UNIT-II

Draw straight lines with the Line Segment tool

To draw one straight line segment at a time, use the Line tool.

1. Select the Line tool ╲.

2. Select Window > Properties and select stroke attributes.

   📝 You cannot set fill attributes for the Line tool.

3. Click the Object Drawing button ◯ in the Options section of the Tools panel to select either Merge or Object Drawing mode. When the Object Drawing button is depressed, the Line tool is in Object Drawing mode.

4. Position the pointer where the line is to begin, and drag to where the line is to end. To constrain the angle of the line to multiples of 45°, Shift-drag.

Draw rectangles and ovals

The Oval and Rectangle tools let you create these basic geometric shapes, and apply strokes, fills, and specify rounded corners. In addition to the Merge and Object drawing modes, the Oval and Rectangle tools also provide the Primitive Object drawing mode.

When you create rectangles or ovals using the Rectangle Primitive or Oval Primitive tools, Animate draws the shapes as separate objects. These shapes unlike the shapes you create using Object Drawing mode. The primitive shape tools let you specify the corner radius of rectangles using controls in the Property inspector. And also the start and end angle, and the inner radius of ovals. After you create a primitive shape, alter the radius and dimensions by selecting the shape on the Stage and adjusting the controls in the Property inspector.

📝 *When either of the Primitive Object drawing tools is selected, the Property inspector retains the values of the last primitive object that you edited. For example, if you modify a rectangle and then draw a second rectangle.*

📝 *To draw from the center of the Stage, hold the Alt key when drawing a shape.*

Draw rectangle primitives

1. To select the Rectangle Primitive tool, click and hold the mouse button on the Rectangle tool , and select the Rectangle Primitive tool from the pop-up menu.

2. To create a rectangle primitive, drag with the Rectangle Primitive tool on the Stage.

   To change the corner radius while dragging with the Rectangle primitive tool, press the Up Arrow key or Down Arrow key. When the corners achieve the desired roundness, release the key.

3. With the rectangle primitive selected, you can use the controls in the Property inspector to further modify the shape or specify fill and stroke colors.
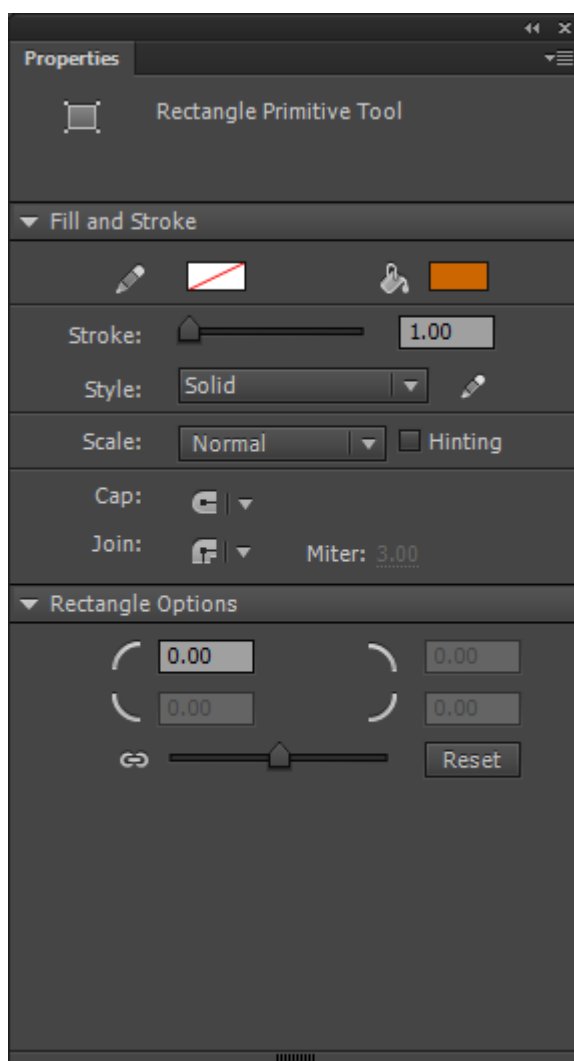
Properties for a rectangle primitive.

Theses Property inspector controls are specific to the Rectangle Primitive tool:

Rectangle Corner Radius Controls Let you specify the corner radiuses for the rectangle. You can enter a numeric value for the inner radius in each text box. Entering a negative value creates an inverse radius. You can also deselect the constrain corner radius icon, and adjust each corner radius individually.

Reset Resets all of the Rectangle Primitive tool controls, and restores the rectangle primitive shape drawn on the Stage to its initial size and shape.

4. To specify a different corner radius for each corner, deselect the Lock icon in the Rectangle Options area of the Property inspector. When locked, the radius controls are restrained so that each corner uses the same radius.

5. To reset the corner radii, click the Reset button in the Property inspector.

Draw oval primitives

1. Click and hold the mouse button on the Oval tool ⬤, and select the Oval Primitive tool ⬤.

2. To create an oval primitive, drag the Primitive Oval tool on the Stage. To constrain the shape to a circle, Shift-drag.

3. With the oval primitive selected on the Stage, you can use the controls found in the Property inspector to further modify the shape or specify fill and stroke colors.
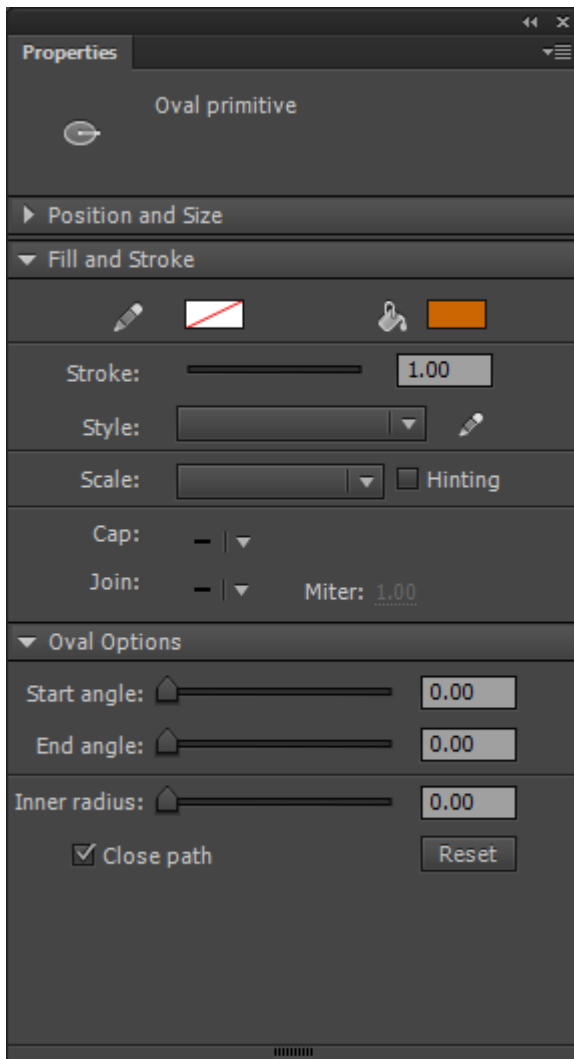
Properties for an oval primitive.

These Property inspector controls are specific to the Oval Primitive tool:

Start Angle/End Angle The angle of the start point and end point of the oval. Using these controls, you can easily modify the shape of ovals and circles into pie slices, half circles, and other creative shapes.

Inner Radius An inner radius (or oval) within the oval. You can either enter a numeric value for the inner radius in the box or click the slider and interactively adjust the size of the inner radius. You can enter values from 0 to 99 representing the percentage of fill that is removed.

Close Path Determines whether the path (or paths, if you are specifying an inner radius) of the oval is closed. If you specify an open path, no fill is applied to the resulting shape, only the stroke is drawn. Close Path is selected by default.

