

How to draw and create shapes

You can add artwork to your Adobe Flash Professional documents in two ways: You can import images or draw original artwork in Flash by using the drawing tools in the Tools panel.

Drawings you create in Flash are vector graphics. *Vector* graphics describe images by using lines and curves called vectors that also include color and position properties. When you edit a vector graphic, you modify the properties of the lines and curves that describe its shape. You can move, resize, reshape, and change the color of a vector graphic without changing the quality of its appearance. Vector graphics are *resolution independent*; that is, they can be displayed on output devices of varying resolutions without losing any quality.

The files you import to Flash can be either vector graphics or bitmap images. *Bitmap* images (also known as *raster* images) are made up of pixels in a grid. *Pixels* are picture elements: tiny dots of individual color that make up what you see on your screen. A JPEG photograph is an example of a bitmap image. Because bitmaps are *resolution dependent*, it's difficult to increase or decrease their size without losing some image quality. Bitmap images are typically much larger in file size than vector graphics.

The bitmap images you import to Flash can also be turned into vector drawings in two ways: You can break them apart to create a single vector shape or you can trace the bitmap to create a collection of vector shapes that resemble the original bitmap image.

In this guide you use the drawing tools to create and modify vector graphics. You also import bitmap images and convert them to vector shapes by using the Break Apart and Trace Bitmap commands.

Drawing with basic lines and shapes

One way to become familiar with the Flash drawing tools is to create something simple using basic lines and shapes.

Flash has two drawing modes: *Merge Drawing* and *Object Drawing*. Merge Drawing blends shapes when they overlap on the Stage. Shapes drawn on top of other shapes will merge, which means if you select one of the shapes and move it, the underneath shape is cut away (**Figure 1**).

Object drawing treats your shapes as grouped objects that can overlap without affecting each other (**Figure 1**).

You can change between drawing modes by enabling or disabling Object Drawing in the Tools panel.

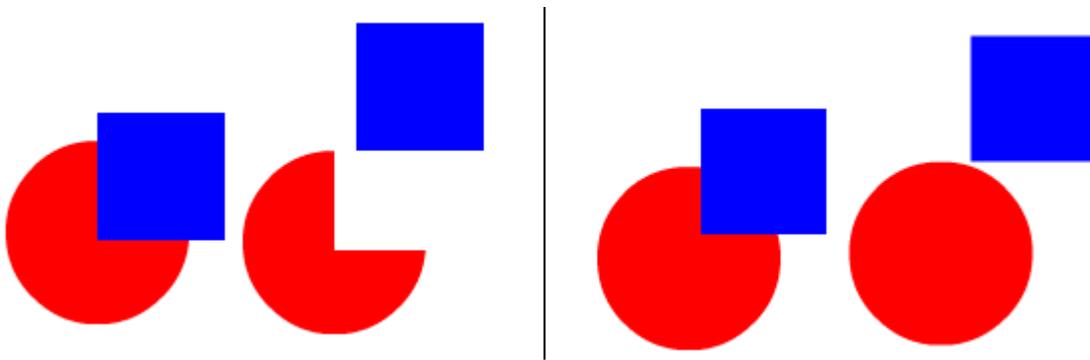


Figure 1 Merge Drawing (left) and Object Drawing (right)

Selecting drawing tools and setting properties

Flash drawing tools are available in the Tools panel. When you select a drawing tool, the properties for that tool appear in the Properties panel and any options for the selected tool appear at the bottom of the Tools panel. (You may need to enlarge the Flash window to see tool options.)

Most drawing tools have several properties in common, but each tool has a few unique properties.

To set drawing tool properties:

1. Start Flash and open a new blank document (ActionScript 3.0).
2. Select the Oval tool in the Tools panel.

The Oval tool properties appear in the Properties panel (**Figure 2**). If the Properties panel isn't open, select Window > Properties.

In the Properties panel, you can set the color, style, and size of the outer stroke of a shape. You can also change the color of the shape's inner fill.

You can select from several stroke types, such as solid or dashed lines.

Selecting the Hinting option enables stroke hinting. Stroke *hinting* adjusts line and curve anchors on full pixels to prevent blurry vertical or horizontal lines.

Cap settings control how the end of a path appears.

- *None*: The path ends flush—there is no cap.
- *Round*: Adds a round cap that extends beyond the path end by half the stroke width.
- *Square*: Adds a square cap that extends beyond the path end by half the stroke width.

Join settings define how two path segments meet (**Figure 3**).

- *Miter*: Forms a sharp angle at the junction of two paths. To avoid beveling a mitered corner, enter a Miter value greater than 0.
- *Round*: Creates a smooth, rounded connection between two paths.
- *Bevel*: Creates a beveled edge where two paths meet.

The options in the Properties panel are slightly different for each drawing tool. For example, the Oval tool includes Start Angle, End Angle, and Inner Radius properties.

The Rectangle tool includes Corner Radius properties for creating rounded corners (**Figure 4**).

If you are creating lines with the Brush tool or with the Pencil tool in Smooth mode, you can set the Smoothing value (**Figure 5**). Smoothing controls how Flash smooths out the curves in the lines you draw or paint. You can specify a value from 0 to 100.

