

## Optional Exercise 1

No due date

## Introduction to Adobe Illustrator

This laboratory exercise will introduce you to the basic feature of Adobe Illustrator. This semester we will be using Adobe Illustrator for vector graphics and later Adobe Photoshop for raster graphics. Both products are top of the line packages for graphic design. Note: Some of the detailed instruction that follows may change—Adobe updates its software often!

Before starting this lab you will need to download the Tour.ai file used in the exercises. This file is located at <http://www.geography.wisc.edu/~harrower/Geog572/Tour.ai.zip>. Save it to your personal directory or other storage media.


You will be editing a simple non-cartographic illustration in order to introduce yourself to the functionality of Adobe Illustrator. The goal for this assignment is a printout of the edited drawing.

## BASIC DRAWING AND PAINTING

Adobe Illustrator provides a variety of tools and commands for creating basic geometric shapes, as well as specialized tools for precision drawing and patterns.

Start Adobe Illustrator. Choose File > Open, and open the Tour.ai file. If Illustrator asks you to convert the color palette click OK to accept the default.

1. First you will add some basic shapes to the

Tour poster. Click the oval tool  in the toolbox. Position the tool in the lower right corner of the artwork; hold down the Shift key, and drag to draw a small moon. (Holding down the Shift key constrains the oval shape to a circle.)

The circle is filled with the current fill color selected in the Paint Style palette.

2. The Paint Style palette is located at the bottom of the toolbox.




The Paint Style palette lets you choose from an almost limitless variety of colors and fill types. In Illustrator, the paint within an object is called a *fill*; paint on a line is called a *stroke*. Note that the solid box indicated the fill color and the square beneath it indicated the stroke color.

## Don't Forget To Save!

The arrows in the upper corner of the Paint Style palette allow you to toggle the color between the selections. The buttons below the Paint Style palette allows you to use features such as gradient fill.

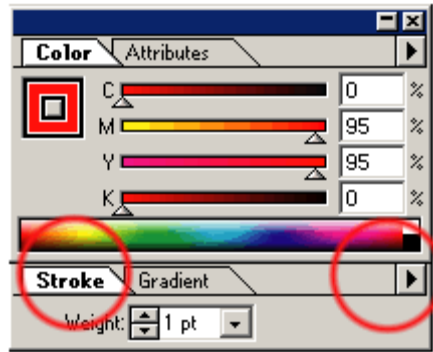
3. To change the color in the fill palate either double click on the fill box (under Swatches) to open the color picker or use the Color window box to the left of the screen. If the color window box is not open choose Window > Show Color from the menu. In the color window box you can change the color by adjusting the values of a color space such as Cyan [C], Magenta [M], Yellow [Y], and Black [K]. Fill the moon with a dark yellow selection

4. Now you will draw a star. Depress the Oval tool in the toolbox until four tools appear as seen in the image below. Choose the star tool (If a dialog box appears, select the default options). Draw a star on the page. Fill the star with the same color used for the moon. Note that all buttons in the toolbox with a small arrow in the lower right corner have more tools “hidden” behind them just like the star tool was hidden behind the oval.

5 Click the direct selection tool  in the toolbox, and drag the star to the top of the rays in the left of the poster. The blue outline around the star indicates that it is *selected* - that is, it is the active object and can be moved or edited. To move and select objects in Illustrator, you use the selection tools (the arrows at the top of the toolbox).


6. If you don't like the effect of a command or tool, you can use the Undo command to cancel your last step. (By default, you can cancel up to 5 steps.) You can also use the Redo command to cancel the effect of the Undo command. To see how this works right now, choose Edit > Undo three or four times, and then choose Edit > Redo the same number of times.

7. Now, click the red line encircling the globe to select the line. Notice that the Paint Style palette shows that the line has no fill and a red stroke. The Stroke window is located at the bottom of the color window. Click on the stroke tab if it is not already highlighted. By pressing the small arrows to the left of the word stroke, you can expand the box and access more features.

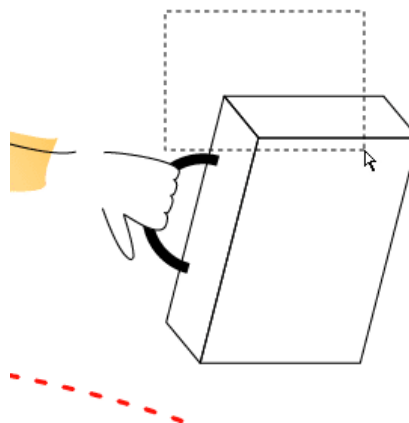



8. To change the line to a dashed line, open the Stroke Window fully by pressing the small arrows to the left of the word Stroke. Check the dashed line box and then enter numbers in the first Dash and Gap boxes (gaps of 2pts and 4pts look good), and press Return.

9. Complete the line by choosing Filter > Stylize > Add Arrowheads. Click OK (the defaults are fine)

10. Now you will add some color to the figure of the man. Click the zoom tool  in the toolbox, and then drag as shown in the illustration to zoom in on the figure. Like the other freeform shapes in this illustration, the man was created using the pen tool. Another way to zoom in and out of a drawing is to use keyboard shortcuts. “Cntrl +” is the shortcut for zooming in and “Cntrl -“ is the shortcut for zooming out.

