Comixplain Helping Guide

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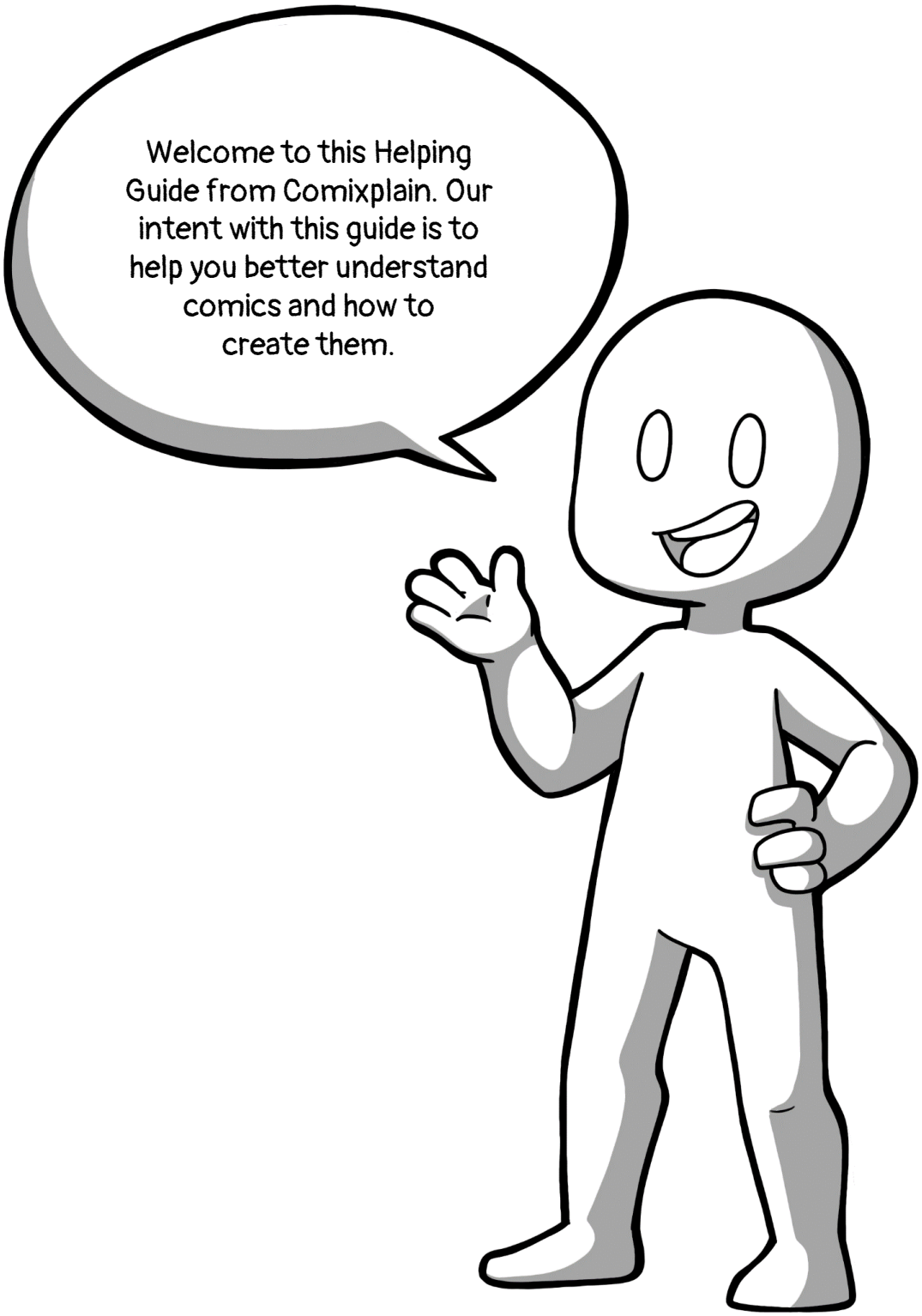
https://fhstp.github.io/comixplain


Welcome to this Helping Guide from Comixplain. Our intent with this guide is to help you better understand comics and how to create them.

Content

Comixplain promotes student-centred teaching and learning. As students vary in their previous knowledge and preferences, we propose alternative didactic materials to cater to individual learning processes. We propose a novel storytelling-based strategy to engage students in learning complex scientific subjects through comics.

