

14 WORKING WITH SYMBOLS

Lesson overview

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

- Work with existing symbols.
- Create a symbol.
- Modify and redefine a symbol.
- Use the Symbolism tools.
- Store and retrieve artwork in the Symbols panel.
- Work with symbols and Adobe Flash®.



This lesson takes approximately an hour to complete. If needed, remove the previous lesson folder from your hard disk and copy the Lesson14 folder onto it.



The Symbols panel lets you apply multiple objects by painting them on the page. Symbols used in combination with the Symbolism tools offer options that make creating repetitive shapes, such as blades of grass, easy and fun. You can also use the Symbols panel as a database to store artwork and to map symbols to 3D objects.

Getting started

In this lesson, you'll add symbols to a map. Before you begin, restore the default preferences for Adobe Illustrator. Then, open the file containing the finished artwork to see what you are going to create.

- 1 To ensure that the tools and panels function exactly as described in this lesson, delete or deactivate (by renaming) the Adobe Illustrator CS6 preferences file. See “Restoring default preferences” on page 3.
- 2 Start Adobe Illustrator CS6.

● **Note:** If you have not already done so, copy the Lesson14 folder from the Lessons folder on the *Adobe Illustrator CS6 Classroom in a Book CD* onto your hard disk. See “Copying the Classroom in a Book files” on page 2.

- 3 Choose File > Open, and open the L14end.ai file in the Lesson14 folder in the Lessons folder on your hard disk.

If you want to view the finished map as you work, choose View > Zoom Out and adjust the window size. Use the Hand tool (☞) to move the artwork where you want it in the window. If you don't want to leave the image open, choose File > Close.



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

● **Note:** In Mac OS, when opening lesson files, you may need to click the round, green button in the upper-left corner of the Document window to maximize the window's size.

- 4 Choose File > Open to open the L14start.ai file in the Lesson14 folder, located in the Lessons folder on your hard disk.

- 5 Choose File > Save As. In the Save As dialog box, name the file **map.ai** and navigate to the Lesson14 folder. Leave the Save As Type option set to Adobe Illustrator (*.AI) (Windows) or the Format option set to Adobe Illustrator (ai) (Mac OS), and click Save. In the Illustrator Options dialog box, leave the Illustrator options at their default settings and then click OK.



- 6 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.

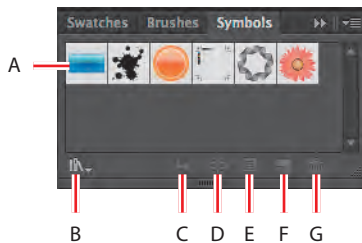
- 7 Double-click the Hand tool (☞) to fit the artboard in the window.

Working with symbols

A symbol is a reusable art object that is stored in the Symbols panel (Window > Symbols). For example, if you create a symbol from a fish you drew, you can then quickly add multiple instances of that fish symbol to your artwork, which saves you from having to draw each fish again. All instances of the fish symbol are linked to the associated symbol in the Symbols panel, so you can easily alter them using Symbolism tools.

When you edit the original symbol, all instances of the fish that are linked to it are updated. You can turn that fish from blue to green instantly! Not only do symbols save time, but they also greatly reduce file size. They can also be used to create SWF files or artwork for Adobe Flash.

- Click the Symbols panel icon (📁) on the right side of the workspace. Take a minute to familiarize yourself with the parts of the Symbols panel.



- A. Symbols
- B. Symbol Libraries Menu
- C. Place Symbol Instance
- D. Break Link To Symbol
- E. Symbol Options
- F. New Symbol
- G. Delete Symbol

● **Note:** The figure at left shows the Symbols panel with the map.ai file showing in the Document window.

Illustrator comes with a series of symbol libraries, which range from tiki icons to hair and fur. You can access the symbol libraries in the Symbols panel or by choosing Window > Symbol Libraries.

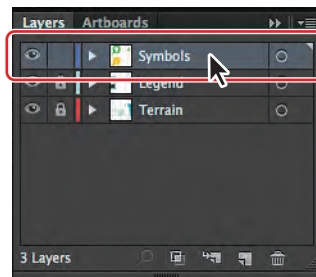
Using existing Illustrator symbol libraries

You will start by adding a symbol from an existing symbol library to the artwork.

- 1 Choose View > Smart Guides to deselect Smart Guides.
- 2 Click the Layers panel icon (📁) on the right side of the workspace to expand the Layers panel. Click the Symbols layer to make sure it is selected. Make sure that all of the layers are collapsed by clicking the triangles to the left of the layer names.

When adding symbols to a document, which layer is selected when they are added is the layer they become a part of.

- 3 Click the Symbols panel icon (📁) on the right side of the workspace to expand the panel.



- 4 In the Symbols panel, click the Symbol Libraries Menu button (☰) at the bottom of the panel and choose Maps. The Maps library opens as a free-floating panel.

This library is external to the file that you are working on, but you can import any of the symbols into the document and use them in the artwork.



► **Tip:** If you want to see the symbol names rather than the symbol pictures, choose Small List View or Large List View from the Symbols panel menu (☰).

- 5 Position the pointer over the symbols in the Maps panel to see their names as tool tips. Click the Rest Area symbol to add it to the Symbols panel for the document. Close the Maps panel.



Every document has a default set of symbols in the Symbols panel. When you add symbols to the panel, as you just did, they are saved with the active document only.

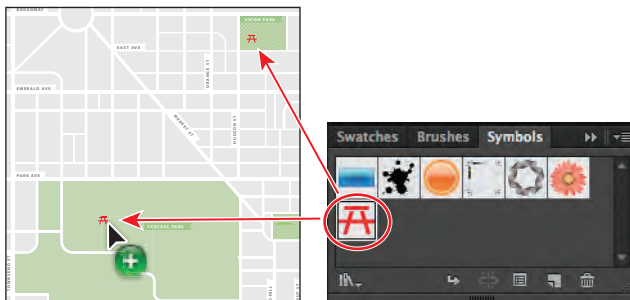
- 6 Using the Selection tool (⬚), drag the Rest Area symbol from the Symbols panel into the UNION PARK area (smaller green area) on the artboard. Drag another into the CENTRAL PARK (larger green area) on the artboard, and leave it selected.

