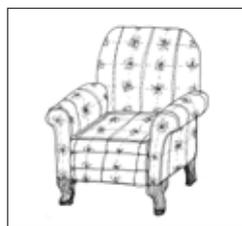
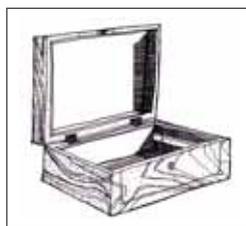
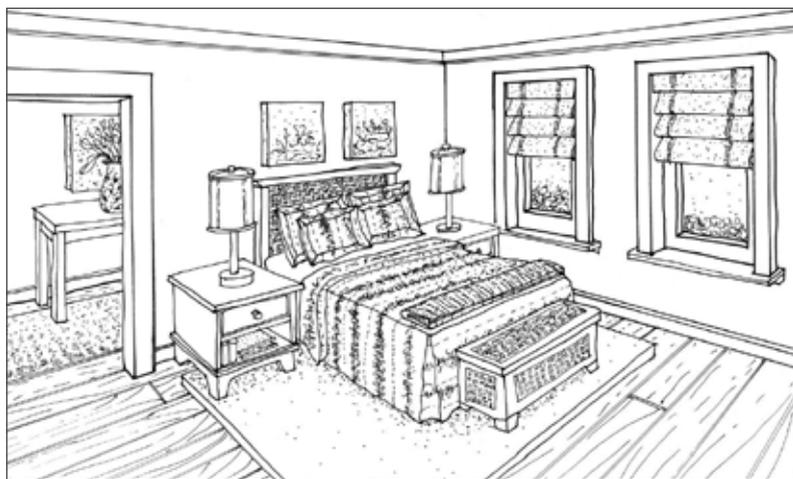


Exploring  
**Perspective Hand Drawing**  
Fundamentals for Interior Design



Stephanie M. Sipp



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## Chapter 2

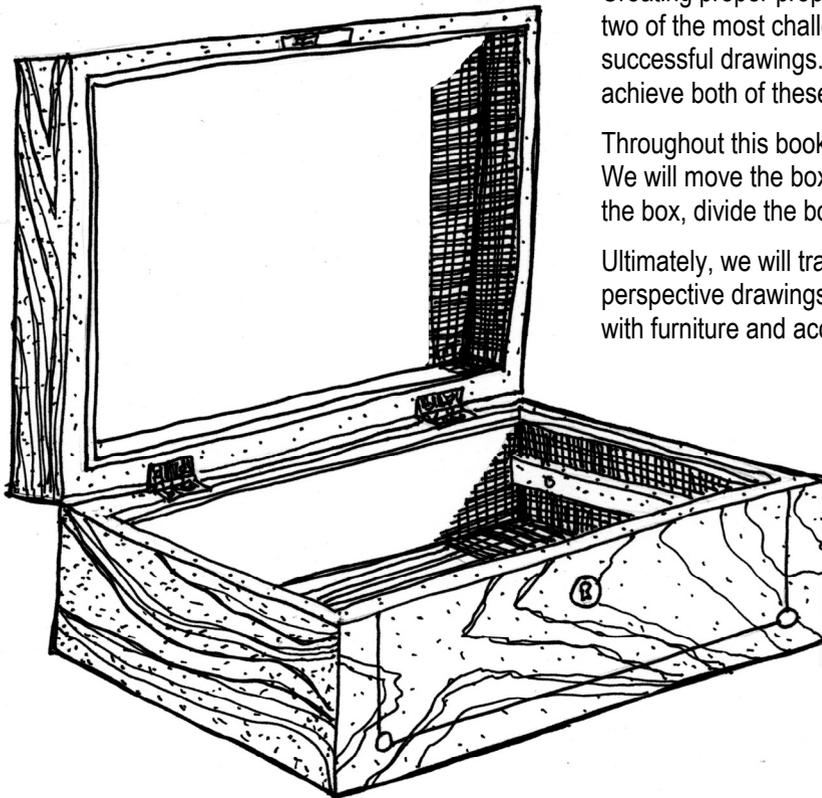
# The Box

The box will be our starting point for learning to draw any object and will provide a method for adding proportion and understanding perspective.

Creating proper proportion and perspective are two of the most challenging aspects of developing successful drawings. The box method helps us achieve both of these goals.

Throughout this book we will work with the box. We will move the box around, create objects from the box, divide the box, and embellish the box.

Ultimately, we will transform our boxes into entire perspective drawings of interior rooms, complete with furniture and accessories.



# GETTING STARTED

The following are concepts that will help you throughout Chapter Two:

**Proportion.** The correct relationship of size between two or more parts of an object.

**Perspective.** The appearance of a distant object in relation to the observer's distance from it.

**Horizon line.** Imaginary line that is at eye level on a perspective drawing.

**Vanishing point.** The point where parallel lines converge in a perspective drawing.

**Parallel.** Lines that remain the same distant apart and never meet.

**Perpendicular.** Lines that meet to make a right angle (90 degree).

**Scale.** A ratio representing the size on a drawing. Typically architectural scales include 1/4 inch and 1/2 inch equals one foot.

## VIEWPOINTS

In the design field, drawings of an interior space or of furniture are typically drawn from different points of view in an effort to more fully communicate a design concept. These different views are often categorized as *Multiview Drawings*, *Perspective Drawings* or *Paraline Drawings*. We will use a subset of these views as we learn to visualize objects and as we learn to draw.

## MULTIVIEW DRAWINGS

As the name implies, this type of presentation consists of multiple drawings of an object from different views.

The *Plan view* or *top view*, is used to communicate the layout and placement of structural elements, furnishings and finishes. The view is a horizontal projection of the object as if you are looking down from above. This view is used to show a floor plan layout or the top view of any object.

An *elevation view* shows the vertical projection of an object as it appears from the direct front, side or back.

## PERSPECTIVE DRAWINGS

One and two-point perspective views depict space on a vertical plane but with three dimensions, thus creating a more natural view.

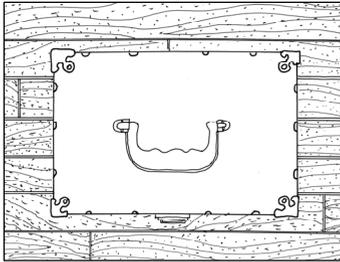
*One-point perspective views* are three-dimensional drawings in which objects have a flat front and the parallel lines depicting depth converge at one single point on an imaginary horizon line in the distance.

*Two-point perspective views* are three-dimensional drawings where objects have a leading edge and the horizontal parallel lines converge at a left and a right vanishing point on a imaginary horizon line.

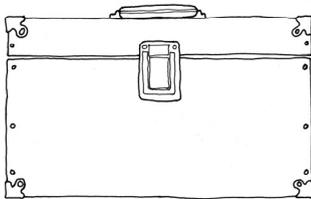
## PARALINE DRAWINGS

*Paraline views* provide a means to visually describe an object in three-dimension *and* to scale. Lines which are parallel in reality remain parallel in the drawing.

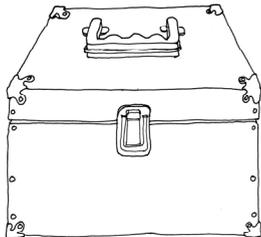
The following drawings of the box shown in the photograph represent the different views and how they each show an aspect of the box design.



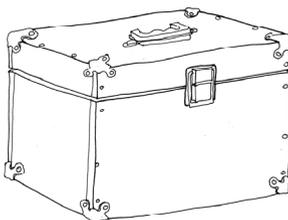
This is the *top view* of the box. You are looking directly down on the box and there is no depth shown in the handle. You will see the details of the box top and the wood flooring. This drawing was done using a scale.



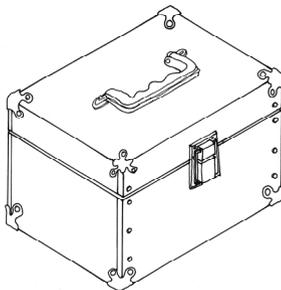
This front view shows detail of the object in an *elevation view*. Elevation drawings do not show depth. This drawing was done using a scale.



A *one-point perspective view* provides a three-dimensional depiction of the box. Notice the flat front of the box and the parallel lines forming the sides of the top recede toward a single point. The proportion was drawn without a scale.



A *two-point perspective view* also depicts a three-dimensional aspect of the box. In this view there is a leading edge and each side appears to get smaller as they move away from the leading edge. The proportion was drawn without a scale.



This *paraline* drawing shows the three dimensional qualities of the box. However, it is distinctly different from a perspective drawing because parallel lines do not converge and a scale was used to complete the drawing.

# ONE-POINT PERSPECTIVE

## FLAT FRONT BOXES

Drawing an object in perspective provides a realistic view and is therefore an important type of drawing for the interior designer. To view a box in a *one-point perspective*, hold it with a flat front facing you and so the two sides appear to move toward a single point in the distance.

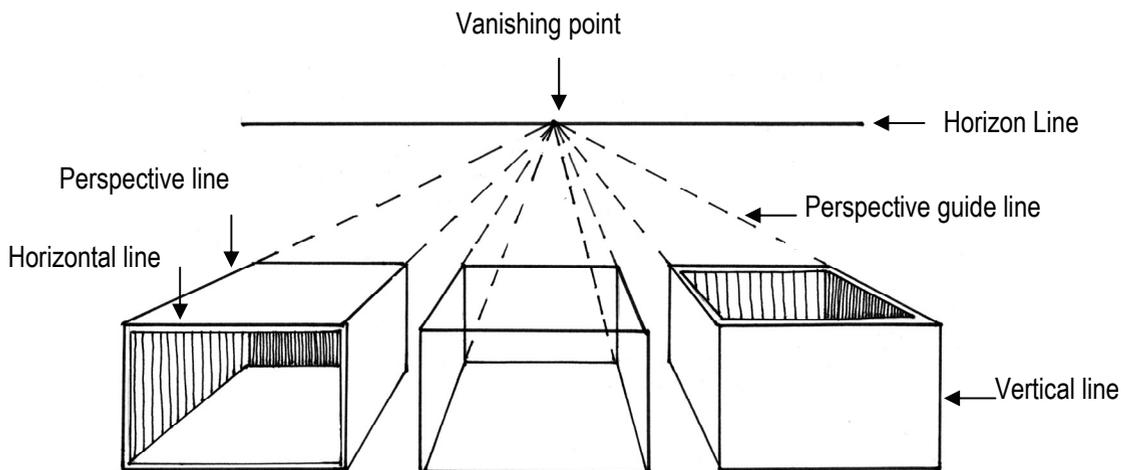
With a one-point perspective box, or a flat-front box, there are three types of lines you will draw to make the box:

**Horizontal line.** Lines of the object that are parallel to the horizon.

**Vertical lines.** Lines of the object that are perpendicular to the horizontal lines.

**Perspective lines.** Lines that project from the front of the object towards a single vanishing point.

Notice the boxes drawn below and how each has these lines. They each have a front that is a rectangular shape and the lines defining the side edges of the box move toward a single vanishing point on the horizon line. The vanishing point is stationary and the perspective lines project toward this point.



