5 Transforming Artwork

Lesson overview

In this lesson, you'll learn how to do the following:

- Add, edit, rename, and reorder artboards in an existing document.

- Navigate artboards.

- Work with rulers and guides.

- Position and align content with Smart Guides.

- Position objects with precision.

- Move, scale, rotate, reflect, and shear objects using a variety of methods.

- Use the Free Transform tool to distort an object.

- Work with the Puppet Warp tool.

This lesson takes approximately 60 minutes to complete. Please log in to your account on peachpit.com to download the lesson files for this chapter, or go to the "Getting Started" section at the beginning of this book and follow the instructions under "Accessing the lesson files and Web Edition."

Your Account page is also where you'll find any updates to the chapters or to the lesson files. Look on the Lesson & Update Files tab to access the most current content.

You can modify objects in many ways as you create artwork, by quickly and precisely controlling their size, shape, and orientation. In this lesson, you'll explore creating and editing artboards, the various Transform commands, and specialized tools, while creating several pieces of artwork.

Starting the lesson

In this lesson, you'll transform artwork and use it to complete an infographic. Before you begin, you'll restore the default preferences for Adobe Illustrator, and then open a file containing the finished artwork to see what you'll create.

1. To ensure that the tools function and the defaults are set exactly as described in this lesson, delete or deactivate (by renaming) the Adobe Illustrator CC preferences file. See "Restoring default preferences" in the "Getting Started" section at the beginning of the book.

● **Note:** If you have not already downloaded the project files for this lesson to your computer from your Account page, make sure to do so now. See the "Getting Started" section at the beginning of the book.

2. Start Adobe Illustrator CC.

3. Choose File > Open, and open the L5_end.ai file in the Lessons > Lesson05 folder on your hard disk.

This file contains the three artboards that make up the front, back cover, and center for an infographic pamphlet. Any data presented is purely fictitious.

4. Choose View > Fit All In Window, and leave the artwork onscreen as you work.

5. Choose File > Open. In the Open dialog box, navigate to the Lessons > Lesson05 folder, and select the L5_start.ai file on your hard disk. Click Open.

6. Choose File > Save As. In the Save As dialog box, name the file **Infographic.ai**, and navigate to the Lesson05 folder. Leave the Format option set to Adobe Illustrator (ai) (macOS) or the Save As Type option set to Adobe Illustrator (*.AI) (Windows) and then click Save.

7. In the Illustrator Options dialog box, leave the Illustrator options at their default settings and then click OK.

8. Choose Window > Workspace > Reset Essentials.

● **Note:** If you don't see Reset Essentials in the Workspace menu, choose Window > Workspace > Essentials before choosing Window > Workspace > Reset Essentials.
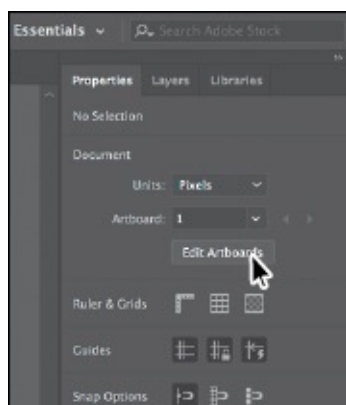

Working with artboards

Artboards represent the regions that can contain printable or exportable artwork, similar to pages in Adobe InDesign or artboards in Adobe Photoshop

or Adobe Experience Design. You can use artboards for creating a variety of things, such as multiple-page PDF files, printed pages with different sizes or different elements, independent elements for websites or apps, or video storyboards, for instance.

Adding artboards to a document

You can add and remove artboards at any time while working in a document. You can create artboards in different sizes, resize them in Artboard Editing mode, and position them anywhere in the Document window. All artboards are numbered and can have a name assigned to them. Next, you'll add a few artboards to the Infographic.ai document.

1. Choose View > Fit Artboard In Window and then press Command+– (macOS) or Ctrl+– (Windows) twice to zoom out.

2. Press the spacebar to temporarily access the Hand tool (✋). Drag the artboard to the left to see more of the darker canvas to the right of the artboard.

3. Click the Edit Artboards button in the Properties panel on the right to enter Artboard Editing mode and to select the Artboard tool in the Tools panel.

