CRASH COURSE IN ILLUSTRATOR

MAIN TOOLBAR

Selection Tool (V) — Direct Selection Tool (A)
Magic Wand Tool (Y) — Lasso Tool (Q)
Pen Tool (P) — Type Tool (T)
Line Segment Tool (\) — Rectangle Tool (M)
Paintbrush Tool (B) — Pencil Tool (N)
Blob Brush Tool (Shift+B) — Eraser Tool (Shift+E)
Rotate Tool (R) — Scale Tool (S)
Width Tool (Shift+W) — Free Transform Tool (E)
Shape Builder Tool (Shift+M) — Perspective Grid Tool (Shift+P)
Mesh Tool (U) — Gradient Tool (G)
Eyedropper Tool (I) — Blend Tool (W)
Symbol Sprayer Tool (Shift+S) — Column Graph Tool (J)
Artboard Tool (Shift+O) — Slice Tool (Shift+K)
Hand Tool (H) — Zoom Tool (Z)
Fill Color — Toggle Fill/Stroke (X)
Default Fill and Stroke (D) — Stroke Color
— Fill Options
Drawing Modes — Change Screen Mode (F)
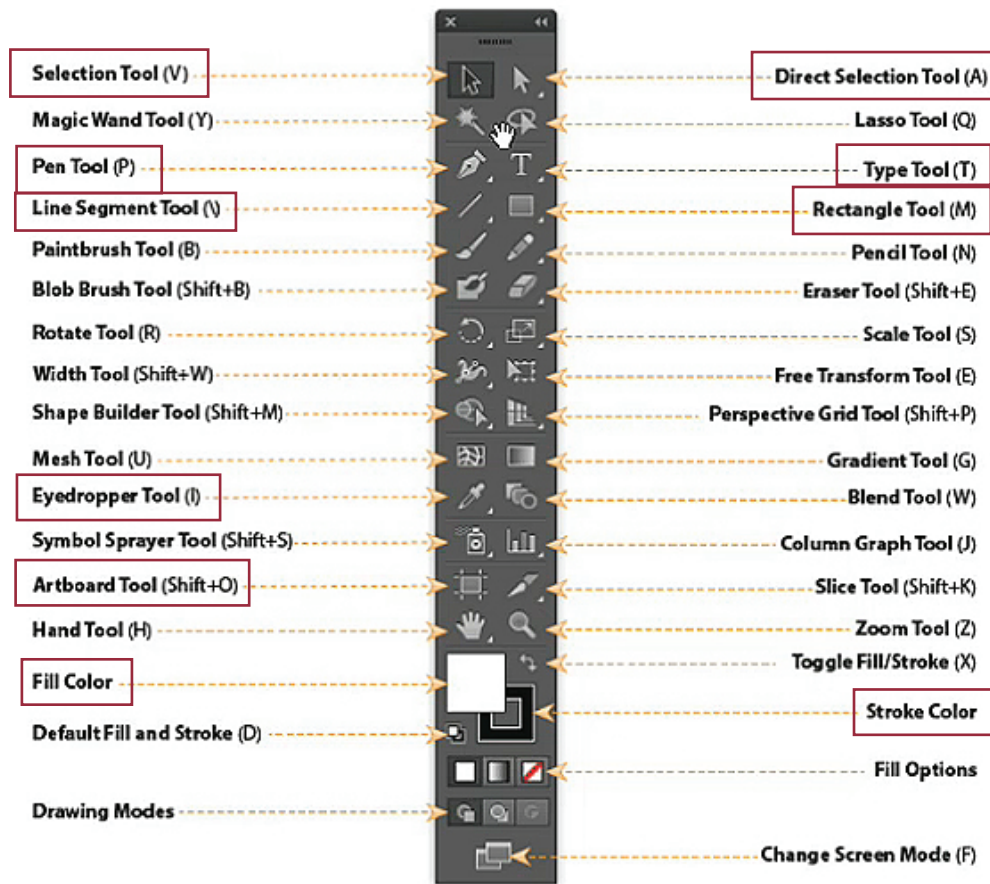
In this section, I have highlighted the main tools you will likely use when making a map. You don't need to worry about the rest. The tools in red boxes also have the keyboard shortcuts listed next to them, e.g. pressing I will bring you to the eyedropper tool. Below I have given a brief explanation of each highlighted tool and what it can be used for. As a rule of thumb, holding your mouse down on a tool will give you more detailed information and options.

