

Perspective: Creating Depth

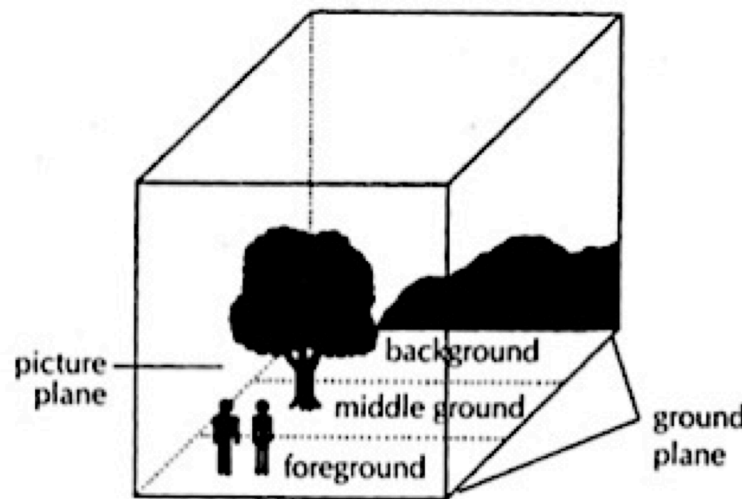
Foreground, Middle Ground, Background

We can show depth in artwork by using foreground, middle ground and background.

In the foreground (at the bottom of the page) things are very large.

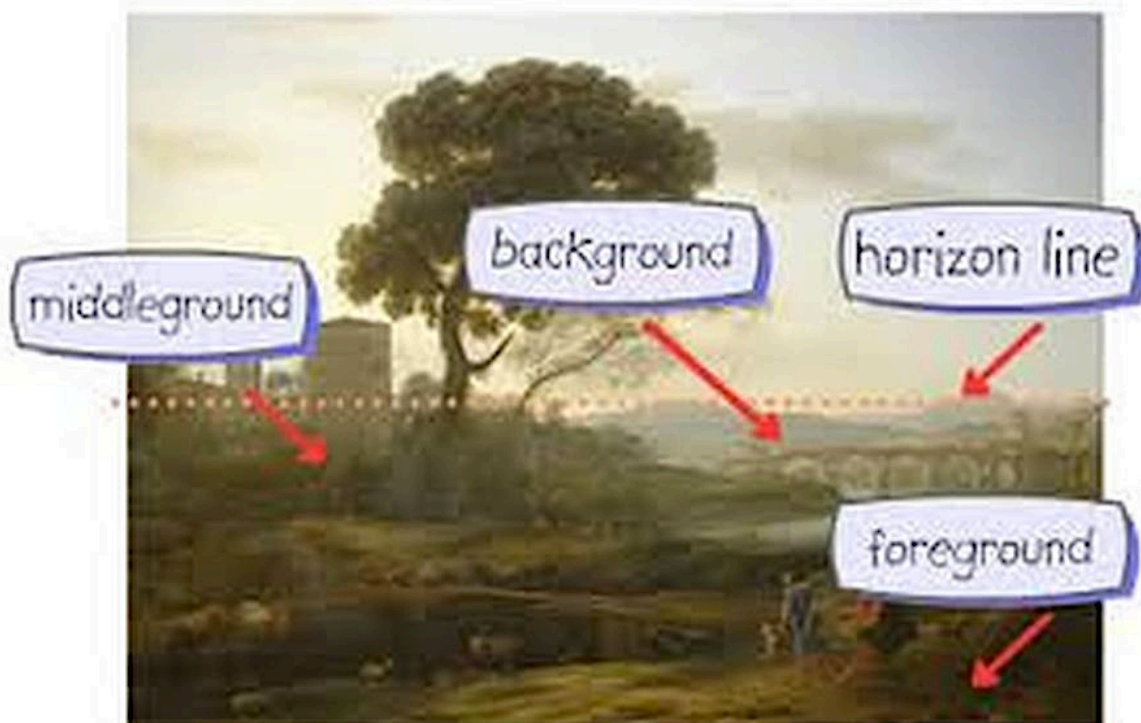
In the middle ground, things are a little smaller.

In the background, things are much smaller, and are usually found near the top of the picture.



Schematic drawing of picture space

We must also have a "horizon line!" This separates what is on the ground from the sky. Without the horizon line, items would look like they are floating in space!





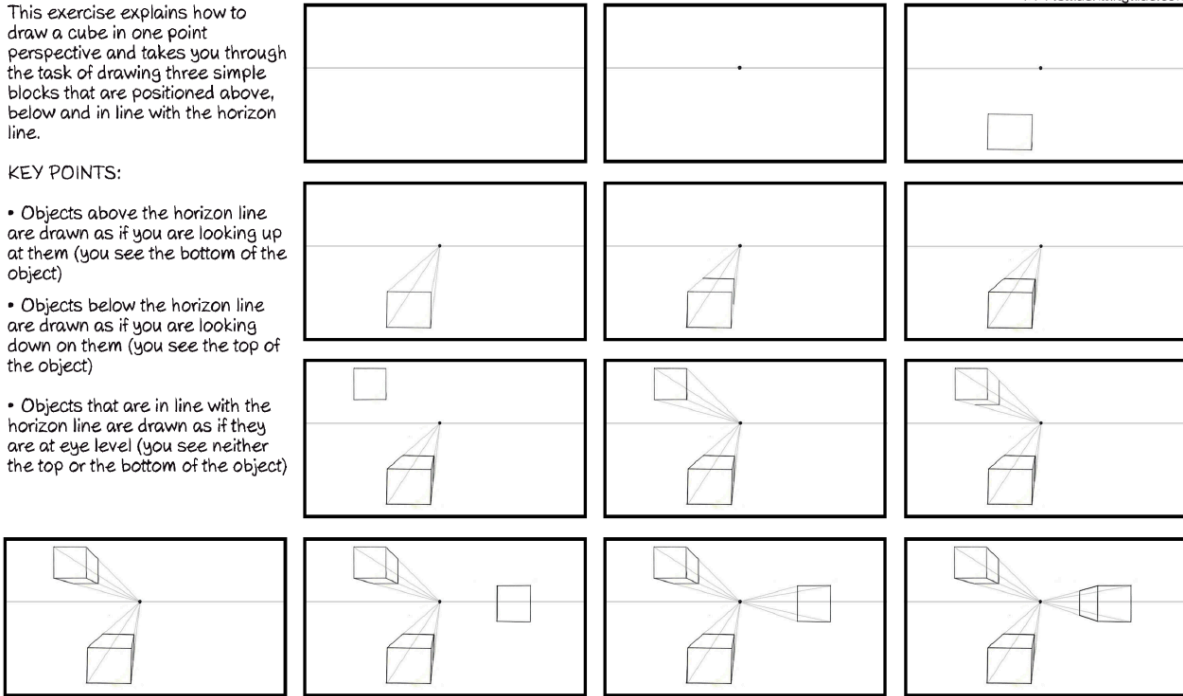
One Point Perspective Cubes

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This exercise explains how to draw a cube in one point perspective and takes you through the task of drawing three simple blocks that are positioned above, below and in line with the horizon line.

KEY POINTS:

- Objects above the horizon line are drawn as if you are looking up at them (you see the bottom of the object)
- Objects below the horizon line are drawn as if you are looking down on them (you see the top of the object)
- Objects that are in line with the horizon line are drawn as if they are at eye level (you see neither the top or the bottom of the object)