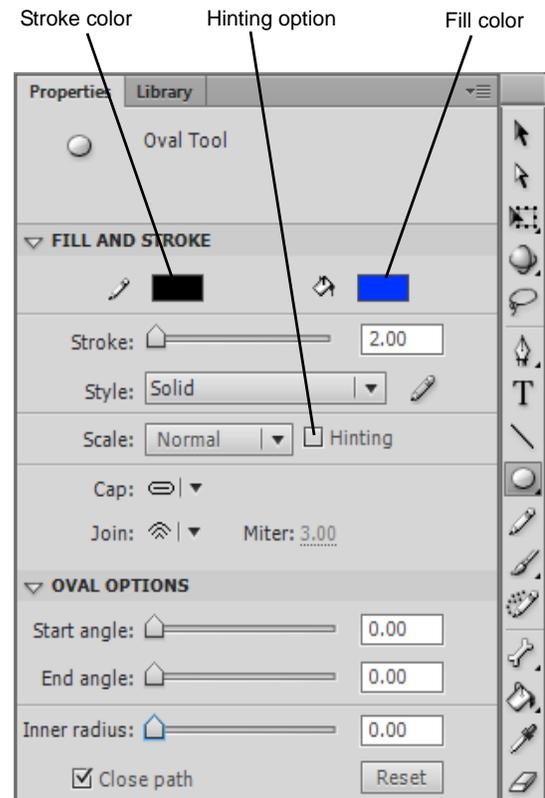


Figure 2 Properties panel, Oval tool



Figure 3 Join options (left to right): Miter, Round, Bevel

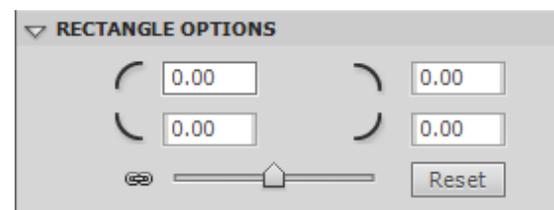


Figure 4 Rectangle tool corner radius options

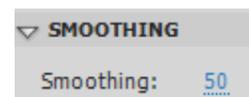


Figure 5 Pencil and Brush tool Smoothing option

3. Make sure the Oval tool is still selected.

A tool's modifier options are located in the options area at the bottom of the Tools panel (**Figure 6**). You may need to enlarge the Flash window to see tool options.

Options that are common to most Flash shape-drawing tools include:

- *Stroke Color and Fill Color*: Open a color palette to change stroke or fill color. In Merge Drawing mode, you must select a color before you begin drawing. You can also select stroke and fill colors in the Properties panel.
- *Black And White*: Resets the stroke and fill colors to black stroke and white fill.
- *Swap Colors*: Swaps the current stroke and fill colors.
- *Object Drawing*: Toggles Object Drawing mode on and off. This is how you change between Merge Drawing and Object Drawing.
- *Snap To Objects*: Toggle the Snap To Objects feature on and off. This is off by default.

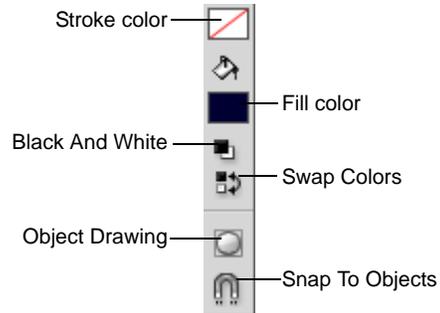


Figure 6 Tools panel, Oval tool modifier options

Creating a simple drawing with lines and shapes

A good way to become familiar with the Flash drawing tools is to create something very basic. In this activity, you use lines and shapes to create a simple drawing.

To draw in Merge Drawing mode:

1. Select the Oval tool in the Tools panel (if it's not already selected).
2. In the options section of the Tools panel, make sure Object Drawing is deselected.

For now, you want to be in Merge Drawing mode.

3. Select a fill color for the shape, such as blue.

Note: You can select a fill color in the Properties panel or in the Tools panel.

4. Select a stroke color, such as black.
5. In the Properties panel, change the Stroke Height value to 15.
6. On the lower-center of the Stage, drag to draw an oval that is about 2 inches tall (**Figure 7**).

Note: If you want to draw a perfect circle, hold down Shift as you drag the Oval tool on the Stage.

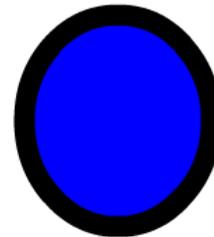


Figure 7 Oval shape with stroke and fill

- In the Properties panel, change the Oval tool fill color, perhaps to red.
- Hold down Shift and drag on the Stage to create a perfect circle. Make it about the same size as the first oval and be sure the two shapes do not touch or overlap (**Figure 8**).

Note: If you make a mistake or don't like what you've drawn, press Ctrl+Z (Windows) or Command+Z (Mac OS) to undo your drawing and start over.

- Use the Selection tool to click the outline (stroke) of the top circle.

Only the outer stroke is selected.

- Click the center (fill) of the top circle to select it.

Now only the fill is selected.

- Double-click the fill of the top circle.

The entire object (stroke and fill) is selected.

Note: If you double-click the stroke, only the stroke is selected. To select both the stroke and fill, you must double-click the fill.

- With the top circle selected, drag it to the top portion of the bottom circle (**Figure 9**).
- Click away from the shapes to deselect them and then click once in the center of the top circle to select only its fill.
- Press the Delete key.

Because you are drawing in merge mode, the selected fill disappears along with everything below it (**Figure 10**).

Next you draw in Object Drawing mode.

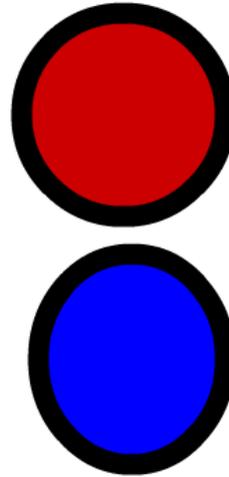


Figure 8 Two shapes with different fills

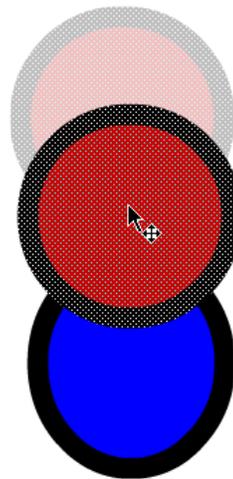


Figure 9 Drag to overlap the shapes

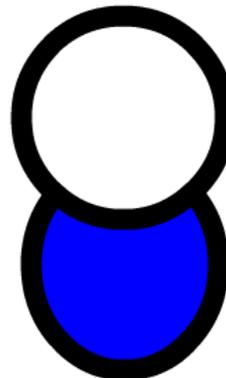


Figure 10 Merged shapes

To draw in Object Drawing mode:

1. Select the Oval tool and then select the Object Drawing modifier in the options section at the bottom of the Tools panel (Figure 6).
2. Change the stroke color to light blue and the fill color to black. Change the Stroke Height value to 10.
3. Anywhere on the Stage, Shift-drag to draw a small circle in Object Drawing mode (Figure 11).

