Layers in Sketchbook

Layers are a big part of Sketchbook. They help you organize the content that make up your image. They are used a lot for complex drawing and projects.

What are layers

Think of layers as transparent sheets of plastic that get combined, can be ordered and reordered, to create a picture. If you were drawing a scene of someone sitting at a beach, you could break down the scene into layers or even layer groups. One could be the sand. Another, the water. Yet another could be the person sitting. Another, the landscape. When each of these are combined, you create the overall image.

You might be asking why anyone would draw like this. Traditionally, you have a piece of paper and you draw, building up your image. Well, with layers, you are still building up your image; however, when you need to erase something or want to change something that's on one layer, the rest of your image isn't in jeopardy.

In the case of comic book artists, a panel might use four basic layers. Pencils, ink, and color layers, separated strategically from one another, as well as from the background plate. This makes it easy to change elements or add them later.

They can be used as a 'preservation' tool. If you're happy with a certain aspect of your art, start a new layer and continue fresh. You can choose to merge all layers afterwards, or keep them separated for future edits.

If you find yourself using lots of layers, the **Layer Editor** can become cluttered fast. Consider grouping layers into folders. With Sketchbook, you can group layers and group groups with up to 9 levels.
Layers can be created, duplicated, merged, turned on and off, reordered, blended, and deleted using the **Layer Editor**. As content is added to a layer, the **Layer Editor Preview** updates, displaying the content and making it easier to identify a layer.

How do Sketchbook layers differ on each platform

Each platform - Android, iOS, Mac and Windows - has slightly different Sketchbook layer features. The number of layers available is dependent on the capabilities of your device. If you have tons of apps running in the background, your device is low on memory, or your canvas is huge, this will affect the number of layers available.

We have tried to make the **Layer Editor** and tools as consistent as possible across platforms. However, due to the form factor of some devices, you will see some minor differences in design. Whenever a tool acts slightly different on a platform, a note has been added.

If you want to transfer images containing files, check out this article: *Transferring images with layers*

Preview (thumbnail)

Each layer, with the exception of the background layer, displays a preview of the layer content. As you sketch, this thumbnail image updates to shows the current layer content, making it easier to identify one layer from another.

Layers in Sketchbook Pro
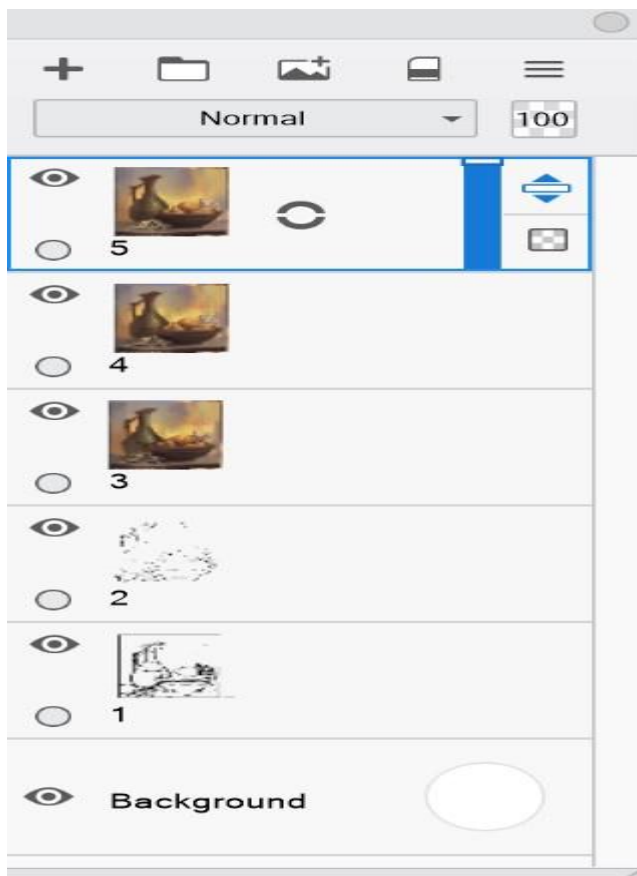
To access the **Layer Editor** and its layers, in the toolbar, tap
Layers are organized under the **Layer Editor** toolbar and the [Blend Modes](). There are three types of layers:

Regular layers contain functionality for [showing/hiding the layer content](), [locking the layer](), [changing opacity](), and accessing other layer tools through the [marking menu](). As you add content to your canvas, the layer corresponding to it will update, displaying a thumbnail preview of the content.

The *background layer* is used for [setting the color of the canvas]() and [creating an alpha channel](). It is at the bottom of the **Layer Editor**.

Text layers contain the text [created with the **Text** tool]().

If you want to try your hand at some animation, check out [FlipBook](). It has a foreground, midground, and background layer for your animation.

Brushes in Sketchbook

There are a huge assortment of brushes with Sketchbook, some pressure-sensitive, others with textures, some glows, splatter, and much more.

Sketchbook "brushes" include not only actual brushes, but also [erasers](), markers, pens, and pencils. The device and version of Sketchbook you're using will determine where your brushes are.

