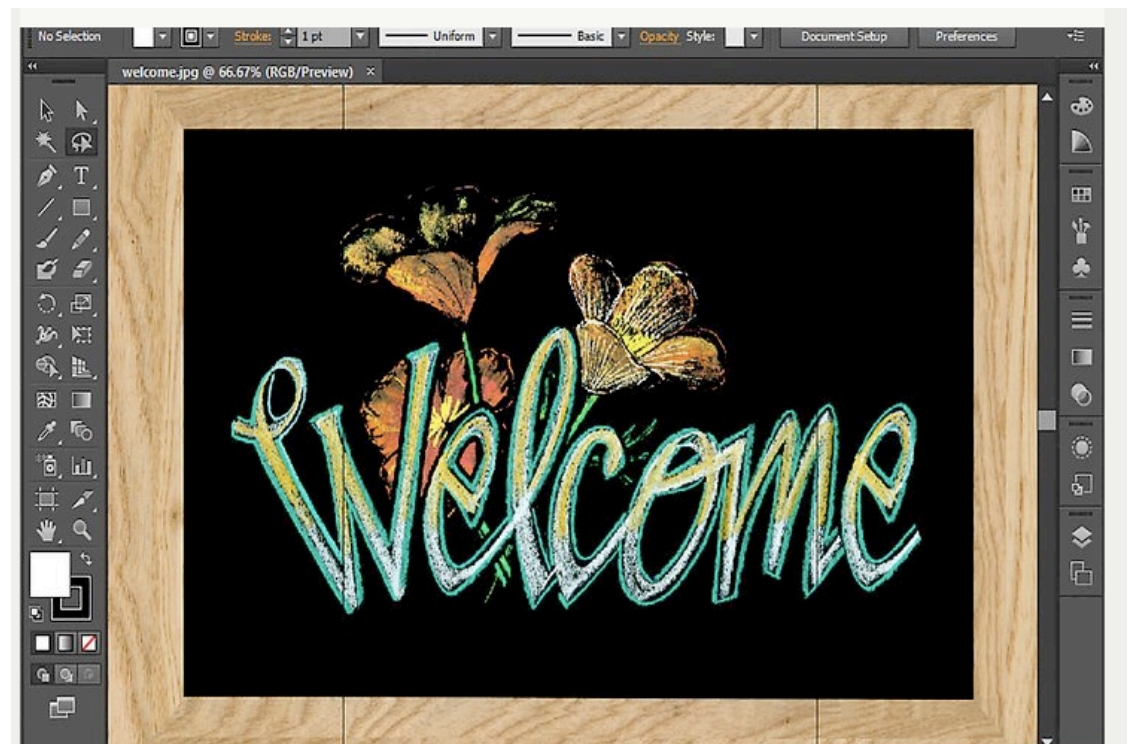


Presentation Tools – Adobe Illustrator

November 6, 2017



Today's Lab

- Adobe Illustrator on Macs in 345
- Need to stagger attendance
 - 5 students from 2-3:30
 - 5 students from 3:30-5

Graphics Software

- Computer software that can create and edit various graphics files
- Wide range of options
 - Adobe **Illustrator** and Photoshop
 - Canvas
 - CorelDraw
 - InkScape
 - 3D modeling/design programs
 - Video processing