Selection tool: Use this to return to simply selecting vector items in your project.
Direct selection tool: This will specifically select the vertices of an item. Using this tool allows you to delete, move, or add vertices to polygons and lines. It also allows you to select items "passing through" whichever clipping masks you have.
Pen tool: You may not use this one as frequently, but you can create new shapes by clicking to connect points. Useful for freehand graphics.
Type tool: Use this to create text boxes, e.g. for titles or legends.
Rectangle tool: Use this to draw a rectangle. This is helpful for creating bounding boxes. Holding your mouse down on this tool will give you options for other vector shapes as well.
Line segment tool: Use this to create lines. This is particularly helpful for leader lines pointing to a symbol or area that was too cluttered to label.
Eyedropper tool: If you have a shape or piece of text selected, clicking on the eyedropper tool lets you click anywhere on the artboard to copy a color or style. Double-clicking the eyedropper tool gives you more options regarding which styles you copy with the tool.
Artboard tool: Use this to manipulate your workspace size. This will be detailed in the layout section.
Fill color: Double-clicking this full box allows you to easily change colors.
Stroke color: Double-clicking on this outlined box allows you to easily change the outline of a shape. Use the arrow between them to flip the fill color and stroke color.

WINDOWS

COLOR

SWATCHES

SYMBOLS

STROKE

LAYERS
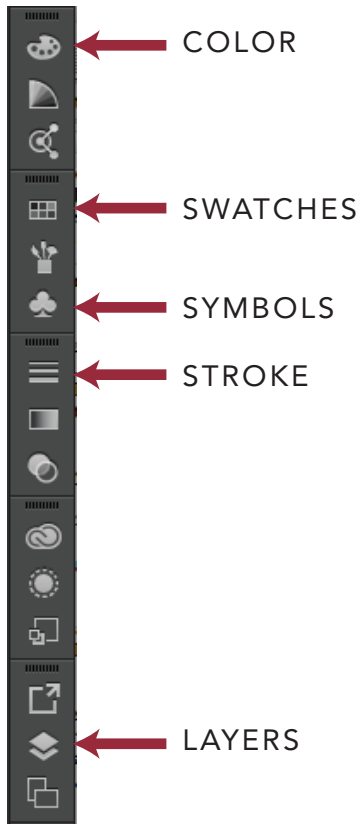
The toolbar that automatically appears on the right of your Illustrator window is full of useful window panels. You can access and edit which panels appear by clicking "Window" from the top menu, opening a window, and dragging it onto this panel. It is largely dependent on which you use most. I have highlighted those that I use most frequently and included a brief explanation of each. I will also discuss a few that are not pictured, but can be easily accessed in the Window menu. Note: most of the panels have sub-menus where you can select "Show Options" which gives even more detail.

Color: Use the eyedropper to select a color quickly.
Swatches: This window is similar to the fill/stroke selection section of the main toolbar, but also provides swatch libraries with preset color palettes.
Symbols: Using Illustrator symbols allows for easier editing of size, color, and shape of symbols. Rather than using vector shapes, you are able to edit all of your symbols at once.
Stroke: The stroke panel is used for advanced editing of your shape outlines. This includes arrowheads, dashed lines, and stroke thickness.

Layers: This is arguably the most important window for your assignments. Here you organize all of your data layers. In the screenshot below, see the most notable features of this panel.
Align: Use this window to align selected objects in a wide variety of manners. This also includes spacing between selected objects. Clicking the box-like icon (Align To:) allows you to toggle between aligning to your artboard or aligning to the selected objects.
Type: The type window has various components for editing text. Character and Paragraph are the two most important for our purposes. In the Character window (accessed via Command T), you can edit typeface, font style, type size, and character spacing. In Paragraph, you can access settings more specific to larger blocks of text, such as leading (space between lines).
Select same: This isn't a window, but is absolutely another useful tool that I thought I would include. If you are editing a large amount of features, you can use the "Select" menu from the top menu bar and choose Select > Same to find features with similar fills, strokes, etc. This saves a lot of time if it is a change you otherwise might've made manually.