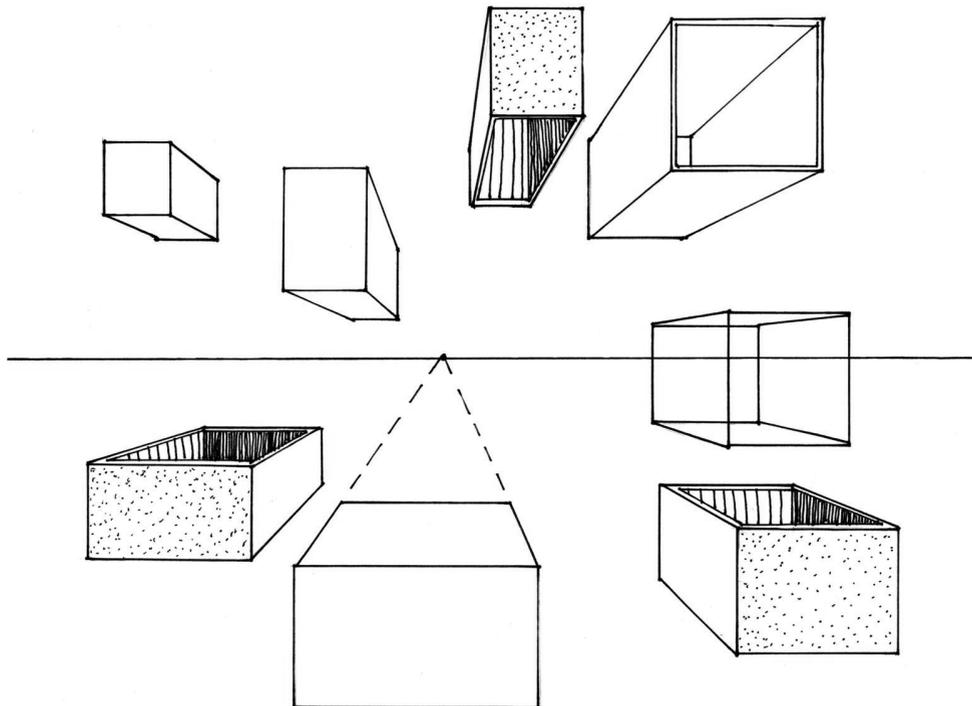
### Helpful Hint:

Perspective drawings are different from scale drawings because the scale drawing use measurements to note size. A perspective drawing represents how our eyes see the world naturally, which is not in a measured scale. Objects are scaled relative to the viewer. Additionally, an object is often not scaled evenly: a circle often appears as an ellipse, a square can appear as a trapezoid, and objects appear to get smaller as their distance from the viewer increases. This distortion is referred to as foreshortening and is a technique that helps create the illusion of depth.

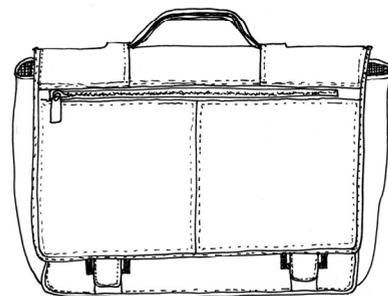
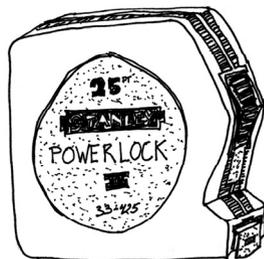
## CREATING OBJECTS IN ONE-POINT PERSPECTIVE

In the drawing below, each one-point perspective box was created as follows:

- 1 Start by drawing a single flat rectangular shape above, below or on the horizon line.
- 2 Add perspective lines using the vanishing point as a guide for creating the proper angle.
- 3 Add additional horizontal and vertical lines to complete the back of the box.



The objects below are drawn in one-point perspective. They each have a flat front and perspective lines converge at a single imaginary vanishing point.



# TWO-POINT PERSPECTIVE

## LEADING EDGE BOXES

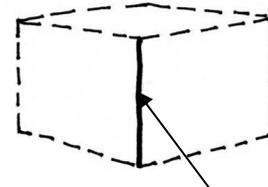
Another type of design perspective is the *two-point perspective*. In this view we will turn the box so the corner is facing you, which creates a leading edge and perspective lines that project and converge at two different points on the horizon line. With two-point perspective there are only vertical lines and perspective lines used to draw the box.

**Leading edge line.** The front vertical line of the box, or the corner of the box facing you.

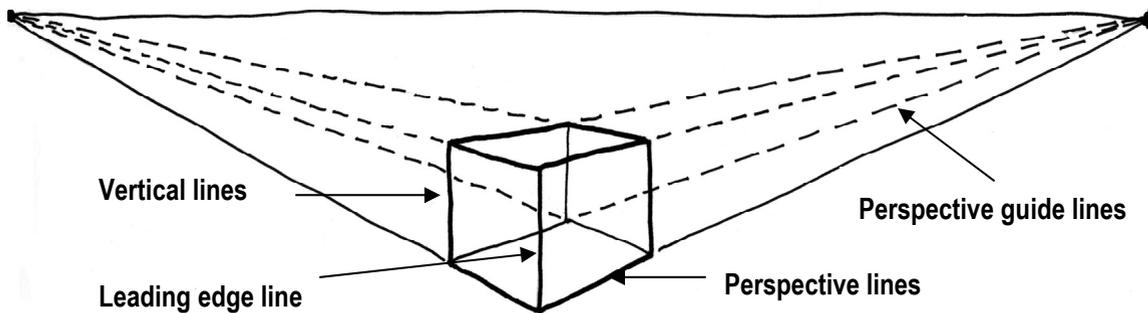
**Perspective lines.** Lines that make up the top and sides and project towards two separate vanishing points on the horizon line.

**Perspective guide lines.** Lines that project from the top and bottom edge towards a point on the horizon.

**Vertical lines.** The remaining vertical lines that complete the shape of the object and are parallel to the leading edge.



**Leading Edge**



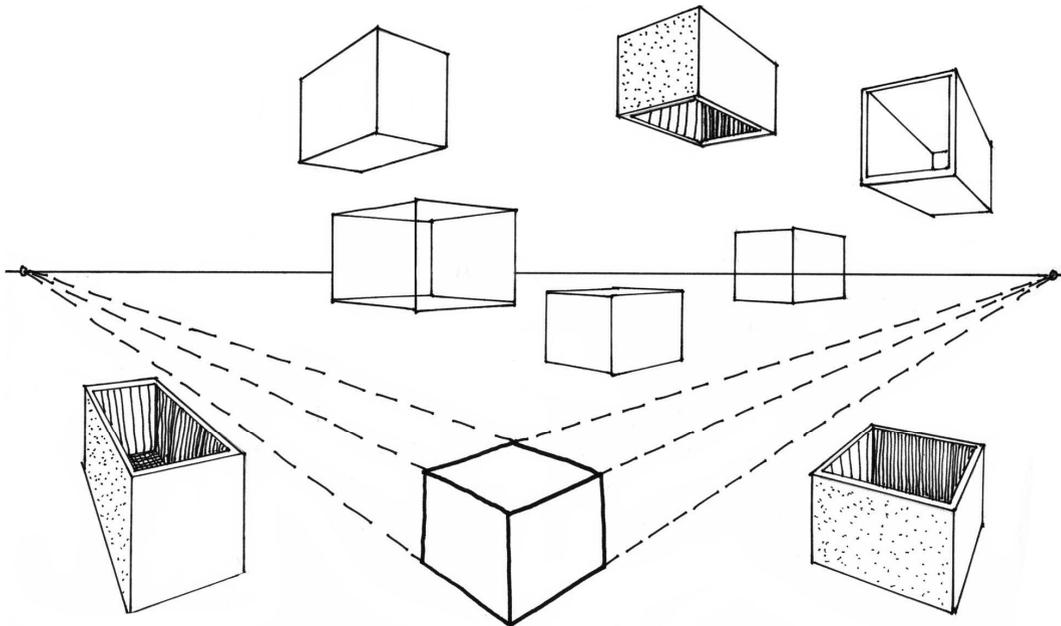
### Helpful Hint:

One of the challenges to drawing boxes or objects in two-point perspective in your activity book is that the vanishing point locations on your paper are very close together causing the drawing of a box shape to look unrealistic and distorted. This is because, for the purpose of learning the two-point perspective concept, we are using two vanishing points on a piece of paper that are actually too close together. In reality the correct vanishing points are about 6 feet apart. Imaginary vanishing points and guide lines can be used as you become more familiar with the drawing steps.

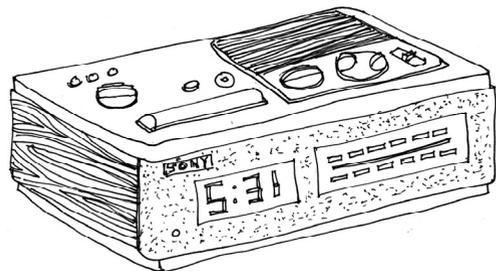
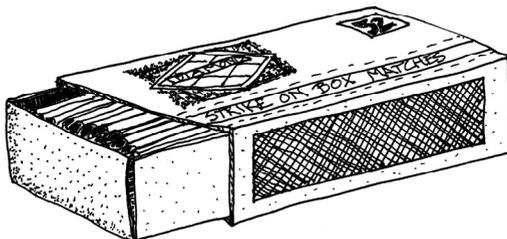
## CREATING OBJECTS IN TWO-POINT PERSPECTIVE

In the drawing below, the boxes were created using the following steps:

- 1 Mark a left and a right point on the horizon line to denote the vanishing points to be used to establish perspective.
- 2 Draw a vertical line anywhere above, below, or over the horizon line. This will define the leading edge of your box.
- 3 Add perspective lines starting from the top and bottom of the leading edge line. These lines will be angled so that they are directed towards either the left or right vanishing point.
- 4 Add additional vertical lines to complete the back edges of the box.



The objects below are drawn in two-point perspective. They each have a leading edge with perspective lines that converge at imaginary vanishing points.

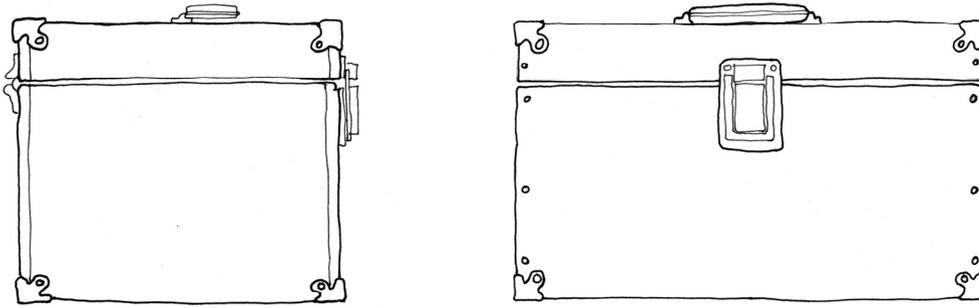


# ELEVATION & PARALINE DRAWINGS

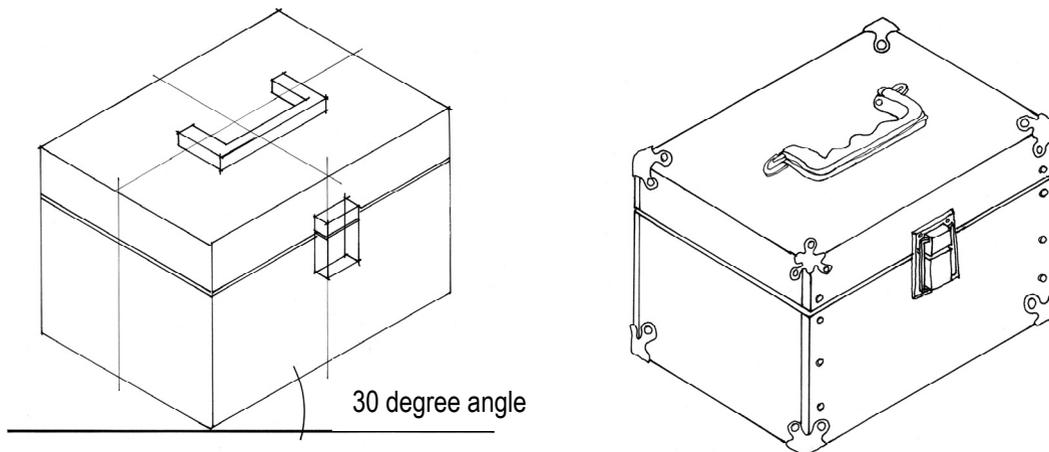
Interior design drawings typically show spaces and buildings viewed from several different view points.

