

## HOW TO CREATE A SCIENTIFIC POSTER

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For certain modules, conferences and workshops, you may have to create a poster of your work. Of course, these aren't like those you'd find plastering the walls of cinema foyers. They're another way of presenting a project or investigation, combining text and images. Additionally, you'll probably be expected to explain it to an audience or individuals, and, as with other presentations, take questions at the end.

Poster presentations differ from institute to institute. But, in general, all should set out to show: what you did, why you did it, how you did it, and what your findings contribute to the bigger picture. Through your poster, you'll also want to promote your work and engage others.

### ■ Initial points to bear in mind

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There a number of points you should bear in mind while constructing your poster:

- ▶ **Keep your contents focused:** you'll only be able to include a certain number of key elements so be selective. Only include what you want your audience to retain, and make sure that you express this clearly.
- ▶ **Be visually enticing:** the content is, of course, key, but this medium also sets out to be striking to passer-bys so that they're tempted to take a closer look.
- ▶ **Make it accessible:** you'll probably have to present your poster, but the rest of the time it'll be left as a standalone piece. Therefore, it should be easy for people to understand independently.

### ■ Design software

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A popular way to design posters is by using **Microsoft PowerPoint**. Before you begin designing, format the page size to that of your final poster *first*. If you save this part until the end, you'll probably mess up all of your formatting.

Other programs include Adobe InDesign, Photoshop and Illustrator.

### ■ What to include

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You'll realize from the start that your space is very limited. A big no-no is filling your poster with text, tables and figures in an attempt to include everything. Less is more. Too much is simply overwhelming. You need to consider your poster from the standpoint of your viewer: they should be able to skim it and easily get the main points you're making.

In order to begin reducing your content, consider the following questions: **what's your take home message?** What do you want your audience to understand and appreciate after looking over your poster? You can then work around this central message, considering all the points laid out before: what you did, why you did it, how you did it, and what your findings contribute to the bigger picture.

Usually, you'll include the following:

- ▶ Title
- ▶ Authors, collaborators, institutions
- ▶ Introduction, background
- ▶ Research questions, hypotheses
- ▶ Methodology (and materials)
- ▶ Results
- ▶ Discussion
- ▶ Conclusions
- ▶ Future research
- ▶ Acknowledgements
- ▶ Contact information

An abstract is not always included, especially as you'll want to conserve space for other components.

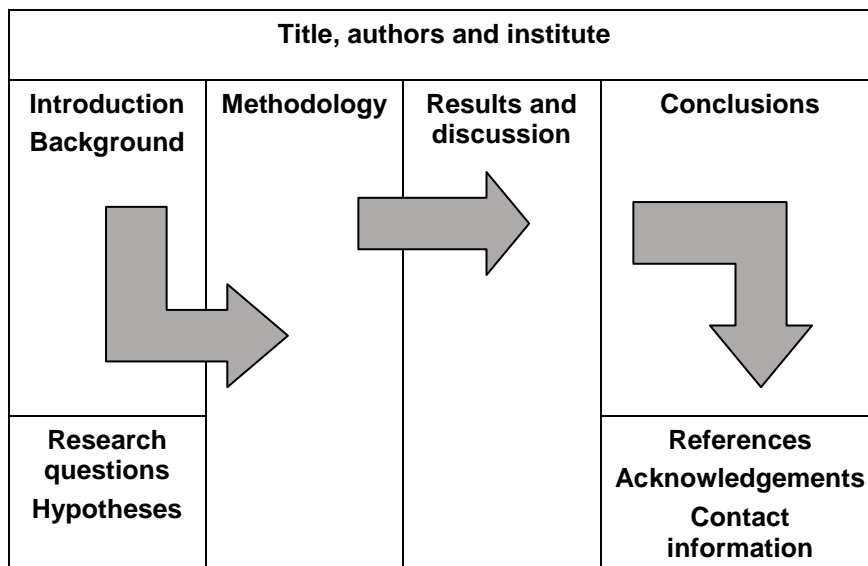
## ■ Layout

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The dimensions are usually 42 x 42 inches, 42 x 48 inches, or 42 x 52 inches. There are no set rules as to how you should design your poster, but, in general, the material is arranged in a number of columns, usually from three to four.

Be logical with how you sequence the contents: the information should flow from the **left to the right**. Most people will naturally look at the top left corner first. Your viewers should be able to link the parts together without any further explanation (including the use of arrows, numbers, etc.). How you organize your content is very important: if it's hard to follow, people will simply move on to the next poster.

It can help to begin with a sketch, detailing where each of the main components will be placed. For instance, the main outline could be as follows (but, remember that you can also use a portrait format):



The title section is the first part most people will look at. Make it big enough to be read up to **6 meters away**. And **don't include too many citations**: this will only end up cluttering your poster.