Each time you drag a symbol onto the artboard, an instance of the Rest Area symbol is created. Next, you will resize one of the symbol instances on the page.

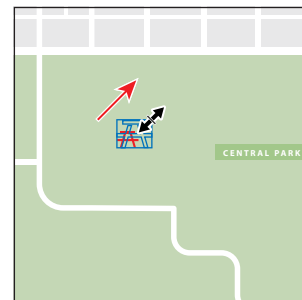
● **Note:** Although you can transform symbol instances in many ways, specific properties of instances cannot be edited. For example, the fill color is locked because it is controlled by the original symbol in the Symbols panel.

► **Tip:** You can also copy a symbol instance on the artboard and paste as many as you need. This is the same as dragging a symbol instance out of the Symbols panel onto the artboard.

- 7 Using the Selection tool and holding down the Shift key, drag the upper-right corner of the Rest Area symbol instance in the CENTRAL PARK area, up and to the right, to make it a little larger, while constraining its proportions. Release the mouse button and then the modifier key.



Drag symbol instances onto the artboard.



Resize a symbol instance.

● **Note:** The pointer that you see when dragging a symbol from the Symbols panel into the Document window may look different, and that's okay.

With the symbol instance selected on the artboard, notice that, in the Control panel, you see the word “Symbol” and symbol-related options.

Next, you will edit the Rest Area symbol so that both instances are affected. There are several ways to edit a symbol, and in this section we will focus on one.

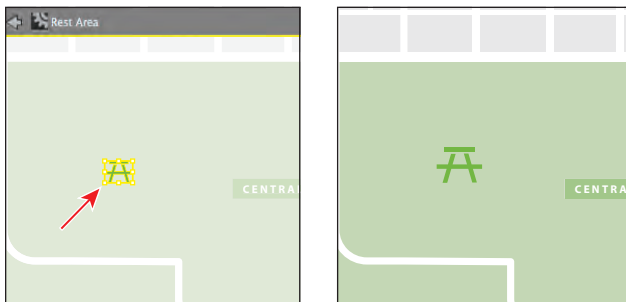
- 8 With the Selection tool (⬇️), double-click the Rest Area symbol instance in the CENTRAL PARK area on the artboard.

A warning dialog box appears, stating that you are about to edit the original symbol and that all instances will update. Click OK to continue. This takes you into Symbol Editing mode, so you can’t edit any other objects on the page.

► **Tip:** Another way to edit a symbol is to select the symbol instance on the artboard and then click the Edit Symbol button in the Control panel.

The Rest Area symbol instance you double-clicked appears to change in size. That’s because you are looking at the original symbol, not at the resized symbol instance on the page. You can now edit the shapes that make up the symbol.

- 9 Select the Zoom tool (🔍), and draw a marquee around the symbol instance in the CENTRAL PARK area to zoom in to it.
- 10 Select the Selection tool and click to select any of the red shapes that make up the picnic bench.
- 11 In the Control panel, change the Fill color to the swatch named Local Green.
- 12 With the Selection tool, double-click away from the Rest Area content or click the Exit Symbol Editing Mode button (⬅️) in the upper-left corner of the artboard until you exit Symbol Editing mode so that you can edit the rest of the content.



- 13 Choose View > Fit Artboard In Window, and notice that both Rest Area instances on the artboard now have a green fill.
- 14 Choose File > Save, and leave the document open.

Creating symbols

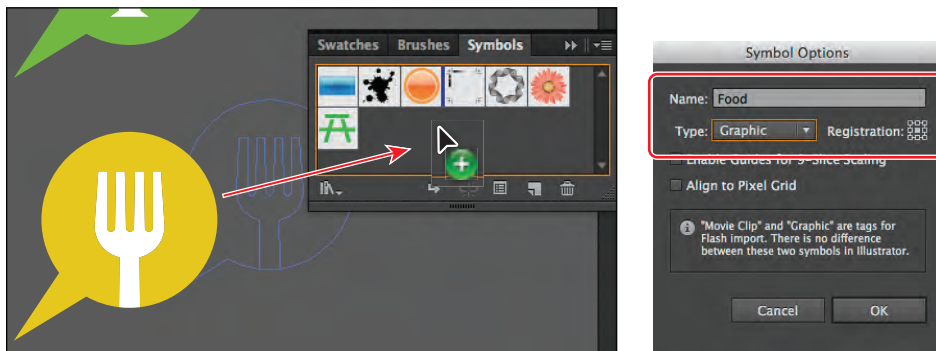
● **Note:** You can only use placed art that is embedded (not linked) to create a symbol.

Illustrator also lets you create your own symbols. You can make symbols from objects, including paths, compound paths, text, raster images, mesh objects, and groups of objects. Symbols can even include active objects, such as brush strokes, blends, effects, or other symbol instances. Now, you will create your own symbol from existing artwork.

- 1 Choose View > symbol content. This takes you to a zoomed in view off the right side of the artboard.
- 2 With the Selection tool (M), drag a marquee across the yellow fork content to select it. Drag the selected content into a blank area of the Symbols panel.
- 3 In the Symbol Options dialog box, change the name to **Food** and select Graphic as the Type. Click OK to create the symbol.

▶ **Tip:** By default, the selected artwork becomes an instance of the new symbol. If you don't want the artwork to become an instance of the symbol, press the Shift key as you create the new symbol.

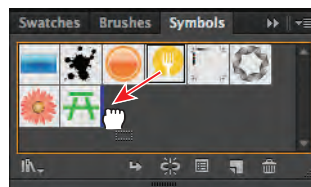
In the Symbol Options dialog box, you will see a note that explains that there is no difference between a Movie Clip and a Graphic Type in Illustrator, so if you do not plan on exporting this content to Adobe Flash, you don't need to worry about the Type.



● **Note:** If you are creating artwork for use on the web or for screen display, you can select Align To Pixel Grid in the Symbol Options dialog box to align the instances to the pixel grid. To learn more about the pixel grid, see Lesson 13, "Applying Appearance Attributes and Graphic Styles."

