

11

WORKING WITH BRUSHES

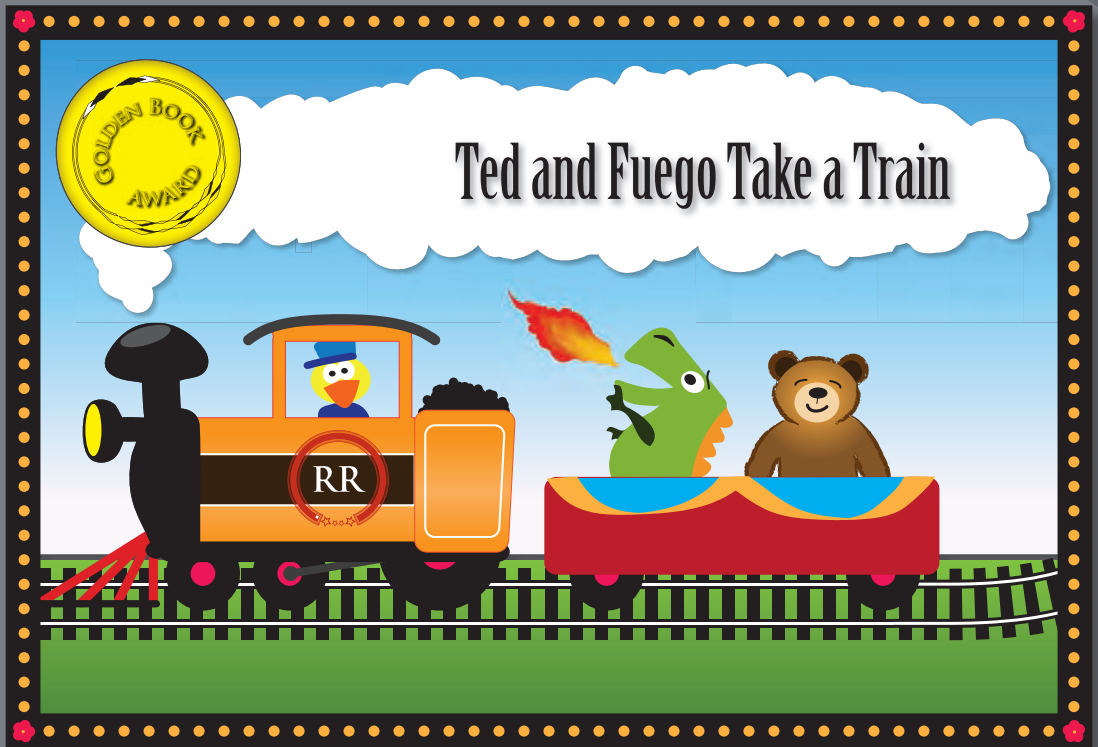
Lesson overview

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

- Use four brush types: Art, Calligraphic, Pattern, and Bristle.
- Apply brushes to paths created with drawing tools.
- Paint and edit paths with the Paintbrush tool.
- Change the brush color and adjust brush settings.
- Create new brushes from Adobe Illustrator artwork.
- Work with the Blob Brush tool and the Eraser tool.



This lesson takes approximately an hour to complete. If needed, remove the previous lesson folder from your hard disk and copy the Lesson11 folder onto it.



The variety of brush types in Adobe Illustrator CS6 lets you create a myriad of effects simply by painting or drawing using the Paintbrush tool or the drawing tools. You can work with the Blob Brush tool, choose from the Art, Calligraphic, Pattern, Bristle, and Scatter brushes, or create new brushes based on your artwork.

Getting started

In this lesson, you will learn how to work with the Blob Brush tool and the Eraser tool. You will also learn how to use four brush types in the Brushes panel and how to change brush options and create your own brushes. Before you begin, you'll restore the default preferences for Adobe Illustrator CS6. Then, you'll open the finished art file for the first part of this lesson to see the finished artwork.

- 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 Lesson11 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 L11end.ai file in the Lesson11 folder, located in the Lessons folder on your hard disk.
- 4 If you want, choose View > Zoom Out to make the finished artwork smaller and then adjust the window size and leave the artwork on your screen as you work. (Use the Hand tool [H]) to move the artwork to where you want it in the Document window.) If you don't want to leave the artwork 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.

- 5 Choose File > Open to open the L11start.ai file in the Lesson11 folder in the Lessons folder on your hard disk.
- 6 Choose View > Fit Artboard In Window.
- 7 Choose File > Save As. In the Save As dialog box, name the file **bookcover.ai** and select the Lesson11 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.



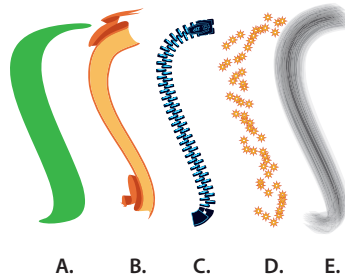
Working with brushes

Using brushes, you can decorate paths with patterns, figures, brush strokes, textures, or angled strokes. You can modify the brushes provided with Illustrator and create your own brushes.

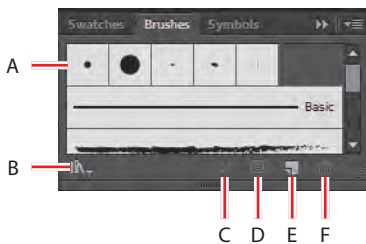
You can apply brush strokes to existing paths, or you can use the Paintbrush tool to draw a path and apply a brush stroke simultaneously. You can change the color, size, and other features of a brush, and you can edit paths after brushes are applied.

There are five types of brushes that appear in the Brushes panel (Window > Brushes): Calligraphic, Art, Pattern, Scatter, and Bristle. In this lesson, you will discover how to work with all of these except for the Scatter brush.

Types of brushes



- A. Calligraphic brush
- B. Art brush
- C. Pattern brush
- D. Scatter brush
- E. Bristle brush



- A. Brushes
- B. Brush Libraries Menu
- C. Remove Brush Stroke
- D. Options Of Selected Object
- E. New Brush
- F. Delete Brush

Using Calligraphic brushes

Calligraphic brushes resemble strokes drawn with the angled point of a calligraphic pen. Calligraphic brushes are defined by an elliptical shape whose center follows the path. You can use these brushes to create the appearance of hand-drawn strokes made with a flat, angled pen tip.


Next, you'll use a Calligraphic pen to create the bunting on the train car.

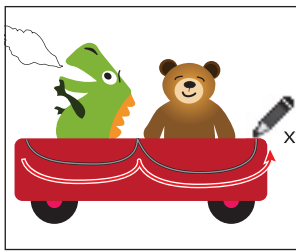


Calligraphic brush examples

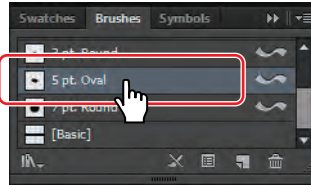
- 1 Click the Brushes panel icon (📁) on the right side of the workspace to expand the Brushes panel.
- 2 In the Brushes panel, choose List View from the panel menu (☰).
- 3 Open the Brushes panel menu (☰), and deselect Show Art Brushes, Show Bristle Brushes, and Show Pattern Brushes, leaving only the Calligraphic brushes visible in the Brushes panel.

● **Note:** A check mark next to the brush type in the Brushes panel menu indicates that the brush type is visible in the panel.

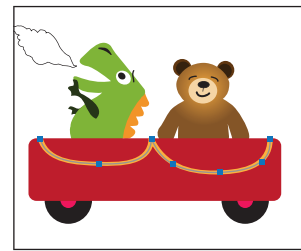
- 4 In the Control panel, click the Stroke color and choose the light orange swatch. Change the Stroke weight to **2 pt**, and make sure that the Fill color is None. Calligraphic brushes use the current stroke color when you apply the brushes to artwork.
- 5 Double-click the Pencil tool () in the Tools panel. In the Pencil Tool Options dialog box, change the Smoothness to **100%** and leave the rest of the settings at their default settings. Click OK.
- 6 Position the pointer in the upper-left corner of the red train car shape, and draw two “U” shapes on the train car, from left to right, in one continuous motion. This will be the bunting on the car.
- 7 With the shape you drew selected, select the 5 pt. Oval brush in the Brushes panel to apply it to the line. You may need to scroll down. Notice that the stroke weight changes in the Control panel.