Reset Resets all of the Oval Primitive tool controls and restores the oval primitive shape drawn on the Stage to its initial size and shape.

Draw ovals and rectangles

The Oval and Rectangle tools create these basic geometric shapes.

1. To select the Rectangle tool ⬜ or Oval tool ⬭, click and hold the mouse button on the Rectangle tool or Oval tool and drag.

2. To create a rectangle or oval, drag the Rectangle or Oval tool on the Stage.

3. For the Rectangle tool, specify rounded corners by clicking the Round Rectangle modifier and entering a corner radius value. A value of zero (0) creates square corners.

4. Drag on the Stage. If you are using the Rectangle tool, press the Up Arrow and Down Arrow keys while dragging to adjust the radius of rounded corners.

   For the Oval and Rectangle tools, Shift-drag to constrain the shapes to circles and squares.

5. To specify a specific size of oval or rectangle, select the Oval or Rectangle tool and press the Alt key (Windows) or Option key (Macintosh). Then click the Stage to display the Oval And Rectangle Settings dialog box.

   - For ovals, specify the width and height in pixels and whether to draw the oval from the center.

   - For rectangles, specify the width and height in pixels, the radius of the rounded corners, and whether to draw the rectangle from the center.

See also: [Live Preview of Colors](#).

Drawing a basic character using Animate

Creating an animated character is easy with Animate. Want to draw some cool characters using rectangle and oval shapes? Watch the tutorial at the end of this example and follow these steps.

1. Click and hold the mouse button on the **Rectangle Tool** ⬜.

2. Select the **Rectangle Primitive**.

3. In the **Rectangle Options**, drag the slider to change the corner radius of the object.

4. Select the **Oval Tool** .

5. Click the **Object Drawing** button .

Draw polygons and stars

1. Select the PolyStar tool by clicking and holding the mouse button on the Rectangle tool and selecting from the pop-up menu that appears.

2. Select Window > Properties and select fill and stroke attributes.

3. Click Options and do the following:

   - For Style, select Polygon or Star.

   - For Number Of Sides, enter a number from 3 through 32.

   - For Star Point Size, enter a number from 0 through 1 to specify the depth of the star points. A number closer to 0 creates deeper points (like needles). If you are drawing a polygon, leave this setting unchanged. (It does not affect the polygon shape.)

4. Click OK.

5. Drag on the Stage.

See also: [Live Preview of Colors](#).

Object drawing mode

While selecting and drawing objects, the object drawing mode shows a thin outline along the shape regions according to the layer color. The small circles are indicate the anchor points and are not interactive or editable using the selection tool. While drawing in object mode, the strokes and shapes are no longer selected by default.

Outlines around a shape

Draw with the Pencil tool

To draw lines and shapes, use the Pencil tool, in much the same way that you use a real pencil to draw. To apply smoothing or straightening to the lines and shapes as you draw, select a drawing mode for the Pencil tool.

1. Select the Pencil tool ✏ .

2. Select Window > Properties and select a stroke color, line weight, and style.

3. Select a drawing mode under Options in the Tools panel:

   - To draw straight lines and convert approximations of triangles, ovals, circles, rectangles, and squares into these common geometric shapes, select Straighten ⅃.

   - To draw smooth curved lines, select Smooth ∫.

   - To draw freehand lines with no modification applied, select Ink ✎.

     Lines drawn with Straighten, Smooth, and Ink mode, respectively.

4. To draw with the Pencil tool, Shift-drag to constrain lines to vertical or horizontal directions, click the Stage, and drag.

Paint with the Brush tool

The Brush tool ✏ draws brush-like strokes. It creates special effects, including calligraphic effects. Select a brush size and shape using the Brush tool modifiers.

Animate scales the brush size proportionately to the changing zoom level of the stage. This allows you to draw seamlessly adjusting to any zoom level and preview your work as you draw. If you want to revert to the earlier default behavior of brushes maintaining a constant pixel size even when you change the zoom level of the stage, you must disable the 'Stage zoom level' checkbox in the brush Property Inspector.

If you disable the Stage zoom level checkbox, the brush size for new strokes remains constant even when you change the magnification level for the Stage. So, the same brush size appears larger when the Stage magnification is lower. For example, suppose you set the Stage magnification to 100% and paint with the Brush tool using the smallest brush size. Then, you change the magnification to 50% and paint again using the smallest brush size. The new stroke that you paint appears 50% thicker, uniform and accurate without any non-tapering ends than the earlier stroke and (Changing the magnification of the Stage does not change the size of existing brush strokes.)

Use an imported bitmap as a fill when painting with the Brush tool.

If you have a Wacom pressure-sensitive tablet connected to your computer, vary the width and angle of the brush stroke. This can be achieved by using the Brush tool Pressure and Tilt modifiers, and varying pressure on the stylus.

The Pressure modifier varies the width of brush strokes when you vary the pressure on the stylus. The Tilt modifier varies the angle of brush strokes when you vary the angle of the stylus on the tablet. The Tilt modifier measures the angle between the top (eraser) end of the stylus and the top (north) edge of the tablet. For example, if you hold the pen vertically against the tablet, the Tilt is 90. The Pressure and Tilt modifiers are both fully supported for the eraser function of the stylus.

📙 On a tablet, the Tilt and Pressure options for Brush Tool function only when you use the Pen mode. The mouse mode does not enable these options.

A variable-width brush stroke drawn with a stylus.

1. Select the Brush tool ✐ .

2. Select Window > Properties and select a fill color.

3. Click the Brush Mode modifier and select a painting mode:

   Paint Normal
   Paints over lines and fills on the same layer.

   Paint Fills Only
   Paints fills Only, skips painting on strokes & empty areas.

   Paint Behind
   Paints in blank areas of the Stage on the same layer, leaving lines and fills unaffected.

   Paint Selection
   Applies a new fill to the selection when you select a fill in the Fill Color control or the Fill box of the Property inspector, the same as selecting a filled area and applying a new fill.

   Paint Inside
   Paints the fill in which you start a brush stroke and never paints lines. If you start painting in an empty area, the fill doesn't affect any existing filled areas.

4. Select a brush size and brush shape from the Brush tool modifiers.

5. To zoom the brush proportionately to the zoom level of the stage as you increase or decrease it while you draw, select the **Zoom size with stage** check box. This allows you to draw seamlessly adjusting to any zoom level and preview your work as you draw.

6. If a Wacom pressure-sensitive tablet is attached to your computer, select the Pressure modifier, the Tilt modifier, or both, to modify brush strokes.

- Select the Pressure modifier to vary the width of your brush strokes by varying the pressure on your stylus.

- To vary the angle of your brush strokes by varying the angle of the stylus on the Wacom pressure-sensitive tablet, select the Tilt modifier.

7. Drag on the Stage. To constrain brush strokes to horizontal and vertical directions, Shift-drag.

Drawing preview and output

The **Traditional Brush** tool and the **Paint Brush** tool have been enhanced in the CC 2015.1 release to give you much more accurate and smoother drawing experience. The final stroke that will be generated is now very close to the live preview. With this, you do not see any unpredictable thinning or thickening of the brush strokes. Even the finer curves drawn using brush tool do not show any breakages or gaps.

Create custom brushes

The Brush Tool allows you to custom-define a brush by setting parameters of the brush such as shape and angle. This enables you to create natural artwork in your projects by customizing the brush tool to suit your drawing needs. You can choose, edit and create a custom brush in Animate through the Property Inspector, when the brush tool is selected in the toolbox. To learn how to create, edit, and delete custom brushes, see Custom Brushes.

Pressure and Tilt in Paint Brush

Using Pressure and Tilt modifiers

Animate provides Pressure and Tilt support for strokes drawn using the Paint brush tool. You can draw art and pattern strokes with variable width, dependent on the applied pressure or tilt on the stylus. For further refinement, use the Width tool to adjust the width points.

