The Perspective Guides are a Pro tool for Autodesk SketchBook available on desktop. Renowned concept designer, Scott Robertson, collaborated with Autodesk to create this cool feature. This guide will help you understand how to use the tool to construct objects, scenes, and drawings in one, two, three, and fisheye perspective.

To get started with the Perspective Guides, click on this icon.

The image above is a breakdown of the perspective menu, where the different modes and options are located. On the left side are the 'one-point', 'two-point', 'three-point' and 'fisheye' modes. On the right side are 'snap', 'lock' and 'visibility' controls.
WORKING WITH PERSPECTIVE

The stacked shapes below were drawn free-hand, without using any special tools. They will serve as an example through this tutorial. Each perspective mode will be broken down and explained as we re-create these same stacked shapes in one, two, three, and

There isn't a whole lot of 'cheating' in digital art. You still need your traditional skills like understanding color, light, and form. Drawing in perspective takes understanding of geometry, theory and a lot of practice to sketch efficiently - even with this tool. But the SketchBook Perspective Guides make it feel a little bit like cheating- in the best way.

There are two terms you should familiarize yourself with:

VANISHING POINT: Imaginary place in space where parallel lines appear to 'meet' or intersect in the distance, relative to the viewer’s line of sight. Each perspective type indicates how many vanishing points your image will have. One point has one, and two point has two.

HORIZON LINE: Imaginary horizontal line stretching left to right through the image. This line does not have to be the actual horizon where the land meets the sky. This line can be thought of as the 'eye level line', which is parallel to the imaginary viewer’s eyes. Some vanishing points live along this line, depending on which perspective mode you use.
GETTING STARTED

Let’s take a look at how the vanishing point and horizon line are displayed in ‘one-point’ perspective mode.

The horizon line appears as a blue line in the center of the canvas by default, with the one single vanishing point in the middle of the canvas.

The horizon line can be moved up or down and the vanishing point can be placed anywhere on or off the canvas by clicking and dragging on the grey circle that represents the point.

The cursor in perspective guides changes to a dynamic cross hair. This is a visual cue to suggest the direction of your lines before you actually draw them. The cursor changes depending on the perspective mode selected, and where you place your vanishing points.
ONE-POINT PERSPECTIVE

In this example, to recreate the sketch in one-point perspective the viewer will be looking at the group of shapes face on.

First, sketch out a simple grid. With perspective active, simply drawing up and down or left and right will allow you to draw perfect horizontal and vertical lines.

Once you have your grid, and have placed the stacked shapes, diagonal lines can be added. Start at the corner of each square and draw into the vanishing point to create boxes as seen below.
ONE-POINT PERSPECTIVE

The horizon in this image is in the default position at the center of the canvas. That means the upper row of shapes will appear above the viewers line of sight. The middle row of shapes appear head-on with the front and insides visible. The bottom row, below the horizon, will have the top sides showing.

The shapes are almost finished. With some cleanup, simple shading, and line weight we can further describe the position of the objects in space. The Flood Fill Tool is used to add shading to the shapes quickly and simply.
ONE-POINT PERSPECTIVE

At this point, the Flood Tool is used to add shading to further define form and depth.

The one-point perspective tool is the most basic and straightforward of all perspective drawing methods. Moving the placement of the horizon line and vanishing point will change the outcome of your drawing, even with the same group of objects.

Here is the final image of the one-point perspective example. Now, let’s try drawing these shapes using the two-point perspective mode.
TWO-POINT PERSPECTIVE

The tools remain mostly the same, but an additional vanishing point appears on your horizon line. Notice the crosshair in your cursor also adds the second diagonal line. Watch it change in relationship to the vanishing points as you hover across the canvas. Two-point perspective is very common in art, and simple to do by hand. To imagine it, think of two intersecting roads running off into the distance, or the corner of a house.

Because you have two vanishing points, the angle of the perspective can be made more extreme or subtle by repositioning them closer or further apart on the horizon line. In this sketch, both vanishing points are on the canvas, somewhat close, making for an exaggerated perspective. A more subtle two-point set up will be shown following this example to illustrate the difference.
TWO-POINT PERSPECTIVE

Working with a forced perspective can give interesting results. A more subtle 2-point set up will be shown following this example.

In this example, the horizon is right beneath the center of the canvas and both vanishing points are at the edges. Because of how close the vanishing points are, the diagonal lines in perspective are extremely angled.

The front side of the stacked shapes is on the right of the scene. The top most shape was defined first, and then a grid was created to figure out the spacing for the other shapes.
TWO-POINT PERSPECTIVE

For a more subtle look, the vanishing points are placed off the canvas, far away from each other. You can even zoom out and place the vanishing points very far away from your artwork.