Types of Graphics Formats

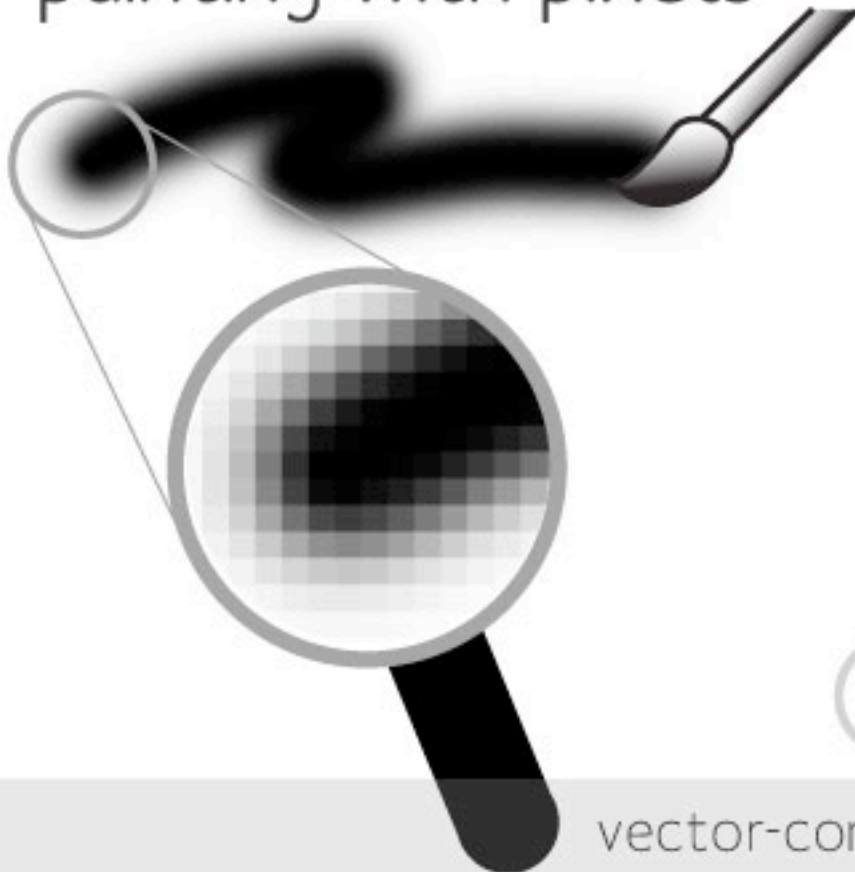
- Many types out there
 - JPEG, TIFF, PSD, BMP, PNG, PDF, PS, EPS,...
- Which ones to use? Depends on what you need to do, so important to understand basic file types
- Key differences: pixel based (bitmap) or vector based image

Bitmap (or Raster) Images

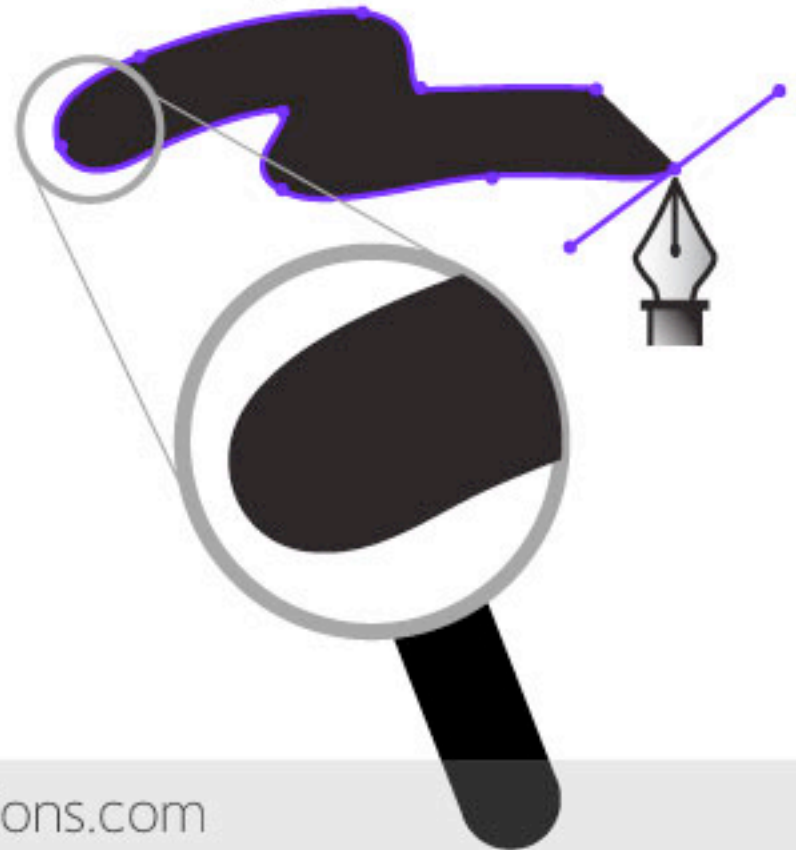
- Images made up of pixels in a grid
 - Pixel = very small square of color
 - Add together to make image
- Resizing figure can result in non-optimal images
 - Reduce size – give up pixels
 - Increase size – need to create new pixels, software has to interpolate between pixels
- Common bitmap formats
 - GIF
 - JPEG
 - PNG
 - TIFF
 - Scanned images, images from digital camera all bitmap
 - Web images often bitmap

Bitmap vs vector

painting with pixels



drawing with vectors



Vector Images

- Made of small scalable objects defined by Bezier curves (math functions) instead of pixels
 - Can be lines, curves, shapes
 - Features of these objects can be changed
 - Color, fill, outline, etc
 - Can be layered on top of other objects (no background)
- No resolution issue
 - Can resize without degradation of image
- Common vector formats
 - ai (adobe illustrator)
 - SVG (scalable vector graphics)

