

# Section 1

## Illustrator Basics

When you first open the Adobe® Illustrator® CS application window, a number of palettes are displayed in the window. These palettes are critical tools that you will learn to use effectively as you complete the exercises that accompany this course.

Adobe Systems software applications have many palettes and tools in common. Each application is also unique in the capabilities that are not shared among applications. Photoshop uses *raster* images while Illustrator is a *vector-based* program.

A *raster* image is comprised of pixels. The pixel size is equal to the image size times resolution. Most images are measured in dpi (dots per inch) or ppi (pixels per inch).

*Vector* images are comprised of mathematical lines and curves. You can move, resize or change the color of a stroke. These images are resolution-independent so they can be sized or scaled without affecting the quality of the image. This is the most common type of image used for bold graphics and curved lines. It is usually the choice for logos and artwork.

This first-level course is designed for brand new users with Illustrator. If you have utilized an earlier version of Illustrator prior to Creative Suite, skip over the preliminaries such as palette descriptions, tool actions, etc. and move on to the important matter of working with the images you are preparing for publication in print or Web environments.

## Image Types

Illustrator allows you to work with many types of images but there are limitations. In order for an image to be fully editable, it is recommended that you work in the Adobe Illustrator (AI) format. Once an image is complete, save it in another format if required for a specific type of output.

Illustrator Legacy (AI) is the format compatible with earlier versions of Illustrator. Since new Illustrator Creative Suite features are not compatible with earlier versions, these effects will be *rasterized* if you save a file in the Legacy format.

Illustrator EPS (Encapsulated Postscript) format is used to transfer files across applications. Files created in Illustrator may be stored in the EPS format to incorporate into page layout programs such as InDesign for printing and Web pages. The EPS format will save paths but it will not save alpha channels.

Photoshop® (PSD) files are photographs and images that have been manipulated with the Adobe® Photoshop® application. This format allows you to maintain additional layers, masks and filters which have been applied during Photoshop editing.

Illustrator does support Windows Bitmap (BMP) files. This means the files may be opened for edit in Illustrator. Bitmap files support up to 24-bit color but be aware that the resulting file size will be quite large.

Graphics Interchange Files (GIF) are the most common type used for Internet Web sites. These files can contain up to 256 colors or as few as two colors, black and white. GIF format is used for scanned line art or black and white images and also for images with transparent backgrounds.

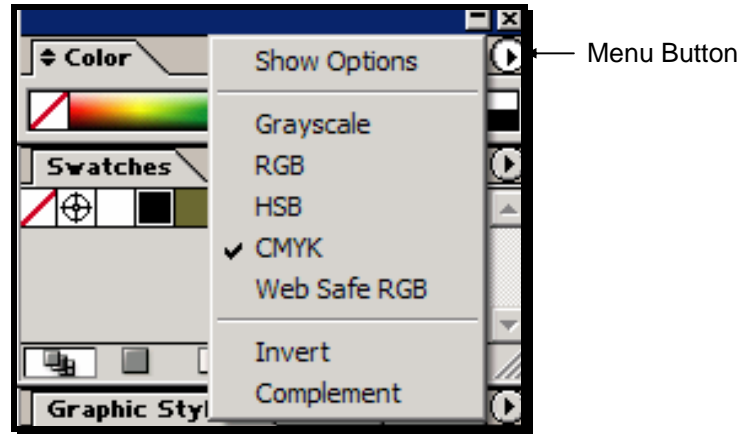
Joint Photographic Experts Group (JPEG) files are most commonly used for photographs because they can store full RGB color information. This can entail up to 16.7 million colors. JPEG has a more efficient compression capability allowing you to maintain the integrity of the image within a smaller file size.

Portable Network Graphic (PNG) is the best format for photographs which will be included in Web sites. This format supports up to 48-bit RGB and 16-bit grayscale. It also supports transparency more fully than the GIF. This format also supports *interlacing* for layering graphics on a Web site. This means that the graphic will load in layers making the download time more efficient.

Tagged Image File Format (TIFF) was developed to assist with compatibility across applications. TIFF uses LZW compression and does not reduce quality. TIFF also preserves color channels.

## Color Models

Color models are determined by software and refer to the way the monitor uses and displays color within the software application. There are five color models available in Illustrator. You may view these models by clicking on the menu button on the **Color** palette.



Grayscale provides 256 shades of gray where 0 is true black and 255 is pure white. All other colors within the grayscale range display shades of gray from lightest to darkest.

The HSB color model refers to hue/saturation/brightness. Hue is the spectrum of color. Brightness is the brilliance – light or dark – of a color and saturation is the strength or intensity of the color.