Using a similar work flow as the last example, the first shape is created. Then the spacing between the other shapes is determined by creating a grid from the first shape.
TWO-POINT PERSPECTIVE

Once the shapes are all drawn, stronger line work and shading is added to define the shapes in space. Again, all of these lines are drawn freehand, and are snapped to the ‘invisible’ grid that is created when the horizon line and vanishing points are set.

If you’ve decided on your layout, it’s good to lock the vanishing points in place. You can use the ‘lock’ icon in the perspective toolbar to do this. This prevents accidentally moving the points, which can be very frustrating and mess up your drawing. Below, notice how the circular vanishing point manipulators are reduced to a small indicator when ‘locked’.
TWO-POINT PERSPECTIVE

There isn’t enough room for the shadow, so the canvas is extended down using the ‘canvas size’ tool.

Adjusting the canvas size will not change the placement of horizon line or vanishing points. Changing the ‘image size’ can alter the perspective of the drawing. The vanishing points would need to be repositioned in order to continue working in perspective after an ‘image size’ adjustment.

Similar shading is added with Flood Fill to complete the subtle two-point sketch.
THREE-POINT PERSPECTIVE

Three-point perspective is a very labor intensive process when using pen and paper. With the aid of SketchBook’s Perspective Guides, it’s simple once the vanishing points are set. The bottom two vanishing points sit along the horizon line, just like in two point. But the third vanishing point is high above – where all vertical lines seem to disappear into space.

This quick sketch shows how the strokes behave in three-point perspective mode with the default settings, which is very exaggerated and drastic. This view is sometimes called a ‘worm’s eye view’ because it feels like you’re looking up from the ground. Any line drawn, in or out of the bounding triangle will snap to or from one of the three vanishing points.
THREE-POINT PERSPECTIVE: WORM’S EYE

In this example, we'll recreate the stacked shapes in ‘worm’s eye view’. To make the effect more subtle, place the top vanishing point far off the canvas. This causes the vertical lines to take longer to intersect, and looks more natural. Repeat this process with the two vanishing points along the horizon.

The strength of three-point perspective is creating a sense of height and scale. Here, the same stacked shapes are blocked out, starting with first with the vertical lines. Because we're using ‘worm’s eye view’, it is as if the viewer is laying on the ground and looking up. Lines that in two-point would have been parallel now join each other in the distance and disappear into the sky.
THREE-POINT PERSPECTIVE: WORM’S EYE

This mode may take some trial and error to get used to. Playing around with the distance between the top vanishing point and the two points on the horizon line will give significantly different results.

Here, the group is set and lines are drawn out to all 3 points to imply sizing and spacing.

Again, the canvas is extended to make room for the shadows, which happens to fall below the horizon line. Any horizontal lines below the horizon line in three-point perspective will appear to move up toward the vanishing points.
THREE-POINT PERSPECTIVE

Most of the objects in this view appear above the viewer’s line of sight or eye level. Because of that, the shading is more visible. The horizon line falls between the shadow and ground plane and the bottom of the floating objects.

The opposite view is called ‘bird’s eye view’. The vertical vanishing point is pulled far down below the horizon line and the viewer’s line of sight is looking down on the objects in frame. Check out the illustration below to see the stacked shapes in this view.
FISHEYE PERSPECTIVE

Three point perspective is considered difficult to accomplish manually, and some might consider ‘fisheye’ or five-point perspective to be nearly impossible. A lot of thought and planning needs to go into creating a fisheye view by hand. But with the help of the SketchBook Perspective Guides, it’s just a matter of throwing lines down out and having fun with the tools.

In fisheye mode, four vanishing points are placed along a bounding circle, with a fifth vanishing point in the center of the circle. You can think of this a little bit like one-point perspective. Any horizontal strokes left to right or up and down are not straight, but appear curved, while any lines heading toward the center vanishing point will be perfectly straight.
FISHEYE PERSPECTIVE

By grabbing one of the vanishing points along the circle, the entire circle is scaled up or down. In this example, the circle was scaled up off of the canvas for a more subtle look. The stacked shapes were re-drawn in the same viewpoint as the very first one-point example.

The math behind Fisheye perspective can be pretty daunting, but experimenting with the SketchBook tools takes out the equations and lets you get creative. Think convex lens.

Give the Perspective Guides a shot while you have access to them with the Trial of Pro Membership. It’s a very handy tool in the SketchBook arsenal.