

Adobe  
**Illustrator CC**  
2014 release



Bē  
Patrick Seymour

# **CLASSROOM IN A BOOK®**

The official training workbook from Adobe

**Brian Wood**

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**Illustrator CC**  
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The official training workbook from Adobe

Brian Wood

Adobe® Illustrator® CC Classroom in a Book® (2014 release)

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# GETTING STARTED

Adobe® Illustrator® CC is the industry-standard illustration application for print, multimedia, and online graphics. Whether you are a designer or a technical illustrator producing artwork for print publishing, an artist producing multimedia graphics, or a creator of web pages or online content, Adobe Illustrator offers you the tools you need to get professional-quality results.

## About Classroom in a Book

*Adobe Illustrator CC Classroom in a Book® (2014 release)* is part of the official training series for Adobe graphics and publishing software developed with the support of Adobe product experts.

The lessons are designed so that you can learn at your own pace. If you're new to Adobe Illustrator, you'll learn the fundamentals you need to master to put the application to work. If you are an experienced user, you'll find that *Classroom in a Book* teaches many advanced features, including tips and techniques for using the latest version of Adobe Illustrator.

Although each lesson provides step-by-step instructions for creating a specific project, there's room for exploration and experimentation. You can follow the book from start to finish, or do only the lessons that correspond to your interests and needs. Each lesson concludes with a review section summarizing what you've covered.

## Prerequisites

Before beginning to use *Adobe Illustrator CC Classroom in a Book (2014 release)*, you should have working knowledge of your computer and its operating system. Make sure that you know how to use the mouse and standard menus and commands, and also how to open, save, and close files. If you need to review these techniques, see the printed or online documentation for your Windows or Mac OS.

● **Note:** When instructions differ by platform, Mac OS commands appear first, and then the Windows commands, with the platform noted in parentheses. For example, "press the Option (Mac OS) or Alt (Windows) key and click away from the artwork."

# Installing the program

Before you begin using *Adobe Illustrator CC Classroom in a Book (2014 release)*, make sure that your system is set up correctly and that you've installed the required software and hardware.

You must purchase the Adobe Illustrator CC software separately. For complete instructions on installing the software, visit [helpx.adobe.com/illustrator.html](http://helpx.adobe.com/illustrator.html). You must install Illustrator from Adobe Creative Cloud onto your hard disk. Follow the onscreen instructions.

## Fonts used in this book

The Classroom in a Book lesson files use fonts that are a part of the Typekit Portfolio plan included with your Creative Cloud subscription, and trial Creative Cloud members have access to a selection of fonts from Typekit for web and desktop use.

For more information about fonts and installation, see the Adobe Illustrator CC Read Me file on the web at [helpx.adobe.com/illustrator.html](http://helpx.adobe.com/illustrator.html).

## Accessing the Classroom in a Book files

In order to work through the projects in this book, you will need to download the lesson files from [peachpit.com](http://peachpit.com). You can download the files for individual lessons, or download them all in a single file. Although each lesson stands alone, some lessons use files from other lessons, so you'll need to keep the entire collection of lesson assets on your computer as you work through the book.

To access the Classroom in a Book files:

- 1 On a Mac or PC, go to [www.peachpit.com/redeem](http://www.peachpit.com/redeem) and enter the code found at the back of your book.
- 2 If you do not have a Peachpit.com account, you will be prompted to create one.
- 3 The downloadable files will be listed under Lesson & Update Files tab on your Account page.
- 4 Click the lesson file links to download them to your computer. The files are compressed into Zip archives to speed up download time and to protect the contents from damage during transfer. You must uncompress (or "unzip") the files to restore them to their original size and format before you use them with the book. Modern Mac and Windows systems are set up to open Zip archives by simply double-clicking.

- 5 On your hard drive, create a new folder in a convenient location and give it the name “Lessons,” following the standard procedure for your operating system:
  - If you’re running Windows, right-click and choose New > Folder. Then enter the new name for your folder.
  - If you’re using Mac OS, in the Finder, choose File > New Folder. Type the new name and drag the folder to the location you want to use.
- 6 Drag the unzipped Lessons folder (which contains folders named Lesson01, Lesson02, and so on) that you downloaded onto your hard drive to your new folder named “Lessons.” When you begin each lesson, navigate to the folder with that lesson number to access all the assets you need to complete the lesson.

## Restoring default preferences

The preferences file controls how command settings appear on your screen when you open the Adobe Illustrator program. Each time you quit Adobe Illustrator, the position of the panels and certain command settings are recorded in different preference files. If you want to restore the tools and settings to their original default settings, you can delete the current Adobe Illustrator CC preferences file. Adobe Illustrator creates a new preferences file, if one doesn’t already exist, the next time you start the program and save a file.

You must restore the default preferences for Illustrator before you begin each lesson. This ensures that the tools and panels function as described in this book. When you have finished the book, you can restore your saved settings, if you like.

### To delete or save the current Illustrator preferences file

- 1 Exit Adobe Illustrator CC.
- 2 Locate the **Adobe Illustrator Prefs** file as follows:
  - (Mac OS 10.7 and later\*\*) The Adobe Illustrator Prefs file is located in the folder [startup drive]/Users/[username]/Library/Preferences/Adobe Illustrator 18 Settings/en\_US\*.
  - (Windows 7 [Service Pack 1], or Windows 8) The Adobe Illustrator Prefs file is located in the folder [startup drive]\Users\[username]\AppData\Roaming\Adobe\Adobe Illustrator 18 Settings\en\_US\*\x86 or x64.

\*Folder name may be different depending on the language version you have installed.

\*\*On Mac OS 10.7 (Lion) and later, the Library folder is hidden by default. To access this folder, in Finder, choose Go > Go To Folder. Type ~/Library in the Go To The Folder dialog box and then click Go.

● **Note:** If you cannot locate the preferences file, try using your operating system’s Find command, and search for “Adobe Illustrator Prefs.”

● **Note:** In Windows 7 or later, the AppData folder is hidden by default. To make it visible, open Folder Options in Control Panel and click the View tab. In the Advanced Settings pane, find Hidden Files and folders and select Show Hidden Files and Folders or Show hidden files, folders, or drives.

If you can't find the file, you either haven't started Adobe Illustrator CC yet or you have moved the preferences file. The preferences file is created after you quit the program the first time and is updated thereafter.

► **Tip:** To quickly locate and delete the Adobe Illustrator preferences file each time you begin a new lesson, create a shortcut (Windows) or an alias (Mac OS) to the Adobe Illustrator 18 Settings folder.

- 3 Copy the file and save it to another folder on your hard disk (if you wish to restore those preferences) or Delete it.
- 4 Start Adobe Illustrator CC. You most likely will see a dialog box that asks if you would like to use the settings from the cloud. Click Disable Sync Settings.

## To restore saved preferences after completing the lessons

- 1 Exit Adobe Illustrator CC.
- 2 Delete the current preferences file. Find the original preferences file that you saved and move it to the Adobe Illustrator 18 Settings folder.

● **Note:** You can move the original preferences file rather than renaming it.

## Additional resources

*Adobe Illustrator CC Classroom in a Book (2014 release)* is not meant to replace documentation that comes with the program or to be a comprehensive reference for every feature. Only the commands and options used in the lessons are explained in this book. For comprehensive information about program features and tutorials, please refer to these resources:

**Adobe Illustrator Help and Support:** [helpx.adobe.com/illustrator.html](http://helpx.adobe.com/illustrator.html) is where you can find and browse Help and Support content on [adobe.com](http://adobe.com). Adobe Illustrator Help and Adobe Illustrator Support Center are accessible from the Help menu in Illustrator CC 2014 (2014 release) or by pressing F1.

**Adobe Creative Cloud Learning:** for inspiration, key techniques, cross-product workflows, and updates on new features go to the Creative Cloud Learn page [helpx.adobe.com/creative-cloud/learn/tutorials.html](http://helpx.adobe.com/creative-cloud/learn/tutorials.html). Available to all.

**Adobe Forums:** [forums.adobe.com](http://forums.adobe.com) lets you tap into peer-to-peer discussions, questions and answers on Adobe products.

**Adobe TV:** [tv.adobe.com](http://tv.adobe.com) is an online video resource for expert instruction and inspiration about Adobe products, including a How To channel to get you started with your product.

**Adobe Inspire:** [www.adobe.com/inspire.html](http://www.adobe.com/inspire.html) offers thoughtful articles on design and design issues, a gallery showcasing the work of top-notch designers, tutorials, and more.

**Resources for educators:** [www.adobe.com/education](http://www.adobe.com/education) and [edex.adobe.com](http://edex.adobe.com) offer a treasure trove of information for instructors who teach classes on Adobe software. Find solutions for education at all levels, including free curricula that use an integrated approach to teaching Adobe software and can be used to prepare for the Adobe Certified Associate exams.

Also check out these useful links:

**Adobe Illustrator CC product home page:** [www.adobe.com/products/illustrator](http://www.adobe.com/products/illustrator)

**Adobe Add-ons:** [creative.adobe.com/addons](http://creative.adobe.com/addons) is a central resource for finding tools, services, extensions, code samples, and more to supplement and extend your Adobe products.

## Adobe Authorized Training Centers

Adobe Authorized Training Centers offer instructor-led courses and training on Adobe products. A directory of AATCs is available at [partners.adobe.com](http://partners.adobe.com).

## Sync settings using Adobe Creative Cloud

When you work on multiple machines, managing and syncing preferences, presets, and libraries among the machines can be time-consuming, complex, and prone to error. The Sync Settings feature enables individual users to sync their preferences, presets, and libraries to the Creative Cloud. This means that if you use two machines, say one at home and the other at work, the Sync Settings feature makes it easy for you to keep those settings synchronized across two machines. Also, if you have replaced your old machine with a new one and have re-installed Illustrator, this feature will let you bring back all those settings on the new machine.



For more information about syncing, visit [helpx.adobe.com/illustrator/using/sync-settings.html](http://helpx.adobe.com/illustrator/using/sync-settings.html)

# WHAT'S NEW IN ADOBE ILLUSTRATOR CC (2014 RELEASE)


Adobe® Illustrator® CC (2014 release) is packed with new and innovative features to help you produce artwork more efficiently for print, Web, and digital video publication. In this section, you'll learn about many of these new features—how they function and how you can use them in your work.

## Creative Cloud Libraries

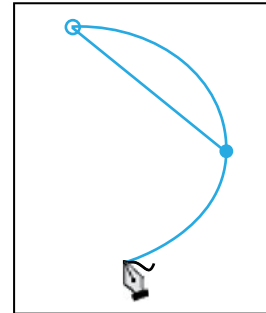
With Creative Cloud Libraries, you can organize creative assets, such as colors, type styles, brushes and graphics, and automatically sync them to Creative Cloud, allowing you to access them whenever and wherever you need them from a single, convenient panel within Illustrator. Libraries make it easy to maintain design consistency across projects, and not have to dig around in files and folders to find the assets you need.



## Curvature tool

With the new Curvature tool () you can draw and edit paths quickly and visually to create paths with smooth refined curves and straight lines. Click once to place points and see the drawing curve “flex” around the points dynamically. Double-click to create corner points for straight lines.

Edit paths while drawing or after the path is complete using the same tool; no need to hassle with anchor points and handles. Just by clicking or double-clicking on the curvature points creates smooth points or corner points at any time. But if you need the fine control you're used to with traditional anchor points and handles, just edit your drawing with any of the Illustrator path editing tools.





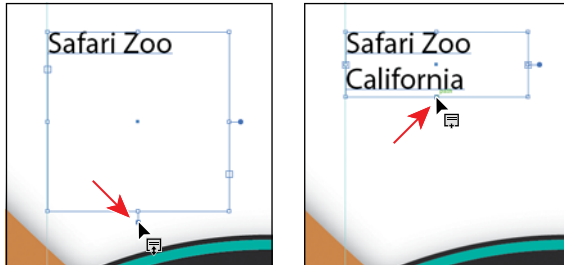
## Touch workspace

The Touch workspace lets you create on the go what you could once only accomplish sitting at your desk: it's Illustrator you can take with you. Designed for Windows 8 tablets, the Touch workspace surfaces the essential tools and controls for drawing and editing with a pressure-sensitive pen and multi-touch gestures. You can create logos, icons, explore custom lettering and typography, create UI wireframes, and more.

The Touch workspace brings traditional drawing templates and French curves to the Illustrator workspace. These templates and curves project a scalable, movable outline that can be traced against to quickly create refined curves. At any time, you can immediately switch between the Touch and traditional workspaces to access the full range of Illustrator tools and controls.

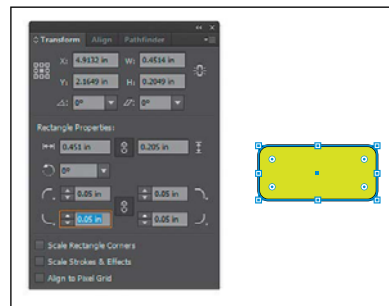
## Area type Autosizing

With area type Autosizing, you can automatically resize the height of area type frames when you add, delete, or edit text. As the text is edited and re-edited, the frame shrinks and grows to accommodate the changing amount of copy, and eliminates overset text without manually sizing and resizing frames. You can easily toggle Autosizing on or off, so it's there when it's needed and off when it's not, e.g., when main text flows, or threads, across layout elements like columns or artboards.



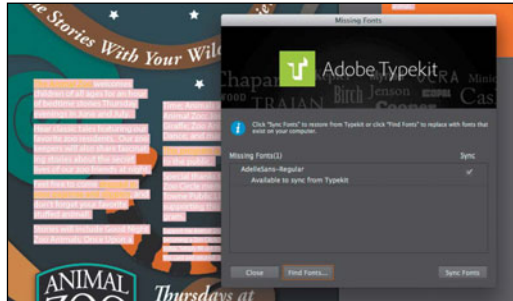
## Live Shapes

All rectangles and rounded rectangles have modifiable corners. While each corner can have an independent radius value, all attributes are retained even when you scale or rotate the rectangle. Rectangles and rounded rectangles now remember all modifications made, be it width, height, rotation, corner treatment. This capability means you can always return to the original shape of the object.



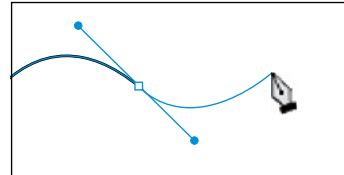
## Typekit integration

When you open an Illustrator artwork file, and find fonts missing, the online Typekit desktop font library is automatically searched for the missing font (you must have an Internet connection for this function). If the missing font is available online, you have the option of syncing it to your current computer. If you choose not to fix the missing fonts when the file is opened in Illustrator, text elements using unavailable fonts are highlighted in pink and rendered using a default font.