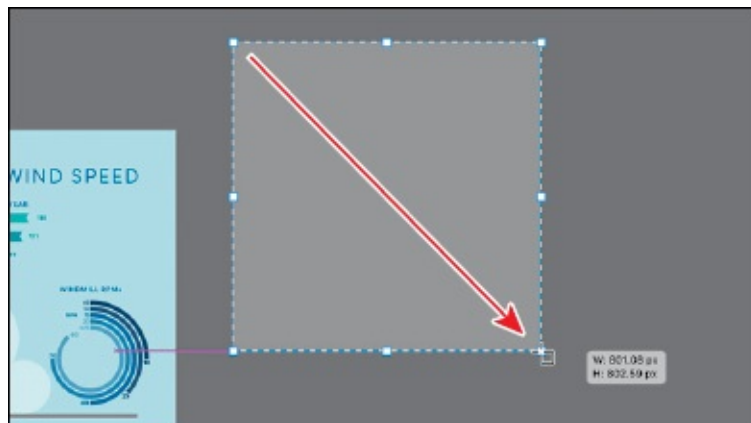> ● **Note:** You can also simply select the Artboard tool (⬒) in the Tools panel to enter Artboard Editing mode.

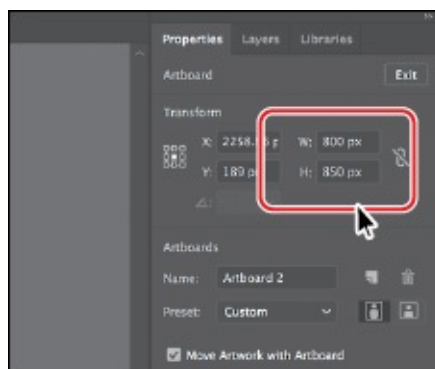> ● **Note:** If a message appears after drawing the artboard, click Okay to close it.

4. Move the pointer to the right of the existing artboard and drag down and to the right. When the measurement label next to the pointer shows an approximate width of 800 pixels and height of 800 pixels, release the mouse button.
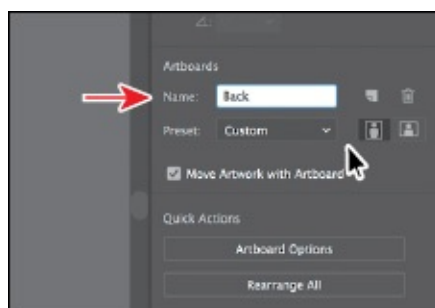
The new artboard should be selected. You can tell it's selected because of the dashed bounding box surrounding it. In the Properties panel on the right, you'll see properties for the selected artboard like position (X, Y) and size (width and height), name, and more.

5. In the Properties panel on the right, select the width value and type **800**. Select the height value and type **850** then press Return or Enter to accept the height.

6. Change the name to **Back** in the Artboards section of the Properties panel. Press Return or Enter to make the change.

Next, you'll create another artboard that's the same size.

7. Click the New Artboard button (▣), in the Properties panel on the right, to create a new artboard that is the same size as the selected artboard (Back) and added just to the right of the Back artboard.

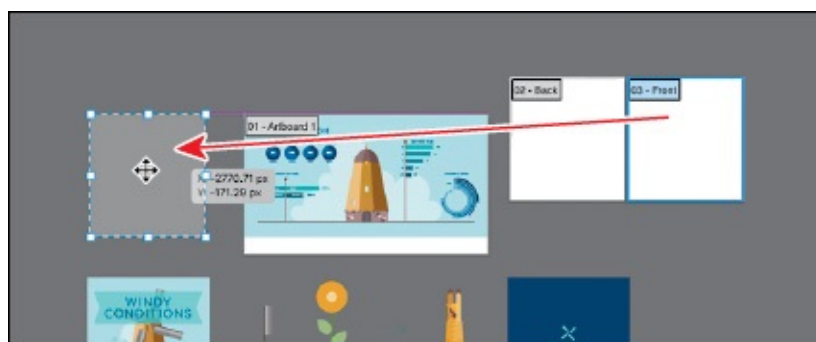**8.** Change the name of the new artboard to **Front** in the Properties panel.

When editing artboards, in Artboard Editing mode, you can see the name of each artboard in the upper-left corner of the artboard.
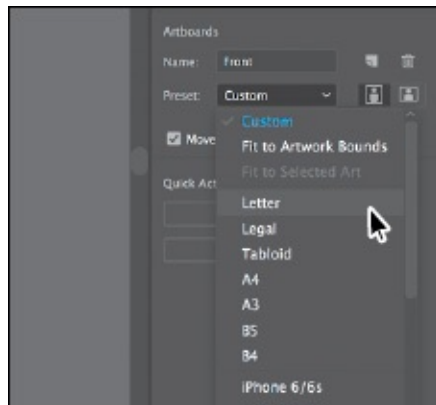
Editing artboards

After creating artboards, you can edit or delete artboards by using the Artboard tool (⊟), menu commands, Properties panel, or the Artboards panel. Next, you'll reposition and change the size of an artboard.