In most versions, you will find a default set of brushes in the **Brush Palette**, along the left side of the screen. If you have a smaller handheld device, your brushes will be in the **Brushes** menu.

When editing brushes, use the **Brush Editor**, **Brush Puck**, or **Double Puck**, or **Brush Property sliders** found along the side of the **Brush Palette**.
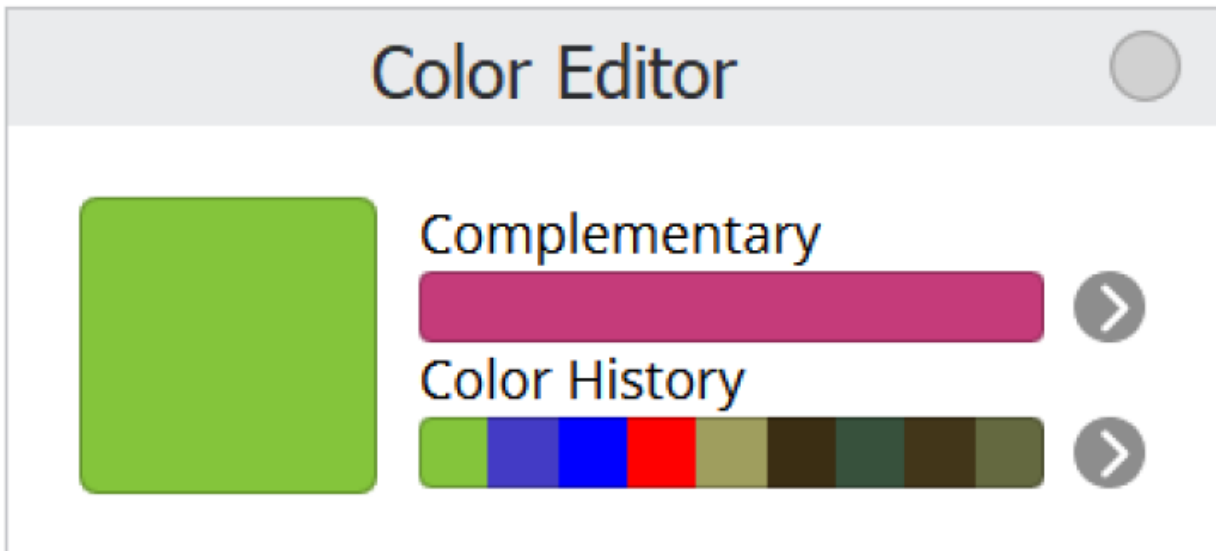
Color Editor

The Color Editor contains a variety of methods for selecting color.

- Color Wheel to dynamically adjust Hue, Saturation and Luminance
- Color sliders
- Randomize Color
- Gradients for creating color ranges
- HEX code

The top section of the Color Editor displays an active color swatch and two color bars one for displaying color harmony and the other showing a history of recently used colors.

Color Editor in Sketchbook Pro

Color Editor
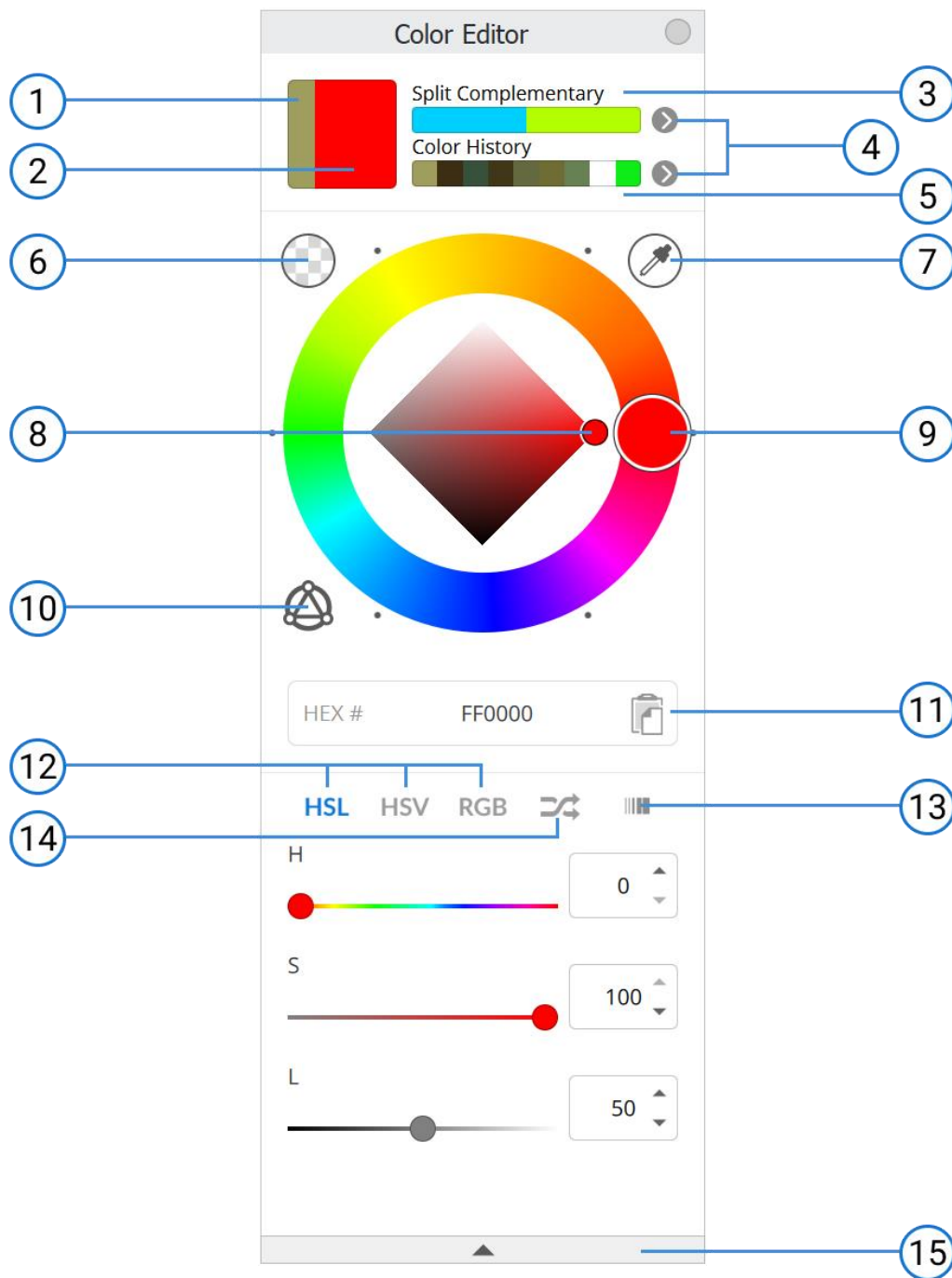
1. Previous color chip for comparison when adjusting the current color
2. Current color
3. Complementary of current color
4. Select different color bar options
5. Color history or gradient colors
6. Transparent color
7. Eye dropper (color selector)
8. Saturation/Luminance diamond
9. Hue wheel
10. Toggle visibility of color harmony handle(s) on hue wheel

