

Drawing

Using the built-in tool set to create artwork

In this section

In this section, you will learn how to:

- draw, colour and edit simple graphics
- draw inside frames on a *Timeline*
- re-use graphics with the help of *Libraries*
- add filters to artwork
- import artwork into Flash
- trace imported bitmap graphics
- create text
- use a component to create scrolling text


Starting to draw

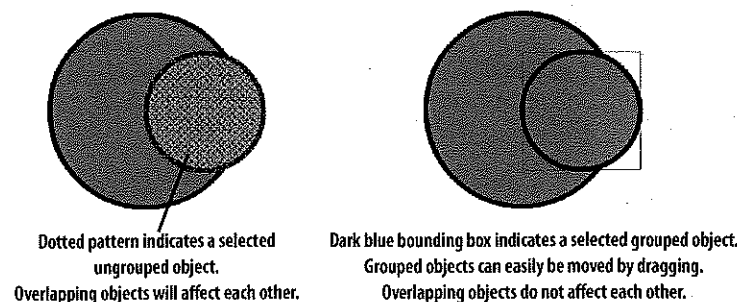
Now that you understand what Flash can do, and can create and save a Flash file, it is time to start drawing.

Merge Drawing mode vs Object Drawing mode

There are two modes of drawing in Flash. The default mode is called **Merge Drawing mode** which, where possible, will separate a shape's stroke and fill, and when objects are overlapped they will merge or dissect each other. This mode can be confusing if you are familiar with using other vector drawing applications that do not merge objects, so you can also use **Object Drawing mode**, which automatically groups the stroke and fill and does not allow shapes to merge or dissect.

To use *Object Drawing mode*:

- Choose the drawing tool you want to use.
- Select the *Object Drawing* option  at the bottom of the *Tools* panel.
- Create an object as normal. A shape drawn using this mode will be surrounded by a dark blue outline (see far right).

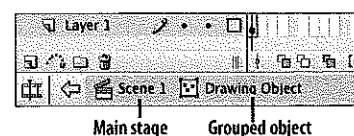


Converting to and from object drawing mode



Object drawing mode basically groups objects together. Objects that were not drawn using this mode can be grouped later: select their parts and choose *Modify > Group*.

To ungroup grouped objects, select them and choose *Modify > Ungroup*.

You can edit an object by double-clicking it, which will enter *Object Editing* mode. *Object Editing* mode shows an ungrouped shape and dims the rest of the artwork surrounding the shape being edited. It also shows your location in the *Scene Menu* underneath the *Timeline* (see right). Double click outside the object once you have finished, or click on *Scene 1* in the *Scene Menu*.



Drawing simple shapes

- Choose the *Rectangle* tool from the *Tools* panel . Click and drag on the *Stage* to draw a rectangle. **Note:** If you hold down the *Shift* key as you drag you will get a square.
- Click and hold on the *Rectangle* tool in the *Tools* panel and choose the *Oval* tool, , then click and drag to draw an oval. **Note:** If you hold down the *Shift* key as you drag you will get a perfect circle.

tip Portable picture skills


Different drawing programs use the same basic rules to draw vector-based artwork.

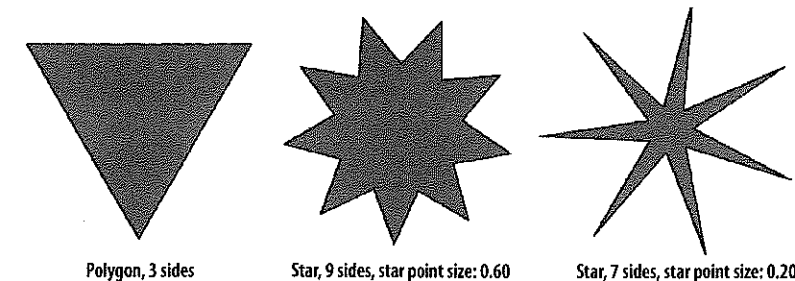
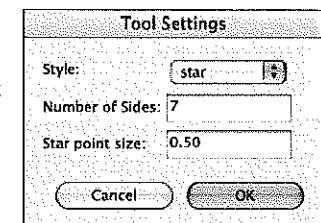
This means that once you learn a skill, you can probably use it in different drawing programs.

tip Undoing mistakes

Undo many recent steps by choosing *Edit > Undo*. Do this as many times as you need to until the shape is whole again.

