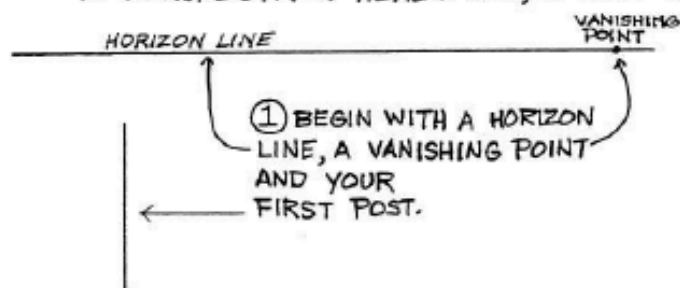


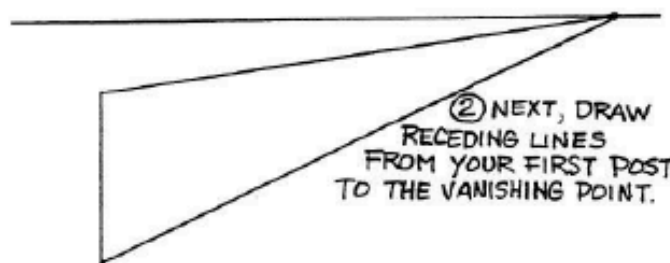
DRAWING FENCE POSTS IN PERSPECTIVE



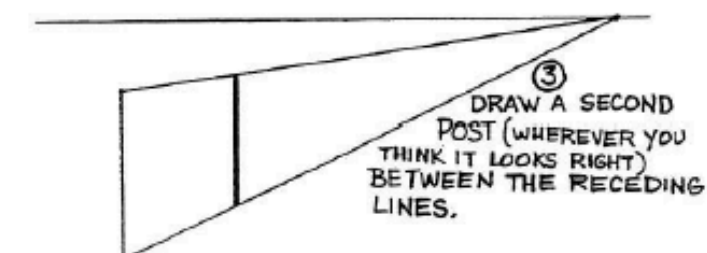
OCCASIONALLY YOU MAY WANT TO DRAW OBJECTS WITH EQUAL SPACING SUCH AS FENCEPOSTS, TELEPHONE POLES, LINES IN SIDEWALKS, OR, STRIPES DOWN A HIGHWAY IN PERSPECTIVE. HERE'S HOW, A STEP AT A TIME...



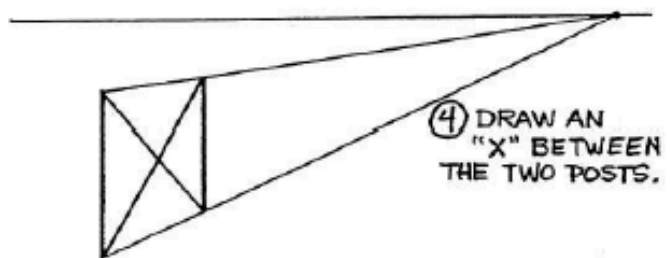
① BEGIN WITH A HORIZON LINE, A VANISHING POINT AND YOUR FIRST POST.



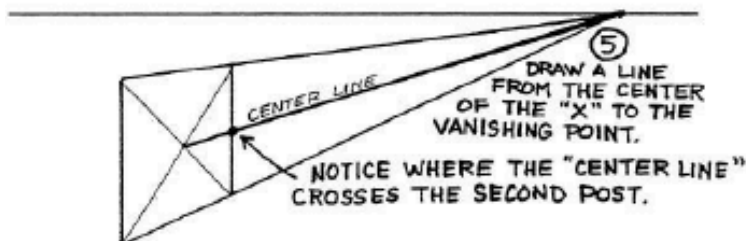
② NEXT, DRAW RECEDING LINES FROM YOUR FIRST POST TO THE VANISHING POINT.



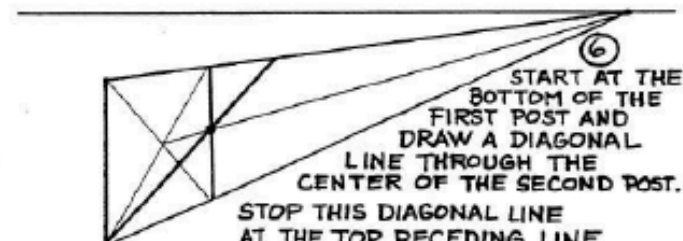
③ DRAW A SECOND POST (WHEREVER YOU THINK IT LOOKS RIGHT) BETWEEN THE RECEDING LINES.



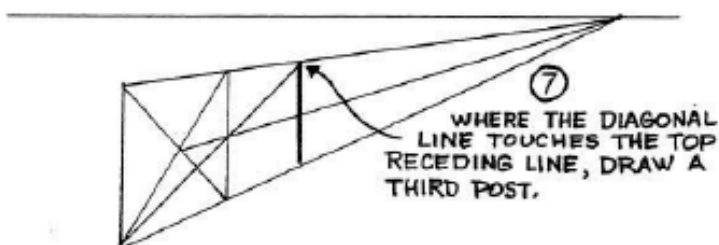
④ DRAW AN "X" BETWEEN THE TWO POSTS.



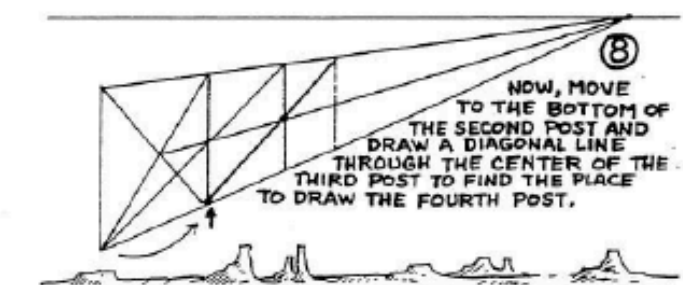
⑤ DRAW A LINE FROM THE CENTER OF THE "X" TO THE VANISHING POINT. NOTICE WHERE THE "CENTER LINE" CROSSES THE SECOND POST.



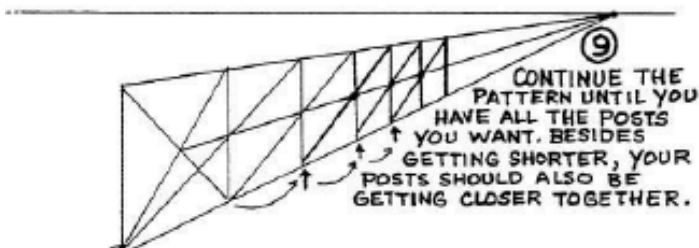
⑥ START AT THE BOTTOM OF THE FIRST POST AND DRAW A DIAGONAL LINE THROUGH THE CENTER OF THE SECOND POST. STOP THIS DIAGONAL LINE AT THE TOP RECEDING LINE.



⑦ WHERE THE DIAGONAL LINE TOUCHES THE TOP RECEDING LINE, DRAW A THIRD POST.



⑧ NOW, MOVE TO THE BOTTOM OF THE SECOND POST AND DRAW A DIAGONAL LINE THROUGH THE CENTER OF THE THIRD POST TO FIND THE PLACE TO DRAW THE FOURTH POST.

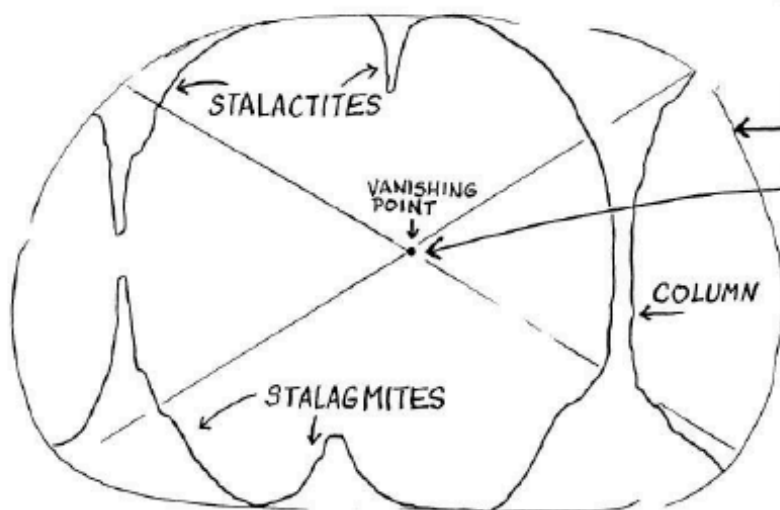


⑨ CONTINUE THE PATTERN UNTIL YOU HAVE ALL THE POSTS YOU WANT. BESIDES GETTING SHORTER, YOUR POSTS SHOULD ALSO BE GETTING CLOSER TOGETHER.



⑩ FINALLY, ERASE ALL OF YOUR GUIDELINES AND ADD TEXTURE AND SHADING TO YOUR DRAWING.