11. HEX color field and copy button
12. Color sliders for HSL, HSV and RGB
13. Custom color gradients for generating blends between 2 colors
14. Randomize color options (HSL ranges, gradient bar, or the active palette set in Custom Color Editor)
15. Collapse/expand window

Accessing the Color Editor

To access the **Color Editor**, tap [icon] in the main toolbar, select **Window > Color Editor**, or tap on the current color indicator in the **Lagoon**.
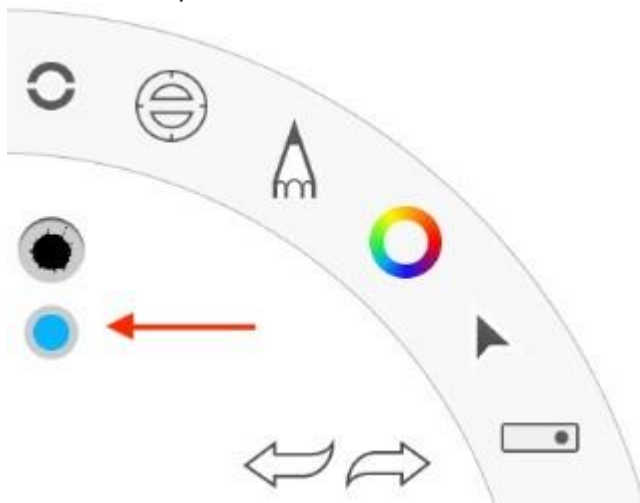
Color Palettes

Sketchbook comes default with three sets of **color palettes**. The Basic, Greys, and Variety Collection contain over 1000 color swatches between them. These are just a start. You can create and organize your own palettes for your projects.

Any palette can have up to 60 color swatches, there can be up to 12 palettes in a set, and a maximum of 50 color sets in the Color Library.

Color Palettes in Sketchbook Pro for desktop

There are multiple color palettes in Sketchbook Pro, including the **Custom Colors** palette and the **Color Puck** color palettes.

Custom Colors

The Custom Colors window is where you access your sets of color palettes, and where you can make and organize your own palettes and sets of palettes.

There are a few ways to access Custom Colors:

- tap the [color grid icon] icon in the toolbar
- in the menu bar, go to Window > Custom Colors
  You can also **customize your lagoon** to access Custom Colors from one of the marking menus. You'll find Custom Colors as an option in the "Windows" section.

