

Skills Covered

- Draw Basic Shapes in Flash
- Select Objects
- Position Objects on the Stage
- Transform Objects
- Arrange the Stack Order
- Group and Ungroup Objects

Software Skills You are already familiar with the Fireworks drawing tools from an earlier exercise, and using Flash tools is a similar process. Knowing how to draw shapes in Flash is the foundation for the animation and interactivity objects you add to your Web pages.

Design Skills Knowing how to make the most of your Flash drawing and painting tools enables you to create unique, creative drawings that you can then animate and use on your Web pages.

Application Skills In this exercise, you build on your knowledge of Flash by adding, positioning, modifying, and grouping objects in a Flash document.

TERMS

Guides Horizontal and vertical lines you drag out of the ruler to align objects on the Stage.

Snap ring A small black ring displayed on the mouse pointer when the Snap to Objects command has been selected. The ring becomes larger when the object is near a snap location.

Transformation handles Small rectangles around the sides of a bounding box that can be dragged to transform an object.

Transformation point The center point of an object. Sometimes called the registration point or center point.

NOTES

Draw Basic Shapes in Flash







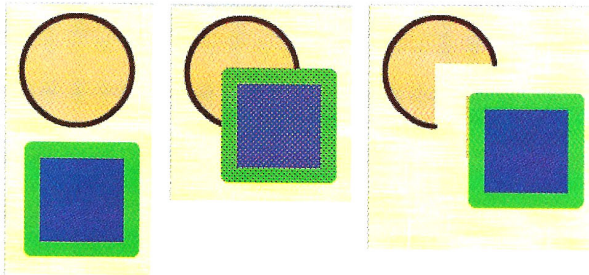
- Use the tools in the Flash Tools panel to draw shapes, lines, and paths.
- Many of the tools have options that enable you to modify the object before or after you draw. The options become available in the Options area of the Tools panel when you select the tool.
- To draw basic geometric shapes, you use the  Line,  Oval, and  Rectangle tools.
 - The Rectangle Options become available in the Property inspector when you select the Rectangle tool. Enter a value if you want to draw a rectangle with rounded corners. The larger the corner radius value, the more rounded the corner. The default is 0, which creates a 90-degree corner.
- The  Pencil tool lets you draw freeform lines and shapes as if drawing with a real pencil. Options for the pencil enable you to adjust the smoothness of the line.
- Similar to the tools in Fireworks, you use the  Pen tool to draw precise straight or curved lines. You also use the  Brush tool to draw as if painting with a paint brush. Options let you control the size and shape of the brush.
- Flash has two drawing models:
 - Merge Drawing model. By default, Flash uses this drawing model, which automatically merges overlapping shapes. If you move or delete a shape that overlaps another shape, the underlying shape is permanently altered (see Figure 6-16).

Figure 6-16.
Drawing with the Merge Drawing model




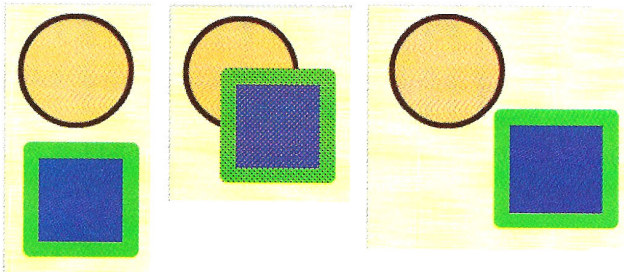


- Object Drawing model. This model lets you draw overlapping shapes without them merging or affecting the appearance of other shapes on the Stage (see the following illustration). You turn the Object Drawing model on or off by clicking the  Object Drawing tool at the bottom of the Tools panel.
 - ✓ *The Object Drawing tool appears only when the Line, Rectangle, Oval, Pen, Pencil, or Brush tools are selected.*
 - ✓ *In order for the Object Drawing model to work properly, you must select it before you begin drawing an object.*

Figure 6-17.
Drawing with the Object Drawing model



- You can combine both drawing models in a single drawing.

