Software: Corel Paint Shop Pro X2 or X3
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Title: Paint Shop Pro Vectors: An elliptic approach
Skill Level: Intermediate

Description:

This tutorial describes a method of making a vector object by drawing out an ellipse using the Ellipse Tool and then modifying the ellipse by manipulating the nodes to attain the desired shape. New nodes may be added as needed to facilitate this process. The tutorial also features the sequence of actions that is a recipe for success in vectoring.

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Paint Shop Pro vector objects are saved as pspimages. If you follow the directions given here, you can return to the vectors on these pspimages at a later date and edit the objects.

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To illustrate elliptic vectoring, we will be making the petals of a lily. But remember that this tutorial's raison d'être is to show an easy way of making a vector object or a series of vector objects.

Step-by-step vectoring

1. Click on New Image. 600 x 600 pixels. Under Image Charac-teristics, select Vector Background. (Transparent will be automatically checked for a Vector Background.)
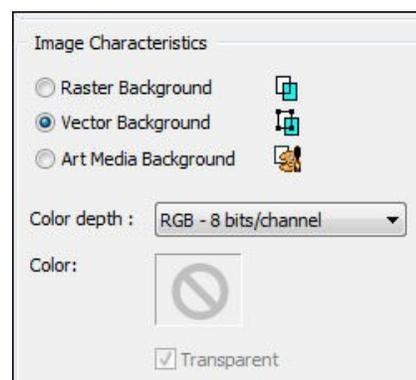
2. Click on File Save As and save your canvas as a pspimage with an appropriate name. I'm saving mine as lilypetals.pspimage. I recently learned the hard way to click on Options at the bottom of the Save As dialog box when saving. This brings up a list of Versions to Save As. My Version had some-how changed to PSP 5 compatible file and my saved images would not open with editable vec-tors in PSP X2 or PSP X3. I changed the version to 12, which works for PSP X2 and PSP X3. As you work on your graphic, frequently click on Save (just to the left of Save As on the Tool Bar) so that if you suffer a crash, your work will not be lost. Or you can go to File > Preferences > Autosave Settings and use Autosave to protect your work.

File Save As
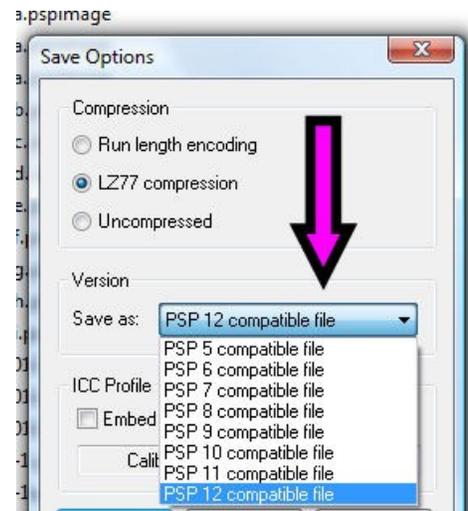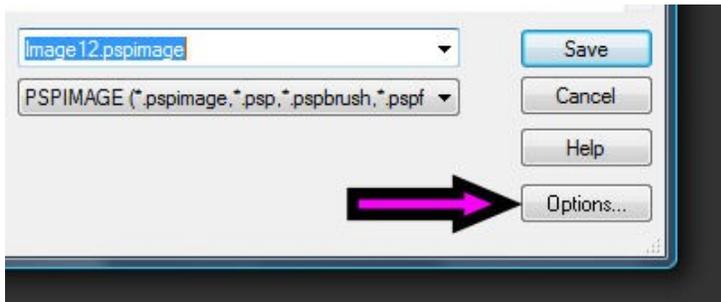
3. Click on the Layers Palette, choosing New Vector Layer from the dropdown menu. I want to make sure that each vector object is placed on its own layer, so I recommend always creating a vector layer before creating a vector object.
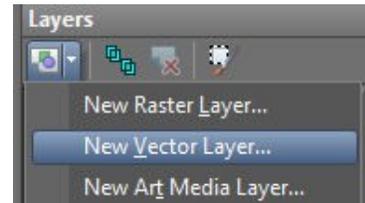
4. Click on the Ellipse Tool. On the Tool Bar, for Mode choose Draw Ellipse. Be sure that there are checkmarks in Show Nodes, Create on Vector, and Anti-alias. Choose a width for your line (I am using a Width of 10) and select your Foreground (stroke) and Background (fill) colors from the Ma-terials Palette. For our lily I have chosen f0d399 for the stroke and da944e for the fill.