One commonly used view is the *elevation view*, which is a side view of an object and does not show depth. The item drawn will appear to be flat and is drawn to scale.

Here two drawings of a box using an *elevation view* of the side and front. Notice the details of each drawing.



The *paraline* drawing shows an object in three dimension. The *paraline* drawing differs from the *perspective* drawing in that it is drawn to scale and parallel lines do not converge at a vanishing point. There are different types of *paraline* drawings, which are not cover in this book. For reference, the one below was drawn with a 30 degree angle and is called a *isometric paraline* drawing. These drawings are often used in the field when measurements of the components are important, such as when designing open office system furniture.

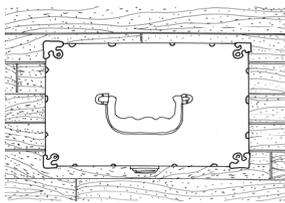


# MULTIVIEW DRAWINGS

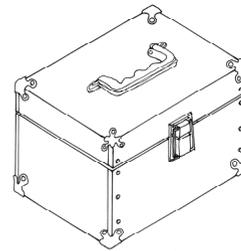
*Multiview drawings* are used during the design process to show composition, configuration, placement, pattern and scale. While these drawings are useful for communicating specific information, they are two-dimensional representations and lack depth of field. Therefore, multiple planar views are necessary to visually describe the object more fully.

As the name implies, multiview drawings reflect multiple viewpoints and typically include a top view, side view, front view and three-dimensional view. It is important to become proficient at visualizing objects in three-dimension by looking at multiview drawings.

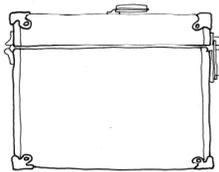
## MULTIVIEW DRAWING OF BOX



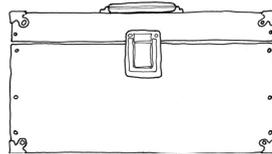
Top View



Three dimensional View



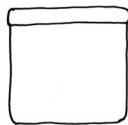
Side View



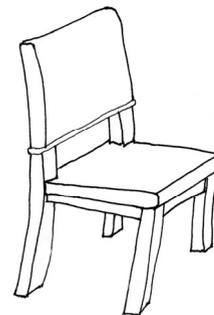
Front View

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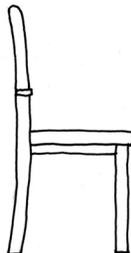
## MULTIVIEW DRAWING OF SIDE CHAIR



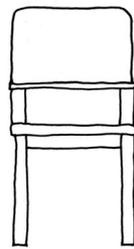
Top View



Three dimensional View



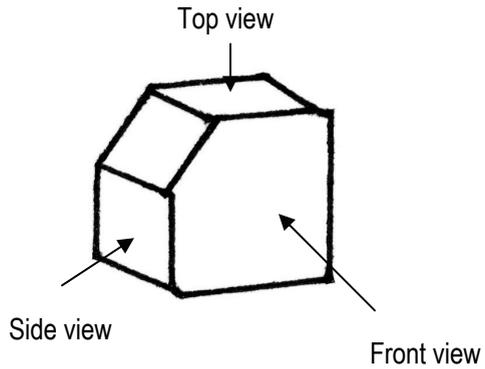
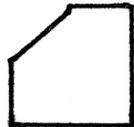
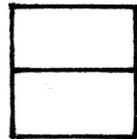
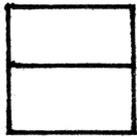
Side View



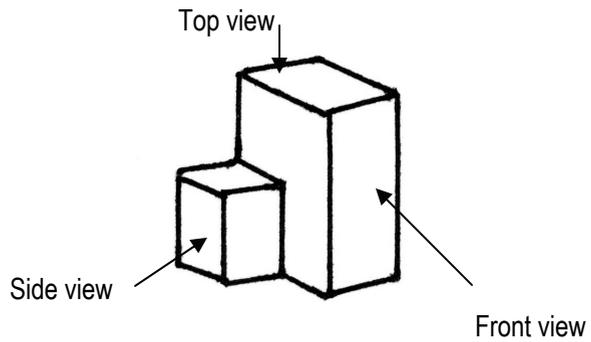
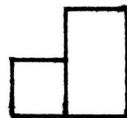
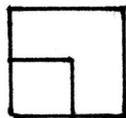
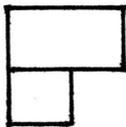
Front View

## MUTIVIEW DRAWINGS OF SHAPES

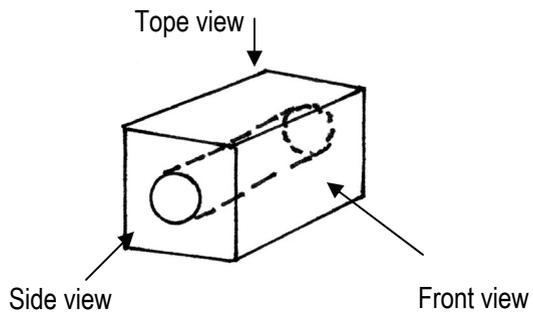
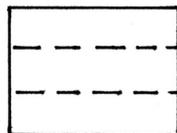
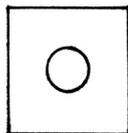
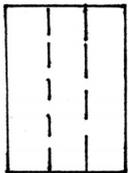
Using the same principle, study the objects below and notice the top, side, front and three dimensional view of each block.



Top view, side view, front view



Top view, side view, front view



Top view, side view, front view

# PROPORTION

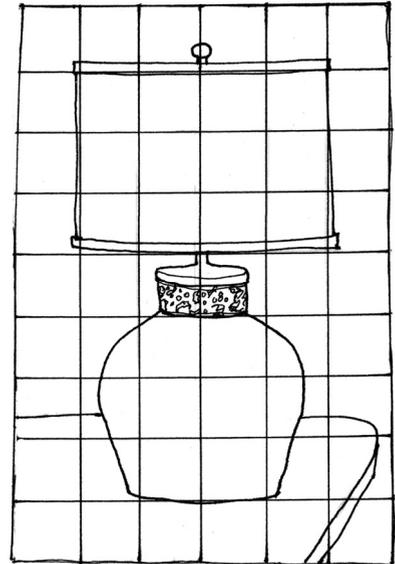
Now that you are more familiar with different points of view, we are going to introduce the idea of proportion to help create more realistic drawings.

Proportion involves the comparative relationship of size and position between objects or parts within an object. Good proportion adds harmony and symmetry among the parts of a drawing as a whole. When an object's components are drawn without the correct size relationship, it is out of proportion.

## GRID TECHNIQUE

One technique for determining proportion is to start with a grid that is divided into equal parts. This works well when you are using an existing picture as your drawing inspiration. The lamp in this example was drawn as follows:

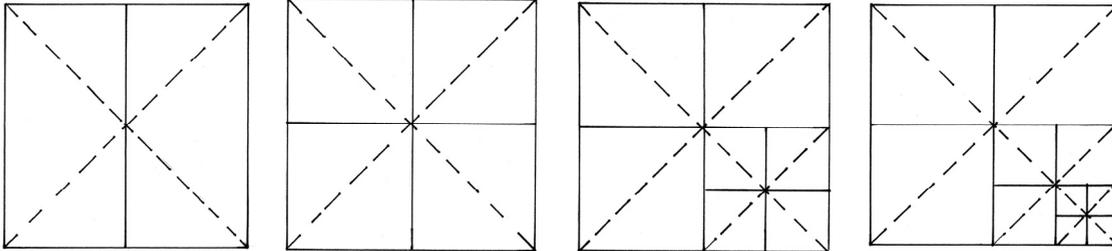
- 1 A 1/8 inch grid was drawn on tracing paper and over the original image in order to obtain relative proportion.
- 2 Notice how the lamp fits into the grid. The lamp shade is four blocks wide and the bottom of the shade starts five blocks from the bottom of the grid. The lamp is vertically centered relative to each edge. The base of the lamp is three blocks high at its tallest point and the neck of the lamp is about one block tall.
- 3 Create a grid with light pencil lines and using a scale that is appropriate for your drawing. The grid may be smaller or larger in scale, depending on the size of the original image and the size of your drawing. In this example, a 1/4 inch grid was created to help create a drawing that is twice the size of the lamp image. Using the proportion information you gained from the original image you can draw the object on your grid.



In this drawing of a sofa, the grid lines were only placed around the outside of the rectangle. Using your eye, you will note the vertical center of the sofa is in the middle, the top of the sofa is half way between the horizontal center and the one quarter mark. The arms of the sofa are close to the edge. When drawing this image, start with a light rectangular shape and light lines for the grid division. These will provide guides for redrawing the image in proper proportion.

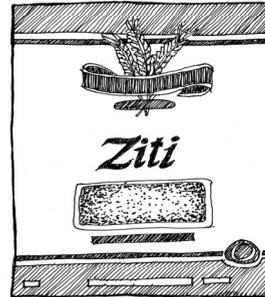
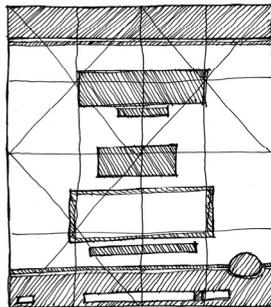
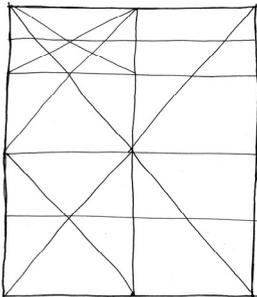
## DIVIDING-THE-SQUARE TECHNIQUE

Dividing-the-square is a technique for finding the exact center of a square and thus helping to properly positioning parts within the box. Here are the steps to use:



- 1 Starting with the outline of your box, draw diagonal dashed lines from corner to corner creating an "X". This will give you the middle of the square.
- 2 Then draw a cross through the center. The square is now divided into eight triangles.
- 3 Now continue dividing in the same manner. You will end up with a wall of equal parts with points equidistance apart to act as guides for creating properly proportioned and positioned parts.

The drawing of the box of noodles was created using this technique. Below is a series of drawings showing the progression. After creating guidelines using this technique, the lines and points were used to properly position and proportion the parts.



### Helpful Hint

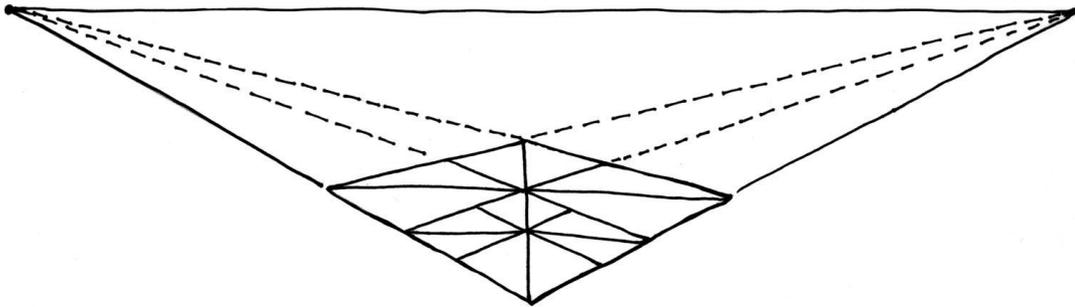
Part of practicing to draw is training your eye to see proportion and to see the relationship between shapes and lines. In your activities, you may want to draw rectangular shapes and start by dividing the shape in half with your eye first, then measure half with a ruler. How close were you with using your eye? Continue to make each division with your eye and then use a measuring tool. Are you getting better at seeing division with your eye?

