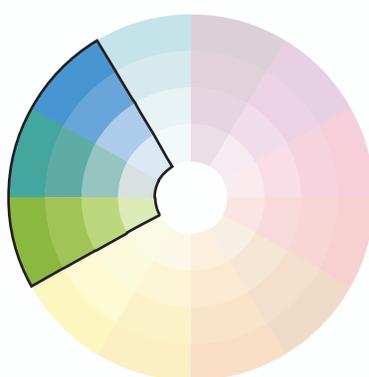
Analagous
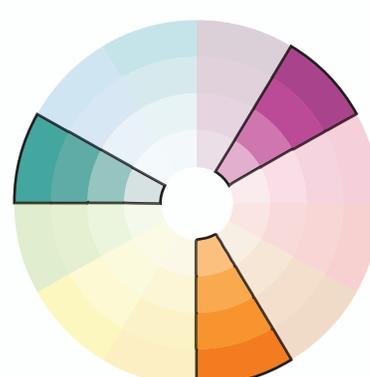
Triad

There are many ways to choose color themes for a poster. Above we have highlighted three rules for choosing, starting from a main color of turquoise. These color rules help pick out two accent colors using the color wheel.

Limit yourself to one main color, and one or two accent colors for sparingly drawing attention to key content.

The easiest way to choose a color theme is to use exisiting color palettes collected on websites or found within computer software (e.g., Photoshop).

Adobe has a great free website that collects color themes. A good place to start is by looking at the most popular: https://kuler.adobe.com/explore/most-popular/

H

HIGHLIGHTING KEYWORDS

True writing is believed to have been independently invented in Mesopotamia and Mesoamerica.

In your poster summary, highlight the 4-5 key phrases in color to further ease the process of someone scanning your poster as they walk by.

Highlight the most critical phrases throughout your poster, such as your main conclusion. It is also helpful to highlight a couple key phrases per section or large chunk of text. This allows someone to get the gist of the text chunk without reading all of it.

You can also use this technique to highlight the important or interesting values in tables.

Your primary color is generally used for large blocks of color, such as subheadings, borders, or backgrounds. Use your secondary color for highlighting keywords.

ADVERTISEMENT FOR YOUR PAPER

Do Not Put This Much Content on Your Poster!

Your poster is an advertisement for your paper or presentation. It should not convey all of your paper's content. Do not even feel obliged to structure your poster identically to your paper!

Adding more content can, paradoxically, reduce comprehension. Your audience will gladly consult your paper if they are interested in your proofs, your discussion of related work, or your detailed methodology.

The goal of your poster is to attract attention, present the most interesting findings, and give a broad overview of your work.

Keep the background of your poster simple and let the content speak for itself. Stay away from gradients, textures, drop shadows, and clip art.

For more information about presenting scientific information, including templates and other guides, visit our website:

www.the**V**isual**S**cientist.com

Poster Design

Hailpern & Danilevsky