## Pen tool preview and drawing-related enhancements

The Pen tool displays a preview of what will be drawn on your artboard before you click and drop the next point. This helps you visualize the next curve before you commit to the next point and saves you the time spent in drawing, reviewing, and then redrawing paths that need to be redone.

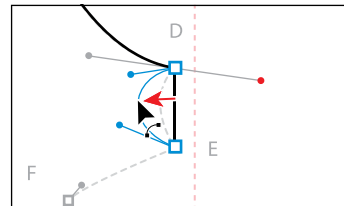


## Pencil tool enhancements


The Pencil tool has been updated with an additional Fidelity setting for finer control over the paths you draw. This additional level has been extended to the Paintbrush and Blob Brush tools as well.

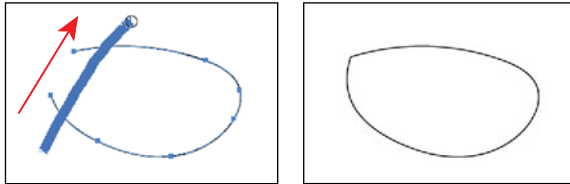
## Path segment reshaping

Drag path segments into the shape you desire. New path reshaping technology, available in the Anchor Point and Direct Selection tools and accessible from the Pen tool, provides a more direct and intuitive way to edit path segments.



## Join tool

Use the Join tool () to intelligently join paths that cross, overlap, or have open ends without affecting the original paths. Using the same tool, you can simultaneously join paths and trim unwanted segments using intuitive scrubbing gestures.



## Other enhancements

- **Windows GPU acceleration**—New GPU acceleration for Windows lets you work faster on Windows 7 or 8 computers. This feature requires an Adobe-certified NVIDIA graphics card with at least 1GB of VRAM.
- **SVG enhancements**—In the SVG Save Options dialog, the “Use <textPath>...” check box is selected by default. This reduces generated markup, resulting in smaller SVG output files. Markup for generated preview HTML has also been cleaned up.
- **Anchor point enhancements**—Fine adjustment of curves is now easier. New anchor point controls allow unequal or different-direction handles to be dragged as you draw to control the smoothness of each segment. You can even change a corner point to smooth without ruining your shape.
- **Custom Tools panels**—Create specialized Tools panels by dragging and dropping just the tools you need—like drawing, editing, or selection tools—into a custom panel. The full Tools panel can then be hidden, allowing for a clean, efficient workspace.
- **Settings import and export**—Share your Illustrator settings across multiple computers. Simply export them to a folder where they can then be imported by other users. While Sync Settings lets you standardize settings on your own computers, now you can also share them across your organization.

Although this list touches on just a few of the new and enhanced features of Illustrator CC (2014 release), it exemplifies Adobe’s commitment to providing the best tools possible for your publishing needs. We hope you enjoy working with Illustrator CC (2014 release) as much as we do.

—The Adobe Illustrator CC (2014 release) Classroom in a Book Team

# A QUICK TOUR OF ADOBE® ILLUSTRATOR® CC (2014 RELEASE)

## Lesson overview

In this interactive demonstration of Adobe Illustrator CC (2014 release), you'll get an overview of the main features of the application.



This lesson takes approximately 60 minutes to complete.

Download the project files for this lesson from the Lesson & Update Files tab on your Account page at [www.peachpit.com](http://www.peachpit.com) and store them on your computer in a convenient location, as described in the Getting Started section of this book.

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.



In this demonstration of Adobe Illustrator CC, you will be introduced to some key fundamentals for working in the application.

# Getting started

For the first lesson of this book, you will get a quick tour of the tools and features in Adobe Illustrator CC, offering a sense of the many possibilities. Along the way, you will create artwork for an amusement park.

- 1 To ensure that the tools and panels function 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 “Getting Started” at the beginning of the book.

- 2 Start Adobe Illustrator CC.

## Creating a new document

An Illustrator document can contain up to 100 artboards (*artboards* are similar to *pages* in a program like Adobe InDesign®). Next, you will create a document with only one artboard.

- 1 Choose Window > Workspace > Reset Essentials.

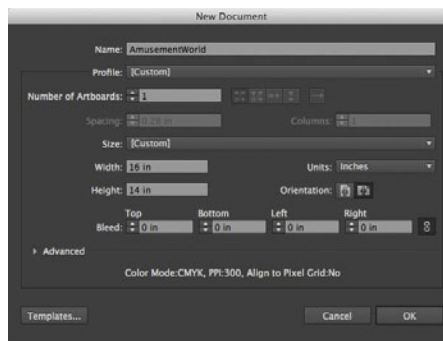
● **Note:** If you don’t see “Reset Essentials” in the Workspace menu, choose Window > Workspace > Essentials before choosing Window > Workspace > Reset Essentials.

- 2 Choose File > New.

- 3 In the New Document dialog box, change only the following options (leaving the rest at their default settings):

- Name: **AmusementWorld**
- Units: **Inches**
- Width: **16 in**
- Height: **14 in**

- 4 Click OK. A new blank document appears.



● **Note:** Learn more about creating and editing artboards in Lesson 4, “Transforming Artwork.”

● **Note:** For more information on syncing with the Creative Cloud, see “Sync settings using Adobe Creative Cloud” in the Getting Started section of this book.

## Sync settings using Adobe Creative Cloud™

When you launch Adobe Illustrator CC for the first time, with no previous sync information available, you will see a prompt asking whether you want to start a sync with Adobe Creative Cloud.

- Click Disable Sync Settings (if the dialog box appears).



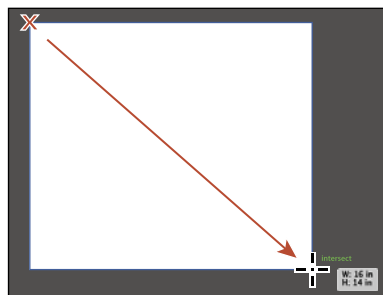
- 1 Choose File > Save As. In the Save As dialog box, leave the name as **AmusementWorld.ai** and navigate to the Lessons > Lesson00 folder. Leave the Format option set to Adobe Illustrator (ai) (Mac OS) or Save As Type option set to Adobe Illustrator (\*.AI) (Windows), and click Save. In the Illustrator Options dialog box, leave the Illustrator options at their default settings, and then click OK.
- 2 Choose View > Rulers > Show Rulers to show rulers in the Document window.
- 3 Choose View > Fit Artboard In Window, and then choose View > Zoom Out. The white area is the artboard, and where your printable artwork will go.

## Drawing shapes

Drawing shapes is the cornerstone of Illustrator, and you will create many of them in the coming lessons. Next, you will create several shapes.

- 1 Select the Rectangle tool (■) in the Tools panel on the left.

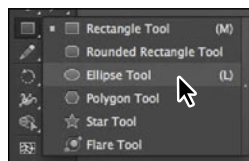
- 2 Position the pointer in the upper-left corner of the artboard (see the red X in the figure). When the word “intersect” appears next to the pointer, click and drag down and to the right edge of the white artboard. When the gray measurement label shows a width of 16 in and a height of 14 in, release the mouse button.



● **Note:** Learn more about creating and editing shapes in Lesson 3, “Using Shapes to Create Artwork for a Postcard.”

- **Note:** If the Transform panel opens, click the “x” in the corner of the Transform panel group to close it.

- 3 Click and hold down on the Rectangle tool in the Tools panel. Click to select the Ellipse tool (○).



- 4 Click roughly in the center of the artboard to open the Ellipse dialog box. Change the Width to **7.6 in** and the Height value to **7.6 in** by typing in the values. Click OK to create a circle that will become the world. Leave the circle selected.



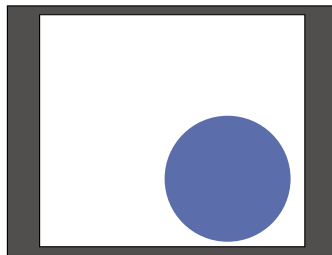
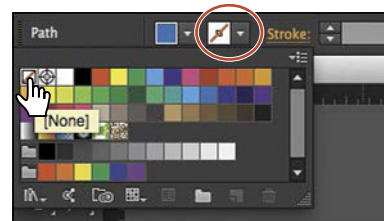
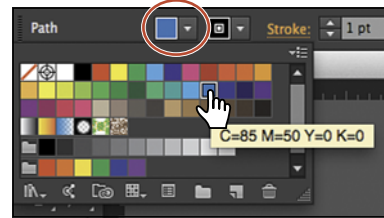
► **Tip:** You can also click the Constrain Width And Height Proportions button (⌘) to change both values together.

## Applying color

● **Note:** Learn more about creating and applying color in Lesson 6, “Using Color and Patterns to Enhance Signage.”

Applying colors to artwork is a common Illustrator task. Experimenting and applying color is easy using the Color panel, Swatches panel, Color Guide panel, and Edit Colors/Recolor Artwork dialog box.

- 1 Select the Selection tool (⌘) in the Tools panel on the left. With the circle still selected, click the Fill color in the Control panel (circled in the figure) to reveal the Swatches panel. Position the pointer over a blue swatch (in the second row of colors). When the tool tip appears that shows “C=85, M=50, Y=0, K=0,” click to apply the blue swatch to the fill.
- 2 Press the Escape key to hide the Swatches panel.
- 3 Click the Stroke color in the Control panel (circled in the figure). Click the None color (☐) to remove the stroke (border) of the circle. Press the Escape key to hide the Swatches panel.
- 4 Choose Select > Deselect, and then choose File > Save.



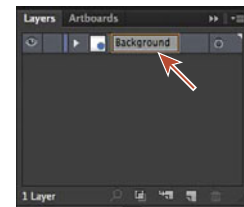
## Working with layers

● **Note:** Learn more about working with layers and the Layers panel in Lesson 8, “Organizing Your Artwork with Layers.”

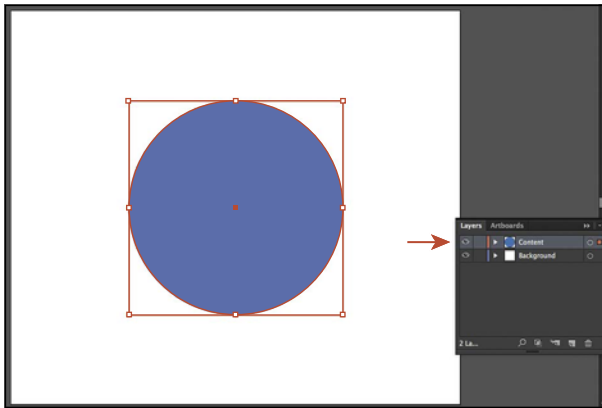
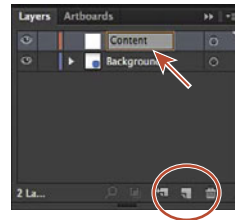
Layers allow you to organize and more easily select artwork. Next, using the Layers panel, you will organize your artwork.

- 1 Choose Window > Layers to show the Layers panel in the workspace.
- 2 Double-click directly on the text “Layer 1” (the layer name) in the Layers panel. Type **Background**, and press Enter or Return to change the layer name.

Naming layers can be helpful when organizing content. Currently, all artwork is on this layer.



- 3 Click the Create New Layer button (📄) at the bottom of the Layers panel. Double-click “Layer 2” (the new layer name), and type **Content**. Press Enter or Return.
- 4 With the Selection tool (🖱️) selected, click to select the blue circle. Choose Edit > Cut.
- 5 Choose View > Fit Artboard In Window.
- 6 Click once on the layer named Content to select it in the Layers panel. New artwork is added to the selected layer.
- 7 Choose Edit > Paste to paste the circle on the selected layer (Content), in the center of the artboard.



- 8 Choose Select > Deselect.

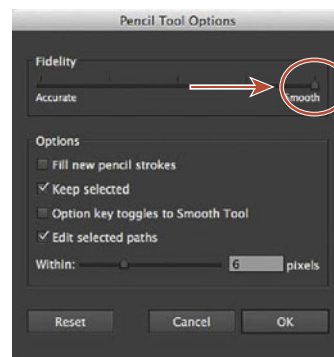
## Drawing with the Pencil tool

The Pencil tool (🖋️) lets you draw free-form open and closed paths that contain curves and straight lines. As you draw with the Pencil tool, anchor points are created on the path where necessary and according to the Pencil tool options you set.

- 1 Double-click the Pencil tool (🖋️) in the Tools panel on the left to open the Pencil Tool Options dialog box. Drag the Fidelity slider all the way to the right (to Smooth). Click OK.

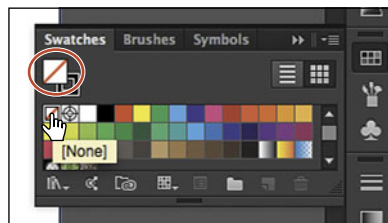
Changing the Fidelity will help to smooth out the path as you draw.

- 2 Press the letter D to set the default fill (White) and stroke (Black) for the artwork you are about to create.



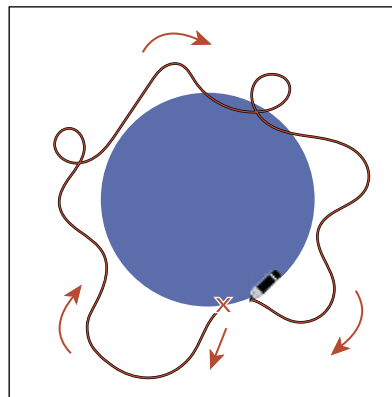
**Note:** Learn more about working with the Pencil tool and other drawing tools in Lesson 5, “Creating an Illustration with the Drawing Tools.”

- 3 Choose Window > Swatches to show the Swatches panel. Click the Fill box (circled in the figure) and select the None (□) swatch to remove the fill. Leave the Swatches panel open.



Next, you'll create a figure similar to the one shown below. The path you draw won't match exactly as shown, and that's okay.

- 4 On the artboard, starting where you see the red X in the figure, click and drag to create a path around the blue circle. Draw all the way around the blue circle and come back *close* to where you started drawing. Make sure that you don't see a circle (○) next to the Pencil tool, indicating that the path will be closed. *If you see the circle next to the Pencil, release the mouse button, press Delete and try the path again.* Release the mouse button to stop drawing the path.



- 5 Leave the path selected.