In Object Drawing mode, the shape's stroke and fill are grouped as one object and share the same selection box.

4. Use the Selection tool to select the circle you just drew, and in the Properties panel, change the Width (W) and Height (H) values to approximately 25 (Figure 12).

Note: You can click the Lock Width And Height Values Together option to constrain or unconstrain the height and width of the shape (Figure 12).

5. With the small blue and black circle still selected, select Modify > Convert to Symbol.

The Convert To Symbol dialog box appears (Figure 13).

6. Type **blue_eye** for Name, choose Graphic as the symbol Type, and click OK.
7. Open the Library panel, and drag another instance of the eye symbol to the Stage.
8. Use the Selection tool to drag both instances of the eye symbol into the empty space in the top circle shape (Figure 14).

You can place Object Drawings or symbols over other shapes without affecting the underlying shape.

One you place a symbol on the Stage, you can swap it for another symbol in the library. You do that next.

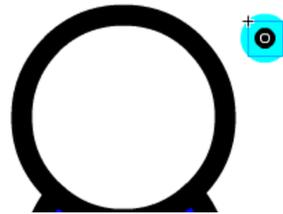


Figure 11 Small circle created in Object Drawing mode

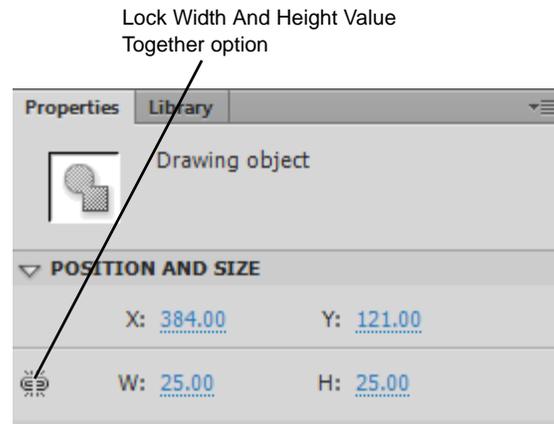


Figure 12 Properties panel, Position And Size

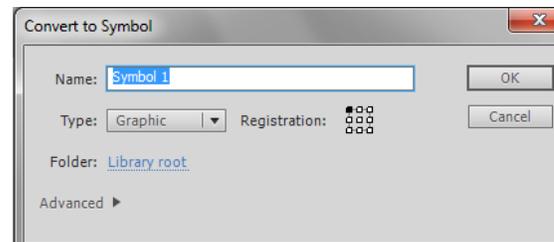


Figure 13 Convert To Symbol dialog box

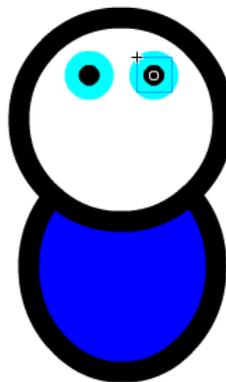


Figure 14 Shapes converted to symbols

To swap symbol instances:

1. Create another small eye shape, only this time make the stroke color green.
2. Convert the green eye shape to a new graphic symbol named **green_eye**.

Now you can create some characters with blue eyes and others with green eyes.

3. Use the Selection tool to select one of the blue_eye symbols on the Stage.
4. In the Properties panel, click Swap (**Figure 15**).

The Swap Symbol dialog box appears (**Figure 16**).

5. Select the green_eye symbol in the Swap Symbol dialog box and click OK.

You have swapped the symbol on the Stage. Your character has one green eye and one blue eye (**Figure 17**).

6. Swap the other eye with a green eye so they match.

Next you use PolyStar tool to create a nose.

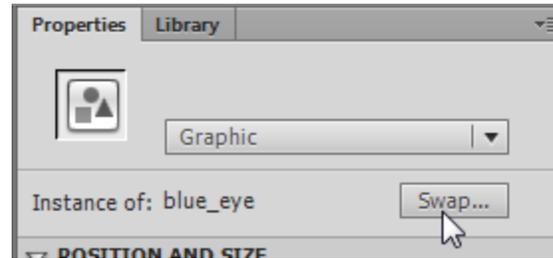


Figure 15 Properties panel, Swap button

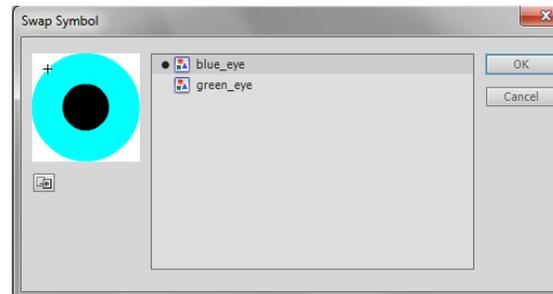


Figure 16 Swap Symbol dialog box



Figure 17 Swapped symbols on the Stage

To draw polygons and stars:

1. Select > Edit > Deselect All to make sure nothing is selected on the Stage.
2. Select the PolyStar tool in the Tools panel.

Note: The PolyStar tool shares the same space in the Tools panel as the Rectangle and Oval tools.