Adding swatches

The round swatch at the top of the Custom Colors window shows your active color. Add a swatch to any palette in the current set by dragging the active color swatch down to the palette.
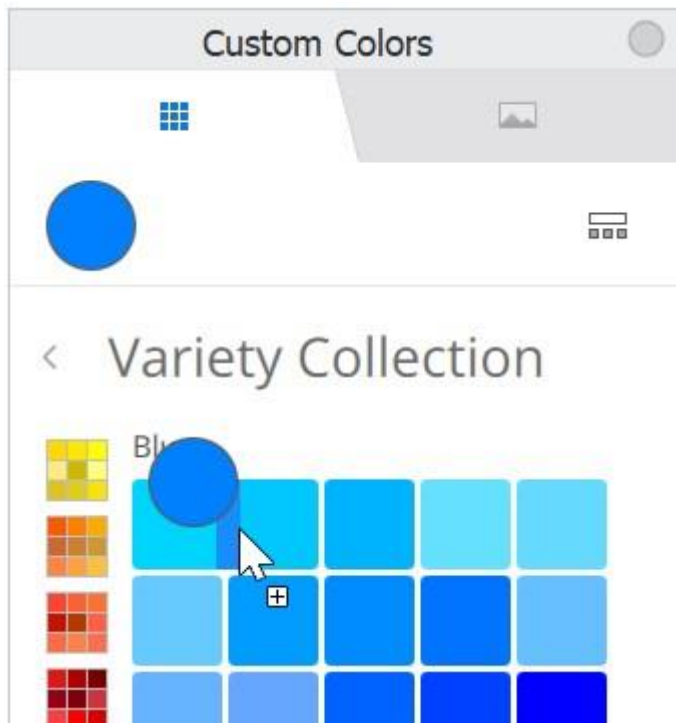
You can drop the swatch in a specific position in the open palette, or drop it in one of the other palettes in the set by dragging it over the palette thumbnail preview on the left side of the window. The new swatch will be added to the last position of the palette.

Tapping the add swatch icon [down arrow icon] at the end of a palette will also add the active color to that position.

You can also drag the active color from the Color Editor window to create a swatch. Swatches cannot be created from the Color Harmony, Gradient, or Color History bars.

Deleting swatches

To delete a swatch, tap-hold the swatch. The trash can icon will appear at the top of the Custom Colors window. Drag the swatch over the trash can to delete it. **This action cannot be undone.**

Organizing swatches and palettes

You can organize swatches within a palette by dragging them to a new position. As you drag, a blue outline will show the position that the swatch would be in if you drop it. Dropping a swatch over another swatch will swap their positions. If you drag a swatch to another palette and drop it, it will be placed at the end of that palette.
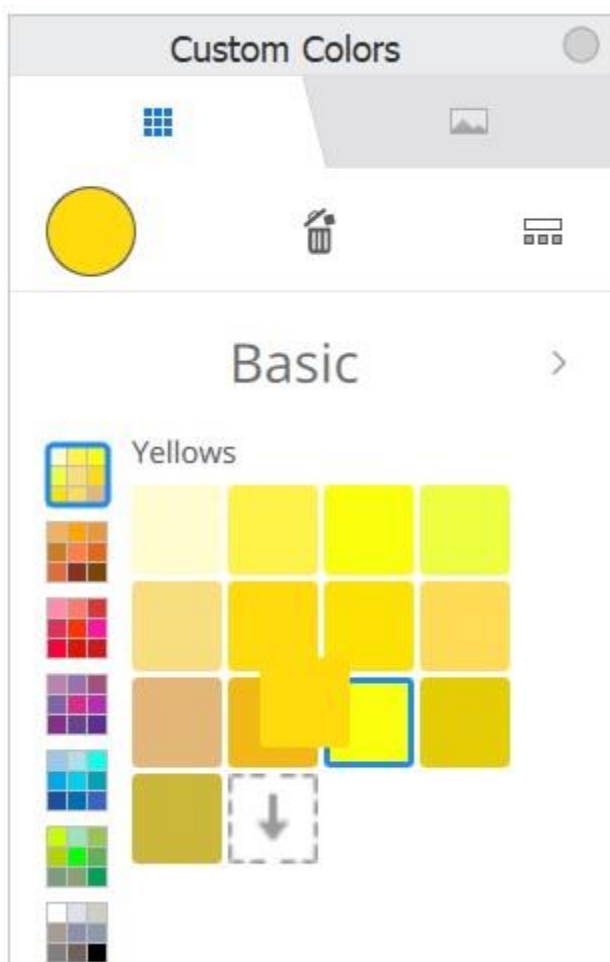
Double-tap the name of the palette to rename it. You can also rename the set of palettes from this view by double-tapping the set name.
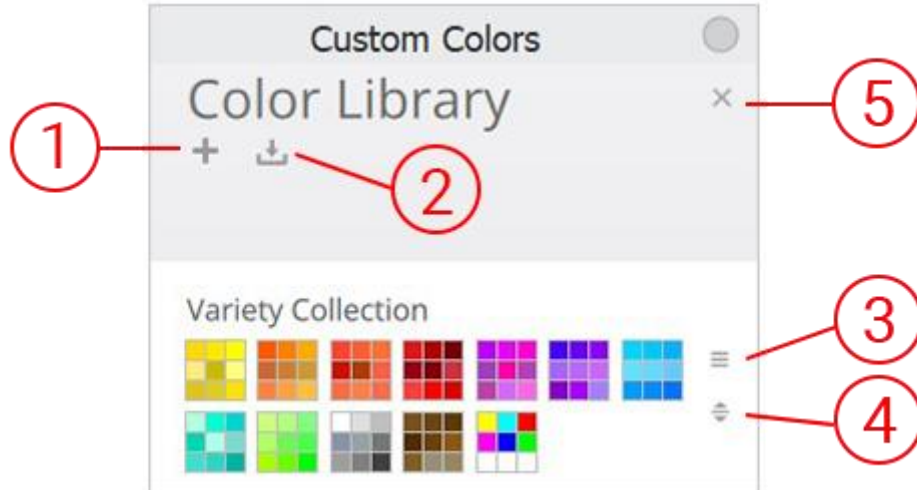
Once created, palettes cannot be reordered within the set. However you can reorder and organize your sets in the Color Library.
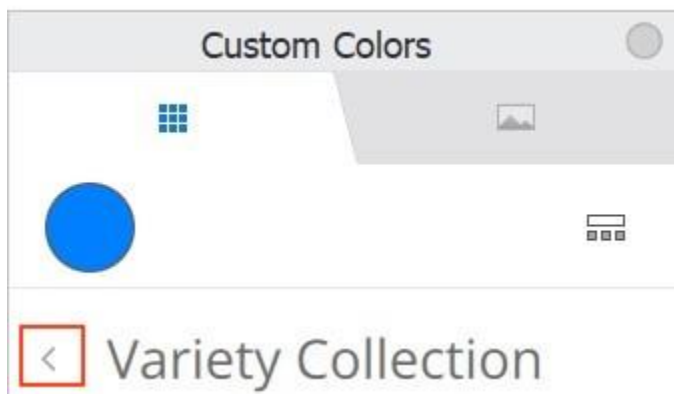
Color Library