1. Choose View > Fit All In Window to see all of your artboards.

2. Press Command+– (macOS) or Ctrl+– (Windows) twice to zoom out.

3. While still in Artboard Editing mode, and with the Artboard tool (⊟) still selected in the Tools panel, drag the artboard named Front to the left of the original artboard. Don't worry about its exact position yet, but make sure it doesn't cover any artwork.

In the Properties panel on the right, in Artboard Editing mode, you'll see lots of options for editing the selected artboard. When an artboard is selected, the Preset menu lets you change the artboard to a set size. The sizes in the Preset menu include typical print, video, tablet, and web sizes. You can also switch orientation, rename, or delete the artboard.
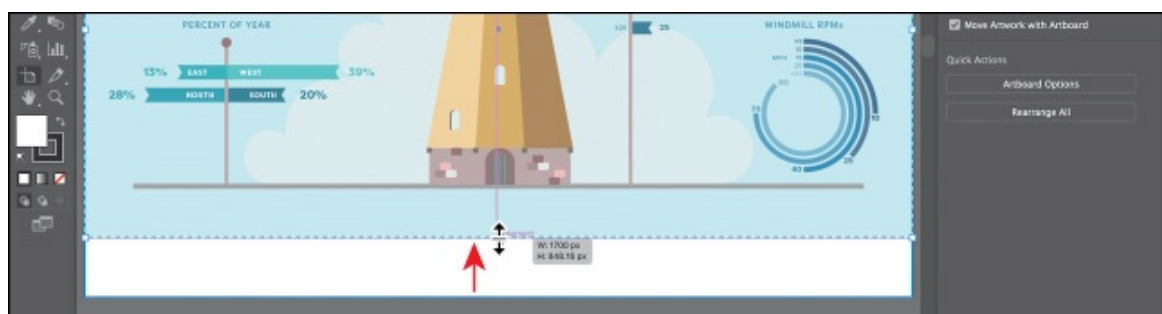

> ▶ **Tip:** To delete an artboard, select the artboard with the Artboard tool (⊟), and either press Delete or click the Delete Artboard button (🗑) in the Properties panel. You can delete all but one artboard.

4. Click in the larger, original artboard in the center and choose View > Fit Artboard In Window to fit that artboard in the Document window.

Commands such as View > Fit Artboard In Window typically apply to the selected or *active* artboard.

5. Drag the bottom-middle point of the artboard up to resize it. When the point snaps to the bottom of the blue shape, release the mouse button.
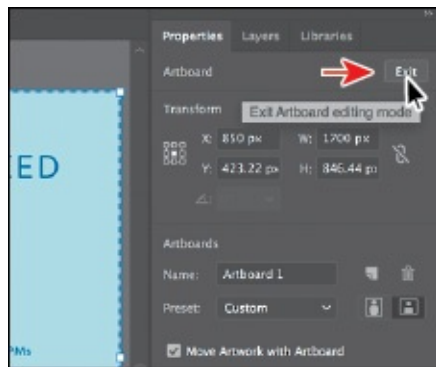

> ▶ **Tip:** You can also transform multiple selected artboards at one time.

6. Click the Exit button at the top of the Properties panel to exit Artboard Editing mode.

Exiting Artboard Editing mode will deselect all artboards and also select the Selection tool (▶) in the Tools panel on the left.

> ▶ **Tip:** To exit Artboard Editing mode, you can also select another tool in the Tools panel besides the Artboard tool (⊡) or press Esc.

7. Choose View > Fit All In Window to fit all of the artboards in the Document window.
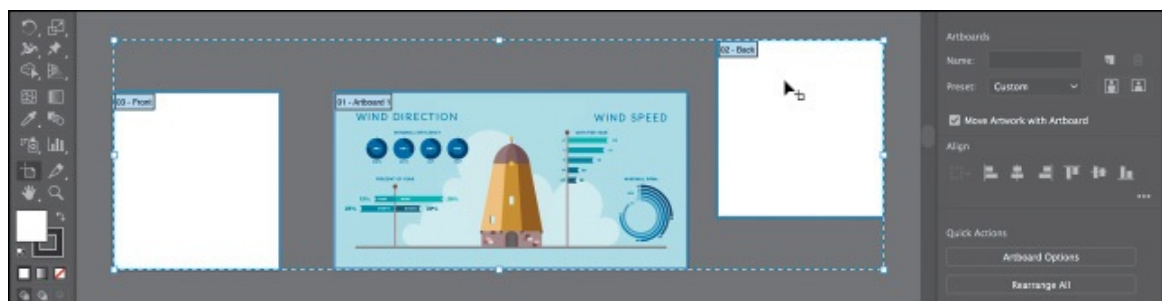
Aligning artboards

In order to organize the artboards in your document, maybe to keep similar artboards next to each other, you can move and align artboards to suit your working style. Next, you'll select all of the artboards and align them.