After creating the Food symbol, the original fork group off the right edge of the artboard is converted to an instance of the Food symbol. You can leave it there or delete it, it's up to you.

- 4 If it isn't already there, drag the Food symbol icon to the right of the Rest Area to change the order of the symbols in the panel.
Reordering symbols in the Symbols panel has no effect on the artwork. It can be a way to organize your symbols.
- 5 Choose File > Save.



Symbol Options

In the Symbol Options dialog box, you will encounter several options that are related to working with Adobe Flash. These options are briefly described below and will be addressed more fully later in this lesson.

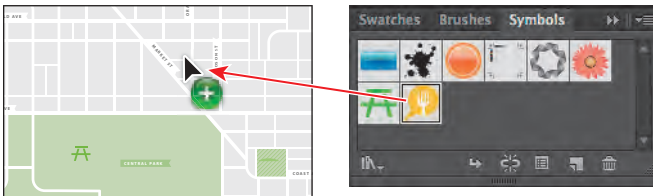
- Select Movie Clip for type. Movie Clip is the default symbol type in Flash and in Illustrator.
- Specify a location on the Registration grid where you want to set the symbol's anchor point. The location of the anchor point affects the position of the symbol within the screen coordinates.
- Select Enable Guides For 9-Slice Scaling if you want to utilize 9-Slice scaling in Flash.

—From Illustrator Help

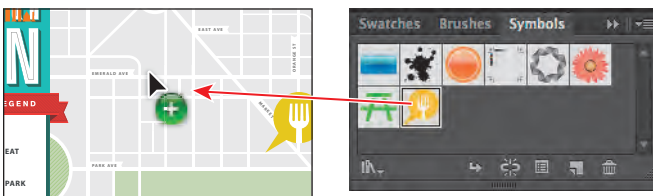
Editing a symbol

In this next section, you will add several instances of the Food symbol to the artwork. Then, you will edit the symbol in the Symbols panel and all instances will be updated.


- 1 Choose View > Fit Artboard In Window.
- 2 Using the Selection tool (⬚), drag an instance of the Food symbol (the yellow fork) from the Symbols panel to just to the right of the MARKET ST label in the middle of the artboard.

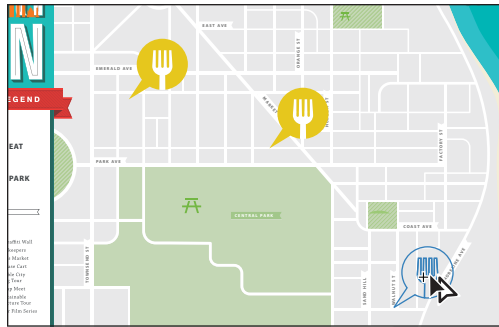


- 3 Drag another instance of the Food symbol from the Symbols panel just to the right of the EMERALD AVE label. See the figure for placement.



Next, you will learn how to add more instances of a symbol that's already on the artboard, using a modifier key.

- 4 With the Selection tool () , press the Alt (Windows) or Option (Mac OS) key and drag one of the Food symbol instances already on the artboard to create a copy of the instance. Drag it to the right of the WALNUT ST label. When the new instance is in position, release the mouse button and then the modifier key.



- 5 Create four more copies by pressing the Alt (Windows) or Option (Mac OS) key and dragging one of the Food symbol instances. Drag them to the right of the EAST AVE, PARK AVE, COAST AVE, and FACTORY ST labels.




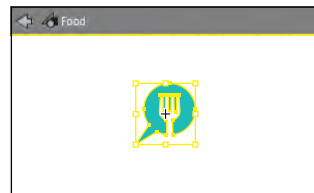
You should now have a total of seven Food symbol instances on the artboard.

- 6 In the Symbols panel, double-click the Food symbol to edit it. A temporary instance of the symbol appears in the center of the Document window.

Editing a symbol by double-clicking the symbol in the Symbols panel hides all artboard content except the symbol. This is just another way to edit a symbol.

- 7 Press Ctrl++ (Windows) or Command++ (Mac OS) several times to zoom in.

- 8 With the Direct Selection tool () , click to select the yellow shape. Change the Fill color to the swatch named New Local Blue in the Control panel.

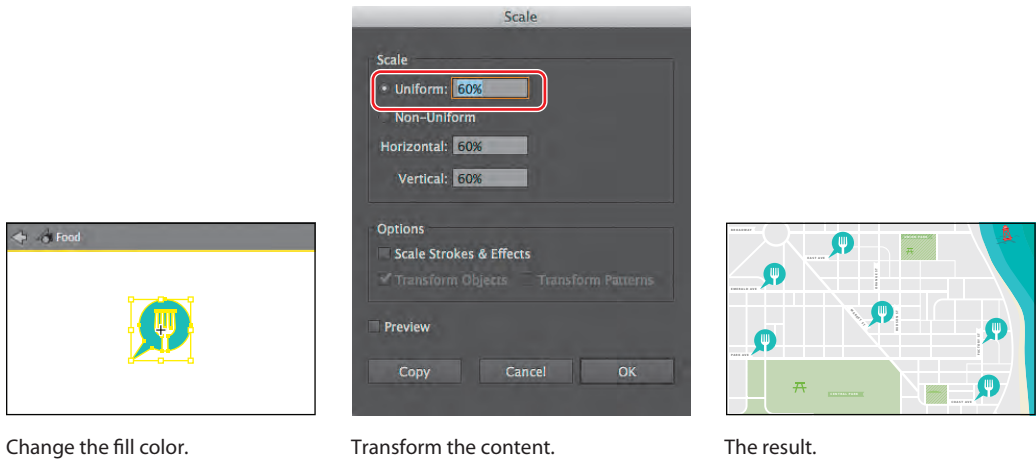


Since the fork content is grouped, selecting with the Direct Selection tool lets you select a shape within the group.

- 9 Choose Select > All, or drag across the shapes with the Selection tool.
- 10 Choose Object > Transform > Scale. In the Scale dialog box, change the Uniform Scale to **60%** and then click OK.

This allows you to scale all of the symbol instances at once, rather than having to scale each individually. You could make other changes to the symbol artwork in a similar manner.