## Editing strokes

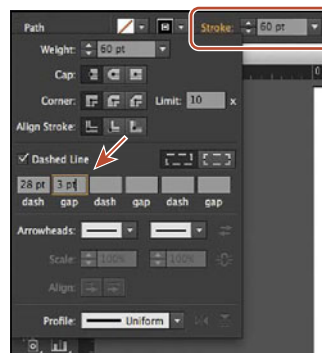
● **Note:** Learn more about working with strokes in Lesson 3, "Using Shapes to Create Artwork for a Postcard."

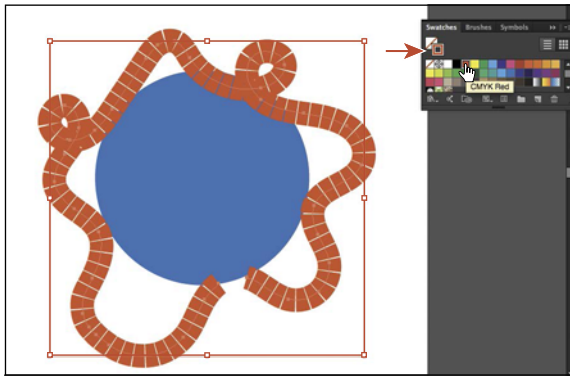
In addition to changing the color of strokes, you can also format them in many other ways. That's what you'll do next with the path you just drew.

- 1 With the path still selected, click the word "Stroke" in the Control panel above the document to open the Stroke panel. Change the following options:


- Stroke Weight: **60 pt**
- Dashed Line: **Selected**
- Dash: **28 pt**
- Gap: **3 pt**


- 2 Press the Escape key to hide the Stroke panel.
- 3 In the Swatches panel, click the Stroke box, and then select the "CMYK Red" swatch in the first row of colors. Leave the shape selected.

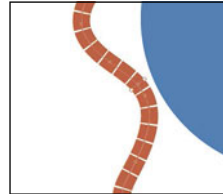
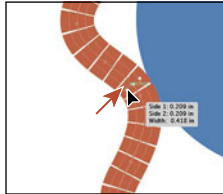
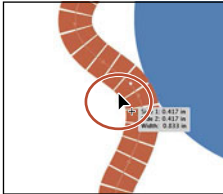




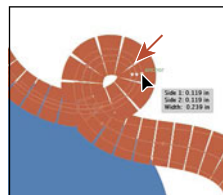
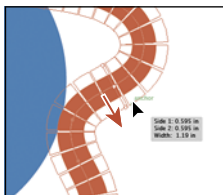
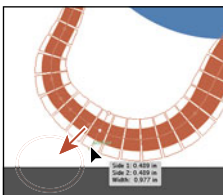
## Working with the Width tool

The Width tool () allows you to create a variable width stroke and to save the width as a profile that can be applied to other objects. Next, you'll change the width of the red path.

- 1 Select the Width tool () in the Tools panel. Position the pointer over the left side of the red path (see the figure). When the pointer shows a plus sign (+) next to it, drag toward the center of the path. When the gray measurement label next to the pointer shows a Width of approximately 0.2 in, release the mouse button.



- 2 Position the pointer at the bottom of the path on the curve (see the figure below). When the pointer shows a plus sign (+) next to it, drag away from the red path. When the gray measurement label shows a Width of approximately 0.5 in, release the mouse button.
- 3 Move to the right side of the path and drag away from the path to make the stroke wider (see the second part of the following figure).
- 4 Move to the top loop and drag toward the path to make the width narrower (see the third part of the following figure).

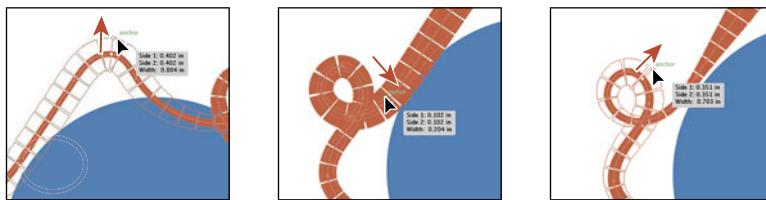


● **Note:** Learn more about the Width tool in Lesson 3, "Using Shapes to Create Artwork for a Postcard."

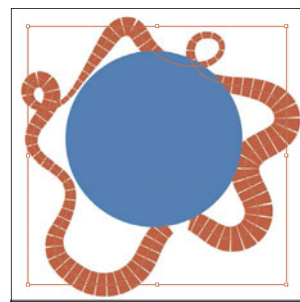
● **Note:** A width point is created on the path where you dragged. This allows you to edit that width at any time.

► **Tip:** You can always choose Edit > Undo Width Point Change to remove the last point and try again.

- 5 Try editing other parts of the path and see how it is affected. Use the next figure as a reference for how we adjusted the rest of the path. If you edit a part of the path and don't like the edit, you can choose Edit > Undo Width Point Change and try it again.




- 6 With the path still selected, choose Object > Arrange > Send To Back to send it behind the blue circle.




## Creating shapes using the Shape Builder tool

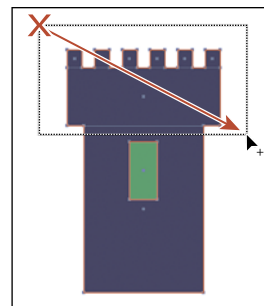
**Note:** Learn more about working with the Shape Builder tool in Lesson 3, "Using Shapes to Create Artwork for a Postcard."

The Shape Builder tool () is an interactive tool for creating complex shapes by merging and erasing simpler shapes. Next, you will finish a castle tower using the Shape Builder tool.

- 1 Choose File > Open, and open the Pieces.ai file in the Lessons > Lesson00 folder on your hard disk.

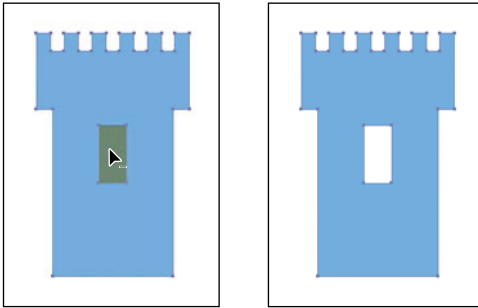
The Pieces.ai file contains a series of individual shapes (rectangles) that make up a tower and a group of shapes that make a flag. You'll finish the tower by combining the shapes using the Shape Builder tool.

- 2 Choose Select > All On Active Artboard to select the tower shapes. The flag shapes are locked, which means they can't be selected without unlocking them.
- 3 Select the Shape Builder tool () in the Tools panel on the left. Position the pointer to the left and above all of the selected shapes (see the red X in the figure). Press the Shift key and drag to the right and down. Make sure you don't drag across the green rectangle, otherwise it will be added to the other shapes (see the figure). Release the mouse button and then the Shift key to combine the shapes.

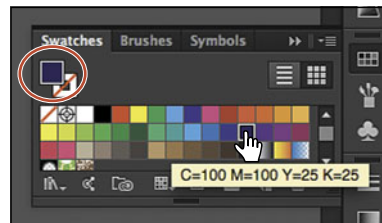




- 4 Position the pointer over the green rectangle. Holding down the Option (Mac OS) or Alt (Windows) key, when you see a mesh pattern appear in the fill of the object, click to subtract the highlighted green shape from the larger tower shape.



- 5 Select the Selection tool (⌘) in the Tools panel on the left, and in the Swatches panel, click the Fill box (if needed) and choose the purple/blue color with the yellow tool tip that shows as “C=100, M=100, Y=25, K=25.”

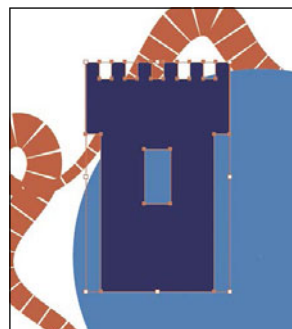


## Copying content

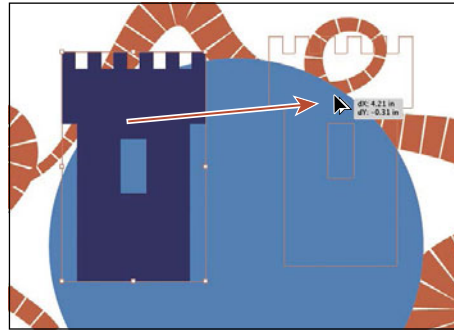
In Illustrator, there are a lot of ways to copy content. In this section, you will use several methods for copying content between documents and in a single document.

- 1 Choose Object > Unlock All to unlock the flag.
- 2 Choose Select > All On Active Artboard to select all of the shapes.
- 3 Choose Edit > Copy.
- 4 Choose File > Close to close the file without saving.
- 5 With the AmusementWorld.ai file showing, choose Edit Paste to paste the artwork into the center of the Document window.
- 6 Choose Select > Deselect.
- 7 With the Selection tool (⌘) selected in the Tools panel, click and drag the tower shape to position it like you see in the figure. Leave it selected.

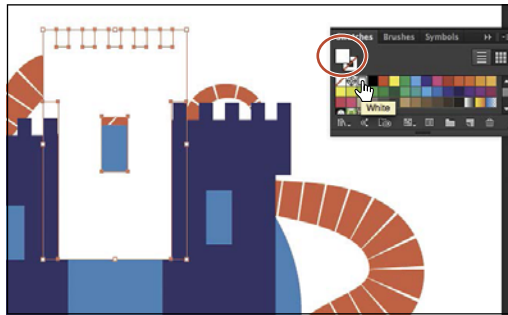
As you drag, you will see green alignment guides and a gray measurement label. These are a part of the Smart Guides feature you will learn about in a later lesson.



- 8 With the tower artwork still selected, Option-drag (Mac OS) or Alt-drag (Windows) a copy of the tower to the right and position it like you see in the figure. Release the mouse button and then the key.



- 9 Choose Edit > Copy, and then choose Edit > Paste to paste a copy in the center of the Document window.
- 10 Drag the tower up like in the next figure.
- 11 In the Swatches panel (Window > Swatches), click the Fill box and select the White swatch.



- 12 Choose Object > Arrange > Send To Back to send the white tower behind the other artwork.

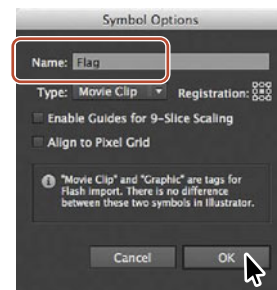
## Working with symbols

● **Note:** Learn more about working with symbols in Lesson 13, “Using Symbols to Create a Map.”

A *symbol* is a reusable art object stored in the Symbols panel. You will now create a symbol from artwork.

- 1 Click the flag artwork you pasted previously.
- 2 Choose Window > Symbols to open the Symbols panel. Click the New Symbol button (📄) at the bottom of the Symbols panel.
- 3 In the Symbol Options dialog box that appears, name the symbol **Flag**, and click OK.

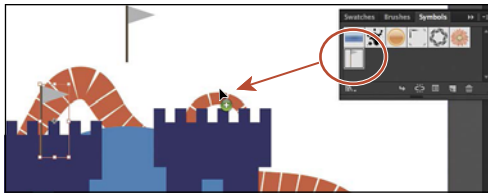
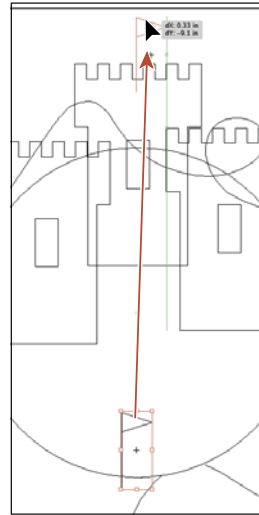
The artwork now appears as a saved symbol in the Symbols panel, and the flag artwork on the artboard you used to create the symbol is now a symbol instance.



- 4 Choose View > Outline to see the artwork without fills. Drag the flag by the stroke (border), up to the top of the white tower.

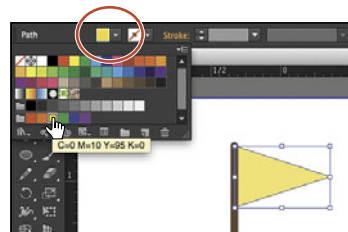
You'll need to select the flag by the stroke (border) since there is no fill to click on in Outline mode.

- 5 Choose Object > Arrange > Send To Back.
- 6 Choose View > Preview.
- 7 From the Symbols panel, drag the Flag symbol thumbnail onto the artboard like you see in the figure. Drag one more Flag symbol from the Symbols panel onto the artboard and position it like you see in the figure. Leave the last symbol instance on the artboard selected.



● **Note:** Your Flag symbol instances may be in different locations than those in the figure. That's okay.

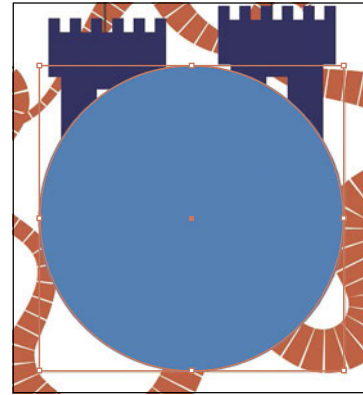
- 8 With one of the flags selected, click the Edit Symbol button in the Control panel above the artwork. This allows you to edit the symbol artwork in Isolation mode without affecting the other artwork.
- 9 In the dialog box that appears, click OK.
- 10 Click the gray flag shape on the artboard. Click the Fill color in the Control panel and select the yellow swatch with the tool tip that shows “C=0, M=10, Y=95, K=0” to change the fill color of the flag. Press the Escape key to close the Swatches panel.
- 11 Press the Escape key to exit the editing (Isolation) mode and notice that the other flags have changed.



► **Tip:** You can also double-click away from the selected artwork to exit Isolation mode.

- 12 Click one of the blue towers, and then Shift-click the other blue tower to select both. Choose Object > Arrange > Bring To Front to arrange the towers on top of the flags.

- 13 Click the blue circle, and choose Object > Arrange > Bring To Front to place the circle on the towers. Drag it into position like you see in the figure.

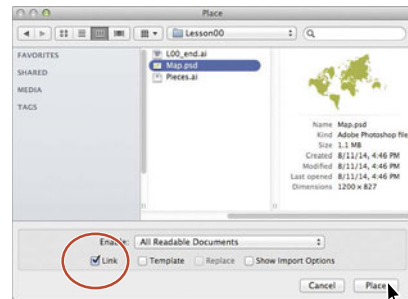


## Placing images in Illustrator

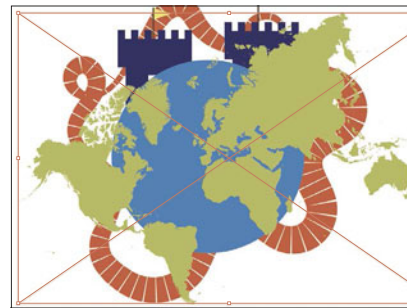
● **Note:** Learn more about placing images in Lesson 14, "Using Illustrator CC with Other Adobe Applications."