Draw the bunting.



Apply the brush.



The result.

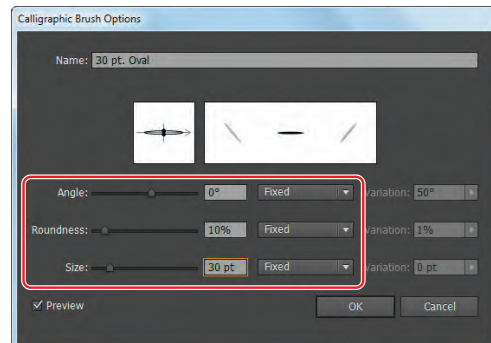
Editing a brush

To change the options for a brush, you can double-click the brush in the Brushes panel. Edits will apply to the current document only, although you can also choose to change artwork to which the brush has been applied. Next, you'll change the appearance of the 5 pt. Oval brush.

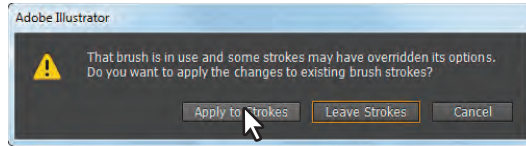
● **Note:** The edits you make will change the brush for this document only.

▶ **Tip:** The Preview window in the dialog box (below the Name field) shows the changes that you make to the brush.

- 1 In the Brushes panel, double-click the name 5 pt. Oval brush and change the name to **30 pt. Oval**. Press Enter or Return.
- 2 In the Brushes panel, double-click the 30 pt. Oval brush thumbnail or to the right of the brush name to display the Calligraphic Brush Options dialog box.
- 3 Enter **0** for the Angle and choose Fixed from the menu to the right. Change the Roundness to **10%** and choose Fixed from the menu to the right. Change the Size to **30 pt** and select Preview. Click OK.



- 4 In the dialog box that appears, click Apply To Strokes to apply the change to the artwork that has the brush applied.



● **Note:** After clicking Apply To Strokes, the brush may no longer appear on the path. With the bunting path still selected, click the 30 pt. Oval brush again to apply it to the path.

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

Using a fill color with brushes

When you apply a brush to an object's stroke, you can also apply a fill color to paint the interior of the object with a color. When you use a fill color with a brush, the brush objects appear on top of the fill color in places where the fill and the brush objects overlap. Now, you'll fill the bunting shape you created with a fill color.



Path with a fill color and a brush applied to the stroke

- 1 With the Selection tool (⌘), select the bunting shape that you drew.
- 2 Click the Fill color in the Control panel, and select the CMYK Cyan swatch.
- 3 Click outside the artwork to deselect it.



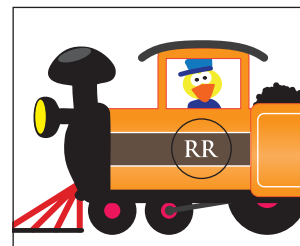
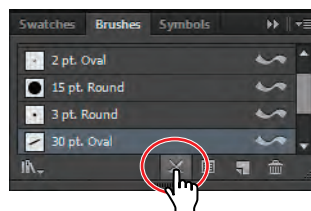
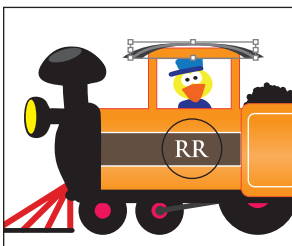
● **Note:** Your bunting shape may look different than what you see here, and that's okay.

Removing a brush stroke

You can easily remove a brush stroke applied to artwork where you don't want it. Now, you'll remove the brush stroke on the path above the duck, on the train engine. This path had the original 5 pt. Oval brush you edited applied to it.

- 1 With the Selection tool (⌘), click the dark gray path above the duck.
- 2 Click the Remove Brush Stroke button (☒) at the bottom of the Brushes panel.
- 3 Change the Stroke weight to 10 pt in the Control panel.
- 4 Choose Select > Deselect, and then choose File > Save.

● **Note:** The path you see may not look the same and that's okay.



Using Art brushes

Art brushes, which include arrow brushes, decorative brushes, artistic brushes, and others, stretch a brush shape (such as Rough Charcoal) or object shape (such as a banner) evenly along the length of the path.



Art brush examples

Drawing with the Paintbrush tool

Now, you'll use the Paintbrush tool to apply an art brush to the bear to make it look fuzzy. As mentioned earlier, the Paintbrush tool allows you to apply a brush as you draw.

● **Note:** If you don't see "Reset Essentials" in the workspace switcher, choose Essentials before choosing Reset Essentials in the workspace switcher.

- 1 Choose Reset Essentials from the workspace switcher in the Application bar.
- 2 Select the Zoom tool (Q) in the Tools panel, and drag a marquee around the teddy bear to zoom in on it.
- 3 Select the Selection tool (K) in the Tools panel, and click to select the bear. Choose Select > Deselect. This selects the layer in the Layers panel that the bear is on so that any artwork you paint will be on the same layer.
- 4 Change the Stroke color to bear brown and the Fill color to None (if necessary) in the Control panel.
- 5 Click the Brushes panel icon (B) on the right side of the workspace. Open the Brushes panel menu (☰), and deselect Show Calligraphic Brushes. Then, select Show Art Brushes to make the brushes visible in the Brushes panel.
- 6 Click the Brush Libraries Menu button (B) at the bottom of the Brushes panel, and choose Artistic > Artistic_ChalkCharcoalPencil.
- 7 In the Artistic_ChalkCharcoalPencil panel, choose List View from the panel menu (☰). Click Charcoal - Thick in the list to add the brush to the Brushes panel for this document. Close the Artistic_ChalkCharcoalPencil panel.

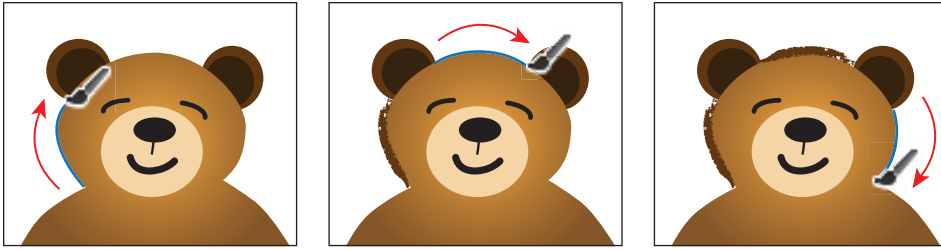
You are going to paint around the outside of the bear to give the edges a roughened (fuzzy) look.

- 8 Select the Paintbrush tool (P) in the Tools panel, and then click the Charcoal - Thick brush in the Brushes panel, if it's not already selected. Change the Stroke weight to **.5 pt** in the Control panel.

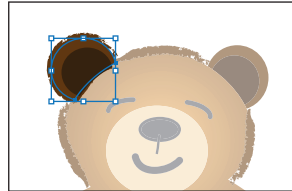
Notice that the Paintbrush pointer has an X next to it (P_X). The X indicates that you are about to draw a new path.

- 9 Draw a long, upward stroke to create the left side of the bear's face, starting at the shoulder and stopping at the ear. Drag across the top of the head from the left ear to the right ear. Finish by dragging a long downward stroke to create the right side of the bear's face, starting at the bottom of the right ear and ending at the right shoulder.

● **Note:** A check mark next to the brush type in the Brushes panel menu indicates that the brush type is visible in the panel.



- 10 Select the Selection tool (⌘) in the Tools panel. Double-click the left ear *twice* to enter Isolation mode. Click to select the larger, lighter brown part of the ear.
- 11 Click the Charcoal - Thick brush in the Brushes panel to apply it. Change the Stroke weight to **.5 pt**, and make sure that the Fill color is bear brown in the Control panel.
- 12 Press the Escape key to exit Isolation mode. Repeat the steps for the other ear.
- 13 Choose Select > Deselect, and then choose File > Save.

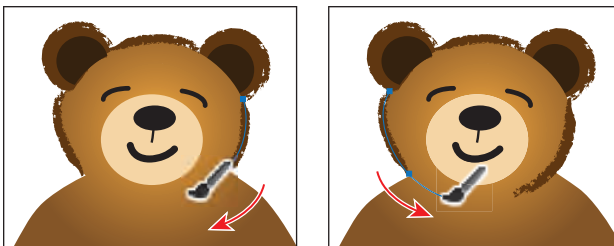


Editing paths with the Paintbrush tool

Now, you'll use the Paintbrush tool to edit a selected path.