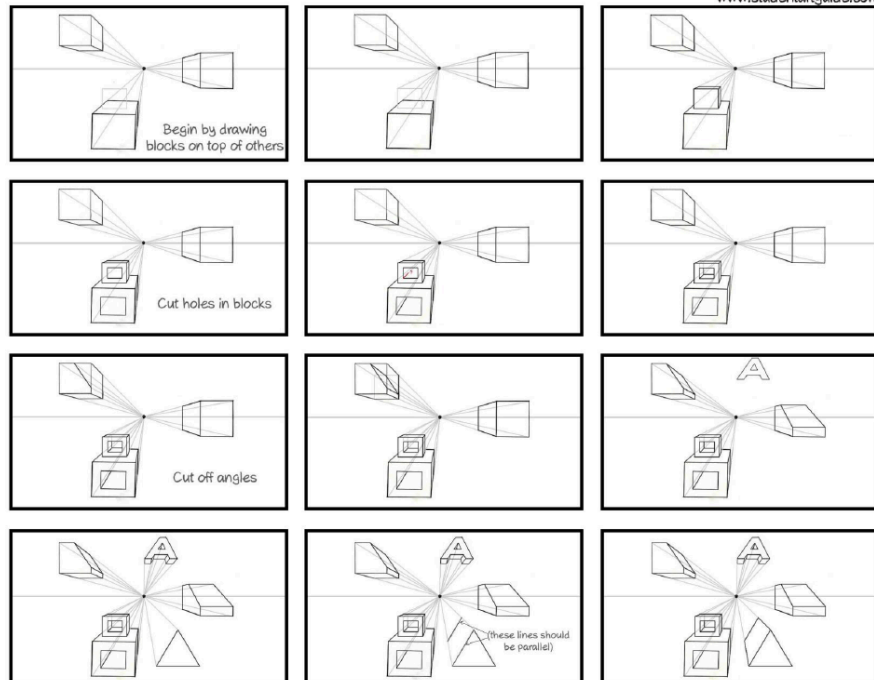
1 Point Perspective: Complex Forms

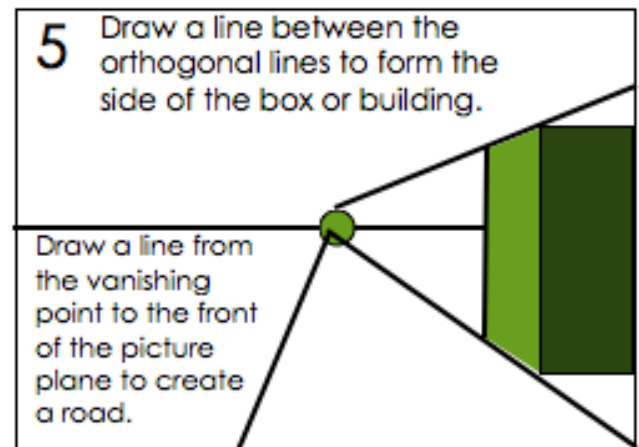
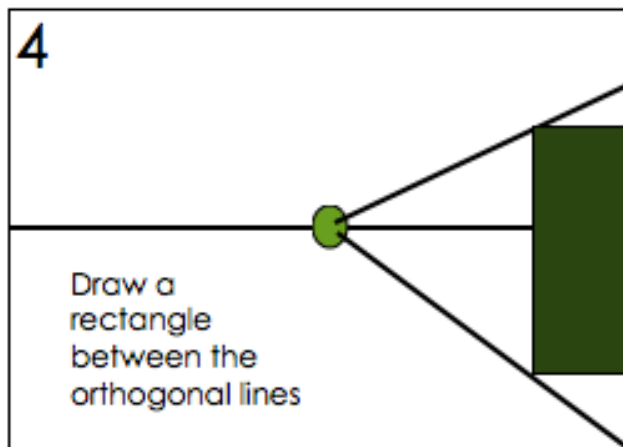
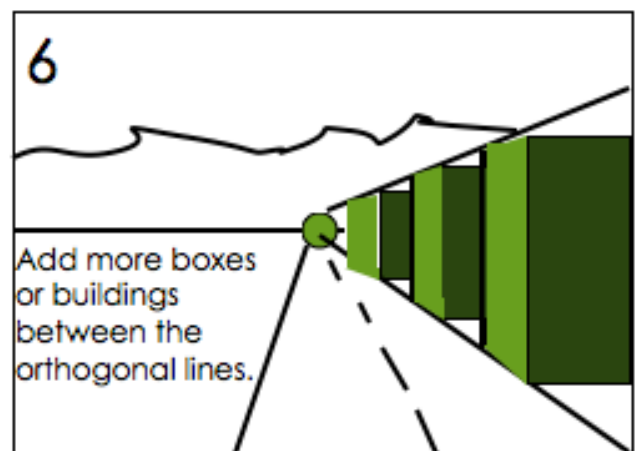
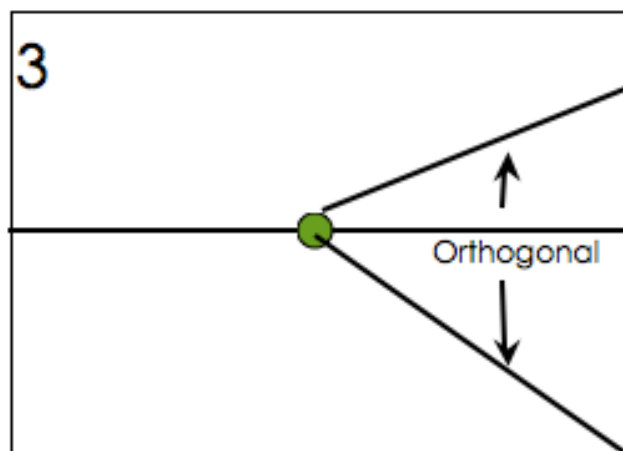
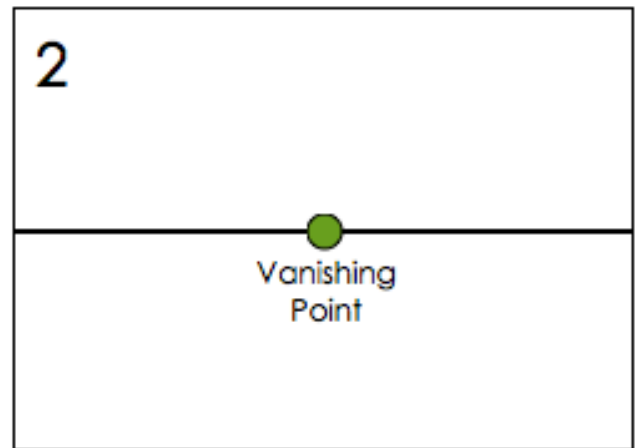
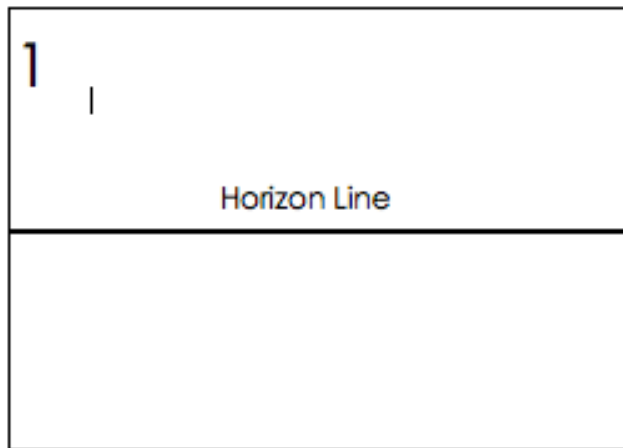
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This worksheet helps you to move from drawing simple blocks to creating more complex forms, by stacking, cutting holes and adding unusual angles.

TASK:

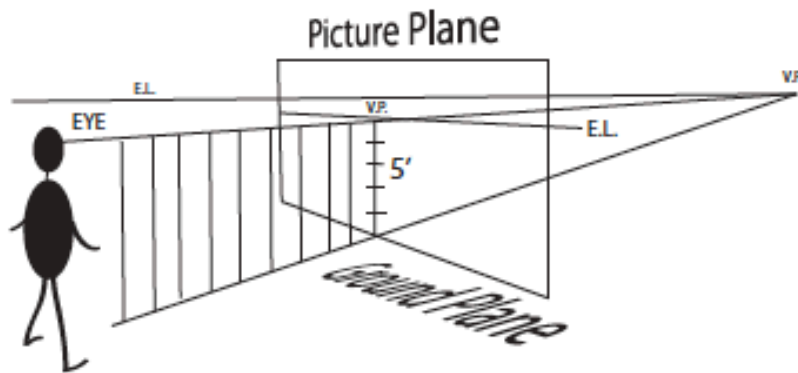
- Begin by drawing a series of blocks in one point perspective, above and below the vanishing point
- Draw other blocks sitting on top or beside these blocks
- Draw rectangular holes cutting through some of the blocks. Remember you may need to draw construction lines to find where the back edge of the hole will be
- Slice off different edges of the blocks on unusual angles
- In the gaps around the blocks, add in more complicated forms, such as letters and triangular shaped blocks (extension activity)





Simple One Point Perspective

1 Point Perspective



Eye Level (EL)- the line representing your eye's distance from the ground. As your eyes move up or down the eye level changes. Also called Horizon Line.

Picture Plane (PP)- The picture plane is the actual surface of a drawing or painting.