In Illustrator, you can place raster images, like JPEG (jpg, jpeg, jpe) and Adobe Photoshop® (psd, pdd) files, and either link to them or embed them. Next, you will place an image of a map.

- 1 Choose File > Place. In the Place dialog box, navigate to the Lesson00 folder in the Lessons folder and select the Map.psd file. Make sure that the Link option in the dialog box is selected, and click Place.



- 2 Click to place the map on the artboard. Drag the map over the blue circle so it is positioned roughly like you see in the figure.
- 3 Choose File > Save.



## Using Image Trace

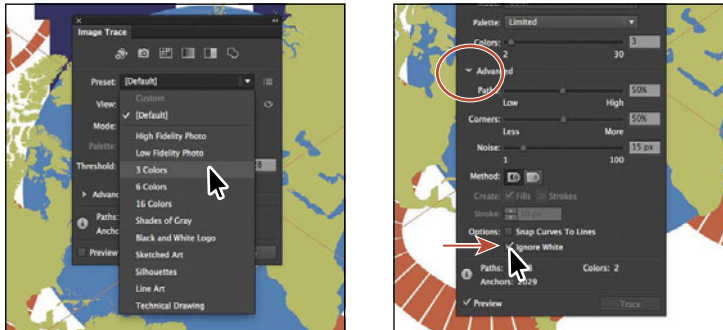
● **Note:** Learn more about Image Trace in Lesson 3, "Using Shapes to Create Artwork for a Postcard."

You can use Image Trace to convert photographs (raster images) into vector artwork. Next, you will trace the Photoshop file.

- 1 Choose Window > Image Trace to open the Image Trace panel.
- 2 In the Image Trace panel, choose "3 Colors" from the Preset menu.

The image is converted to vector paths, but it is not yet editable.

- 3 In the Image Trace panel, click the toggle arrow to the left of Advanced. Select Ignore White near the bottom of the panel. Close the Image Trace panel by clicking the small “x” in the corner.



- 4 With the map still selected, click the Expand button in the Control panel to make the object editable artwork.  
The map image is now a series of vector shapes that are grouped together.
- 5 Choose Object > Arrange > Send Backward to put the map behind the blue circle.
- 6 Choose Window > Workspace > Reset Essentials.

## Creating a clipping mask

A *clipping mask* is an object that masks other artwork so that only areas that lie within its shape are visible—in effect, clipping the artwork to the shape of the mask. Next, you will copy the blue circle and use the copy to mask the map.

- 1 With the Selection tool (⌘) selected, click the blue circle.
- 2 Choose Edit > Copy, and then choose Edit > Paste In Front to paste a copy of the circle directly on top of the original circle.
- 3 With the circle still selected, press the Shift key, and click the map artwork to select it as well.
- 4 Choose Object > Clipping Mask > Make.



**Note:** Learn more about working with clipping masks in Lesson 14, “Using Illustrator CC with Other Adobe Applications.”

## Creating and editing gradients

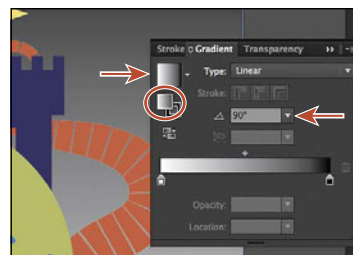
● **Note:** Learn more about working with gradients in Lesson 9, “Blending Colors and Shapes.”

*Gradients* are color blends of two or more colors that you can apply to the fill or stroke of artwork. Next, you will apply a gradient to the background shape.

1 Click the white rectangle in the background to select it.

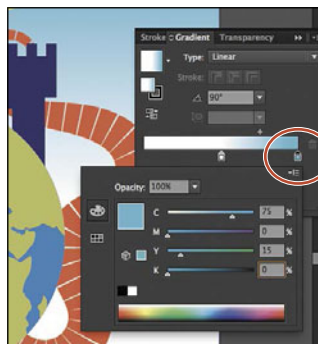
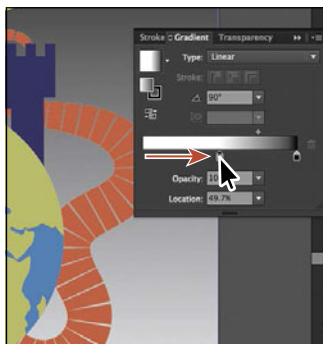
2 Choose Window > Gradient to show the Gradient panel on the right side of the workspace. In the Gradient panel, change the following options:

- Click the white Fill box (circled in the figure), if it's not already selected, so that you can apply the gradient to the fill of the rectangle shape.
- Click the Gradient menu button (▢) to the left of the word “Type,” and choose “White, Black” from the menu.
- Choose **90** from the Angle menu.

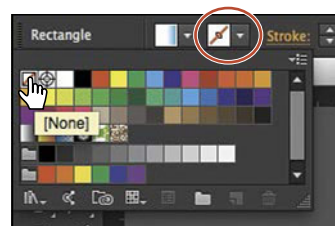


3 Drag the white color stop in the Gradient panel (see the figure below) to the right until the Location value below it shows roughly 50%.


4 Double-click the black color stop on the right side of the gradient slider in the Gradient panel (circled in the figure below). In the panel that appears, click the Color button (🎨) (if it's not already selected), and change the color values to C=75, M=0, Y=15, K=0. Press the Escape key to hide the Color panel.

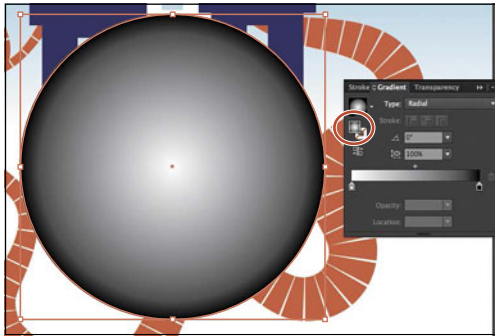



5 Click the Stroke color in the Control panel (circled in the figure). Click the None color (☐) to remove the stroke (border) of the rectangle (if necessary). Press the Escape key to hide the Swatches panel.




Next, you'll create a circle and apply a transparent gradient on the world.

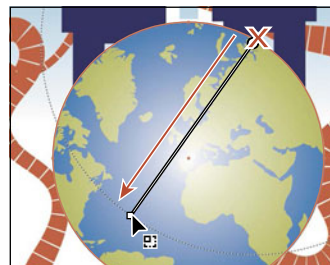
- 6 Click within the green of the map artwork, and choose Object > Lock > Selection.
- 7 Click again on the map, and you will select the blue circle behind it since the map artwork is locked and can't be selected.
- 8 Choose Edit > Copy, and then Edit > Paste In Place to paste it on top of all other artwork.
- 9 In the Gradient panel, change the following options:
  - Click the Fill box (circled in the figure), if it's not already selected, so that you can apply the gradient to the fill of the rectangle shape.
  - Click the Gradient menu button (  ) to the left of the word "Type," and choose "White, Black" from the menu.
  - Choose Radial from the Type menu.



- 10 Double-click the black color stop on the right side of the gradient slider in the Gradient panel (circled in the figure). In the panel that appears, click the Swatches button (  ), and select the white swatch. Change the Opacity to 0. Press Enter or Return to hide the Color panel.



- 11 Select the Gradient tool (  ) in the Tools panel on the left. Click and drag across the circle, starting at the red X in the figure, to reposition and resize the gradient.
- 12 Choose Object > Lock > Selection to lock the gradient circle.



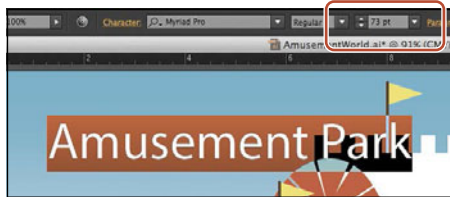


## Working with type

● **Note:** Learn more about working with type in Lesson 7, “Adding Type to a Poster.”

Next, you will add some text to the project and apply formatting. You will choose a Typekit font that requires an Internet connection. If you don’t have an Internet connection, you can choose another font.

- 1 Select the Type tool (**T**) in the Tools panel on the left, and click in a blank area of the artboard. Type **Amusement Park**.
- 2 With the cursor still in the text, choose **Select > All** to select it.
- 3 In the Control panel above the artwork, type **73 pt** in the Font Size field (to the right of the Font Family), and press the Enter or Return key.

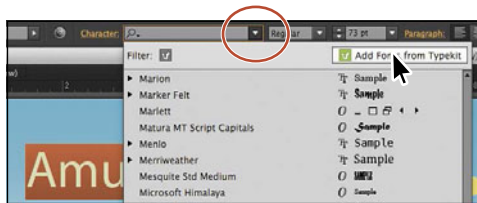


► **Tip:** If you don’t see the character options like font size in the Control panel, click the word “Character” to see the Character panel.

- 4 Click the Fill color in the Control panel above the artwork and choose the purple/blue color with the yellow tool tip that shows as “C=100, M=100, Y=25, K=25.”

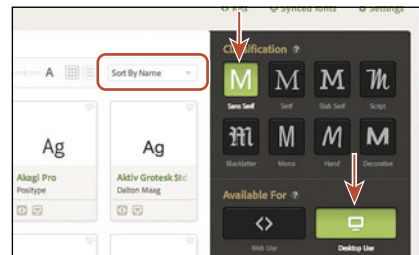
Next, you will apply a Typekit font. You will need an Internet connection. *If you don’t have an Internet connection or access to the Typekit fonts, you can choose any other font from the font menu.*

- 5 Click the arrow to the right of the Font field. Click the Add Fonts From Typekit button to sync a font from Typekit. This opens a browser, launches the Typekit.com website, and signs you in to the site.



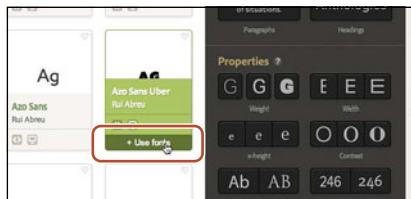
● **Note:** If you are taken to the Typekit.com home page, you can simply click the Browse Fonts button. It may also ask you to login with your Adobe ID.

- 6 In the browser, click the Sans Serif button to sort the listing of fonts and make sure that the Desktop Use button is selected. Choose Name from the Sort By field to sort the fonts alphabetically.

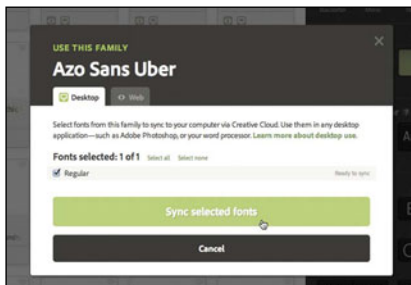




- 7 Find Azo Sans Uber in the list (or another font, if you don't see that one). Hover over it and click +Use Fonts.

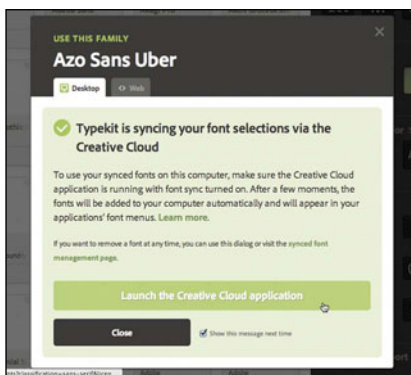


- 8 Click Sync Selected Fonts in the window that appears.



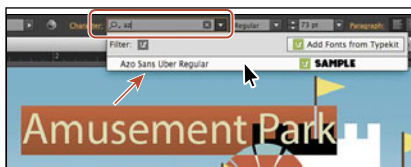
- 9 After it is synced, click the Launch The Creative Cloud Application button to open the Creative Cloud Desktop application.

In the Creative Cloud desktop application, you will be able to see any messages indicating that font syncing is turned off (turn it on in that case) or any other issues.



- 10 Return to Illustrator. With the text still selected, in the Font field in the Control panel, begin typing Azo.

- 11 Click Azo Sans Uber Regular in the menu that appears to apply the font.



- 12 Select the Selection tool (⬚), and drag the text roughly into position over the world, like you see in the figure and leave it selected.



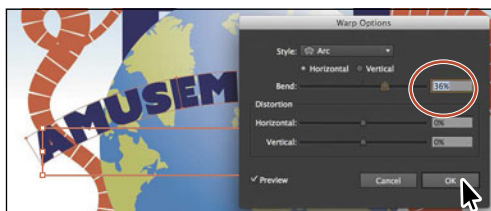
● **Note:** It may take a few minutes for the font to sync with your computer.

## Warping text

● **Note:** Learn more about working with a warp in Lesson 7, “Adding Type to a Poster.”

Next, you will see how you can warp text into different shapes using a preset envelope warp.

- 1 With the text object still selected, choose Object > Envelope Distort > Make With Warp.
- 2 In the Warp Options dialog box, make sure that Arc is chosen from the Style menu. Change the Bend to **36%** and select Preview. Click OK.



## Working with brushes

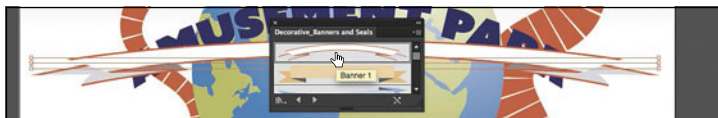
● **Note:** Learn more about working with brushes in Lesson 10, “Using Brushes to Create a Poster.”

Brushes let you stylize the appearance of paths. You can apply brush strokes to existing paths, or you can use the Paintbrush tool (P) to draw a path and apply a brush stroke simultaneously.

- 1 Select the Line Segment tool (L) in the Tools panel on the left. Pressing the Shift key, click and drag from the left side of the artboard (see the red X in the figure) to the right. When the gray measurement label shows a width of roughly 15.3 in, release the mouse button and then the key.



- 2 Choose Window > Brush Libraries > Decorative > Decorative\_Banners And Seals to open the brush library as a panel.
- 3 Click the Banner 1 brush in the panel to apply it to the path. Click the “x” in the corner of the Decorative\_Banners And Seals panel to close it.



- 4 Change the Stroke weight to 5 pt in the Control panel above the artwork.

The brush is an art brush, which means that it stretches the banner artwork (in this case) along the path.