Tap the ⬚⬚⬚ icon to access the Color Library. Here you will see all your sets of palettes. You can have a maximum of 50 sets.

1. Tap the **+** icon to create a new set
2. Tap ⬇ to **import** a set (.skcolors)
3. Tap ☰ to access the set menu. Here you can rename, duplicate, export, and delete a set. Deleting a set cannot be undone.
4. Drag the handle of any set to reorder it up or down in the Library.
5. Close the Color Library and return to palette view

When in palette view, you can navigate through your sets by tapping the arrow buttons next to the set name.

The Color Library is also where you can **import, back up and restore** your color sets.

Image sets

Image sets let you extract colors from reference images. There are three sample image sets that come default in the app to give you some ideas of how you might use this feature.
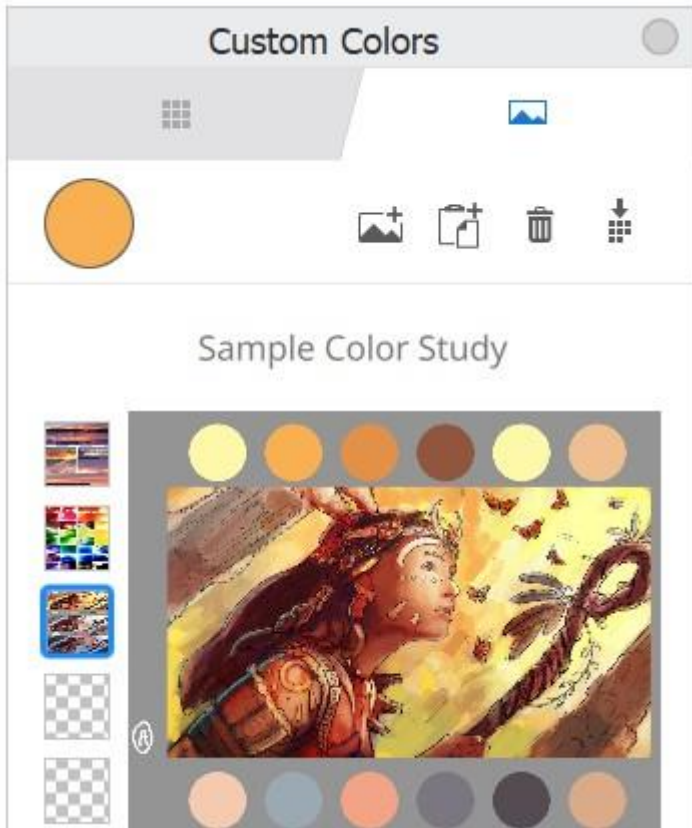
Extracting colors from an image

Scroll your pen over an image in the Image Sets and you'll see the active color update in real time. This is a quick and easy way to choose a color from a reference image.