Select Objects

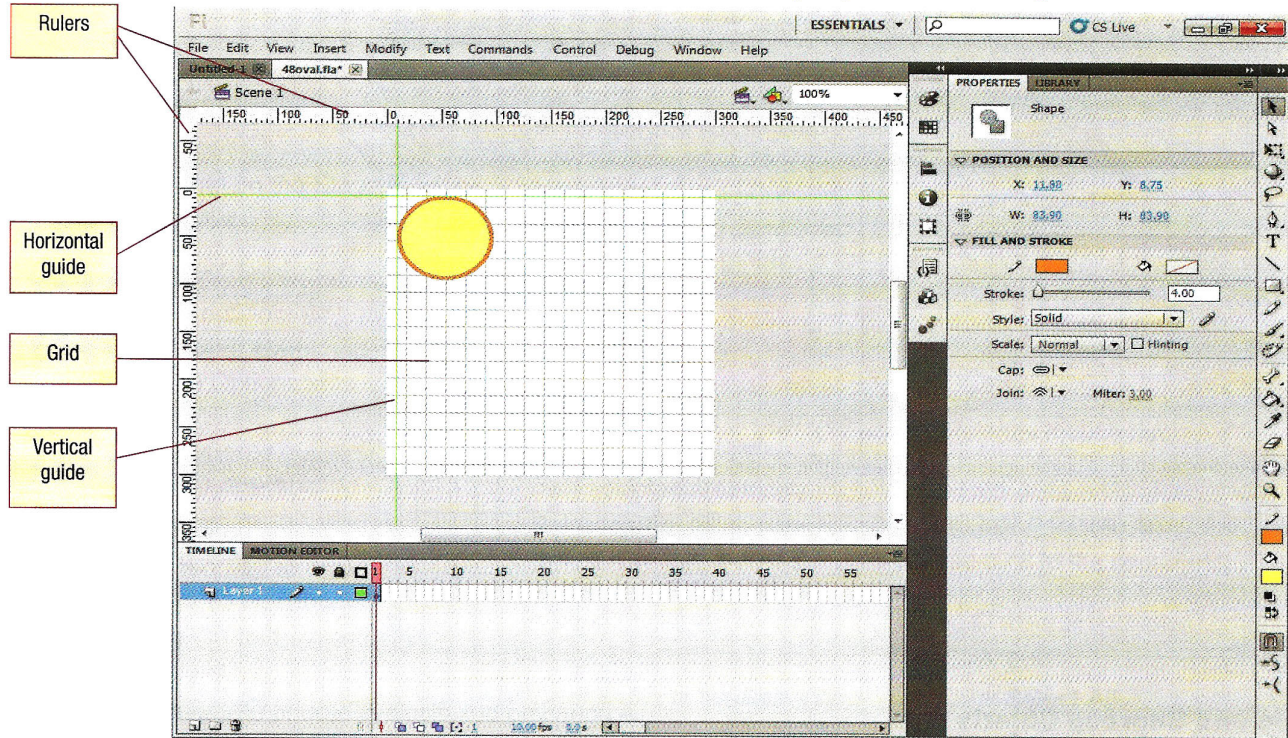
- In order to edit or modify an object on the Stage, you must first select it.
- Use the  Selection tool to select one or more objects.
- You can also use the  Lasso tool to select objects by drawing either a freehand or a straight-edged selection area. The Lasso tool is useful if the object you want to select is very close to a different object.

- When Merge Drawing is active, Flash applies a dot pattern to highlight selected objects to help you identify them on the Stage.
- When Object Drawing is active, Flash displays a rectangular bounding box around selected objects.
- In addition, when Merge Drawing is active, all lines, shapes, and fills are considered separate objects. You must be sure to select all parts of a drawing that you need.
- For example, if you want to move both the stroke and fill of an oval when Merge Drawing is active, you must be sure to select both the stroke and fill. If you select only the fill, and then move it, the stroke remains in its original location.

Position Objects on the Stage

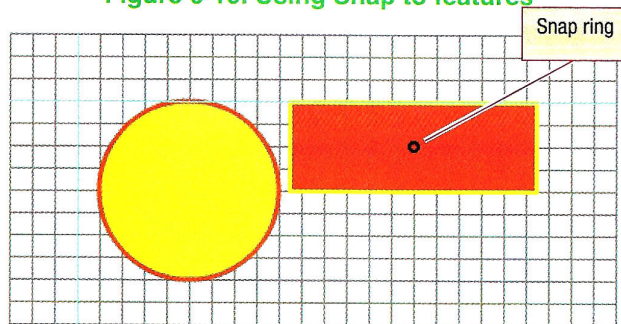
- You can drag selected objects on the Stage to move them to a new location.
- Flash includes visual elements to help you position objects on the Stage, including horizontal and vertical rulers, a grid, and **guides** (see Figure 6-18).
- Display the rulers and the grid by choose Rulers or Grid from the View menu.
- The unit of measurement on the rulers depends on your selection in the Document Properties dialog box.
- By default, the spacing between grid lines is 10 px, but you can edit the grid to change the spacing. You can also change the color of the grid lines and remove them when you no longer need them.
- Flash also includes features to help you snap objects to a location on the Stage.
 - To automatically position objects on the nearest grid lines, make the Snap to Grid feature active.
 - By default, the Snap to Objects feature is active so that you can snap an object to the edge of an object already positioned on the Stage.
 - The Snap Align feature displays a dotted line when you drag an object to a preset distance relative to the edge of another object or to the Stage boundary.
 - ✓ *By default, the dotted line displays when the edge of the object you are dragging is within 18 px of the Stage boundary or within 0 px of an object already on the Stage.*
- Snap to Guides automatically snaps an object to a horizontal or vertical guide line.