DRAWING INTERIORS... **A SIMPLE CAVE**

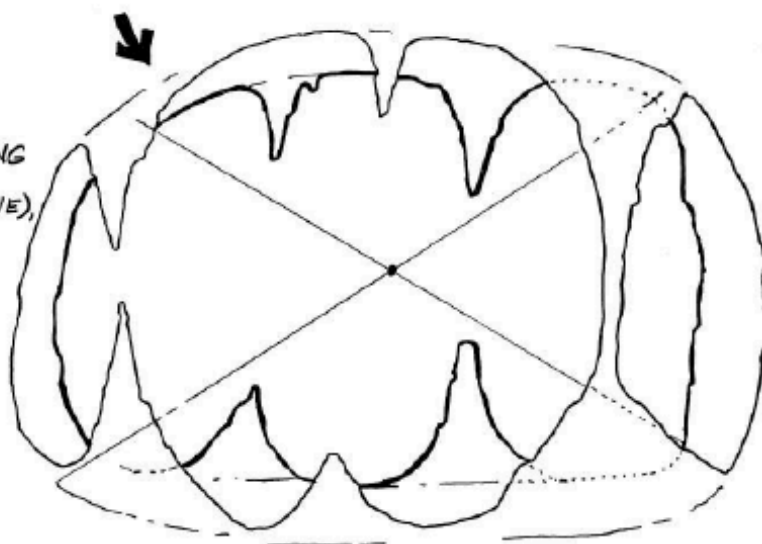


START YOUR CAVERN WITH A SIMPLE OVAL OUTLINE AND SOME LIGHT GUIDELINES ENDING AT A CENTRAL VANISHING POINT.

FROM THE EDGE OF YOUR SIMPLE OVAL, SKETCH A FEW STALACTITES (HANGING FROM THE ROOF OF THE CAVE), SOME STALAGMITES (RISING FROM THE FLOOR), AND A COLUMN OR TWO. KEEP IT SIMPLE!

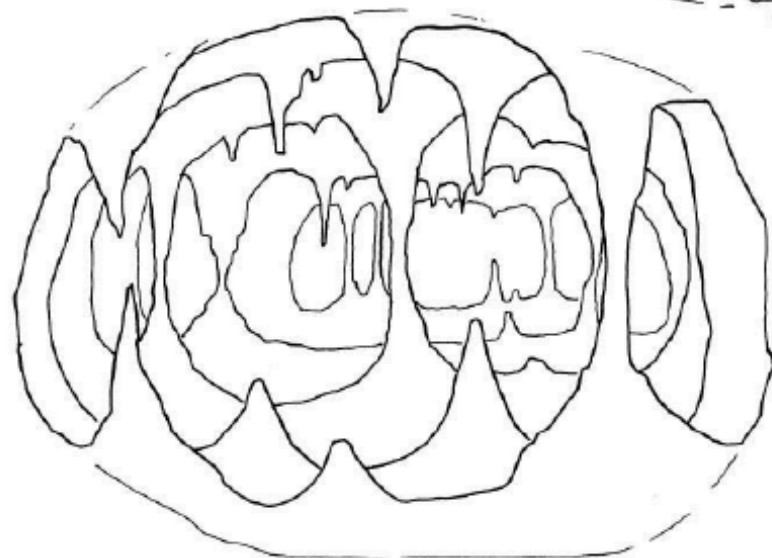
ADD A SECOND "OVAL" USING YOUR GUIDELINES. BY USING OVERLAPPING SHAPES (OPTICAL PERSPECTIVE) AND YOUR GUIDELINES (LINEAR PERSPECTIVE), YOU CAN START SHOWING DEPTH IN YOUR DRAWING.

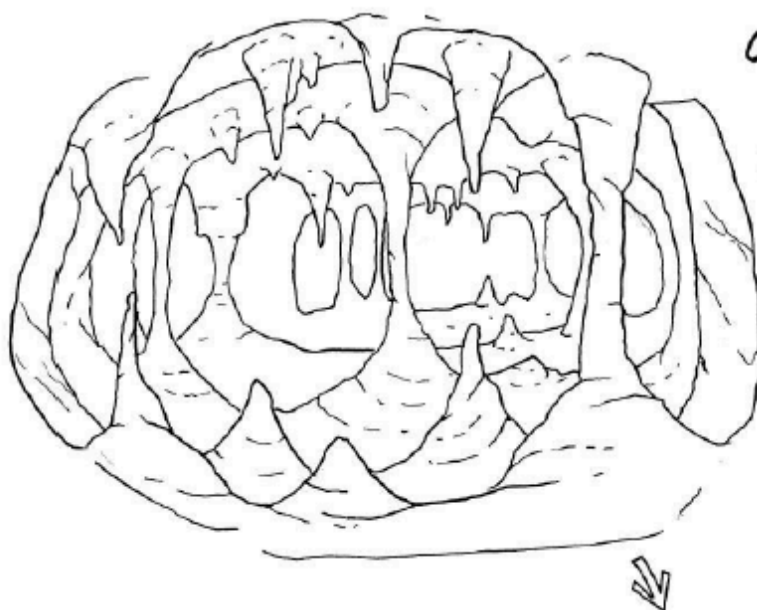
DRAW A FEW STALAGMITES AND STALACTITES HANGING DOWN AND RISING UP FROM YOUR SECOND OVAL.



CONTINUE ADDING OVALS ALONG WITH STALAGMITES, STALACTITES AND COLUMNS UNTIL YOU HAVE 5 OR 6 "LAYERS" IN YOUR CAVERN.

REMEMBER TO DRAW YOUR STALAGMITES, STALACTITES AND COLUMNS **SMALLER** AS YOU ADD THEM TO THE BACK OVALS. (OPTICAL PERSPECTIVE)





CHANGING SHAPE INTO FORM

NEXT, ADD SOME SMALL, CURVED LINES TO YOUR CAVERN FEATURES, CHANGING THE TWO-DIMENSIONAL SHAPES INTO THREE-DIMENSIONAL FORMS.

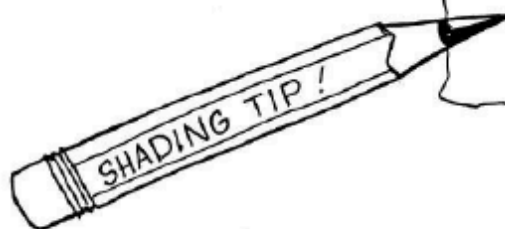


FINISH WITH TEXTURE & SHADING

REMEMBER, INTERIOR SCENES LIKE CAVES AND TUNNELS ARE USUALLY DARKEST AT THE FAR END.



START YOUR SHADING AT THE BACK OF YOUR CAVE WHERE IT WILL BE THE DARKEST AND GRADUALLY SHADE LIGHTER AS YOU WORK YOUR WAY FORWARD THROUGH THE DIFFERENT LAYERS.



Atmospheric PERSPECTIVE



PERSPECTIVE IS USED BY ARTISTS TO MAKE OBJECTS IN THEIR DRAWINGS LOOK CLOSER OR FURTHER FROM THE VIEWER. (DEPTH)

OPTICAL PERSPECTIVE SHOWS DEPTH BY USING VALUE (SHADING), POSITION, DETAIL, OVERLAPPING LINES AND SIZE.



"LINEAR" PERSPECTIVE USES VANISHING POINTS, A HORIZON LINE AND RECEEDING LINES TO SHOW DEPTH.

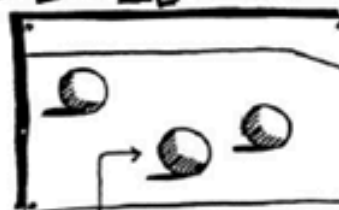
VALUE



IN THIS EXAMPLE, THE "HILLS" ON THE LEFT APPEAR "CLOSER" THAN THE ONES ON THE RIGHT. (EVEN THO' THEY'RE SMALLER). VALUE (SHADING) HAS BEEN USED TO SHOW DEPTH. GENERALLY, THINGS CLOSER TO YOU ARE DARKER THAN THE SAME THINGS FAR AWAY.

POSITION

DEPTH CAN ALSO BE SHOWN BY WHERE



OBJECTS ARE PLACED ON A DRAWING! OBJECTS DRAWN TOWARD

THE BOTTOM OF THE PAGE APPEAR "CLOSER" TO THE VIEWER.

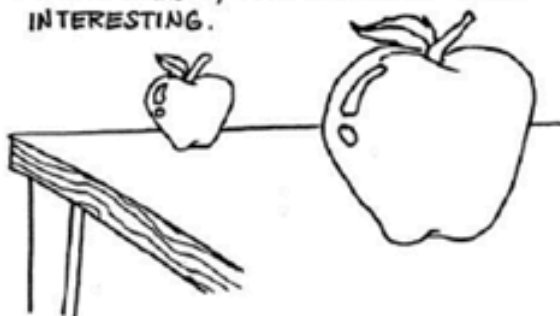
DETAIL

BY ADDING MORE DETAIL TO SOME OBJECTS IN YOUR DRAWINGS, THEY CAN LOOK CLOSER THAN OTHER OBJECTS.



SIZE

BY CHANGING THE SIZE OF OBJECTS IN YOUR DRAWINGS, YOU CAN ADD DEPTH TO YOUR WORK. REMEMBER, ADDING DEPTH MAKES YOUR DRAWINGS MORE INTERESTING.