1. Select the Artboard tool (⊡) in the Tools panel on the left.

This is another way to enter Artboard Editing mode and can be useful when artwork is selected since you can't see the Edit Artboards button in the Properties panel with artwork selected.

2. Click in the leftmost artboard labeled 03-Front to select it. Press the Shift key, and click in the other two artboards to the right, one at a time, to select all three.
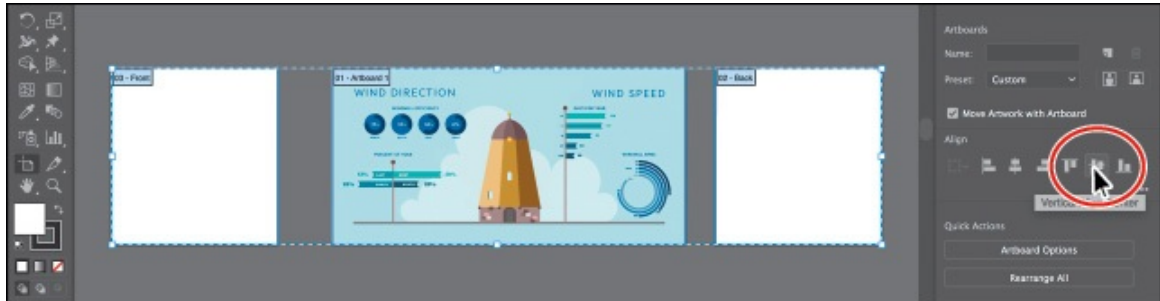

The Shift key allows you to add artboards to the selection, rather than draw an artboard, when the Artboard tool is selected.

> ▶ **Tip:** With the Artboard tool (⊡) selected, you can press the Shift

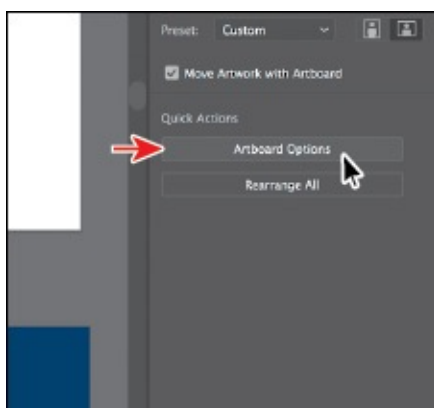key and drag across a series of artboards to select them.

3. Click the Vertical Align Center option (⊞) in the Properties panel on the right to align the artboards to each other. Leave the artboards selected.
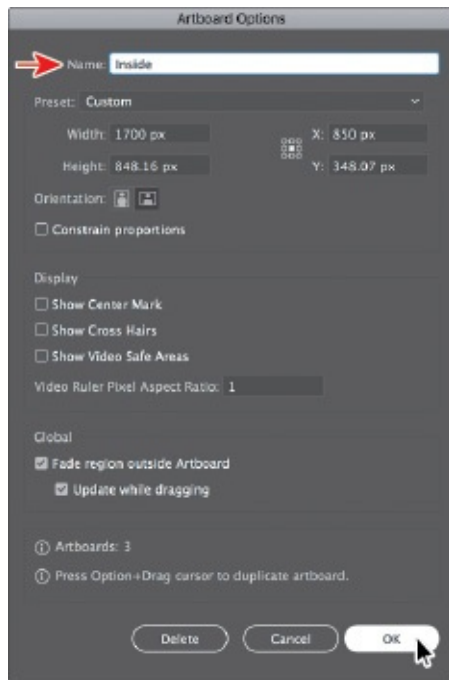

Renaming artboards

By default, artboards are assigned a number and a name, as you've seen. When you navigate the artboards in a document, it can be helpful to name them. Next, you're going to rename artboards so that the names are more useful.