- 11 Double-click outside the symbol instance artwork on the artboard, or click the Exit Symbol Editing Mode button (⏪) in the upper-left corner of the artboard to see all of the artwork.
- 12 Press Ctrl+0 (Windows) or Command+0 (Mac OS) to fit the artboard in the window.
- 13 With the Selection tool, drag the Food instances closer to the street labels.



As you saw earlier, when you double-click an instance of a symbol on the artboard, you edit it in place. By double-clicking a symbol in the Symbols panel, the rest of the artwork is hidden and the symbol appears in the center of the Document window. You can use whichever method suits your workflow.

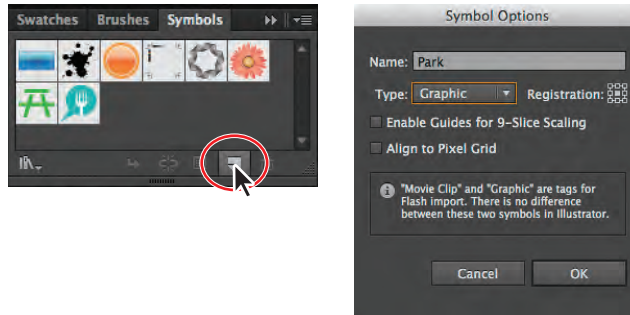
- 14 Choose File > Save.

Replacing symbols

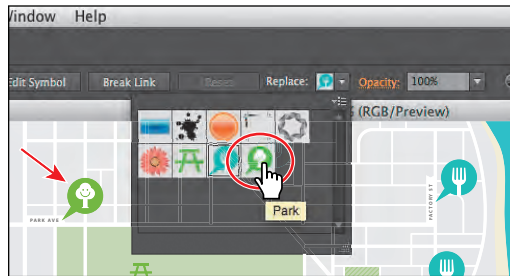
Next, you will create a symbol from some other shapes and then replace a few of the Food symbol instances with the new symbol.

- 1 Choose View > symbol content.
- 2 With the Selection tool (⏶), select the green group of shapes with the smiley face (not the two trees).

- 3 Choose Object > Transform > Scale. In the Scale dialog box, change the Uniform Scale to **60%**, if it's not already 60, and then click OK.
- 4 At the bottom of the Symbols panel, click the New Symbol button (📄). In the Symbol Options dialog box, change the name to **Park** and the Type to Graphic. Click OK.



- 5 Choose View > Fit Artboard In Window.
- 6 With the Selection tool, select the Food instance to the right of the PARK AVE label on the artboard. In the Control panel, click the arrow to the right of the Replace Instance With Symbol field to open a panel showing the symbols in the Symbols panel. Click the Park symbol in the panel.



- 7 Choose Select > Deselect.
- 8 With the Selection tool, select the Food instance to the right of the COAST AVE label on the artboard. In the Control panel, click the arrow to the right of the Replace Instance With Symbol field to open a panel showing the symbols in the Symbols panel. Click the Park symbol in the panel.
- 9 With the COAST AVE Park symbol instance still selected, choose Select > Same > Symbol Instance.

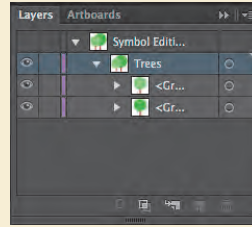
This is a great way to select all instances of a symbol in the document. Notice that it also selects the original symbol instance off the right side of the artboard.

- 10 Choose Object > Group, and then File > Save. Keep the file open.

Symbol layers

When you edit a symbol using any of the methods described, open the Layers panel and you will see that the symbol has its own layering.

Similar to working with groups in Isolation mode, you see the layers associated with that symbol only, not the document's layers. In the Layers panel, you can rename, add, delete, show/hide, and reorder content for a symbol.



Breaking a link to a symbol

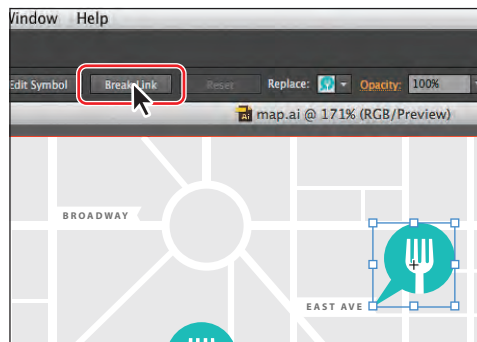
At times, you will need to edit specific instances on the artboard but not all of them. Because you can only make changes to a symbol instance like scaling, opacity, flipping, and more, you may need to break the link between a symbol and an instance. This breaks the instance into the original objects or group, if the symbol content was originally grouped, on the artboard.

Next, you will break the link to one of the Food instances.

- 1 With the Selection tool (☞) selected, click to select the Food symbol instance to the right of the EAST AVE label on the artboard. In the Control panel, click the Break Link button.

This object is now a series of paths, as indicated by the word “Path” on the left side of the Control panel. You should be able to see the anchor points of the shapes. This content will no longer update if the Food symbol is edited.

- 2 Select the Zoom tool (🔍), and drag a marquee across the selected content to zoom in.
- 3 Choose Select > Deselect. Select the Direct Selection tool (☞), and then click the aqua shape.
- 4 Change the Fill color to the swatch named Mid Gray in the Control panel.
- 5 Choose Select > Deselect and then File > Save.

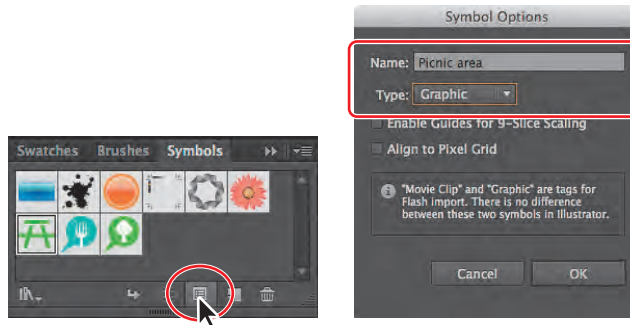


► **Tip:** You can also break the link to a symbol instance by selecting the symbol instance on the artboard and then clicking the Break Link To Symbol button (🔗) at the bottom of the Symbols panel.