Drawing polygons and stars


- Click and hold on the *Rectangle* tool again and choose the *Polystar* tool, .
- On the *Properties* window, click on the *Options...* button. The *Tool Settings* box will appear (see right).
- Choose settings for your star or polygon (see below).



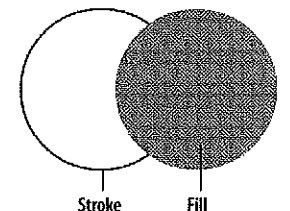
The Selection tool

The *Selection* tool selects and moves objects around the *Stage*. The *Selection* tool is probably the most often used tool in Flash and the first tool covered in detail.

Selecting a shape (ungrouped shapes only)

Choose the top most tool in the *Tools* panel—this is the *Selection* tool .

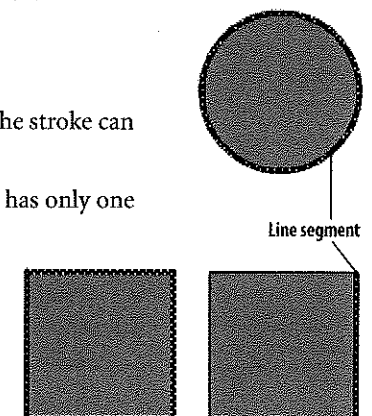
- To select a shape:** on the *Stage*, click once on the centre of the shape. It should darken, showing it is selected.
- To deselect a shape:** click away from the shape, on a blank area of the *Stage*. The shape is now deselected.
- To move a shape:** drag inside the shape and move it a short distance. The shape's stroke will be left behind (see right).
- To move a shape and its stroke:** double-click on the shape then drag it a short distance. The whole of the shape will move. Try moving your rectangle.



Selecting strokes (ungrouped shapes only)

You have seen that a shape can have a fill and a stroke. Now you will see how the stroke can be made up of many line segments:

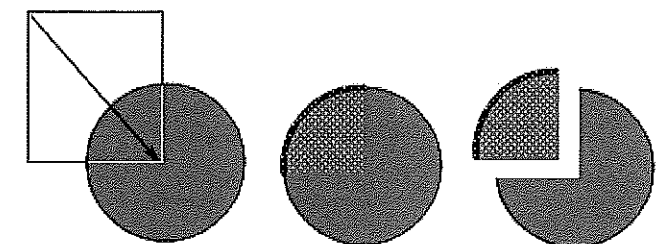
- Using the *Selection* tool click once on the stroke of a circle or oval. An oval has only one line segment so the whole stroke is selected (see right).
- Click once on the stroke of a square or rectangle. A rectangle has four line segments and only one segment is selected (see far right).
- Double-click the stroke of the rectangle to select all four line segments (see right).



Selecting parts of shapes using the marquee tool (ungrouped shapes only)

A method called **marquee selecting** allows you to select a part of a shape:

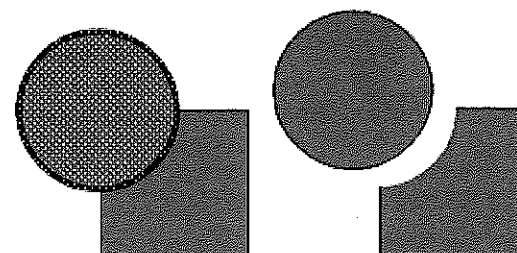
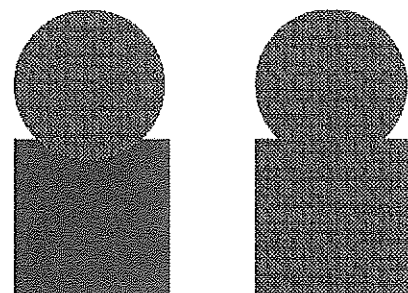
- Using the *Selection* tool, drag on a blank part of the *Stage* near your shape and keep dragging until your mouse has partially covered the shape (see right).
- Release the mouse button. Notice that you have selected a part of the shape's fill and stroke (see centre right).
- Drag on the selected part to move it a short distance (see far right).



Combining shapes (ungrouped shapes only)

Shapes that have the same inside colour will 'weld' together if they touch.