1. While still in Artboard Editing mode, click to select the middle (largest) artboard. Click the Artboard Options button in the Properties panel.
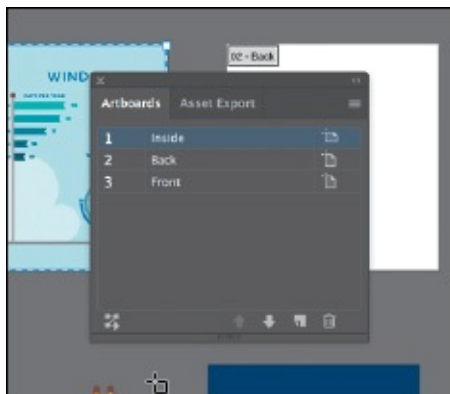

2. In the Artboard Options dialog box, change the name to **Inside**, and click OK.

The Artboard Options dialog box has a lot of extra options for artboards, as well as a few you've already seen, like width and height.

3. Choose Window > Artboards to open the Artboards panel.

The Artboards panel allows you to see a list of all of the artboards in the document. It also allows you to reorder, rename, add, and delete artboards and to choose many other options related to artboards without being in Artboard Editing mode.

4. Choose File > Save, and keep the Artboards panel showing for the next steps.

Reordering artboards

You can navigate between artboards in your document using the Next artboard (▶) and Previous artboard (◀) buttons in the Properties panel with the Selection tool selected, nothing selected, and not in Artboard Editing mode, or below the Document window. By default, artboards are ordered according to the order in which they are created, but you can change that order. Next, you'll reorder the artboards in the Artboards panel so that if you use the Next or Previous artboard buttons, you navigate in an artboard order

you determine.

1. With the Artboards panel open, double-click the number 2 to the left of the name "Back," and then double-click the number 1 to the left of the name "Inside" in the Artboards panel.

Double-clicking the number to the left of an artboard name that isn't selected in the Artboards panel makes that artboard the *active* artboard and fits it in the Document window.
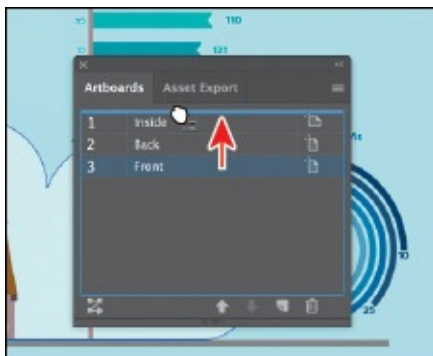
2. Drag the "Front" artboard name up until a line appears above the artboard named "Inside." Release the mouse button.

This makes the Front artboard the first artboard in the list.

▶ **Tip:** You can also reorder the artboards by selecting an artboard in the Artboards panel and clicking the Move Up (⬆) or Move Down (⬇) button at the bottom of the panel.

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3. Choose View > Fit Artboard In Window to fit the Front artboard in the Document window, if necessary.

4. Click the Exit button in the Properties panel to exit Artboard Editing mode.

5. Click the Next artboard button (▶) in the Properties panel.

▶ **Tip:** The Artboard Options icon (▣) appears to the right of the name of each artboard in the Artboards panel. It not only allows access to the artboard options for each artboard but also indicates the orientation

(vertical or horizontal) of the artboard.

This fits the next artboard in the Artboards panel list, named "Inside," in the Document window. If you hadn't changed the order of the artboards in the Artboards panel, the Next artboard button in the previous step would have been dimmed (you couldn't select it) because the Front artboard was the last artboard in the Artboards panel list.

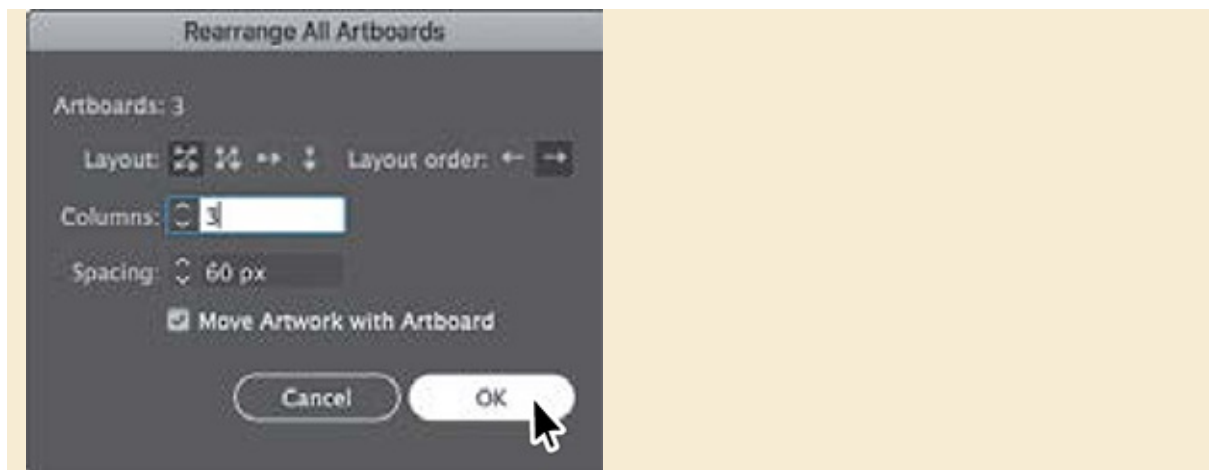**6.** Click the X at the top of the Artboards panel group to close it.