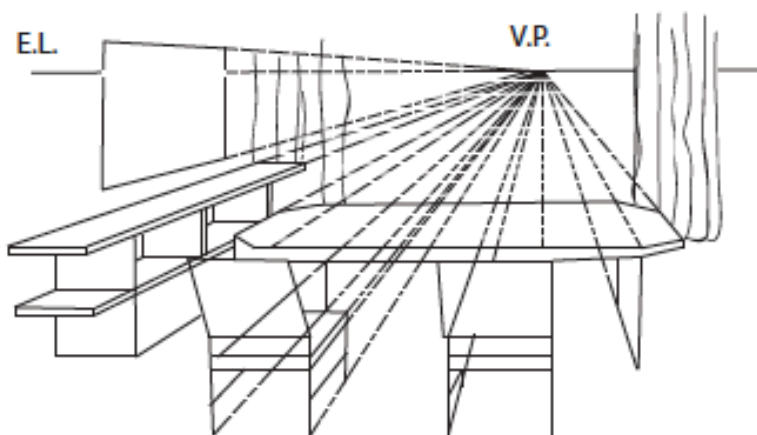
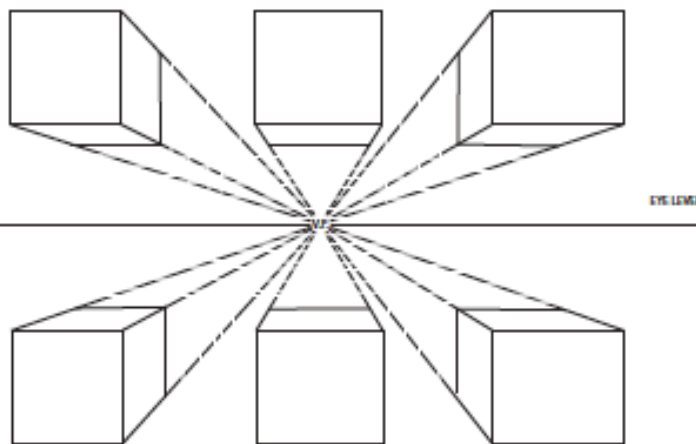
Plane- Any flat surface such as a wall, floor, or table top is a plane.

Vanishing Point (VP)- The vanishing point is a point at which parallel lines receding into space appear to meet.

Center Line of Vision (CLV) - represented by a vertical line that is the equivalent to the center of your eyes. If an object is directly in front of you it is on the center line of vision (CLV)

Ground Line (GL)- represents the ground you are standing on.

Station Point (SP)- The point at which the viewer is standing.



Basic rules of perspective:

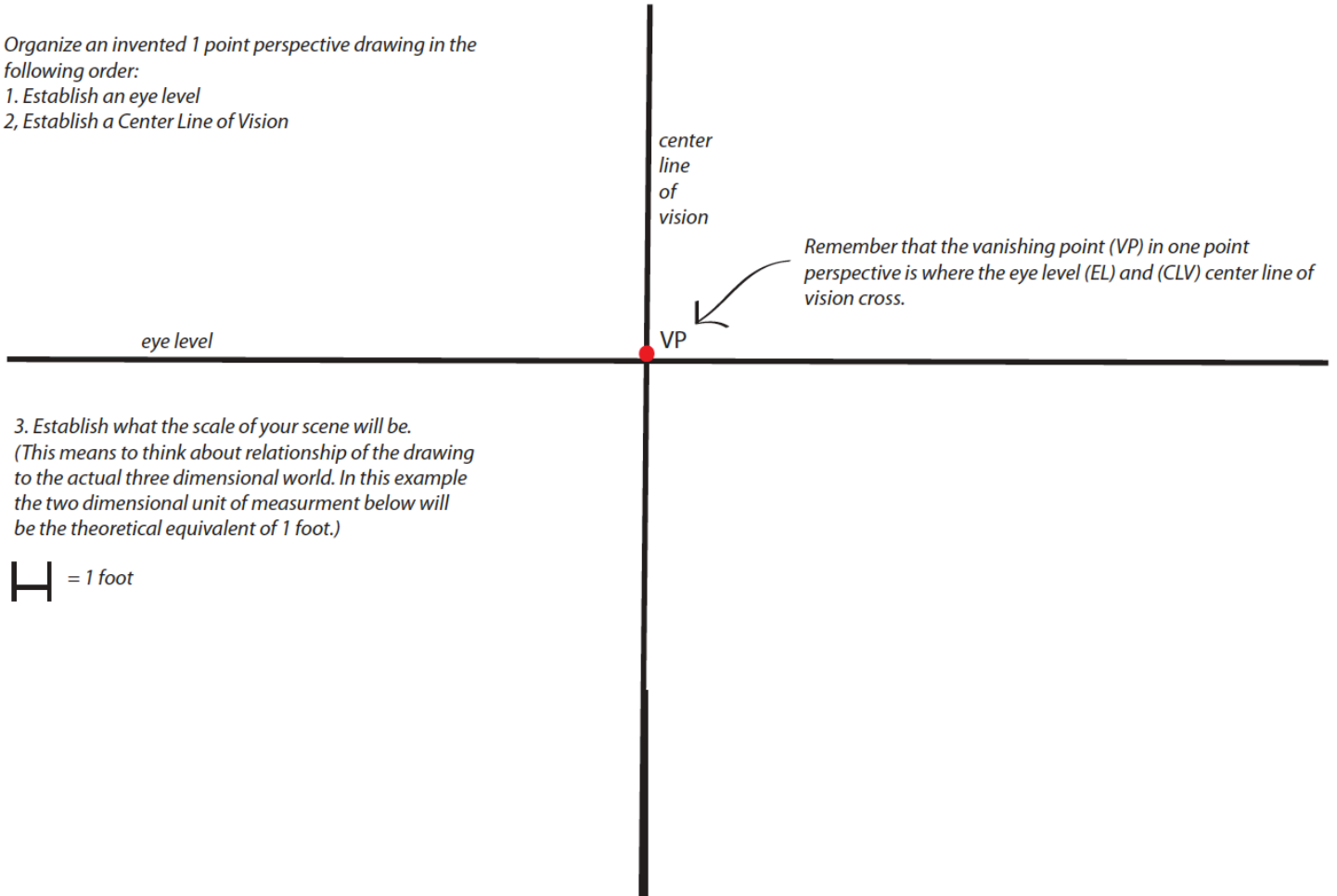
All parallel lines will converge to the same vanishing point.

Objects will appear to get smaller as they get closer to the Eye Level (Horizon Line)

In both 1 and 2 point perspective, the (VP) vanishing points are always on the eye level

Organize an invented 1 point perspective drawing in the following order:

1. Establish an eye level
2. Establish a Center Line of Vision

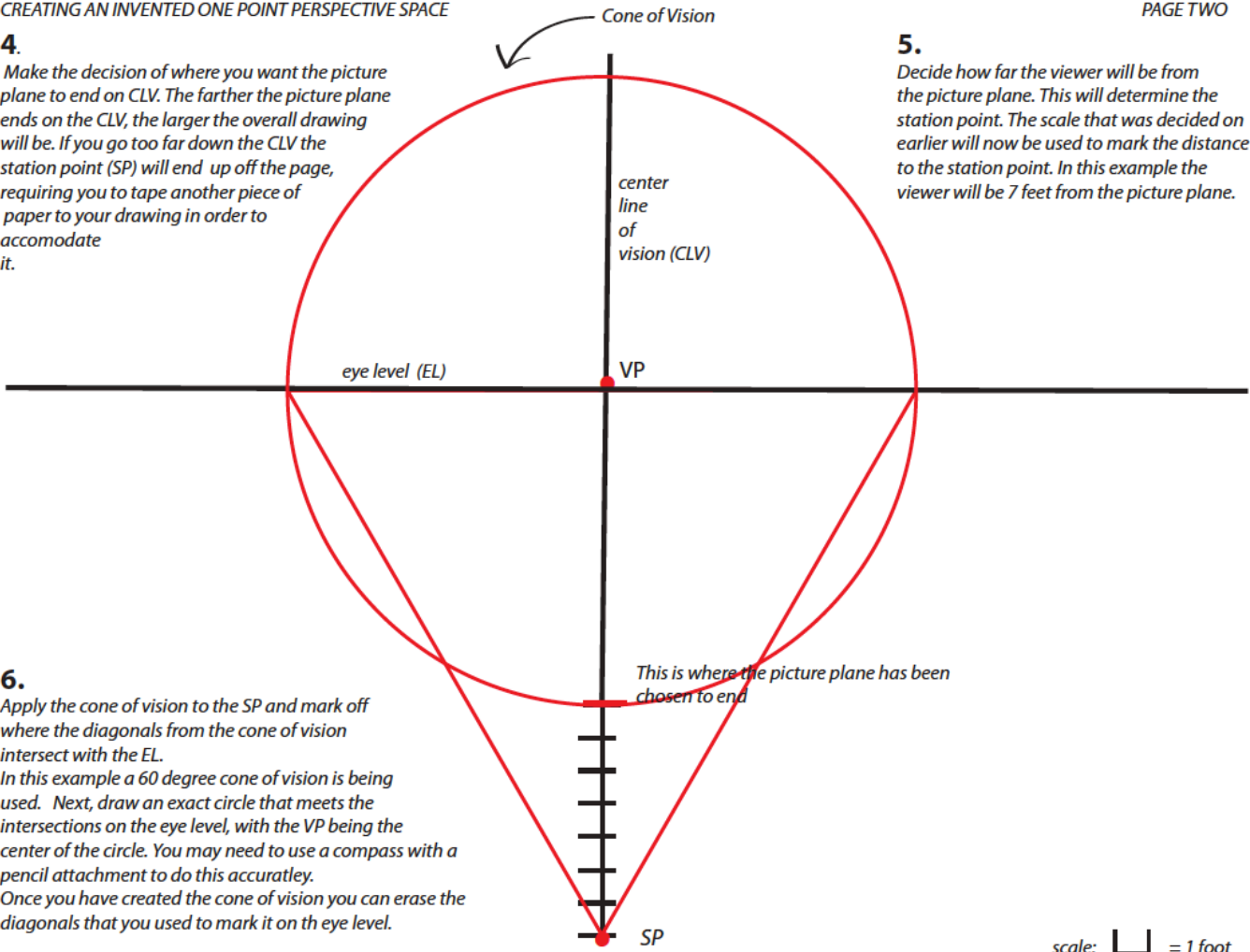


3. Establish what the scale of your scene will be.
(This means to think about relationship of the drawing to the actual three dimensional world. In this example the two dimensional unit of measurement below will be the theoretical equivalent of 1 foot.)