You can also extract an entire palette from an image. Tap to set the color palette extraction options
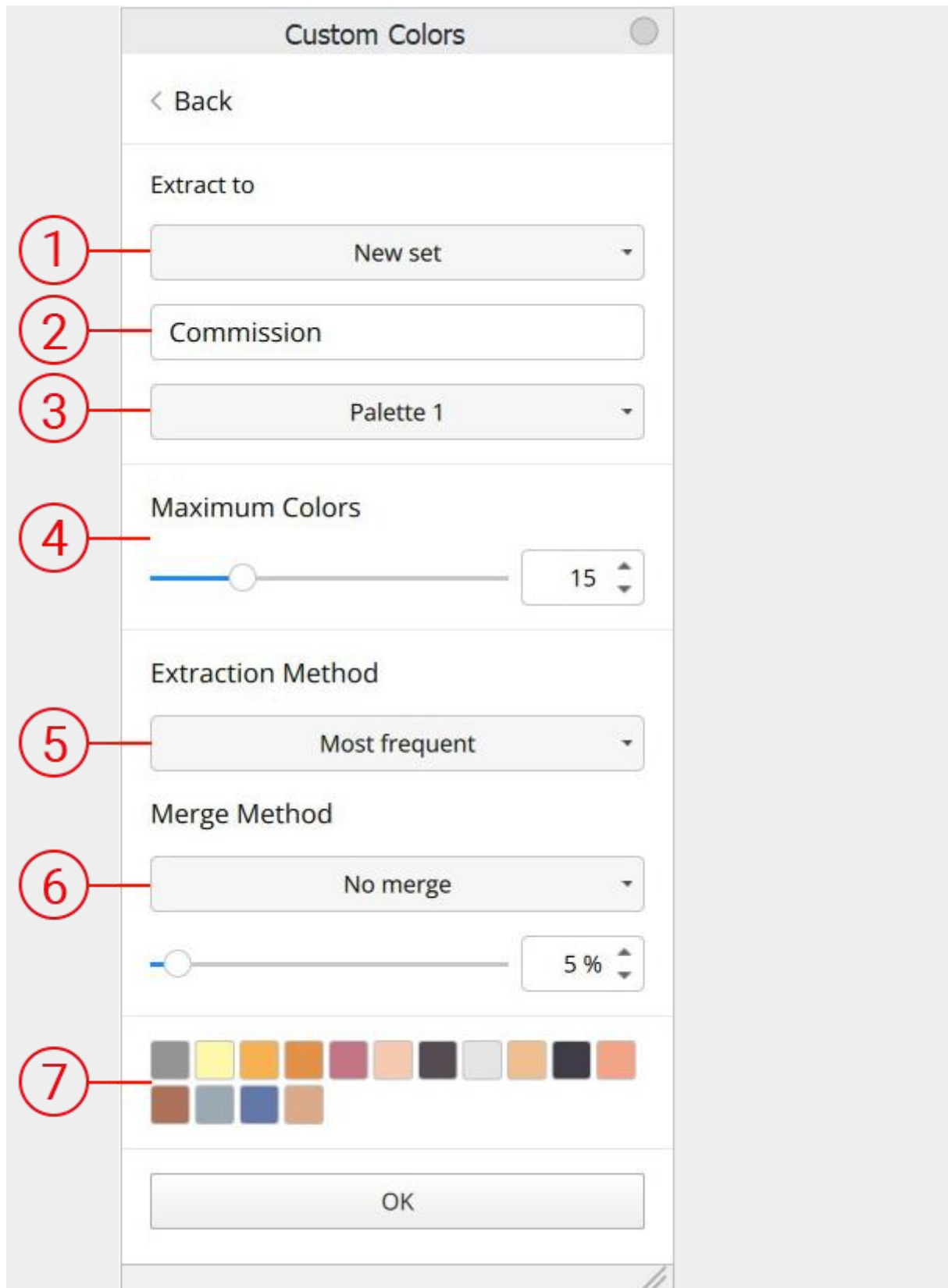
1. Which custom color set the new palette will be added to
2. Title of the new palette
3. Position of the new palette within the set
4. Maximum number of colors to extract (extraction may be fewer colors based on other choices below)

5. Select the **most frequent** colors in the image, the **lighter** colors, or the **darker** colors
6. Select colors based on difference in **RGB** value, **hue** value, **saturation** or **lightness**. Adjust the **percentage difference** for the selection.
7. Preview of the color palette based on the current extraction settings

Loading images

A new image will load in the active position. If there is already an image loaded in that position, you'll be asked if you want to replace it. To load an image without replacing one, tap an empty position before loading.