- 1 With the Selection tool, click to select the last path you drew on the right side of the bear's face.
- 2 Select the Paintbrush tool (🖌) in the Tools panel. Position the pointer near the bottom end of the selected path. An X will *not* appear next to the pointer when it's positioned over a selected path. Drag down and to the left to extend the path a bit under the bear's chin. The selected path is edited from the point where you began drawing.
- 3 Press and hold the Ctrl (Windows) or Command (Mac OS) key to toggle to the Selection tool, and select the first path you drew with the Paintbrush tool (on the left side of the bear's face).
- 4 With the Paintbrush tool still selected, move the pointer near the bottom of the selected path and drag down and to the right to extend the path a bit under the bear's chin. See the figure below for placement.

► **Tip:** You can also edit paths drawn with the Paintbrush tool using the Smooth tool (🖌) and the Path Eraser tool (🖌), located under the Pencil tool (🖌) in the Tools panel.



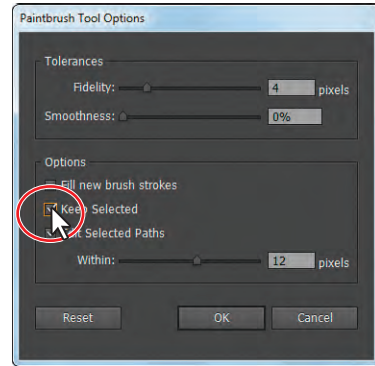
- 5 Choose Select > Deselect, and then choose File > Save.

Next, you will edit the Paintbrush tool options.

► **Tip:** Increase the value of the Smoothness option in the Paintbrush Tool Options dialog box to smooth the path by using fewer points as you draw.

- 6 Double-click the Paintbrush tool (🖌️) to display the Paintbrush Tool Options dialog box. Select Keep Selected, and then click OK.

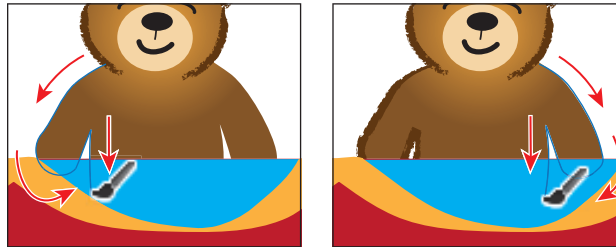
The Paintbrush Tool Options dialog box changes the way the Paintbrush tool functions. Because you selected Keep Selected, the paths now remain selected after you finish drawing them.



- 7 With the Paintbrush tool selected, position the pointer over the left shoulder and drag down and to the left, to trace around the arm on the left. Paint all the way around the arm and down the side of the bear.

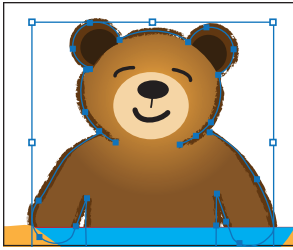
● **Note:** You can release the mouse button at certain points and then continue painting the path. The path remains selected because of the Keep Selected option you set in the Paintbrush Tool Options dialog box.

- 8 With the Paintbrush tool selected, position the pointer over the right shoulder and drag down and to the right, to trace around the arm on the right. Paint all the way around the arm and down the side of the bear.

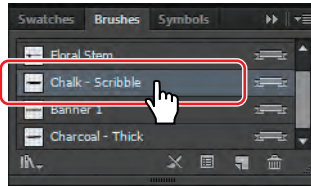


● **Note:** When the Keep Selected option is deselected, you can edit a path by selecting it with the Selection tool (🖱️) or by selecting a segment or point on the path with the Direct Selection tool (⌘+A) and then redrawing over the path with the Paintbrush tool.

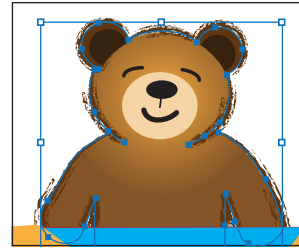
- 9 Double-click the Paintbrush tool in the Tools panel. In the Paintbrush Tool Options dialog box, deselect the Keep Selected option and then click OK. Now, the paths will not remain selected after you finish drawing them, and you can draw overlapping paths without altering previously drawn paths.
- 10 Choose Select > Deselect. Choose Select > Object > Brush Strokes. This will select all of the objects with a brush stroke applied, on all artboards.
- 11 Select the Selection tool in the Tools panel. Shift-click the bunting to deselect it.
- 12 Click several other brushes in the Brushes panel to see the effects. When you have finished, click the Charcoal - Thick brush again to reapply that brush. Make sure the Stroke weight is .5 pt in the Control panel.



The selected paths.



Try another brush.



The result.

► **Tip:** Don't forget the large number of brushes that come with Illustrator. To access them, click the Brush Libraries Menu button (📖) in the lower-left corner of the Brushes panel.

13 Click outside the artwork to deselect it.

14 Choose File > Save.

Creating an Art brush

You can create new Calligraphic, Scatter, Art, Pattern, and Bristle brushes based on your settings. For Scatter, Art, and Pattern brushes, you must first create the artwork you want to use. In this section, you'll use artwork provided with the lesson to create a new Art brush. The Art brush will be used to create a logo for the train engine.

● **Note:** To learn about guidelines for creating brushes, see "Create or modify brushes" in Illustrator Help.

1 Choose View > Fit Artboard In Window.

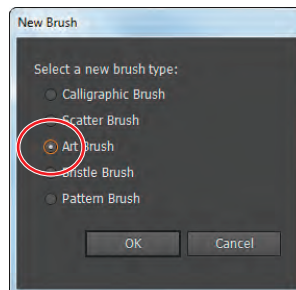
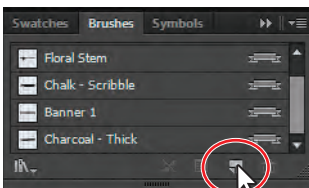
2 Choose 2 from the Artboard Navigation menu in the lower-left corner of the Document window. This will fit the second artboard in the Document window.

3 Using the Selection tool (🖱️), click to select the group of stars.

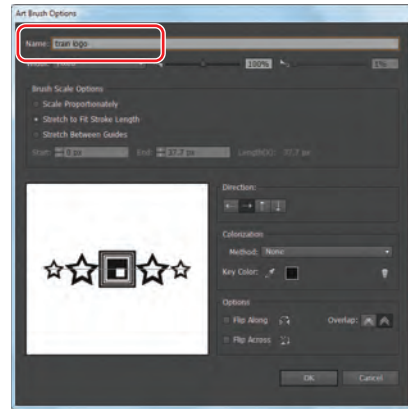
Next, you will make an Art brush from the selected artwork. You can make an Art brush from vector artwork, but that artwork must not contain gradients, blends, other brush strokes, mesh objects, bitmap images, graphs, placed files, masks, or text that has not been converted to outlines.

4 Click the New Brush button (🔧) at the bottom of the Brushes panel. This begins the process of creating a new brush from the selected artwork.

5 In the New Brush dialog box, select Art Brush and then click OK.



- 6 In the Art Brush Options dialog box, change the Name to **train logo**. Click OK.
- 7 Choose 1 from the Artboard Navigation menu in the lower-left corner of the Document window.
- 8 With the Selection tool selected, click to select the circle around the “RR” on the engine.
- 9 Select the Zoom tool (🔍) in the Tools panel, and drag a marquee across the circle and the RR in the center of the engine to zoom in to it.



- 10 Click the train logo brush in the Brushes panel to apply it.

Notice that the original artwork is stretched around the shape. This is the default behavior of an Art brush.

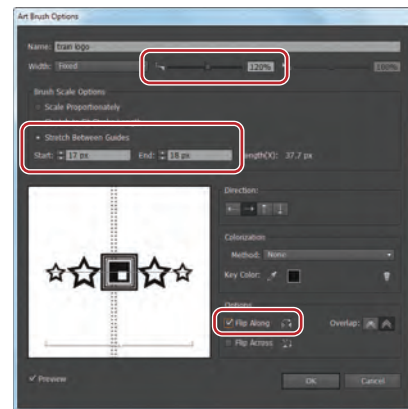


Editing an Art brush

Next, you will edit the train logo Art brush.