H = 1 foot

4.
 Make the decision of where you want the picture plane to end on CLV. The farther the picture plane ends on the CLV, the larger the overall drawing will be. If you go too far down the CLV the station point (SP) will end up off the page, requiring you to tape another piece of paper to your drawing in order to accommodate it.

5.
 Decide how far the viewer will be from the picture plane. This will determine the station point. The scale that was decided on earlier will now be used to mark the distance to the station point. In this example the viewer will be 7 feet from the picture plane.



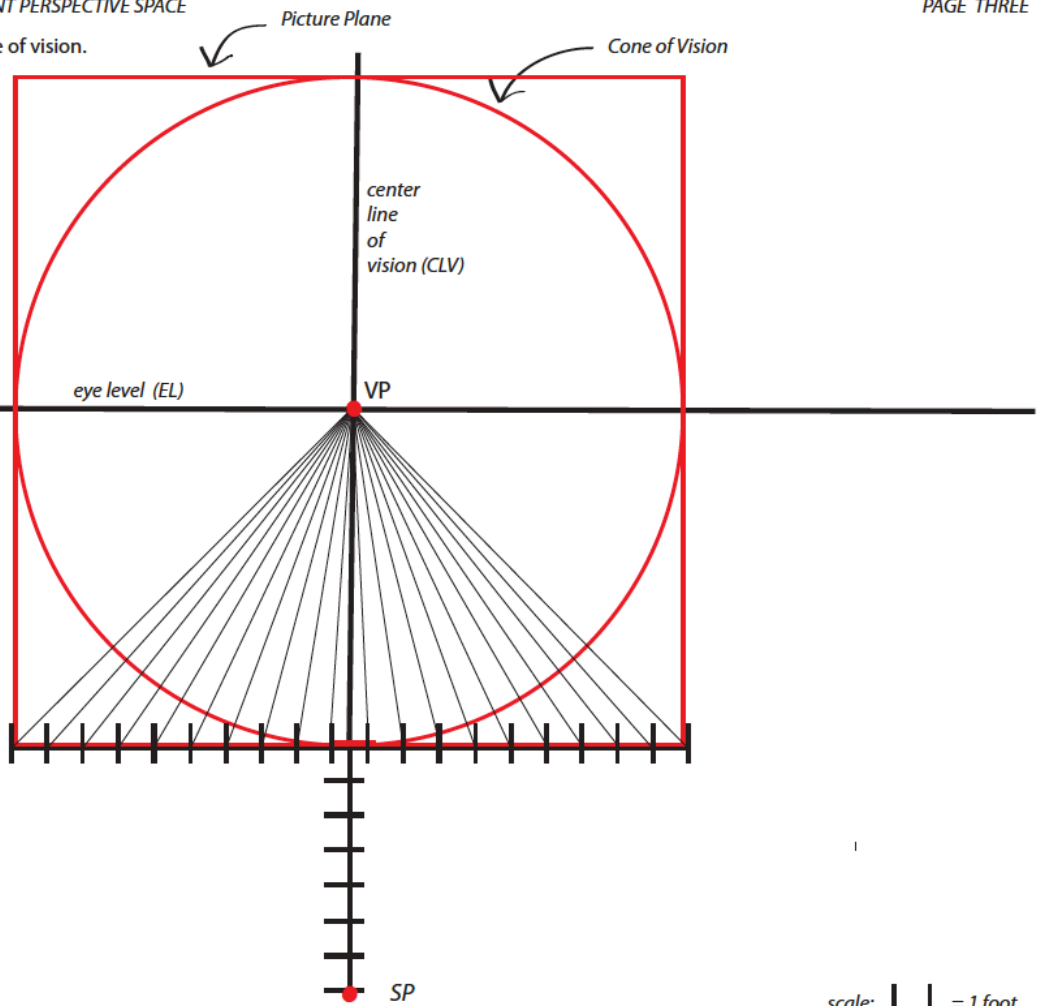
6.
 Apply the cone of vision to the SP and mark off where the diagonals from the cone of vision intersect with the EL. In this example a 60 degree cone of vision is being used. Next, draw an exact circle that meets the intersections on the eye level, with the VP being the center of the circle. You may need to use a compass with a pencil attachment to do this accurately. Once you have created the cone of vision you can erase the diagonals that you used to mark it on the eye level.

scale:  = 1 foot

7. Draw a square around the cone of vision.
This will create the defined horizontal and vertical of the picture plane.

8. Mark off on the 1 foot lengths on the bottom of the picture plane using the scale for feet established in the beginning.

9. Draw a line from each section marked as 1 foot to the VP.



scale: [H] = 1 foot

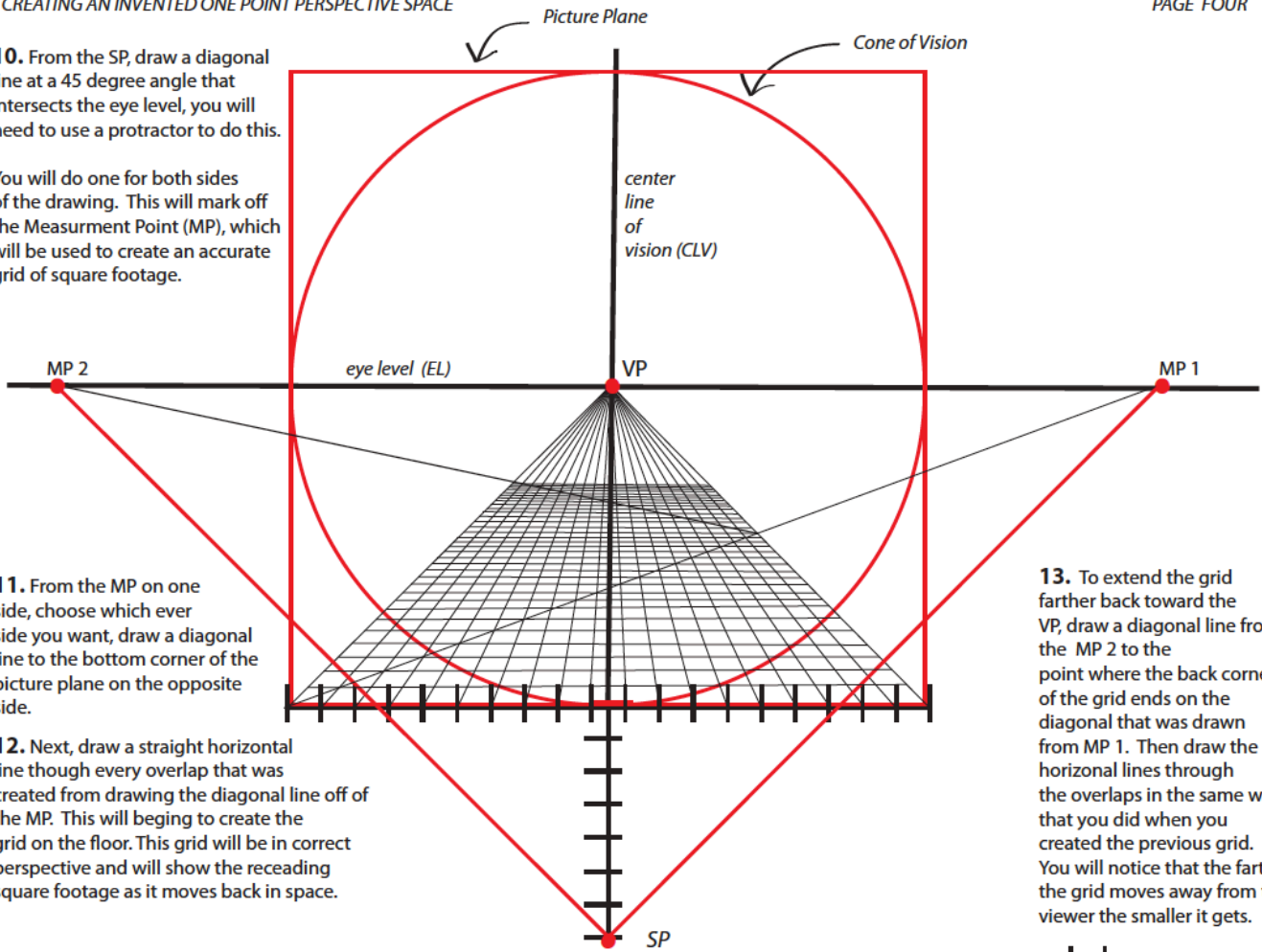
10. From the SP, draw a diagonal line at a 45 degree angle that intersects the eye level, you will need to use a protractor to do this.