The RGB color model supports all colors that can be mixed with the red/green/blue color combinations. This is the color model used by computer monitors. These three primary colors may produce up to 16,800,000 colors.

The CMYK color model supports all colors that can be mixed using cyan/magenta/yellow/black inks. This is a model used primarily for printers and pre-flight press setup.

The Web Safe RGB model includes colors that can be reproduced on a Web page. This simplifies greatly the number of colors that may be “mixed” from the red/green/blue combinations. Web safe colors are defined as 16-bit colors between the 00 and FF color values. This produces consistent colors across Web browsers.

## Color Modes

A color mode determines how the Illustrator image will be output to a printer or printing press. In Illustrator there are two color modes available, RGB and CMYK. It is recommended that you select a color model and color mode for an image upon its creation and refrain from moving to a different mode. Each color model and color mode has its own unique range of colors that can be displayed or printed.

## Tools



Selection Tool

A few tools in Illustrator have a small triangle at the bottom right of the tool button. If you point to this triangle and hold the left mouse button down, you will see the additional tools that “hide” beneath the displayed tool. As soon as you point to a tool in the Toolbox, you will see a tool tip, describing the tool. Many tools also have a keyboard letter shortcut that will activate the tool. You will become familiar with the letters as you use the same tools frequently. A list of the Tools keyboard letter shortcuts is included in **Appendix 2 – Adobe Illustrator Keyboard Shortcuts**.

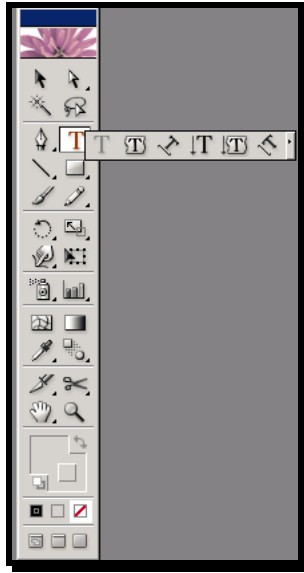
If the Toolbox is currently not displayed, click on **Window** then **Tools** from the menu. This will always restore the Toolbox to the application window.

**N**OTE: Hold the <Ctrl> key and click on a shape or stroke to restore the selection tool when another tool is active.

The first two tools on the Toolbox are both selection tools but perform different actions. The **Selection** tool will select the entire image or artwork within the canvas or artboard. The **Direct Selection Tool** will select one specific shape or object within a group. When one tool is active, hold the <Ctrl> key and press <Tab> to switch to the second.

1. Click on the **Selection Tool** (the first button in the Toolbox).
2. Press the letter A.

*The active tool is now the Direct Selection Tool.*



3. Point to the **Type Tool** and hold down the left mouse button.  
*The hidden tools will be displayed.*
4. Release the mouse button to turn off the hidden tools display.