For more information, see Working with PaintBrush.

Pressure and tilt icons in the tool bar are displayed only if you have connected a Wacom pressure-sensitive tablet to your computer.

Brush Library

Animate has an integrated global library for Vector Brushes that includes a vast collection of Art and Pattern brushes. To launch the Brush Library Panel, click **Windows > Brush Library** or click on the Brush icon in the Property Inspector. Before using any brush, double-click any brush to add it to your current document.

Import new Vector Brushes from CC Libraries

You can import new Art and Pattern Brushes to your Animate document using the CC Libraries in addition to the brush presets available by default. To add a new Art or Pattern Brush, open the CC libraries panel and just click on any of the supported brushes. (Animate currently supports only Illustrator brushes from CC Libraries.) For adding new brushes to your CC Library, you can use the Brush App for Android and iOS. Clicking on a brush in CC Library adds it to both the global Brush Library panel and the current document.

You can use any brush as either an Art or Pattern brush. By default, the brushes are added as Art brushes. To modify it to a Pattern brush, use the **Edit brush** option and select the **Brush type** as **Pattern brush**.
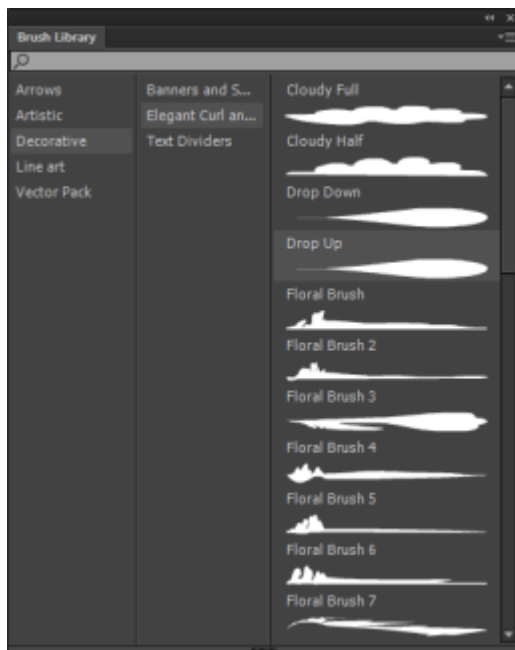

Editing brushes

The Edit Brush icon launches the Brush editing dialog box for the selected brush. If you select an Art Brush for editing, the Art Brush Options dialog box appears. You

can modify properties such as brush direction, scaling preferences, and overlap preference, and apply the changes to the existing strokes.

For more information, see [Working with Paint Brush](#).
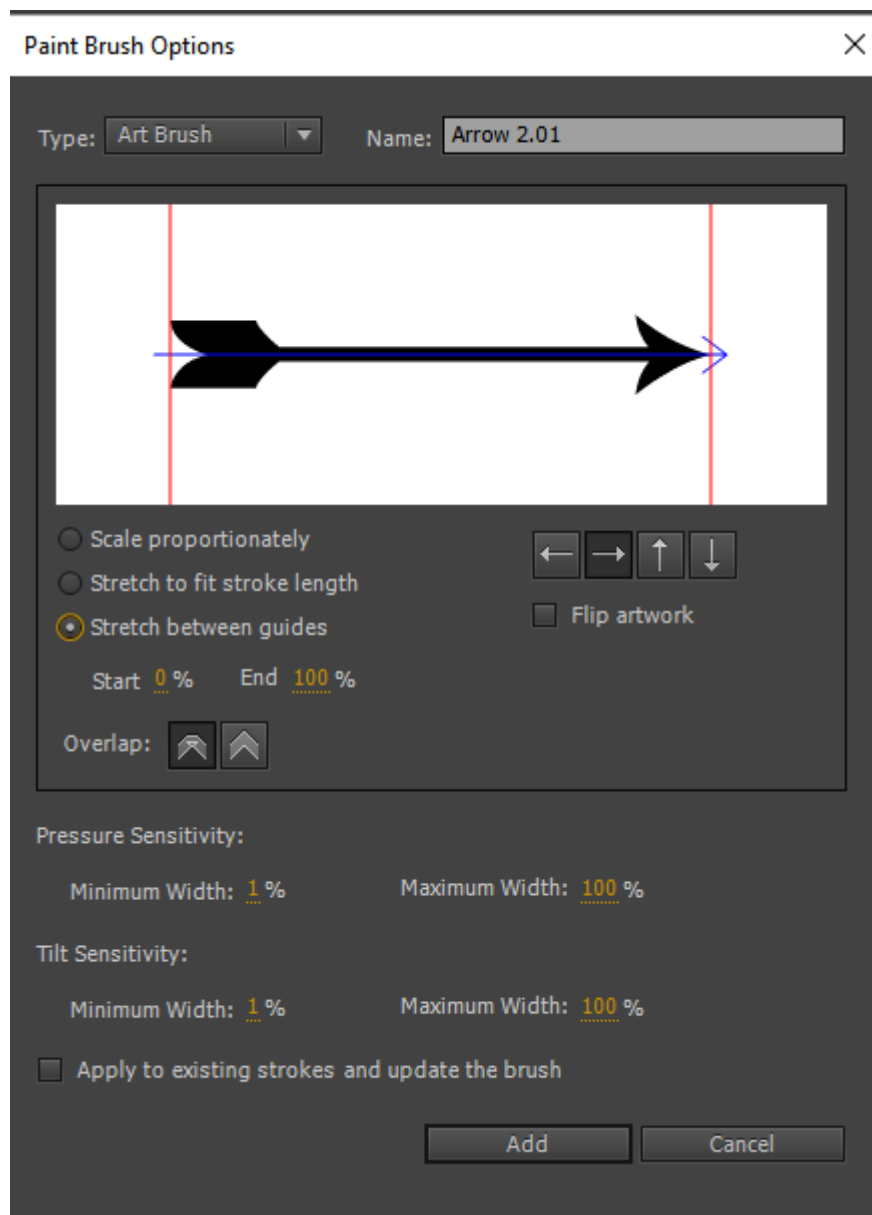
Art Brush options

Enhancing strokes and shapes using the Variable Width tool

The Width tool allows you to embellish a stroke by adding widths of varying thickness. Variable width can then be saved as Width Profiles that can be applied to other strokes. You can select the Width tool from the Tools panel or using the Keyboard Shortcut (U).

When you mouseover a stroke with the Width tool selected, points (Width Point) appears on the stroke with handles (Width Handle). You can adjust the stroke width, move the width point, copy the width point, and delete the width point. The Width information is displayed in the Info Panel when you modify Width of a stroke.

You can also select multiple Width Points, and perform any of actions (move, copy, or delete) mentioned earlier.

For multiple strokes, the Width Tool adjusts only the active stroke. If you want to adjust a stroke, mouse-over the stroke using the Width Tool.

📑 Variable Width Strokes are converted to Uniform strokes, if a file containing variable width stroke is opened using an older version of Animate.

## Adding variable width to a stroke using Width tool

To add width to a stroke, do the following:

1. Draw a stroke or shape using any of the tools. For example, Line tool.

   Stroke create using the Line tool with Stroke Size set to 88, Style set to Solid, and also, using Width Profile 1.