The effectiveness of comics in learning for both children and adults has been shown in many studies. However, many STEM topics have not yet been explored in depth. The power of comics in learning does not only come with their familiarity, but also from a unique combination of traits of the medium itself: They offer an engaging narrative structure as mostly seen in learning videos while keeping the freedom of 2D spatial layout as text, visualizations, and infographics do. This means that a reader can benefit from a friendly, linear presentation and continuously keep the overview of the subject (as opposed to rewinding a video), and while having full control over the reading speed.

Our hypothesis is that comics can be used to effectively understand, review, or provoke the discussion of complex subjects such as math, statistics, or physics. The goal of this project was to understand and identify which factors are related to the difficulty in learning such topics and how comics can contribute to the learning process.

This guide will help you understand how to implement our comics in your own lectures and teaching activities. We explain our modular system and best practices to help you use and adapt our comics, as well as create new ones with the assets we provide in our repository (https://github.com/fhstp/comixplain).

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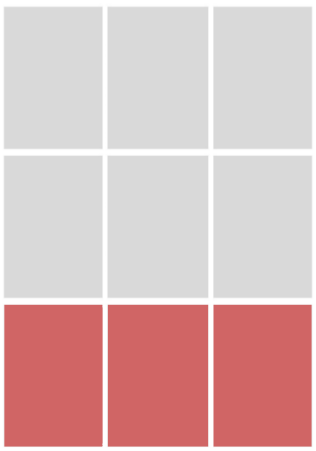
Panels

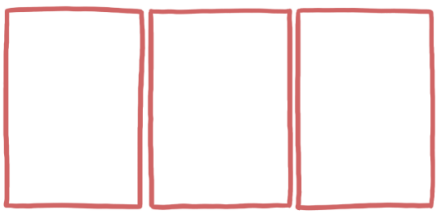
Panels are the main structure of comics. They are the borders around the drawings.
For Comixplain, we already have a base grid that defines the shape and size of panels, but there are still a few design-, storytelling, and general comic rules we should follow when placing them.



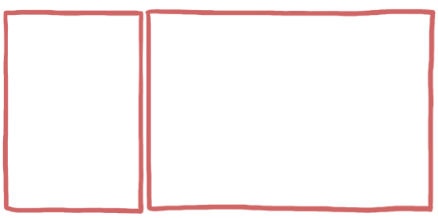
The grid provided with the Comixplain assets has three rows, each consisting of three squares. Each panel can be as small as one square, and as big as three in one row.

These rows in Comixplain are so-called „strips".

Panel sizing in Comixplain according to the grid:



Three single panels with the same size

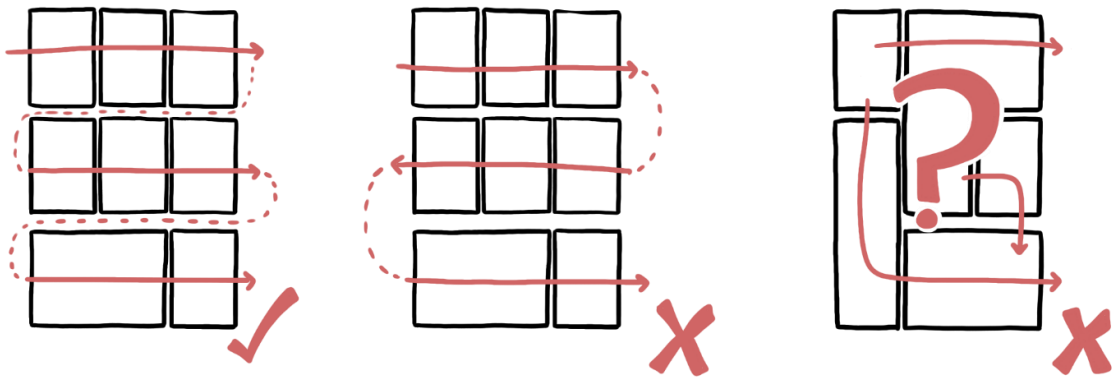


One single and a „double" panel, which spans over two singles. The order of those panels can be changed.

One panel for the full row.