3. Open the Properties panel and change the fill color to black and the stroke color to None.

Note: To set a stroke or fill color to None, click the color swatch in the Properties panel or in the Tools panel to open the color palette and click the None option (Figure 18).

4. In the Tool Settings section of the Properties panel, click Options.

The Tool Settings dialog box appears (Figure 19). You can create polygons or stars.

5. In the Style menu, choose Polygon. Set the number of sides to 3 (to create a triangle), and click OK.
6. Drag to draw a triangle with one vertex pointing down (Figure 20).

7. In the Tools panel, select the Free Transform tool.

Free Transform selection handles appear around the selected shape (Figure 21).

8. Position the pointer over the lower-right selection handle of the triangle shape, and drag inward to reduce the size of the shape (Figure 21).

Note: You can hold down Shift as you drag to constrain the proportions of the shape. You can also resize the shape by entering Width (W) and Height (H) values in the Properties panel.

9. Use the Selection tool to select and drag the triangle below the eyes in your drawing (Figure 22).

Next you use the Line tool to create a mouth.



Figure 18 Stroke color palette

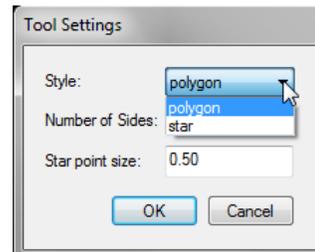


Figure 19 Tool Settings dialog box

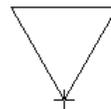


Figure 20 Polygon shape



Figure 21 Free Transform selection



Figure 22 Position the triangle to create a nose

To draw paths by using the Line, Pencil, and Brush tools:

1. Select the Line tool in the Tools panel.
2. In the Properties panel, select a stroke color and change the stroke height to 4.
3. Drag to draw a horizontal line below the triangle you just created (**Figure 23**).
4. Use the Selection tool to click an empty area of the Stage to deselect the line without selecting another shape.
5. Position the pointer along the bottom edge of the line and drag downward to modify the line (**Figure 24**).
6. Select the Brush tool in the Tools panel.

Notice the stroke options are disabled for the Brush tool in the Properties panel.

7. Select a fill color for the Brush tool in the Properties panel.

You can set painting options for the brush in the options section of the Tools panel (**Figure 25**).

- *Object Drawing Mode*: Toggle Object Drawing Mode on or off.
- *Lock Fill*: When you select the Lock Fill modifier with the Brush or Paint Bucket tool and paint with the tool, the bitmap or gradient fill extends across the objects you paint on the Stage.
- *Brush Mode*: Select from five painting modes.
 - *Paint Normal*: Paints over lines and fills on the same layer.
 - *Paint Fills*: Paints fills and empty areas, leaving lines unaffected.
 - *Paint Behind*: Paints in blank areas of the Stage on the same layer, leaving other lines and fills unaffected.
 - *Paint Selection*: Applies a new fill to the selection when you select a fill in the Fill Color control or the Fill box in the Properties panel, the same as selecting a filled area and applying a new fill.
 - *Paint Inside*: Paints the fill in which you start a brush stroke and never paints lines. If you start painting in an empty area, the fill doesn't affect any existing filled area.
- *Brush Size and Brush Shape*: Select a size and shape for the brush.

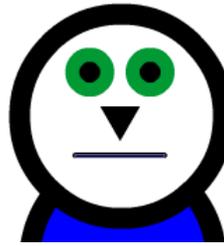


Figure 23 Position the triangle to create a mouth



Figure 24 Reshape the line to make a smile

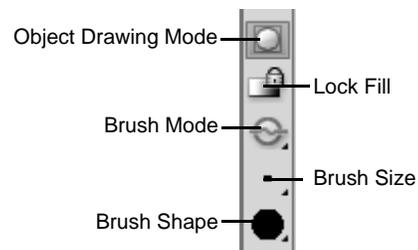


Figure 25 Brush modifiers in the Tools panel

8. Experiment with the Brush tool by making several brush strokes on the Stage.

In this example, we used the Brush to make antennae for the bug-like character who has been taking shape throughout this activity (**Figure 26**).

9. Select the Pencil tool in the Tools panel.

Notice the fill color option is disabled for the Pencil tool in the Properties panel.

10. Select a stroke color and set a stroke height for the Pencil.

Flash offers three pencil drawing modes, available in the options section of the Tools panel.

- *Straighten*: Draws straight line segments.
- *Smooth*: Draws curvy lines with smooth curves.
- *Ink*: Draws freehand lines with no modification applied.

11. Use the Pencil tool to put some final touches on your drawing (**Figure 27**).

Note: Because you are still in Object Drawing mode, overlapping your existing shapes will not affect them.

Now you've created your entire character and have several shapes arranged on the stage.



Figure 26 Brush strokes used to create antennae

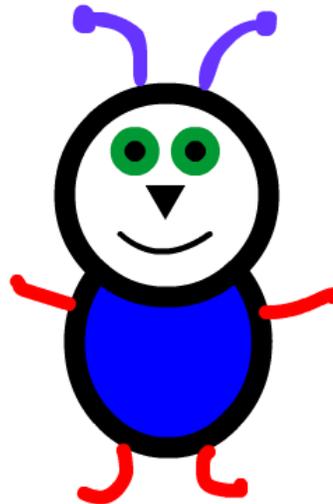


Figure 27 Smooth pencil lines used to create arms and legs

Creating decorative fills by using the Deco tool

Designing the settings in a Flash movie or the virtual world in a game can be similar to designing sets or locations in a live-action movie. You don't need to be a fine artist to include stylish backgrounds in Flash. By using the Deco (decorative) tool with its various drawing effects, you can turn symbols into complex geometric patterns with creative artistic fills.

Some Deco tool drawing effects, such as the Tree Brush or Lightning Brush, do not use symbols. Other Deco tool drawing effects, such as Grid Fills, require that you select a symbol in the document library to use as the artwork for the decorative fill.