OVERLAPPING



USING OVERLAPPING LINES TO SHOW DEPTH IS ONE OF THE EASIEST WAYS TO INCLUDE OPTICAL PERSPECTIVE IN YOUR DRAWINGS.

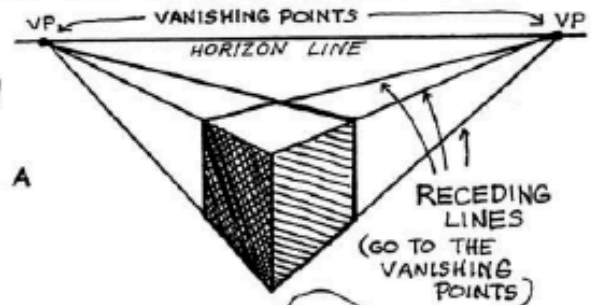


IN THIS EXAMPLE OF MOUNTAIN PEAKS, IT'S IMPOSSIBLE TO TELL WHICH PEAKS ARE CLOSER OR FURTHER AWAY, BUT ADD SOME OVERLAPPING LINES & NOW IT'S EASY TO TELL.

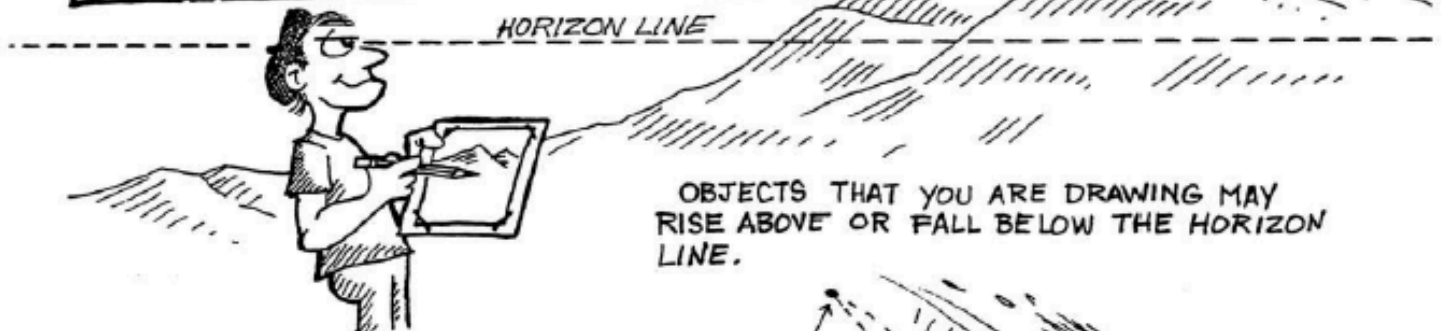
LINEAR PERSPECTIVE

ARTISTS USE "LINEAR PERSPECTIVE" (LIKE "OPTICAL PERSPECTIVE") TO SHOW DEPTH IN THEIR DRAWINGS.

LINEAR PERSPECTIVE IS CONSTRUCTED WITH A HORIZON LINE, VANISHING POINTS, AND RECEDING LINES.



A HORIZON LINE IS AN IMAGINARY LINE WHICH IS LEVEL TO THE ARTIST'S EYES. IT IS SOMETIMES CALLED AN "EYE LEVEL" LINE.



OBJECTS THAT YOU ARE DRAWING MAY RISE ABOVE OR FALL BELOW THE HORIZON LINE.

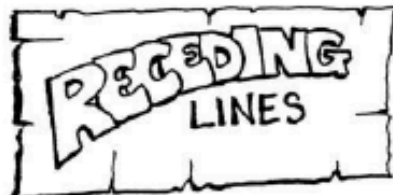


... POP ...
VANISHING POINTS ARE IMAGINARY POINTS WHERE PARALLEL LINES MEET.



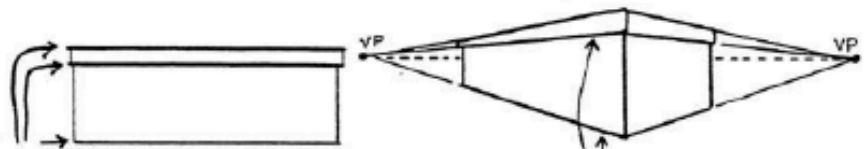
USUALLY, (BUT NOT ALWAYS), VANISHING POINTS ARE PLACED ON THE HORIZON LINE.

A DRAWING MAY HAVE SEVERAL VANISHING POINTS.



RECEDING LINES ARE PARALLEL LINES WHICH COME TOGETHER AT A VANISHING POINT IN YOUR DRAWING.

FOR EXAMPLE, THE PARALLEL LINES ON THIS BOX...

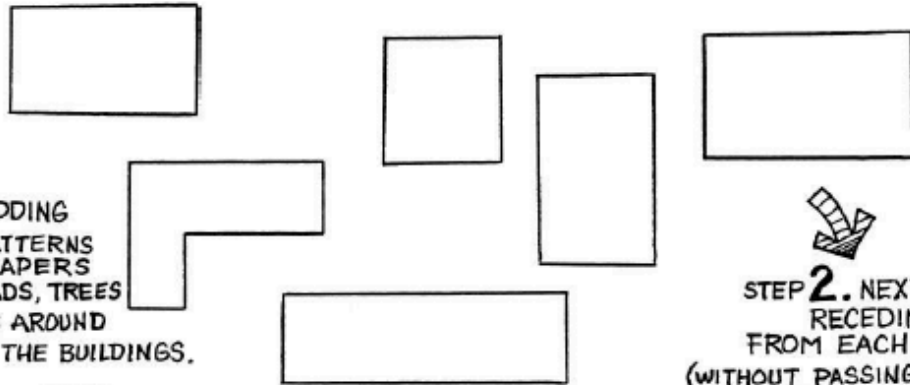


BECOME RECEDING LINES WHEN DRAWN IN PERSPECTIVE.



A 1-POINT PERSPECTIVE PROJECT! DRAWING A BIRD'S-EYE VIEW OF A CITY

STEP 1. FIRST, DRAW SEVERAL RECTANGLES AROUND A CENTRAL VANISHING POINT. THESE RECTANGLES WILL BE THE TOPS OF YOUR SKYSCRAPERS!



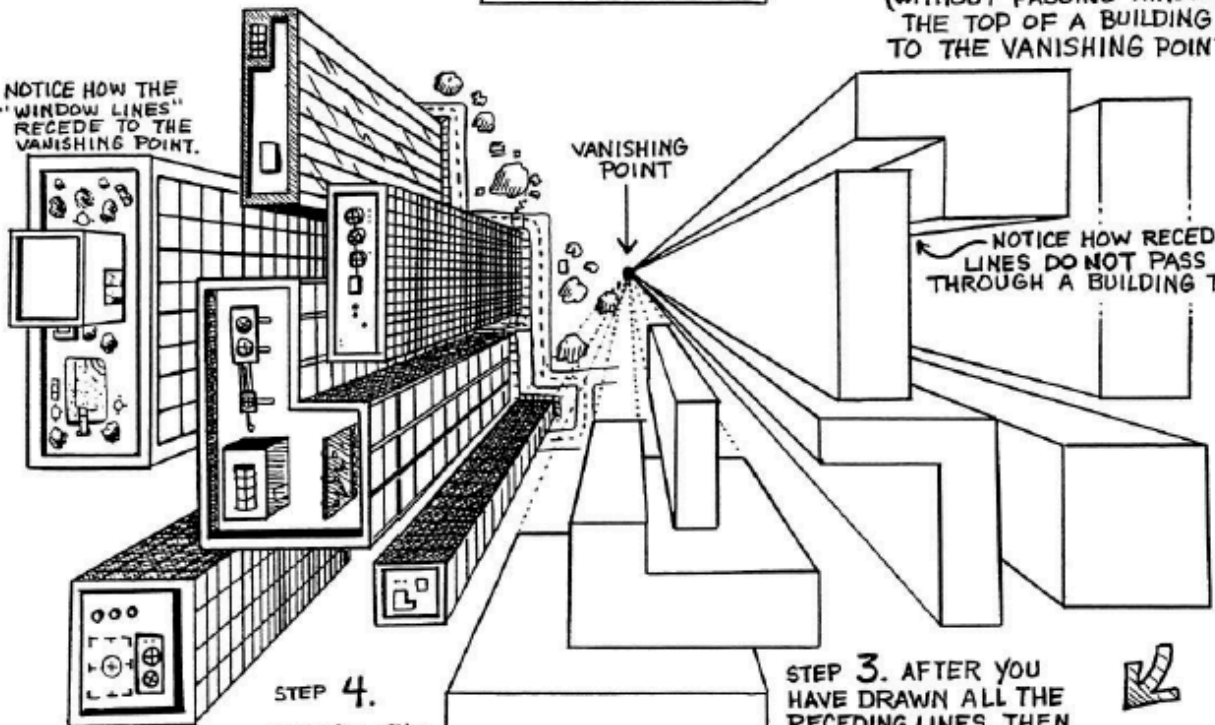
STEP 5. FINISH YOUR DRAWING BY ADDING SHADING AND PATTERNS TO YOUR SKYSCRAPERS ALONG WITH ROADS, TREES AND SIDEWALKS AROUND THE BASES OF THE BUILDINGS.