You can load **.png, .jpg, or .tif** files. There are a few ways to load an image to image sets.
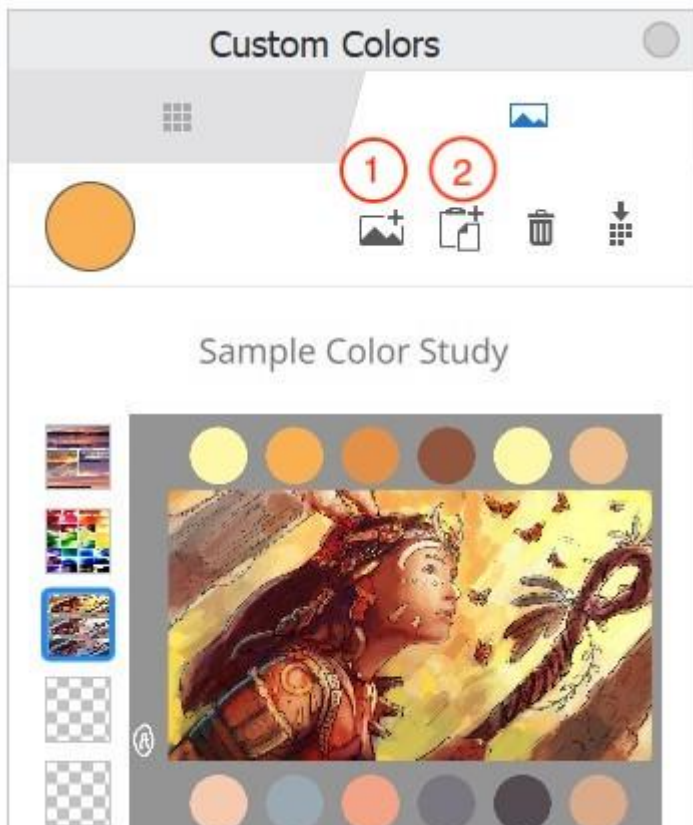
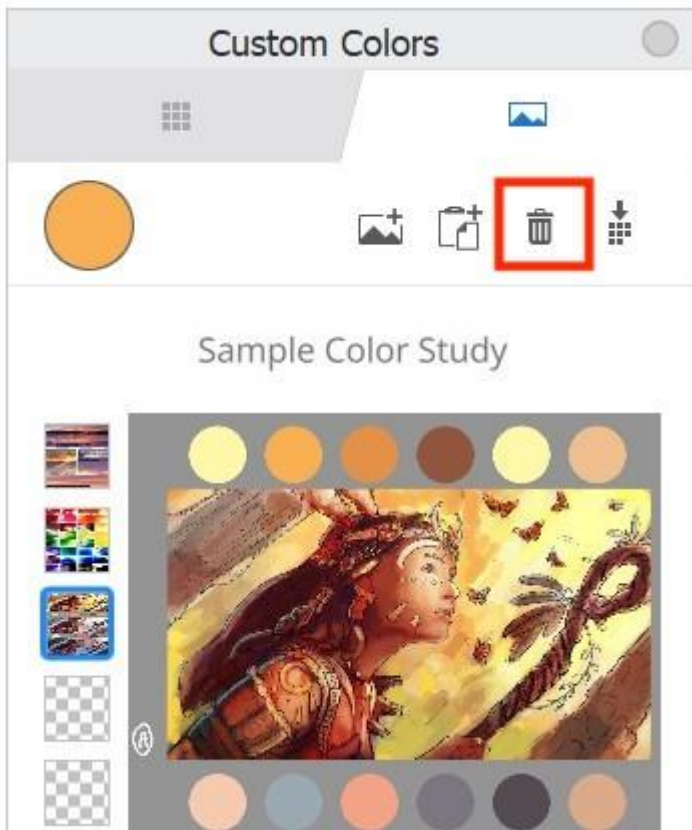1. tap the [icon] icon and in the file manager window that opens, navigate to the image and tap "Open"

2. Copy an image to your clipboard, and then in the Custom Colors images window, tap [icon] to paste
3. Drag and drop an image from a file manager window into the Custom Colors images window

Deleting images

Tap the trash can icon to delete an image from Image sets. You'll be asked to confirm that you want to delete, as **this action cannot be undone**.

Resetting palettes and images

If needed, you can reset your color palettes and image sets from preferences.

Color Puck Color Palette and Gradient Palette

When a solid fill is selected from the **Fill** toolbar, and you're in the **Color Puck**, the **Color Palette** is available. It contains color swatches. If you want to save a color you've used, tap-drag the color swatch onto a swatch within the palette below. The new swatch will replace the one it is dropped onto.
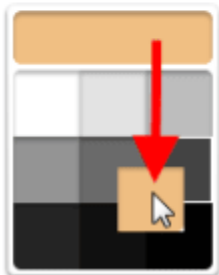
Accessing the Color Puck palette
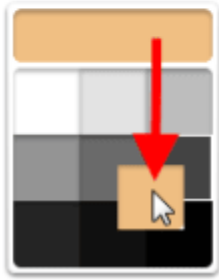
Tap the **Color Puck**, then tap to access the palette and to close it.

Adding custom colors to the Color Puck palette

To add a new swatch to the palette, create a color with the **Color Wheel**, then click-drag the new color swatch onto another swatch in palette to replace it.

Gradient Fill Palette

When a linear or radial fill is selected from the Fill toolbar, and you're in the **Color Puck**, the **Gradient Fill Palette** is available. It contains swatches of pre-made gradient fills. If you create a fill and want to save it, tap-drag the gradient swatch to the palette below. The new swatch will replace the one it is dropped onto.
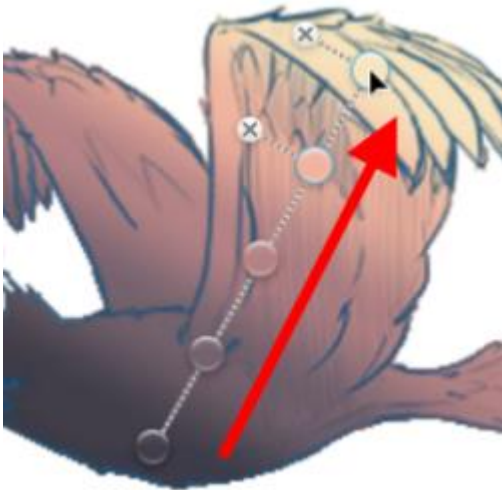

Using the Gradient Fill Palette

Quickly select a gradient fill from the **Gradient Palette**.