Panels

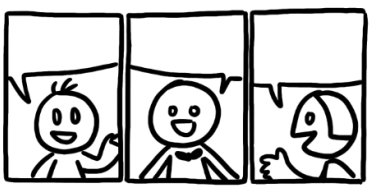
Western comics are read from left to right and top to bottom.
We follow this rule in comics too. Therefore, when reading a comic, we start with the top panel in the left corner, then read the first row from left to right, and continur reading like we would read a book.

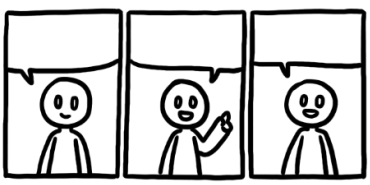


If we don't follow this rule by changing the reading direction or arranging the panels in a way that makes the reading order is unclear, we confuse the readers and break their reading flow.

Another thing we have to keep in mind is how to break the story down into individual panels.

Try to avoid overcrowded panels, and rather stretch the dialogue across multiple single panels. Then again, don't overdo it with too many single panels - try to achieve a pacing that feels natural to you.

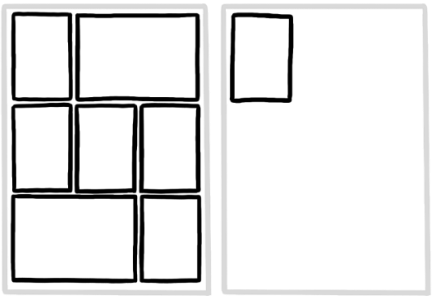




If you want to put more variation and life into the comic, try varying the poses in characters.

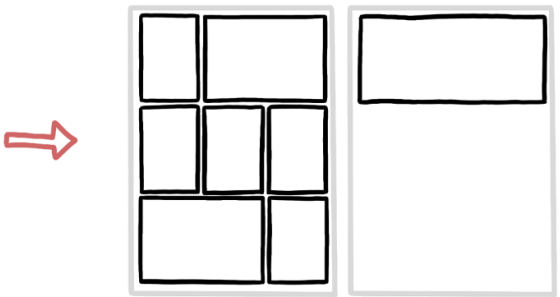
Panels

Panel arrangement should be applied logically over multiple pages.

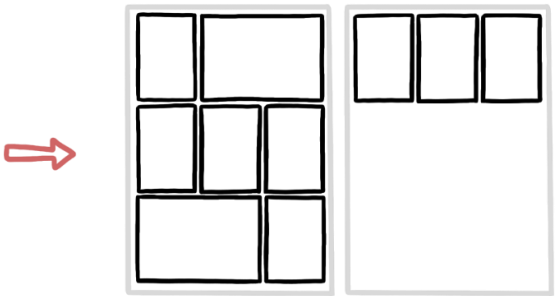


Try not to have just one small panel on a single page. The panel will seem out of place.

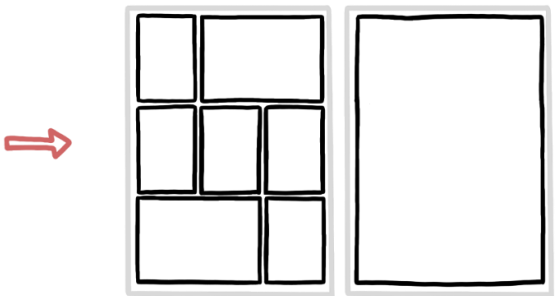
Do this instead:



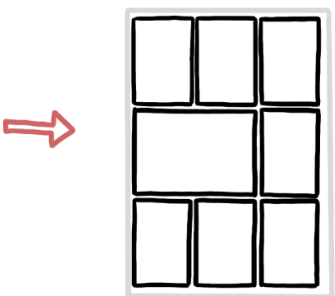
One full row panel



Lenghten the story to fill the row wth more single panels, or a single and a double.



A full page panel
Though this makes only sense if you want to end the comic with an excersice/notepad for the readers.