# PROPORTION IN PERSPECTIVE

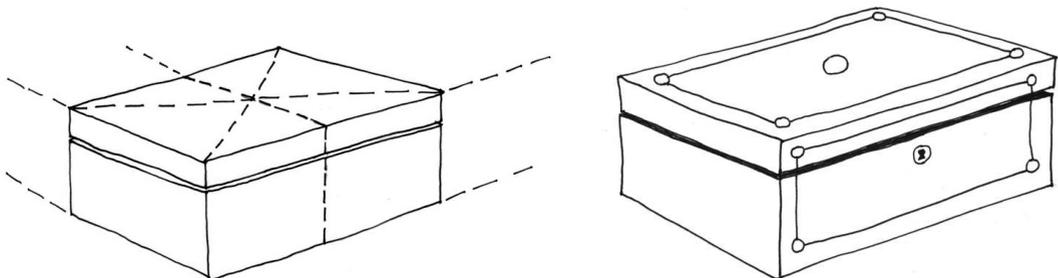
Dividing-the-square technique becomes particularly useful when trying to properly locate points within a perspective drawing. Remember, scale drawings are different from perspective drawings because the proportions can be measured. A perspective drawing represents how our eyes see the world naturally, which is not to scale. For this reason, proportions of a square or an object in perspective will be found using perspective guidelines to make the divisions in the square or object.

In the drawing below the square is divided by following these steps:

- 1 Draw an "X" by drawing lines from corner to corner. This establishes the middle of the square in perspective just as it did in the square.
- 2 Draw a cross at the midpoints by finding a line that projects through the center and toward the opposite vanishing point.
- 3 Continue to use perspective guide lines to further divide the square into equal parts which are also in proper perspective.



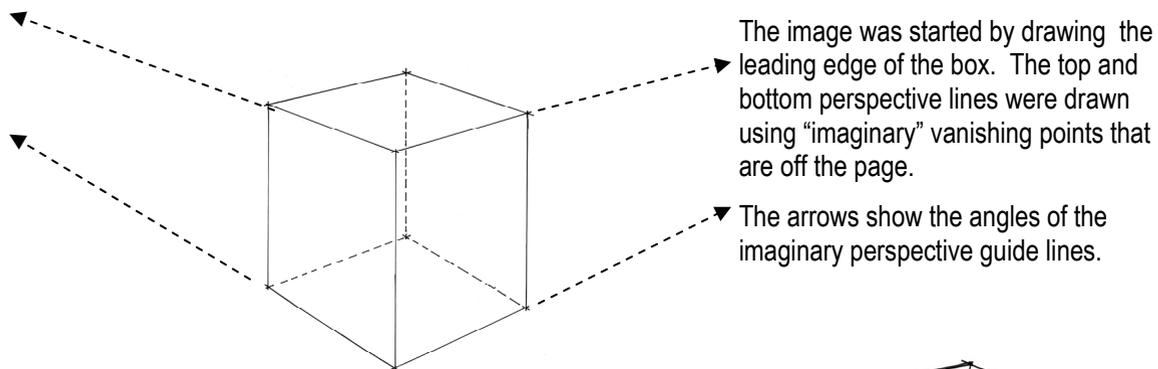
When drawing an object in two-point perspective it is important to have realistically proportioned details. In the example below, perspective guide lines were used to divide the top of the box. This located the center which provided the correct location of the round pearl on the top and the key hole location on the side



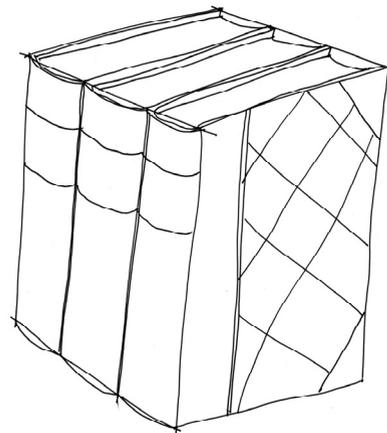
## PUTTING IT TOGETHER

Combining what we have learned about drawing in perspective and proportion, we can now create more elaborate drawings of detailed objects. The drawing series below shows how to move from a simple two-point perspective box to a finished drawing of three books.

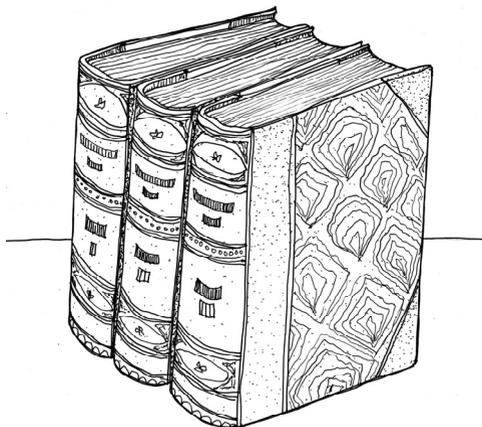
First we create a two-point perspective box, but this time using more realistic vanishing points. In our previous exercises, we created boxes with vanishing points only inches away from each other. In reality, if we are trying to represent a realistic perspective, the vanishing points would be several feet apart. With this in mind, drawing two-point perspective objects like books, requires using “imaginary” vanishing points to create more realistic images. You will need to start imagining the vanishing points in order to obtain the proper angles of your perspective lines.



The box was then divided into three books using the “imaginary” vanishing points. The left side plane was further divided to depict the binding design. Additional lines were added to the top plane to show the division of the books. Design was added to the right plane by using a diagonal grid to act as a guide for adding pattern for the front cover.



In the finished drawing, value and pattern were added. This will be covered in Chapter 4.



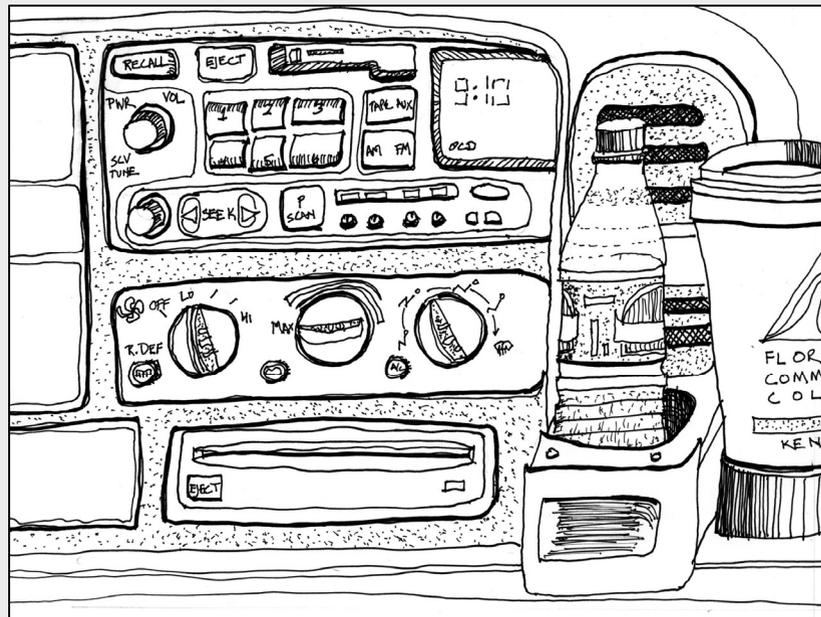
## Creativity Strategy

### LOSE THE REFEREE

When you are starting to learn how to draw it is easy to get stuck by your own expectations. In the beginning, your images may not look like the object, they may be out of proportion, they may not be drawn as well as another student. If you are just leaning to draw, it is unreasonable to expect your drawings to be perfect. It is unreasonable for you to expect to be as good as someone who already has some drawing experience. Unreasonable expectations can become a huge stumbling block to learning, especially if they are preventing you from moving forward. If you find yourself being too critical, try to imagine that you are in a kindergarten class learning to draw. When we were children, we had little expectation and therefore we were not afraid to explore. Drawing was fun because we were all artists.

Consider what happens in a playground. The school room door has just opened and out rush 15 kindergarten students who have been inside sitting at their desks all morning. They scatter through the playground - a couple of students on the swings, a few in the sand box and some going down the slide. Next thing you know, they are spontaneously jumping over to a different area. Are the students learning as they play? Of course. Is anyone scoring their play? Does the teacher have a clip board to note progress on their play with a grade? Is there a referee blowing a whistle? No! This is time to explore, experiment, fool around and enjoy trying new activities.

Allow yourself the freedom to play around with your new drawings skills. Loose the referee as you practice making a line, drawing boxes and adding texture. This attitude of being open and allowing yourself to explore new activities will serve you well as you take on the challenge of learning to draw. Have fun and go play!