Figure 6-18. Tools for positioning objects on the Stage




- When you draw an object with any snap feature active, a **snap ring** displays at the pointer location (see the following illustration).

Figure 6-19. Using Snap to features



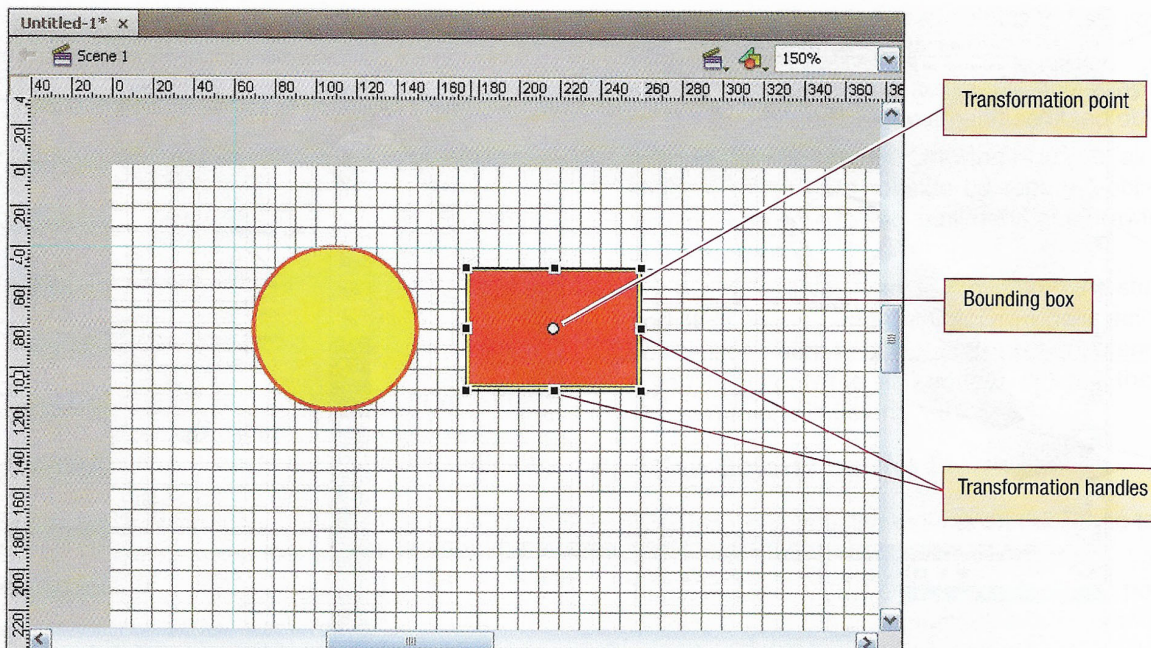
Transform Objects

- Use Flash's transformation tools to modify the appearance of an object on the Stage.
- You can rotate, skew, scale, flip, resize, and distort objects.
- When you select the  Free Transform tool, all transformation options are available. Alternatively, you may select the specific type of transformation you want to perform.
- When you select an object or objects for transformation, a bounding box displays around the selection. **Transformation handles** display around the bounding box and a **transformation point** displays in the center of the selection (see Figure 6-20).
- The position of the transformation point is determined by the X and Y coordinates, which display in the Info panel or in the Property inspector. You can move the transformation point by dragging it, or by changing the X and Y settings.

Arrange the Stack Order

- By default, newer objects are stacked on top of existing objects.
- You can arrange the stack order for grouped objects, or for objects drawn using the Drawing Object model in order to move objects forward, backward, behind, or in front of other objects.
- Individual objects drawn using the Merge Drawing model cannot be rearranged.