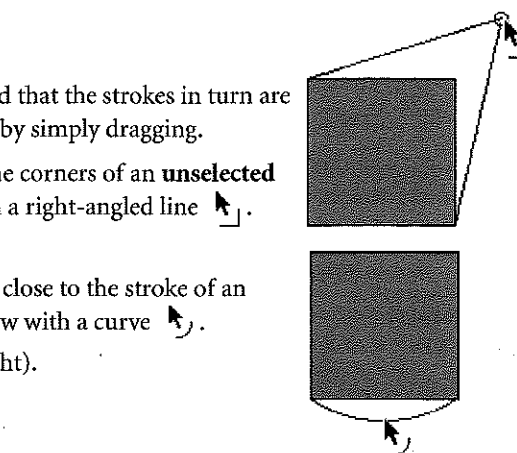
- 1 Move two shapes (without strokes) of the same colour so that they overlap each other (see right).
- 2 Deselect the shapes then reselect them. The two shapes have merged (see far right).



Subtracting shapes and lines (ungrouped shapes only)

Shapes of a different fill colour, or which have strokes, will dissect each other, 'cutting out' the back most shape.

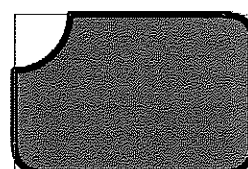
- 1 Overlap two ungrouped shapes which either have strokes, or which are different colours (see right).
- 2 Deselect the shapes.
- 3 Select one of the shapes (and its stroke) again, and move it (see far right).



Editing shapes (grouped or ungrouped shapes)

You have seen that shapes are made up of **strokes** and **fills**, and that the strokes in turn are made up of **line segments**. Those line segments can be edited by simply dragging.

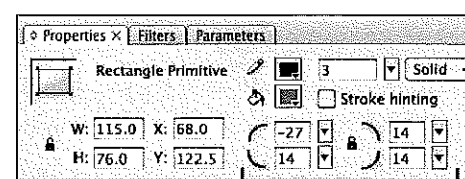
- 1 Using the *Selection* tool, move the mouse close to one of the corners of an **unselected** rectangle shape. The cursor will change into an arrow with a right-angled line.
- 2 Drag to move that corner. The lines will follow (see right).
- 3 Move the mouse close to the middle of one of the lines, or close to the stroke of an **unselected** oval shape. The cursor will change into an arrow with a curve.
- 4 Drag to stretch the line. The corners will not move (see right).



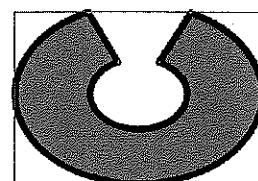
Drawing with Primitives

There are two new tools in Flash CS3; the *Rectangle Primitive* tool and the *Oval Primitive* tool. These tools allow you to adjust characteristics of the shape (rounded corners, angle etc) at any time.

- Choose the *Rectangle Primitive* tool from the *Tools* window (it hides underneath the *Rectangle* tool). Click and drag to draw a rectangle.
- To adjust the corners of the rectangle, either drag one of the rectangle's corner points using the *Selection* tool, or use the controls in the *Properties* window to adjust single corners or to turn the corners 'inside out' (see above right and right).
- Choose the *Oval Primitive* tool from the *Tools* window. Click and drag to draw an oval.
- To make the oval into a wedge, drag the outermost most dot on the oval using the *Selection* tool, or adjust the controls in the *Properties* window (see below).
- To make a hole in the middle of the oval, drag the innermost dot on the oval using the *Selection* tool, or adjust the controls in the *Properties* window.

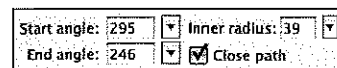


Primitive adjustment options



tip Getting about easily

You can move the *Stage* around easily by moving the mouse with the *Spacebar* held down.