▶ **Tip:** To learn more about the Art Brush Options dialog box, see “Art brush options” in Illustrator Help.

- 1 With the circle still selected, double-click the thumbnail to the left of the train logo name or to the right of the name in the Brushes panel to open the Art Brush Options dialog box. Select Preview to see the changes as you make them. Change the Width to **120%**. This will increase the size of the artwork relative to its original width. Select Stretch Between Guides, and then change the Start to **17 px** and the End to **18 px**. Select Flip Along, and then click OK.



● **Note:** If the stars on your circle are not at the bottom of the circle, you can rotate the circle with the Rotate tool (⦿) in the Tools panel to match the position shown in the figure.

- 2 In the dialog box that appears, click Apply To Strokes to apply the change to the artwork that has the brush applied.
- 3 Choose View > Fit Artboard In Window.
- 4 Choose Select > Deselect, and then choose File > Save.



Using Bristle brushes

Bristle brushes allow you to create strokes with the appearance of a natural brush with bristles. You'll start by adjusting options for a brush to change how it appears in the artwork and then paint with the Paintbrush tool and Bristle brush to create a fire effect.



Bristle brush examples

Changing Bristle brush options

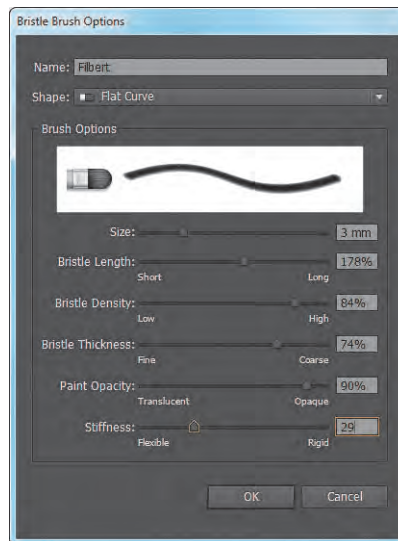
As you've seen earlier, you can change the appearance of a brush by adjusting its settings in the Brush Options dialog box, either before or after brushes have been applied to the artwork. When you paint with a Bristle brush, it creates vector paths. It is usually best to adjust Bristle brush settings prior to painting, since it can take some time to update the brush strokes.

- 1 In the Brushes panel, choose Show Bristle Brushes from the panel menu (☰) and then deselect Show Art Brushes.
- 2 Double-click the thumbnail for the Filbert brush or directly to the right of the brush name to open the Bristle Brush Options dialog box for that brush. Leave the dialog box open for the next step.

- 3 In the Bristle Brush Options dialog box:

- Leave the Shape set at Flat Curve.
- Make sure that Size is 3 mm. The brush size is the diameter of the brush.
- Change the Bristle Length to **178%**. The bristle length starts from the point where the bristles meet the handle of the bristle tip.
- Change the Bristle Density to **84%**. The bristle density is the number of bristles in a specified area of the brush neck.
- For Bristle Thickness, set the value to **74%**. The bristle thickness can vary from fine to coarse (between 1% and 100%).
- For Paint Opacity, change the value to **90%**. This option lets you set the opacity of the paint being used.
- For Stiffness, change the value to **29%**. Stiffness implies the rigidity of the bristles.

- 4 Click OK.



► **Tip:** Illustrator comes with a series of default Bristle brushes. Click the Brush Libraries Menu button (☰) at the bottom of the Brushes panel, and choose Bristle Brush > Bristle Brush Library.

● **Note:** To learn more about the Bristle Brush Options dialog box and its settings, see "Using the Bristle brush" in Illustrator Help.

Painting with a Bristle brush

Now, you'll use the Filbert brush to draw some fire. Painting with a Bristle brush can create a very organic stroke. In order to constrain the painting, you will paint inside a shape. This will mask (hide) part of the painting to be in the shape of a flame.

- 1 Select the Zoom tool (🔍) in the Tools panel, and drag a marquee around the flame shape to the left of the dinosaur, to zoom in on it.
- 2 Select the Selection tool (🖱️) in the Tools panel, and click to select the flame shape. This selects the layer that the shape is on so that any artwork you paint will be on the same layer.

- 3 Click the Draw Inside button (🔲) at the bottom of the Tools panel.

● **Note:** If the Tools panel appears as one column, click and hold down the Drawing Modes button at the bottom of the Tools panel, and then choose a Drawing mode from the menu that appears.

- 4 Choose Select > Deselect to deselect the flame shape. You can still draw inside the shape, as indicated by the dotted lines on the corners of the shape.
- 5 Select the Paintbrush tool (🖌️) in the Tools panel. Choose the Filbert brush from the Brush Definition menu in the Control panel, if it's not already chosen.
- 6 Change the Fill color to None and Stroke color to flame red in the Control panel. Press the Escape key to hide the Swatches panel. Make sure that the Stroke weight is 1 pt in the Control panel.

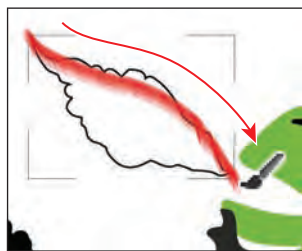
- 7 Position the pointer at the upper-left tip of the flame shape. Drag down and to the right to loosely follow the top edge of the flame shape. Release the mouse button when you pass the lower-right tip of the flame shape.

When you release the mouse button, notice that the path you just painted is masked by the flame shape.

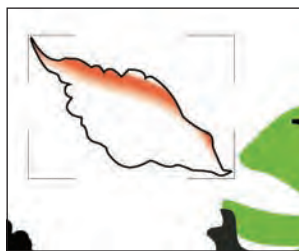
- 8 Use the Paintbrush tool (🖌️) to provide some texture by drawing more strokes inside the flame shape, using the Filbert brush.

● **Note:** To learn more about the drawing modes, see Lesson 3, "Creating and Editing Shapes."

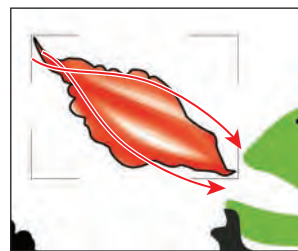
▶ **Tip:** If you want to edit paths as you draw, you can select the Keep Selected option in the Paintbrush Tool Options for the Paintbrush tool or select paths with the Selection tool. You don't need to completely fill the shape.



Paint with the Bristle brush.



The masked path.

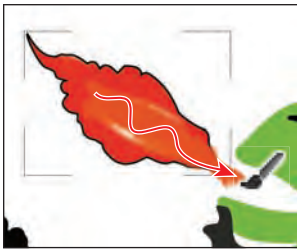


The result.

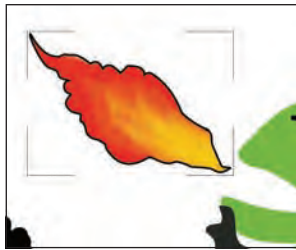
▶ **Tip:** If you don't like what you just painted, you can choose Edit > Undo Bristle Stroke.

Next, you will edit the brush and paint with another color to build the flame by layering paths.

- 9 Change the Stroke color to flame orange in the Control panel.
- 10 Double-click the Filbert brush thumbnail or to the right of the brush name in the Brushes panel. In the Bristle Brush Options dialog box, change the Paint Opacity to **30%** and then click OK.
- 11 Click Leave Strokes in the dialog box that appears. This changes the brush settings without changing the red flame you already painted.
- 12 Draw some more paths on top of the red flames, using the Paintbrush tool. Focus the orange paths you draw closer to the dinosaur's mouth.
- 13 Change the Stroke color to flame yellow in the Control panel.
- 14 Double-click the Filbert brush thumbnail or to the right of the brush name in the Brushes panel. In the Bristle Brush Options dialog box, change the Bristle Density to **18%** and the Stiffness to **60%**. Click OK.
- 15 Click Leave Strokes in the dialog box that appears.
- 16 Draw some more paths on top of the orange flames, using the Paintbrush tool. Focus the yellow paths you draw closer to the dinosaur's mouth.



Apply some orange flame.



Finish the flame with yellow.