Now that the artboards are set up, you will concentrate on transforming artwork to create the content for your project.

Rearranging artboards

In Artboard Editing mode (with the Artboard tool selected in the Tools panel), you can click the Rearrange All button in the Properties panel to open the Rearrange All Artboards dialog box.

In the Rearrange All Artboards dialog box, you can arrange your artboards in columns and set the spacing between each artboard to a set amount. For instance, if you had a document with six artboards and set the columns to 3, the artboards would be arranged in two rows (or two columns) of three artboards.

You can also click the Rearrange All Artboards button at the bottom of the Artboards panel (Window > Artboards) or choose Object > Artboards > Rearrange All Artboards.

Working with rulers and guides

With the artboards set up, next you'll learn about aligning and measuring content using rulers and guides. *Rulers* help you accurately place and measure objects and distances. They appear at the top and left in the Document window and can be shown and hidden. There are two types of rulers in Illustrator: *artboard rulers* and *global rulers*. The point on each ruler (horizontal and vertical) where the 0 (zero) appears is called the *ruler origin*. Artboard rulers, which are the default rulers, set the ruler origin to the upper-left corner of the *active* artboard. Global rulers set the ruler origin to the upper-left corner of the *first* artboard, or the artboard that is at the top of the list in the Artboards panel, no matter which artboard is active. By default, rulers are set to artboard rulers, which means the origin is in the upper-left corner of the active artboard.
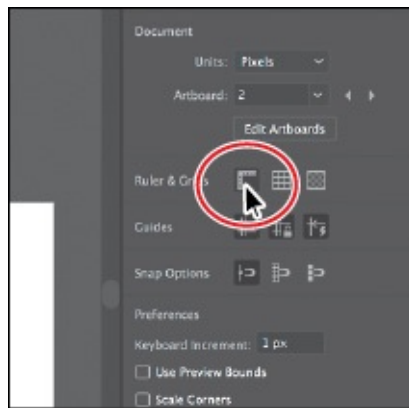
● **Note:** You could switch between the artboard and global rulers by choosing View > Rulers > and selecting Change To Global Rulers or Change To Artboard Rulers (depending on which option is currently chosen), but don't do that now.

Creating guides

Guides are nonprinting lines created from the rulers that help you align objects. Next, you'll create a guide so later you could more accurately align content on an artboard.

1. With nothing selected and the Selection tool (▶) selected, click the Show Rulers button in the Properties panel to the right to show the page rulers.
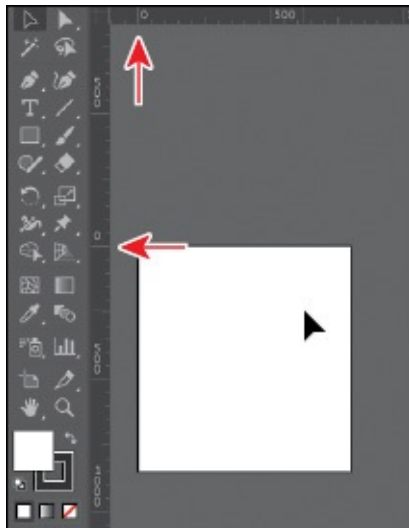

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2. Choose View > Fit All In Window.

3. Click each of the artboards, and as you do, look at the horizontal and vertical rulers (along the top and left sides of the Document window).

Notice that 0 (zero) for each ruler is always in the upper-left corner of the active (selected) artboard (the last artboard you clicked in). The point on each ruler (horizontal and vertical) where the 0 appears is called the *ruler origin*. By default, the ruler origin is in the upper-left corner of the *active* (selected) artboard. As you can see, the 0 point on both rulers corresponds to the edges of the active artboard.