11. Click the direct selection tool, and drag as shown in the illustration below to select all three shapes that make up the suitcase. If you make a mistake, click away from the artwork to deselect it, and then try again.

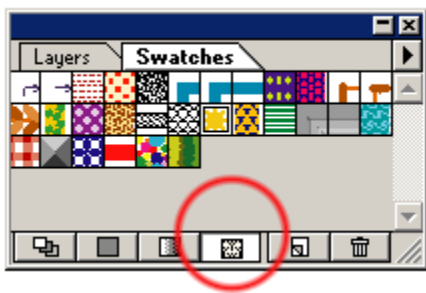


12. In the Paint Style palette, click on the Stroke Selection color and then click on the None box  to set the stroke to None.

13. Now click on the Fill box, select a color to fill in the selections.

14. Now you will change the color on the surfaces of the suitcase to add depth. Click away from the artwork to deselect the suitcase, and then click the front of the suitcase to select it only. In the Color Window palette, select a lighter version of the same color used to fill the sides of the suitcase. This will give the suitcase a 3-D appearance


15. Now you will use the Color Window palette to add patterns and gradated fills, called *gradients*, to your artwork. Click inside the man's tie to select it. Open the Swatch Window if not already open (Window > Show Swatches). In the Swatch Window choose the Pattern option as seen in the image below. By holding the cursor over the Patterns, you can find out the names of each pattern. Try each one. Choose a fill pattern that fits the outfit well.



16. The eyedropper and paint bucket tools let you easily copy and paste colors from one object to another. Click the eyedropper tool.



Then click the man's pants to pick up, or sample, their color (they are filled with a gradient). Sampling a color copies the color's fill and stroke into the Paint Style palette.

17. The paint bucket tool  is located next to the eyedropper. Click on the man's hat with the paint bucket to fill it. Zoom out to a full view of the artwork.

## MODIFYING SHAPES


Illustrator includes numerous tools and commands that let you easily modify the shape

of objects. Transformation tools allow you to scale and mathematically alter selections. The Pathfinder tools allow you to change the shapes of objects by adding and subtracting the outlines, or *paths*, around them.

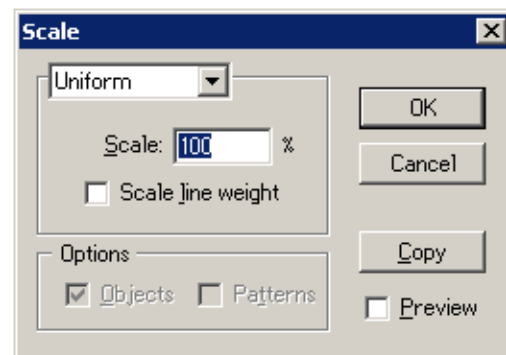
1. Click on the Zoom tool and draw a box around the airplane to zoom in on it.

2. Click the Direct Selection tool and drag around the airplane to select all of its shapes. The choose Objects > Group to combine the shapes into a single selectable group. You can now move the entire plane around just by clicking on a part of it. (Note: Use the regular selection tool on grouped objects because the direct selection tool will select object within a group.)

3. Next you will scale and rotate the airplane. You can easily scale, rotate, and shear objects-


either by dragging with the scale tool  or by specifying precise values. Use the regular selection tool to select the airplane. After selecting the plane, right click on it to bring up an option menu.




4. In the option menu choose Transform > Scale. A dialog box will appear similar to the one show below. Choose to uniformly scale the plane 150% and press OK. Notice that the plane is larger.



5. Repeat the scale transformation by right clicking on the plane again with the mouse and choosing Transform > Transform Again.

6. Now you will rotate the plane by dragging.


Select the rotate tool  click on the tip of the plan and hold the mouse button. By moving the mouse you can rotate the plane. Rotate the nose of the plane slightly upwards.

- 7 Use the regular selection tool , and then drag the airplane over the tip of the arrow. The regular selection tool is used here because it automatically selects all items in a group rather than selecting them individually like the direct selection tool.
8. Note that the airplane is covering the arrow. Objects in Illustrator are stacked in the order in which they are created. Choose Object > Arrange > Send to Back to move the airplane behind the arrow. Deselect the airplane by clicking away from the airplane. Then double-click the hand tool  in the toolbox to fit the artwork in the window.
9. Now you will create a copy of the moon and apply a Pathfinder filter to create a crescent. Choose the regular selection tool and then click on the moon. Hold down the Shift and Alt keys, and drag the moon upwards to move a copy just off center from the original (they should be overlapping). Holding down the Shift key as you drag constrains the movement to a straight line; holding down the Alt key creates a copy.
10. Now Shift-click the original moon so that both shapes are selected. (Shift-clicking lets you select multiple objects.) Then choose Object > Pathfinder > Minus Front to subtract the front shape from the back and create a crescent moon.
11. Drag the moon into position. Click the rotate tool and rotate the moon slightly up and to the left. Then click away from the artwork to deselect it.
12. Now you will practice working with two types of blends: object blends, which are created using the blend tool; and gradients, which are gradated, multicolored fills.
13. Click the zoom tool, and click near the star rays once to zoom in. Use the direct selection pointer to click one of the star rays to select it, and Shift-click the other ray to select it also.
14. Click the blend-tool.  Click the point at the top of the left ray, and then click the top point of the other ray. The Blend dialog box will appear. Enter a value in the Steps text box to indicate the number of intermediate shapes you want (5 looks the best in this example). Click OK. The blended rays should appear.