Lily Petal One
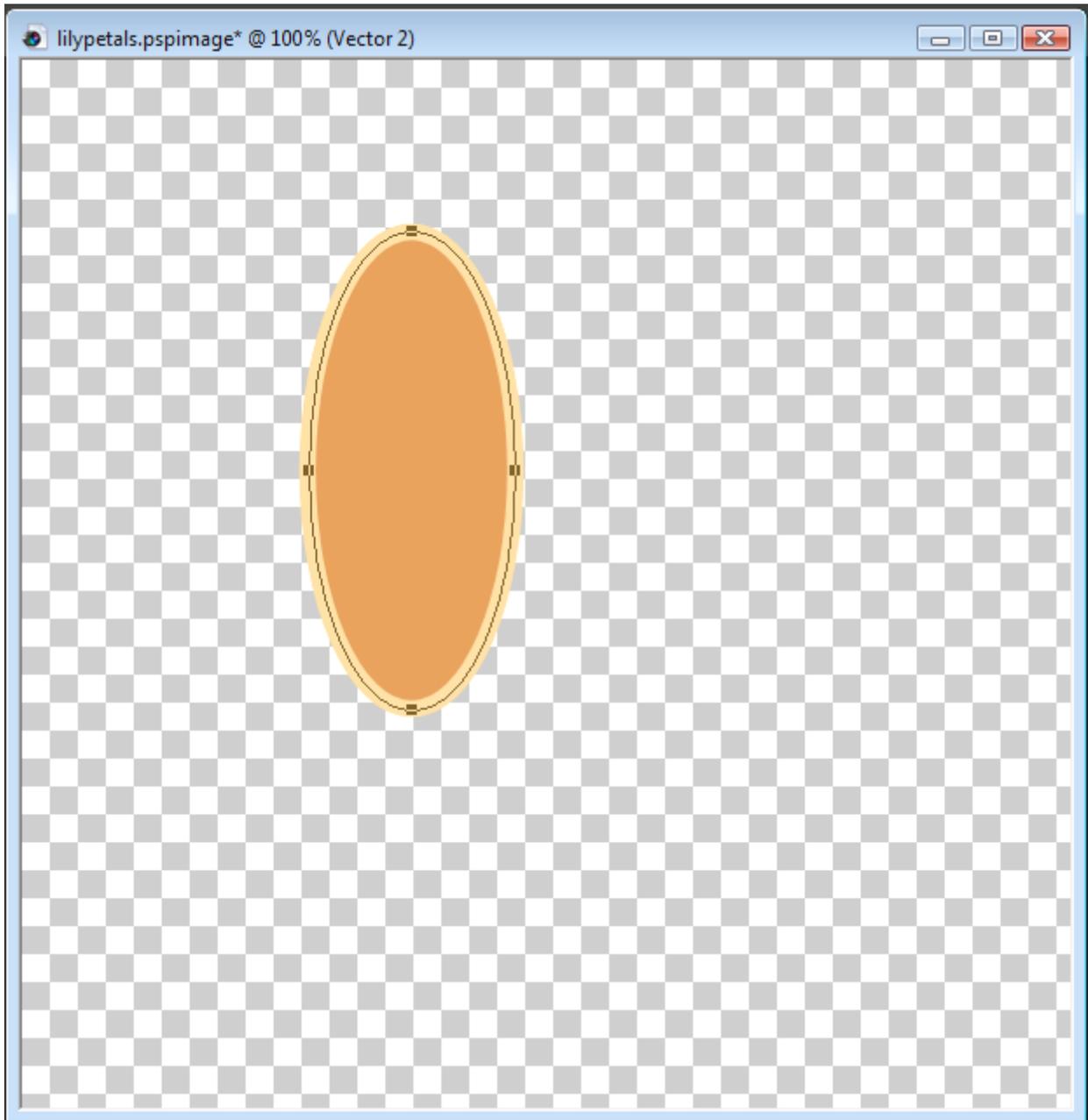
5. With your mouse cursor, draw out an ellipse approximately the size of the vector object you are making. The lily petals I am creating from ellipses are based on a Dover Woodlily image that you will find at the end of this tutorial.

Tip. I used a light color for my stroke, which makes it easier to see the vector wireframe and nodes. If your Foreground (stroke) color is dark, you may want to reduce the Opacity of the Vector Layer in the Layers Palette or make the Foreground transparent by clicking on the Transparent box below the Foreground color in the Materials Palette.
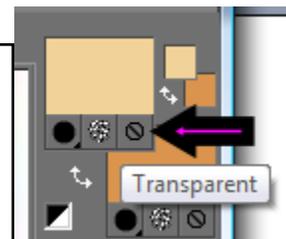
6. Right click on one of the four nodes that are visible on the line of the ellipse and select Convert to Path from the dropdown menu.
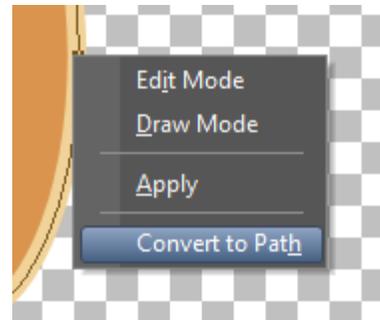

7. Click on the Pen Tool. On the Tool Bar, Edit Mode will be highlighted.

Tip. The default node type is Symmetric, but much of the time I find Cusp a better choice. With Cusp you can adjust the length and direction of each control arm (the left and right arrow handles of the node) independently. This gives you much greater freedom and control in shaping your object.