PS and PDF formats

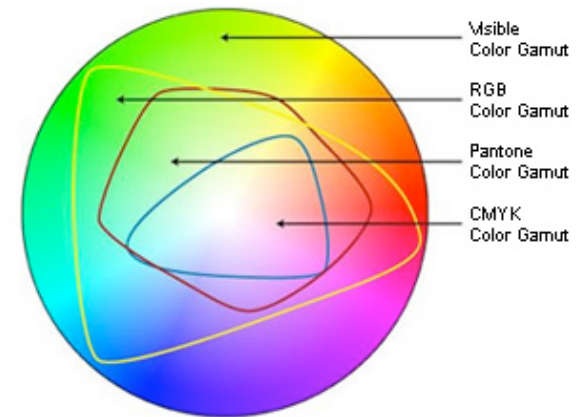
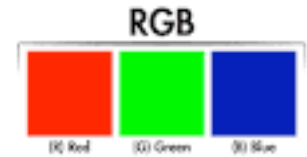
- Postscript (ps and eps) and Portable Document Format (pdf) contain both raster and vector data
- Example: vector image that has an object that is filled with a bitmap pattern

Software to Create and Edit Images

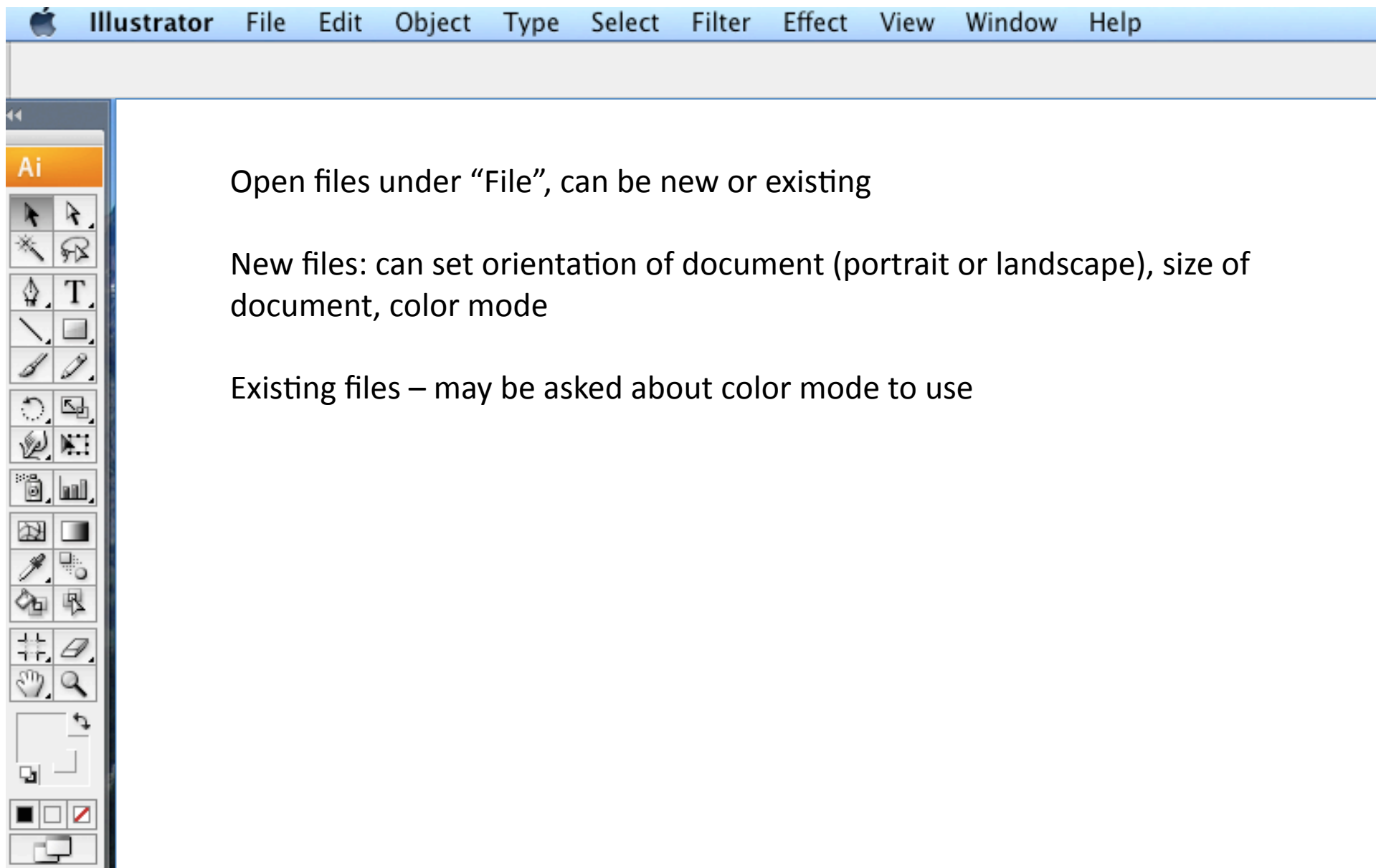
- Next few weeks will go over Adobe Illustrator and Generic Mapping Tools (GMT)
 - Will allow you to create and edit vector image files