- 17 Choose View > Outline.
- 18 Choose Select > Object > Bristle Brush Strokes to select all of the paths created with the Paintbrush tool, using the Filbert Bristle brush.
- 19 Choose Object > Group, and then View > Preview.
- 20 Click the Draw Normal button at the bottom of the Tools panel.
- 21 Select the Selection tool in the Tools panel. Choose Select > Deselect.
- 22 Double-click the edge of the flame shape to enter Isolation mode. Click the black stroke of the flame shape. Change the Stroke color to None in the Control panel.
- 23 Press the Escape key to exit Isolation mode.
- 24 Choose Select > Deselect and then choose File > Save.



Note: When saving, you may see a warning dialog box. Click OK.

The Bristle brush and graphic tablets

When you use a Bristle brush with a graphic tablet, Illustrator interactively tracks the movements of the stylus over the tablet. It interprets all aspects of its orientation and pressure input at any point along a drawing path. Illustrator provides the output that is modeled on the stylus's x-axis position, y-axis position, pressure, tilt, bearing, and rotation.

A cursor annotator that simulates the tip of an actual brush is displayed when using a tablet and stylus that support rotation. This annotator does not appear when other input devices such as a mouse are used. The annotator is also disabled while using the precise cursors.

Note: Use the Wacom Intuos 3 or higher tablet with Art (6D) pen to explore the full capabilities of the Bristle brush. Illustrator can interpret all 6-degrees of freedom that this device combination provides. However, other devices including the Wacom Grip pen and Art brush pen may not be able to interpret some attributes such as rotation. These uninterpreted attributes are treated as constants in the resulting brush strokes.

While using a mouse, only x and y-axis movements are recorded. Other inputs, such as tilt, bearing, rotation, and pressure remain fixed resulting in even and consistent strokes.

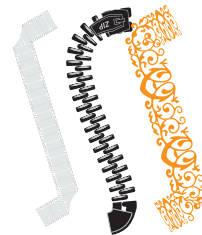
For Bristle brush strokes, feedback is displayed when you drag the tool. This feedback provides an approximate view of the final stroke.

Note: Bristle brush strokes are made up of several overlapping, filled transparent paths. These paths, like any other filled path in Illustrator, interact with the paint of other objects, including other bristle brush paths. However, the fill for strokes does not self-interact. Therefore, layered, individual, bristle brush strokes build up and interact with each other, but a single stroke scrubbed back and forth in place does not interact with itself and build up.

—From Illustrator Help

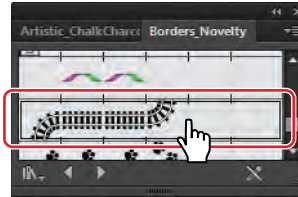
Using Pattern brushes

Pattern brushes paint a pattern made up of separate sections, or tiles. When you apply a Pattern brush to artwork, different tiles of the pattern are applied to different sections of the path, depending on where the section falls on the path—the end, middle, or corner. There are hundreds of interesting Pattern brushes that you can choose from when creating your own projects, from dog tracks to cityscapes. Next, you'll open an existing Pattern Brush library and choose a train track pattern to create tracks.



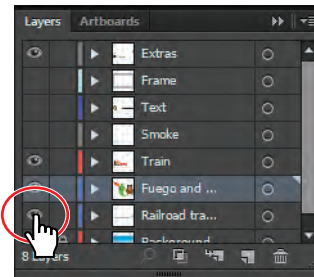
Pattern brush examples

- 1 Choose View > Fit Artboard In Window.
- 2 In the Brushes panel, choose Show Pattern Brushes from the panel menu (☰) and deselect Show Bristle Brushes.
- 3 Click the Brush Libraries Menu button (📁), and choose Borders > Borders_Novelty. A brush library panel with various borders appears.
- 4 Scroll toward the bottom of the Borders_Novelty panel, and click the Train Tracks brush to add it to the panel. Close the Borders_Novelty brush library group.



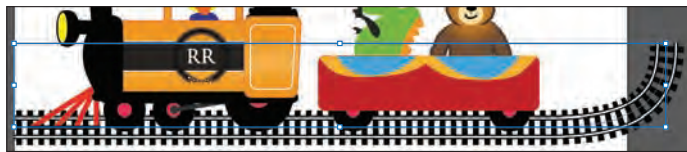
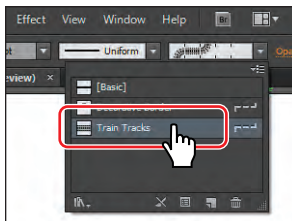
Next, you will apply the brush and then edit its properties.

- 5 Click the Layers panel icon (📁) on the right side of the workspace to expand the Layers panel. Click the visibility column to the left of the Railroad tracks layer to show the path for the tracks on the artboard. Click the Layers panel icon to collapse the panel.
- 6 Select the Selection tool (🖱️) in the Tools panel. Click the path that appears below the train to select it.



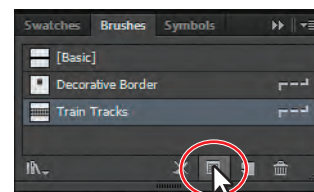
- 7 Choose the Train Tracks Pattern brush from the Brush Definition menu in the Control panel to apply the Pattern brush.
- 8 Change the Stroke weight to **4 pt** in the Control panel.

Notice that the train tracks follow the curve precisely. A Pattern brush has tiles, as described earlier, that correspond to parts of the path.



Next, you will edit the brush properties for the selected train tracks.

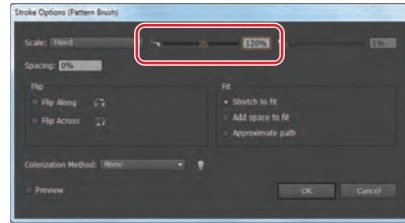
- 9 Click the Brushes panel icon (📁) on the right side of the workspace to expand the panel. Click the Options Of Selected Object button (🔧) at the bottom of the Brushes panel to edit the brush options for only the selected train tracks on the artboard. This opens the Stroke Options (Pattern Brush) dialog box.



► **Tip:** To change the size of the railroad tracks, you can also change the stroke of the line on the artboard, with the brush applied.

- 10 Change the Scale to **120%** either by dragging the Scale slider or by typing in the value. Click OK.

When you edit the brush options of the selected object, you only see some of the brush options. The Stroke Options (Pattern Brush) dialog box is used to edit the properties of the brushed path without updating the corresponding brush.



- 11 Choose Select > Deselect and then File > Save.

Creating a Pattern brush

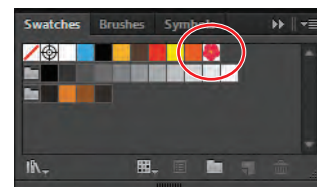
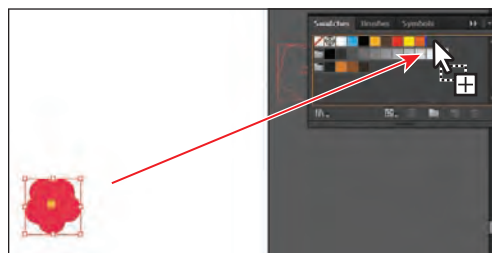
You can create a Pattern brush in several ways. For a simple pattern applied to a straight line, for instance, you can select the content that you're using for the pattern and click the New Brush button (🖌️) at the bottom of the Brushes panel.

To create a more complex pattern to apply to objects with curves and corners, you must first create swatches in the Swatches panel from the artwork that you are using for the Pattern brush tiles and then create the new brush. For example, to create a Pattern brush that will be used on a straight line with corners, you might need to create three swatches, one for the straight line, another for the inside corner and another for the outside corner. Next, you'll create swatches to be used in a Pattern brush.

- 1 Click the Layers panel icon (📁) on the right side of the workspace to expand the Layers panel.
- 2 Click the visibility column to the left of the Frame layer to show its contents.
- 3 Click the Swatches panel icon (🎨) to expand the Swatches panel, or choose Window > Swatches.

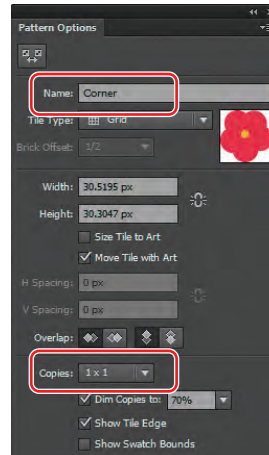
Now, you'll create a pattern swatch.