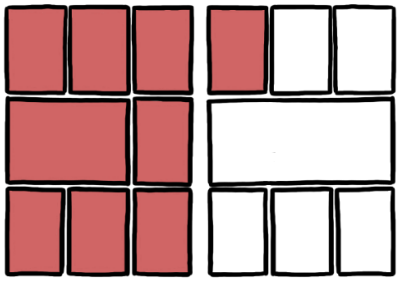


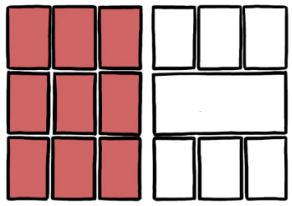
Reaarange panels and scripting to downsize your comic and do not need to use another page

Panels

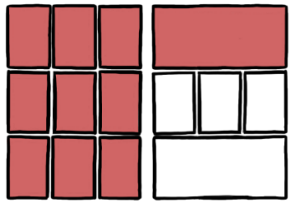
Just as we try to not have single panels on pages or not filled out rows, we want to keep sepereate „themes" in a comic together and apply shifts into other themes logically.

If one theme bleeds into another...





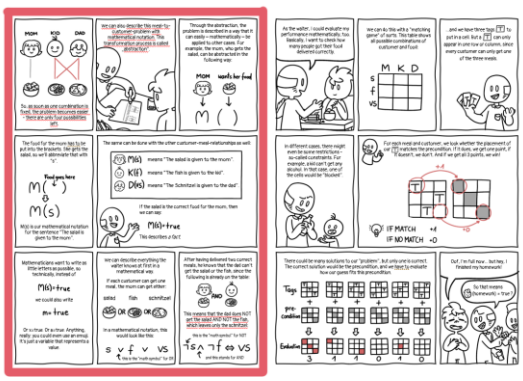
...make the change between the pages



...use the full row of panels for the first topic (singles, doubles or whole row panel)

Example:

In the Comixplain comic „Mathematical Thinking" were two different themes of the topic in the story:
-)Notation
-)Evaluation
In the sketch those two topics overlapped and even if they are part of the same theme, they were two different versions of mathematical thinking so we rearranged the panels and text to differentiate between those two better.



Speechbubbles

For talking in comics we use so called speech bubbles. There are many different types and styles of speech bubbles.

The most well known examples are:

Normal Speech:
These bubbles contain conversations or monologues that are spoken in a normal room volumn .

Thoughts
These contain thoughts of characters that are not spoken and is a tool to show the inner thoughts of characters to the reader.

Shouting
Includes any form of louder sounds. Can be happy, sorrowful, angry, surprised, etc. versions of shouting, it just means that it is louder than normal voices.

For Comixplain we mostly use variations of the normal speech bubble and in this helping guide we will show you how to use the speech assets provided to you in powerpoint and additionally we will show you some genereal rules for usage and layout of speech bubbles in comics too.

This are the three used versions of normal speech bubbles in Comixplain:

Full Bubble

Half Bubbles (on top of panels)

Boxes on top of panels for captions or narrations

Speechbubbles

These are the speech bubble assets we provide in the Comixplain product.
On this page we will tell you how to use them in Powerpoint after importing them into your presentation.
Something you always have to make sure of that speech bubbles are under the panel layer, but above the drawings layer. More to layering will be explained in the layering chapter of this helping guide.

Full Bubble
You can place these easily on the comic.
They come with a white background so they can hide the artwork behind them, making lettering on them easy.
Just make sure that the little triangle points to the person speaking the text in the speech bubble.

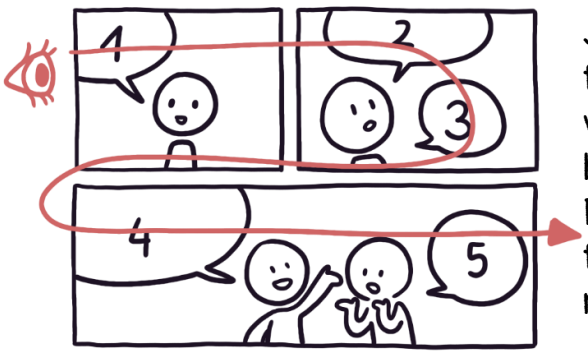
Half Bubble and Caption Boxes
The former are used for speech, while the boxes can have any written text like narrations, thoughts, mentions of time and space, etc on them. They are often used if a character is explaining or recountering something and you see the talked baout topic instead of the character. Or if you want to explain the setting of the story, you can write the date or place in this box.