You will do one for both sides of the drawing. This will mark off the Measurement Point (MP), which will be used to create an accurate grid of square footage.

11. From the MP on one side, choose which ever side you want, draw a diagonal line to the bottom corner of the picture plane on the opposite side.

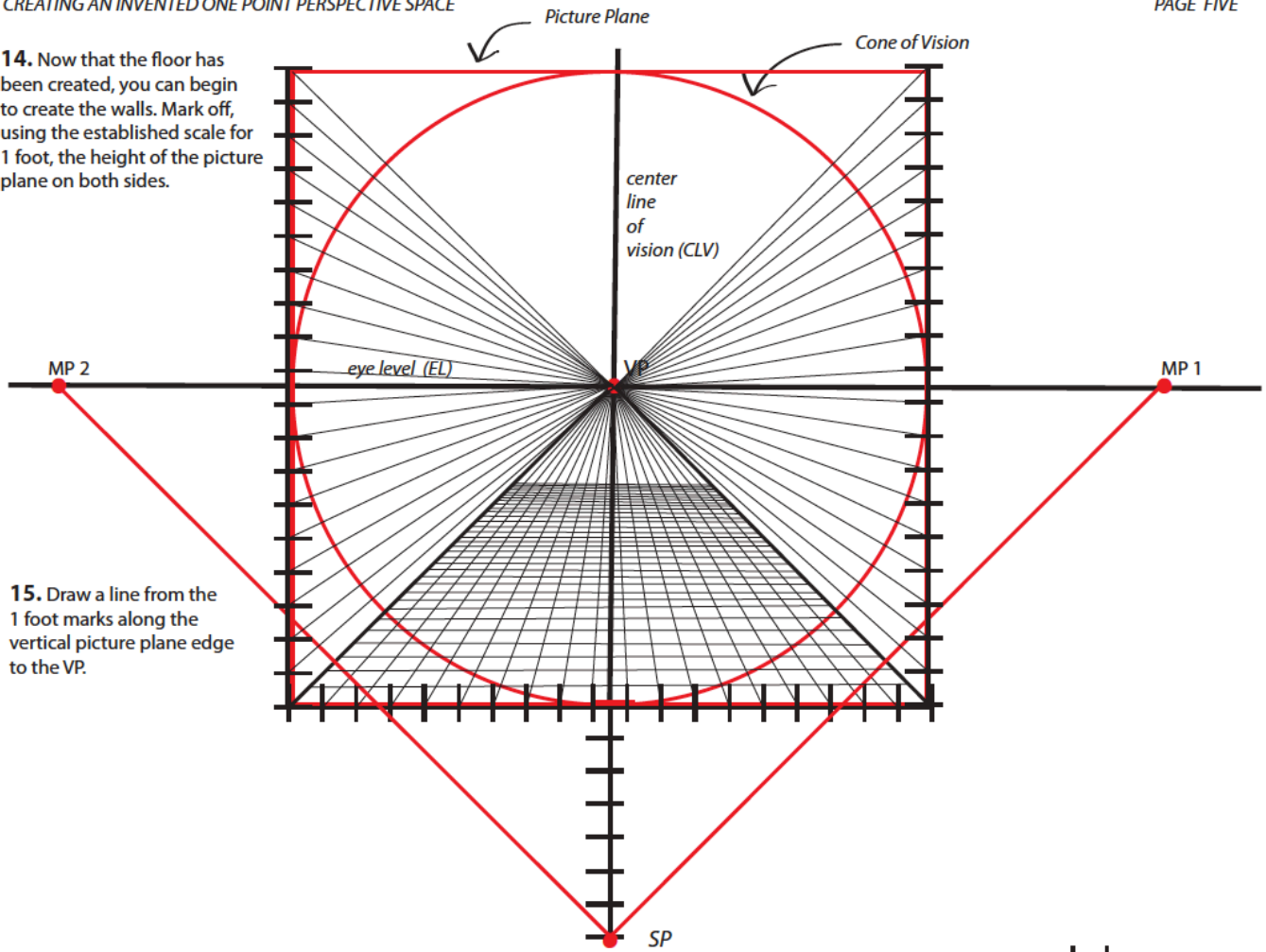
12. Next, draw a straight horizontal line through every overlap that was created from drawing the diagonal line off of the MP. This will begin to create the grid on the floor. This grid will be in correct perspective and will show the receding square footage as it moves back in space.

13. To extend the grid farther back toward the VP, draw a diagonal line from the MP 2 to the point where the back corner of the grid ends on the diagonal that was drawn from MP 1. Then draw the horizontal lines through the overlaps in the same way that you did when you created the previous grid. You will notice that the farther the grid moves away from the viewer the smaller it gets.



scale:  = 1 foot

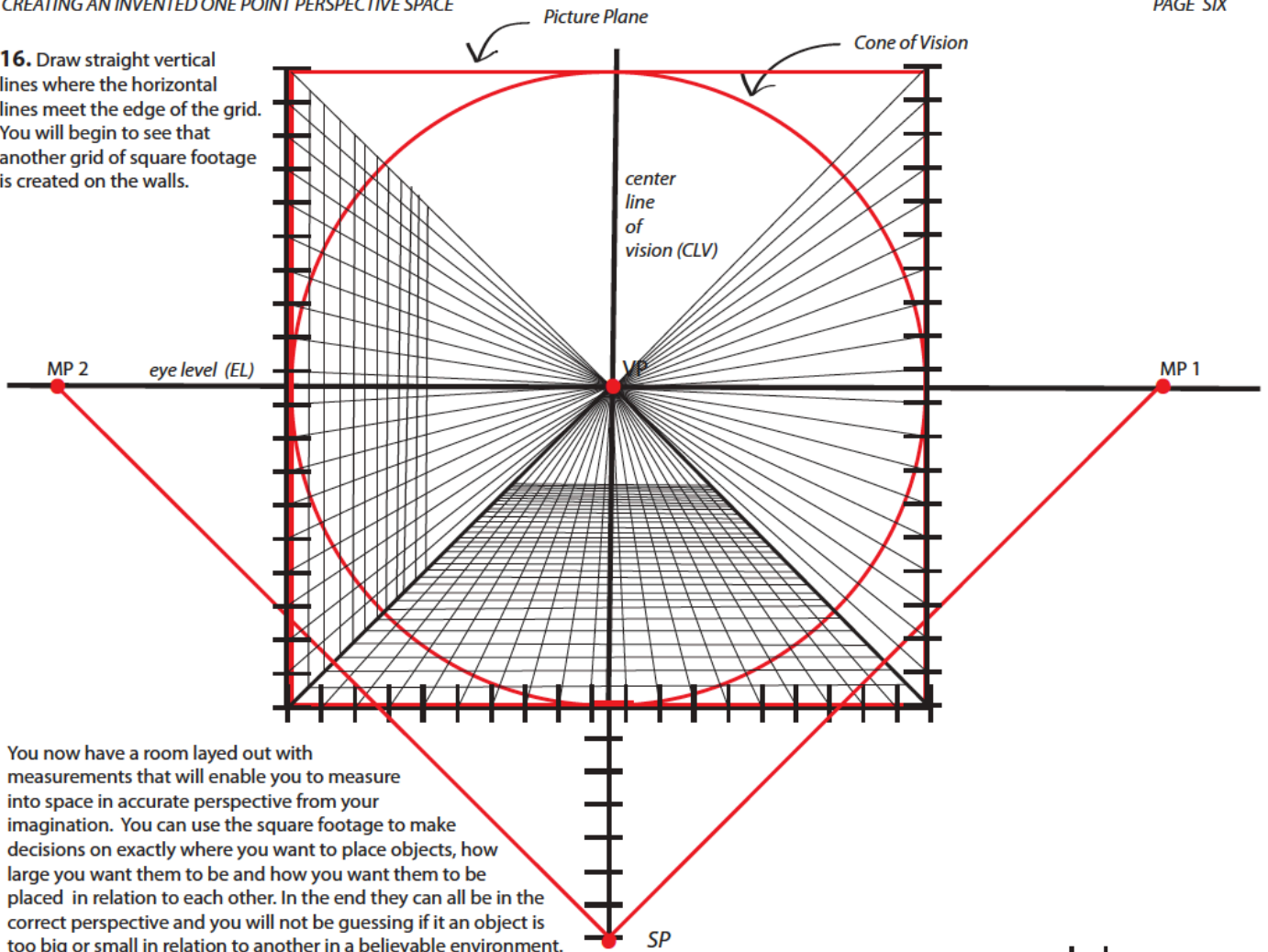
14. Now that the floor has been created, you can begin to create the walls. Mark off, using the established scale for 1 foot, the height of the picture plane on both sides.