STEP 2. NEXT, DRAW RECEDING LINES FROM EACH CORNER (WITHOUT PASSING THROUGH THE TOP OF A BUILDING) TO THE VANISHING POINT.

NOTICE HOW THE "WINDOW LINES" RECEDE TO THE VANISHING POINT.

VANISHING POINT

NOTICE HOW RECEDING LINES DO NOT PASS THROUGH A BUILDING TOP.



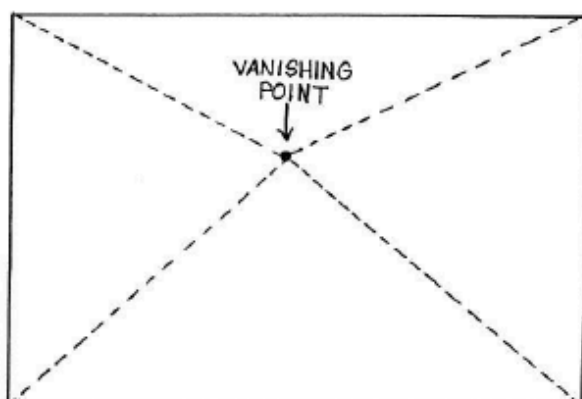
STEP 4. ERASE THE RECEDING LINES FROM THE "FAR END" TO THE VANISHING POINT.

STEP 3. AFTER YOU HAVE DRAWN ALL THE RECEDING LINES, THEN DRAW THE "FAR END" OF EACH BUILDING. (BE CAREFUL NOT TO DRAW OVER OTHER BUILDINGS)

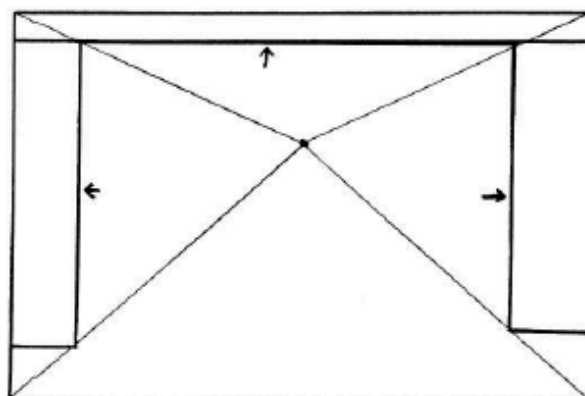


DRAWING INTERIORS... A MINE TUNNEL

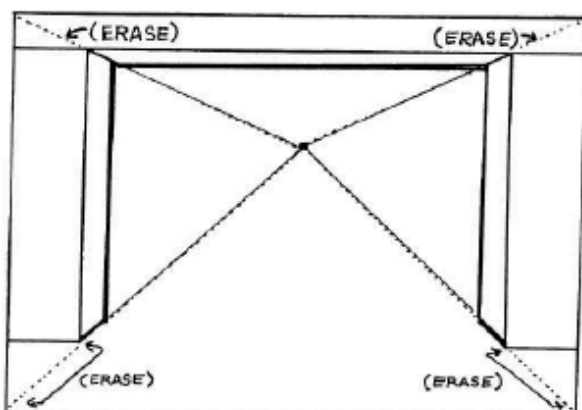
WHEN YOU DRAW INTERIOR SCENES, A GOOD KNOWLEDGE OF BOTH OPTICAL AND LINEAR PERSPECTIVE IS ESSENTIAL.



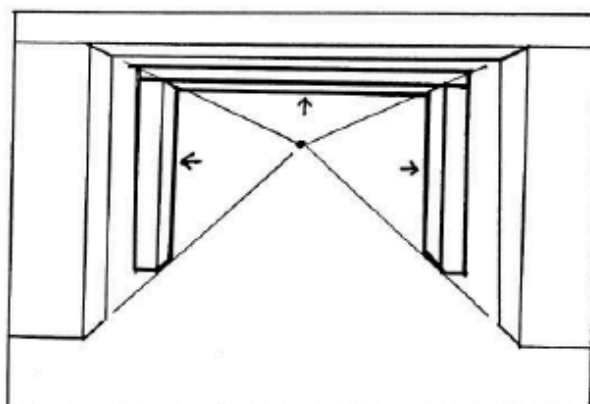
1. START BY PLACING YOUR VANISHING POINT A LITTLE ABOVE THE CENTER OF THE PAGE. NEXT, DRAW RECEDING LINES FROM THE CORNERS OF THE PAGE TO YOUR VANISHING POINT. (DRAW LIGHTLY)



2. DRAW THE FIRST SET OF "SUPPORTS" FOR YOUR TUNNEL. NOTICE HOW THE RECEDING LINES ARE USED TO PICK WHERE THE CORNERS ARE PLACED.



3. USE YOUR RECEDING LINES TO ADD THICKNESS AND DEPTH TO YOUR SET OF SUPPORT TIMBERS.

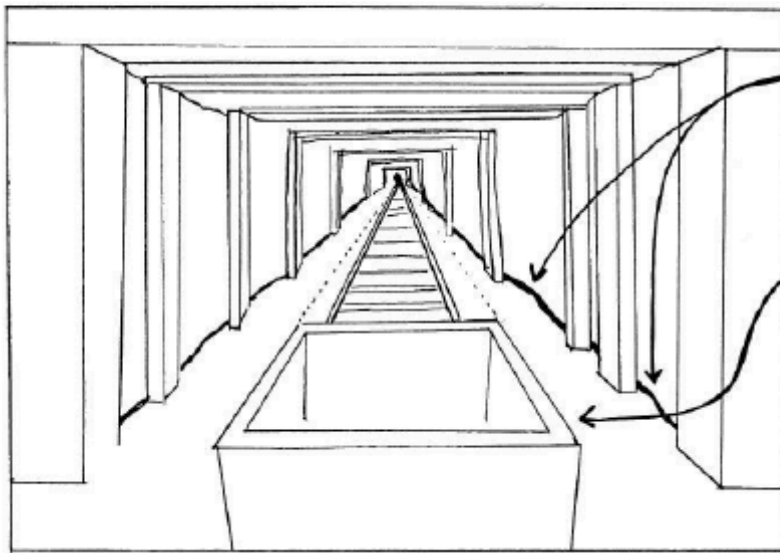


4. DRAW A SECOND (SMALLER) SET OF TUNNEL SUPPORTS, USING YOUR RECEDING LINES FOR PLACEMENT AND DEPTH.

THINGS TO REMEMBER!

***DRAW LIGHTLY!**
YOU'LL BE CHANGING THE SMOOTH LINES OF THE TIMBERS INTO ROUGH EDGES AND ADDING OBJECTS LIKE OIL LAMPS AND SIGNS. MAKE YOUR LINES EASY TO CHANGE AND ERASE BY DRAWING THEM AS LIGHTLY AS POSSIBLE.

***OPTICAL PERSPECTIVE!**
YOUR TIMBERS AND OBJECTS SHOULD GET SMALLER AS YOU DRAW THEM TO APPEAR FURTHER BACK IN SPACE. ALSO, THINGS SHOULD SHOW LESS DETAILS AND WILL BE DARKER AS THEY ARE DRAWN TOWARDS THE BACK OF YOUR TUNNEL.



4. AS YOU ADD SETS OF TUNNEL SUPPORTS, CONNECT THE BOTTOMS WITH A ROUGH LINE WHICH SHOWS THE TUNNEL WALL.

5. USE YOUR VANISHING POINT TO LAYOUT THE MINING CART AND THE TRACKS FOR THE CART.



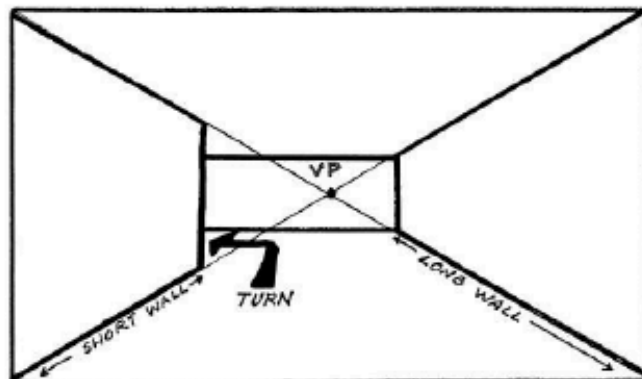
6. FINISH YOUR MINE DRAWING WITH TEXTURES, SHADING AND A FEW SCATTERED OBJECTS TO ADD INTEREST TO THE SCENE.