- 5 Choose Object > Arrange > Send Backward to arrange the banner behind the text.
- 6 Select the Selection tool (⬚) and drag both into position like you see in the figure.



## Working with effects

Effects alter the appearance of an object without changing the base object. Next, you will apply the Drop Shadow effect to the world artwork.

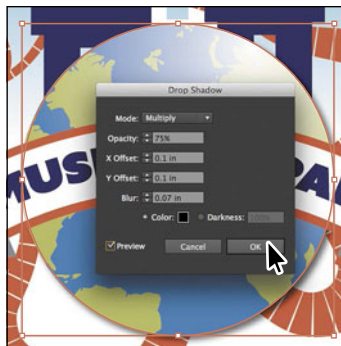
- 1 With the Selection tool (⬚), click the blue circle.

- 2 Choose Effect > Stylize > Drop Shadow. In the Drop Shadow dialog box, set the following options (if necessary):

- Mode: **Multiply** (the default setting)
- Opacity: **75%** (the default setting)
- X Offset and Y Offset: **0.1 in** (the default setting)
- Blur: **0.07 in** (the default setting)

- 3 Select Preview, and then click OK.

- 4 Choose File > Save, and then choose File > Close.



● **Note:** Learn more about effects in Lesson 11, “Exploring Creative Uses of Effects and Graphic Styles.”



# 4 TRANSFORMING ARTWORK

## Lesson overview

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

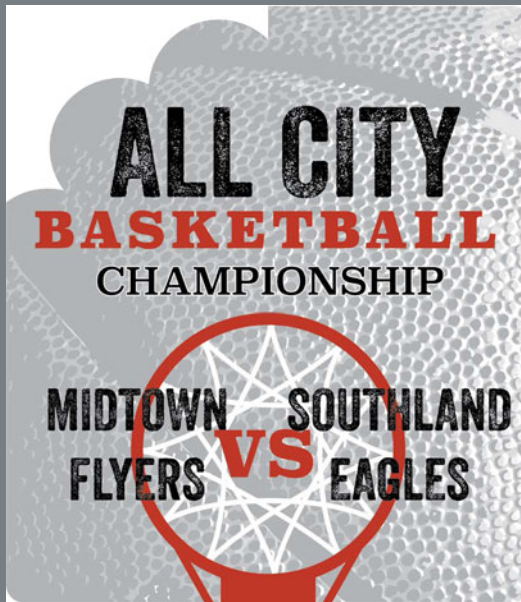
- Add, edit, rename, and reorder artboards in an existing document.
- Navigate artboards.
- Work with rulers and guides.
- Move, scale, and rotate objects using a variety of methods.
- Reflect, shear, and distort objects.
- Position objects with precision.
- Position and align content with Smart Guides.
- Use the Free Transform tool to distort an object.
- Create a PDF.



This lesson takes approximately 60 minutes to complete.

Download the project files for this lesson from the Lesson & Update Files tab on your Account page at [www.peachpit.com](http://www.peachpit.com) and store them on your computer in a convenient location, as described in the Getting Started section of this book.

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.

# Getting started

In this lesson, you'll create content and use it in a ticket for a sporting event. 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 and panels function 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.

- 2 Start Adobe Illustrator CC.

- 3 Choose File > Open, and open the L4\_end.ai file in the Lessons > Lesson04 folder on your hard disk.

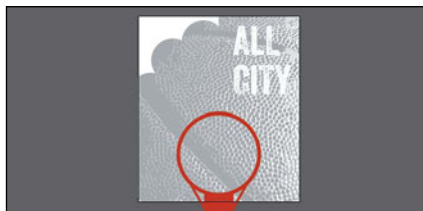
This file contains the three artboards that make up the front, back, and inside of a folding ticket for a sporting event.



- 4 Choose View > Fit All In Window, and leave the artwork onscreen as you work. If you don't want to leave the file open, choose File > Close (without saving).

To begin working, you'll open an existing art file.

- 5 Choose File > Open to open the L4\_start.ai file in the Lesson04 folder, located in the Lessons folder on your hard disk.



● **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.



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

- 6 Choose File > Save As. In the Save As dialog box, name the file **Ticket.ai**, and navigate to the Lesson04 folder. Leave the Format option set to Adobe Illustrator (ai) (Mac OS) or Save As Type option set to Adobe Illustrator (\*.AI) (Windows), and then click Save. In the Illustrator Options dialog box, leave the Illustrator options at their default settings, and then click OK.
- 7 Choose Window > Workspace > Reset Essentials.



# Working with artboards

Artboards represent the regions that can contain printable artwork, similar to pages in Adobe InDesign. You can use multiple 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 video storyboards, for instance.

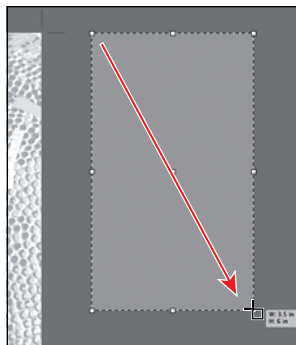
## Adding artboards to the document

You can add and remove artboards at any time while working in a document. You can create artboards in different sizes, resize them with the Artboard tool () or Artboards panel () and position them anywhere in the Document window. All artboards are numbered and can have a unique name assigned to them.


Next, you will add two more artboards to the document. Since this is a ticket for a sporting event that will fold, each artboard will be a different face of the ticket (front, inside, and back).

- 1 Choose View > Fit Artboard In Window, then press Command+- (Mac OS) or Ctrl+- (Windows) 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 off the right side of the artboard.
- 3 Select the Artboard tool () in the Tools panel. Position the Artboard tool pointer to the right of the existing artboard and in line with its top edge (a green alignment guide appears). Drag down and to the right to create an artboard that is 3.5 in (width) by 6 in (height). The measurement label indicates the artboard size.

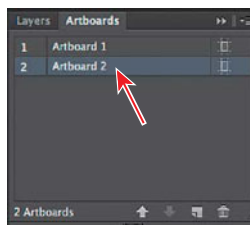
► **Tip:** If you zoom in on an artboard, the measurement label has smaller increments.



► **Tip:** If you find it difficult to make the width value exactly 3.5 in, you can always change the W: (width) value in the Control panel, after you finish drawing the artboard.

- 4 Click the Artboards panel icon () on the right side of the workspace to show it.

The Artboards panel allows you to see how many artboards the document currently contains. It also allows you to reorder, rename, add, and delete artboards and to choose many other options related to artboards. Notice that Artboard 2 is highlighted in the panel. The active artboard is always highlighted in this panel.

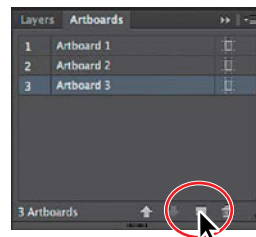


Next, you will create a copy of an artboard using this panel.

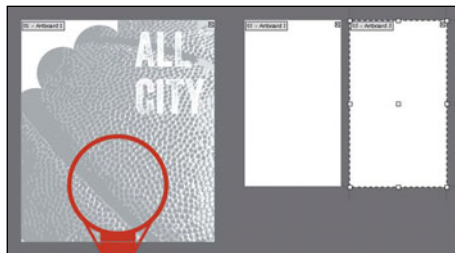


- 5 Click the New Artboard button (📄) at the bottom of the panel to create a copy of Artboard 2, called Artboard 3. The copy is placed to the right of Artboard 2 in the Document window.

► **Tip:** You can also create a new artboard by clicking the New Artboard button (📄) in the Control panel. This allows you to create a duplicate of the last selected artboard. After clicking the button, position the pointer in the canvas area and click to create a new artboard.



- 6 Choose View > Fit All In Window to see all of your artboards and leave the Artboard tool selected.

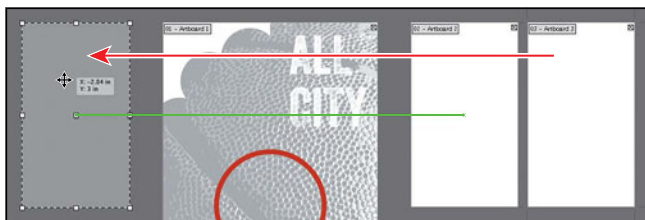


## Editing artboards

After creating artboards, you can edit or delete artboards at any time by using the Artboard tool (⇧⌘A), menu commands, or the Artboards panel. Next, you will reposition and change the sizes of several of the artboards using multiple methods.

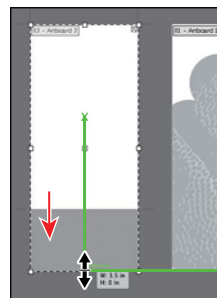
- 1 Press Command+– (Mac OS) or Ctrl+– (Windows) *twice* to zoom out further.
- 2 With the Artboard tool (⇧⌘A) still selected, drag Artboard 3 from the center, to the left of the original (larger) artboard. You can reposition artboards at any time and even overlap them, if necessary.

► **Tip:** With the Artboard tool (⇧⌘A), you can also copy an artboard by holding down the Option (Mac OS) or Alt (Windows) key and dragging away from the original artboard. When creating new artboards, you can place them anywhere—you can even overlap them.



- 3 With the Artboard tool selected, drag the bottom-center bounding point of the artboard down until the height is 8 in, as shown in the measurement label. The bottom will snap to the bottom of the larger artboard to its right and a green alignment (smart) guide will appear.

► **Tip:** To delete an artboard, select the artboard with the Artboard tool (⇧⌘A) and either press Delete, click the Delete Artboard button (🗑️) in the Control panel, or click the Delete icon (⌫) in the upper-right corner of an artboard. You can delete all but one artboard.





Another way to resize an artboard is to do so by entering values in the Control panel, which is what you'll do next.

- 4 Click Artboard 2, to the right of the larger artboard in the middle. “Artboard 2” will be highlighted in the Artboards panel. Select the upper-middle point in the reference point locator (⌵) in the Control panel. Change the height to **8** in the Control panel and press Enter or Return to accept the value.



Selecting the upper-middle point allows you to resize an artboard from the top, center of the artboard. By default, artboards are resized from their center.

In the Control panel, with the Artboard tool selected, you will see many options for editing the currently active artboard. The Preset menu lets you change a selected artboard to a set size. Notice that the sizes in the Preset menu include typical print, video, tablet, and Web sizes. You can also fit the artboard to the artwork bounds or the selected art, which is a great way to fit an artboard to a logo, for instance. Other options in the Control panel include the ability to switch orientation, rename or delete the artboard, even show other helpful guides like a center point or video-safe areas.

► **Tip:** You can see the Constrain Width and Height Proportions icon (⌵) in the Control panel, between the Width and Height fields. This icon, if selected (⌵), allows the width and height to change in proportion to each other.

- 5 Select the Selection tool (⌵), and choose View > Fit All In Window.

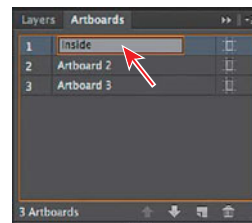
Notice the *very* subtle black outline around Artboard 2, with “2” showing in the Artboard Navigation menu (lower-left corner of the Document window), and “Artboard 2” highlighted in the Artboards panel, all of which indicate that Artboard 2 is the currently active artboard. There can only be one active artboard at a time. Commands such as View > Fit Artboard In Window apply to the active artboard.

## Renaming artboards

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

- 1 In the Artboards panel, double-click the name “Artboard 1.” Change the name to **Inside**, and press Enter or Return.

► **Tip:** You can also change the name of an artboard by double-clicking the Artboard tool (⌵) in the Tools panel. Doing so changes the name for the currently active artboard in the Artboard Options dialog box. You can make an artboard the currently active artboard by clicking it with the Selection tool (⌵).



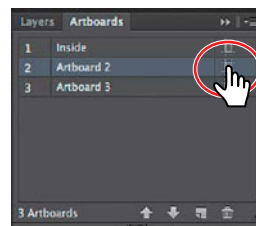
► **Tip:** With the Artboard tool (⌵) selected, you can press the Shift key to resize an artboard proportionally or press the Option (Mac OS) or Alt (Windows) key and drag to resize an artboard from its center.

● **Note:** If you don't see the Width (W) and Height (H) fields in the Control panel, click the Artboard Options button (⌵) in the Control panel and enter the values in the dialog box that appears.

You will now rename the rest of the artboards.

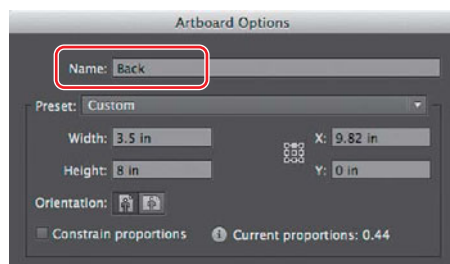
- 2 Double-click the Artboard Options icon (■) to the right of the name “Artboard 2” in the Artboards panel. This opens the Artboard Options dialog box.

► **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. You only need to single-click the icon when the artboard name is highlighted in the panel.



- 3 In the Artboard Options dialog box, change the Name to **Back** and click OK.

The Artboard Options dialog box has a lot of extra options as well as a few we’ve already seen, like width and height.



- 4 Double-click the name “Artboard 3” in the panel, and change the name to **Front**. Press Enter or Return to accept the name.
- 5 Choose File > Save, and keep the Artboards panel showing for the next steps.

## Reordering artboards

When you navigate your document, the order in which the artboards appear can be important, especially if you are navigating the document using the Next artboard (▶) and Previous artboard (◀) buttons. By default, artboards are ordered according to the order in which they are created, but you can change that order. Next, you will reorder the artboards in the Artboards panel.

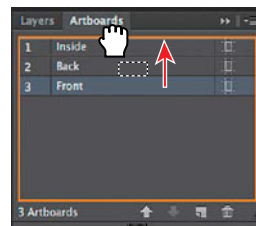
- 1 With the Artboards panel still open, double-click the number 1 to the left of the name “Inside” in the panel. This makes the artboard named “Inside” the active artboard and fits it in the Document window.

► **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.

- 2 Click and drag the “Front” artboard name up until a line appears above the artboard named “Inside.” Release the mouse button.

This moves the artboard up in order so that it becomes the first artboard in the list.

- 3 Double-click to the right of the name “Front” in the Artboards panel to fit that artboard in the Document window, if necessary.



- 4 Click the Next artboard button (▶) in the lower-left corner of the Document window to navigate to the next artboard (Inside). This fits the Inside artboard in the Document window.