2. Select the Width Tool ✍ from the tools panel.

3. With the Width Tool selected, mouseover the stroke. This displays potential Width Points and Width Handles. The tool also changes its appearance to ▶₊, indicating that the Width Tool is active and variable width can be applied to the stroke.
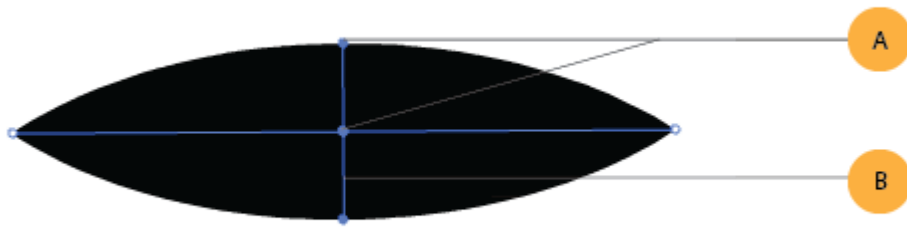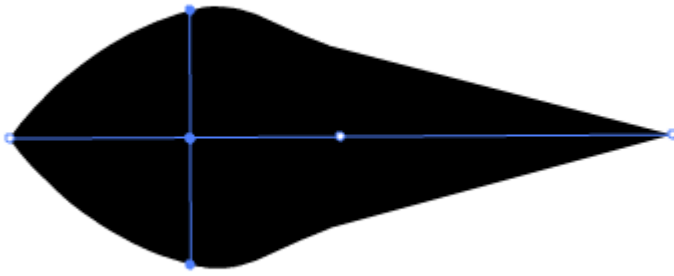
(A) Width Point (B) Width Handle

4. With the point selected using the Width Tool, drag the Width Handle outwards.

   The size of the Width is constrained to 100 pixels on either side of the Width point.
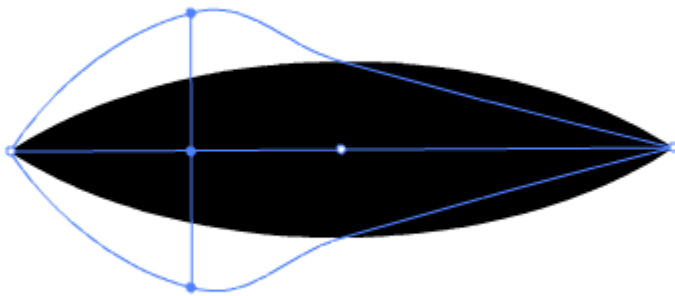
Add width by dragging outwards

5. You can see that variable width is added to stroke. Select the Width Tool and mouseover the stroke, this displays the new Width Point and Width Handle.

Variable width is added to the stroke with the Width Point and Width Handle highlighted.

Moving or copying variable width applied to a stroke

You can move or copy Width Points created for a stroke, which in effect, moves or copies variable width applied to stroke. To move a width point, do the following:

1. Select the Width tool from the tools panel.
2. Mouseover the stroke to display existing width points, and select the Width Point you want to move.
3. Drag the Width Point along the stroke.

    Movement of the Width Point is constrained by the next successive Width Point on either sides.
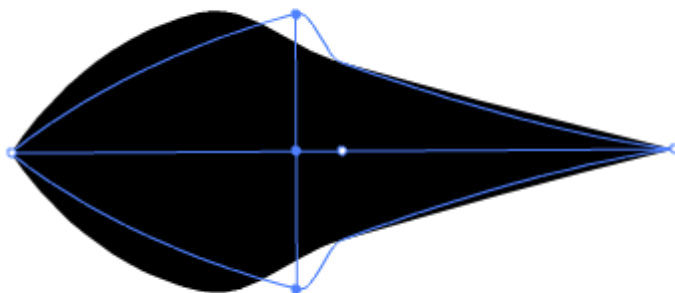
Moving a Width point

4. Width point is moved to its new location, and thereby also modifying the stroke accordingly.

Width point is moved to its new location
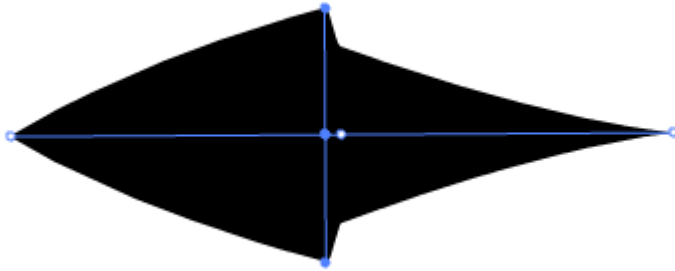
To copy a Width Point, do the following:

1. Select the Width tool ![icon] from the tools panel.
2. Mouseover the stroke to display existing Width Points, and select the point you want to copy.
3. Hold **Alt** (**Option** for Mac) and drag the width point along the stroke to copy the selected Width point.

   ![note icon] Movement of the point is constrained by the next successive Width Point on either sides.
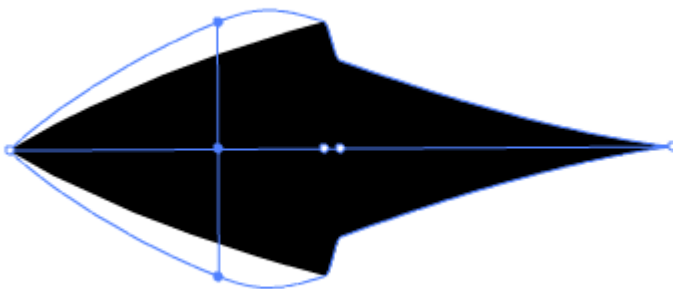
Copying a Width point

4. Width point is copied. This also modifies the stroke accordingly.

Width point is copied

Modifying variable width of a stroke

Modifying the variable width of a stroke at any Width point, expands or contracts the stroke proportionally on either sides of the Width Point. However, if you want to modify the width on any one side of the point, do the following:
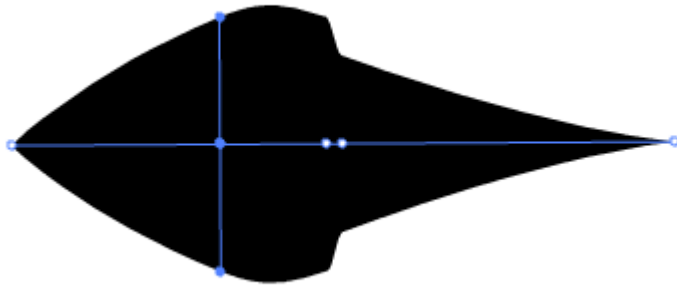
1. Select the Width tool from the tools panel.

2. Mouseover the stroke to display existing Width Points, and choose the Width Point from either ends of the Width Handle that you want to modify.

3. Hold **Alt** (**Option** for Mac) and drag the Width Handle outwards to modify the selected Width Point.
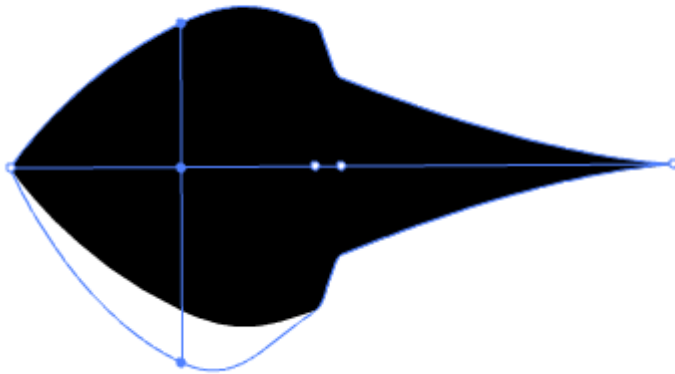
Modifying Width of a stroke

4. The Width point is moved, and the stroke is modified accordingly.
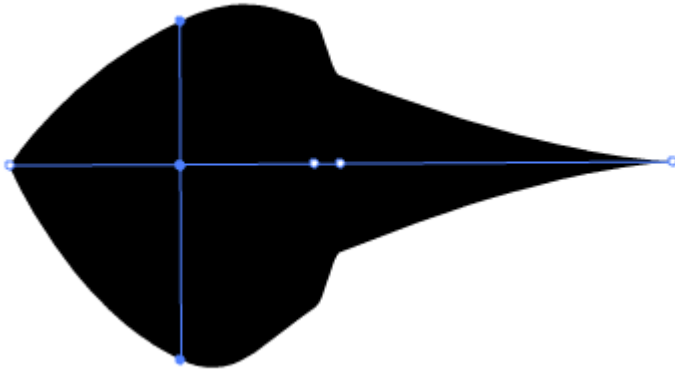
Width point is moved asymmetrically, and the stroke is modified accordingly.