DRAWING INTERIORS... **HALLWAYS & PASSAGES**



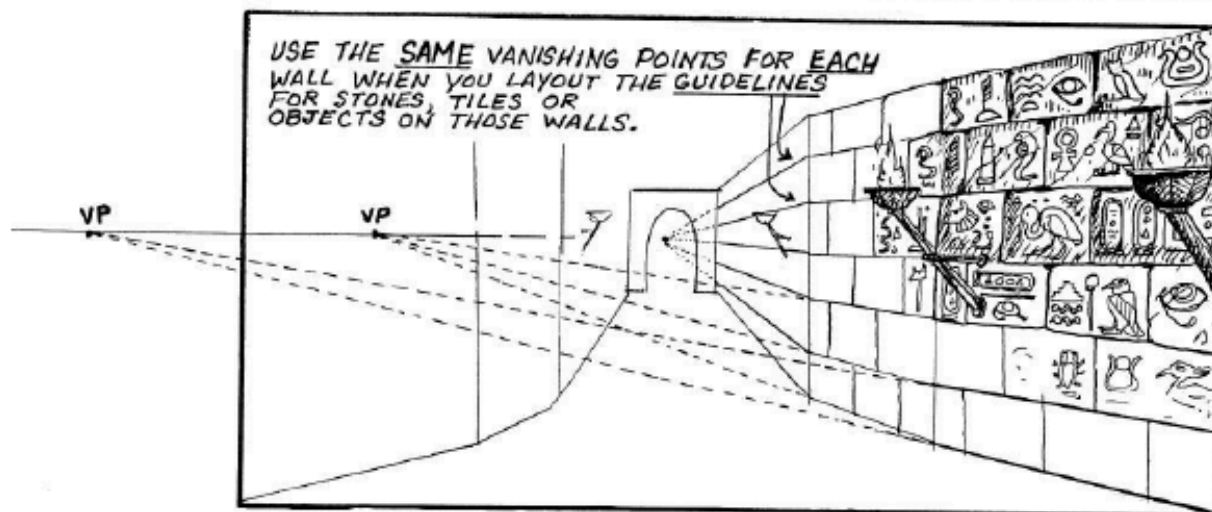
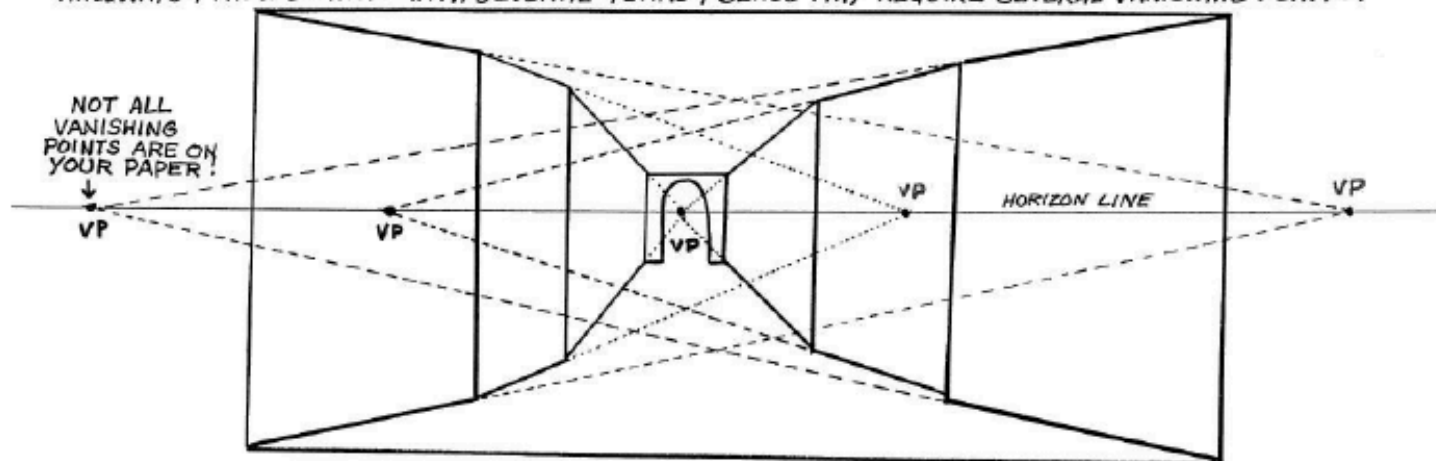
IN A SIMPLE, ONE-POINT HALLWAY, ALL LINES END AT ONE VANISHING POINT. THE TOPS OF THE DOORS, TILES ON THE FLOOR, EVEN THE WALLPAPER BORDERS ALL LINE UP WITH THE CENTRAL VANISHING POINT.



TO CREATE THE "ILLUSION" OF A "TURN" IN YOUR HALLWAY, SIMPLY MAKE ONE WALL SHORTER THAN THE OTHER.

USING MULTIPLE VANISHING POINTS!

HALLWAYS & PASSAGEWAYS WITH SEVERAL TURNS & BENDS MAY REQUIRE SEVERAL VANISHING POINTS.



DRAWING A SIMPLE "HOUSE" STEP-BY-STEP INSTRUCTIONS

FIRST, BEGIN BY DRAWING A "HORIZON" LINE ACROSS THE TOP OF YOUR PAPER. NEXT, PLACE VANISHING POINTS AT THE ENDS OF THE HORIZON LINE.

- THE 1ST LINE OF YOUR HOUSE ① IS THE CORNER NEAREST TO THE VIEWER. MAKE SURE THIS LINE IS TALL ENOUGH TO REACH THE PEAK OF THE ROOF!
- DRAW RECEDING LINES ②③④ & ⑤ FROM LINE ① TO BOTH VANISHING POINTS.
- DRAW THE LEFT END ⑥ OF YOUR HOUSE BETWEEN LINES ④ AND ⑤
- DRAW THE RIGHT END ⑦ OF YOUR HOUSE BETWEEN LINES ② AND ③
(BE SURE TO MAKE LINE ⑦ CLOSER TO LINE ① THAN LINE ⑥)

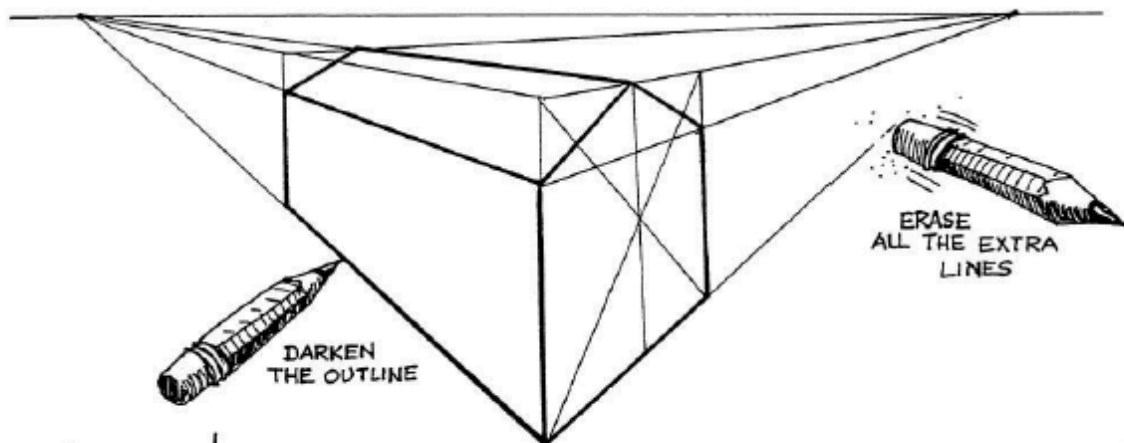
NOW, DECIDE HOW TALL YOU WANT YOUR ROOF TO BE & PUT POINT "A" ON LINE ①.