These two versions of asset bubbles have an open top border and are ment to be placed at the top of the panel. Because of the open top, you can move them freely from the top to the bottom and create a box that way.
Because of this flexible use of the height of the boxes, only a small part of the Bubbles have a white background, so if you want to make them bigger, but there is artwork behind them that does not get hidden by the white background, you will need the help of creating white rectangles between the bubbles and the artwork.

Speechbubbles

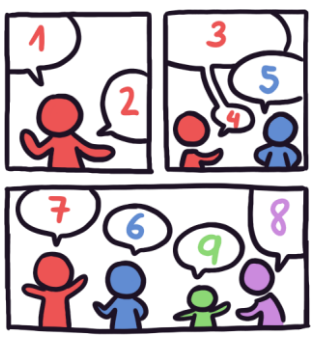
Some basic speech bubble rules:

o) Reading Flow



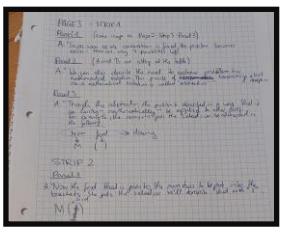
Just as with panels, we read speech bubbles from right to left, up to down, in the western world. Therefor we have to arrange our speech bubbles following that rule.
Reading starts in the top left corner, going from there in the right direction, always reading the closet bubble.

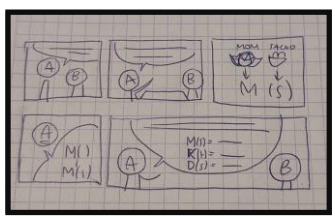
This comic would be read in the following way:



But if we want to read the bubbles how they are numbered in the colored version, we will need to rearrange the bubbles or the panel layout.

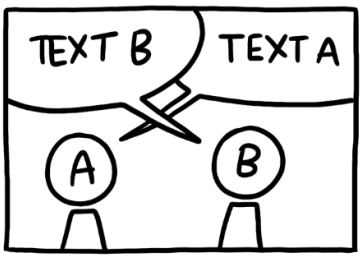
Write a script of the comic first, then draw a first really basic sketch (can be crude) and then show it to other peoples, to get their opinion on if the comic is understandbale.





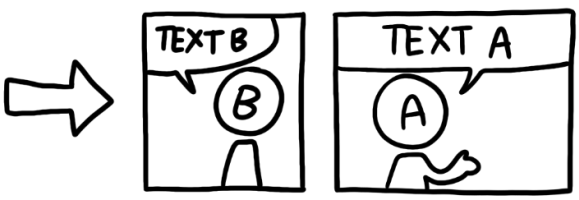
Speechbubbles

o) Don't cross speech bubbles over each other.

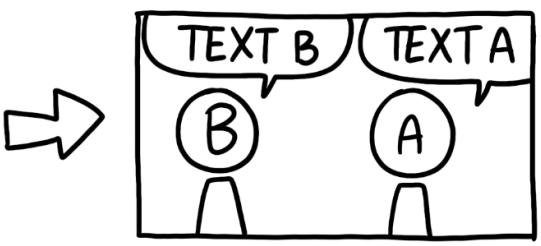


Since our reading direction is from left to right, we first read the bubble with „Text B", but since our „artwork reading" is too from left to right we assoziate the bubble with person A instead of B. Because there are two speech bubbles we tend to stick each of those to the closest character. Therefor if the bubbles are crossed it will throw off the readers.

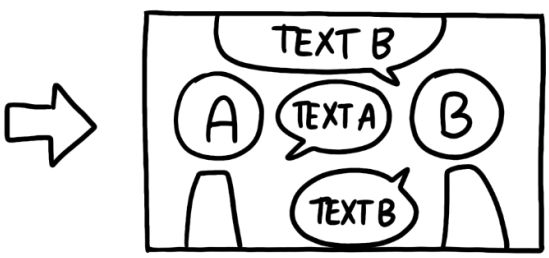
Instead do one of the following versions:



Split the one panel into two. This way each bubble has it's own panel and the reading order is clear



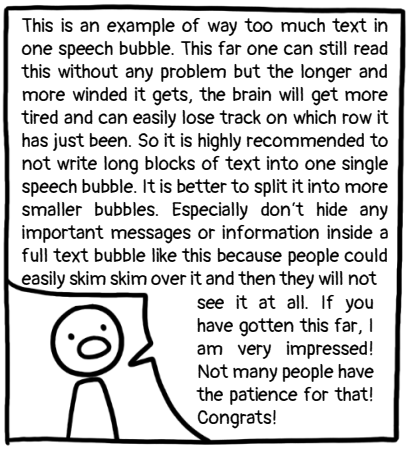
Change the position of A and B.
Just be mindful of too many positionjumps, if you do this too often, because it could confuse the reader with how fast the camera angle movement is.