15. Draw a line from the 1 foot marks along the vertical picture plane edge to the VP.

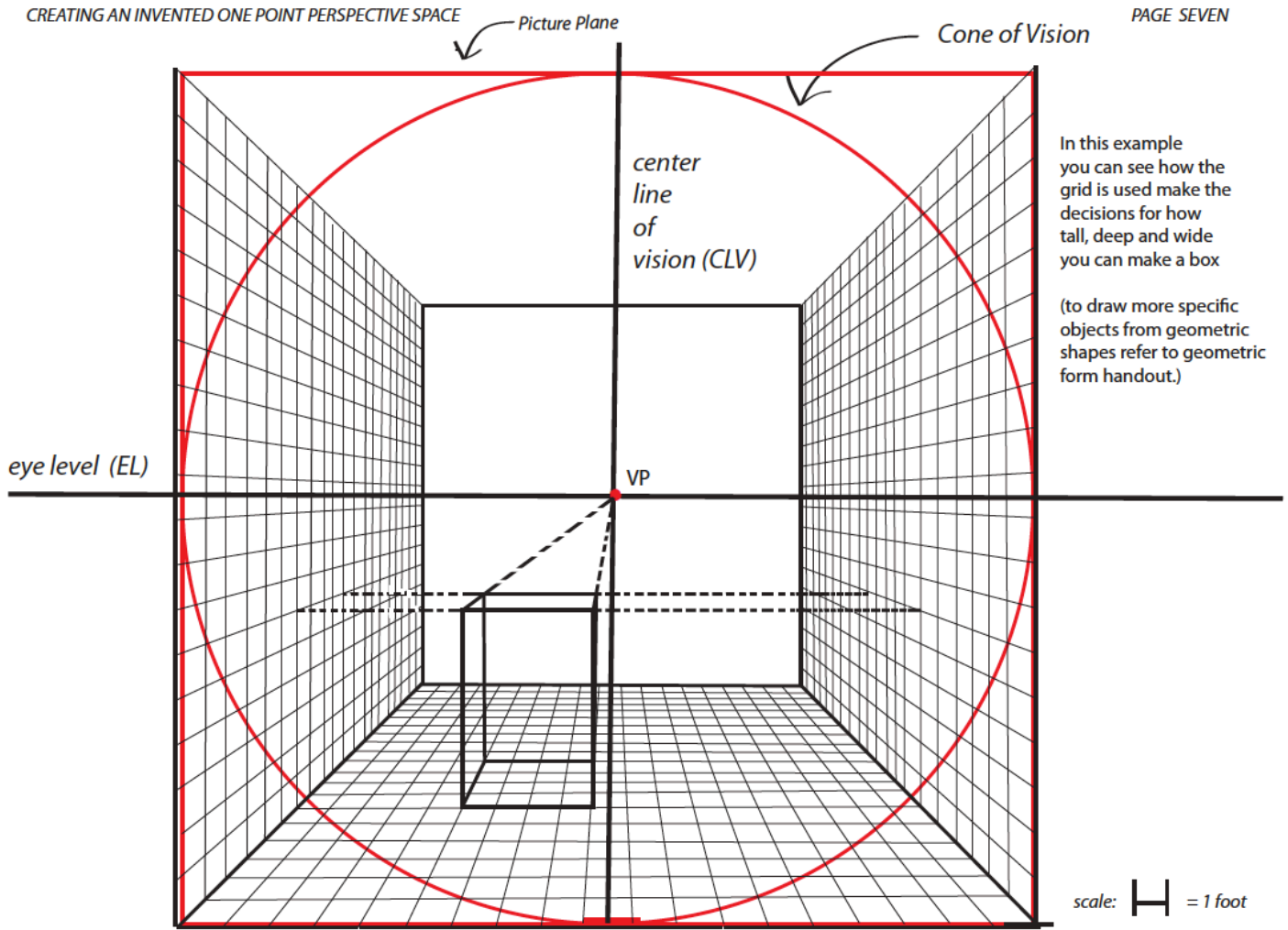
scale: | | = 1 foot

16. Draw straight vertical lines where the horizontal lines meet the edge of the grid. You will begin to see that another grid of square footage is created on the walls.



You now have a room layed out with measurements that will enable you to measure into space in accurate perspective from your imagination. You can use the square footage to make decisions on exactly where you want to place objects, how large you want them to be and how you want them to be placed in relation to each other. In the end they can all be in the correct perspective and you will not be guessing if it an object is too big or small in relation to another in a believable environment.

scale: 1 foot

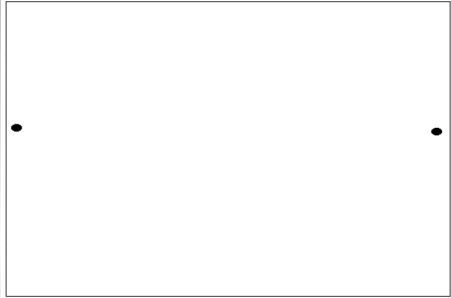


In this example you can see how the grid is used make the decisions for how tall, deep and wide you can make a box

(to draw more specific objects from geometric shapes refer to geometric form handout.)

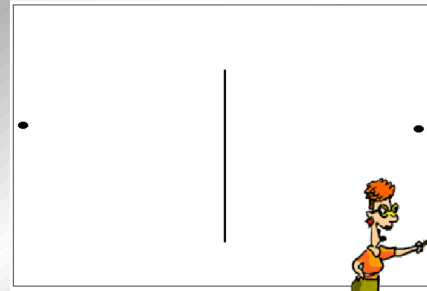
Two Point Perspective

First, add your vanishing points to the paper. Try to make both vanishing points at equal heights. You can put the vanishing points as high or low as you wish when drawing in perspective, but for this project it works well to put them near the center of the paper.



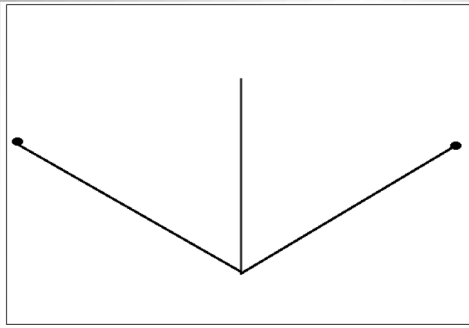
Did you know that in one point perspective you use one vanishing point, two point perspective you use two, and so forth?

Next, draw a vertical line near the center of the paper. Make sure your line is nice and straight. This line will become the corner building of your city block!

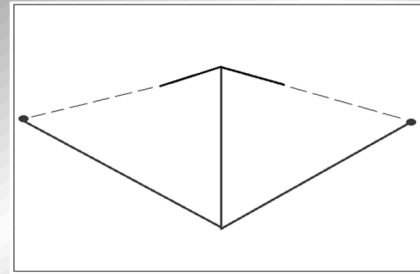


Tip: Always use a ruler when drawing straight lines in perspective!

Using your ruler, connect the bottom of your vertical line to each vanishing point. Make sure it touches!

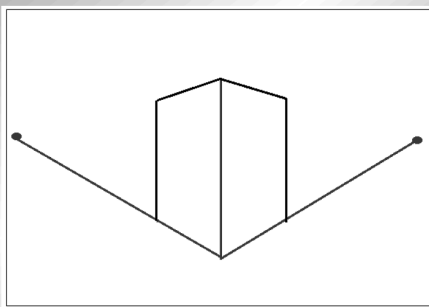


Then, line up the top of the line with each vanishing point. Draw your diagonal lines partway towards each vanishing point. This will create the sides of your building.



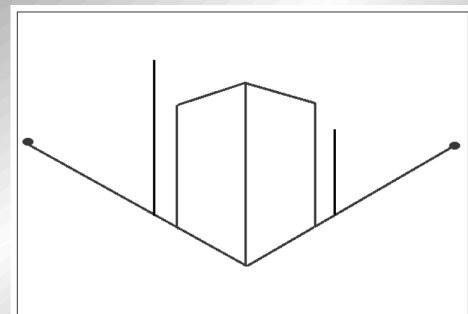
Save yourself some erasing by drawing your line only partway to the vanishing point like the bold lines in the drawing. Your lines still have to line up with your points, however!

Draw a vertical line to connect the diagonal lines. This completes the sides of your building and your corner is all set!

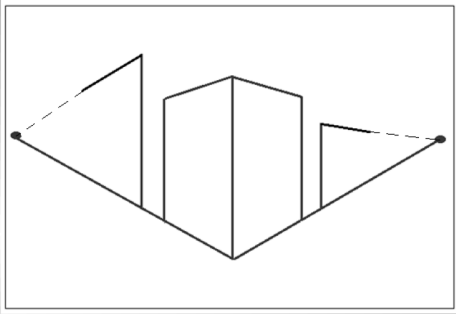


Your first building is complete!