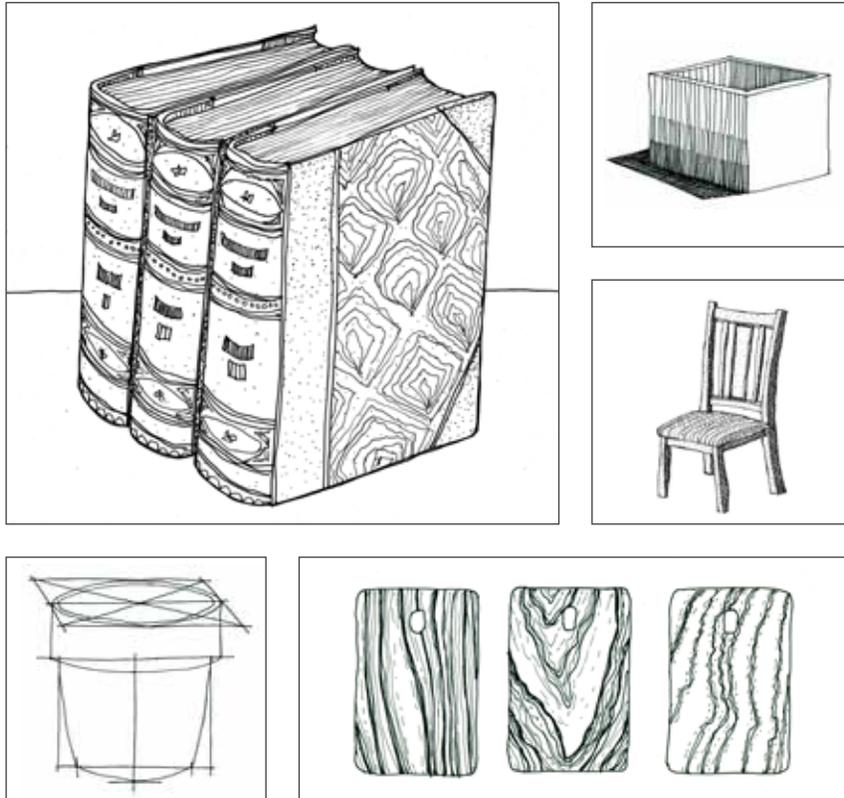


Exploring

# Perspective Hand Drawing

Fundamentals for Interior Design

Activity Sketch Book



Stephanie M. Sipp

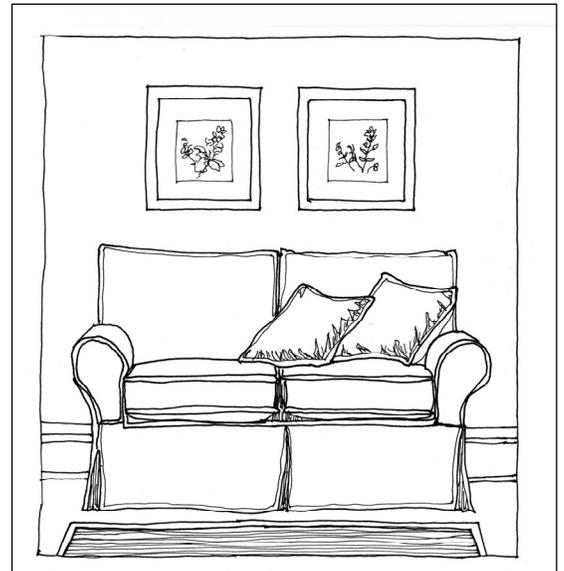
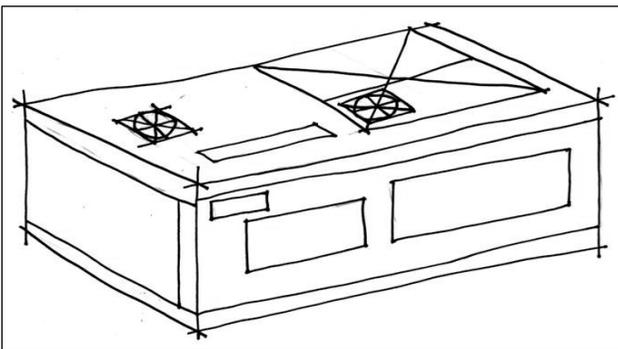
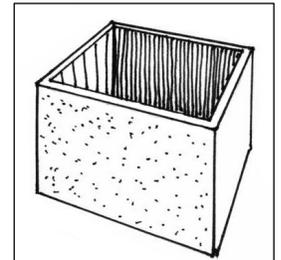
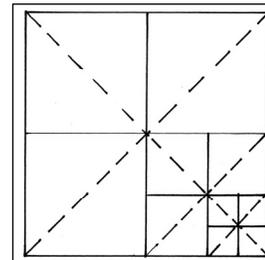
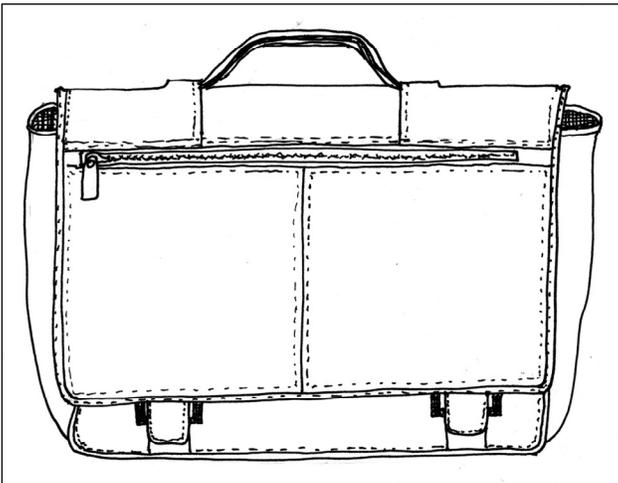
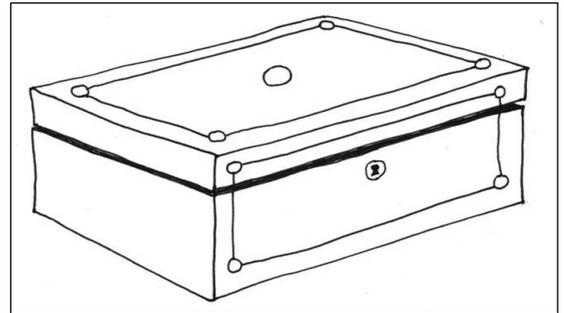
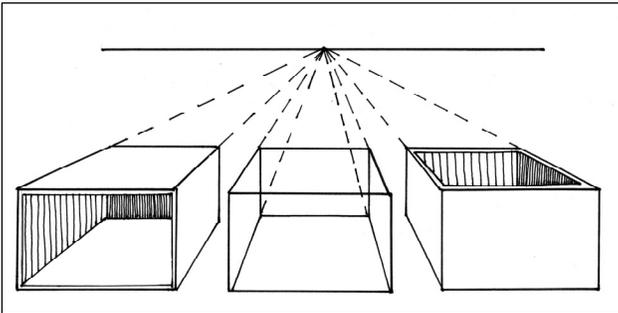


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## CHAPTER 2

# The Box



## ACTIVITY 2.1

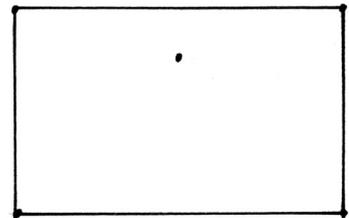
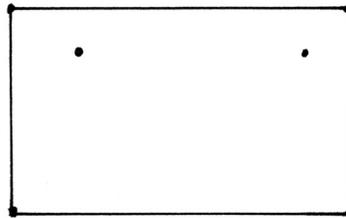
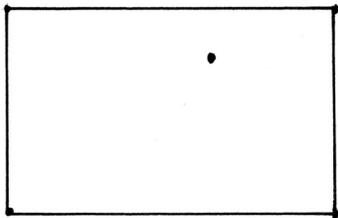
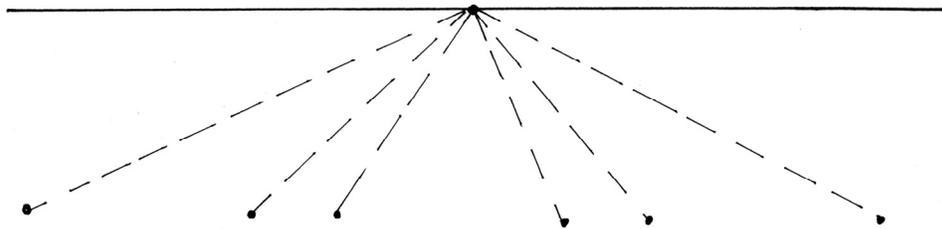
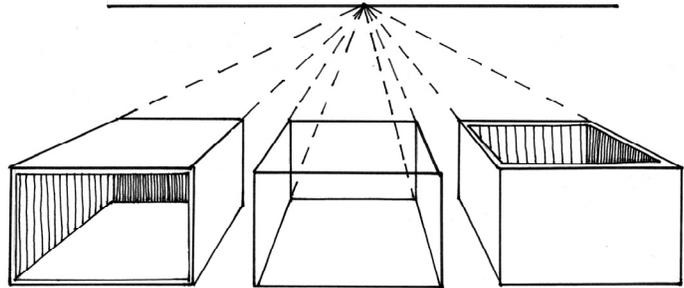
## ONE-POINT PERSPECTIVE VIEWS

Use the drawing below to complete the one-point perspective box shape activity. The flat front of each box is provided as a starting point. You will add the rest of the box shape using the vanishing point. Your final drawing should match the example.

❶ In pencil, for each box, use your straight edge to extend the dashed perspective lines to connect the vanishing point to the flat front of the box. This will create the top and sides.

❷ Draw the back of the box with your straight edge, creating lines that will be parallel to the flat front. Darken the box lines.

❸ Define the inside of the box using two lines for the edge and a vertical line for the inside corner line. Add additional vertical lines on the inside of the boxes as shown in the example.

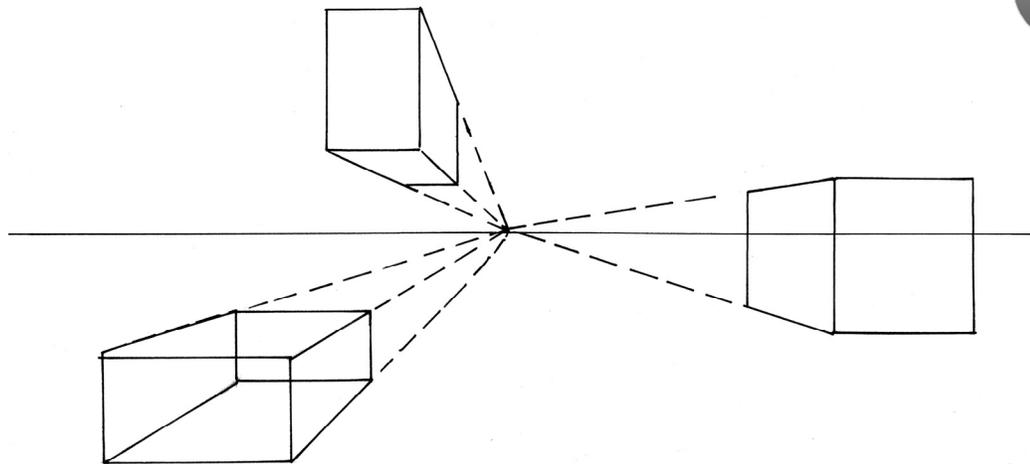


## ACTIVITY 2.2

## ONE-POINT PERSPECTIVE BOXES

In this activity, follow the steps below to add one-point perspective box shapes similar to the example.

- 1 Start your first box shape above the horizon line provided below. Draw the box shape which represents the flat front of the box.
- 2 With a straight edge, draw dash lines from the vanishing point to each corner of the box.
- 3 Determine the depth of the box and then add parallel lines to define the back of the box.
- 4 Redraw the lines of the box to darken and to make a distinction between solid lines and dashed lines.
- 5 Repeat these steps, adding another box below the horizon line and another on the horizon line.

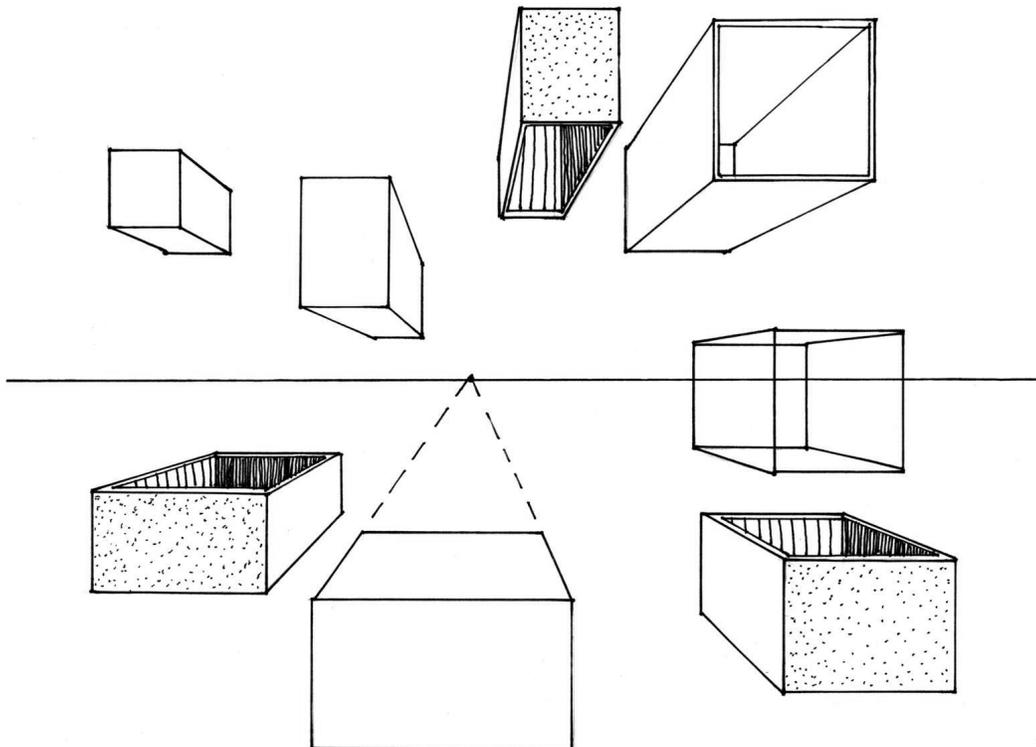


## ACTIVITY 2.3

## MORE ONE-POINT PERSPECTIVE BOXES

This activity is similar to Activity 2.2, however, this time draw your own horizon line with boxes above and below as shown in the example. Use the blank space on the next page for your drawing.

- 1 Before starting your drawing, add guidelines to the drawing below using your straight edge. These guide lines should extend from the vanishing point to every corner of the box. Notice how the angle for the sides of a one-point perspective box always comes from the single vanishing point.
- 2 On the next page, start your drawing with a horizontal line across the middle of the page and then mark the vanishing point in the center of the line.
- 3 Draw a flat front box above the horizon line.
- 4 With your straight edge, draw dashed perspective guide lines from the vanishing point to the corners of the flat front box.
- 5 Determine the depth of your box and add lines that are parallel to the top and side edges of the flat front box to define the far end of the box. Darken the contour of the completed box shape.
- 6 Continue to add more boxes from different positions above, below, and on the horizon line. Remember to always start each box with the flat front.
- 7 Draw the inside view of several box shapes.