1. With the **Flood Fill** tool selected, select a gradient fill from the **Flood Fill**toolbar.

2. Click-drag to place the fill.

3. Do either of the following:

- **To change the color of a manipulator**, double-click the manipulator and select another color from the **Color Wheel**.
- **To select a different gradient fill**, double-click a manipulator and select another gradient fill from the **Gradient Palette**.

Backing up and restoring your custom color palettes

1. In the Color Library, tap the Color Set you want to export

2. Tap the menu icon

3. Select **Export**. The file will be saved as .skcolors

To restore a Color Set or import a color set to another device:

1. At the top of the Color Library, tap Import
2. In the file window, navigate to where you have the .skcolors file saved
3. Tap "Open"

TINKERCAD

Tinkercad is an online collection of software tools from Autodesk that enable complete beginners to create 3D models. This CAD software is based on constructive solid geometry (CSG), which allows users to create complex models by combining simpler objects together. As a result, this 3D modeling software is user-friendly and currently enjoyed by many, particularly teachers, kids, hobbyists, and designers. Best of all, it's free and only requires an internet connection. The software allows users to create models that are compatible with 3D printing, a great option for beginners to the technology.

Tinkercad is a good alternative to other 3D modeling software such as SketchUp or Fusion360 if you do not need the more advanced features of these solutions. Autodesk, producers of Fusion 360, acquired Tinkercad in 2013, two years after the latter was launched by former Google engineer Kai Backman and cofounder Mikko Mononen. The software's main advantage over the other two software is that it is free, while still offering more modeling freedom than what first meets the eye! It is currently available in 16 languages.

What Are the Main Features of Tinkercad?

Even though Tinkercad is perfect for beginners, it does not mean that those who are more experienced with 3D modeling will not also enjoy this software. Given that it is based on CSG to create solid models, you can always make your model more complex by adding more shapes. In more concrete terms, all you have to do is select one of the available shapes and add or remove material as you wish. For example, you could start with a cylinder before adding triangles, circles, cones, etc. The shape can then be moved and rotated, allowing users to see it from all angles.

Additionally, the software allows you to add electronic circuits to 3D models in order to create objects with light and movement. The end result can even be simulated on the software to check how the components will respond in real life. Another feature of Tinkercad is its ability to transform a 3D design into buildable brick models, similar to creating Lego designs. Finally, Tinkercad is suitable for young learners, as it adheres to the ISTE (International Society for Technology in Education) standards.
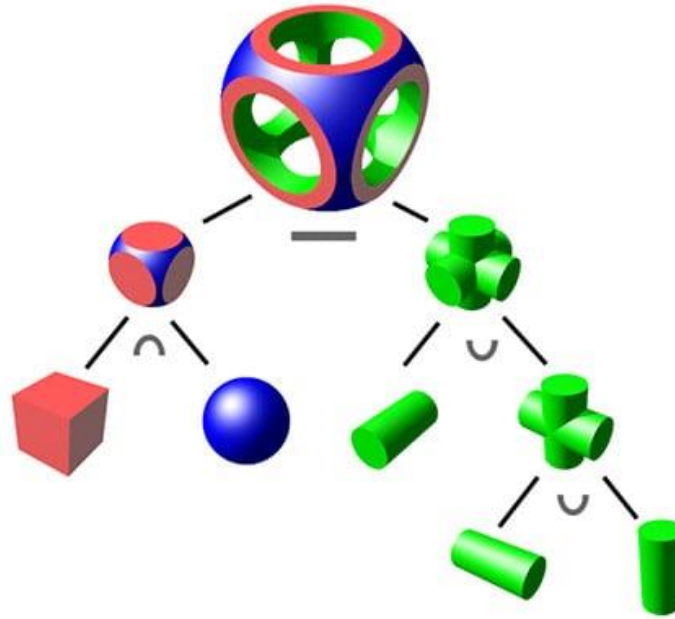
Tinkercad relies on solid construction geometry.

Therefore, Tinkercad can be used for a range of applications, including 3D printing. The 3D models can be saved in three different formats, STL, OBJ, and SVG. Once you have an STL file of your model, you can go on to using slicing software. Slicing software converts the 3D model into a series of thin layers and produces a G-code file containing instructions tailored to a specific type of printer. In other words, it is dividing the object into a stack of flat layers and describing these layers as linear movements of the 3D printer extruder. If you don't have a 3D printer, you can also order your model via the online service offered by Tinkercad. You should also know that it can be exported in SVG format for laser cutting.

Tinkercad's 50 million+ users often compliment the intuitiveness of this CAD software. Transformation, duplication, and shape modification are easy to grasp. Additionally, Autodesk has made many resources available to its community. For example, you will find inspiration, and tips & tricks to get started on their blog, as well as videos and course to get you started with 3D modeling! The software works on any computer with an internet connection, you just have to create your account. It also offers a backup of 3D models on the cloud. As mentioned before, the software is very suitable for education. Tinkercad offers the option to upgrade to Fusion 360: the website shows teachers how to help learners transition from the basic Tinkercad software to more advanced Fusion 360 CADCAM solution