## ■ The text

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Remember that a poster is a visual representation of your work. Therefore: **cut back on the text**. As much as possible, use graphs, tables, figures and pictures to get your main messages across. As a general rule, your poster should be composed of:

- ▶ 20 - 25% text
- ▶ 40 - 45% images
- ▶ 30 - 40% empty space (borders around and between sections)

Your wording should be simpler than that you'd use in a paper. If you use long, complex sentences, your audience may not take the additional time to figure out what your poster's about. You want to keep your **wording succinct and straightforward**. **Bullet points** are an effective way to achieve this.

On the other hand, **avoid overusing acronyms and abbreviations**. Too many will simply confuse and aggravate your viewers.

Also, unlike a written report, use the **active voice**. This is an effective way of keeping your word count down. For more guidance on this issue, check out "**Active versus passive voice**" in this series.

In regard to **font size**, your text should be large enough to be read from around **two meters away**.

- ▶ main heading: 42 point
- ▶ section headings: 36 - 40 point
- ▶ section text: 24 - 28 point

**Line spacing** is also important. Most of the time, **1.5 spacing** is more than enough. Include a larger space between paragraphs, usually between 80 - 100% of the font size.

**Justify your text**. As your text will be organized in columns, it looks neater than jagged edges.

In regard to **font style**, stick to **san serif fonts**. These are fonts without ("sans") embellishments, and include: Arial, Calibri and Helvetica. It's fine to use a number of different styles in your poster, but stick to **no more than three**.

Use **bold, underlining and color to emphasize points**. Italics can be harder to read, but it's another option. However, don't use them altogether, and don't overuse them: for example, while bold is effective for a few words, whole sentences in bold can be difficult to read.

**Lower caps** are easier to read than UPPER CAPS. Therefore, avoid writing any text – including titles – in all upper.

If your poster is difficult to read then it won't be effective in communicating the information you want to convey. And, as stated before, most people won't stop to try and figure out what this information is.

## ■ The images

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Images include figures, tables, photos, pictures, etc. As we've already established, the images you use should take up most of your poster (40 - 45%). In this respect,

always consider whether you can represent a point as an image as opposed to words.

Like the text, you should be able to easily see what a table or figure is representing from about **two meters away**. To help achieve this, get rid of any superfluous information from tables and figures: only keep the essential point(s).

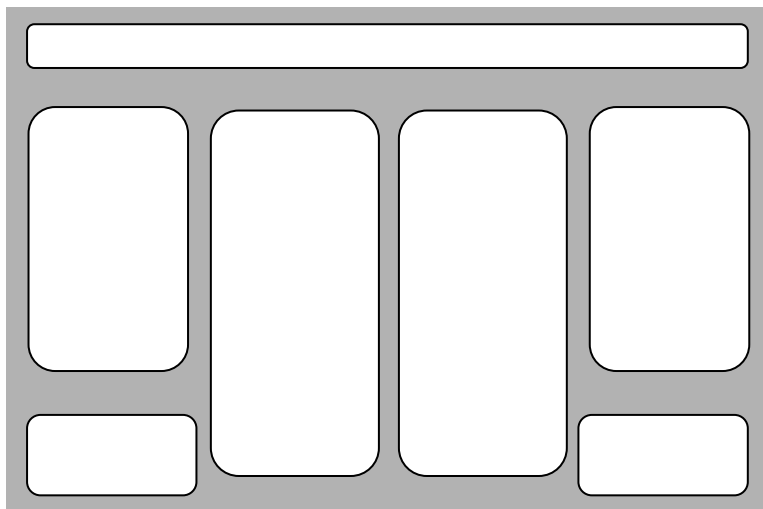
You want to attract viewers, but don't attempt this by using too many colors. In general, stick to no more than **three different shades**. Use color wisely for emphasis and to distinguish different data groups. Avoid patterns.

As with a written report, images should be **self-explanatory**. And, where relevant, don't forget to **label all axes and include captions**.

## ■ The background

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Empty space is important for increasing your poster's visual appeal, and helps to make the content more readable. Opt for a light background and darker font in regard to sections that include text. Borders, however, can be of a darker hue.



Remember: **the contents should be legible from at least two meters away**. Therefore, avoid busy patterns and the use of too many colors. Instead, use color to highlight and define. Make sure that important information has the greatest contrast.

In the advertising world, a lot of emphasis is placed on color: it effects mood and can hold symbolic meaning. Plus, color blindness – which means that people can't distinguish between red and green – affects 1 in 200 women and 1 in 12 men. Therefore, it's worth carefully considering which colors you're going to opt for.

Lastly: be aware that **on screen, colors will appear lighter than when printed out**. In this respect, opt for a lighter color than you think you'll need.