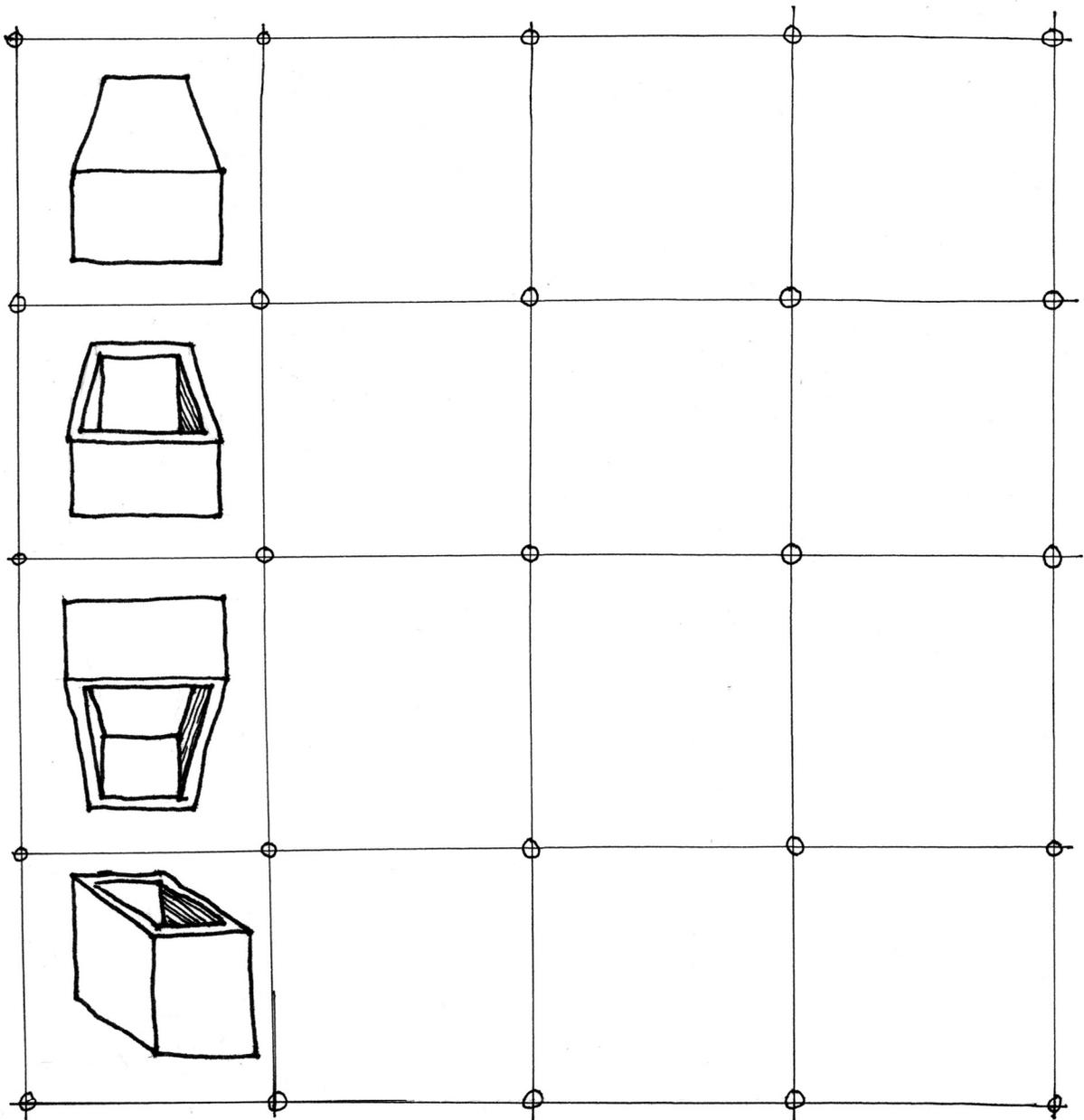


## ACTIVITY 2.4

## FREE HAND ONE-POINT PERSPECTIVE BOXES

Replicate the box shape three times using the space provided on the right. Do this activity freehand (i.e. without using a straight edge).

- 1 Start each drawing with the rectangular flat front shape and add the details.
- 2 For each shape, plan to draw the first two drawings with your pencil and the last drawing with your drawing marker.



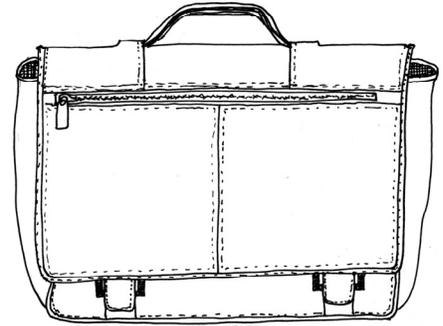
## ACTIVITY 2.5

## OBJECTS IN ONE-POINT PERSPECTIVE

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For this activity, start by finding a simple rectangular shaped object to look at and draw. Face the object so there is a flat front. Look carefully at the proportions and the details. Taking time to notice the details of your subject is an important step for creating successful drawings.

- ❶ In the space below, start your drawing with a rectangular box shape. Plan to make the flat front shape at least 2 or 3 inches wide. Use your straight edge tool for the first 4 steps.
- ❷ Mark a single vanishing point at the top of your page.
- ❸ From the corner of your flat front shape, draw the top perspective lines angled toward that single vanishing point. These lines form the top side of your object.
- ❹ Use your eye to determine the depth of your object and draw a line parallel to the top line of your box. This defines to back edge.
- ❺ Plan to draw the details of your object free hand and without the straight edge tool.

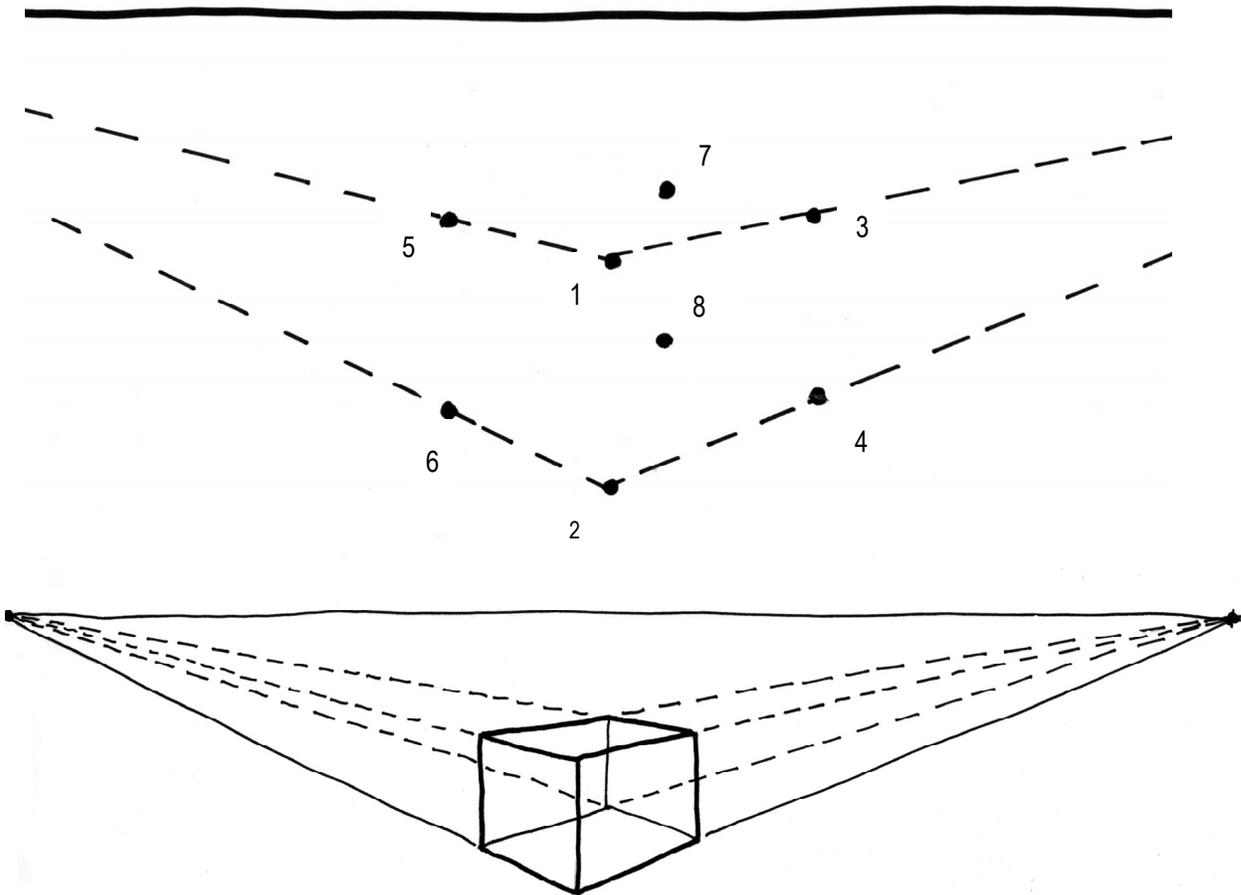


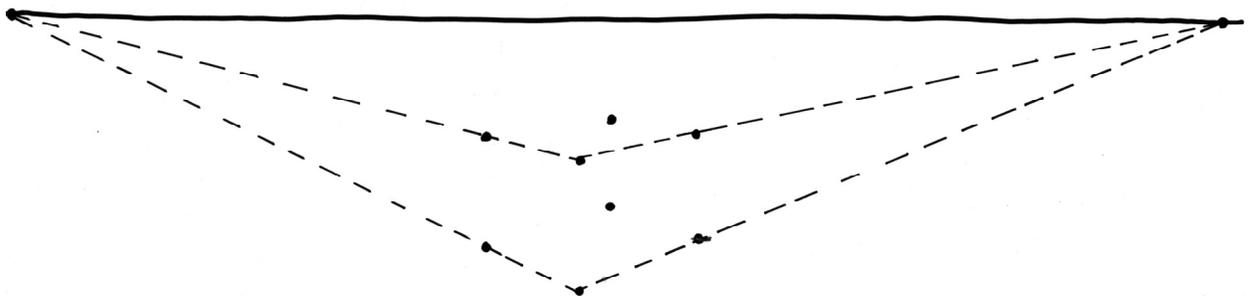
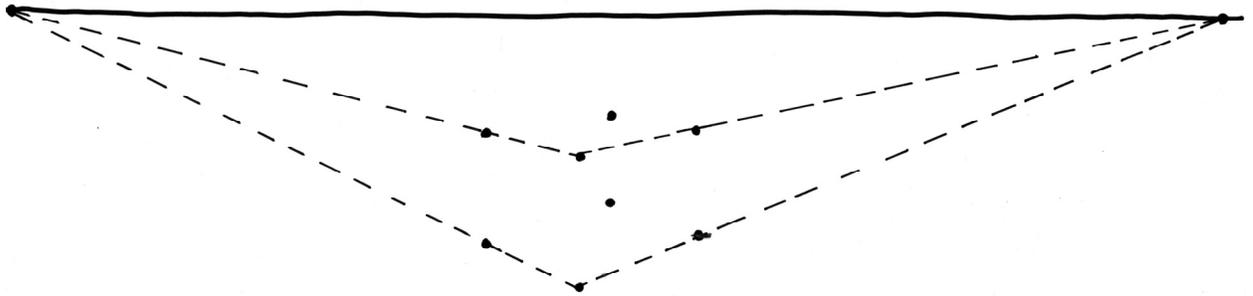
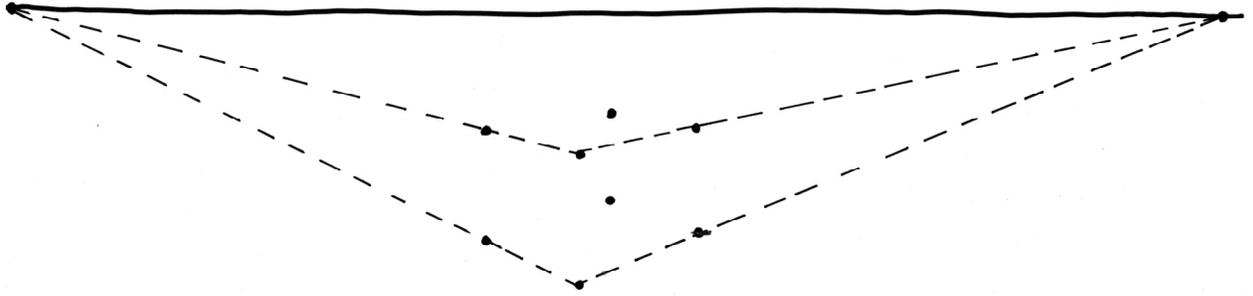
## ACTIVITY 2.6

## TWO-POINT PERSPECTIVE BOX

These next four activities focus on two-point perspective. Use the drawings below and on the next page to draw two-point perspective boxes. Notice in the example with the numbers that the two vanishing points are off the page.