Editing symbol options

Using the Symbols panel, you can easily rename or change other options for a symbol, which then updates all the symbol instances in the artwork. Next, you will rename the Rest Area symbol.

- 1 Choose View > Fit Artboard In Window.
- 2 In the Symbols panel, make sure that the Rest Area symbol is selected. Click the Symbol Options button (☰) at the bottom of the Symbols panel.
- 3 In the Symbol Options dialog box, change the name to **Picnic area** and the Type to Graphic. Click OK.





Working with the Symbolism tools

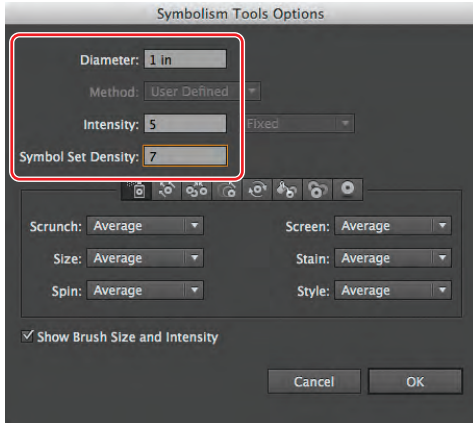
The Symbol Sprayer tool (☼) in the Tools panel allows you to spray symbols on the artboard, creating symbol sets. A symbol set is a group of symbol instances that you create with the Symbol Sprayer tool. This can be really useful if, for instance, you were to create grass from individual blades of grass. Spraying the blades of grass speeds up this process greatly and makes it much easier to edit individual instances or the sprayed grass as a group. You can create mixed sets of symbol instances by using the Symbol Sprayer tool with one symbol and then using it again with another symbol.

Spraying symbol instances

Next, you will save several trees as a symbol and then use the Symbol Sprayer tool to apply those trees to your illustration.

- 1 Choose View > symbol content.
- 2 With the Selection tool (⌘), drag across the two tree shapes to select them.
- 3 Drag the trees group into the Symbols panel. In the Symbol Options dialog box, change the name to **Trees** and the Type to Graphic. Click OK.
- 4 Choose Select > Deselect, and then choose View > Fit Artboard In Window.

- 5 Select the Symbol Sprayer tool () in the Tools panel. Make sure the Trees symbol is selected in the Symbols panel.
- 6 Double-click the Symbol Sprayer tool () in the Tools panel. In the Symbolism Tools Options dialog box, change the Diameter to **1 in** and the Intensity to **5**, if they aren't already, and change the Symbol Set Density to **7**. Click OK.



● **Note:** A higher intensity value increases the rate of change—the Symbol Sprayer tool sprays more and faster. The higher the symbol set density value, the more tightly packed the symbols are as you spray them. If you were to spray grass, for instance, you would want the intensity and density set high.

- 7 Position the pointer over the CENTRAL PARK label, and click and drag from left to right and from right to left with the Symbol Sprayer, much like using an airbrush or a can of spray paint, to create trees in the park. Release the mouse button when you see some trees on the artboard, like in the figure.

► **Tip:** Make sure to keep moving the pointer. If you don't like the results, you can choose Edit > Undo Spraying and try again.

Notice the bounding box around the Trees symbol instances, identifying it as a symbol set. As you spray, the instances are grouped together as a single object. If a symbol set is selected when you begin to spray with the Symbol Sprayer tool, the symbol instances that you are spraying are added to the selected symbol set. You can easily delete an entire symbol set by selecting it and then pressing the Delete key.



Spray the symbols.



The result.

- 8 Choose Select > Deselect.
- 9 Position the Symbol Sprayer pointer over the trees you just created. Click and drag to add more trees.

Notice that after releasing the mouse button, you see a bounding box around only the new symbol set. To add symbol instances to an existing symbol set, you must first select the set.



- 10 With the new symbol set selected, press Delete or Backspace to delete it.
- 11 With the Selection tool, click to select the first Trees symbol set you created.

► **Tip:** If you don't like the placement of a tree, you can choose Edit > Undo Spraying to remove the instances you sprayed in the previous click.

- 12 Select the Symbol Sprayer tool, and add more trees to the first symbol set. Try clicking and releasing, instead of clicking and dragging, to add one tree at a time.
- 13 Choose File > Save, and leave the symbol set selected.

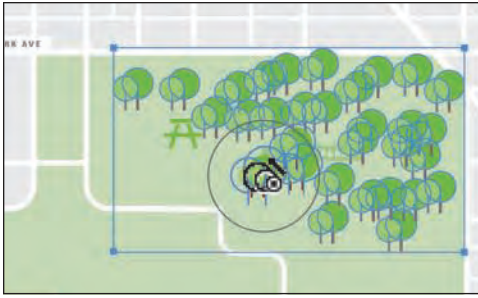


Editing symbols with the Symbolism tools

Besides the Symbol Sprayer tool, there is a series of Symbolism tools that allow you to edit the size, color, rotation, and more of the instances within a symbol set. In the next steps, you will edit the trees in the Trees symbol set using the Symbolism tools in the Tools panel.

- 1 With the Trees symbol set and the Symbol Sprayer tool (☞) still selected, position the pointer over one of the tree instances. Press the Alt (Windows) or Option (Mac OS) key, and click to delete one of the instances in the set.
- 2 Select the Symbol Sizer tool (☞) from the Symbol Sprayer tool (☞) group in the Tools panel. Double-click the Symbol Sizer tool, and change the Intensity to 3 in the Symbolism Tools Options dialog box. Click OK.
- 3 Position the pointer over some of the trees, and click the mouse button to increase the size of some of the trees. In another area of trees, press the Alt (Windows) or Option (Mac OS) key while you are using the Symbol Sizer tool to reduce the size of the selected symbol set. Make some of the trees smaller than the rest, varying the sizes.

► **Tip:** If the Symbol Sizer tool is sizing too quickly, double-click the Symbol Sizer tool in the Tools panel and try lowering the Intensity and Density values in the Symbolism Tools Options dialog box.



Resize some of the trees.



The result.

Now, you will reposition some of the trees in the symbol set.

