

Some helpful shortcuts & tips for using Adobe Illustrator

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This is by no means a comprehensive guide, but it will hopefully help you create simple figures.

selecting & grouping objects

- V (black arrowhead): select (selects “highest level” - object or group of objects)
- A (white arrowhead): direct select (selects “lowest level” - individual anchor points or objects inside of groups if you click in the center of the object)
 - note: if you select an individual object out of a group, you can command+V after selecting it with command + A in order to manipulate that object
- hold down shift when selecting to select multiple objects
- command + A: select all
- object → select → same...: select objects with same stroke or fill color, etc. - great for recoloring graphs
- command + G: group selected objects
- shift+command + G: ungroup selected objects

other shortcuts:

- command + Z to undo
- command + shift + Z to redo
- command + + to zoom in
- command + - to zoom out
- command + Y to see outlines
- command + H to hide or show edges (if you can't find your edges and/or anchor points you might have accidentally clicked this!)
- command + C to copy
- command + V to paste
- **command + F to paste in place (super useful!)**

reformatting objects

- use shift when scaling objects in order to preserve aspect ratio (e.g. don't squish things horizontally or vertically)
- use shift when drawing lines or rotating objects in order to constrict to set angles (90°, 180°, etc. - you can alter these degree defaults in the settings)
- use shift when moving with arrows, increasing text size or stroke width, etc. in order to move further/higher, etc. in bigger increments
- use shift when dragging to constrain angles (so, for example, you can drag vertically without moving horizontally, or vice versa)
- use option when rescaling objects in order to scale them while preserving the position of their center
- object → transform → transform each if you want to scale, turn, etc. multiple objects in place rather than as a group (e.g. spin each around their own center)
- hold down option while dragging (and before releasing the mouse) in order to make a copy of the object at the new location (and leave the original where it was)
- I (eyedropper tool): let's you mimic another objects format (color, line width, etc.) - select an object then press I, then click another object whose format you want to mimic

arranging objects

- command + [to send selected object backwards
 - command + shift + [to send selected object all the way back
- command +] to send selected object forward
 - command + shift +] to send selected object all the way to the front
- sometimes objects don't seem to be cooperating when you try to arrange them - they could be in different groups or layers. try grouping them together, then ungrouping them and arranging again
- you can lock items with command + 2 and unlock things with option + command + 2

aligning objects

- shift + F7 to get align window - also can show up in top toolbar
- align will align objects -
 - if you want to align to a specific object, + click that object to set it as the key reference
 - you can also set the key object when you're setting the objects you want to align – shift+click each or shift drag around the objects you want to include, then release shift and click again on the object you want to make key (it should then get a thick outline showing it's set as key)
 - if you want to align to the artboard, click the artboard icon in the align window (note: if you only have one item selected, this will be the default)
- distribute will evenly space out or distribute the objects (depending on the setting)
- you can change the reference point (e.g. center or corner of object) by selecting one of the little boxes in the 3X3 grid icon
- if you click on info icon it will tell you about the size & location of a selected object - you can then copy & paste that info into a different selected object's transform if you want to copy that location, size, etc.

working with lines & shapes

- if you're trying to change stroke color, make sure you have the border icon selected, and if you're trying to change fill color, make sure you have the filled icon selected
- P to get bezier tool and draw lines & shapes point by point
 - Just click for corner, or click-drag for smooth
 - in the toolbar, you can later convert anchor points to smooth or corner depending if you want sharp or curvy points
- object → path → simplify to reduce number of anchor points & help smooth out lines
- use pencil tool to draw smooth shapes
- in the stroke window you can change the capping, add arrowheads, make and alter dash-ness, etc.
 - can scale the arrowheads differently from the line which can be good if it's making your arrowheads huge by default when you scale
- you can use the line width tool to vary the line thickness along a path
- there are a variety of "fancy" brushes you can choose from or you can make custom ones, including symbol brushes
- check "scale strokes and effects" in the settings to make sure that when you shrink things the lines don't look huge, etc. (you generally want the line width to decrease with the figure size)

working with text

- T gets you to the text mode
- window → type to get character, paragraph options, etc. (I like to keep this window out)