- ❶ Start with a line connecting points 1 & 2 to form the leading edge of the box.
- ❷ From points 3 to 4, draw a line parallel to the leading edge. Do the same from points 5 to 6. These lines define the back edges of the box.
- ❸ Darken the perspective lines between 1 & 3, 2 & 4, 5 & 1, 6 & 2 to complete the right and left sides of your box. Notice that the top and bottom perspective lines are coming from the left and right vanishing points that are off the page.
- ❹ Use the left vanishing point to draw a line from 7 to 3 and 8 to 4.
- ❺ Use the right vanishing point to draw a line from 7 to 5 and 8 to 6.
- ❻ Continue on the next page and repeat these steps.



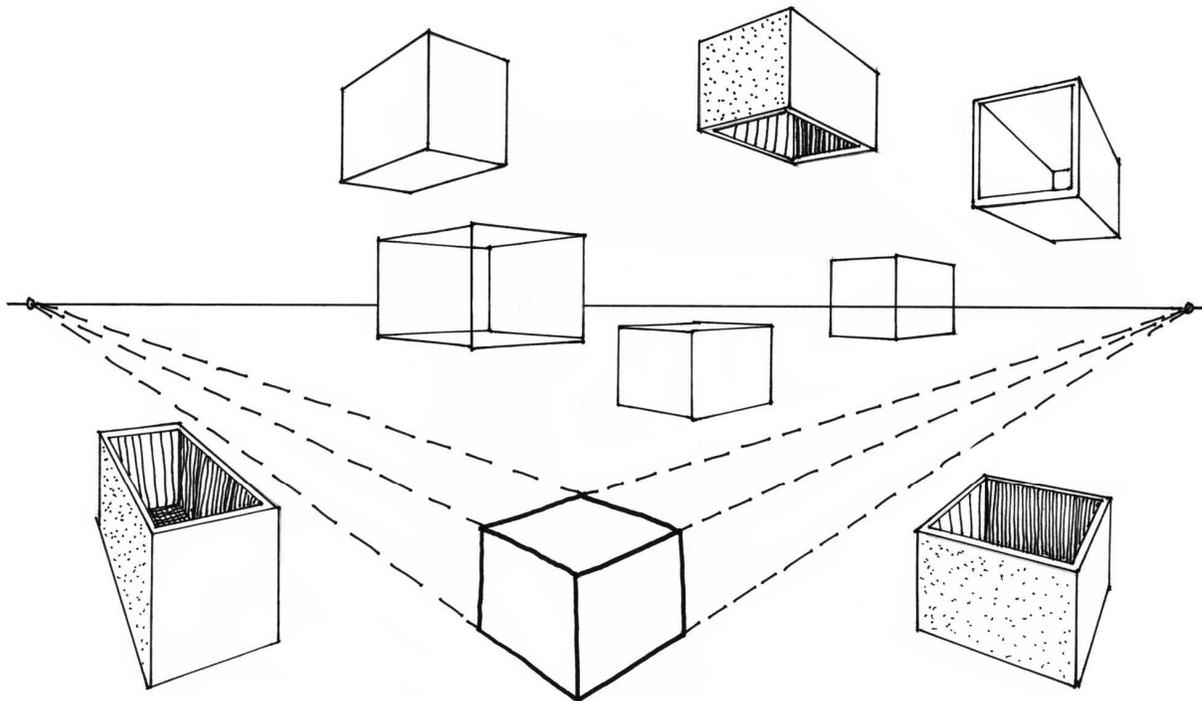


## ACTIVITY 2.7

## BOXES FROM DIFFERENT VIEWPOINTS

In this activity you will be drawing two-point perspective boxes from different viewpoints. Each box starts with a leading edge, perspective lines come from the vanishing points, and vertical lines are parallel to the leading edge.

- 1 Before starting your own drawing, add guidelines to the drawing below using your straight edge. Add the guide lines from the vanishing point to each box. Notice each box has a leading edge and the angle lines for the side of the box comes from a vanishing point.
- 2 On the next page, turn your book horizontally, draw the horizon line at the top and add vanishing points on each end.
- 3 Draw your own boxes by starting with a leading edge. Use your straight edge tool to make the guide lines from the vanishing points.
- 4 Use perspective guide lines to draw the top and bottom lines.
- 5 Use parallel lines to finish the sides of the box.
- 6 Draw boxes below, above and on the horizon line.

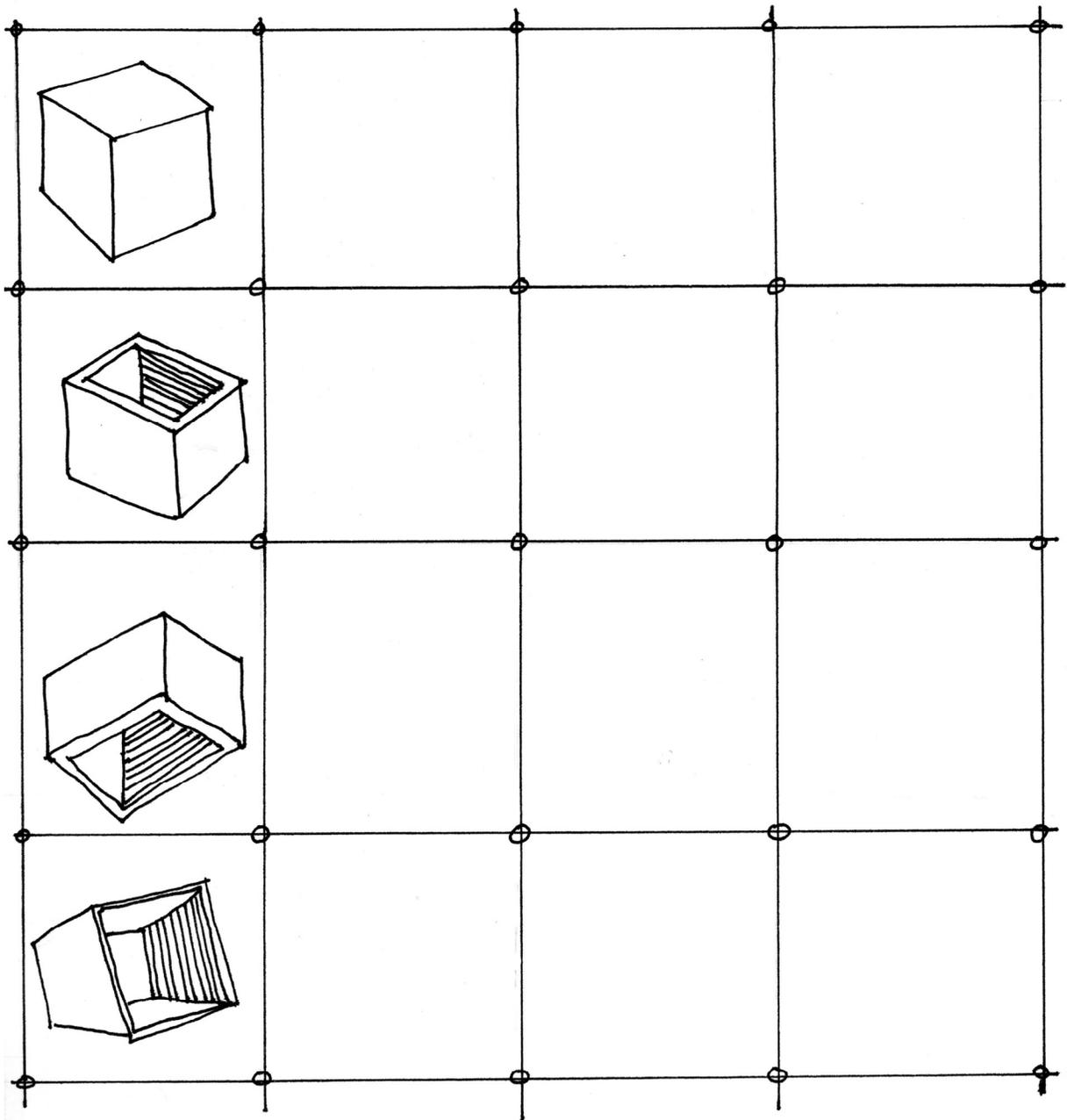




## ACTIVITY 2.8 FREE HAND TWO-POINT PERSPECTIVE DRAWINGS

For this activity, draw the box shape in the space provided on the right using a free hand technique (i.e. without using a straight edge).

- 1 Start each drawing with the leading edge line. Add perspective lines using imaginary vanishing points. Add the other box details as shown in the example.
- 2 For each shape, plan to draw the first two drawings with your pencil and the last drawing with your drawing marker.



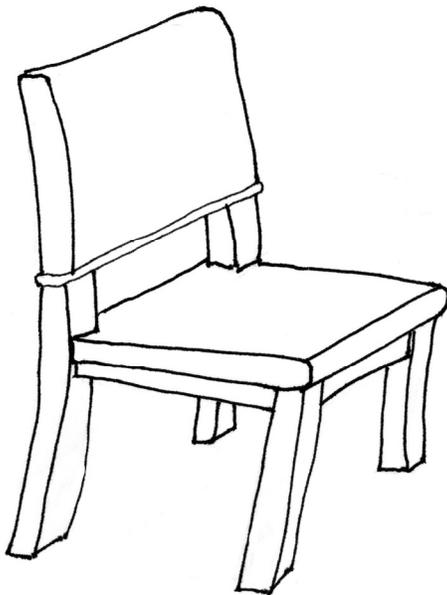
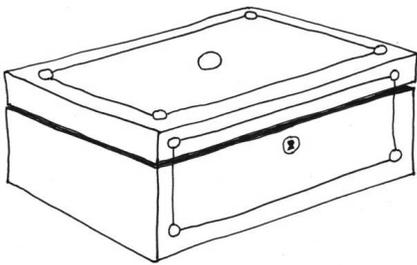
## ACTIVITY 2.9

## MULTIVIEW DRAWINGS OF OBJECTS

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For this activity practice drawing multiview drawings of objects. In the space to the right of the object, draw the top, side and front views of the box and chair. Refer to Chapter 2 in the reference book more information on multiview drawings.

- 1 Start with the box shape for each drawing. Plan to use your straight edge.
- 2 Add the detail lines found on each object.
- 3 Under each drawing add a label identifying the view.



