METBD 050
Drawing Tool Notes:

Drawing toolbar: (View – Toolbars – Drawing)

Create Drawing Objects:
1. Pick the type of object to be created from the toolbar or from the AutoShapes menu.
2. Click and drag in the document to create the object.
   a. Press the Shift key while dragging and lines will be horizontal, vertical, or aligned with snap axes oriented at angle intervals of 15°.
   b. Pressing the Shift key while dragging AutoShapes has the following effects:
      - Oval → becomes a circle.
      - Rectangle → becomes a square.
      - Polygons → become “regular” where all sides have the same length.
c. Pressing the Ctrl key while dragging an objects causes the initial selection point to be the center of the object.

d. Pressing the Shift and Ctrl keys at the same time while dragging causes objects to be centered and regular.

e. Many AutoShapes have yellow anchors which can be dragged to change the AutoShape.

![Yellow anchor for modifying the AutoShape](image)

f. Arcs can be created in any of the 4 Cartesian quadrants using the Arc AutoShape. Press the Shift key to make it round having a 90-degree included angle. Use the yellow anchors for included angles more or less than 90-degrees.

![Created Pressing the Shift key](image) ![Created w/ Shift Key and Dragging Yellow Anchor](image)

g. The Freeform AutoShape allows the user to create non-standard, closed geometric shapes. Click at each required corner and close the object by picking on the first point again. These objects have a fill color.

![Freeform AutoShape](image)

Right-clicking on the object opens a menu. One of the items in this menu, “Edit Points” allows the user to move the points used to create the Freeform.

h. The Curve AutoShape can be used to create curved objects. Double-click in the last position to close the curve. The parabola shown below was created using the Curve AutoShape. The coordinates were defined before drawing the curve. Like the Freeform AutoShape, the points of a Curve can be edited.

![Curve AutoShape](image)

i. Text Box objects are used to include text in Word drawings. These objects do not scale well when grouped with other objects.
Formatting Drawing Objects:
1. Standard formats can be applied to any drawing object by selecting the object then picking the appropriate tool from the drawing toolbar. The formatable parts of a drawing object include:

   a. Line Style – specify the thickness of the line or AutoShape boundary line in points. (You will recall that 72 points = 1 inch.) This tool can also change the line style as shown below.

   b. Dash Style – specify the line style as solid, round dot, square dot, dash, dash dot, long dash, long dash dot, or long dash dot dot.

   c. Arrow Style – create arrows at either or both ends of a line object. The figure below shows the basic types. Pick More Arrows… to specify other arrowhead styles. Arrows can be applied to line type objects (lines, arcs, and curves).

   d. Fill Color – Sets the Color or Fill Effects (pattern) of the interior of an AutoShape. Can be set to “No Fill” to see through the AutoShape.

   e. Line Color – Sets the color of the object’s line. Can be set to “No Line” to hide the line on AutoShapes.
2. Other formats are available by right-clicking on the object and selecting “Format AutoShape” from the menu. This option opens the dialog box shown below.

The Size tab permits the sizing and rotation of a drawing object. Objects can be scaled (increase or decrease the size) using this tab as well.

The Layout tab is used to specify how text wraps around the drawing object. Additionally, it can be used to specify horizontal and vertical alignment of the drawing object on the page.

The Text Box tab is used to set the internal text margins of the Text Box. This is the distance text appears from the edges of the Text Box.

Nicely Proportioned Arrowheads
Screen Captures:

1. Often times, we want to capture something from our screen for inclusion in a document. To capture the screen, press the “Print Scrn” button to capture the screen image in the clipboard. Select a place to put the picture in your document and pick the Paste button to insert the picture into the document. The picture can be cropped using the crop tool which is found on the Picture toolbar. To crop, select the crop tool, then click on a picture anchor and drag.

![Screen Capture](image1)

2. To capture the active window, press the Alt button while pressing the Print Scrn button. Place and crop in the same manner as in number 1.

Snap and Grid:

1. Snap and grid are tools used to aid in creating proportional and scale drawings in Word. Access the Drawing Grid dialog box through the Draw menu on the Drawing Toolbar. An invisible grid, similar to the grid on graph paper, can be used in a Word document. The spacing of the grid can be specified in the Drawing Grid dialog box. The spacing can only be specified to TWO decimal places. When the “Snap objects to grid” is checked, the cursor will tend to “snap” or “jump” to the intersection points of the grid. Because of rounding errors, grid settings should not be changed throughout a drawing session.

![Drawing Grid](image2)

2. The margins can be specified as the origin of the grid. As an alternative, any horizontal or vertical distance from the edge of the page can be specified as the grid origin.

3. Gridlines can be displayed on the Word document to aid in creating a drawing. These gridlines are not printed with the document.

4. Sometimes it is easier to move existing objects for centering with the “Snap objects to grid” unchecked. This is particularly true when trying to align text in a Text Box with a line or other drawing object.
Move, Copy and Paste:
1. Drawing objects can be moved by clicking on the edge of the object (cursor changes to indicate move mode) and dragging to the new location.
2. Drawing objects (and groups) can be copied. Pick on the object and pick the copy button to place a copy of the object in the computer clipboard. Select the new location for the object and pick paste to place the object in the document. As long as the object anchors are visible, the object(s) can be dragged into exact position.

Flip, Rotate and Align Objects:
1. All drawing objects can be flipped or rotated, with the exception of Text Box objects. The flip and rotate tools can be found in the Draw menu found on the Drawing Toolbar.

2. Free Rotate – Pick object, then the Free Rotate button. Click on one of the green anchors and drag to spin. Release the mouse button to keep the rotation. Press the Shift key to snap to the alignment lines.

3. Objects can be selected (Press the Shift key while selecting multiple objects) and aligned horizontally or vertically. The alignments can be specified to be the left edge of the leftmost object, the center of selected objects, or the right edge of the rightmost object. The alignments can also be specified to be the top, bottom, or middle of the selected objects.
Grouping:
1. Individual drawing objects can be Grouped so that they can act together when being rotated or flipped.
2. To group objects, select them (drag a window with the select tool, or pick them individually while holding down the Shift key) then right click, pick Grouping – Group. Alternately, select Group from the Draw menu of the Drawing Toolbar.

Order:
1. When drawing objects are created they are placed on transparent layers within the document. It is possible to switch the order of these layers to hide or display different parts of drawing objects.

Text Wrapping:
1. Found in the Layout tab of the Format Object dialog box, this function defines how text will wrap around (or behind or in front) of an object. Typically, Square is adequate. In this case, the text will treat the object as a rectangle and will place text around it. Experiment with the other options.