8. Right click on a node that you want to work with. For our first lily petal, right click on the bottom node and from the dropdown menu choose Node Type and then Cusp. Next, right click on the top node and change it to Cusp.
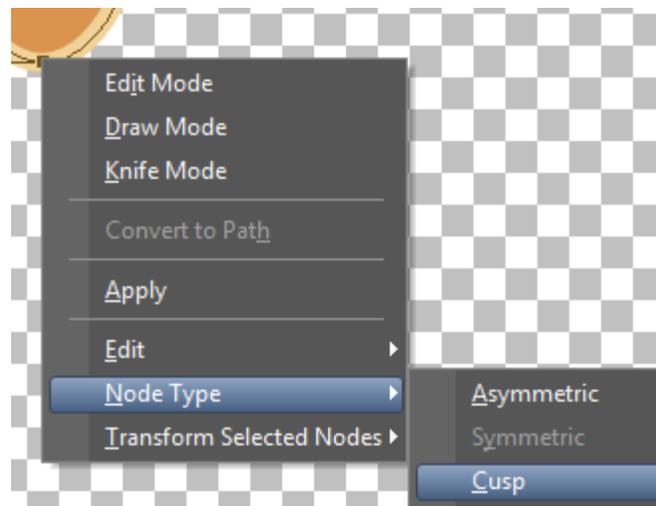
9. Click on the bottom node and move it to the right, then click on the top node and move it to the
    left.
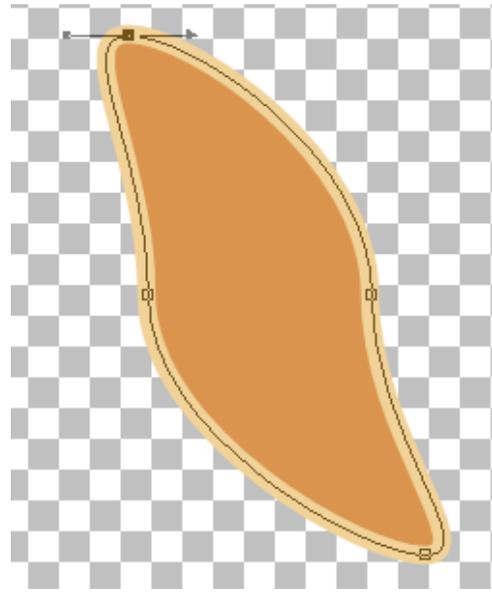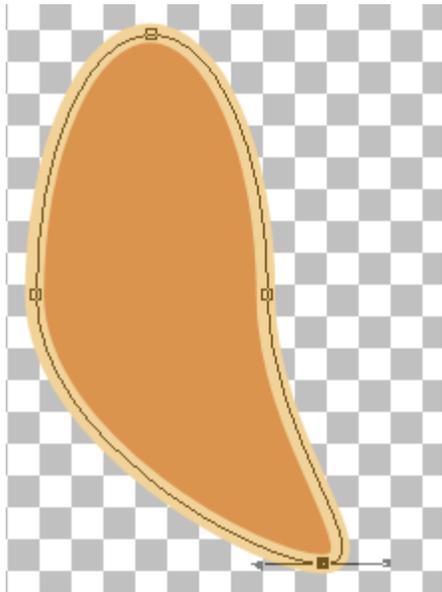
10. To make sharp tips at the top
    and bottom of the petal, pull
    the node arrows of the top
    and bottom nodes inward.

11. Position the two middle nodes on the canvas as shown
    and adjust the curves as needed using their Symmetric
    node arrows. When satisfied with the petal shape , click
    on the Apply button to deselect the object or use the key-
    board shortcut Ctrl+D to deselect the object.
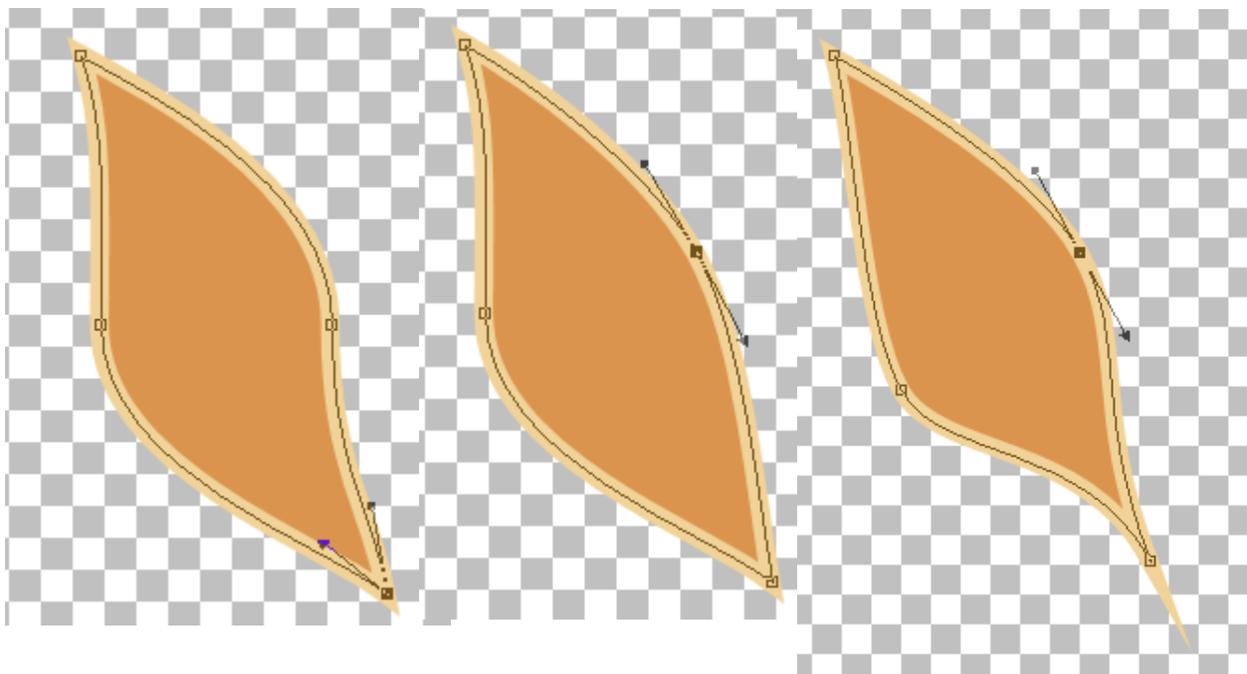
The secret to success with vectors in PSP

The secret is in embedding in your brain the sequence of actions that should be followed each and every time you create a vector object. They are:

A. Create a New Vector Layer.
B. Draw your ellipse.
C. Convert your object to path.
D. Switch from the Ellipse Tool to the Pen Tool to edit the object.
E. After shaping your object by node manipulation, deselect by clicking Apply or by Ctrl+D.

