## The Powerful Pen Tool

## Straight Lines

Choose View/Straight Line to zoom into the left corner of the template.
Choose View/Hide Bounding box to hid the bounding boxes of selected objects. Select the pen tool and move the pointer over to the dashed line in the artwork.
Click Point A at the left end of the line to create the starting point for a straight line.
Click Point B at the right end of the line to create the ending point and draw a straight line.
NOTE: You must end the line before you can draw a new line that isn't connected. There are a few ways to do this:


Hold down the Ctrl (Windows) or Command (Mac) to activate the current selection Tool and click away from the object to deselect it. You can also just click once on the pen tool or choose Edit/Deselect All.
Change the stroke of the line to 3 points.

## Splitting a Path

Select the straight line, then select the scissors tool and click in the middle of the line to make a cut. The spot where you clicked created two new anchor points-one on top of the other.
Use the Selection Tool to move the two lines further apart.

## Adding Arrowheads

With the top line selected, choose Filter/Stylize/Add Arrowheads and select an arrowhead style for the box that says End. Leave the box for Start (the start of the segment) as None.

## Drawing Curves

Now you'll practice drawing smooth curves to create the leaf, pear and stem.
Choose View/Leaf to see the leaf of the template.
You will drag the pen tool to set the starting point and the direction of the line's curve.
Select the Pen Tool and position it over point A. Press and drag from point A to the red dot.
Release the mouse and move over to set the second anchor point.
Press and Drag from point B to the next red dot. Illustrator connects the two anchor points with a curved line segment.
Any time you make a mistake, you can use Edit/Undo or Ctrl/Cmd Z
Drawing with Cusps (Different kinds of curves)

## Scroll down to the instructions for Leaf Step 2

You'll add a corner point to change the direction of the curve.
Position the pen tool over the end of the line at point A. The slash next to the pen tool indicated that you'll continue the path of the line rather than start a new line.
Hold down the Alt/Opt key and notice that a new symbol appears (the Convert Anchor Point). Now hold the key and drag to the red dot. Then release the mouse.
Position the pointer over Anchor Point B and look for a small open circle. This indicated that you

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will close the path. Drag from Point B to the red dot to finish the leaf.
$\mathrm{Ctl} / \mathrm{Cmd}$ click away from the line to deselect.

## Changing a Smooth Curve to a Corner

Choose View/Stem
Select the Direct Selection Tool and position the pointer over Point A at the top of the curve to display a hollow square (the Anchor Point), then click to see the direction lines for the smooth point.
Select the convert-to-anchor point from the Pen Tool or hold down Alt/Opt key and select the left direction point (handle) and drag it to the gold dot on the template. Then release.
Use the same convert-to-anchor point tool or keyboard shortcuts to select the bottom anchor point and drag from Point B to the red dot to round out the curve. Release the mouse.

## Drawing the Pear Shape

Choose View/Pear to display the pear.
Select the Pen Tool and drag from Point A to the red dot to set the starting anchor point. Release the mouse.
Drag the pen tool from Point B to the red dot-don't release the mouse and hold down the Alt/Opt key and drag the direction handle from the red dot to the gold dot. Release the mouse button. This is how you create a cusp curve.
Continue drawing to points C and D by first dragging from the anchor point to the red dot and then Alt/Option dragging the direction handle from the red dot to the gold dot.
At the corner points B, C, and D, you first drag to continue the current segment, and then Alt/Opt drag to set the direction of the next curved segment.
Finish the pear by drawing smooth points. Drag from each of the points $E$ through $J$ to their red dots, and then click anchor point K to close the pear shape. Note the small open circle that appears when you close the entire shape.
Deselect the pear in one of the three ways discussed.

## Editing Curves

Use the Direct Selection Tool and click on the outline of the pear.
Click on an anchor point to see the two anchor points:
Drag on the end of the direction point (handle) to change the size or direction of the curve
Drag on the anchor point to move the curve
Assemble the Pear
Use the Transformation Tools to move and rotate the leaves and put in place.
Move the parts of the arrow and use Object/Arrange/Bring to Front when necessary.