15. With the selection pointer, click away from the artwork to deselect. Note that the blend tool creates blends between the colors as well as between the shapes of two objects.

To fill objects with gradated colors, you use the Gradient option in the Paint Style palette. You can then use the gradient tool to adjust the length and position of the gradient.

16. Click the star with the regular selection tool to select it. In the Color Window palette, click the Gradient option tab at the bottom. Choose Radial as the Type of gradient. The fill patterns will appear in the Swatches Window. Browse the fill patterns in the Swatches Window. Locate the Sun gradient (orange-yellow radial pattern) and select it for the star.

17. Clicking in the artwork with the Gradient tool  repositions the highlight of a radial gradient, and dragging adjusts the length of the gradient. Position the pointer inside the sun, and experiment with different highlight positions and gradient lengths. When finished, double-click the hand tool in the toolbox to fit the artwork in the window.


## USING LAYERS AND TYPE


Illustrator's Layers palette lets you organize artwork into groups that can be selected, displayed, edited, and printed.

1. If the Layers window is not visible, choose Window > Show Layers to display it. The Tour poster --has been organized into four layers New objects are created on whatever layer is selected in the Layers palette.
2. Select the Clouds layer in the Layers palette and drag it up just above the Draw & Paint layer to bring the clouds to the front of the artwork. You can drag layers to change their order in the artwork; you can also move objects between layers.
3. Now click the Type layer, and then click the eye icon on all the other layers to hide all other layers. Hiding layers is a useful way to isolate detailed artwork as you work. You can also lock and print layers individually.

**Save! Save! Save!**

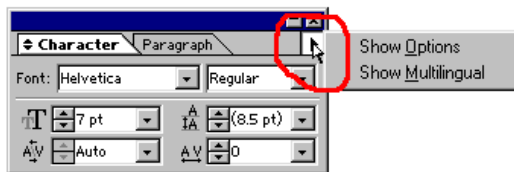
4. Select the zoom tool, and drag around a portion of the type to zoom in. Illustrator lets you easily create type on a path or at any point in your artwork, as well as create and import text in columns or in other containers.

5. Select the type tool , and click once between any two words to position the type cursor. This type has been entered on an invisible path (an unfilled, unstroked circle) around the globe. The type's path appears when you click inside the type. This kind of type can be created

by using the Path Type tool , which is one of the type tools “hidden” beneath the regular tool.

6. Type the word ASIA; then click the regular selection tool in the toolbox. Clicking the selection tool after using the typing tool automatically selects the entire block of type.

7. Choose Type > Character to display the Character window. The Character window, like almost all windows, has features that can be accessed by clicking on the arrow in the upper right corner as seen in the image below.



Click on this arrow and choose Show Options. Notice more type options appear at the bottom of the window. Choose a different type size from the Size menu (9 points works well).

8. Point the mouse cursor over each icon in the Character window to find out what each control is. Find Tracking and enter a value (175). Notice that the type automatically adjusts to the new value. Play with the tracking value until you feel the type is visually pleasing.

9. Click away from the artwork to deselect the type. In the Layers windows, click the eye icons back on to display all the layers.

10. Drag the Type layer to the top of the palette to position that layer on top of the artwork. Then double-click the hand tool in the toolbox to fit the artwork in the window.

Illustrator includes a number of special effects filters you can apply to bitmap images for an almost limitless variety of effects.

1. Click under the lock icon next to the Photo layer in the Layers window to unlock the layer.

2. Click the regular selection tool, and click the earth to select it. The image of the earth is an imported TIFF file from Adobe Photoshop.

3. Experiment with the effects in the Filter menu. Note also that not all effects are available for this image. Filter > Blur > Radial Blur looks good. Click off to deselect.

4. Now you will turn the man's clothes into a bitmap so that you can apply a bitmap image filter. Turning Illustrator artwork, called vector artwork, into a bitmap is called rasterizing. Hold down the Shift key and click to select the man's pants and shirt.

5. Choose Object > Rasterize. The box around the man represents the entire bitmap image, which is defined by a rectangular grid, or raster.

6. Experiment with the effects in the Filter menu. Note also that not all effects are available for this image.

Congratulations! You've completed the Illustrator quick tour. Save the Tour.ai file in your own directory under a different name so that you still have the original.

### **Deliverables:**

Print your Tour.ai file after you have completed the exercise. You may want to add your name to the drawing by using the type tool.

## **APPLYING BITMAP IMAGE FILTERS**