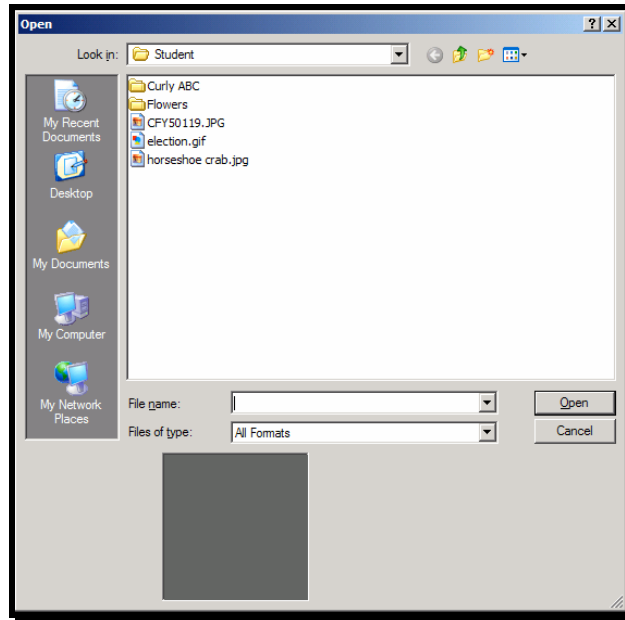
## Image Manipulation



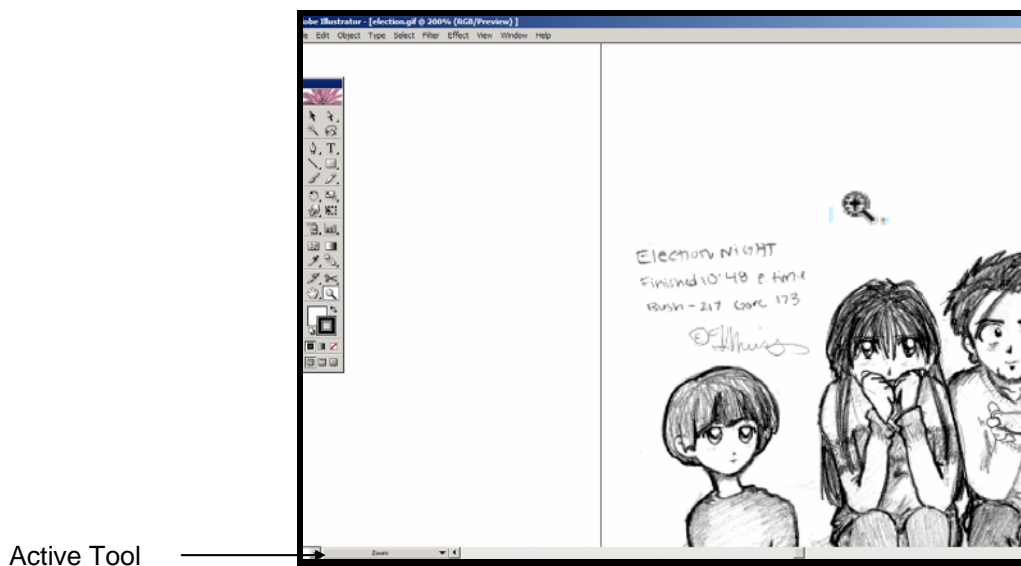
Zoom Tool (Z)

To practice with the Zoom tool and options, you will open an existing file. This image is black-and-white drawn art that has been scanned into a digital format (GIF). In this exercise, you will learn to zoom and size the image in the workspace using the **Zoom Tool** and the **Navigator** palette.

1. From the menu, select **File** then **Open** (or press <Ctrl> <O>).
2. Double-click to open the folder **Student**.



3. Double-click on the image **Election.gif**.  
*The image will appear in its own window on the artboard.*
4. Click on the **Zoom Tool** in the Toolbox or press the letter **Z**.  
*The pointer changes to a magnifying glass icon as you move it over the illustration in the artboard.*



Active Tool

5. Click on the text in the upper left corner of the illustration.

6. Continue to click on the image or press **<Ctrl> <+>**.  
*The zoom will continue to increase.*
7. Hold the **<Alt>** key and click on the image.  
*The icon has changed to a zoom out magnifying glass.*
8. Press **<Ctrl> <->** to zoom back out.  
*The image will grow smaller.*
9. From the menu, select **View** then **Actual Size** or **<Ctrl><1>**.
10. To open the **Navigator** palette, click on **Window** then **Navigator** from the menu.

# Section 1

## Summary Exercises

### Part One

1. Open the image **horseshoe crab.jpg** from the **Images** folder.
2. Practice with the zoom feature until the text under the image is legible.
3. What does the text say?
4. What zoom percent was required in order to read the text?
5. Open the **Navigator** palette.
6. Use the slider to increase and decrease the size of the image.
7. Minimize the **Stroke** palette.
8. How many palettes are minimized? Which ones?
9. Close the image **horseshoe crab** without saving changes.
10. Close the **Navigator** palette.
11. Restore the **Appearance** palette.
12. Click on the **Eyedropper Tool** (or press the letter **I**).
13. Click on a gold color on the horseshoe crab shell.
14. Display the **Color** palette and the **Appearance** palette.
15. In what areas of the Illustrator application window does the fill swatch containing the gold color appear?
16. Close the image without saving any changes.

## Part Two

1. What are two file types that can be edited in Illustrator?
2. The Adobe Illustrator application window displays a \_\_\_\_\_ on the left side of the window for easy access to tools which enable you to edit and manipulate objects.
3. Open \_\_\_\_\_ appear on the right side of the application window.
4. Use the \_\_\_\_\_ palette to zoom in to an image, increase or decrease the image scale.
5. Point to the title bar of a palette to display the \_\_\_\_\_ - \_\_\_\_\_ - \_\_\_\_\_ arrow to move the palette to a new location in the window.
6. Click on the \_\_\_\_\_ command in the menu to display a palette if it does not appear in the application window.
7. Click the \_\_\_\_\_ button in a palette to close the palette.

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<sup>1</sup> Election Night, a drawing by Valerie Meiss, copyright 2004. Used by permission.