4. With the Selection tool, click in the leftmost artboard, called "Front."

Notice the *very* subtle black outline around the Front artboard, with "1" showing in the Artboard Navigation menu (below the Document window) and in the Document section of the Properties panel to the right of the document, all of which indicate that the Front artboard is the currently active artboard. There can be only one active artboard at a time. Commands such as View > Fit Artboard In Window apply to the active

artboard.

5. Choose View > Fit Artboard In Window.

That fits the active artboard in the window and the ruler origin (0,0) is in the upper-left corner of that same artboard. Next you'll create a guide on the active artboard.

6. Drag from the top ruler down, into the artboard. When the guide reaches 600 pixels on the ruler, release the mouse button. The units for this document are set at pixels.
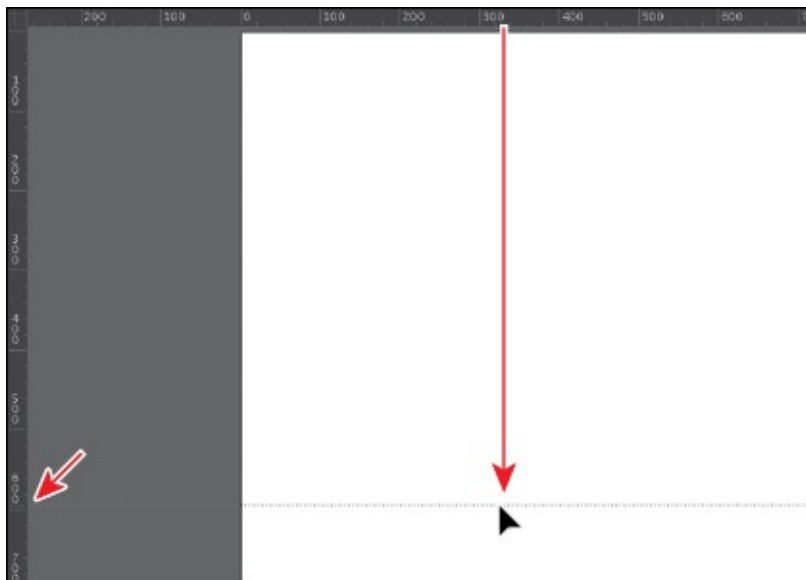
▶ **Tip:** Dragging from a ruler with the Shift key pressed "snaps" a guide to the measurements on the ruler.

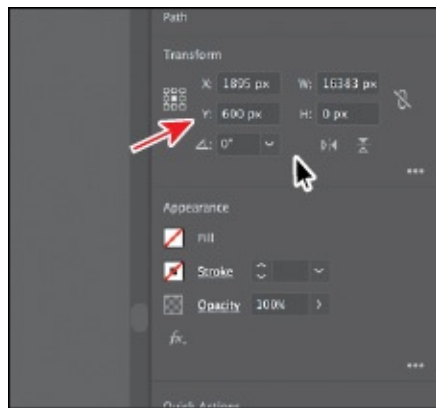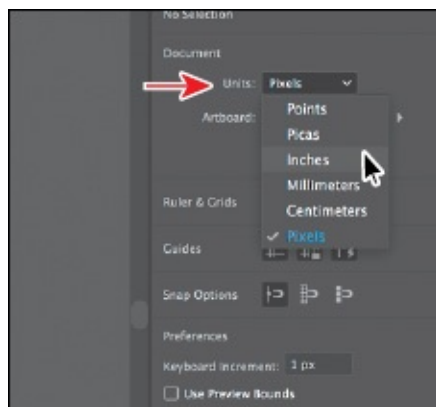▶ **Tip:** You can double-click the horizontal or vertical ruler to add a new guide.

After creating a guide, it's selected, and when selected, its color matches the color of the layer that it's associated with (darker blue in this case) when you move the pointer away from it.

7. With the guide still selected (in this case, it will be blue if selected), change the Y value in the Properties panel to **600**, and press Return or Enter.

8. Click away from the guide to deselect it.

9. Click the Units menu in the Properties panel, and choose Inches to change the units for the entire document. You can now see that the rulers show inches instead of pixels.