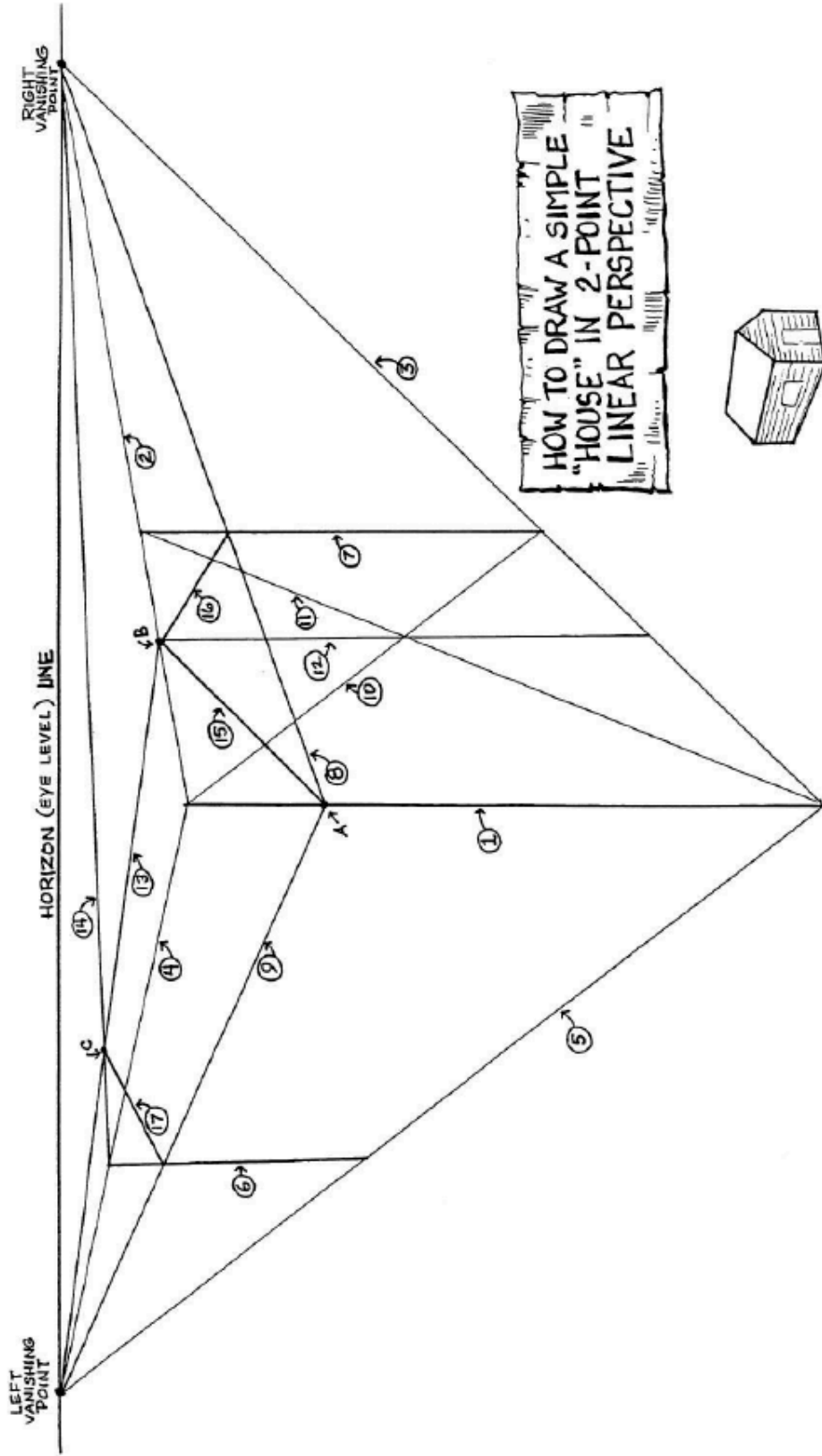
- DRAW RECEDING LINES ⑧ AND ⑨ FROM POINT "A" TO BOTH VANISHING POINTS. FIND THE "VISUAL CENTER" OF THE FRONT OF THE HOUSE BY DRAWING AN "X".
- DRAW LINE ⑩ FROM THE TOP OF LINE ① TO THE BOTTOM OF LINE ⑦
- DRAW LINE ⑪ FROM THE TOP OF LINE ⑦ TO THE BOTTOM OF LINE ①
- DRAW LINE ⑫ SO IT PASSES THROUGH THE CENTER OF YOUR "X".
(LINE ⑫ IS DRAWN BETWEEN LINES ② AND ③.)

PLACE POINT "B" ON LINE ②, AT THE TOP OF LINE ⑫

- DRAW LINE ⑬ FROM POINT "B" TO THE LEFT VANISHING POINT.
- DRAW LINE ⑭ FROM THE TOP OF LINE ⑥ TO THE RIGHT VANISHING POINT.
- PLACE POINT "C" ON LINE ⑭ WHERE LINE ⑬ CROSSES ⑭.
- DRAW LINE ⑮ FROM POINT "A" TO POINT "B".
- DRAW LINE ⑯ FROM POINT "B" TO THE PLACE WHERE LINE ⑦ CROSSES ⑧.
- DRAW LINE ⑰ FROM POINT "C" TO THE PLACE WHERE LINE ⑨ CROSSES ⑥.

NOW, JUST DARKEN THE OUTLINE, ERASE ALL THE EXTRA LINES, AND YOU'LL BE READY TO ADD WINDOWS, A DOOR AND SIDING.





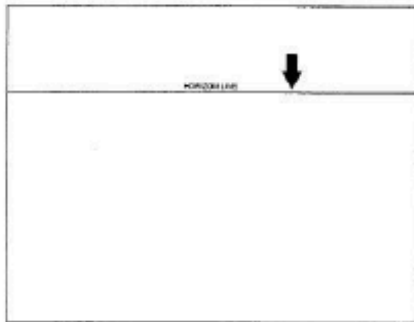
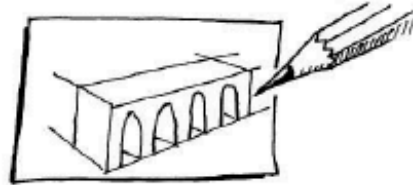
HOW TO DRAW A SIMPLE
"HOUSE" IN 2-POINT
LINEAR PERSPECTIVE

[illegible]

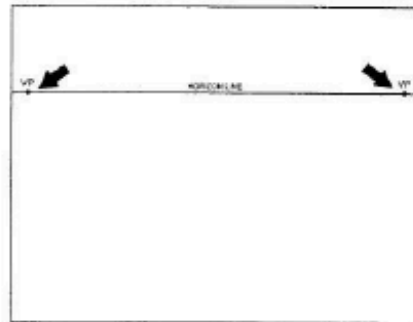
NOTICE HOW ALL
THE STAIR LINES
(EXCEPT THE VERTICAL LINES)
ARE DRAWN TO A
VANISHING POINT.

USING 2-POINT PERSPECTIVE TO DRAW

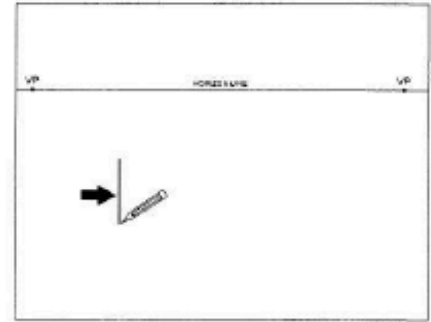
A BRIDGE IN A BOX



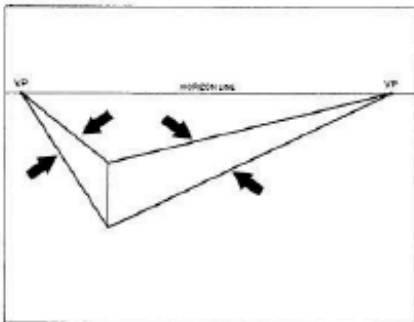
1. Draw a horizon line across the top half of your paper (about 2 ½ inches down from the top of the paper)



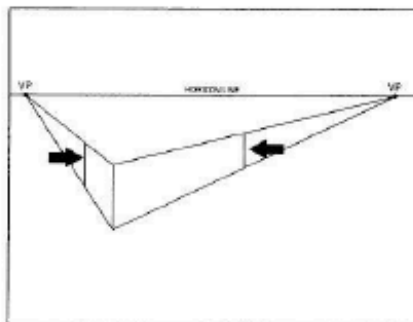
2. Add Vanishing Points (VP) on the left and right ends of the horizon line, just inside the edge of your paper.



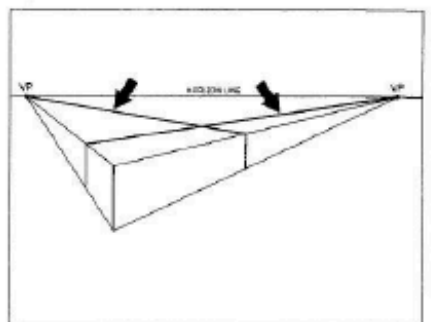
3. Draw a vertical line underneath the horizon line about 3 inches high. This is the left edge of the box that will become your bridge.



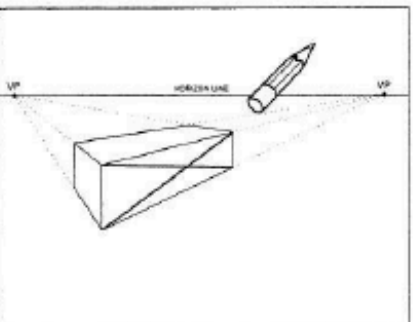
4. Connect the top and bottom of your vertical line with receding lines to each of the Vanishing Points.



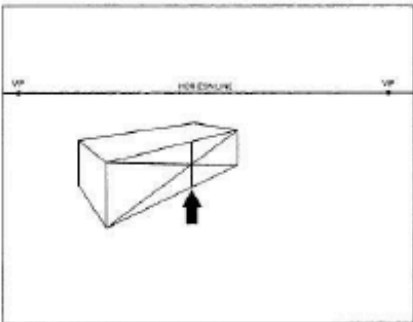
5. Draw two more vertical lines between the receding lines. The vertical line on the left side will show how WIDE your bridge will become. The vertical line on the right side will show how LONG your bridge is.



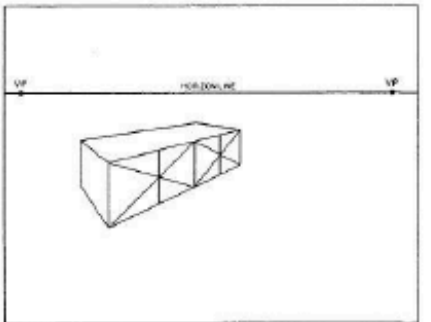
6. Finish the box outline by connecting the top of the left vertical line with the Vanishing Point on the right. Connect the vertical line on the right with the Vanishing Point on the left.