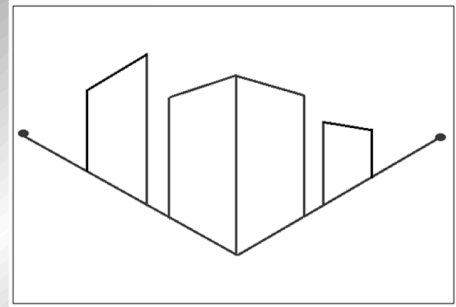
Next, create additional buildings and build your city. Leaving a little space next to your first building, draw vertical lines up. They can be taller, shorter, or equal height to your first building.



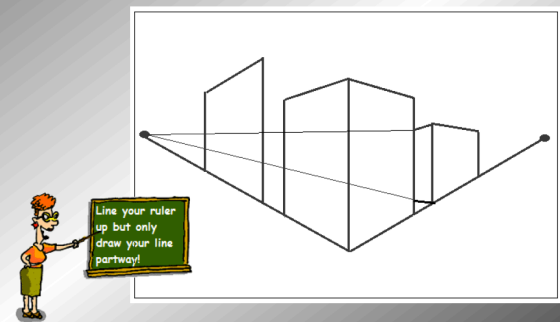
Connect the top of those vertical lines to the nearest vanishing point. You do not have to draw the line all the way, but it must line up with that point!



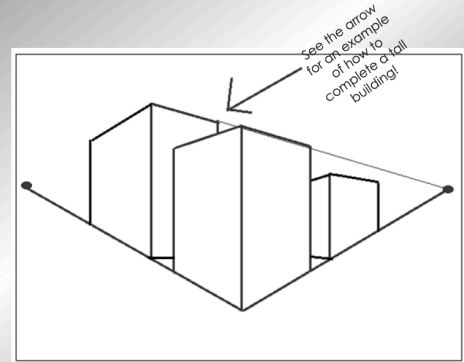
Just like before, draw vertical lines down to create the sides of your building.



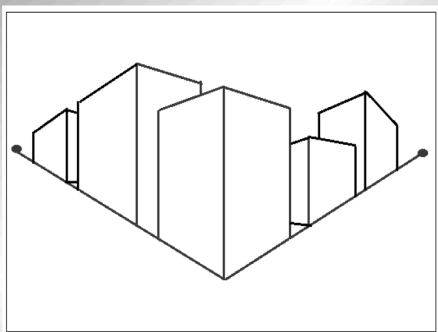
Create the sides of your new buildings by lining up the top and bottom corners to the opposite vanishing point.



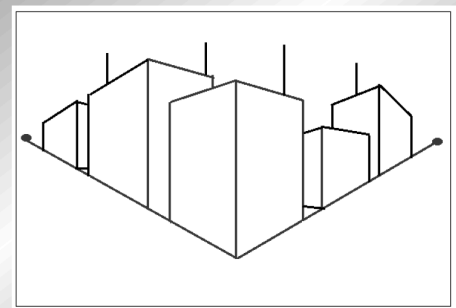
If your building is tall, draw your line towards the vanishing point partway and then draw a vertical line down to complete your building.



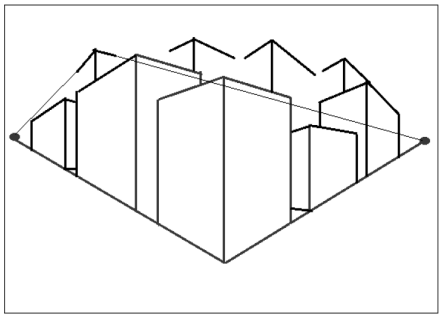
Keep adding buildings all the way to each vanishing point for a city block effect.



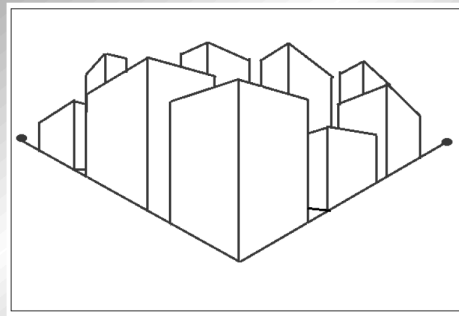
Add in additional buildings in the background to build up your city. Start like always by drawing vertical lines up from existing buildings.



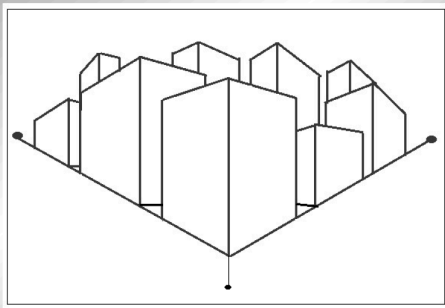
Connect the top of each vertical line towards each vanishing point. You do not have to draw the line the whole way, only partway like the bold lines above.



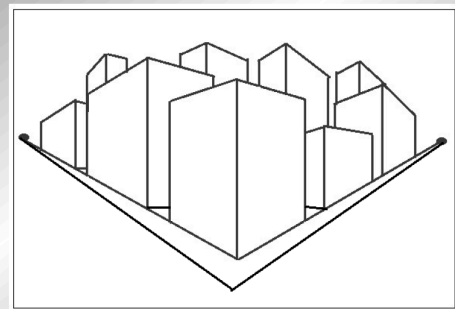
Draw vertical lines down from each side to create the sides of your buildings. Your city buildings are complete!



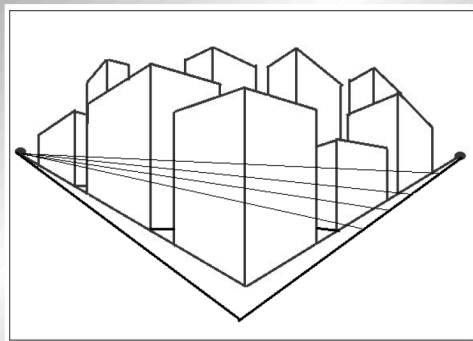
Add a sidewalk or street to create a realistic city look. Start by marking a dot below the first vertical line you drew. This will create the corner of your sidewalk.



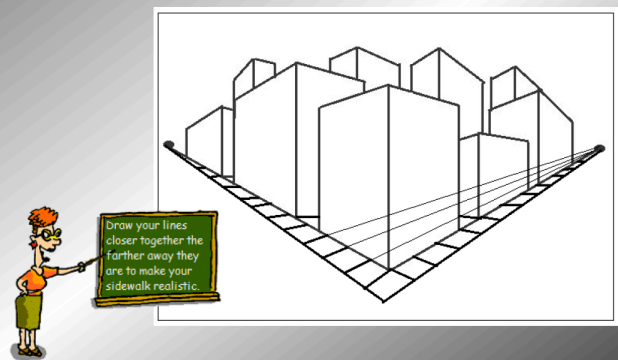
Connect the dot to each vanishing point. The base of your sidewalk is created.



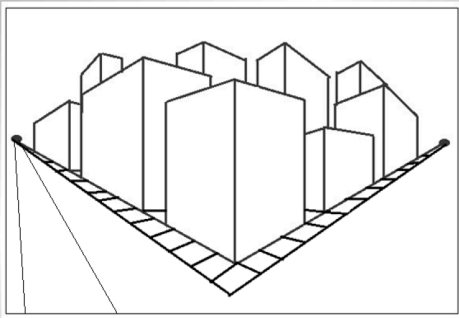
Draw the division lines for the sidewalk by drawing those lines to the opposite vanishing point like shown below.



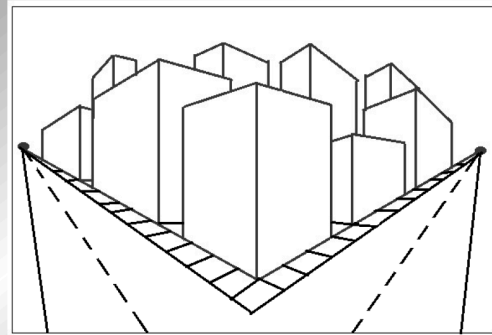
Continue to connect each division line to the opposite vanishing point to finish your sidewalk.



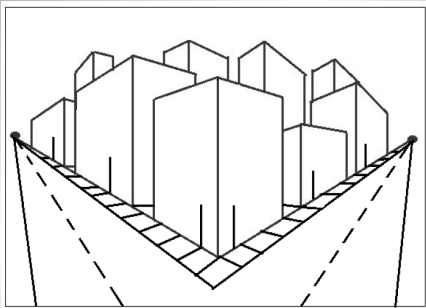
Your city is looking great! Next, add in a street by drawing lines from the vanishing point to each side. Your street can be as wide as you would like.



Complete your street by lining up each side with its appropriate vanishing point.

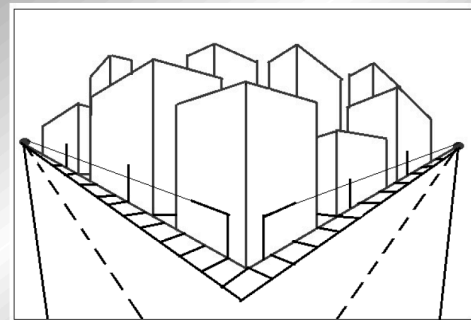


Add details to buildings by creating doors, windows, signs, and more for your buildings. Start your doors by drawing vertical lines up from the base of your buildings.