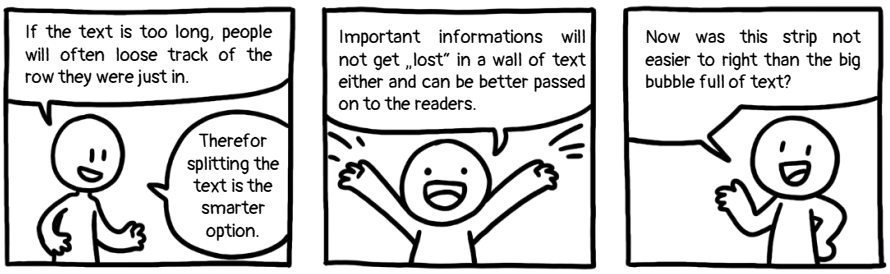
Change the reading direction from up to down. This only make sense if you can change the script in a way where they are talking in short sentences and alternate between each other.
This version will also crowd the panel, so be mindful of it's use.

Speechbubbles

o) Too much text in one speech bubble



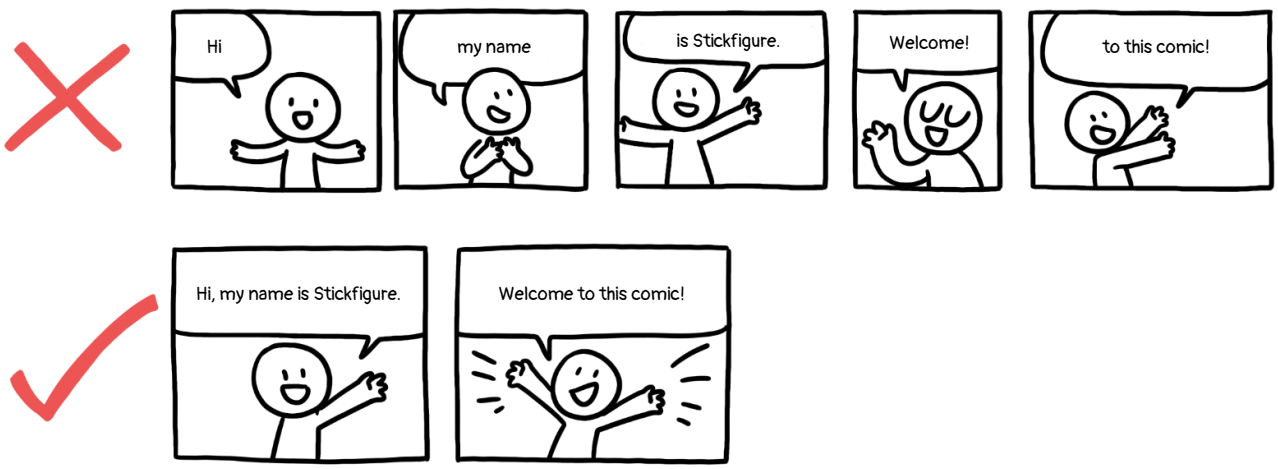
If there is too much text and information in one single speech bubble, people will often just skim over it and not read it properly or at all.
Imagine a really long text in a book that spans over two pages without any paragraphes or breaks after some sentences. Tiring to read, isn't is?



Better split that text into more panels!

But at the same time do not overdo stretching your text!
You can loose your readers by dragging out your writing too.

If something can be said in just one or two panels without any reading problem, do not extend it unnecessary just to get your comic longer.