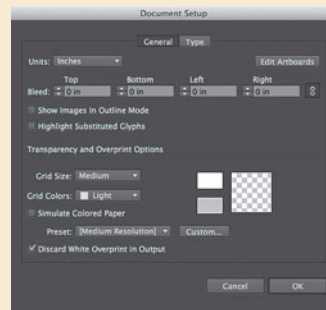
If you had not changed the order, the next artboard would have been dimmed since it was the last artboard in the Artboards panel (there was no artboard after it).

- 5 Choose File > Save.

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

## Editing document setup options

When working with artboards for the current document, you can change default setup options, like units of measure, bleed guides, type settings (such as language), and more in the Document Setup dialog box. To access the Document Setup dialog box, you can either choose File > Document Setup, or, if nothing is selected in the Document window, click the Document Setup button in the Control panel.



There are two sets of options in the Document Setup dialog box that will be worth exploring: General and Type. In the General options, you can change the units and set bleed guides, among a host of other options.

# Transforming content

Transforming content allows you to move, rotate, reflect, scale, shear, and either free distort or perspective distort objects. Objects can be transformed using the Transform panel, selection tools, specialized tools, Transform commands, guides, Smart Guides, and more. For the remainder of the lesson, you will transform content using a variety of methods and tools.

## Working with rulers and guides

*Rulers* help you accurately place and measure objects. They appear at the top and left in the Document window and can be shown and hidden. *Guides* are non-printing lines created from the rulers that help you align objects. Next, you will create a few guides based on ruler measurements so that later you can more accurately align content.

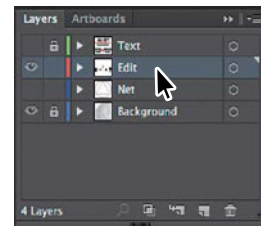
- 1 Choose View > Rulers > Show Rulers, if you don't see the rulers.
- 2 Choose View > Fit All In Window.
- 3 With the Selection tool (M) selected, click each of the artboards and, as you do, look at the horizontal and vertical rulers. Notice that the 0 (zero) for each ruler is always in the upper-left corner of the active (selected) artboard.

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 artboard. As you can see, the 0 point on both rulers corresponds to the edges of the active artboard.

There are two types of rulers in Illustrator: *artboard rulers* and *global rulers*. Artboard rulers, which are the default rulers that you are seeing, set the ruler origin at the upper-left corner of the *active* artboard. Global rulers set the ruler origin at 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.

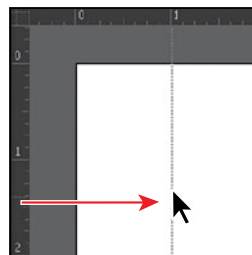
● **Note:** You could switch between artboard and global rulers by choosing View > Rulers > and selecting Change To Global Rulers or Change To Artboard Rulers, (depending on which option is currently chosen), but don't do that now.

- 4 Click the leftmost artboard, called "Front."
- 5 Open the Layers panel by choosing Window > Layers, and select the layer named Edit.



- 6 Shift-drag from the left vertical ruler right to create a vertical guide at 1 inch on the horizontal ruler (the ruler above the artboard) on the “Front” artboard. Release the mouse button, and then release the Shift key.

Dragging with the Shift key pressed “snaps” guides to the measurements on the ruler. The guide is selected and when selected, its color matches the color of the layer that it’s associated with (red in this case). By default, guides that are not selected are aqua in color.



● **Note:** Guides are similar to drawn objects in that they can be selected like a drawn line, and they can be deleted by pressing the Backspace or Delete key, and they also are on the active layer in the Layers panel.

- 7 With the guide still selected (it should be red in color), change the X value in the Control panel to **0.25 in**, and press Enter or Return.

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.

● **Note:** If you don’t see the X value, you can click the word “Transform” in the Control panel or open the Transform panel (Window > Transform).

► **Tip:** To change the units for a document, you can right-click either ruler and choose the new units.

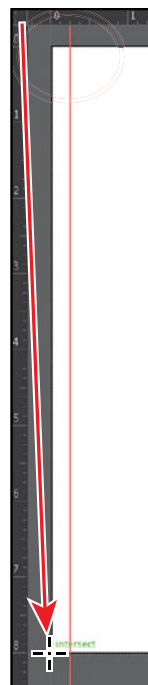
- 8 Position the pointer in the upper-left corner of the Document window, where the rulers intersect (■), and drag the pointer to the lower-left corner of the artboard. When the word “intersect” appears, release the mouse button.

As you drag, a crosshair in the window and in the rulers indicates the changing ruler origin. This sets the ruler origin (0,0) to the lower-left corner of the artboard. This can be very useful when you need to place content a set distance from the bottom edge of the artboard, for instance.

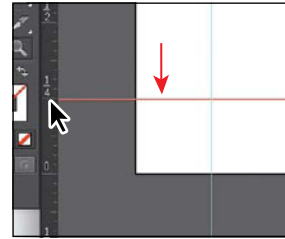
► **Tip:** If you Command-drag (Mac OS) or Ctrl-drag (Windows) from the ruler intersect, you create a horizontal and vertical guide that intersects where you release the mouse button and then release the Ctrl or Command key.

Next, you’ll add a guide using a different method that can sometimes be faster.

- 9 Select the Zoom tool (Q) and click several times, slowly, on the lower-left corner of the artboard until you see 1/4-inch measurements on the ruler. We had to click at least four times.



- 10** Shift-double-click the vertical ruler at the 1/4-inch mark (the ruler to the left of the artboard), *above* the 0 on the ruler. This creates a guide that crosses the bottom edge of the artboard at -0.25 in from the bottom.



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

- 12** Choose View > Guides > Lock Guides to prevent them from being accidentally moved.

The guides are no longer selected and are aqua in color by default.

► **Tip:** You can also hide and show guides by pressing Command+; (Mac OS) or Ctrl+; (Windows).

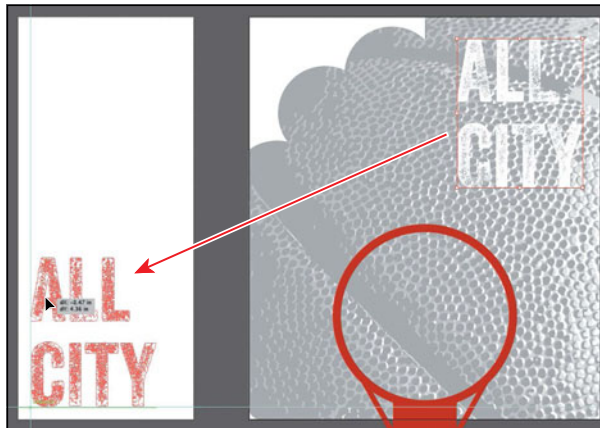
- 13** Choose View > Fit All In Window.

- 14** With the Selection tool (■) selected, select the white text “ALL CITY.”

- 15** Choose View > Hide Edges so you only see the bounding box of the grouped paths.

This hides the inside edges of the shapes, but not the bounding box. It can make it easier to move and position the artwork.



- 16** Drag the text group into the lower-left corner of the artboard with the guides. When the left and bottom edges snap to the guides, release the mouse button.



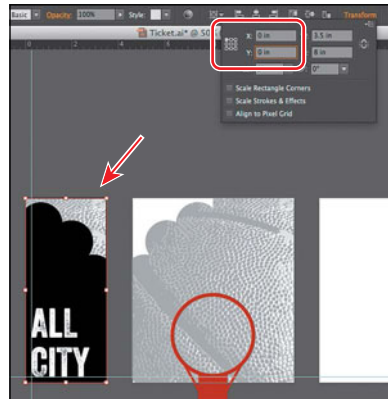
## Positioning objects precisely

At times, you may want to position objects more precisely—either relative to other objects or to the artboard. You could use the alignments options, like you saw in Lesson 2 “Techniques for Selecting Artwork,” but you can also use Smart Guides and the Transform panel to move objects to exact coordinates on the x and y axes and to control the position of objects in relation to the edge of the artboard.

Next, you’ll add content to the backgrounds of two artboards and then position that content precisely.


- 1 Press Command+– (Mac OS) or Ctrl+– (Windows) (or View > Zoom Out) *three times* to zoom out. You should see content off the bottom edge of the artboards.
- 2 Click the artboard with the guides on it (the artboard named Front) to ensure that it is the active artboard (check the origin of the rulers and make sure that 0,0 starts in the upper-left corner of the artboard).
- 3 With the Selection tool () , click to select the large background shape on the left, below the artboards (see the next figure for which shape).
- 4 Click the upper-left point of the reference point locator () in the Control panel. Then, change the X value to 0 and the Y value to 0.

● **Note:** Again, depending on the resolution of your screen, the Transform options may not appear in the Control panel. If they do not appear, you can click the word “Transform” to see the Transform panel, or you can choose Window > Transform.

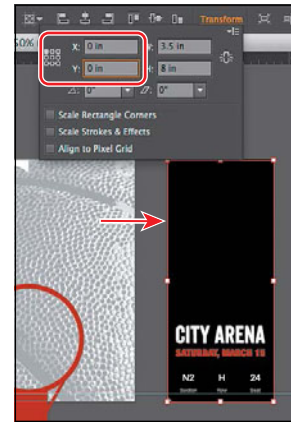



The content should now be precisely positioned on the artboard, since it was the same size as the artboard to begin with.

- 5 In the Artboards panel, select the artboard named Back to make it the active artboard.
- 6 Select the group with the “City Arena” text in it below the artboards. You may need to either zoom out or scroll over and down to see it.

- 7 With the upper-left point of the reference point locator () selected in the Control panel, change the X value to 0 and the Y value to 0.

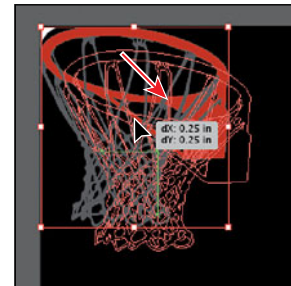
Next, you will use Smart Guides to move content. When moving objects with Smart Guides turned on (View > Smart Guides), measurement labels appear next to the pointer and display the distance (X and Y) from the object's original location. You will use these to make sure that an object is a certain distance from the edge of the artboard.



- 8 With the Selection tool, click to select the basketball hoop with net below the artboards. With the upper-left point of the reference point locator () in the Control panel selected, change the X value to 0 and the Y value to 0.

- 9 Choose View > Fit Artboard In Window.

- 10 Using the Selection tool, position the pointer over the selected basketball hoop with net and drag the group down and to the right. As you drag, press the Shift key to constrain the movement to 45°. When the measurement label shows approximately dX: 0.25 in and dY: 0.25 in, release the mouse button, and then the Shift key. Leave the artwork selected.



The dX indicates the distance moved along the x axis (horizontally), and dY indicates the distance moved along the y axis (vertically). Don't worry if you can't get the exact values, it's difficult when zoomed out so far. Also, because there is other content on the canvas, Smart Guides are attempting to snap to it. You can always change the X and Y values in the Control panel or Transform panel.

● **Note:** You can also choose Illustrator > Preferences > Smart Guides (Mac OS) or Edit > Preferences > Smart Guides (Windows) and deselect the Measurement Labels option to turn off just the measurement labels when Smart Guides are on.

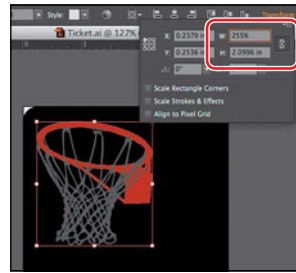
- 11 Choose File > Save.

## Scaling objects

So far in this book, you've scaled most content with the selection tools. In this lesson, you'll use several other methods to scale objects.



- 1 With the artwork (basketball hoop and net) still selected, ensure that the upper-left point of the reference point locator (📍) is selected in the Control panel. Click to select the Constrain Width And Height Proportions icon (📏) located between the W and H fields. Change the Width (W:) to **255%**. Press Enter or Return to accept the value.

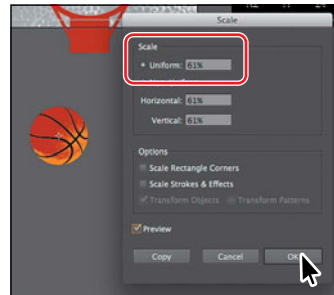


**Note:** The figure shows the Width value before pressing Enter or Return.

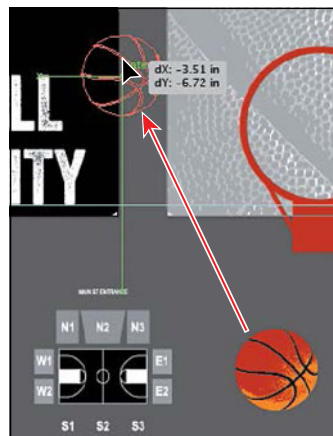
When typing values to transform content, you can type different units such as percent (%) or pixels (px) and they will be converted to the default unit, which is inches (in) in this case.

- 2 Choose View > Fit All In Window.
- 3 Press Command+– (Mac OS) or Ctrl+– (Windows) (or View > Zoom Out) *twice* to zoom out. You should see content off the bottom edge of the artboards again. You may need to scroll down to see all of the content.
- 4 Select the basketball and double-click the Scale tool (⌘) in the Tools panel.
- 5 In the Scale dialog box, change Uniform to **61%**. Toggle Preview on and off to see the change in size. Click OK.

► **Tip:** You could also choose Object > Transform > Scale to access the Scale dialog box.

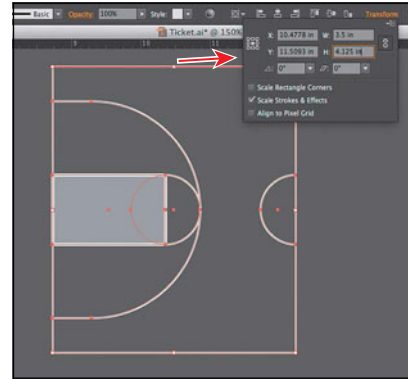


- 6 Select the Selection tool (🖱️) and drag the basketball onto the first artboard named “Front,” like you see in the figure.
- 7 Select the basketball court group (without the numbers on it) *below the larger artboard*. Notice that the Stroke weight in the Control panel shows as 1 pt.
- 8 Select the Zoom tool (🔍) in the Tools panel and click several times, *slowly*, to zoom in to it.
- 9 Choose View > Show Edges.
- 10 Open the Transform panel by clicking the X, Y, W, or H link in the Control panel (or the word “Transform” if that appears in the Control panel). Select Scale Strokes & Effects.



● **Note:** Depending on the resolution of your screen, the Transform options may not appear in the Control panel. If they do not appear, you can click the word “Transform” to see the Transform panel or you can choose Window > Transform.