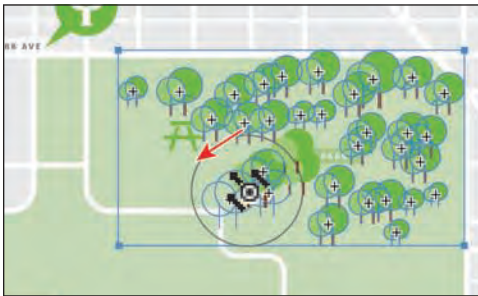
- 4 Select the Symbol Shifter tool (⌘) from the Symbol Sizer tool group. Double-click the Symbol Shifter tool. In the Symbolism Tools Options dialog box, change the Intensity to 8, and then click OK.

The higher the Intensity, the further you can move the symbol instances.

- 5 Position the pointer over a tree in the selected symbol set, and then drag left or right to move it. Drag the trees away from the CENTRAL PARK label so that you can see the whole thing.

The more you move the pointer, the further you can drag instances. The trees you see in your symbol set may be arranged differently than in the figures and that's okay.

Tip: The circle (diameter setting) around the Symbolism tools pointers indicates that any symbol instances within that circle will be affected. Press the left bracket key ([) or right bracket key (]) to change the brush diameter.



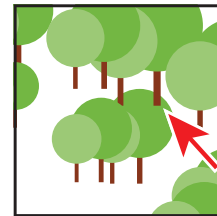
Drag the trees.



The result.

You may notice that, as you drag, some of the trees that should be behind other trees are actually on top of them.

Next, you will fix this with the Symbol Shifter tool.



► **Tip:** Shift+Alt-click (Windows) or Shift+Option-click (Mac OS) to send a tree behind.

You may want to zoom in to the symbol set for the next steps.

- 6 With the Symbol Shifter tool selected, press the left bracket key ([) a few times to decrease the diameter. Make sure that the circle surrounding the pointer (that indicates the diameter) isn't much bigger than a tree. Shift-click one of the trees that should be in front to bring it to the front.



Change the stacking order of instances.



The final result.

- 7 Select the Symbol Stainer tool (🖌️) from the Symbol Shifter tool group in the Tools panel. With the symbol set still selected, position the pointer over the symbol set. Press the right bracket key (]) several times to increase the size of the brush.

► **Tip:** The longer you press the mouse button, the more stained they become. Try quickly tapping the mouse button.

- 8 Change the Fill color in the Control panel to New Local Yellow, and begin clicking on trees in the symbol set to change their color.

You can always choose Edit > Undo Staining, if you don't like how it's affecting the trees, or Alt-click (Windows) or Option-click (Mac OS) to decrease the amount of colorization.


► **Tip:** There are lots of Symbolism tools for you to experiment with, including the Symbol Styler tool (🎨), which allows you to apply graphic styles to symbol instances in the symbol set. To learn more about the different types of Symbolism tools available, search for "symbolism tool gallery" in Illustrator Help (Help > Illustrator Help).

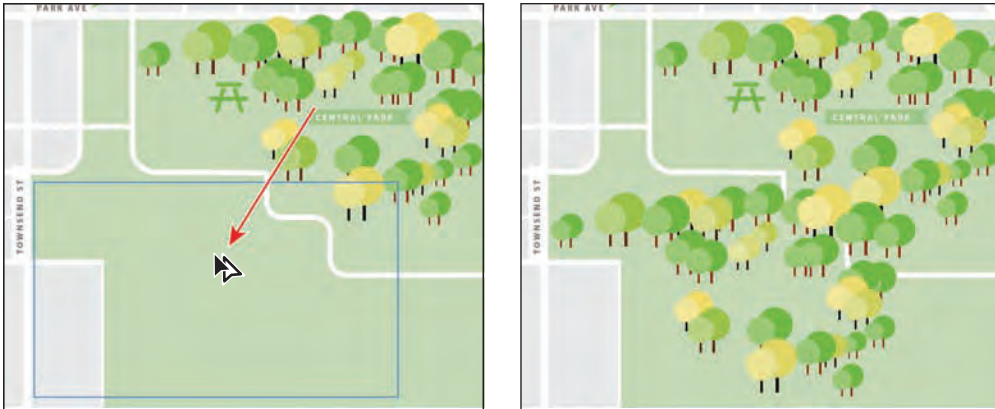
- 9 Choose Select > Deselect, and then choose File > Save.

Copying and editing symbol sets


A symbol set is treated as a single object. In order to edit the instances in it, you use the Symbolism tools in the Tools panel, as you've already seen. You can, however, duplicate symbol instances and use the Symbolism tools to make the duplicates look different.

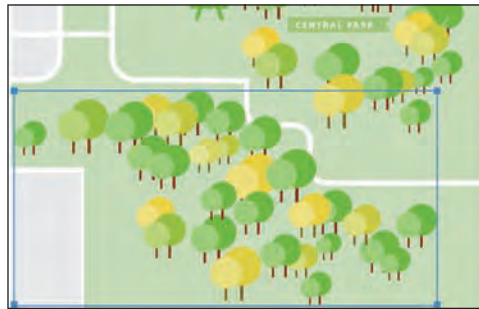
Next, you will duplicate the Trees symbol set.

- 1 Select the Selection tool () , and click to select the Trees symbol set.
- 2 Press the Alt (Windows) or Option (Mac OS) key, and drag a copy of the instances down and to the left, into the lower-left part of the CENTRAL PARK green area. When it is in position (see the figure), release the mouse button and then the modifier key.



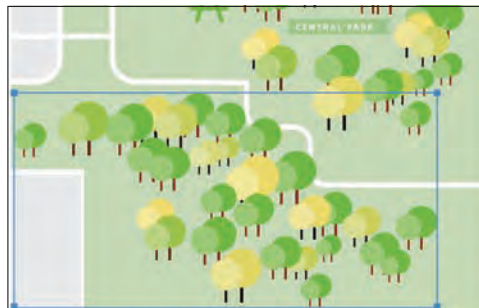
● **Note:** There are many transformations that you can make to a symbol set. You can also drag a point in the bounding box of a symbol set with the Selection tool to resize it.