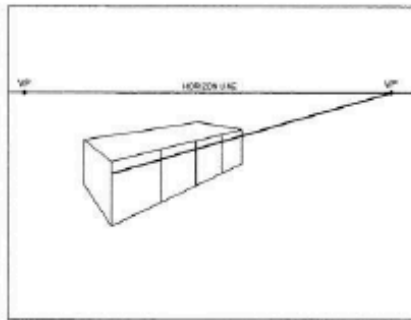
7. Erase the receding lines from the edge of your box to the Vanishing Points. Next divide the long side of your bridge in half by drawing an "X" across the long side.



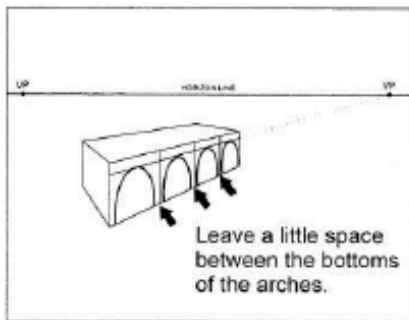
8. Use the center of the "X" to divide the side of your bridge in half with a vertical line.



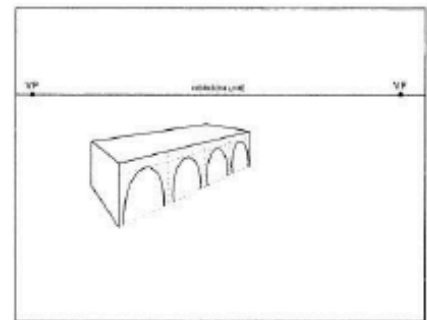
9. Erase the first "X" and then, use an "X" to divide each half into halves. Draw vertical lines through each half as you did in step 8. These are the guidelines for the arches.



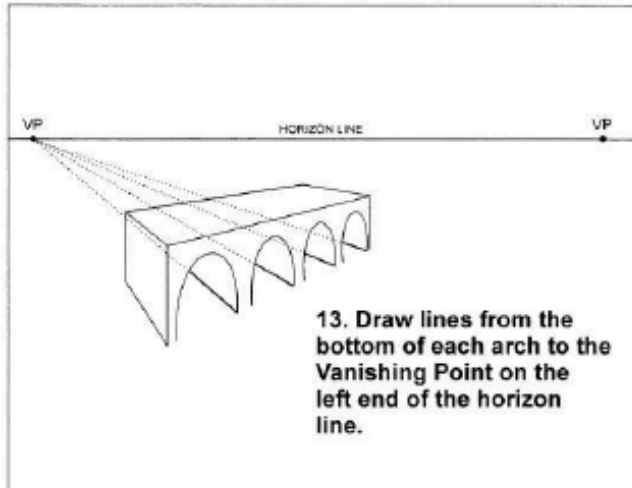
10. Draw a line from the 1st vertical line to the Vanishing Point on the right. This is the guideline for the tops of the arches on your bridge.



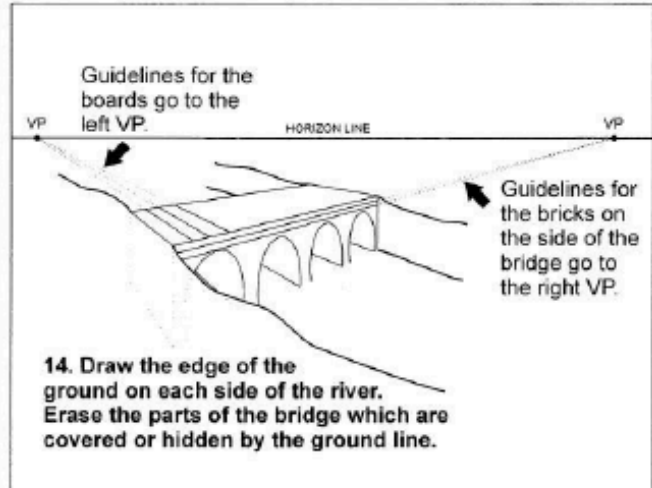
11. Erase the guideline from the edge of your bridge to the Vanishing Point. Draw ARCHES inside each section of the side of your bridge.



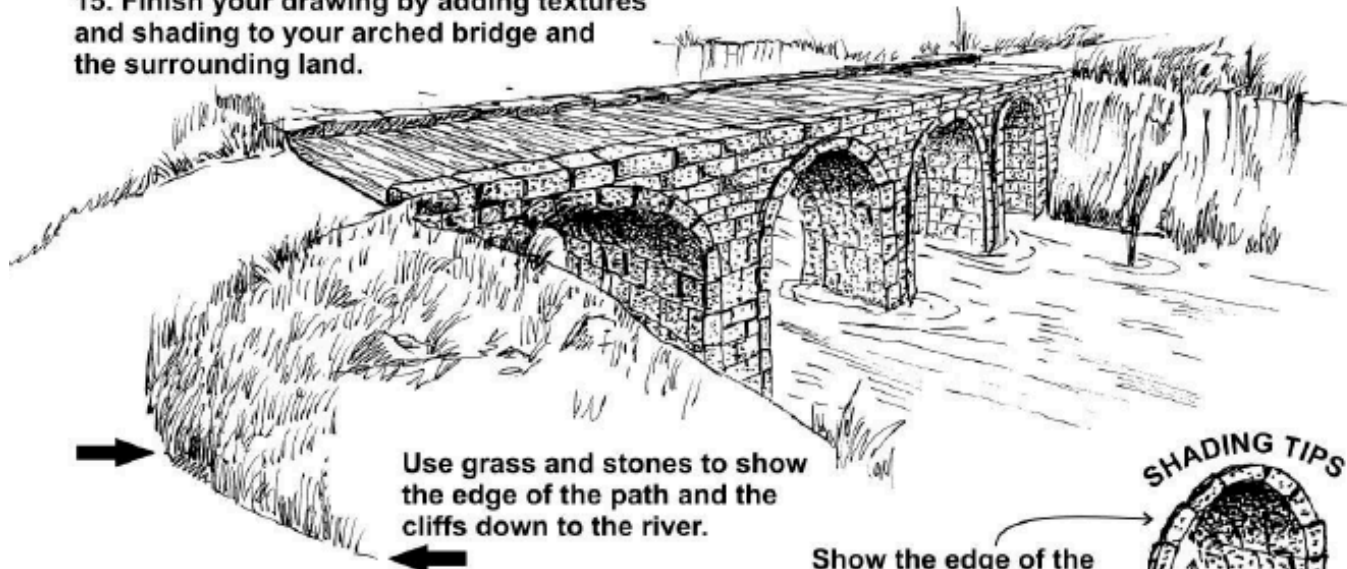
12. Erase the remaining guidelines from the side of your bridge, leaving only the arches.



13. Draw lines from the bottom of each arch to the Vanishing Point on the left end of the horizon line.



15. Finish your drawing by adding textures and shading to your arched bridge and the surrounding land.



Use grass and stones to show the edge of the path and the cliffs down to the river.

WHY CROSS THE BRIDGE?

Where does your bridge lead to? On the right side of your drawing draw a "destination" like a castle, cottage, cave or whatever you think someone would cross the bridge to get to.

SHADING TIPS

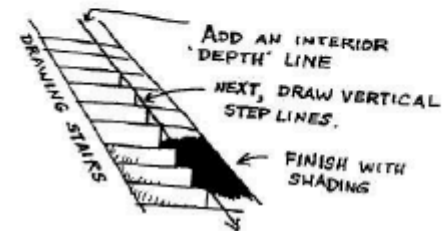
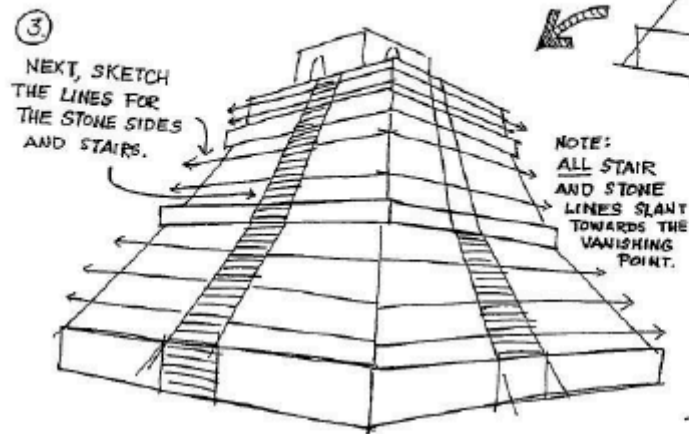
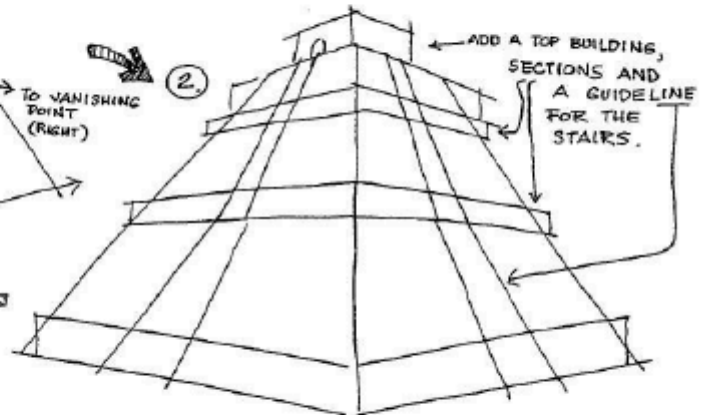
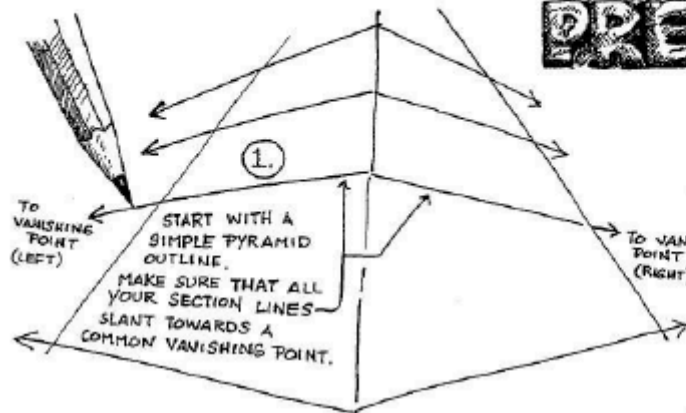
Show the edge of the bricks with a little "Thickness" shading.