The Symmetry effect

Use the Deco tool Symmetry effect to arrange symbols symmetrically around a central point.

To apply the Symmetry effect:

1. Open a Flash document that contains symbols or open a new blank Flash document (ActionScript 3.0) and use the shape tools to create a few new graphic symbols.

Note: Smaller symbols work best when you are creating decorative fills.

2. Select the Deco tool in the Tools panel.

Properties for the Deco tool appear in the Properties panel (**Figure 28**).

3. Select Symmetry Brush from the Drawing Effect menu in the Properties panel (**Figure 29**).
4. In the Properties panel, click the Edit button.

The Select Symbol dialog box appears. It shows the symbols in the library (**Figure 30**).

You can use any movie clip or graphic symbol in the library with the Symmetry Brush effect. This symbol-based effect gives you a great deal of creative control over artwork you create in Flash.

5. Select one of the symbols you created and click OK.

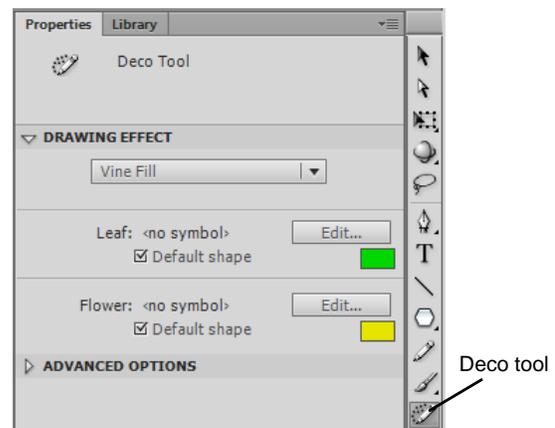


Figure 28 Properties panel, Deco tool

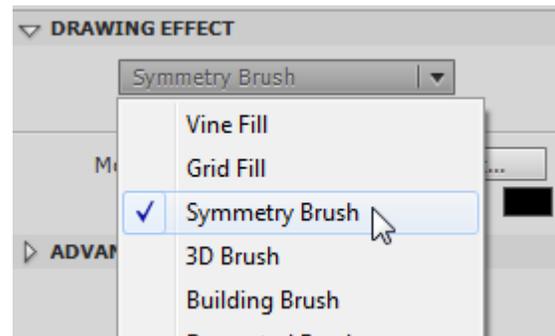


Figure 29 Drawing Effect menu

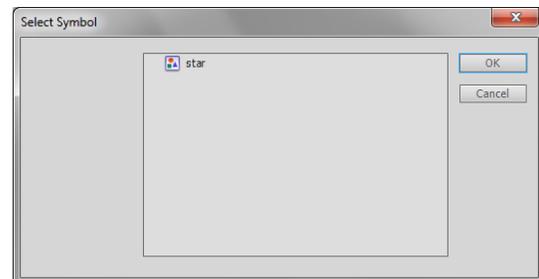


Figure 30 Select Symbol dialog box

6. In the Properties panel, choose one of the options from the Advanced Options menu (**Figure 31**).
 - *Reflect Across Line*: Flips the shapes an equal distance apart across an invisible line that you specify.
 - *Reflect Across Point*: Places two shapes an equal distance apart around a fixed point that you specify.
 - *Rotate Around*: Rotates the shapes in the symmetry around a fixed point that you designate. The default reference point is the center point of the symmetry. To rotate the object around its center point, drag in a circular motion.
 - *Grid Translation*: Creates a grid by using the shapes in the Symmetry effect you are drawing. Each click of the Deco tool on the Stage creates a grid of shapes. Adjust the height and width of the shapes by using the x and y coordinates defined by the Symmetry Brush handles.
7. Click the Stage where you want the Symmetry Brush artwork to appear (**Figure 32**).
8. Use the Symmetry Brush handles to adjust the size of the symmetry and the number of symbol instances.
9. Select Edit > Select All and press Delete.

You will start the next activity with an empty Stage.

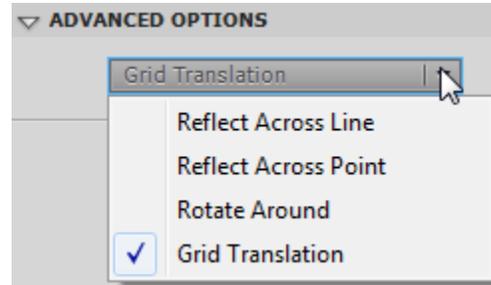


Figure 31 Advanced Options menu

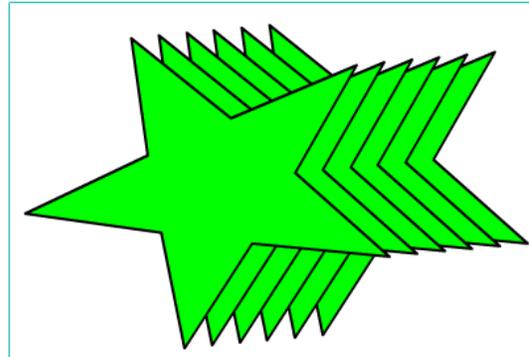


Figure 32 Placing symbols with the Symmetry Brush

The Grid Fill effect

You can use the Grid Fill effect to fill the Stage, a symbol, or a closed region with a symbol from the library. After you draw a Grid Fill on the Stage, if you move or resize the filled symbol, the Grid Fill moves or resizes accordingly.

The Grid Fill effect creates a repeating tiled background or an area or shape with a custom pattern. The default symbol for the Grid Fill effect is a 25-by-25-pixel black rectangular shape with no stroke.