Not a long list of actions, but when you are working on a graphic with many vector objects it can be difficult to remember to check off each action from your mental checklist as you work with a new vector object. Before the process became automatic through repetition, I often became upset because I couldn't work with the nodes on an object, only to realize that I had forgotten to switch from the Ellipse Tool to the Pen Tool.
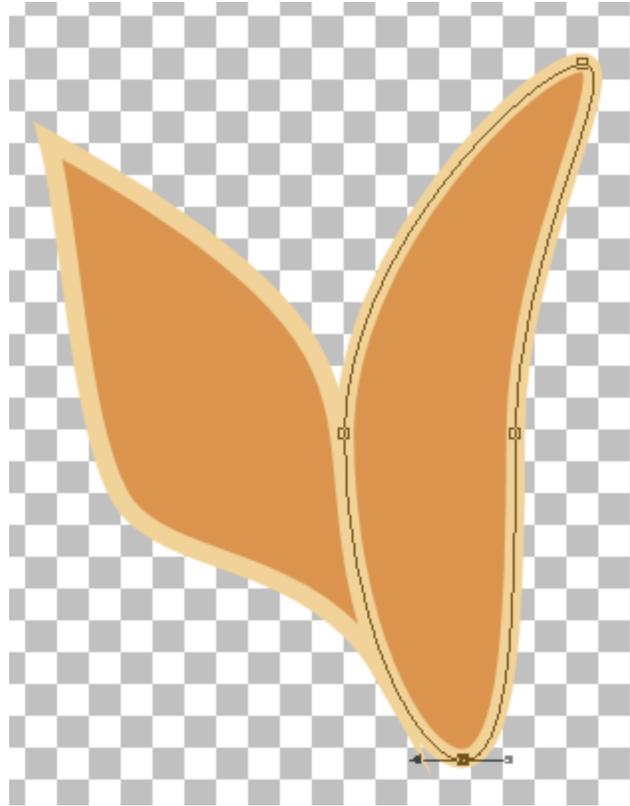
Lily Petal Two

Actions Checklist

A. Create a New Vector Layer.
B. Draw your ellipse.
C. Convert your object to path.
D. Switch from the Ellipse Tool to the Pen Tool to edit the object.
E. After shaping your object by node manipulation, deselect by clicking Apply or by Ctrl+D.

12. Follow the Actions Checklist to make a second petal. First create a New Vector Layer. Then, on this new Vector Layer, draw out an ellipse just to the right of the first petal. Convert this petal object to path. Change the top and bottom nodes to Cusp.
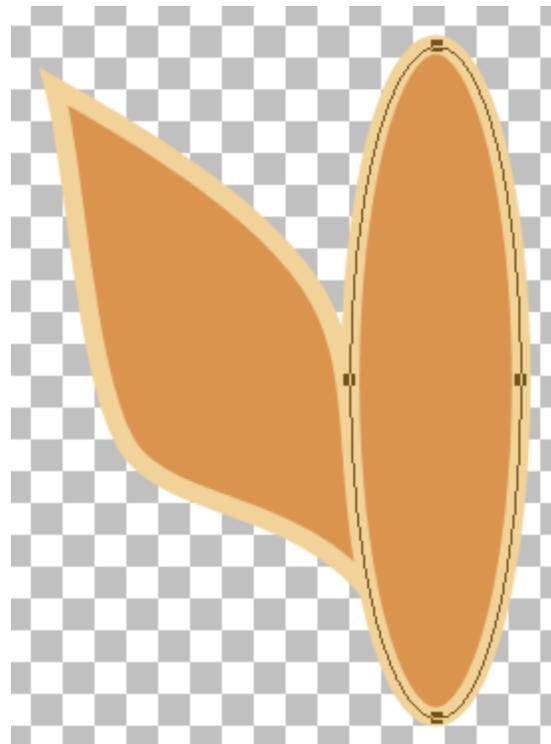
13. Move the top node to the right and slightly up. Then move the bottom node very slightly to the left or right if necessary to line up with the bottom of the first petal. You may want to temporarily lower the opacity of the second petal object so that you can clearly see all of the first petal.