- double click on circle on the right of the text box to toggle between text modes
 - a white circle on the right of the text box indicates that the *text box* is a set size so your text will scale with it if you change the box size (but the text won't change its wrapping)
 - a black circle indicates you're in area type so the text is a fit size and will change wrapping but not size if you change the box size
- it's easy to accidentally squish text, so make sure that the text width and height are at 100%
- if the line spacing looks weird, check the leading and set it to auto (in the character box there is an icon with 2 stacked letters, click this, then select auto)
- it has spell check you can turn on: edit → spelling (can turn on auto or manual) but you will likely need to teach the dictionary a lot of science terms!
- you often want to turn off hyphenation - you can do this in the paragraph tab

working with imported linked, or embedded figures

- embed files if you don't want to be able to change the identity of underlying file - this will make the embedded file part of the illustrator file
- embed files if you want to be able to edit the underlying file in Illustrator (e.g. if you import a PDF of a graph you want to change the color of)
- insert files as linked files if you want to be able to update the underlying file - but make sure you save your illustrator file with the setting to save that underlying file or else if you try to open it and it can't find that underlying file, it will be missing
- if you import a PDF, make sure all the clipping masks are released
 - object → clipping mask → release (may need to do a number of times, especially if you're importing a figure from Prism)
 - shortcut to release clipping mask: option + command + 7 (I typically just click it a bunch of times until it shows "Mixed Objects" instead of "Clip Group" in the upper left)
 - after you release all those, make sure to remove any invisible lines → select everything (command + A) → object → path → clean up
- use "mask" instead of crop to preserve underlying image (e.g. you can change the mask to make it bigger or smaller or remove it without having actually "cut" the figure)
 - can mask to a specific shape by drawing a shape over it, selecting the shape and the figure, then going to object → clipping mask → make clipping mask

working with artboards

- shift + O to get to artboard tool or click the icon that looks like a sheet of paper with a plus sign at the top left corner
- name artboards the desired figure file name if you want to use artboards to export figures
- to scale artboards to selected art, select art, then object → artboard → scale to selected art

working with colors

- in the color tab I like to switch to "HSB" (hue, saturation, brightness) - this allows you to lighten, brighten, etc. colors without relying on changing the transparency (which can cause things to export weird)
- you can also use the color guide to find shades and tints of a color as well as exploring color themes
- use the eyedropper or press "I" to match color

working with workspaces

- if you find an organization you like, with regards to windows and tabs and stuff, save it under Window → Workspace
 - you can then reset to this if your screen gets messy!

exporting

- since it's a vector system, you can export in "any" format at any size without pixelation*
 - * unless there are embedded image files which will get pixelly because they'll be limited to the original resolution of the image
 - export as a PDF if you want to preserve scalability - good for presentations, etc. where figures will be blown up, but will make for large file sizes
- with artboards
 - can export artboards as separate files, go to file → export → export for screens
- with asset export (the box with an arrow at the top right)
 - this is a way to export figures, parts of figures, etc., without being tied to an artboard
 - hold down option while dragging selected objects into the asset export window to keep them together even if they aren't all grouped
 - drag into window without holding down option to export them all as separate figures
- if you are exporting as a PDF or PNG there are settings for a clear background (using alpha channel) or white or black background depending on what you want

There is sooooo much more you can do with illustrator, but hopefully this will help get you started and/or let you do the bare minimum you need to do!

Blog version with videos: https://bit.ly/adobe_illustrator_fundamentals

link to PDF version of this:

https://drive.google.com/file/d/1C72zWcht0gmtRV45Yl1p0xML4JwzFrgp/view?usp=share_link

you can also find it, along with other cheat sheets etc. here: https://bit.ly/bumblng_uploads