Deleting variable width of a stroke

To delete a Width point, do the following:

1. Mouse over and select the Width point you want to delete.
2. Press Backspace or Delete to delete the Width point.
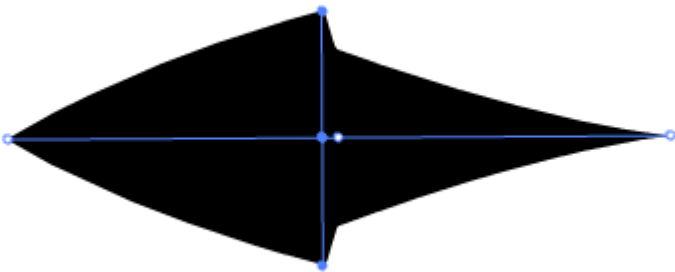
Width point is deleted, and the stroke is modified

WIDTH TOOL CONTROLS

The following table lists the keyboard modifiers to use while working with the Width tool:

Width control tasks	Keyboard modifiers
Create non-uniform widths	Alt+drag (Windows) or Opt+drag (Mac OS)

Create a copy of the width point	Alt+drag the width point (Windows) or Opt+drag the width point (Mac OS)
Copy and move all the points along the path	Alt+Shift+drag (Windows) or Opt+Shift+drag (Mac OS)
Select multiple width points and drag them	Shift+click+drag
Delete selected width points	Delete

Saving width profiles

After defining the stroke width, you can save the variable width profile from the Properties Inspector.

1. Select the stroke to which you added variable width.
2. Click the **+** button to the right of Width drop-down on Properties Inspector.
3. On the Variable Width Profile dialog, enter a **Profile Name**.
4. Click **Ok**.
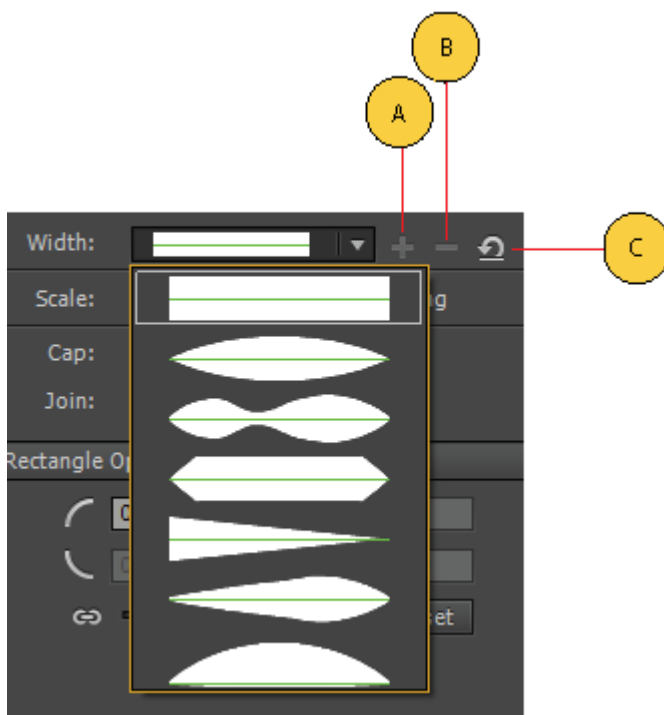
A) Save Width Profile icon B) Delete Width Profile icon C) Reset Width Profile icon

Width profiles can then be applied to selected paths by choosing them from the Width Profile drop-down list in the Properties Panel. When a stroke with no variable width is selected, the list displays the Uniform option. To restore the default width profile set, click the Reset Profiles button.

Save width profile is enabled only when variable width apart from default width profiles is selected on the stage. You can create your own stroke profiles using width tool and save them. Similarly, delete width profile icon is enabled when custom width profile is selected in the drop down. In case you want to delete any custom profile, you can use this option.

Restoring the default width profile set in the PI, removes any custom saved profiles. You also sync the customs saved profiles to the cloud.

Live Color Preview

Live Color Preview feature displays the stroke and fill colors simultaneous when drawing a shape on the stage. It allows you to preview the near-final appearance of a shape when drawing. This feature is enabled for all drawing tools available within Animate.

The Live Color Preview feature is also enabled for Color Swatches within Animate. This allows you to preview changes of stroke or fill colors for a selected shape on the Stage. By hovering the pointer over a desired color, you can see the color change.

Live Color Preview is enabled for color swatches in the following panels:

- Tools panel
- Properties Inspector (PI)
- Stage PI
- Text PI
- Grid
- Guides

ANIMATION FROM OBSERVATION

Since the earliest days of the art form [?], animators have observed the movement of real creatures in order to create animated motion. Sometimes this simply takes the form of an artist carefully observing nature for inspiration. Another process is to transfer the movement from a recording of the movement to the animated objects. The earliest mechanism for doing this was the Rotoscope, a device that projected frames of film onto the animator's workspace, providing the animator with a guide for their drawings. Computer animation brings the potential for automating the process of creating animated motion from observations of real moving objects. Optical, mechanical, or magnetic sensors record the movements that can then be transferred to animated characters. This process is commonly referred to as motion capture, although the act of "capturing the motion" is only one aspect of creating animation from observations of real motion. Capturing the motion is only part of the problem of using this data to create animation. Commonly, the term motion capture is used to describe the whole process. This has the problem that it neglects other aspects of the task,

and sets up some unreasonable expectations about how much work needs to be done to move from the sensor data to animation. Motion capture for animation implies that we will somehow be changing something about what we have recorded-if we did not intend to change something, we could have simply replayed a video. Almost always, we will at least change the character to which the motion is applied from a real person to some graphical model. By definition, to animate means to bring to life, so technically it is the act of making a lifeless object (a graphics model) move that makes what we're doing animation. While we have said this before (and will say it again), motion capture is only one part of the process for creating animation from observation. All that said, I will often be guilty of abusing the term "motion capture" in this book, in this very same way

DRAWING TECHNIQUES FOR ANIMATION

Drawing is about observation. And if you want to improve your drawing skills, then you must focus on how you see the subjects that you draw.
It seems simple enough – "draw what you see". We've all heard it before and it is a fine suggestion because it does work. We *do* need to draw what we see. But if you don't know what to look for, or perhaps more importantly – how to look for it, then this statement can be frustrating.
Fortunately, there are several techniques we can use to help us see – thus helping us to improve our drawing.
These seven techniques are designed to improve your accuracy in your drawings. They aren't a perfect solution and they do require a bit of practice in order to master them. But keep in mind that drawing is a skill that can be attained by anyone if they are willing to put in a little work.
**Each technique is briefly discussed below with links to detailed lessons on the subject.**