- 3 Select the Symbol Shifter tool () from the Symbol Stainer tool group. Double-click the Symbol Shifter tool, and change the Intensity to 9. Click OK. Drag the trees in the symbol set so that they fit within the green park area, as you see in the figure.



You can change the diameter by pressing the left bracket ([) key or right bracket (]) key. This will help you move more or fewer trees.

- 4 With the Symbol shifter tool, Shift-click the trees that should be in front, to bring them to the front. Shift+Alt-click (Windows) or Shift+Option-click (Mac OS) to send a tree behind.
- 5 Choose Select > Deselect.
- 6 Choose File > Save.



Storing and retrieving artwork in the Symbols panel

● **Note:** Symbol libraries are saved as Adobe Illustrator (.ai) files.

Saving frequently used logos or other artwork as symbols lets you access them quickly. Unfortunately, symbols you create in one document are not accessible by default in another document. In this next part of the lesson, you will take symbols that you've created and save them as a new symbol library that you can share with other documents or users.

- 1 In the Symbols panel, click the Symbol Libraries Menu button (📁) at the bottom and then choose Save Symbols.

● **Note:** When saving symbols as a separate library, the document that contains the symbols that you want to save should be open and active in the Document window.

- 2 In the Save Symbols As Library dialog box, choose a location, such as your Desktop, to place the symbol library file. Name the library file **map_symbols.ai**. Click Save.

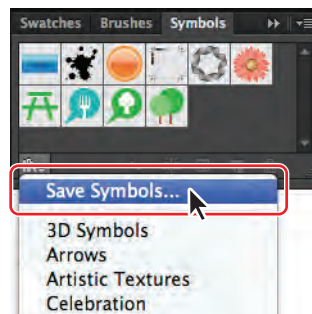
● **Note:** When you first open the Save Symbols As Library dialog box, Illustrator takes you to the default Symbols folder, where you can store the libraries that you create. Illustrator recognizes any libraries stored here and lets you choose them from the Symbol Libraries menu later.

▶ **Tip:** If you save the library in the default folder, you can make subfolders and create a folder structure that suits you. You can then easily access them using the Symbol Libraries Menu button or by choosing Window > Symbol Libraries > User Defined > *your symbol library*.

- 3 Without closing the map.ai file, create a new document by choosing File > New. Leave the default settings, and then click OK.
- 4 In the Symbols panel, click the Symbol Libraries Menu button (📁) and choose Other Library at the bottom of the menu. Navigate to the folder where you saved the map_symbols.ai library, select it, and then click Open.

The map_symbols library appears as a free-floating panel in the workspace. You can dock it or leave it where it is. It stays open as long as Illustrator is open. When you close Illustrator, and then relaunch it, this panel does not reopen.

- 5 Drag any of the Symbols from the map_symbols library panel onto the artboard.
- 6 Choose File > Close, and do not save the new file.
- 7 Close the map_symbols library.
- 8 With the map.ai file open, choose File > Save, if necessary, and then File > Close.



Mapping a symbol to 3D artwork

You can apply 2D artwork stored as a symbol in the Symbols panel to selected surfaces on a 3D object. To learn about mapping symbols to 3D artwork, see Lesson 12, “Applying Effects.”

Working with symbols and Flash integration

Illustrator also provides excellent support for SWF and SVG file type export. When you export to Flash, you can set the symbol type to Movie Clip. In Adobe Flash, you can choose another type, if necessary. You can also specify 9-slice scaling in Illustrator so that the movie clips scale appropriately when used for user interface components.

You can move Illustrator artwork into the Flash editing environment or directly into the Flash Player. You can copy and paste artwork, save files as SWF, or export artwork directly to Flash. In addition, Illustrator provides support for Flash dynamic text and movie clip symbols.

The following is a generic symbol workflow in Illustrator:

- Step 1: Symbol creation
When you create a symbol in Illustrator, the Symbol Options dialog box lets you name the symbol and set the following options, specific to Flash: Movie Clip symbol type (which is the default for Flash symbols), Flash registration grid location, and 9-slice scaling guides. In addition, you can use many of the same symbol keyboard shortcuts in Illustrator and Flash, such as pressing F8 to create a symbol.
- Step 2: Isolation mode for symbol editing
- Step 3: Symbol properties and links
- Step 4: Static, dynamic, and input text objects

Next, you will create a button, save it as a symbol, and then edit the symbol options.

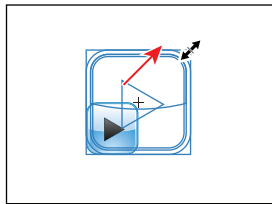
- 1 Choose Window > Workspace > Reset Essentials.
- 2 Choose File > New.
- 3 In the New Document dialog box, choose Web from the New Document Profile menu. Keep the rest of the options at their default settings, and then click OK.
- 4 Choose File > Save As. In the Save As dialog box, name the file **buttons.ai** and navigate to the Lesson14 folder. Leave the Save As Type option set to Adobe Illustrator (*.AI) (Windows) or the Format option set to Adobe Illustrator (ai) (Mac OS), and then click Save. In the Illustrator Options dialog box, leave the Illustrator options at their default settings and then click OK.
- 5 Choose Window > Symbol Libraries > Web Buttons And Bars.

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

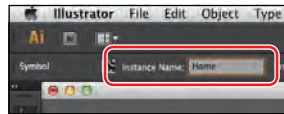
- 6 Choose Small List View from the Symbols panel menu (☰).
- 7 Drag the blue Bullet 4 - Forward symbol from the Web Buttons And Bars panel onto the artboard. Close the Web Buttons And Bars panel menu group.
- 8 With the Selection tool (☞), Shift-click the upper-right corner of the button and drag to make it roughly twice its original size, releasing the mouse button and then the key.
- 9 With the button still selected, change the Instance Name in the Control panel to **Home** and press Enter or Return.

The Instance Name is optional when working in Illustrator and is used to identify one symbol instance from another. Entering an instance name for each button is useful if you choose to import the Illustrator content to the stage in Flash (File > Import > Import To Stage).