show/hide layer

select a layer

lock/unlock layer

select a feature

delete a layer
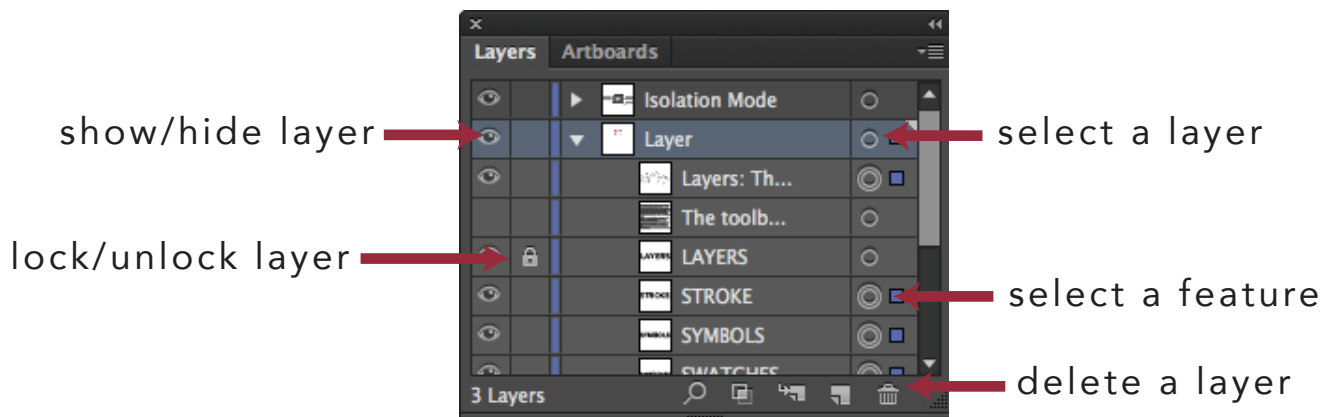
CLIPPING MASKS/LAYOUT

When you export an .ai file from Arc, a clipping mask is automatically applied to each data layer on your map. Select the layer in the Layers panel and click Object > Clipping Mask > Release. This will make it easier to navigate and manipulate your map. You can always make a clipping mask at the end to clean up the extent and make a bounding box. To do so, simply create a rectangle the is ABOVE the layer in the layers panel, select the rectangle and the layer, and click Object > Clipping Mask > Create. There are also shortcuts to do so from the layers panel.

Guides can be used to easily align and clean up your map. Before using guides, click View > Rulers > Show Rulers. Once your rulers appear, simply click on the ruler and drag down (or right, depending on if you are on the horizontal or vertical ruler) and a guide will appear. You can use as many as you want and you can manipulate them via View > Guides > Hide, Lock, Clear. Smart guides are different -- this is the name for the automatic setting in Illustrator to align or snap your items in line with each other. Toggle this on and off with Command U. Smart guides can help with alignment, but they can also be pesky if you are trying to place something arbitrarily.

Lastly, important to graphic layout is the Artboard tool mentioned earlier. By clicking the artboard tool (or Shift O) you can create, delete, or manipulate artboards. Artboards are the white space you see behind the map you've exported. This is useful, for example, for changing the layout of your map to a landscape/horizontal layout. Keeping the rulers on, you can scale the artboard to any size you like.

VISUAL VARIABLES

Visual variables are important to keep in mind when working on symbolization. Since many of the assignments incorporate a lot of complex information, it is crucial to think of how you can convey some of these quantitative values or categorical classifications with different symbol characteristics. Refer to the image below for a brief reminder on variable principles while you construct your map symbols.