- 4 Choose 2 from the Artboard Navigation menu in the lower-left corner of the Document window.
- 5 With the Selection tool (🖱️), drag the flower into the Swatches panel. The new pattern swatch appears in the Swatches panel.



- 6 Choose Select > Deselect.
- 7 In the Swatches panel, double-click the pattern swatch that you just created. In the Pattern Options dialog box, name the swatch **Corner** and choose 1 x 1 from the Copies menu.
- 8 Click Done in the gray bar along the top of the Document window to finish editing the pattern.
- 9 Repeat steps 5 through 7 to create a pattern swatch of the orange circle located to the left of the flower on the artboard. Name the swatch **Side**.

To create a new Pattern brush, you apply swatches from the Swatches panel to tiles in the Brush Options dialog box. Now, you'll apply the pattern swatches that you just made to tiles, to create a new Pattern brush.



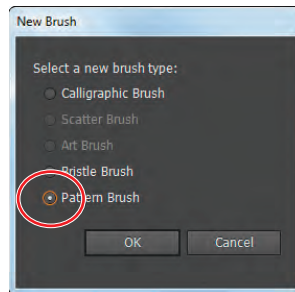
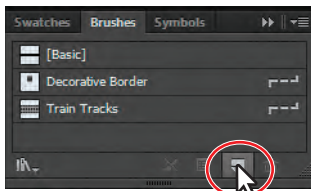
► **Tip:** For more information on creating pattern swatches, see “About patterns” in Illustrator Help.

- 10 Click the Brushes panel icon (B) to expand the panel.
- 11 Choose Select > Deselect, if there is content selected.

This is an important step! Any content selected will be part of the brush.

- 12 In the Brushes panel, click the New Brush button (B).
- 13 In the New Brush dialog box, select Pattern Brush.

Notice that you can't select the Art Brush or Scatter Brush. That is because artwork needs to be selected in the document first. Click OK.

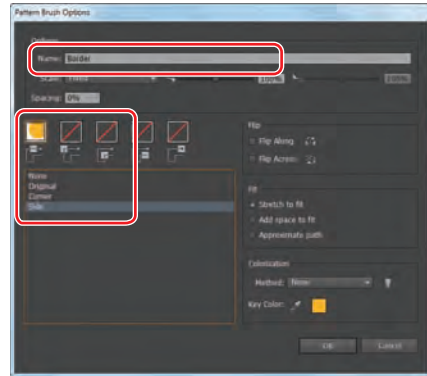


Now, you'll apply the swatches to the tiles for the new Pattern brush.

► **Tip:** Position the pointer over the tile squares in the Pattern Brush Options dialog box to see a tool tip indicating which tile it is.

14 In the Pattern Brush Options dialog box, name the brush **Border**.

15 Under the Spacing option, make sure that the Side Tile box is selected. Below the tile boxes, select Side. The Side swatch appears in the Side tile box.

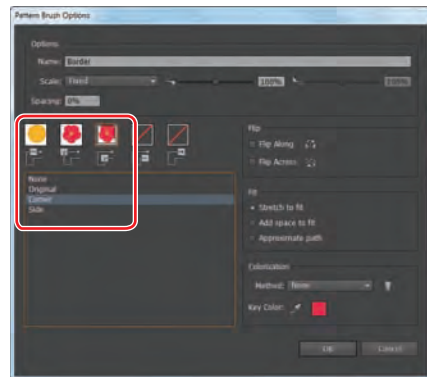


The Pattern Brush Options dialog box shows the tiles in the new brush you are making. The first tile on the left is the side tile, which is used to paint the middle sections of a path. The second tile is the outer corner tile. The third tile is the inner corner tile. The names of the pattern swatches that are in the Swatches panel are listed under the tiles.

Pattern brushes can have up to five tiles—the side, start, and end tiles, plus an outer corner tile and an inner corner tile to paint sharp corners on a path. Some brushes have no corner tiles because the brush is designed for curved paths.

In the next part of this lesson, you'll create your own Pattern brush that has corner tiles. Next, you'll apply the Corner swatch to the outer corner and inner corner tiles for the new Pattern brush.

16 In the Pattern Brush Options dialog box, select the Outer Corner Tile box (the second tile box from the left). In the pattern swatches list, select Corner. The Corner swatch appears in the Outer Corner Tile box.



17 Select the Inner Corner Tile box (the middle tile box). In the pattern swatches list, select the Corner swatch. The Corner swatch appears in the Inner Corner Tile box. Click OK.

● **Note:** When you create a new brush, the brush appears in the Brushes panel of the current document only.

You won't create a start or end tile for the new brush, because you'll apply the new brush to a path in the artwork next. When you want to create a Pattern brush that includes start and end tiles, you add those tiles the same way as you did the side and corner tiles.

The Border brush appears in the Brushes panel.

► **Tip:** To save a brush and reuse it in another file, you can create a brush library with the brushes you want to use. For more information, see "Work with brush libraries" in Illustrator Help.

Applying a Pattern brush

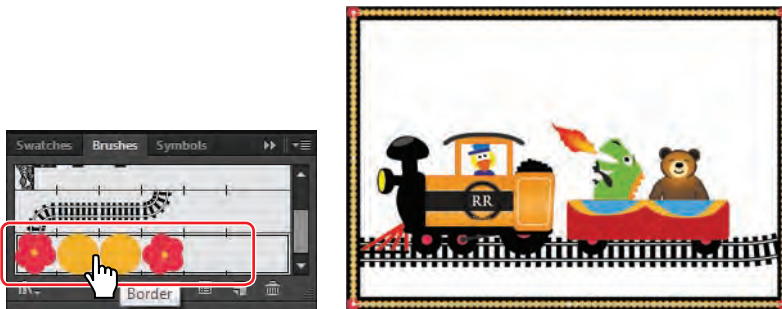
In this section, you'll apply the Border Pattern brush to a rectangular border around the artwork. When you use drawing tools to apply brushes to artwork, you first draw the path with the drawing tool and then select the brush in the Brushes panel to apply the brush to the path.

- 1 Click the First artboard button (🏠) in the lower-left corner of the Document window to return to the first artboard and to fit it in the Document window.
- 2 With the Selection tool (🖱️) selected, click the white stroke of the rectangle on the border.
- 3 In the Tools panel, click the Fill box and make sure that None (☑️) is selected. Then, click the Stroke box and select None (☑️).
- 4 Click the Brushes panel icon (📁) to expand the panel and choose Thumbnail View from the Brushes panel menu (☰).

Notice that Pattern brushes in Thumbnail view are segmented in the Brushes panel. Each segment corresponds to a pattern tile. The side tile is repeated in the Brushes panel thumbnail preview.

- 5 With the rectangle selected, click the Border brush in the Brushes panel.

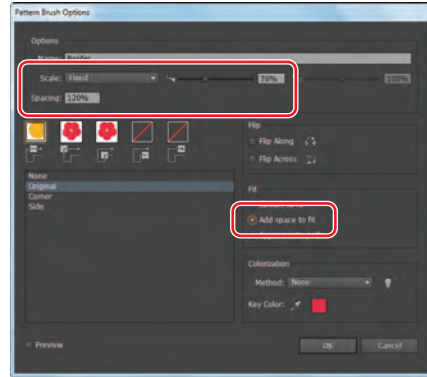
The rectangle is painted with the Border brush, with the side tile on the sides and the corner tile on the corners.



Now, you'll edit the Border brush.

- 6 In the Brushes panel, double-click the Border Pattern brush to open the Pattern Brush Options dialog box.

- 7 In the Pattern Brush Options dialog box, change the Scale to **70%** and the Spacing to **120%** and then select Add Space To Fit. Click OK.
- 8 In the Brush Change Alert dialog box, click Apply To Strokes to update the border on the artboard.
- 9 With the Selection tool selected, click to select the arch right above the duck's head. Click the Border brush in the Brushes panel to apply it.



Notice that the flowers are not applied to the path. The path is painted with the side swatch from the Border brush, to which the side tile is applied. Because the path does not include sharp corners, the outer corner and inner corner tiles are not applied to the path.

- 10 Choose Edit > Undo Apply Pattern Brush to remove the brush from the arch.