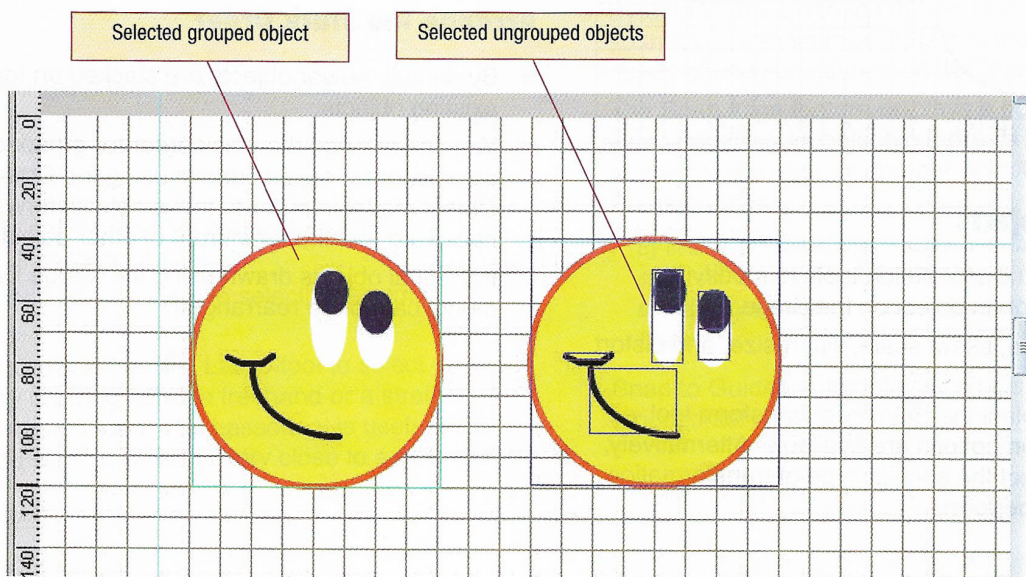
Figure 6-20. Transformation tools



Group and Ungroup Objects

- Group objects together when you want to modify or transform them as one single object.
- For example, if you draw a face that includes a head, nose, eyes, mouth, and hair, you can group all of the lines and fills comprising the face into a single object so you can quickly select and modify it.
- In addition, grouped objects do not create segments or cutouts when they overlap other objects.
- A bounding box displays around all objects in a selected group, instead of the highlights used to indicate selected Merge Drawing objects. The group's transformation point also displays (see Figure 6-21).
- You can edit objects within a group without ungrouping them using edit mode. In edit mode, only the objects in the group are available for editing; all other objects on the Stage are dimmed.

Figure 6-21. Select a group or individual objects







PROCEDURES

Draw Basic Shapes


Draw oval:

1. Click **Oval** tool (O)
2. Click and drag on the Stage to draw the shape.


Draw freeform lines and shapes:

1. Click the **Pencil** tool (Y)
2. Click the **Pencil Mode** option button in the Options area of the toolbar.
 - ✓ *The Pencil Mode list displays the most recently selected option.*
3. Click the desired option:
 - **Straighten** , to draw straight lines and shapes.
 - **Smooth** , to draw smooth curved lines.
 - **Ink** , to apply no modification; in other words, lines display just as you draw them.
4. Click and drag on the Stage to draw the shape.


Draw paths on straight line segments:






1. Click the **Pen** tool (P)
2. Click on the Stage at the desired starting point.
3. Click at each point as desired.
4. Double-click at the last point to end the line.

Draw paths on curved line segments:

1. Click the **Pen** tool (P)
2. Click on the Stage at the desired starting point.
3. Drag to next desired point.
4. Release mouse button.
5. Repeat steps 3 and 4.
6. Double-click at the last point to end the line.

Draw brush strokes:


1. Click **Brush** tool (B)
2. Click **Brush Mode** option button.
 - ✓ *The Brush Mode option button displays the most recently selected Brush Mode option.*

3. Click the desired Brush Mode option:
 - **Paint Normal**  to paint over existing lines, fills, and blank areas.
 - **Paint Fills**  to paint over existing fills and empty areas, but leave lines unchanged.
 - **Paint Behind**  to paint over blank areas only, leaving lines and fills unchanged.
 - **Paint Selection**  to paint over selected areas only.
 - **Paint Inside**  to paint over a fill within a closed shape, leaving the stroke around the fill unchanged.