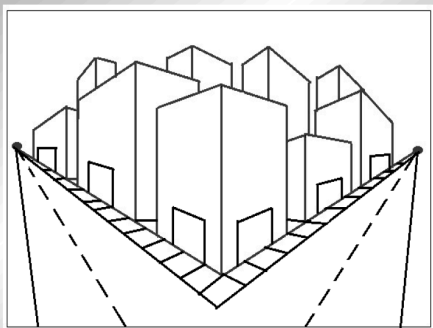


Door and window tip: when creating doors or windows, draw your vertical line on the side of the building that is farther from the vanishing point.

Connect the top of your vertical lines to the vanishing point it is closest to. Again, you do not have to draw your lines all the way but they must line up with your point!

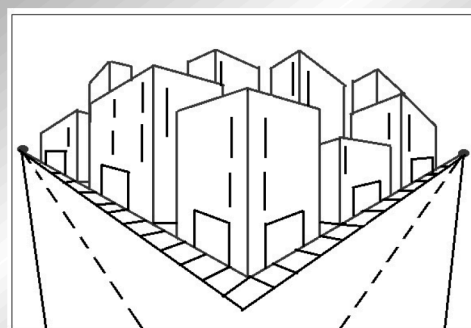


Finish your doors with vertical lines down. You can also add a vertical line in the middle to divide the doors into two, making double doors.

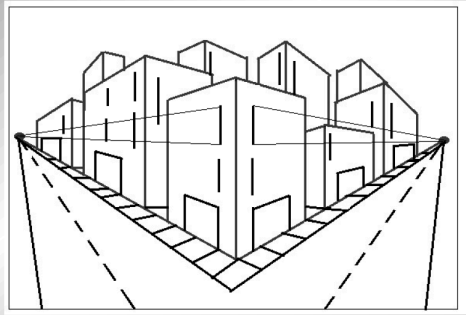


Add your creativity with this step by thinking of unique types and styles of doors such as garage doors!

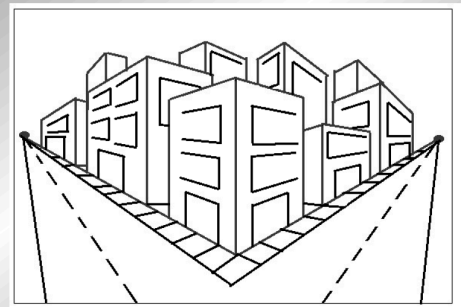
Add in windows, posters, or signs the same way by starting with drawing vertical lines.



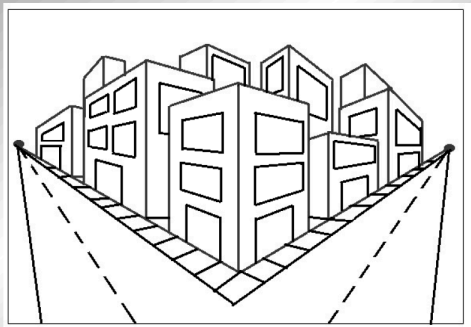
Draw lines to the right or left vanishing point from the top and bottom of each vertical line.



See the windows & signs below to see the progress of this step.



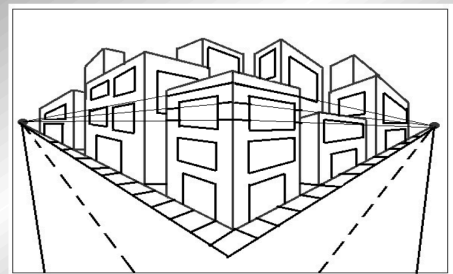
Complete this step by drawing vertical lines to connect the top and bottom vertical lines.



Be creative with your signs and windows! Think about what you will see in your city and what it will be like.

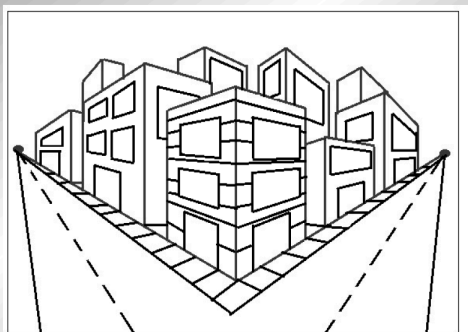
nus lesson: How to draw bricks on the side of your building!

Start by drawing lines on each side of the building to the vanishing points. Draw them evenly spaced down the side of the building.



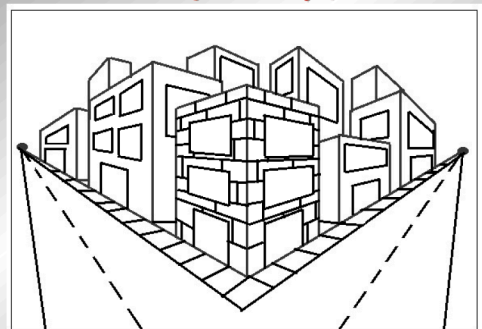
Tip: When drawing your lines, draw around any windows or doors. Don't draw your lines through those items.

The center building below has all the diagonal lines draw on it to create a brick effect. Notice the even spacing of the lines down the building.

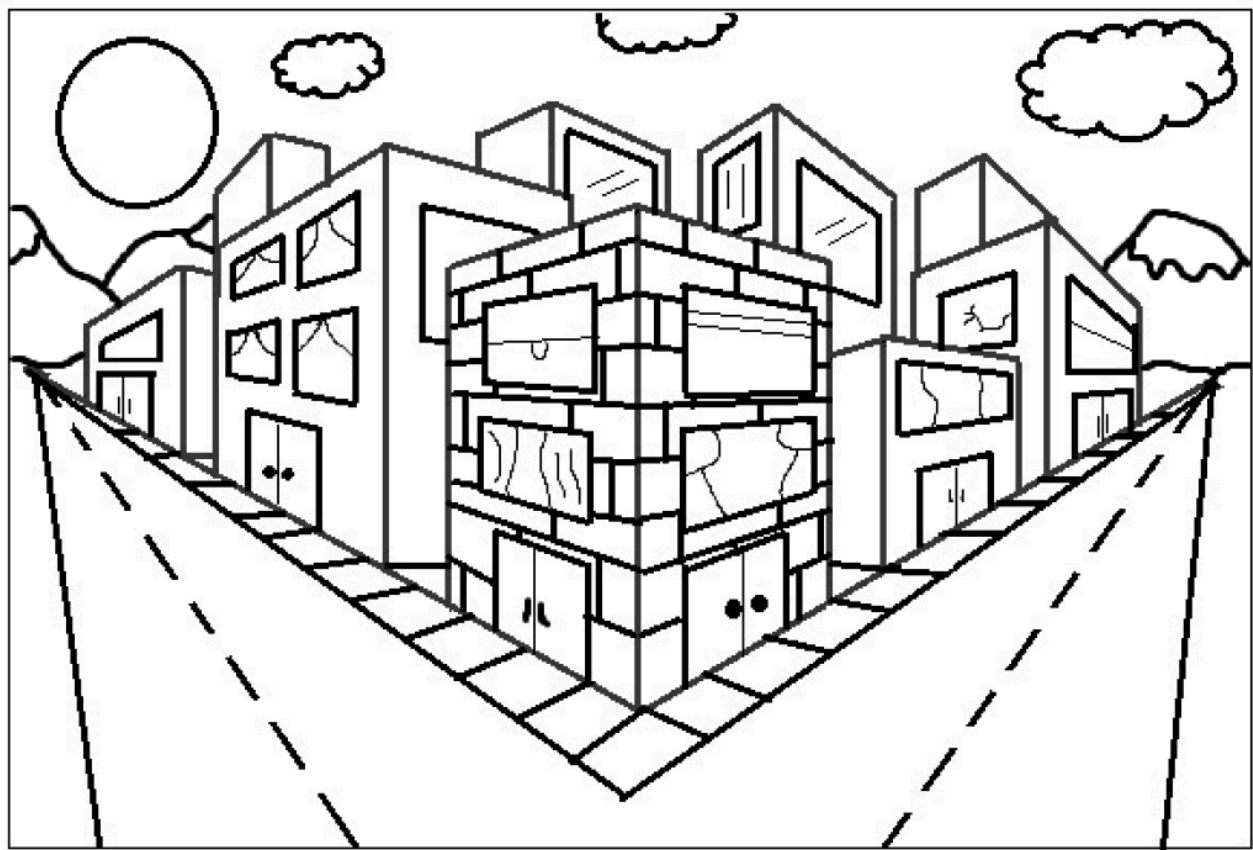


Lastly, divide up each section by making irregular, vertical lines to create the brick effect. You're done with all the major steps!

BOOYAH!



There's nothing left to do but add details and personalize your city. Be creative and make it unique!



Examples of 2 Point Perspective City Blocks



What else can you draw with two point perspective?