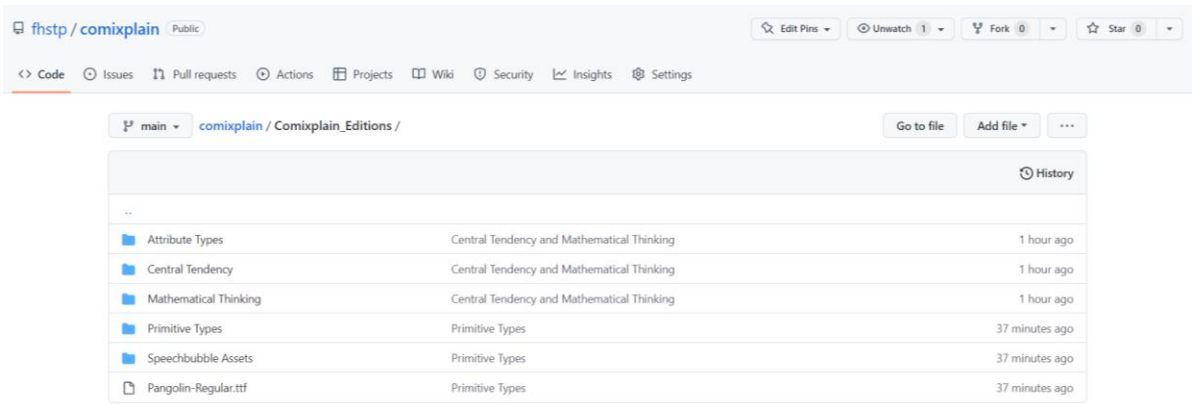


Layering

In this part of the guide we will show you how to import out assets into powerpoint and how to layer them

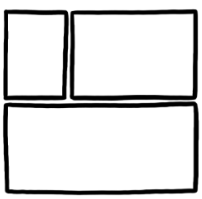
o) Import

In the Comixplain repository (https://github.com/fhstp/comixplain), you will find PowerPoint files with the basic 3x3 grid, and folders with assets, such as speech bubbles, characters, and comics font.

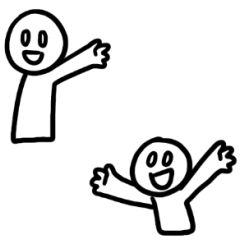


o) What do we need now for a comic?

Comixplain Grid (for reference of placement)



Borders for panels



People Assets

Background Assets

Speech bubbles

To put them all together we will need

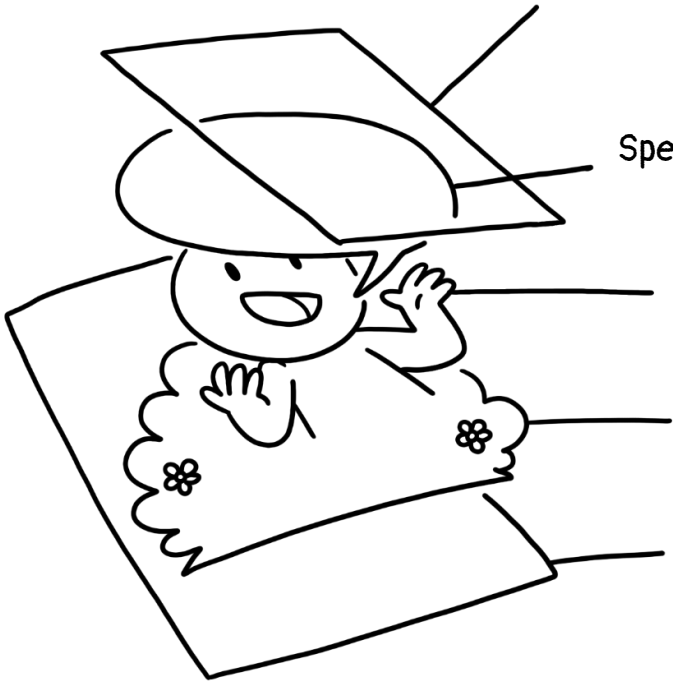
Layering

But what is layering exactly?

Just imagine you actually do the comic traditionally and all the assets are cut out of paper. Now when you lay them in a random order over each other, some parts of the assets will be hidden by other assets.

So we need to layer them in a order that makes sense →

Layering order used in Powerpoint for Comixplain:



The text on the speech bubbles can be either placed between the panel and the speechbubble layer or on top of all the layers,