4. Click the **Brush Size** button.
 - ✓ *The Brush Size button displays the most recently selected Brush Size option.*
5. Click the desired brush size.
6. Click the **Brush Shape** button.
 - ✓ *The Brush Shape button displays the most recently selected Brush Shape option.*

7. Click desired brush shape.
8. Click and drag on the Stage to draw the shape.
 - ✓ *Press and hold the Shift key to draw only horizontal or vertical strokes.*


Turn Object Drawing Model On or Off

1. Select desired drawing tool.
2. Click the **Object Drawing** option button .
 - ✓ *The Object Drawing option button becomes available when the Line, Oval, Rectangle, Pen, Pencil, or Brush tool is selected.*

Select Objects

1. Click the **Selection** tool (V)
2. Click object to select.

OR

- a. Click the **Lasso** tool (L)
 - b. Click and drag to draw a border around the object(s) to select.
 - ✓ *With the Selection tool, the border will be a rectangle; with the Lasso tool, the border will follow the mouse pointer, like drawing with a pencil.*
3. Release mouse button.

To select both stroke and fill of merge drawing shape at the same time:

Double-click in the center of the fill.

To select all objects on the stage:

1. Click **Edit**(Alt)+(E)
2. Click **Select All**(L)

Use Rulers and Guides to Position Objects

Display the rulers:

1. Click **View**(Alt)+(V)
2. Click **Rulers**(R)

Display the grid:

1. Click **View**(Alt)+(V)
2. Click **Grid**(D)
3. Click **Show Grid**(D)

Apply guidelines:

1. Click in the horizontal or vertical ruler.
2. Drag a guide out from the ruler.
3. When the guide is where you want it, release the mouse button.

OR

1. Click **View**(Alt)+(V)
2. Click **Guides**(E)
3. Click **Show Guides**(U)

Remove guidelines:

- Click and drag the guide back to the ruler.

OR


1. Click **V**iew (Alt)+V
2. Click **G**uides E
3. Click **C**lear Guides.

Turn Snap to Grid On or Off (Ctrl + Shift + `)

1. Click **V**iew (Alt)+V
2. Click **S**napping S
3. Click **S**nap to Grid R

✓ A check mark next to the Snap to Grid command indicates that feature is currently on.

Turn Snap to Objects On or Off (Ctrl + Shift + /)

- Click **S**nap to Objects button  on main toolbar or in Tools panel options area.

✓ Snap to Objects becomes available as an option in the Tools panel when the Selection, Line, Oval, or Rectangle tool is selected.

OR

1. Click **V**iew (Alt)+V
2. Click **S**napping S
3. Click **S**nap to **O**bjects O


Turn Snap Align On or Off

1. Click **V**iew (Alt)+V
2. Click **S**napping S
3. Click **S**nap **A**lign S

Turn Snap to Guides On or Off (Ctrl + Shift + ;)

1. Click **V**iew (Alt)+V
2. Click **S**napping S
3. Click **S**nap to **G**uides G

Transform Objects

1. Select the object to transform
2. Click the **F**ree Transform tool  Q
3. Drag a handle in the desired direction.

OR

Drag the transformation point in the center of the object.











Group Objects (Ctrl + G)

1. Select objects to group.
2. Click **M**odify (Alt)+M
3. Click **G**roup G

Ungroup Objects (Ctrl + Shift + G)

1. Select group.
2. Click **M**odify (Alt)+M
3. Click **U**ngroup U

EXERCISE DIRECTIONS

1. Create a new Flash document and save it in your Solutions folder with the name **Last,firstinitial_49garden**
2. Set the Stage size to 600 x 600.
3. Add a background color of #99FFFF.
4. Hide the Timeline.
5. Display the rulers.
6. Collapse the Property inspector.
 - ✓ This gives you more room to work on the Stage.
7. Turn off Snap to Objects and make sure Snap to Guides is on.
8. Set the zoom to Fit in Window.
9. Display a vertical guide 50 pixels (px) from the left boundary of the Stage.
10. Display a vertical guide 50 px from the right boundary of the Stage.
11. Display a horizontal guide 50 px from the top boundary of the Stage.
12. Display a horizontal guide 50 px from the bottom boundary of the Stage.
13. Turn on the grid.
14. Click the  Line tool.
15. Display the Property inspector, and select the color #669900 for the stroke, with a Stroke height of 7.
16. Click on the left vertical guide at the 400px mark and drag the pointer down and to the right, ending at the 200px mark on the bottom horizontal guide.
17. Continue using the  Line tool to create a triangle in the lower left corner by following the guides.
18. Use the  Paint Bucket tool to fill the shape with #669900.
 - ✓ If prompted, choose to close gaps in the shape before using the Paint Bucket tool.
19. Click the  Brush tool and from the choices that appear at the bottom of the toolbar, choose a medium sized brush using the  Brush Size tool. Set Smoothing to 60.
20. With #669900 as the color, draw the beginning of a vine emerging from the green triangle. Use Illustration A as a reference as you draw.
21. Zoom to 150%. Use the  Hand tool to move the vine up into the Stage where you can work with it easily.
22. Click the  Pencil tool and make sure that  Object Drawing is turned off. Click the  Pencil Mode tool and choose  Smooth.