Basics For Adobe Illustrator

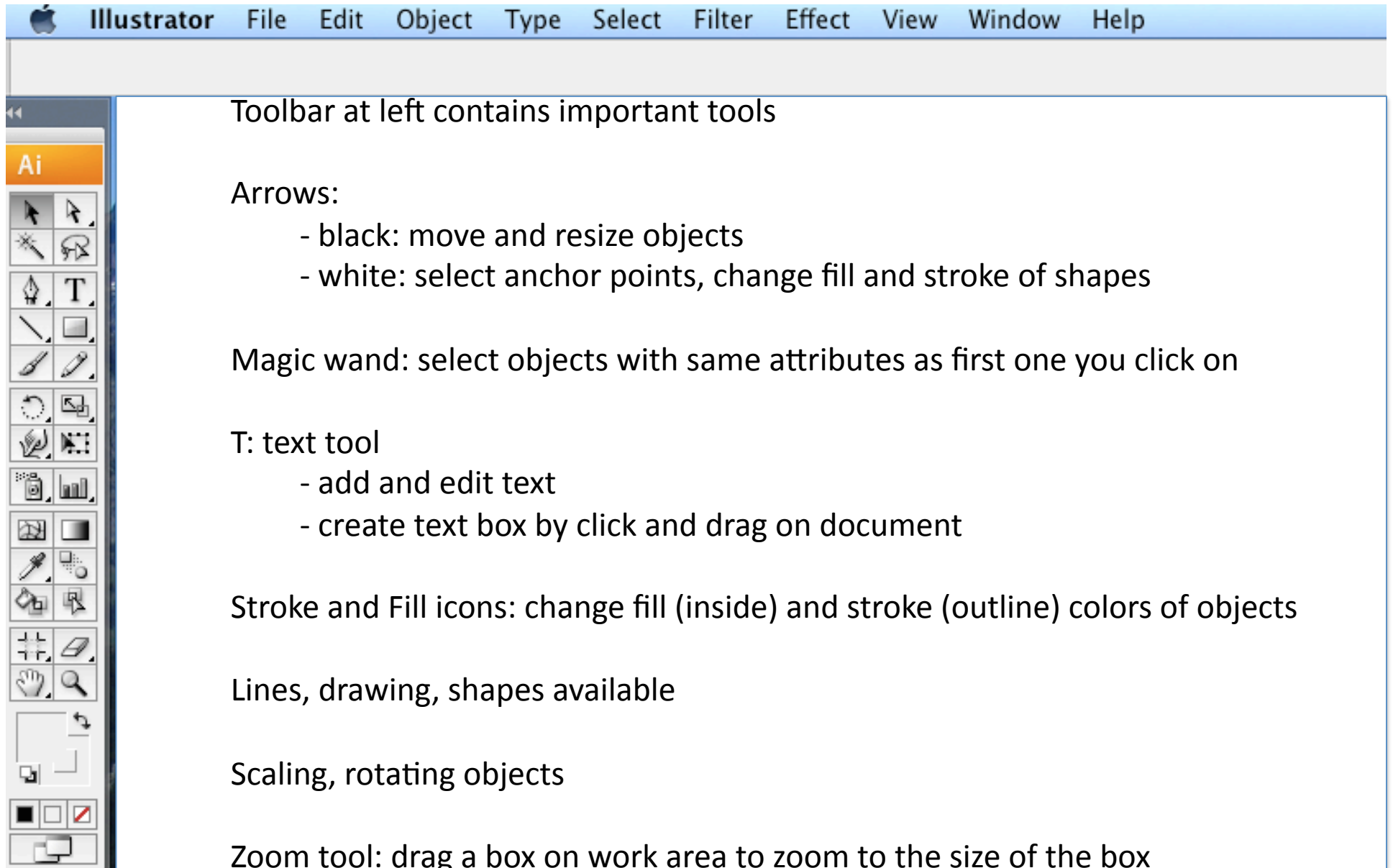
- Handling color
 - RGB vs CMYK
 - RGB: red, green, blue
 - Additive colors, create color by adding values of each primary color (range from 0 to 255; add all 3 colors at max (255) intensity, get white)
 - commonly used for web, presentations (screen viewing)
 - CMYK: cyan, magenta, yellow, black
 - Subtractive color (starts with all the colors, when you subtract all, get black)
 - use for journal, poster printing