● **Note:** Earlier in the lesson, you learned how to remove a brush from an object by clicking the Remove Brush Stroke button (✖) in the Brushes panel. In this case, you chose Edit > Undo Apply Pattern Brush instead, because clicking the Remove Brush Stroke button would strip the previous formatting from the arch, leaving it with a default fill and stroke.

Editing Pattern brush tiles

You can edit the tiles in a Pattern brush by creating (or updating) swatches and applying the new swatches to the tiles in the Pattern Brush Options dialog box.

You can also change the pattern tiles in a Pattern brush by pressing the Alt (Windows) or Option (Mac OS) key and dragging the new artwork from the artboard onto the tile you wish to change in the Brushes panel.

Changing the color attributes of brushes

The colors that a Scatter, Art, or Pattern brush paints depend on the current stroke color and the colorization method of the brush. If you have not set a colorization method, the default color for that brush is used. For example, the train logo Art brush was applied with its default color (not the current stroke of black) because its colorization method was set to None.

To colorize Art, Pattern, and Scatter brushes, you can use three editing options in the Brush Options dialog box: Tints, Tints and Shades, and Hue Shift.

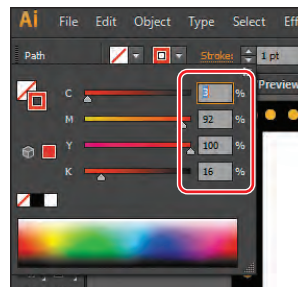
To learn more about each of these colorization methods, search for “Colorization options” in Illustrator Help.

● **Note:** Brushes colored with a stroke color of white may appear entirely white. Brushes colored with a stroke color of black may appear entirely black. Results depend on which brush colors were originally chosen.

Changing a brush color using Tints colorization

Now, you’ll change the color of the train logo Art brush using the Tints colorization method.

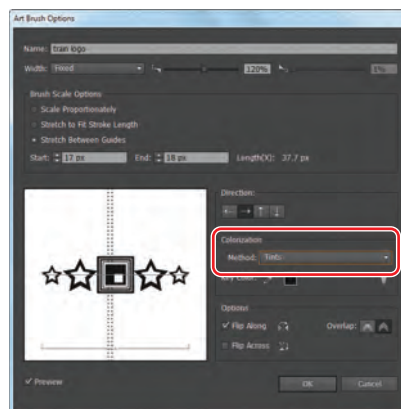
- 1 In the Brushes panel, choose Show Art Brushes from the panel menu (☰) and deselect Show Pattern Brushes.
- 2 With the Selection tool (⬚), click to select the train logo (the circle with the train logo Art brush applied) below the duck.
- 3 Pressing the Shift key, click the Stroke color in the Control panel to open the Color panel. Change the values to C=3, M=92, Y=100, K=16.
- 4 In the Brushes panel, double-click the train logo brush to view the Art Brush Options dialog box.



A tool tip appears with the brush name when you position the pointer over it. Select Preview (if necessary) to see the changes you will make, and then move the dialog box off to the side so that you can see your artwork as you work.

- 5 In the Colorization section of the Art Brush Options dialog box, choose Tints from the Method menu.

The selected path with the train logo brush applied is colorized and displays the brush stroke in tints of the stroke color. Portions of the art that are black become the stroke color, portions that aren’t black become tints of the stroke color, and white remains white.



► **Tip:** To learn more about how the different colorization methods affect artwork, click the light bulb icon (💡) in the Art Brush Options dialog box.

● **Note:** The Tints And Shades colorization method displays the brush stroke in tints and shades of the stroke color. Tints And Shades maintains black and white, and everything between becomes a blend from black to white through the stroke color.

- 6 If desired, choose the Tints And Shades colorization method from the menu in the Art Brush Options dialog box to preview the change. Choose the Tints method again, and then click OK. In the warning dialog box, click Apply To Strokes to apply the colorization change to the strokes in the artwork.



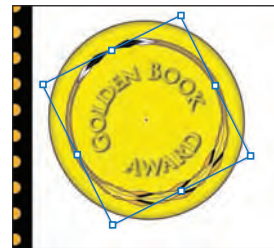
You can also choose to change only subsequent brush strokes and leave existing strokes unchanged. When you select a colorization method for a brush, the new stroke color applies to selected brush strokes and to new paths painted with the brush.

- 7 Pressing the Shift key, click the Stroke color in the Control panel to open the Color panel. Click in the color spectrum bar at the bottom to select a color.
- 8 When you are satisfied with the color of the train logo, click away from the artwork to deselect it.
- 9 Choose File > Save.

Changing the brush color using Hue Shift colorization

Now, you'll apply a new color to the Banner 1 brush in the Brushes panel.

- 1 Click the Layers panel icon (☰) on the right side of the workspace to expand the Layers panel. Click the visibility column to the left of the Text layer to show its contents. Click the Layers panel tab to collapse the panel.
- 2 Select the Zoom tool (🔍) in the Tools panel, and drag a marquee around the Golden Book Award seal in the upper-left corner to zoom in to it.
- 3 With the Selection tool (🖱️), click to select the circle in the seal with the brush applied.
- 4 Click the Brushes panel icon (🖌️) to expand the panel. Double-click the Banner 1 brush in the Brushes panel to reveal the Art Brush Options dialog box. Note that the Banner 1 brush is set to a None Colorization method, by default.

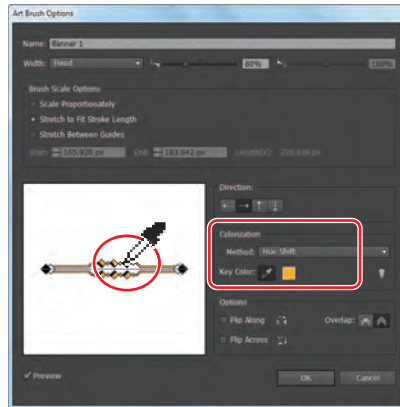


- 5 In the Art Brush Options dialog box, select Preview, if it's not already selected. In the Colorization section, choose Hue Shift from the Method menu.

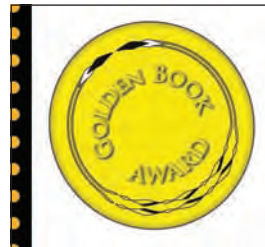
You typically choose Hue Shift for brushes that use multiple colors. Everything in the artwork that is the key color changes to the new stroke color when the stroke color is changed.

- 6 In the Colorization section of the Art Brush Options dialog box, click the Key Color Eyedropper (👉), position the pointer over an orange color in the preview area (to the left of the Colorization settings), and then click, as shown in the figure.

The key color you just sampled (the orange) will now be colorized with the current stroke color. Any orange content in the brush will be yellow. This color appears when you apply the Hue Shift colorization method.



- 7 Click OK. In the warning dialog box, click Apply To Strokes to apply the colorization change to the strokes in the artwork. You can also choose to change only subsequent brush strokes and leave existing strokes unchanged.
- 8 Change the Stroke color to flame red in the Control panel. Try other stroke colors for the selected brush strokes before finally choosing flame yellow, as shown in the figure on the right.
- 9 Choose Select > Deselect.
- 10 Choose File > Save.

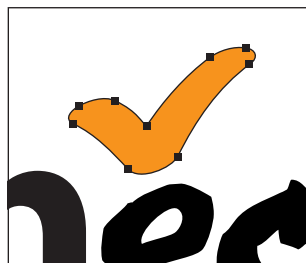


Working with the Blob Brush tool

You can use the Blob Brush tool to paint filled shapes that intersect and merge with other shapes of the same color. With the Blob Brush tool, you can draw with Paintbrush tool artistry. Unlike the Paintbrush tool, which lets you create open paths, the Blob Brush tool lets you create a closed shape with a fill only (no stroke) that you can then easily edit with the Eraser or Blob Brush tool. Shapes that have a stroke cannot be edited with the Blob Brush tool.



Path created with the Paintbrush tool



Shape created with the Blob Brush tool

Next, you will use the Blob Brush tool to create a part of the smoke coming from the train engine.