To apply the Grid Fill effect:

1. Select the Deco tool, and select Grid Fill from the Drawing Effect menu in the Properties panel (**Figure 33**).

You can use any movie clip or graphic symbol in the library with the Grid Fill effect. You can use the same symbol for all tiles or combine up to four symbols. The default shape is a small black square. You can change the color used for the default shape by clicking the color swatch for each tile and picking a new color.

2. In the Properties panel, click the Tile 1 Edit button to select a symbol from the library.

The Select Symbol dialog box appears, listing symbols in the document library.

3. Select a symbol in the Select Symbol dialog box and click OK.

You can use the following advanced options in the Properties panel to specify the horizontal and vertical spacing and the scale of the fill shape.

- *Horizontal Spacing*: Specifies the horizontal distance in pixels between shapes used in the Grid Fill.
- *Vertical Spacing*: Specifies the vertical distance in pixels between shapes used in the Grid Fill.
- *Pattern Scale*: Enlarges or shrinks an object horizontally (along the x axis) and vertically (along the y axis).

After you apply the Grid Fill effect, you cannot change the advanced options to alter the fill pattern.

4. Click the Stage or click within a shape or symbol where you want the Grid Fill pattern to appear.

The pattern fills the area (**Figure 34**). If you want the entire grid filled with the same symbol, select that symbol for all four tiles in the Properties panel.

5. Select Edit > Select All and press Delete.

You will start the next activity with an empty Stage.

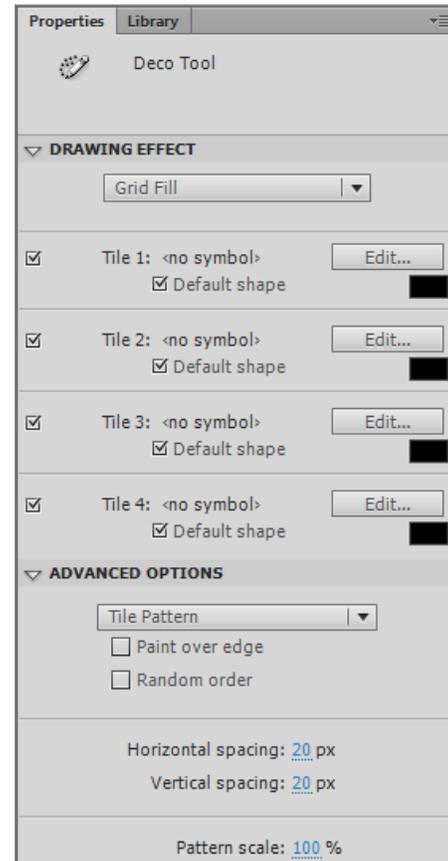


Figure 33 Deco tool Grid Fill properties

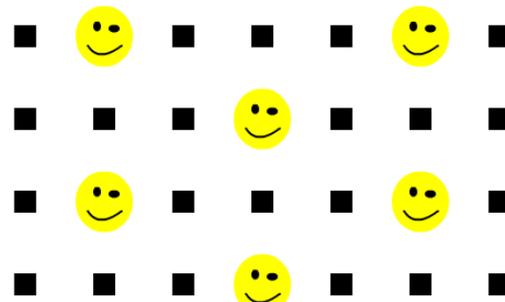


Figure 34 Grid Fill pattern

The 3D Brush effect

You can use the 3D Brush effect to spray symbols so they appear to be in front of each other. After you draw a 3D Brush on the Stage, if you resize or otherwise change the filled symbol, the 3D Brush changes accordingly.

To apply the 3D Brush effect:

1. Select the Deco tool, and select 3D Brush from the Drawing Effect menu in the Properties panel (**Figure 35**).

Similar to the Grid Fill effect, you can choose the symbols or default shapes to use when drawing.

2. In the Properties panel, click the Object 1 Edit button to select a symbol from the library.

The Select Symbol dialog box appears.

You can use any movie clip or graphic symbol in the library with the 3D Brush effect.

3. Select a symbol in the Select Symbol dialog box and click OK.

You can use the following advanced options in the Properties panel.

- *Max Objects*: Specifies the total number of shapes used in the 3D Brush.
- *Spray Area*: Specifies the area covered in each spray of the 3D Brush.
- *Perspective*: Specifies that objects appear in front of each other.
- *Distance Scale*: Specifies how far in front of each other objects appear to be.
- *Random Scale Range*: Specifies the degree to which objects vary in size.
- *Random Rotation Range*: Specifies the degree to which objects are rotated.

Note: After you apply the 3D Brush effect, you cannot change the advanced options to alter the fill pattern.

4. Drag the pointer across the Stage to draw with the 3D Brush (**Figure 36**).

As you drag, Flash paints a pattern using the objects you selected in the Properties panel.

5. Select Edit > Select All and press Delete.

You will start the next activity with an empty Stage.