14. Move both middle nodes up just a bit and pull the right node a bit farther to the right.
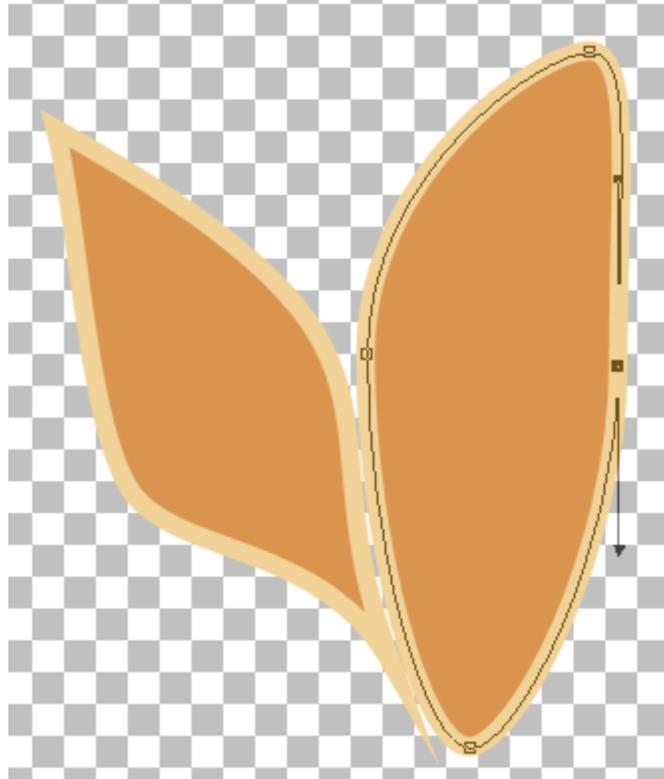
15. Shape the petal by pulling the arrows on the top and bottom Cusp nodes sharply toward the center of the petal. Adjust the curves of the middle nodes as needed. When you are satisfied with the shape, deselect the second petal object.
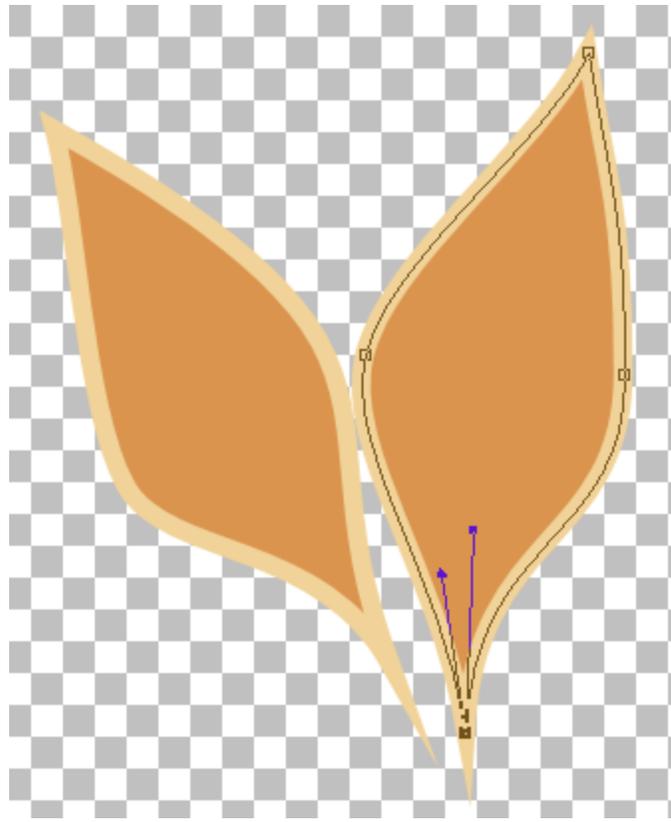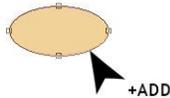
Lily Petal Three

Actions Checklist

A. Create a New Vector Layer.
B. Draw your ellipse.
C. Convert your object to path.
D. Switch from the Ellipse Tool to the Pen Tool to edit the object.
E. After shaping your object by node manipulation, deselect by clicking Apply or by Ctrl+D.