- 11 In the Control panel, either click the word “Transform” to reveal the Transform panel, or click the center reference point locator (📍) in the Control panel. Ensure that the Constrain Width And Height Proportions is set (🔒), and type 3.5 in the Width (W) field, and then press Enter or Return to increase the size of the artwork. Notice that the Stroke weight has scaled as well, and is now 2 pt. Leave the artwork selected.



By default, strokes and effects, like drop shadows, are not scaled along with objects. For instance, if you enlarge a circle with a 1 pt stroke, the stroke remains 1 pt. But by selecting Scale Strokes & Effects before you scale—and then scaling the object—that 1 pt stroke would scale (change) relative to the amount of scaling applied to the object.

## Reflecting objects

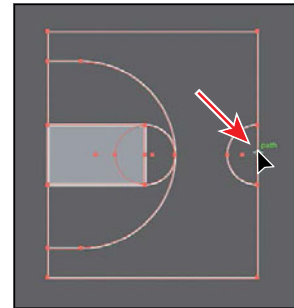
When you *reflect* an object, Illustrator flips the object across an invisible vertical or horizontal axis. In a similar way to scaling and rotating, when you reflect an object, you either designate the reference point or use the object’s center point, by default.

Next, you’ll use the Reflect tool (⇧R) to flip the basketball court artwork 90° across the vertical axis and copy it.

► **Tip:** If all you want to do is flip content in place, you can also choose Flip Horizontal or Flip Vertical from the Transform panel menu (☰).

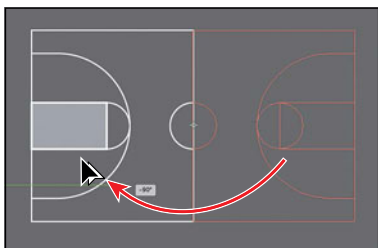
- 1 Select the Reflect tool (⇧R), which is nested within the Rotate tool (⇧O) in the Tools panel. Click the right edge of the basketball court group (the word “anchor” or “path” may appear).

This sets the invisible axis that the shape will reflect around on the right edge of the selected artwork, rather than on the center, which is the default.



► **Tip:** You can reflect and copy in one step. With the Reflect tool (⇧R) selected, Option-click (Mac OS) or Alt-click (Windows) to set a point to reflect around and to open the Reflect dialog box, in one step. Select Vertical, and then click Copy.

- 2 With the basketball court artwork still selected, position the pointer off the right edge and drag clockwise. As you are dragging, hold down the Shift+Option (Mac OS) or Shift+Alt (Windows) keys. When the measurement label shows –90°, release the mouse button and then release the modifier keys.



The Shift key constrains the rotation to 45° as the artwork is reflected, and the Option (Alt) key will copy the artwork. Leave the new court artwork where it is for now. You'll move it later.

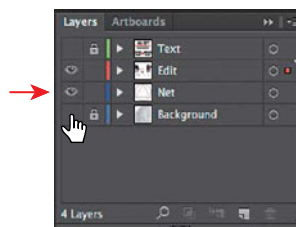
- 3 Select the Selection tool (⌘) and drag across both groups, then choose Object > Group.

## Distorting objects with effects

You can distort the original shapes of objects in different ways, using various tools. Now you'll distort the basketball net using the Pucker & Bloat effect. These are different types of transformations because they are applied as effects, which means you could ultimately edit the effect later or remove it in the Appearance panel.

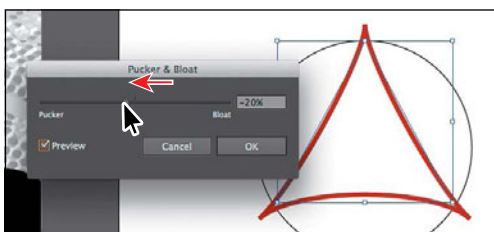
**Note:** To learn more about effects, see Lesson 11, "Exploring Creative Uses of Effects and Graphic Styles."

- 1 Choose "2 Inside" from the Artboard Navigation menu to fit the larger artboard in the Document window.
- 2 Click the Layers panel icon (📁) to open the panel, and then click the visibility column (an arrow is pointing to it in the figure) to the left of the Net layer name to show that content, and click the eye icon (👁) to the left of the Background layer to hide its contents.



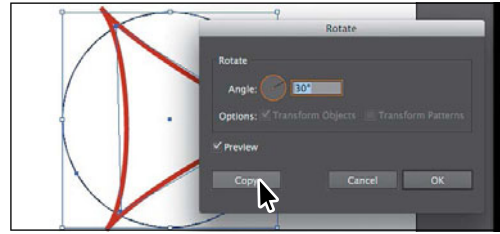
You are going to create a net for the basketball hoop that is already on the artboard.

- 3 Click to select the red triangle shape. Choose Effect > Distort & Transform > Pucker & Bloat.
- 4 In the Pucker & Bloat dialog box, select Preview and drag the slider to the left to change the value to roughly -20%, which distorts the triangle. Click OK.

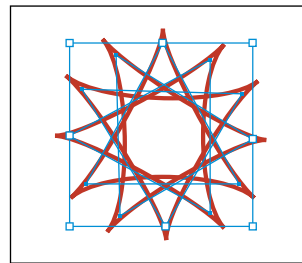
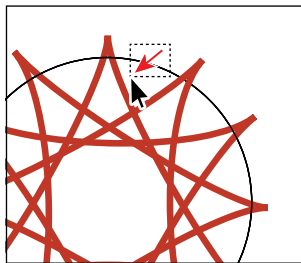
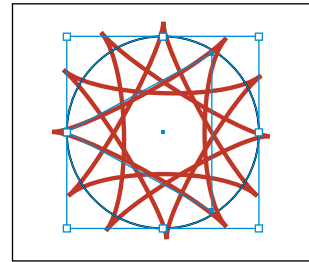


► **Tip:** To access the Rotate dialog box, you can also double-click the Rotate tool (⌘) in the Tools panel. The Transform panel (Window > Transform) also has a rotate option.

- 5 Drag across the triangle and circle to select them both. Choose Object > Transform > Rotate. In the Rotate dialog box, change the Angle to 30°, select Preview, and then click Copy. You will learn more about rotating artwork in the next section.



- 6 Choose Object > Transform > Transform Again to repeat the transformation on the selected shapes.
- 7 Press Command+D (Mac OS) or Ctrl+D (Windows) once to apply the transformation one more time.
- 8 Choose Select > Deselect, and then drag across the edge of the circle (see the figure below) to select all of the copies and press Delete.
- 9 Drag across the triangles to select them all and choose Object > Group.



- 10 Drag the group down onto the basketball hoop and visually center-align them. Change the Stroke color to White in the Control panel.
- 11 In the Layers panel, click the visibility column to the left of the Background and the Text layers to show the content for each.




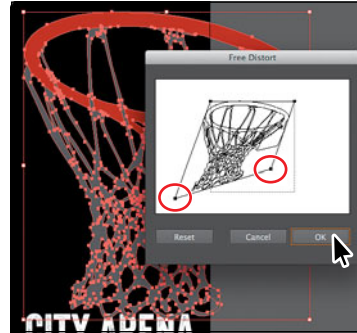
Next, you will apply a Free Distort effect to artwork.

**12** Choose “3 Back” from the Artboard Navigation menu and select the basketball net.

**13** Choose Effect > Distort & Transform > Free Distort.

**14** In the Free Distort dialog, box drag the lower-left and lower-right points so they match the figure. Click OK.

► **Tip:** Later in this lesson, you will learn about the Free Transform tool () that has a free distort option. Applying a free distort via the Free Transform tool is permanent and affects the underlying artwork, whereas the Free Distort effect can be edited and even removed later because it's an effect.




## Rotating objects


You rotate objects by turning them around a designated reference point. There are lots of ways to do this, including methods that range from more precise to more free-form rotation.

First, you'll rotate the basketball manually, using the Selection tool.



**1** Choose “1 Front” from the Artboard Navigation menu in the lower-left corner of the Document window.


**2** With the Selection tool () , select the basketball. Option-drag (Mac OS) or Alt-drag (Windows) the basketball up and to the left to create a copy. When the artwork is positioned like you see in the figure, release the mouse button and then the modifier key.



**3** Position the pointer just off either the upper-right or lower-right corner points of the bounding box of the basketball you just created and when the pointer changes to rotate arrows () , drag in a counterclockwise fashion (up). When the measurement label shows *approximately 15°*, release the mouse button.



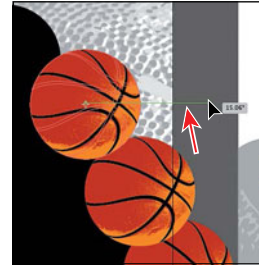
► **Tip:** You can press the Shift key as you rotate artwork with the Rotate tool () or Selection tool () to constrain the rotation to 45°. Remember to release the mouse button before the key.

Next, you'll rotate content using the Rotate tool () and learn how this method can be different from rotating with the Selection tool.

► **Tip:** To rotate the object around a different reference point, click once anywhere in the document window to reposition the reference point. Then move the pointer away from the reference point and drag in a circular motion.

- 4 With the Selection tool, Option-drag (Mac OS) or Alt-drag (Windows) the selected basketball up and to the left to create another copy. When the artwork is positioned like you see in the following figure, release the mouse button and then the modifier key.

- 5 Select the Rotate tool (⌘) in the Tools panel (it's under the Reflect tool). Notice the rotate-around point in the center of the basketball artwork. The Rotate tool allows you to rotate the object around a different reference point. Position the pointer to the right of the basketball, and drag counterclockwise (up) until the measurement label shows approximately 15°, and then release the mouse button.

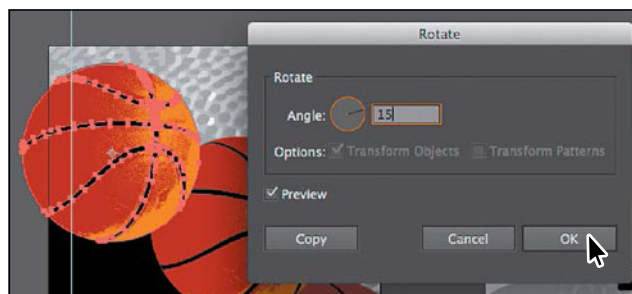


► **Tip:** If you select an object and then select the Rotate tool (⌘), you can Option-click (Mac OS) or Alt-click (Windows) anywhere on the object (or artboard) to set a reference point and to open the Rotate dialog box in one step.

Next, you will rotate each basketball in place using the Transform Each command.

- 6 With the Selection tool, Option-drag (Mac OS) or Alt-drag (Windows) the selected basketball up and to the left to create a final copy. When the artwork is positioned like you see in the following figure, release the mouse button and then the modifier key.
- 7 With the last basketball selected, double-click the Rotate tool in the Tools panel. In the Rotate dialog box that appears, the last rotation value should be the value set for the Angle value. It should be approximately 15°. Make sure it's 15° and click OK.

► **Tip:** You can choose Object > Transform > Transform Each to rotate several selected objects separately, and around the center of each.




► **Tip:** After transforming content using various methods, including rotation, you will notice that the bounding box is now rotated. You can choose Object > Transform > Reset Bounding Box to reset the bounding box around the artwork again.

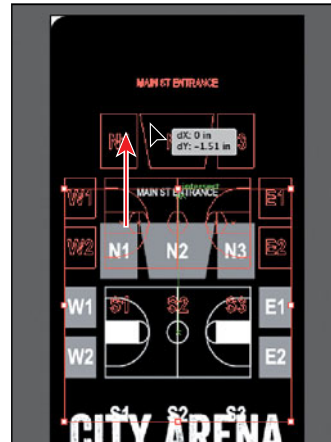
- 8 Choose File > Save.



## Shearing objects

*Shearing* an object slants, or skews, the sides of the object along the axis you specify, keeping opposite sides parallel and making the object asymmetrical.

Next, you'll copy artwork and apply shear to it.

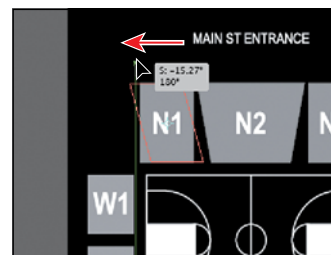
- 1 Choose View > Fit All In Window.
- 2 Press Command+- (Mac OS) or Ctrl+- (Windows) (or View > Zoom Out) *twice* to zoom out. You should see content off the bottom edge of the artboards as again.
- 3 Select the Selection tool () . Click to select the grouped content below the first artboard that contains the "N1," "N2," etc.
- 4 Choose Edit > Cut, and then choose "3 Back" from the Artboard Navigation menu in the lower-left corner of the Document window.
- 5 Select the basketball net and choose Object > Hide > Selection.
- 6 Choose Edit > Paste to paste a copy in the center of the artboard.
- 7 Begin dragging the group of content up, and as you drag, press the Shift key to constrain the movement. Drag it up until it looks something like you see in the figure. Release the mouse button and then the Shift key.
- 8 Choose Object > Ungroup and the Select > Deselect.
- 9 Press Command++ (Mac OS) or Ctrl++ (Windows) once to zoom in to the artboard.



- 10 Select the gray square beneath the "N1" text. Select the Shear tool () , nested within the Scale tool () in the Tools panel. Position the pointer above the shape; press the Shift key and drag to the left. The Shift key constrains the artwork to its original width.

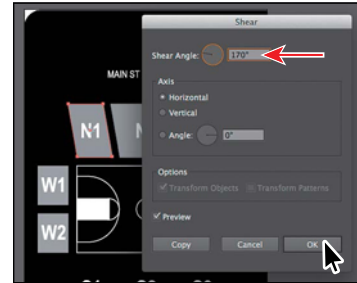
If you were shearing a single object and precision didn't matter, you could leave the object as is. But this artwork requires the shapes beneath "N1" and "N3" to have the same shearing applied.

- 11 Choose Edit > Undo Shear.

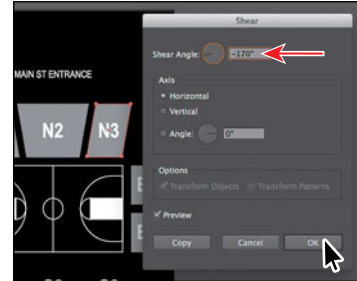




- 12** With the rectangle still selected, double-click the Shear tool. In the Shear dialog box, change the Shear Angle to **170**, select Preview, and click OK.