Key Features



Key Features



The image shows the Adobe Illustrator application window. The title bar at the top contains the Apple logo, the word "Illustrator", and a menu bar with the following items: File, Edit, Object, Type, Select, Filter, Effect, View, Window, and Help. On the left side, there is a vertical toolbar with an orange header labeled "Ai". The toolbar contains various icons for different tools, including selection tools (black and white arrows), drawing tools (pen, pencil, eraser, brush, line, rectangle, ellipse, polygon, star, spiral, lasso), and editing tools (text, fill, stroke, zoom, pan, hand, crop, slice, and a palette).

Toolbar at left contains important tools

Arrows:

- black: move and resize objects
- white: select anchor points, change fill and stroke of shapes

Magic wand: select objects with same attributes as first one you click on

T: text tool

- add and edit text
- create text box by click and drag on document

Stroke and Fill icons: change fill (inside) and stroke (outline) colors of objects

Lines, drawing, shapes available

Scaling, rotating objects

Zoom tool: drag a box on work area to zoom to the size of the box

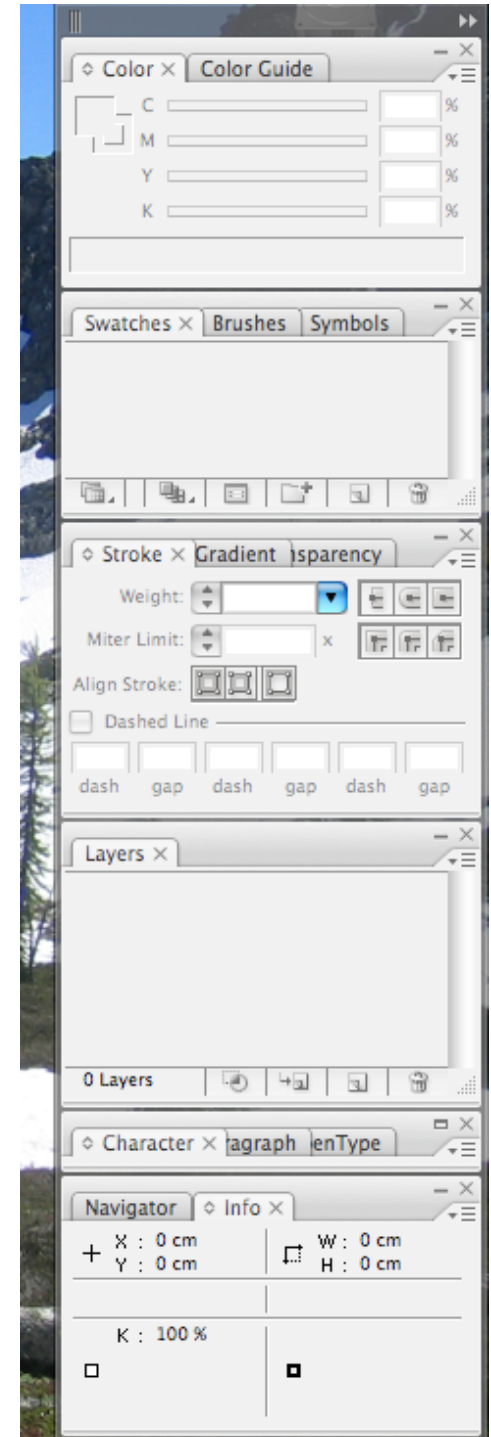
Other options on left panels

Set color of lines and fill

Define stroke weight, line style, gradients, transparency

Layers!!!!!!! Use them!!!!!!!

Character font type, paragraph alignment



Other useful tips

- Use selection tool to drag box around objects to select all of them in that area
- Get rulers and grids to help with measurements (View menu)
- Change measurements (Edit, preferences, units/display)
- Eyedropper (left menu): quickly copy fill, stroke, size by highlighting object to change, then click on eyedropper, followed by object containing desired effect

Making a Poster

- Final project in this class – poster
- Recommend making this in Adobe Illustrator
- Set up document with correct paper size initially
- Save as a pdf (may need to save as compressed filesize due to printer memory restrictions)
- Contact Andrew Phillips (andrew.g.phillips@nmt.edu) with poster file and details about desired paper, etc (see nmtearth.com/wide-format-plotter for details)