16. Follow the Actions Checklist to make a third petal. Draw out the third petal horizontally just to the left of the first petal.
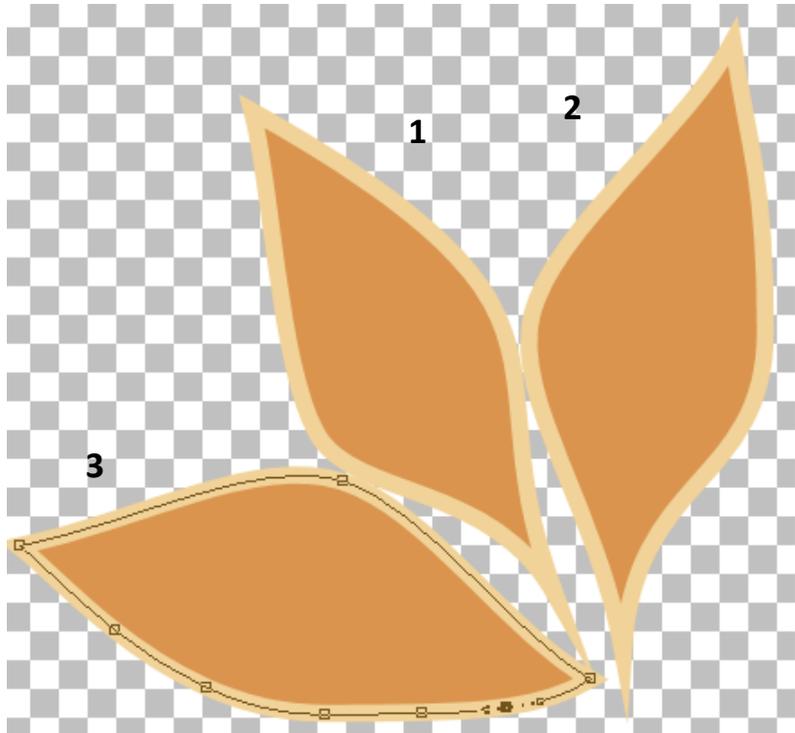
17. This time change the left and right nodes to Cusp. Move the left node up just a bit. Pull the node handles for both left and right nodes toward the center of the petal. Move the top (Symmetric) node just a little up and to the right.
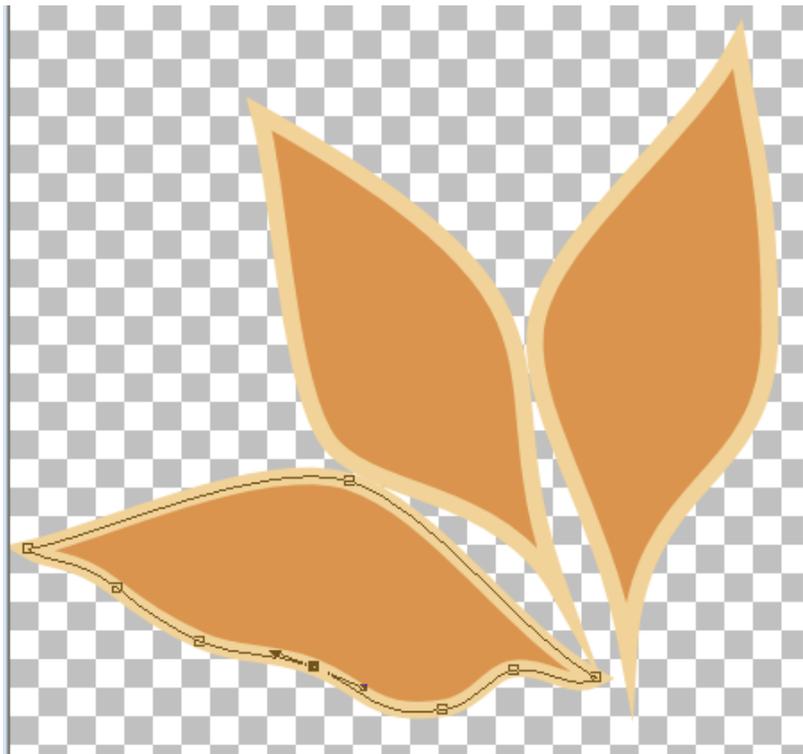
Tip. You will find that the default four nodes of an ellipse will often need to be supplemented by additional nodes to create more complex shapes. To add a node, Hold down Ctrl and move the mouse cursor to the point on the object's wire frame line where you want the node. When +Add appears, click and you will have a new node.

Note. If you compare petal one on the previous page with petal one above, you will see that I have gone back and played with the left middle node a bit to broaden the petal.

18. Add two nodes to the left and two nodes to the right of the bottom node. Move these nodes up or down and pull on the node handles to create the curved petal edge shown. You should not need to change the node type. When you are satisfied with petal three, deselect.