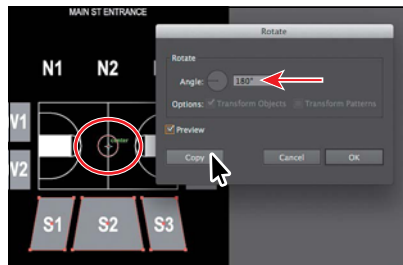


- 13** With the Selection tool, select the gray rectangle beneath the “N3” text. Double-click the Shear tool in the Tools panel and change the Shear Angle to **-170**, select Preview, and click OK. Leave the rectangle selected.



► **Tip:** You can also apply shear numerically in the Transform panel (Window > Transform) or in the Shear dialog box (Object > Transform > Shear).


- 14** Select the Selection tool, and with the Shift key pressed, select the gray rectangles behind the “N1” and “N2” text to select all three.
- 15** Choose Object > Group.
- 16** Select the Rotate tool (⌘) and position the pointer over the center of the circle below (circled in the figure). When the green word “center” appears, Option-click (Mac OS) or Alt-click (Windows). In the Rotate dialog box, change the Angle to **180** and click Copy.






- 17** Choose Object > Show All to show the basketball net you hid earlier.
- 18** Choose Select > Deselect, and then choose File > Save.



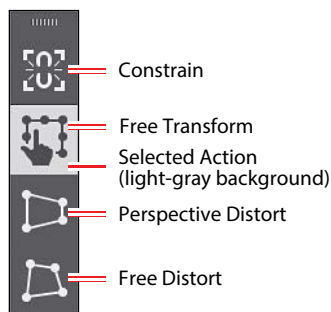
## Transforming with the Free Transform tool

The Free Transform tool () is a multipurpose tool that allows you to distort an object, combining functions like moving, scaling, shearing, rotating, and distorting (perspective or free). The Free Transform tool is also touch-enabled, which means you can control transformation using touch controls on certain devices. For more information on touch controls, see the sidebar at the end of this section.


● **Note:** To learn more about the options for the Free Transform tool, search for “Free Transform” in Adobe Help (Help > Illustrator Help).

- 1 Select the Selection tool () in the Tools panel. Press the Spacebar to access the Hand tool () temporarily. Drag up so you can see the basketball court artwork beneath the artboards.
- 2 Click to select the basketball court group, and then select the Free Transform tool () in the Tools panel.

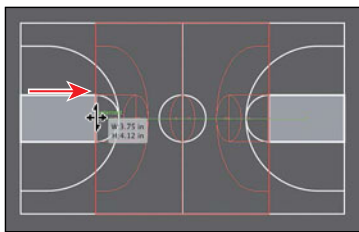
After selecting the Free Transform tool, the Free Transform widget appears in the Document window. This widget, which is free-floating and can be repositioned, contains options to change how the Free Transform tool works. By default, the Free Transform tool allows you to move, shear, rotate, and scale objects. By selecting other options, like Perspective Distort, you can change how the tool transforms content.



First, you'll change the width of the selected artwork using the Free Transform tool.

- 3 Position the pointer over the left middle point of the artwork bounding box, and the pointer changes its appearance ()<sup>+</sup>, indicating that you can shear or distort. Begin dragging to the right. As you drag, press the Option (Mac OS) or Alt (Windows) key to change both sides at once. Notice that you can't drag the artwork up or down—the movement is constrained to horizontal by default. When a width of *approximately* 3.7 in shows in the measurement label, release the mouse button and then the key.

● **Note:** If you were to drag the side bounding point up first to distort the artwork by shearing, the movement wouldn't be constrained and you could move in any direction.

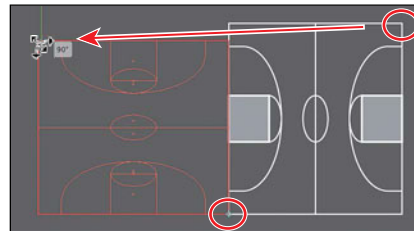


Next, you will rotate with the Free Transform tool around a specific point.

► **Tip:** You can also drag the reference point to a location. You can double-click the reference point to reset its position.

- 4 Position the pointer over the lower-left corner and double-click when the pointer looks like this (⌘).

This moves the reference point and ensures that the artwork will rotate around it. Press the Shift key and drag the upper-right corner in a counterclockwise fashion until you see 90° in the measurement label. Release the mouse button and then the Shift key.

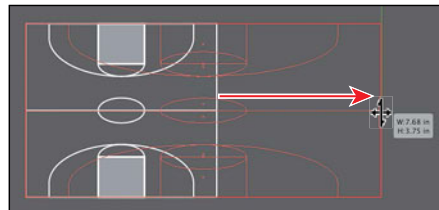


● **Note:** If you find that, by trying to rotate, you are instead scaling, stop dragging and choose Edit > Undo Scale and try again.

● **Note:** The Constrain option cannot be selected when the Perspective Distort option is selected.

Like other transform tools, by holding down the Shift key while dragging with the Free Transform tool, you can constrain the movement for most of the transformations. If you don't want to hold down the Shift key, you can also select the Constrain option in the Free Transform widget before transforming, to constrain movement automatically. After dragging, the Constrain option is deselected.

- 5 Position the pointer over the right middle point of the artwork bounding box, and drag to the right. Drag until a width of approximately 7.7 in shows in the measurement label.

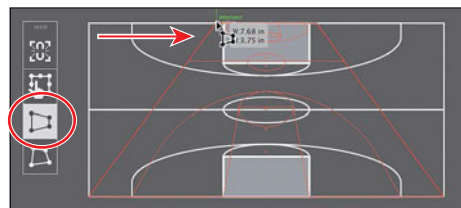


- 6 With the Free Transform tool still selected, click the Perspective Distort option in the Free Transform widget (circled in the figure below).

With this option selected, you can drag a corner point of the bounding box to distort the perspective.

● **Note:** The Free Distort option of the Free Transform tool (⌘) allows you to freely distort the selected content by dragging one of the corner bounding points.

- 7 Position the pointer over the upper-left corner of the bounding box, and the pointer changes in appearance (⌘). Drag to the right until it looks like the figure.



- 8 Change the Opacity to 60% in the Control panel.
- 9 Press Command+– (Mac OS) or Ctrl+– (Windows) several times to zoom out, until you see the artboard with the basketballs on it.

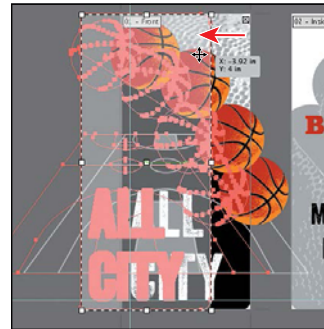
- 10** Select the Selection tool and drag the artwork onto the artboard similar to what you see in the figure.

**Note:** If the artwork appears on top of the text, choose Object > Arrange > Send To Back as many times as necessary to arrange it behind the text.



- 11** Select the Artboard tool (⇧) in the Tools panel. Drag the 1 Front artboard to the left until the basketball court is no longer overlapping the artboard to the right.

**Note:** When you drag an artboard with content on it, the art moves with the artboard, by default. If you want to move an artboard but not the art on it, select the Artboard tool (⇧) and then click to deselect Move/Copy Artwork With Artboard (☐) in the Control panel.



**Tip:** You could also simply mask the content that is outside of the artboard. You will learn about clipping masks in Lesson 14, "Using Illustrator CC with Other Adobe Applications."

- 12** Choose View > Fit All In Window and then choose Choose File > Save.

## The Free Transform tool and touch-enabled devices

In Illustrator CC, the Free Transform tool is touch-enabled. This means that, if you are using either a Windows 7- or 8-based touchscreen PC or a Touchscreen device like Wacom Cintiq 24HD Touch, you can utilize certain touch-enabled features.

Here are a few noteworthy examples:

- You can touch and drag from the center of an object and move the reference point.
- Double tapping on any of the corner points moves the reference point for the object to that point.
- Double tapping on the reference point resets it to the default position (if it's not already there).
- To constrain movement, you can tap the Constrain option in the widget before transforming.

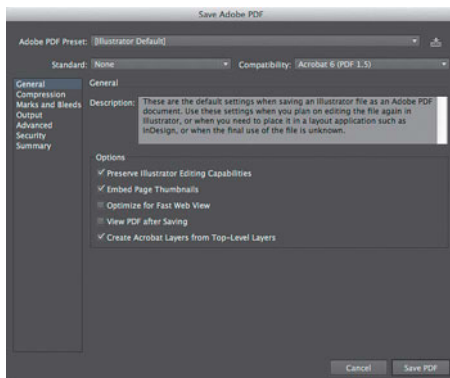
# Creating a PDF

Portable Document Format (PDF) is a universal file format that preserves the fonts, images, and layout of source documents created on a wide range of applications and platforms. Adobe PDF is the standard for the secure, reliable distribution and exchange of electronic documents and forms around the world. Adobe PDF files are compact and complete, and can be shared, viewed, and printed by anyone with free Adobe Reader® software.

You can create different types of PDF files from within Illustrator. You can create multipage PDFs, layered PDFs, and PDF/x-compliant files. Layered PDFs allow you to save one PDF with layers that can be used in different contexts. PDF/X compliant files ease the burden of color, font, and trapping issues in printing. Next, you will save this project as a PDF so that you can send it to someone else to view.

- 1 Choose File > Save As. In the Save As dialog box, choose Adobe PDF (pdf) from the Format menu (Mac OS) or Adobe PDF (\*.PDF) from the Save As Type menu (Windows). Navigate to the Lessons > Lesson04 folder, if necessary. Notice that you have the option, at the bottom of the dialog box, to save all of the artboards in the PDF or a range of artboards. Click Save.
- 2 In the Save Adobe PDF dialog box, click the Adobe PDF Preset menu to see all of the different PDF presets available. Ensure that [Illustrator Default] is chosen and click Save PDF.

● **Note:** If you want to learn about the options and other presets in the Save Adobe PDF dialog box, choose Help > Illustrator Help and search for “Creating Adobe PDF files.”








There are many ways that you can customize the creation of a PDF. Creating a PDF using the [Illustrator Default] preset creates a PDF in which all Illustrator data is preserved. PDFs created with this preset can be reopened in Illustrator without any loss of data. If you are planning on saving a PDF for a particular purpose, such as viewing on the Web or printing, you may wish to choose another preset or adjust the options.

- 3 Choose File > Save, if necessary, and then choose File > Close.

## Review questions

- 1 Name two ways to change the size of an existing active artboard.
- 2 How can you rename an artboard?
- 3 What is the *ruler origin*?
- 4 What is the difference between *artboard rulers* and *global rulers*?
- 5 Briefly describe what the Scale Strokes & Effects option does.
- 6 Name at least three transformations that can be applied with the Free Transform tool.

## Review answers

- 1 To change the size of an existing artboard, you can double-click the Artboard tool () and edit the dimensions of the active artboard in the Artboard Options dialog box. Select the Artboard tool, position the pointer over an edge or corner of the artboard, and drag to resize. Select the Artboard tool, click an artboard in the Document window, and change the dimensions in the Control panel.
- 2 To rename an artboard, you can select the Artboard tool () and click within the bounds of an artboard to select it. Then, change the name in the Name field in the Control panel. You can also double-click the name of the artboard in the Artboards panel () to rename it or click the Options button () in the Artboards panel to enter the name in the Artboard Options dialog box.
- 3 The ruler origin is the point where 0 (zero) appears on each ruler. By default, the ruler origin is set to be 0 (zero) in the top-left corner of the active artboard.
- 4 There are two types of rulers in Illustrator: artboard rulers and global rulers. Artboard rulers, which are the default rulers, set the ruler origin at the upper-left corner of the active artboard. Global rulers set the ruler origin at the upper-left corner of the first artboard, no matter which artboard is active.
- 5 The Scale Strokes & Effects option, found in the Transform panel (or in Illustrator > Preferences > General [Mac OS] or Edit > Preferences > General [Windows]), scales any strokes and effects as the object is scaled. This option can be turned on and off, depending on the current need.
- 6 The Free Transform tool () can perform a multitude of transformation operations, including move, scale, rotate, shear, and distort (perspective distort and free distort).

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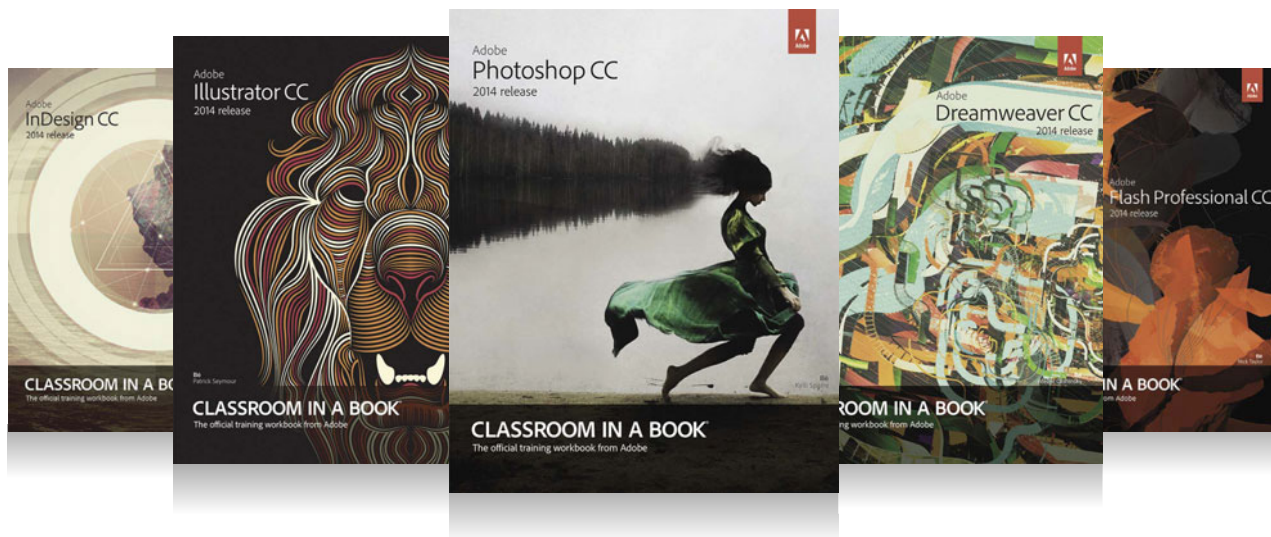
### Typefaces used

Adobe Myriad Pro and Adobe Warnock Pro are used throughout this book. For more information about OpenType and Adobe fonts, visit [www.adobe.com/type/opentype/](http://www.adobe.com/type/opentype/).

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