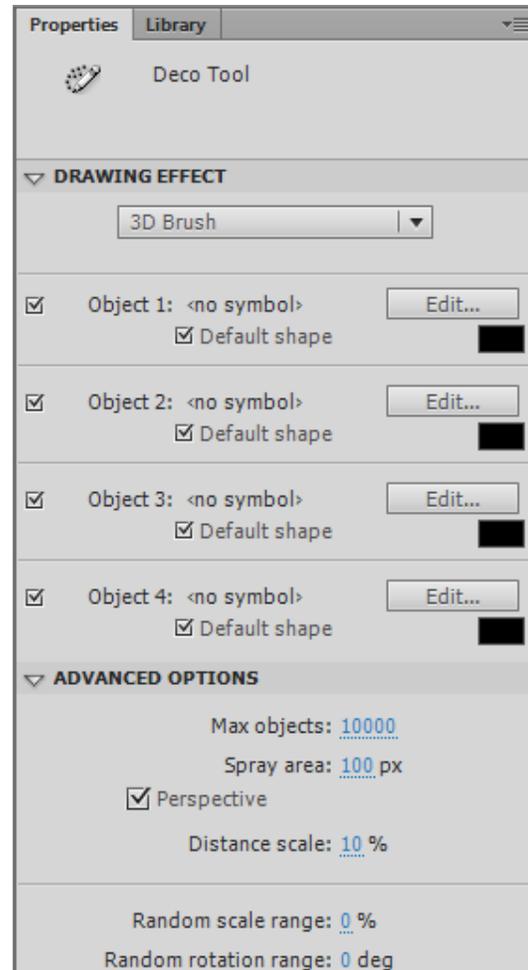


Figure 35 Deco tool 3D Brush properties



Figure 36 Placing symbols with the 3D Brush effect

The Vine Fill effect

You can use the Vine Fill effect to fill the Stage, a symbol, or a closed region with a vine-like pattern. You can substitute your own artwork for the leaves and flowers by selecting symbols from the library. The resulting pattern is contained in a movie clip that itself contains the symbols that make up the pattern.

To apply the Vine Fill effect:

1. Select the Deco tool, and select Vine Fill from the Drawing Effect menu in the Properties panel (**Figure 37**).

By default, the Vine Fill effect uses a leaf and flower as the artwork for the fill. You can change these to custom symbols by clicking the Edit buttons and selecting symbols in the document library.

You can set the following Advanced Options in the Properties panel:

- *Branch Angle*: Specifies the angle of the branch pattern.
- *Branch Color*: The color box to the right of Branch Angle. Specifies the color for the branch.
- *Pattern Scale*: Adjusts an object by enlarging or reducing it both horizontally (along the x axis), and vertically (along the y axis).
- *Segment Length*: Specifies the length of the segments between leaf and flower nodes.
- *Animate Pattern*: Specifies that each iteration of the effect is drawn to a new frame in the Timeline. This option creates a frame-by-frame animated sequence of the flower pattern as it is drawn.
- *Frame Step*: Specifies how many frames to span per second of the effect being drawn.

Note: After you apply the Vine Fill effect, you cannot change the advanced options in the Properties panel to alter the fill pattern.

2. Click the Stage or click within the shape or symbol where you want the Vine Fill pattern to appear.

The pattern fills the area (**Figure 38**).

3. Select Edit > Select All and press Delete.

You will start the next activity with an empty Stage.

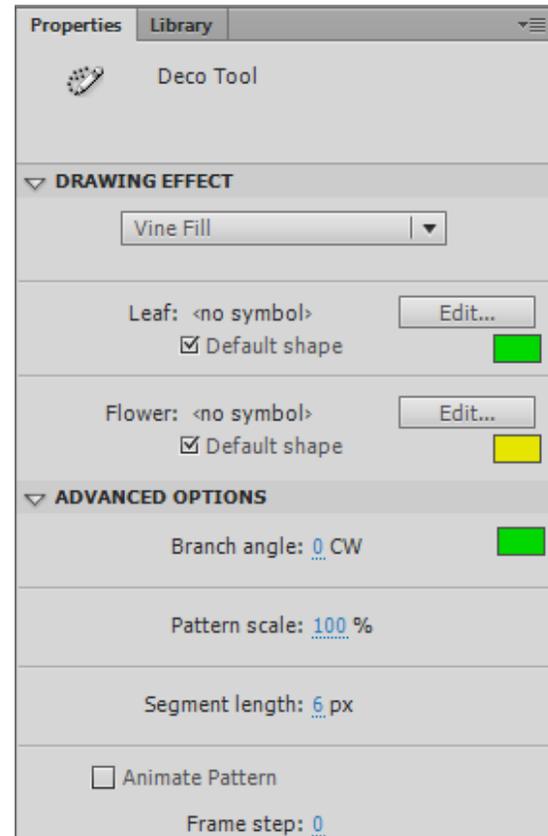


Figure 37 Deco tool Vine Fill properties



Figure 38 Vine Fill pattern

Converting text and bitmap images to vector shapes

In addition to drawing vector shapes in Flash, you can import bitmap graphics, such as photographs, and convert them to vector artwork. Converting large bitmaps to vectors can significantly reduce the file size of your document.

Flash provides two ways to convert a bitmap image to a vector shape: *Break Apart* converts the entire bitmap into a single shape. Trace Bitmap analyzes the colors in the bitmap image and creates a collection of merged shapes.

Using the Break Apart command

The Break Apart command appears in the Modify menu.

You can break apart bitmaps and text to create vector shapes. When you break apart text, you can use the resulting shape in an animation that morphs the shape into another shape.

When objects or symbols are grouped, using Break Apart ungroups them into separate objects. You may need to use Break Apart several times to completely ungroup objects before you can convert them into vector drawings.

To break apart text:

1. Use the Text tool to create some text. Use the Selection tool to select the text.
2. Select Modify > Break Apart.

The text is ungrouped into separate letters (**Figure 39**). You can now select and modify each letter as a separate object, but they are still not vector shapes, as shown in the Properties panel (**Figure 41**). You need to break them apart a second time to convert them to vector shapes.

3. Select Modify > Break Apart again.

Flash converts the selected letters into several shapes (**Figure 40**), as shown at the top of the Properties panel (**Figure 41**).

4. Select Edit > Select All and press Delete.

You will start the next activity with an empty Stage.

Converting Text to Vectors

Figure 39 Text broken into separate objects

Converting Text to Vectors

Figure 40 Letter objects broken into shapes

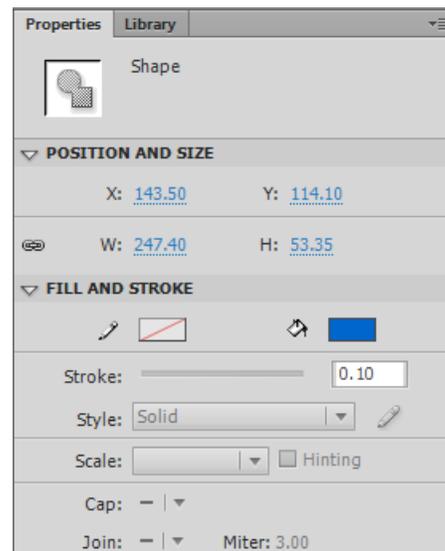


Figure 41 Properties panel, shape properties

To break apart a bitmap image:

1. Select the bitmap you want to break apart.

Note: To import a bitmap image, you can choose File > Import > Import To Stage, select the file to import, and click Open.