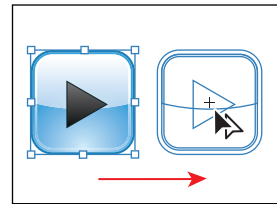
- 10 With the button selected, begin dragging it to the right. As you drag, press Shift+Alt (Windows) or Shift+Option (Mac OS) to create a copy. Release the mouse button first and then the modifier keys.
- 11 In the Control panel, change the Instance Name to **Info** and press Enter or Return.



Resize the symbol instance.



Name the instance.

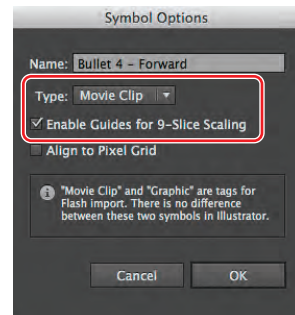


Duplicate the instance.

- 12 With one of the buttons still selected, click the Symbols panel icon (☰) to open the panel. Click the Symbol Options button (☰) at the bottom of the panel. Make sure that Movie Clip is chosen from the Type menu, select Enable Guides For 9-Slice Scaling, and then click OK.

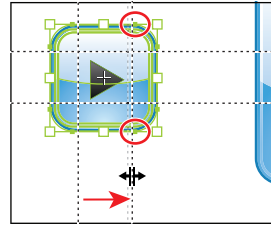
Next, you'll adjust the 9-slice scaling guides.

- 13 With the Selection tool, double-click the leftmost button to enter Isolation mode. When the warning dialog box appears, click OK.
- 14 Select the Zoom tool (🔍) in the Tools panel, and click three times on the leftmost button to zoom in. Choose Select > All.



Choosing Select > All allows you to see the anchor points in the shapes. When you adjust the 9-slice scaling guides, you want to try to position them to indicate the scalable part of the object (usually not the corners).

- 15 With the Selection tool, drag the rightmost dotted line to the right so that it lines up approximately with the anchor points (circled), as shown in the figure.

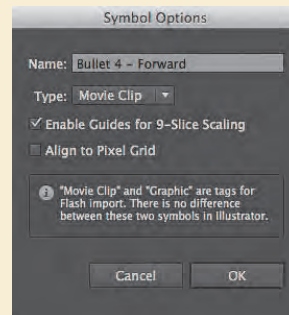


You can use 9-slice scaling (scale-9) to specify component-style scaling for graphic style and movie clip symbols. To maintain the visual integrity of the symbol, corners are not scaled, while the remaining areas of the image are scaled (as opposed to being stretched) larger or smaller, as needed.

- 16 With the Selection tool, double-click away from the buttons to exit Isolation mode.
- 17 Choose View > Fit Artboard In Window and then File > Save.

Understanding symbol options for Flash

Movie Clip: Use movie clip symbols to create reusable pieces of animation (in Flash). Movie clips have their own multiframe Timeline that is independent from the main Timeline—think of them as nested inside a main Timeline that can contain interactive controls, sounds, and even other movie clip instances. You can also place movie clip instances inside the Timeline of a button symbol to create animated buttons. In addition, movie clips are scriptable with ActionScript®.



Align to Pixel Grid: To create a pixel-aligned symbol, select the Align to Pixel Grid option from the Symbol Options dialog box. Symbols aligned to the pixel grid remain aligned to the pixel grid at all locations of the artboard, in their actual size.

9-slice scaling: You can use 9-slice scaling (scale-9) to specify component-style scaling for graphic style and movie clip symbols. This type of scaling lets you create movie clip symbols that scale appropriately for use as user interface components, as opposed to the type of scaling typically applied to graphics and design elements.

The symbol is conceptually divided into nine sections with a grid-like overlay, and each of the nine areas is scaled independently. To maintain the visual integrity of the symbol, corners are not scaled, while the remaining areas of the image are scaled (as opposed to being stretched) larger or smaller, as needed.

—From Illustrator Help

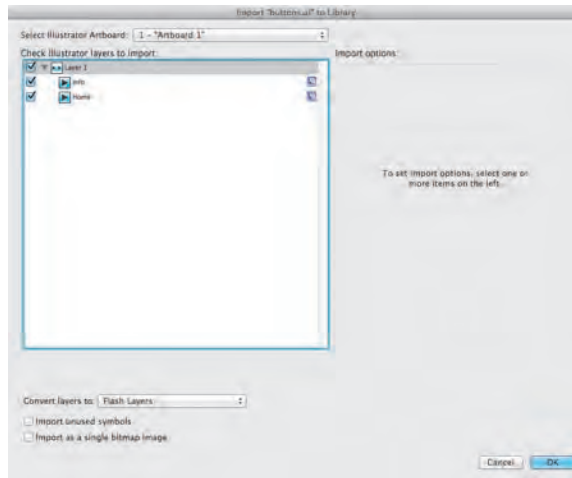
● **Note:** If you don't own Adobe Flash CS6, you can install a free trial version from Adobe.com for 30 days, here: <http://www.adobe.com/downloads/>

For the next section, you need to have Adobe Flash CS6 installed on your machine.

- 1 Open Adobe Flash CS6.
- 2 Choose File > New. In the New Document dialog box, make sure that the General tab is selected and that ActionScript 3.0 is also selected as the Type. Click OK.
- 3 Choose File > Import > Import To Library in Adobe Flash. Navigate to the buttons.ai file you just saved in Illustrator, and then click Open. The Import “buttons.ai” To Library dialog box appears.

In this dialog box, you can select which artboard to import, which layers to import, how to import the content, and more. The Import Unused Symbols option at the bottom of the dialog box brings all the symbols in the Illustrator Symbols panel into the Flash Library panel. This can be very useful if, for instance, you are developing a series of buttons for a site but they are not on the artboard in Illustrator.

- 4 Click OK.



- 5 Open the Library panel by clicking the Library panel tab on the right side of the workspace. Click the arrow to the left of the folder names to reveal the assets as well as the Bullet 4 - Forward symbol in the Illustrator Symbols folder.
- 6 Drag the Bullet 4 - Forward symbol onto the stage.
- 7 Choose File > Close to close the Flash file, and don't save changes. Close Flash, and return to Illustrator. Close all open files in Illustrator.