Lily Petal Four

19. Follow the Actions Checklist to make a fourth petal. Draw out the more diminutive ellipse for the fourth petal to the right of the second petal.
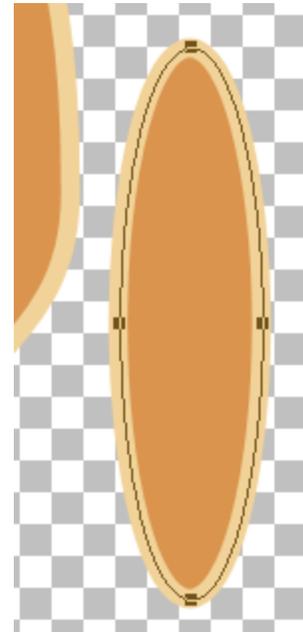
20. Change the node type for the top and bottom nodes to Cusp. Move the top node to the right almost to the edge of the canvas. Use the node arrows to create the tip of the petal. Can't move the arrow because the point disappears off the canvas to the right? No problem: just move the canvas border to the right with your mouse to see all of the arrow. Move the bottom node to the left. Change the left middle node to Cusp. Move the node up. You don't want a smooth curve on the top of this petal, so pull the right Cusp arrow to the right to flatten the curve. Add a node to the left of the bottom node and move it up as shown in the second illustration. When you are satisfied with petal four, deselect.
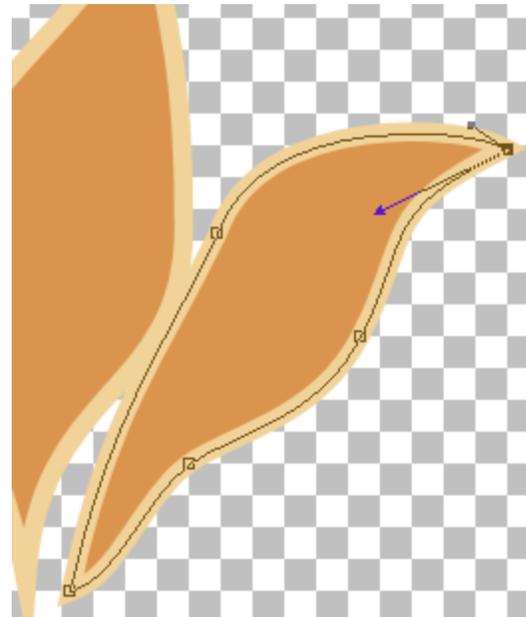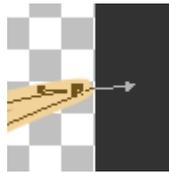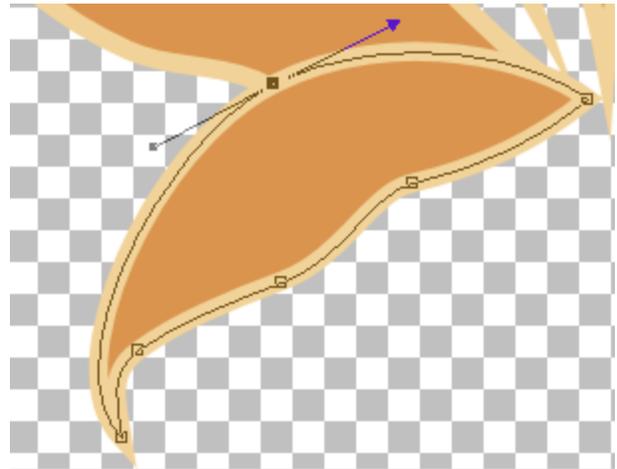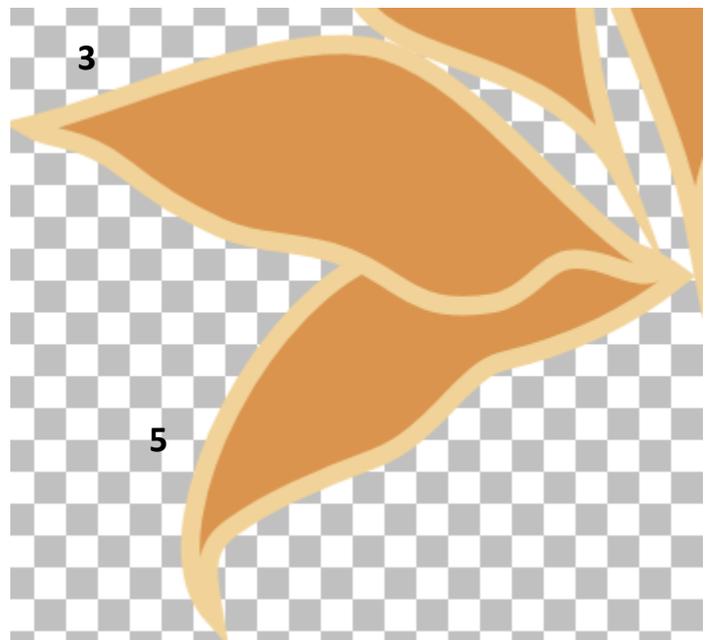
Lily Petal Five
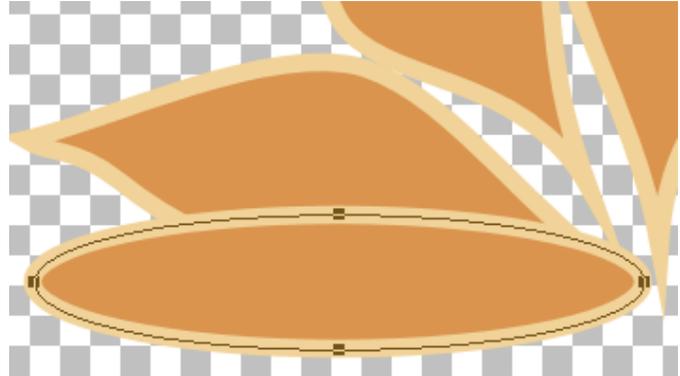
21. Follow the Actions Checklist to make a fifth petal. Change the left node to Cusp. Drag it in and down almost to the bottom of the canvas. Add a node up just a little way from the petal tip on the right side. Add another node to the right of the center node and tweak the curves. Deselect.

22. Petal 5 belongs under petal 3. Click on petal 5 in the Layer Palette and move it below petal 3.
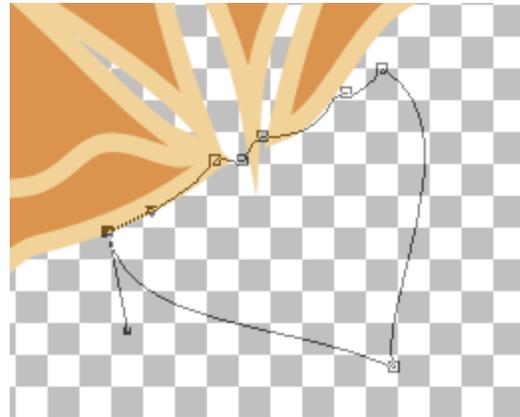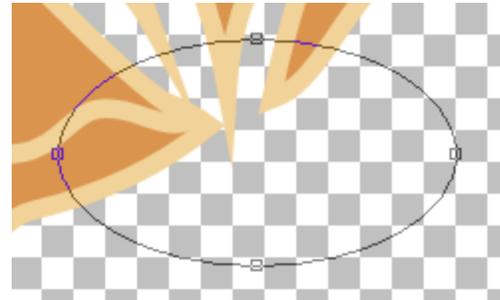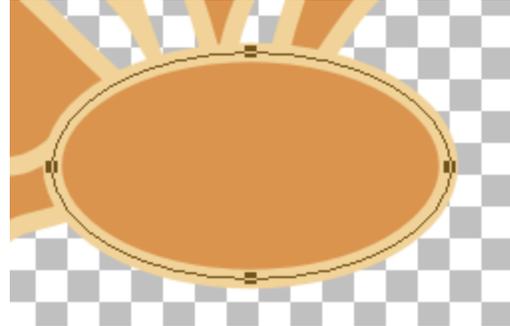
Lily Petal Six

23. One more petal. Follow the Actions Checklist to make the last petal.

24. It will be helpful to be able to see what's behind the ellipse when shaping this sixth petal object. In the Layers Palette, reduce the Opacity from 100% to a level where you can clearly see the other petals.