Add darker shading inside the top of the arches.

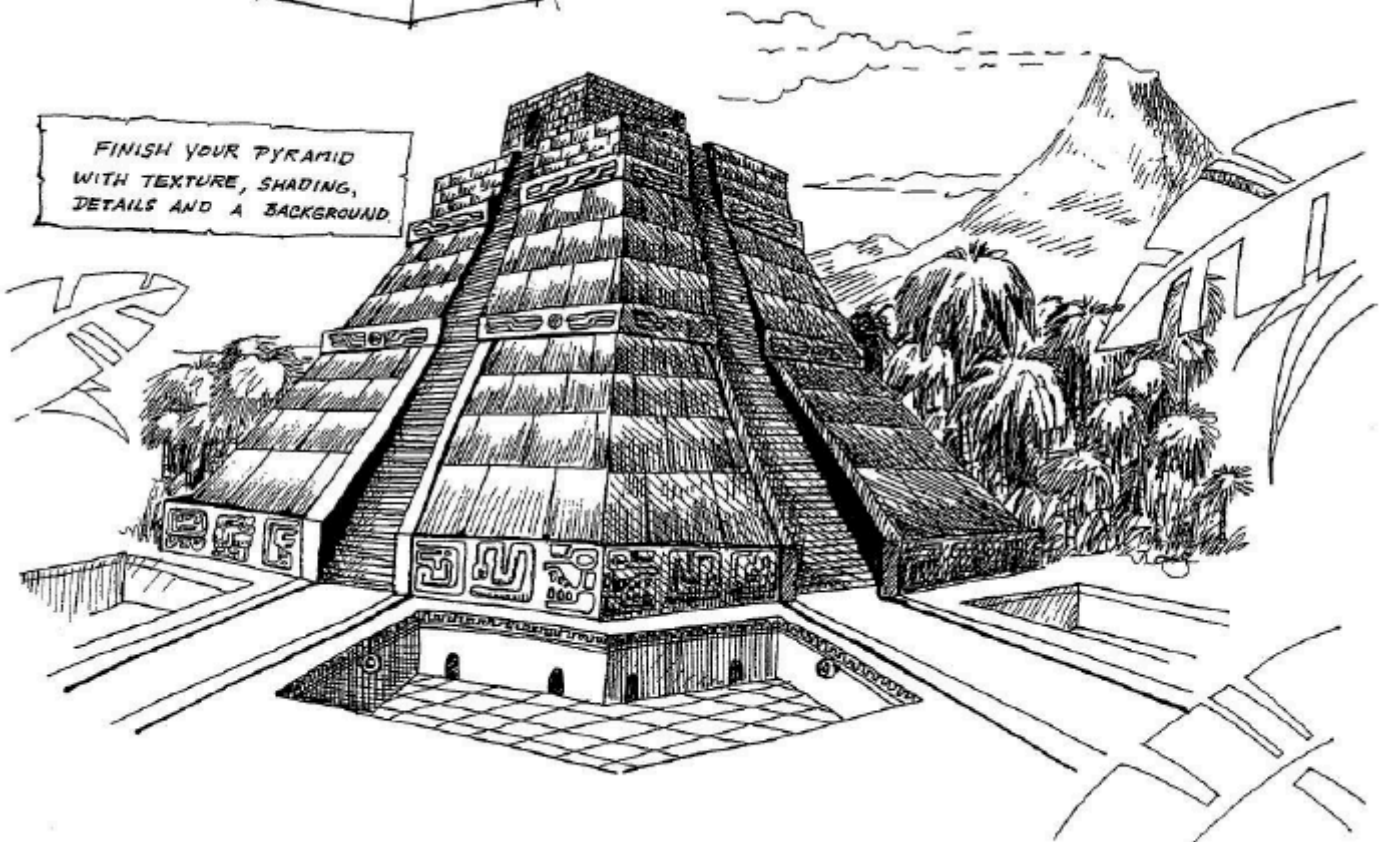
DRAWING A

PRE-COLUMBIAN

PYRAMID



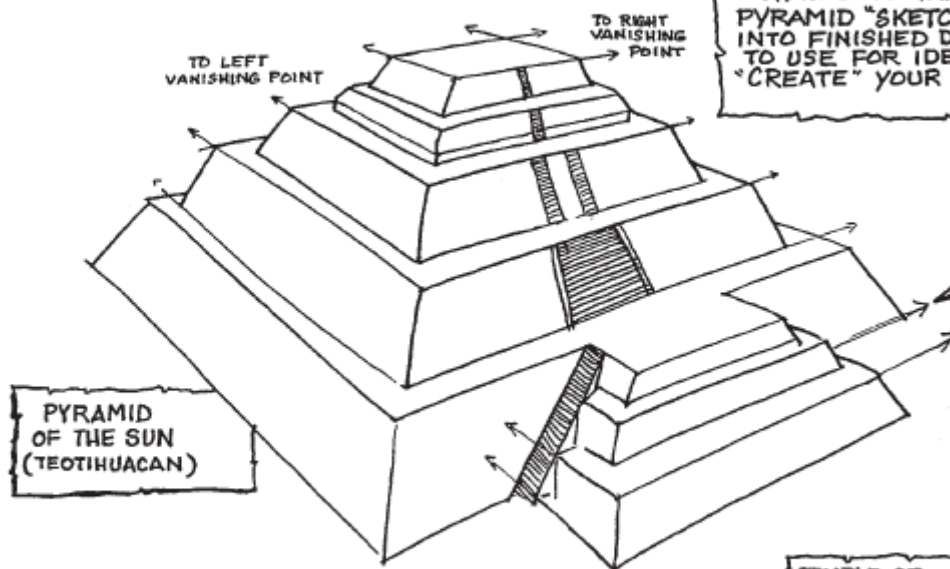
FINISH YOUR PYRAMID WITH TEXTURE, SHADING, DETAILS AND A BACKGROUND



PRE-COLUMBIAN PYRAMID DESIGNS



HERE'S A VARIETY OF PRE-COLUMBIAN PYRAMID "SKETCHES" TO DEVELOP INTO FINISHED DRAWINGS OR, JUST TO USE FOR IDEAS TO HELP YOU "CREATE" YOUR OWN PYRAMIDS.



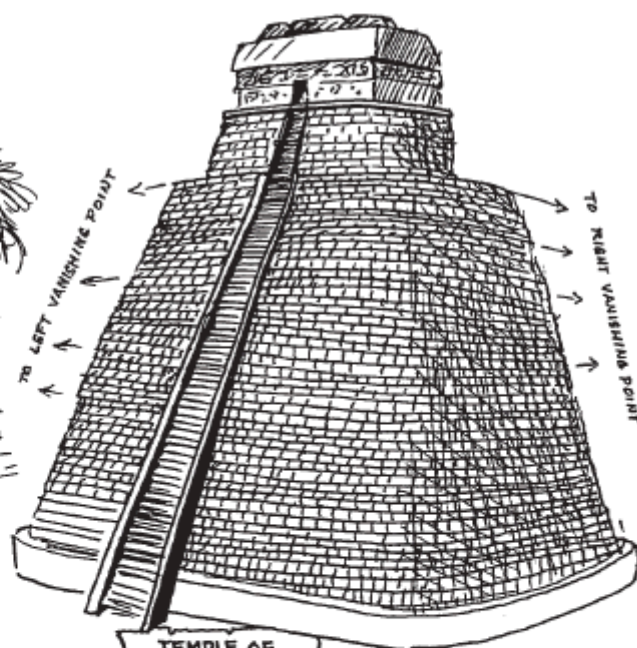
PYRAMID OF THE SUN
(TEOTIHUACAN)



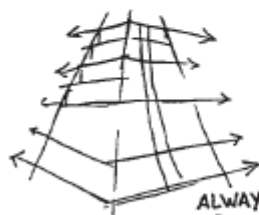
TEMPLE OF
INSCRIPTIONS
(PLAENQUE)



TEMPLE I
(TIKAL)



TEMPLE OF
THE MAGICIAN
(UXMAL)



ALWAYS TRY TO
USE PERSPECTIVE IN
YOUR STARTING SKETCHES!