1. Sighting / Measuring
We can use "tools" to measure proportions of our subject in order to improve the accuracy of what we record in our drawings. We can use any tool that we wish, but a pencil works surprisingly well.
Here's how it works. Begin by extending your arm out toward your subject with your pencil in hand. Be sure that your arm is extended completely without any bending at the elbow. Bring your line of sight down to your shoulder and close one eye. Use the end of your pencil (or the tip) and line it up with the top of the highest or widest point on the object. Use your thumb to mark the bottom.
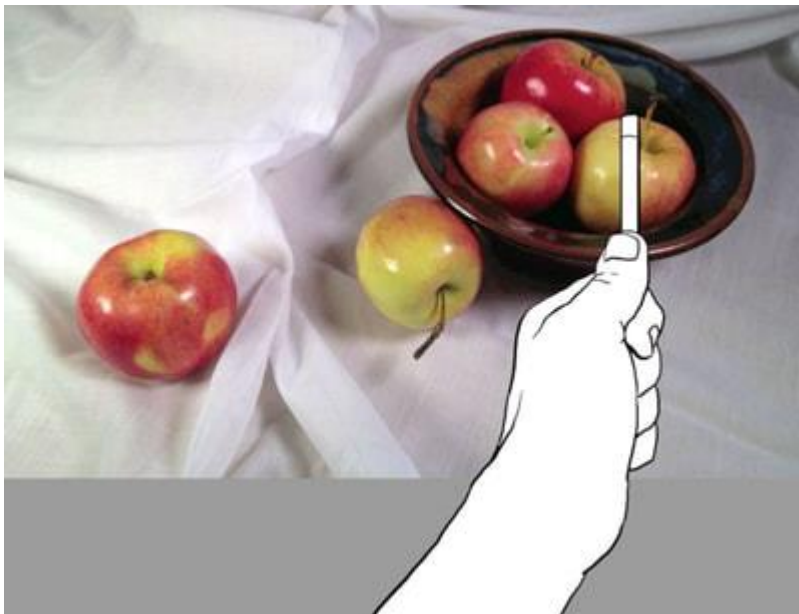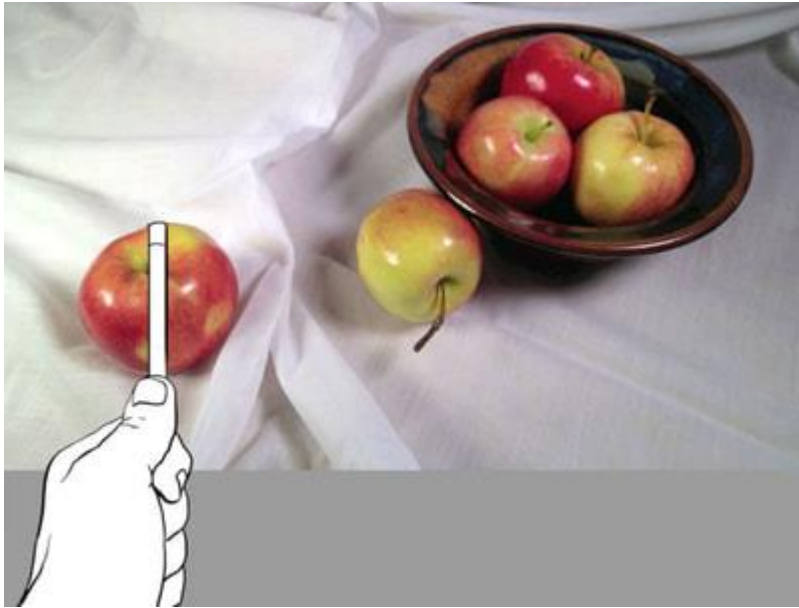
You now have a measurement "unit" that you can use to compare and record the size of the object on your drawing surface. You can use this measurement to record the object on the drawing surface or simply make comparisons to what you have already drawn.
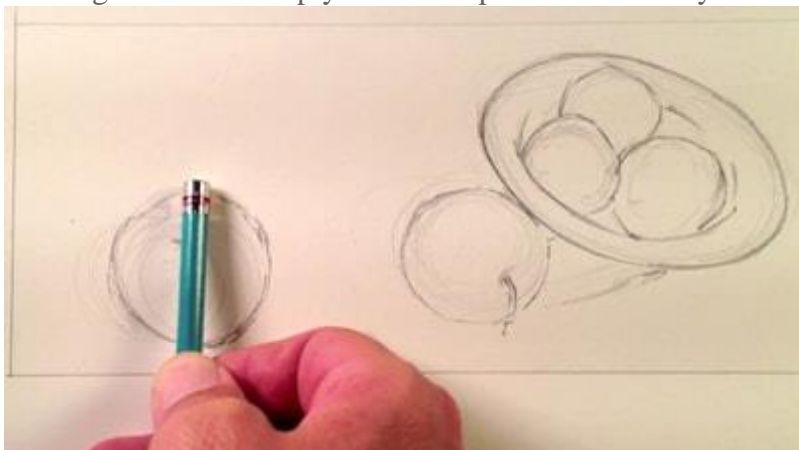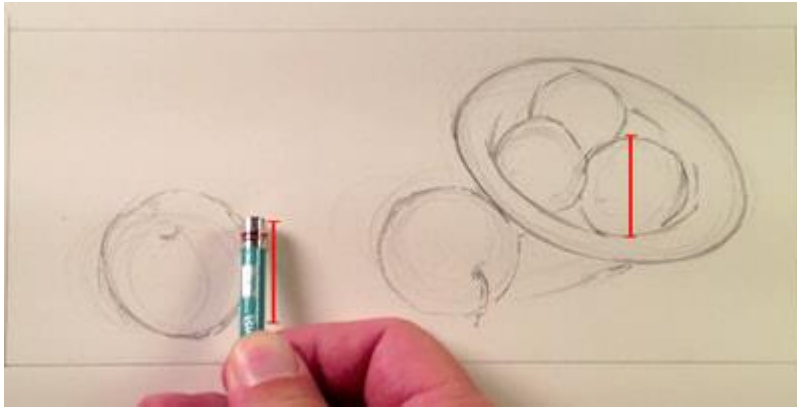
This technique works best when drawing directly from life. However, a modified version can be used when drawing from photos if the size of the photo reference is exactly the same size as the drawing surface. Simply take the measurement from the reference and bring it over to the drawing surface. There's no need to keep your arm straight or close one eye since your paper is the same size as your reference.

2. The Grid Technique

The grid technique is an approach to drawing that breaks the subject down into "bite-sized" pieces of visual information. A grid is drawn over a photo reference while a proportional grid is drawn lightly on the drawing surface. Each square within the grid on the reference corresponds to a square on the drawing surface.
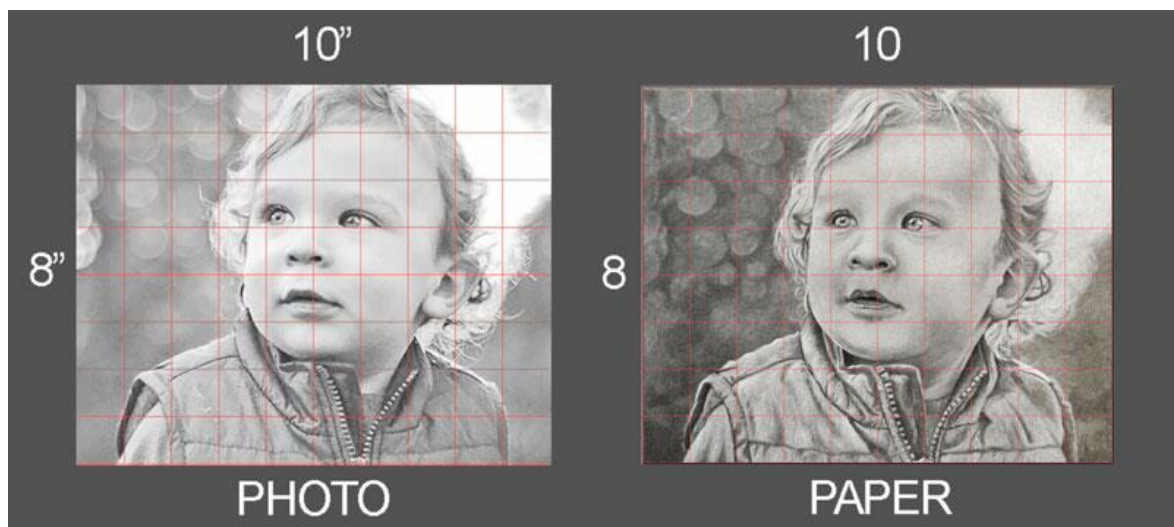
Since the subject is simplified into smaller squares, the lines, shapes, and values are also simplified making it easier to focus on what you are actually seeing.