25. Change all four nodes to Cusp. Move each of the four nodes to form the basic shape of the object. The top node will be at the flower center. The bottom node will be at the tip of the petal. Add nodes very close to the top node on both sides. Change them to Cusp and then move them up slightly. Add another node just below the right middle petal node. Make it Cusp; drag it up and to the right slightly, and use the arrow handles to shape the edge of the petal as shown. When you are satisfied with the shape of this last petal, return the Opacity to 100% and deselect your object.

The Lily Petals
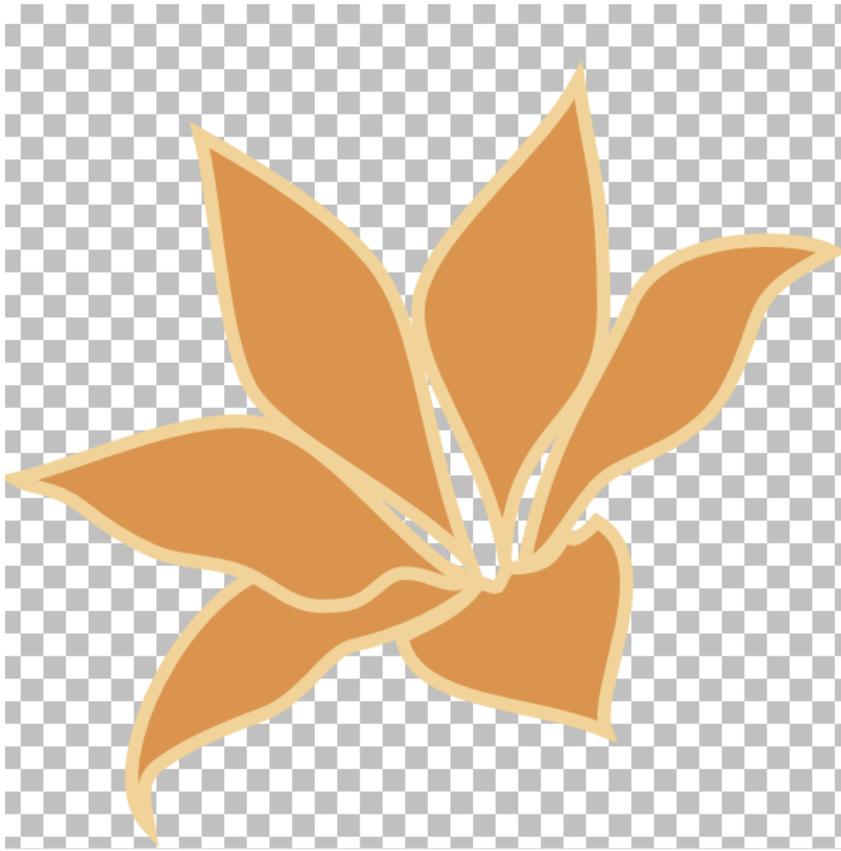
26. As you work on your image, you may find that you need to return to one of the objects that you have created and make changes to the shape. Click on the object's layer in the Layers Palette to highlight it. This returns you to the layer where the vector object you want to work on is located. (Another way to go to the object's layer is to click on the Move Tool and then click on the object on the canvas.)

27. Use the keyboard shortcut O to activate the Object Selection Tool. Type an O and then click on your vector object on the canvas. (The Object Selection Tool does not appear on any of the toolbars in PSP X2 or PSP X3.) Your object will now be surrounded by a bounding box.

28. Click on the Pen Tool. The bounding box will disappear and your object will now show the nodes.

29. Make your changes to the object as desired by working with the nodes. When these are complete, deselect.

30. When you are satisfied with the shapes of all of your vector objects, it is time to Save once more and then do a File Save As under a new name. Your work to this point is all vector objects on vector layers. After the final Save you can close the original file and then re-open it at another time and the vector objects will still be editable.

31. Working on the canvas you have saved with a new name, you can bring each of your objects to life by painting or applying drop shadows, cutouts, or other effects. However, when you start one of these actions, you will be notified that "The current layer must be converted to a raster layer." Once the layer is converted to a raster layer, the nodes are gone and your object is no longer a vector object. The exception would be if you used Undo to go back to the Vector Layer. But what if you have been working on a graphic for some time and decide that you really want to do something completely different in enhancing your object, and Undo is not possible at this point? You can go back to your original pspimage, make the layer with the original vector object involved active, right click on the top of the canvas, and click on Copy. Then, on the top of the version of the canvas you are working on, right click and choose Paste as a New Layer. Now you will have both the original, still editable vector object on a vector layer on this canvas and the unsatisfactory later version of this object that you want to replace on a raster layer, which you can delete.

32. I use the Ellipse Tool most of the time in making vector objects, but occasionally I will use the Pen Tool in Mode Draw Lines and Polylines or Mode Draw Freehand or I will draw out an object with the Rectangle Tool. And there will be occasions to draw out a Preset Shape or a Symmetric Shape. But usually when I am creating a vector object and want to work with the nodes to realize the desired shape, the Ellipse Tool can't be beat.

The lily in this tutorial is based on this Dover clip art lily. You may want to use this lily as a guide for completing your vector lily. You may even want to go back to your vector lily and add new vector objects for the stem, leaves, and stamens. Have fun!