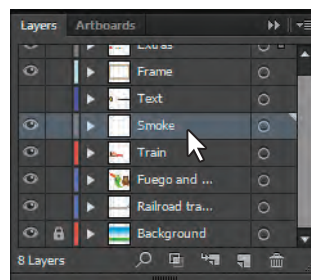
Drawing with the Blob Brush tool

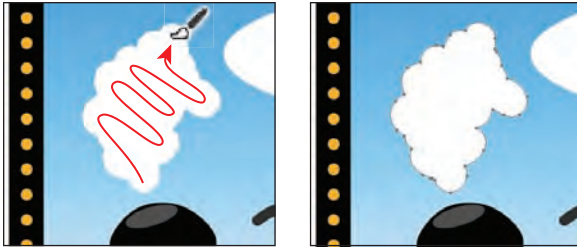
The Blob Brush tool uses the same default brush options as Calligraphic brushes.

● **Note:** If you don't see "Reset Essentials" in the workspace switcher, choose Essentials before choosing Reset Essentials in the workspace switcher.

● **Note:** When drawing with the Blob Brush tool, if a fill and stroke are set before drawing, the stroke becomes the fill of the shape made by the Blob Brush tool. If only a fill is set before drawing, it becomes the fill of the shape created.

- 1 Choose Reset Essentials from the workspace switcher in the Application bar.
- 2 Choose View > Fit Artboard In Window.
- 3 Click the Layers panel icon (☰) on the right side of the workspace to expand the Layers panel. Click the eye icon to the left of the Text layer to hide its contents, and then click the visibility column to the left of both the Background layer and the Smoke layer. Click the Smoke layer to select it.
- 4 Change the fill color to white and the stroke color to None (☐) in the Control panel.
- 5 Double-click the Blob Brush tool (☞) in the Tools panel. In the Blob Brush Tool Options dialog box, select the Keep Selected option and change the Size to **30 pt** in the Default Brush Options area. Click OK.
- 6 Position the pointer just above the black smoke stack to the left of the duck. Drag in a zigzag pattern up and to the right to create some smoke.





● **Note:** When you draw with the Blob Brush tool, you create filled, closed shapes. Those shapes can contain any type of fill, including gradients, solid colors, patterns, and more.

- 7 Choose Select > Deselect.

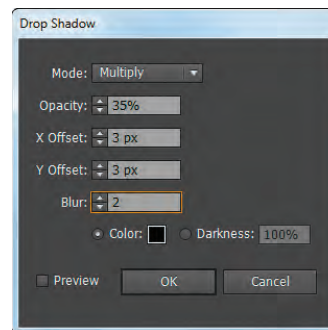
Merging paths with the Blob Brush tool

Besides drawing new shapes with the Blob Brush tool, you can use it to intersect and merge shapes of the same color. Next, you will merge the smoke you just created with the white ellipse to the right of it to create one big smoke shape.

- 1 Click the Appearance panel icon (📄) on the right side of the workspace to expand the panel. In the Appearance panel menu (☰), deselect New Art Has Basic Appearance. When this option is deselected, the Blob Brush tool uses the attributes of the selected artwork.
- 2 With the Selection tool (🖱️), click the smoke you just drew and Shift-click the white ellipse to the right of the smoke shape.
- 3 In the Appearance panel, click the word “Path” at the top of the panel so that the drop shadow you apply next isn’t applied to the fill or stroke only.

● **Note:** If you see “Mixed Appearances” in the Appearance panel with both shapes selected, then press the letter D to apply the default fill and stroke and then change the stroke to 0 in the Control panel, to remove it.

- 4 Choose Effect > Stylize > Drop Shadow. In the Drop Shadow dialog box, change Opacity to 35%, X Offset to 3 px, Y Offset to 3 px, and Blur to 2 px. Click OK.



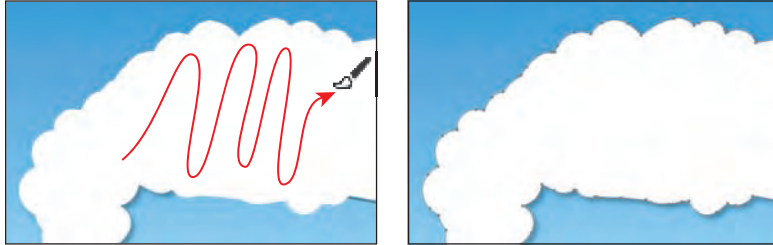
- 5 Choose Select > Deselect.
- 6 With the Blob Brush tool selected in the Tools panel, make sure that you see the same attributes as the smoke shapes (a white fill, no stroke, and a drop shadow) in the Appearance panel. Drag from inside the smoke shape you created to the inside of the ellipse to the right, connecting the two shapes.

● **Note:** Notice that the drop shadow is applied to the entire shape as you draw and edit.

● **Note:** Objects merged with the Blob Brush tool need to have the same appearance attributes, have no stroke, be on the same layer or group, and be adjacent to each other in the stacking order.

- 7 Continue drawing with the Blob Brush tool to make the smoke look more like a cloud. When you release the mouse button, the drop shadow is applied.

If you find that new shapes are being made, instead of the existing cloud shape being edited, undo what you've created; then, with the Selection tool, reselect and then deselect the cloud shape and continue.



- 8 With the Blob Brush tool, add more shape to the ellipse part of the smoke on the right side to make it more cloud-like.
- 9 Choose Select > Deselect and then File > Save.

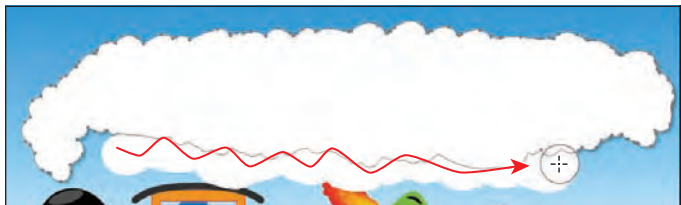
Editing with the Eraser tool

As you draw and merge shapes with the Blob Brush tool, you may draw too much and want to edit what you've done. You can use the Eraser tool to mold the shape and correct any changes you don't like.

► **Tip:** As you draw with the Blob Brush and Eraser tools, it is recommended that you use shorter strokes and release the mouse button often. You can undo the edits that you make, but if you draw in one long stroke without releasing the mouse button, an undo removes the entire stroke.

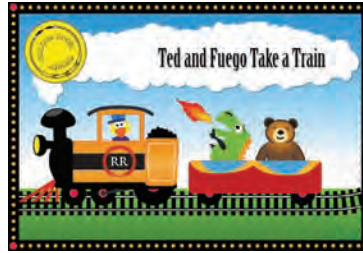
- 1 With the Selection tool (⌘), click to select the smoke shape.
- 2 Select the Eraser tool (🧽) in the Tools panel. Proceed slowly with the next steps, and remember that you can always stop and undo.
- 3 Position the pointer over the cloud shape, and press the right bracket key (]) several times to increase the size of Eraser brush.
- 4 With the Eraser tool, drag along the bottom of the smoke shape to remove some of the smoke.

The Blob Brush and Eraser tools have pointers that include a circle, indicating the diameter of the brush.



● **Note:** Selecting the shape before selecting the Eraser tool limits the Eraser tool so that it erases only the selected shape.

- 5 Try switching between the Blob Brush tool and the Eraser tool to edit the smoke.
- 6 Click the Layers panel icon (☰) on the right side of the workspace to expand the Layers panel. Click the visibility column to the left of the Text layer. Click the Layers panel tab to collapse the panel group.
- 7 Choose File > Save, and close all open files.



● **Note:** You may need to select the Selection tool and reposition the text "Ted and Fuego Take a Train" to center the text on the smoke.

The Blob Brush tool guidelines

When using the Blob Brush tool, keep the following guidelines in mind:

- To merge paths, they must be adjacent in stacking order.
- The Blob Brush tool creates paths with a fill and no stroke. If you want your Blob Brush paths to merge with existing artwork, make sure that the artwork has the same fill color and no stroke.
- When drawing paths with the Blob Brush tool, new paths merge with the topmost matching path encountered. If the new path touches more than one matching path within the same group or layer, all of the intersecting paths are merged together.
- To apply paint attributes (such as effect or transparency) to the Blob Brush tool, select the brush and set the attributes in the Appearances panel before you start drawing.
- You can use the Blob Brush tool to merge paths created by other tools. To do this, make sure that the existing artwork does not have a stroke; then set up the Blob Brush tool to have the same fill color, and draw a new path that intersects all of the paths that you want to merge together.

—From Illustrator Help