This technique works for any subject that you draw, but it is most useful for portraits when accuracy is of the upmost importance.

When using this technique, be sure to draw your grid lines very lightly on the drawing surface. You don't want the grid lines to be visible when the drawing is complete.

3. Triangular Grid Technique

An alternative to using the traditional grid technique is the triangular grid technique. This technique uses far less lines but requires a bit more from the artist.

With this technique, a grid made of triangles is created on both the photo reference and the

drawing surface. This grid is created by dividing the length and width and then drawing lines diagonally from each of the corners. This creates eight triangles within the grid.
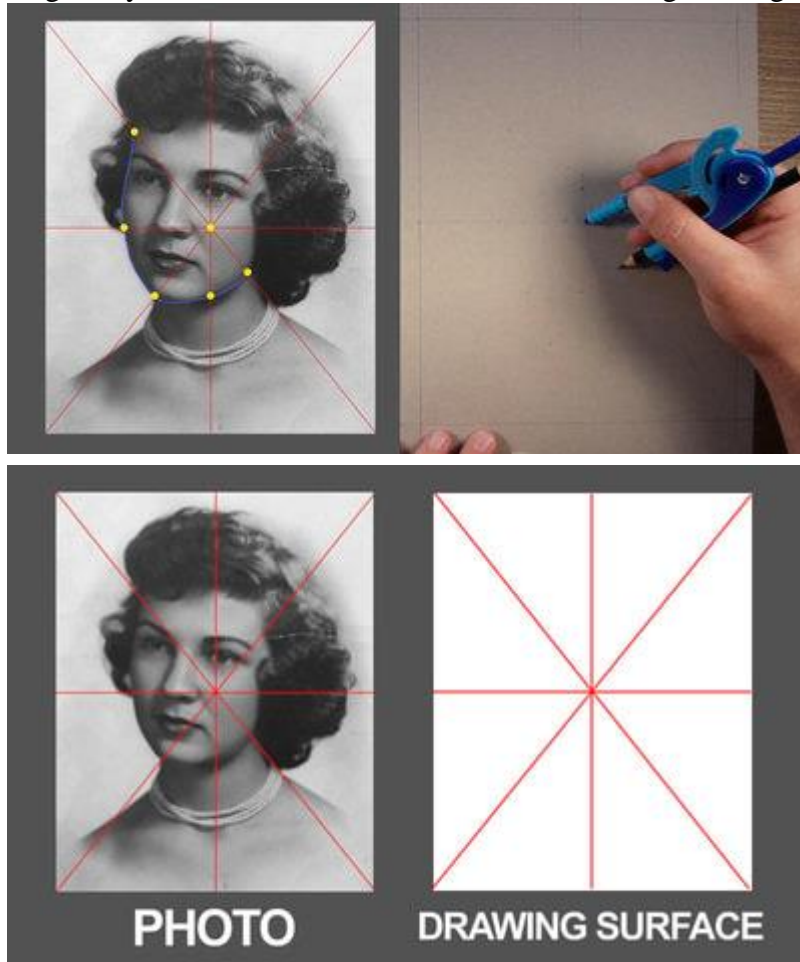

Using a compass or proportional divider, measurements can be taken from the photo reference and then transferred to the drawing surface. The end of the compass is positioned in the center as marks are made in locations where important bits of information cross over the lines of the grid.

This essentially creates a collection of marks that can be used to draw the contour lines of the subject – somewhat like "connecting the dots". Here again, this technique can be used for drawing any subject, but it is most useful for portraits.

4. Identifying Basic Shapes and Positive and Negative Space

Many objects are quite complex, making them seem difficult to draw. However, even the most complex subjects can be simplified into basic shapes. When we break subjects down into basic shapes, it becomes easier to be accurate in our drawing. Instead of letting the details get in the way, we can focus on the simplified shapes and the relationships of those shapes – leading to greater accuracy in the drawing.
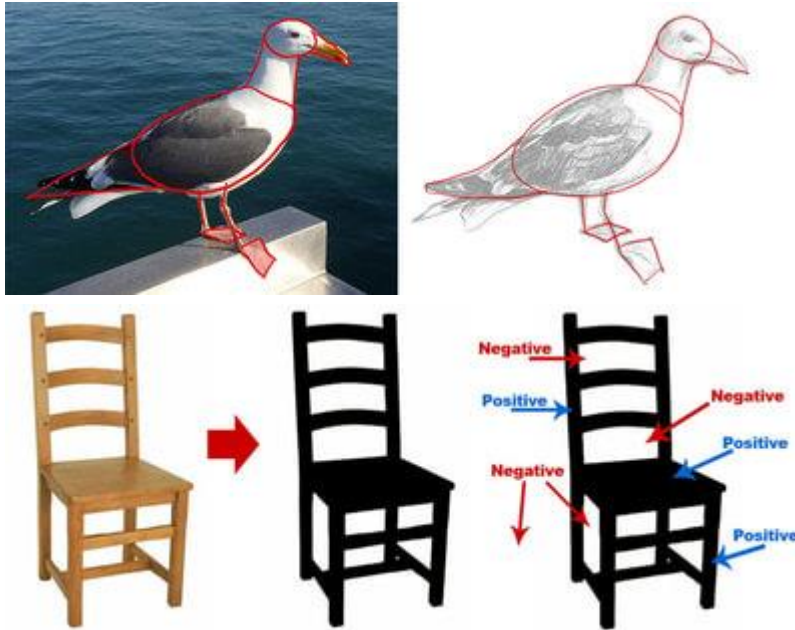
These shapes can be drawn loosely and as we become more confident with the shapes, we can add the details.

We can go even further with shapes when we lay out a drawing. We can pay attention to the relationships of positive and negative shapes (spaces) within the scene. The open areas around the subject form negative shapes.

We can compare the relationships of the positive and negative shapes to ensure that the proportions are correct.

5. Linear Perspective

Linear perspective is a system that uses lines to aid the artist in creating the illusion of space in a drawing. It is a structured system that uses a vanishing point (or points) as a reference point for drawing forms. Although linear perspective can be used for drawing any object in space, it is mostly used for drawing architectural elements such as buildings, windows, doors, and interior scenes.

One Point Perspective – In this form of perspective, one vanishing point is placed on the horizon line. This type of perspective is typically used when the objects within the scene are viewed from a "flat" view. When this occurs, simple shapes (squares, rectangles, etc.) can be used to describe the objects. To create the illusion of depth, lines are drawn from the corners of objects back to the vanishing point.

Two Point Perspective – Two point perspective differs from one point perspective in that it uses two vanishing points instead of one. Both vanishing points are placed on the horizon line with a good amount of space separating them. Instead of starting with the shape of the object like we do with one point perspective, the corner of the subject is typically drawn first. Lines are then drawn from each end of the corner back to each of the vanishing points to facilitate in creating the illusion of space.