(GIS&T Body of Knowledge)
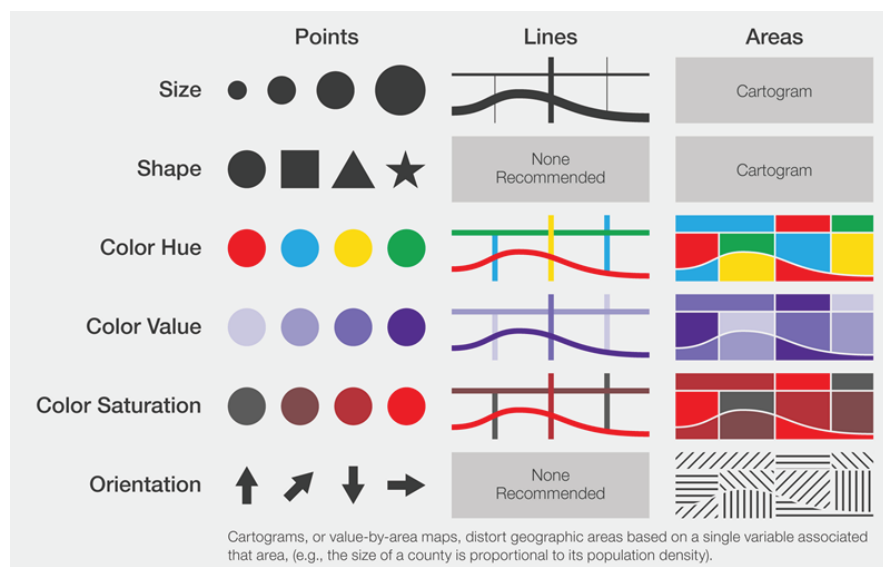
COLOR/FONTS

Most of the things on this page are supplementary. You have not yet been graded on design, but you can always implement good design techniques if you are looking to make your map more visually appealing.

On the right, you can see the difference between serif and sans serif fonts. Serifs are the word for the small "decorations" or tags on each letter. Traditionally, serifs are used for labeling natural features such as rivers, lakes, oceans, mountains, basins, etc. I am particularly partial to using sans serif fonts for most other features, including titles and legends.

In terms of color, much consideration regards print vs. web mapping, which we won't have to deal with right now since all of your maps are submitted digitally and not printed. There are a few color resources that I find useful, Adobe Kuler and ColorBrewer. Colors are often communicated in HEX codes: this is a 6 character key (e.g. #99d8c9). To use a HEX code, you can double click on the fill color in the toolbar and type in the code where highlighted in the screenshot below.

https://color.adobe.com/create/color-wheel/
http://colorbrewer2.org/#type=sequential&scheme=BuGn&n=3
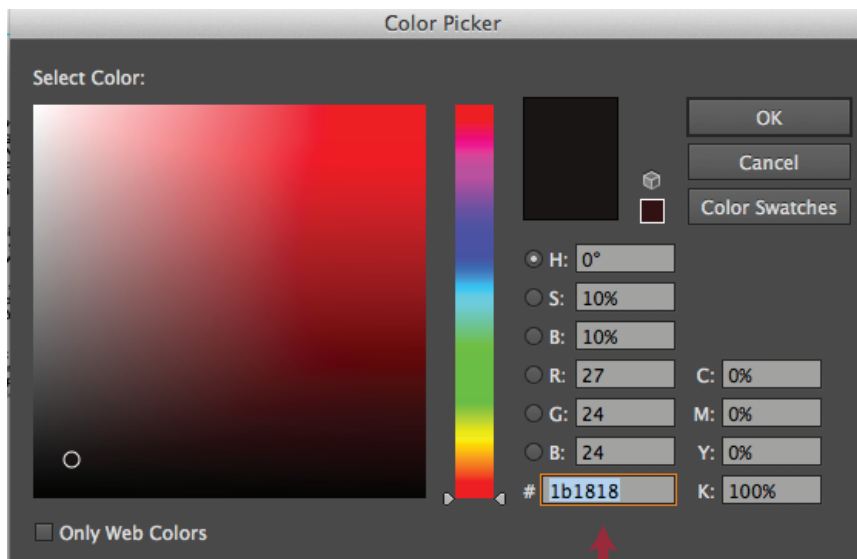
SHORTCUTS

Even though comprehensive lists of keyboard shortcuts exist online, I will highlight some useful ones that I use most often that will save you some time. Any shortcut that uses "command" should be replaced with "control" if you are on a Windows computer rather than a Mac.

Eyedropper: I
Select: V
Direct select: A
Group items together: Command G
Make clipping mask: Command 7 (while data is selected)
Release clipping mask: Command shift 7
Toggle smart guides on/off: Command U
Zoom in/out: Command +/-
Other keyboard shortcuts apply: cmd C (copy), cmd X (cut), cmd V (paste), cmd Z (undo), cmd S (save)

If you hold down the space bar and scroll, you can pan around the canvas without accidentally selecting anything.
If you hold shift while scaling the size of any object, it will not distort the object. Everything will remain scaled in the same proportions.
If you hold the "option" key and drag an object, it will quickly create a copy the same way copying and pasting would.