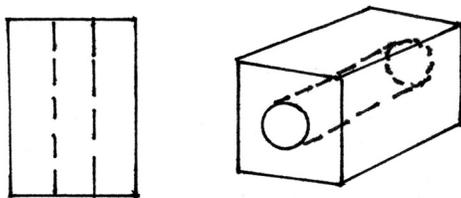
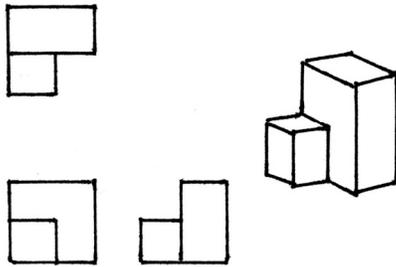
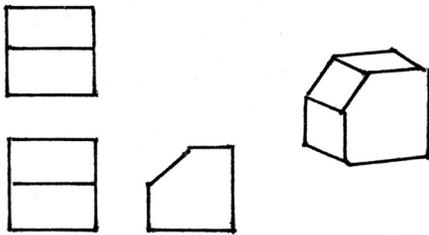
## ACTIVITY 2.10

## MULTIVIEW DRAWINGS OF SHAPES

In this activity, redraw the views of each shape to the right of the example. Notice the top, side and front views are flat without showing the shape dimension.

In the last diagram, dashed lines represent hidden lines that are inside the shape. These dashed lines represent edges that are not visible from this view.

- 1 Start by measuring the shapes and plan to draw them approximately the same size.
- 2 With pencil, using guide points and a straight edge as needed.



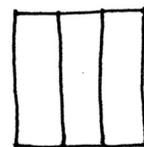
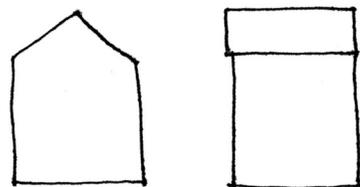
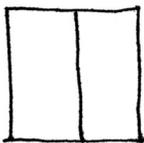
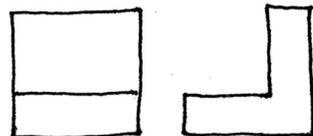
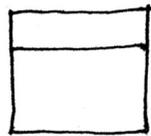
## ACTIVITY 2.11

## VISUALIZING THREE DIMENSIONAL OBJECTS

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In the drawings below, there are three sets of shapes represented by two-dimensional multiview drawings. Draw the three dimensional paraline shape represented by the multiview diagram on the left.

- 1 Start by measuring the shapes and plan to draw your three dimensional drawing approximately the same size.
- 2 With pencil, draw the shapes and use guide points and a straight edge as needed.



## ACTIVITY 2.12

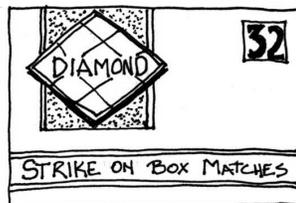
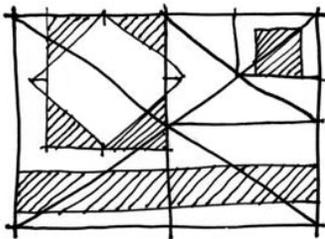
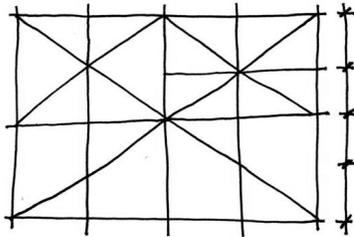
## FINDING PROPORTION WITH A GRID

One technique for determining proportion is to start with a grid that is divided into equal parts. This allows you to focus on a portion of the object detail and to notice the relationship of shapes to each other.

In this activity, use the picture of the match box top as a guide to practice the divide-the-square technique for finding proportion. Draw the image of the match box top using the steps and examples as a guide:



- 1 Measure the image and use this as a guide for your drawing. Draw your box shape twice as big as the actual image and using the same proportions.
- 2 Using light pencil lines, divide your rectangle into equal divisions. Start by drawing a cross from corner-to-corner to find the center. Then divide the box into quarters by drawing a cross through the middle. Continue to divide each new square in this same manner.
- 3 Notice how the divided rectangles are used as a proportion guide for the shapes on the match box top. Lightly add the basic shapes of the image to your grid.
- 4 Using your marker, added your final lines and details. Erase any visible pencil markings.

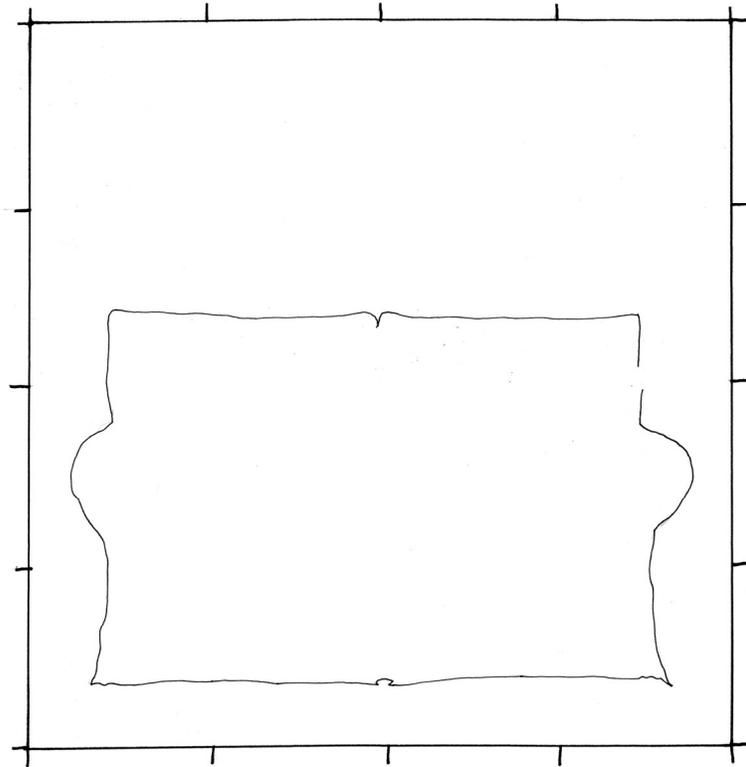
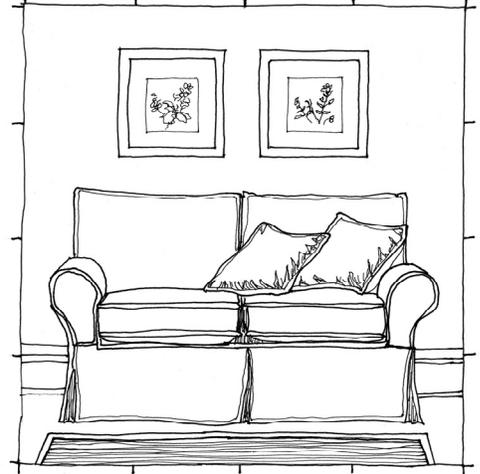


## ACTIVITY 2.13

## DRAWING A SOFA WITH A GRID

In this activity, using the box and outline below, draw the image of the sofa, pillows and pictures as seen in the drawing. On the outside of the box are lines providing 1/4th division of the box to use as a guide for placement of the objects. Plan to draw this free hand without the straight edge tool.

- 1 Start by dividing the image to the right into equal parts by lightly drawing a pencil grid over the image.
- 2 Use the rectangular shape drawn below for your drawing. Start by creating a pencil grid using the division marks on the side as a guide.
- 3 Add details to the sofa outline using your marker.
- 4 Continuing with your marker, add rendering of the two pictures.
- 5 Add the pillows and the rug to your drawing using the grid as a guide for placement.



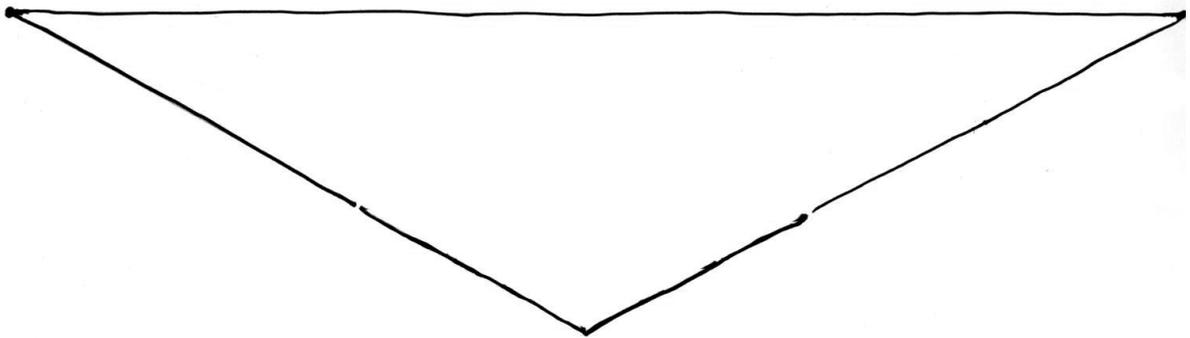
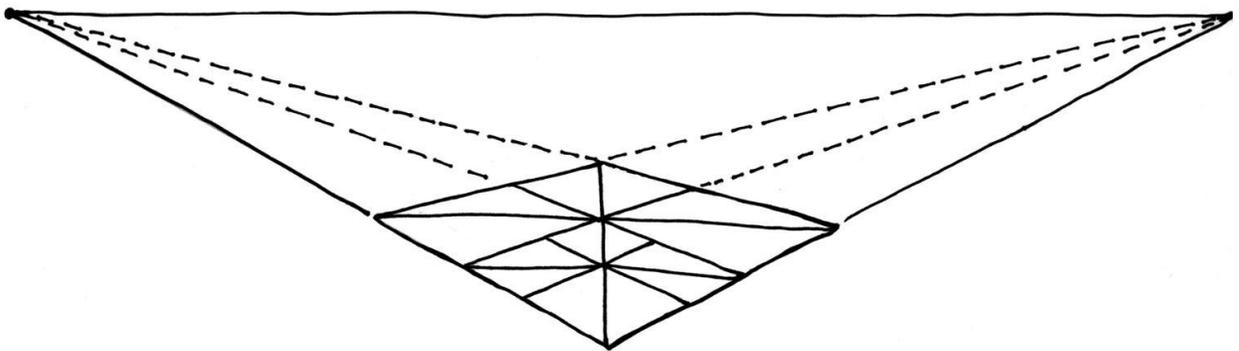
## ACTIVITY 2.14

## PROPORTION IN PERSPECTIVE

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For this activity, use the horizon line and initial perspective lines to practice using divide-the-square technique in a perspective drawing. Plan to use a straight edge tool for this activity.

- 1 Draw a square shape using the vanishing points to create your perspective lines.
- 2 In this square shape, drawn an "X" from corner to corner.
- 3 Draw a cross from side to side using the vanishing points and the center point of the "X" as guides.
- 4 Repeat these steps to divide the square again.



## ACTIVITY 2.15

## PUTTING IT TOGETHER

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In this last activity you will be incorporating all the techniques from Chapter 2 using an everyday item of your choosing. Use the example drawn and the instructions to complete the activity on the next page. Here are a few ideas for objects that you could draw: tissue box, toaster, decorative box, tool box, jewelry box, phone book, frame, remote control or make-up compact.

- 1 Find a simple everyday item and be sure it is a *rectangular* shape.
- 2 Using your pencil, start your drawing as a simple 2-point perspective box. Remember to start with a leading edge and use your straight edge to draw perspective lines using “imaginary” vanishing points. Plan to have your drawing measure at least 2 or 3 inches in size.
- 3 Add guide lines and shapes outlining the details of your item.
- 4 After the outlines are drawn, use marker to redraw the contour shape. Then, erase any visible pencil lines.
- 5 Add the details, textures and patterns to complete your drawing. Use your pencil to create guide lines or guide marks to aid with adding the details. You can alternate between pencil and markers and erase as you go.