2. Select Modify > Break Apart.

Flash converts the bitmap image to a shape, as shown at the top of the Properties panel (**Figure 42**).

The selected image is filled with a consistent pattern to show it's selected as a single shape object (**Figure 43**).

3. Click away from the shape or select Edit > Deselect All to deselect the shape.
4. Click the shape again to select it.

The entire shape is selected as a single object.

5. Select Modify > Combine Objects > Union.

The shape is grouped as a single drawing object, as shown in the Properties panel (**Figure 44**). You can now apply stroke and fill properties.

6. Select Edit > Select All and press Delete.

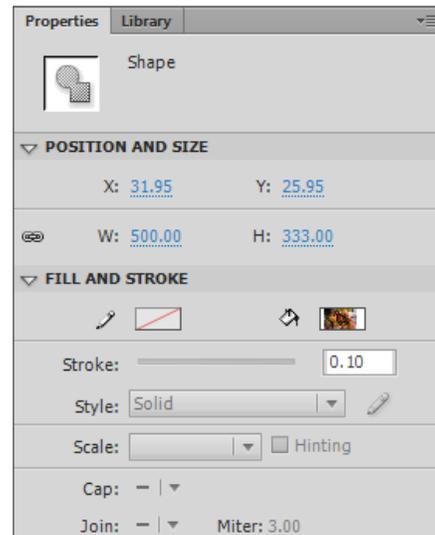


Figure 42 Properties panel, shape properties



Figure 43 Selected shape

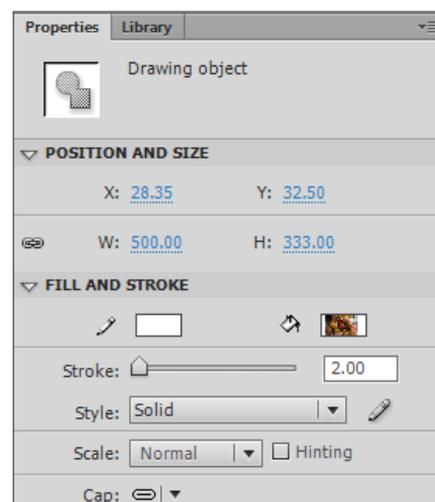


Figure 44 Properties panel, drawing object

Using Trace Bitmap

In this activity, you trace the same bitmap you broke apart in the previous activity to see the difference between Break Apart and Trace Bitmap.

To trace a bitmap image:

1. Select the bitmap you want to break apart.

Note: If you've already imported the image, you can drag a fresh copy of the image from the Library panel to the Stage.

2. Select **Modify > Bitmap > Trace Bitmap**.

The Trace Bitmap dialog box appears (**Figure 45**). Tracing will occur based on colors and lines in the image. You can adjust how sensitive Flash is when analyzing the bitmap.

3. Click **OK** to accept the default Trace Bitmap settings.

Flash traces the bitmap and creates an artistic rendering of the image. The resulting object is a vector shape, as shown in the Properties panel.

4. Click away from the image or select **Edit > Deselect All** to deselect the shape.

5. Click in the image again.

Only a portion of the image is selected (**Figure 46**). When you trace a bitmap, the resulting vector drawing is a collection of merged shapes.

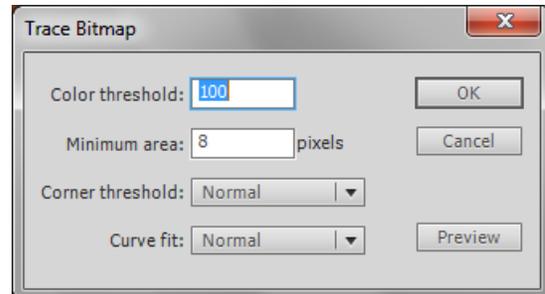


Figure 45 Trace Bitmap dialog box



Figure 46 Traced bitmap converted to shapes

Using adaptive scaling to produce a Flash document for multiple screens

It used to be that one of the most time-consuming tasks of designing content in Flash was to size and optimize your movie for multiple screen sizes. With Adobe Flash Professional, you can now choose to scale the contents of your document when you change the Stage size. All objects on the Stage, including symbols, shapes, paths, motion paths, and bitmap images across all scenes, are scaled together.

To scale a document by using adaptive scaling:

1. Select **Modify > Document**.

The Document Settings dialog box appears (**Figure 47**).

When you change the Dimensions settings of the document, the Scale Content With Stage option becomes active. This option activates adaptive scaling.

2. To change the document dimensions, select **Scale Content With Stage**, and click **OK**.

The content resizes along with the Stage.

3. Select **Edit > Undo Modify FLA Document** to return the Stage and content to their original dimensions.

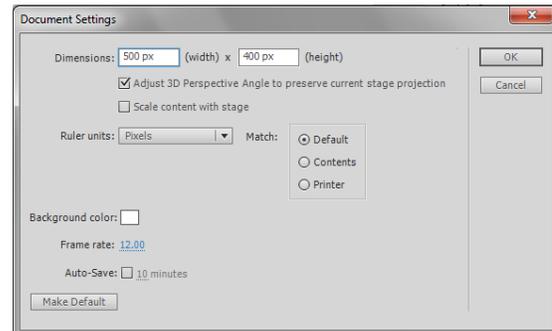


Figure 47 Document Settings dialog box