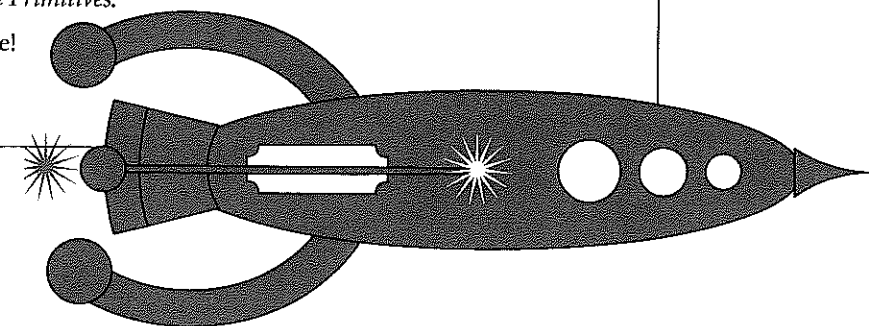


Exercise 1.1

Red retro rocketship

Build this rocketship (or one like it) using the techniques you have learned so far in this section. This example was built using ovals, rectangles, polygons and stars (distorted and un-distorted), in *Merge Drawing* mode and *Object Drawing* mode and using *Rectangle* and *Oval Primitives*.

Remember to save the file!



The Timeline

Frames and layers

The *Timeline* is divided into frames and layers (see right).

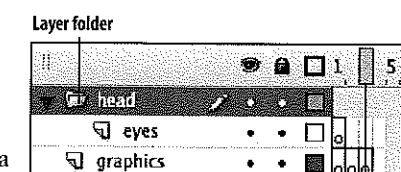
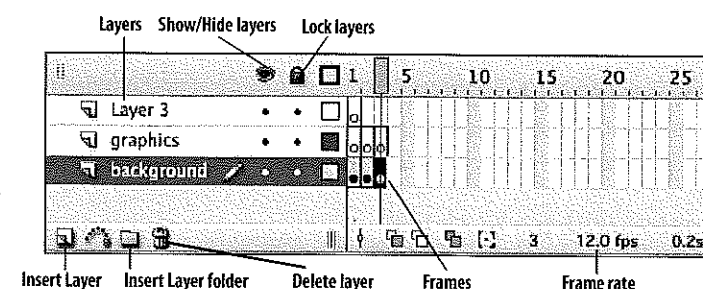
In this chapter, **Drawing**, layers will be looked at. In the next chapter, **Animating**, frames will be looked at.

Managing layers

The *Timeline* can contain multiple layers as well as multiple frames.

Layers offer a way to easily deal with multiple graphics. Layers are like transparent sheets of paper that sit on top of each other. You can see through empty areas of one layer to the contents of the layer below.

- Click the *Insert Layer* button to add a new layer. Always rename new layers, because as your project grows, you'll add many more layers, and named layers are much easier to keep track of. To rename a layer, double click on its name.
- To delete a layer click on its name to select it, then click on the *Delete layer* button.
- Click the *Insert Layer Folder* button to create a new folder.
- Click a layer's black dot under the eye icon to hide or show it.
- Click a layer's black dot under the lock icon to lock it. This prevents changes being made to a layer's contents inadvertently.



Changing the view

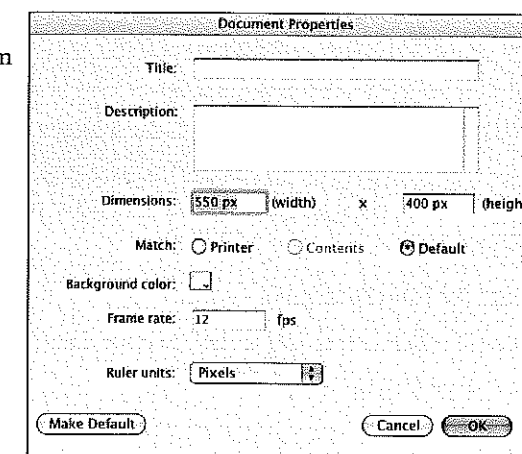
To quickly change the size of the view:

- Using the *Zoom* tool from the *Tools* panel, click on the stage to zoom in, or *Option/Alt*-click to zoom out.
- Double-click directly on the magnifying glass tool to zoom back to 100%.

Quickly editing the Document Properties

On the bottom edge of the *Timeline*, in the centre, you will see a small **12.0 fps**.

Double-click it to open the *Document Properties* window, which lets you change the movie's width and height. In the next section you'll learn more about the frame-rate (fps).



tip Rulers

Under the *View* menu try turning the *Rulers* on and off. You will notice that the unit of measurement is always **pixels**.