Three Point Perspective – Three point perspective is used to a lesser degree since it is mostly reserved for drawings that feature extreme angles. When drawing the subject from a "worm's eye view" or a "bird's eye view", three point perspective can be extremely useful. As the name implies, three point perspective utilizes three vanishing points. Two of the vanishing points are placed on the horizon line while the third is either placed far above or far below.
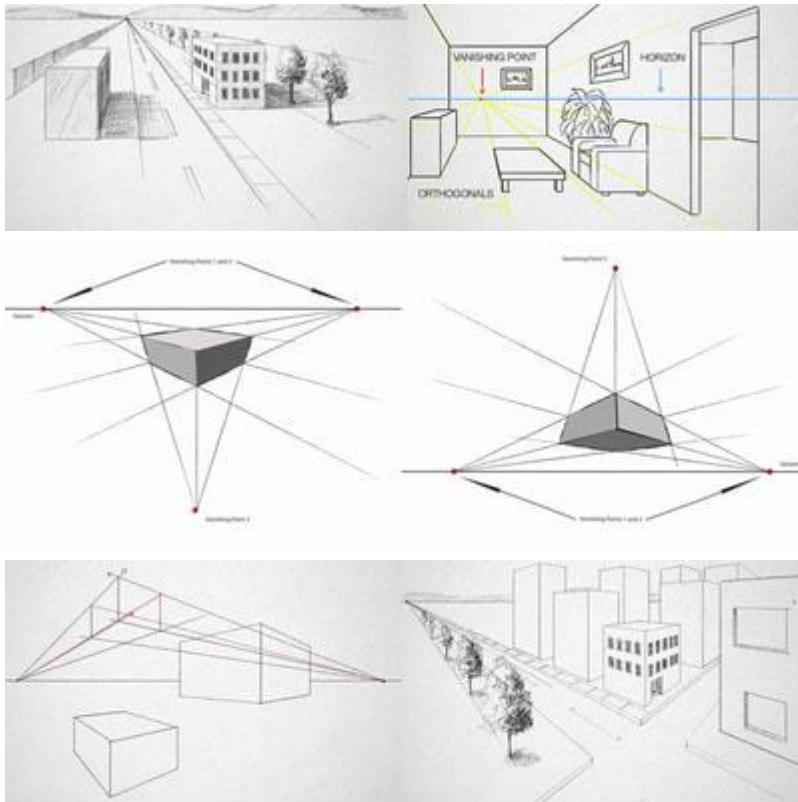
5. **Basic Facial Proportions**
   Although every face is different, certain approximate facial proportions do exist. We can use these approximations to ensure that the features of the face are placed in the right locations and that the size of each of the features are natural. We still have to observe the face when drawing a portrait, but knowing the general locations of the eyes, nose, mouth, etc. can help us be sure that what we are putting to paper is "in line" with what we are observing.
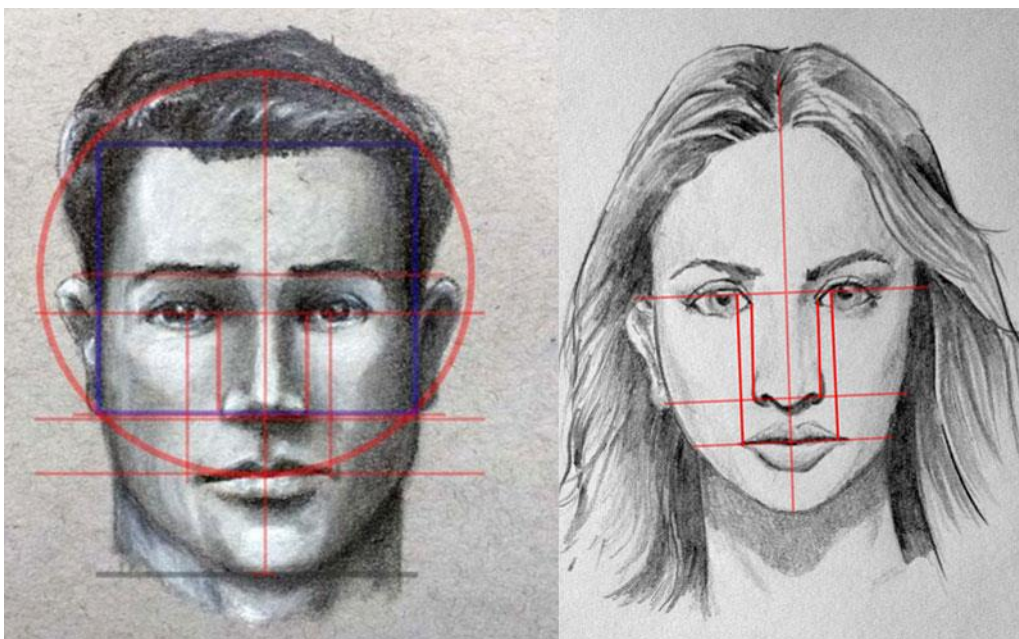

7. Figure Proportions and Gesture Drawing
Just as knowledge of basic facial proportions can be used to ensure accuracy in portrait

drawing, knowledge of approximate figure proportions can aid in creating accurate figure drawings. Every figure is different so it's important to recognize that there is no "one size fits all" solution to figure drawing. But combined with careful observation, knowledge of the basic proportions of the figure certainly helps in creating accurate drawings.

Gesture drawing can also be used to improve accuracy, especially when drawing the figure. Gesture drawing utilizes quick, loose lines and shapes to "find" the pose of the figure. Details are mostly omitted as the focus is to capture the weight and proportion of the figure in a short amount of time.

After the initial gesture is drawn, the artist can develop the details of the drawing after they are confident with the accuracy of the initial sketch. Gesture drawing is especially useful when the figure is in a position where the basic proportions are more difficult to recognize as is the case with foreshortening.
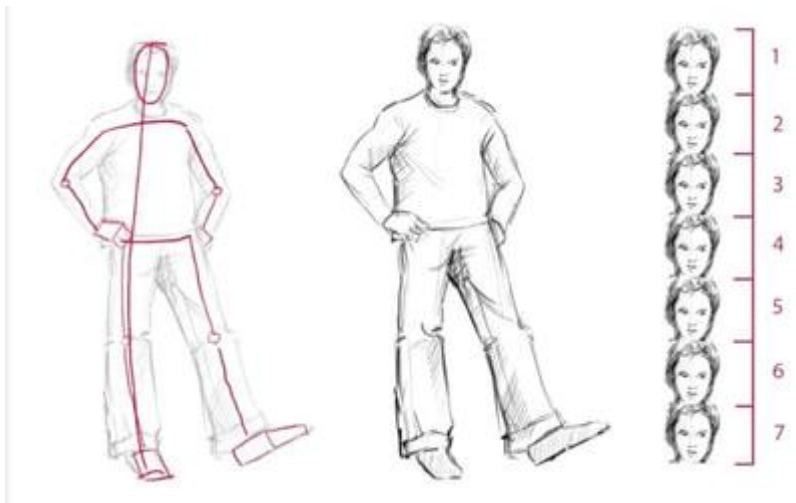
There are many kinds of lines.

Short ones:

Long ones:

Curved lines:

And some that get off to a good start but then seem to poop out:

You can do anything with lines. Years ago there was a silly gimmick that went like this:

Do you know what this is? It's a T.V. screen for people who squint.

Know what this is? It's a tornado with the hiccups.

There are sturdy lines: | staggering lines: /" and lines that just

can't seem to get off the ground: ⌒ ⠆ There are obsequious lines that

always curtsy: (proud lines with chests out:) obese lines:)

Normal lines: | stretched lines: | and squashed lines: ⌇

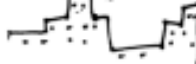There are graceful lines: 🦋 ugly lines: 𝄃

Gregarious lines: 〰〰〰〰 | loners:

Choppy lines: ᵕᵕᵕ continuous lines: ⌇⌇⌇

They are the shortest distance between two points: •————•

They make music possible (with the help of spaces): 𝄞

There are dotted lines to sign on: ⁚⋯⋯⋯⋯⋯⋯⋯⋯⋯⋯

A line of bull: a sky line:

Invisible lines like the equator:

There are shore lines:

airlines:

Scrimmage lines:

fishing lines:

The moon, prima donna of the heavens, in its proud fullness took its place on the stage of night, and performed its slow, graceful way across the dark blue, speckled sky in a costume of borrowed light.

Poetic lines on a page:

and the lines of old age.

Rebellious lines,

lines that obey,

leftover lines to be thrown away

And if you're a theatre goer--lines in a play:

Lines that soldiers form while

and last but not least, lines of wondrous beauty