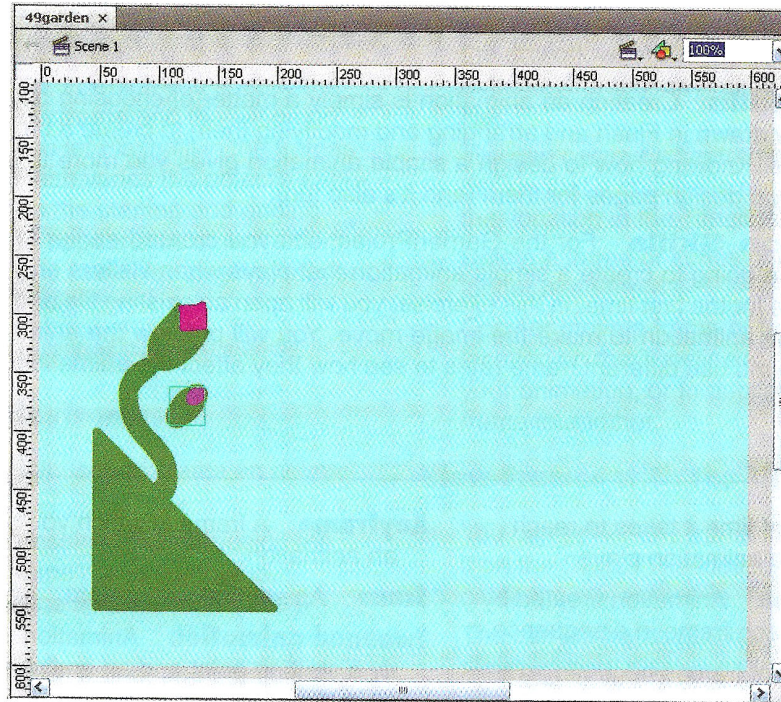


23. Add a bud to the image by drawing and filling (with the Paint Bucket tool) a green area at the bottom and use the Pencil and Paint Bucket to add a fluorescent pink (#FF00CC). See the large bud in Illustration A for reference.
24. Now add a smaller bud using the shape tools. Click the  Oval tool and click  Object Drawing.
25. Set the Stroke color and Fill color to #669900. Draw an oval on the Stage, approximate 40px wide and high.
26. Click the  Free Transform tool. Click the transformation point in the center of the oval and drag it up and to the right. Move the mouse pointer around the bounding box until you see the pointer change to a bi-directional arrow. Click and drag to transform the shape and make it look more like a bud (refer to Illustration A). Resize and rotate the shape as needed to make it smaller than the painted bud.
27. Repeat the step creating the flower portion of the bud, using a Stroke and Fill color of #CC66CC. Move this oval and place it so that it overlaps the skewed oval.
28. Click the  Selection tool and select both ovals. Choose the Modify > Group menu command.
29. Click  to turn off Object Drawing.
30. Move the bud below the larger bud, closer to the stem.
31. Clear the guides and remove the grid.
32. Zoom out to Fit in Window.
33. Close the file, saving all changes, and exit Flash.

Illustration A



ON YOUR OWN

1. Open [S_49garden_xx](#) from your Solutions folder and resume your work.
2. Redisplay the grid.
3. Add a vertical guide to the 50px position.
4. Use the  Line tool to add a stem to connect the main vine to the new bud.
5. Add another stem that grows up along the vertical guide.
6. Turn on Object Drawing.
7. Use the  Oval tool to add a cloud in the sky. Change the stroke and fill color before you draw the shapes for the cloud. Draw multiple ovals, if you like, and group them to work with as a single object.
8. Feeling creative? Use a variety of shapes to add a bee to the document.
 - ✓ *Hint: Zoom to 400% to work in detail when creating the bee.*
9. Turn off Object Drawing, remove the guide, hide the grid, and save your work as [SO_49garden_xx](#).
10. Close the file, saving all changes, and exit Flash.