▶ **Tip:** To change the units for a document (inches, points, etc.), you can also right-click either ruler and choose the new units.
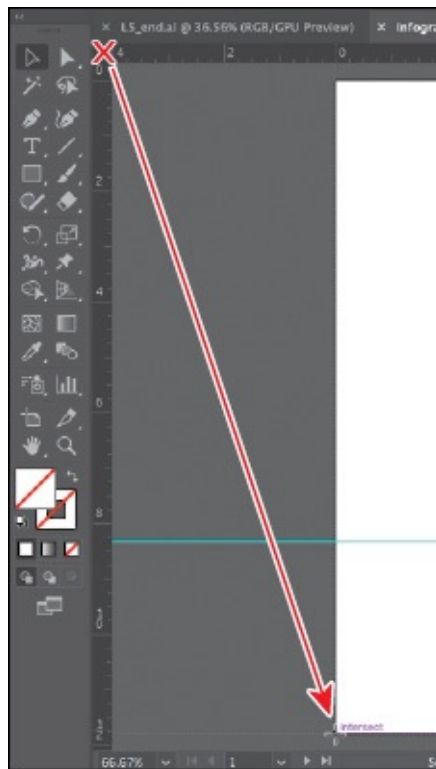
0. Choose File > Save.

Editing the ruler origin

On the horizontal ruler, measurements to the right of 0 (zero) are positive and to the left are negative. On the vertical ruler, measurements below 0 (zero) are positive and above are negative. You can move the ruler origin to start the horizontal and/or vertical measurements at another location, and that's what you'll do next.
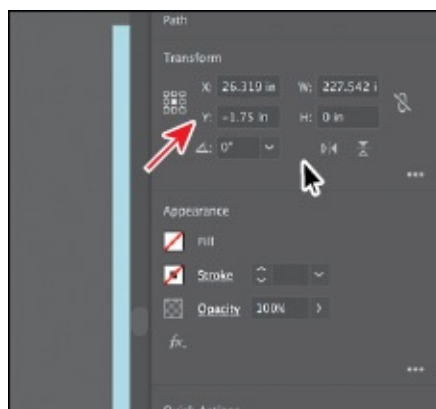
1. Choose View > Zoom Out.

2. Drag from the upper-left corner of the Document window, where the rulers intersect (▦), to the lower-left corner of the Front artboard.

This sets the ruler origin (0,0) to the lower-left corner of the artboard. In other words, the measurements start in the lower-left corner of the
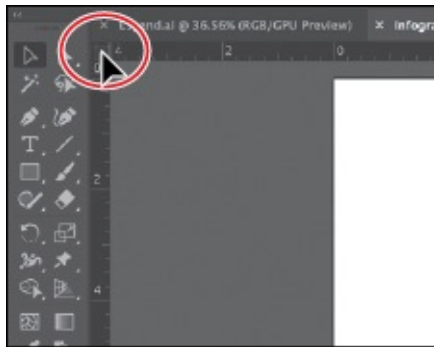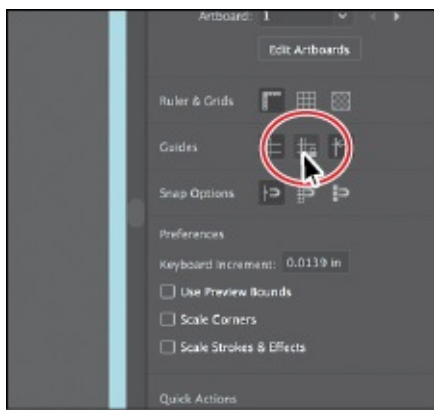
artboard.

3. With the Selection tool (▶) selected, click on the guide to select it.

4. Look in the Properties panel on the right to see the Y value. Right now, because you moved the ruler origin (0,0), the Y shows the vertical distance from the bottom of the artboard. Change the Y value to **–1.75** (inches), and press Return or Enter.

5. Position the pointer in the upper-left corner of the Document window, where the rulers intersect (▦), and *double-click* to reset the ruler origin to the upper-left corner of the artboard.

6. Choose Select > Deselect to deselect the guide.

7. Click the Lock Guides button in the Properties panel to lock all guides and prevent them from being selected.

> ▶ **Tip:** You can also lock guides by choosing View > Guides > Lock Guides. You can hide guides by clicking the Hide Guides button in the Properties panel or pressing Command+; (macOS) or Ctrl+; (Windows).

Transforming content

In Lesson 4, "Editing and Combining Shapes and Paths," you learned how to take simple paths and shapes and create more complex artwork by editing and combining that content. That was a form of transforming artwork. In this lesson, you'll learn how to scale, rotate, and transform content in other ways, using a variety of tools and methods.

Working with the Bounding Box

As you've seen in this lesson and previous lessons, a bounding box appears around selected content. You can transform content using the bounding box, but you can also turn it off. This makes it so you can't resize content by dragging anywhere on the bounding box with the Selection tool.

1. With the Front artboard showing, choose View > Zoom Out until you see the group of artwork that contains the text headline "WINDY