

3 THE *OFFICE* DRAWING TOOLS

LEARNING OUTCOMES

In the second word processing tutorial you learned how to work with a longer document (the Term Paper). You practiced inserting page numbers, formatting text, using the indent markers, creating sections and columns of text, finding and replacing text, moving and copying text, putting borders around blocks of text, and wrapping text around pictures or charts.

After completing lessons one and two, you should be beginning to think of yourself as reasonably proficient at word processing, but there is still much to learn. In this tutorial you will be introduced to functions of *Word* that are especially useful when working with images (pictures, charts, and so forth). The set of *Word* drawing tools is extensive, easy to use, and powerful in the sense that they enable anyone to create good quality images or designs for a multitude of practical applications. Teachers, in particular, should familiarize themselves with these drawing tools, not only for their own purposes, such as the preparation of handouts for class, but also so they can teach the tools to their students so they, too, can use them for project work of all kinds.

Lesson 3 thus will cover the following:

- The tools available for drawing
- Drawing, moving, rotating, resizing, and otherwise editing simple shapes and lines
- AutoShapes
- Selecting one or more objects at once—overlapping, ordering, aligning, and rotating objects
- Using colors, patterns, and other visual effects
- Grouping, ordering, and aligning objects
- Working with text and word art
- Working with diagrams, organization charts, clip art, and other images
- Bringing it all together—creating a class newsletter

A caveat before you begin: You'll find it easiest to use the tutorial if you follow the directions carefully. On computers there are always other ways of doing things, but if you wander off on your own be sure you know your way back!

3.1 GETTING STARTED

This tutorial is designed to give you practice working with the drawing tools that are built into the various *Office* applications, including *Word*. Drawings that you create in one *Office* application such as *Word*, can be easily copied and pasted into other *Office* applications, such as *PowerPoint* or *Excel*.

The only way to learn the skills required to get the most out of the drawing tools is to use them. This lesson will get you started in that direction, introducing you to all the tools and showing you how to work with them. But if you want to become proficient, you will need to work with them as much as possible and experiment with ideas of your own for applying the tools in the creation of art work of all kinds. Perhaps you already have a natural flair for drawing, in which case you will especially love these tools. But even if you think you don't have a flair for drawing, you may discover, as you become adept in the use of the drawing tools, that you have more ability than you ever dreamed.

Showing the Full menus and organizing the Toolbars

Recall from Lessons 1 and 2 that, when using any of the *Office* programs, it is best to be able to see the full menus at all times. Unless you set the Customize options to show the full menus, you will only see a few of the items in each menu at the top of the *Word* window. So let's start out by setting the Option in *Word* to "Always show full menus."

In the **Tools** menu, select **Customize...**, then in the dialog box that pops up, select the **Options** tab (Fig. 3.1)

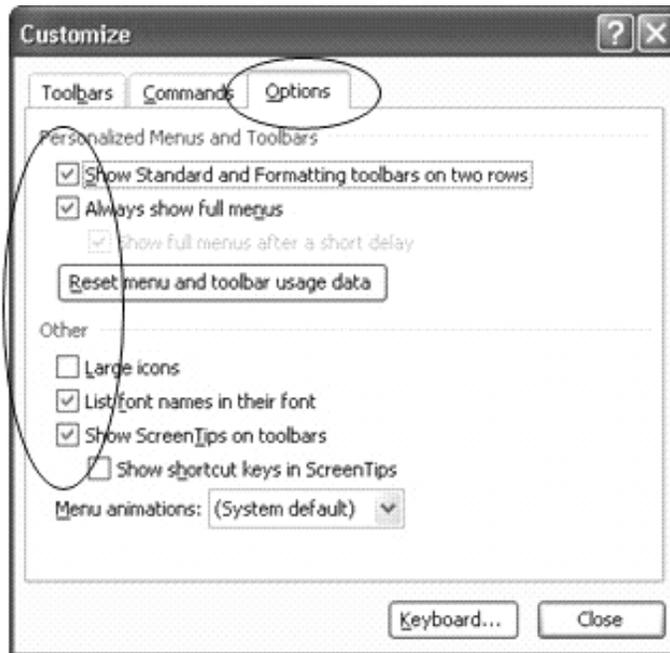


Fig. 3.1 The Customize dialog box

Make sure there is a **check mark** next to the item to **Always show full menus**

While you're at it, check the box next to **Show Standard and Formatting toolbars on two rows**, **List font names in their font**, and **Show ScreenTips on toolbars**

Click the **Close** button when you're ready

Displaying the Drawing toolbar

When the Drawing toolbar (Fig. 3.2) is open, it is usually displayed at the bottom of the *Word* window (lower left, above the Start button).

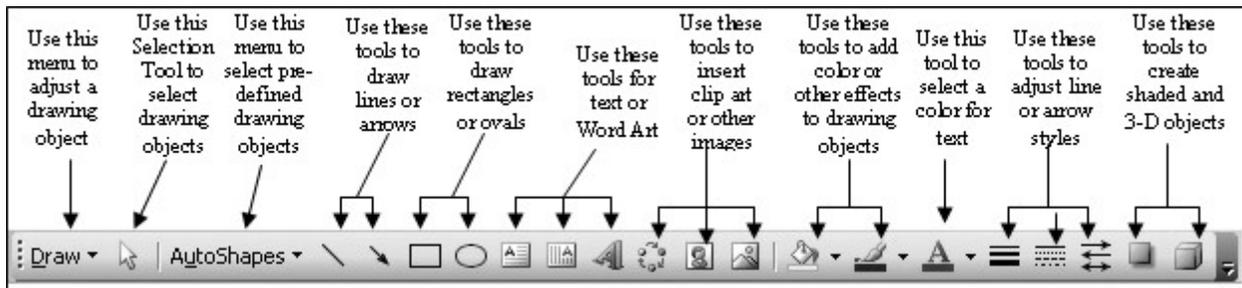


Fig. 3.2 The Drawing toolbar (annotated)

Check to see that you have the **Drawing toolbar** displayed on your screen

If you do not see the **Drawing toolbar**, from the **View** menu select **Toolbars**, then in the **Toolbars sub-menu** put a **check mark** next to **Drawing**

Changing the Page Orientation

There are two possible orientations for a page in Microsoft *Word*—portrait and landscape. You want landscape orientation for the exercises that follow. Here is how you select one or the other.

From the **File** menu select **Page Setup**

Make sure the **Margins** tab is selected in the **Page Setup** dialog box (Fig. 3.3) and, in the **Orientation** section of the dialog box, click on the **Landscape** icon, then click on **OK**

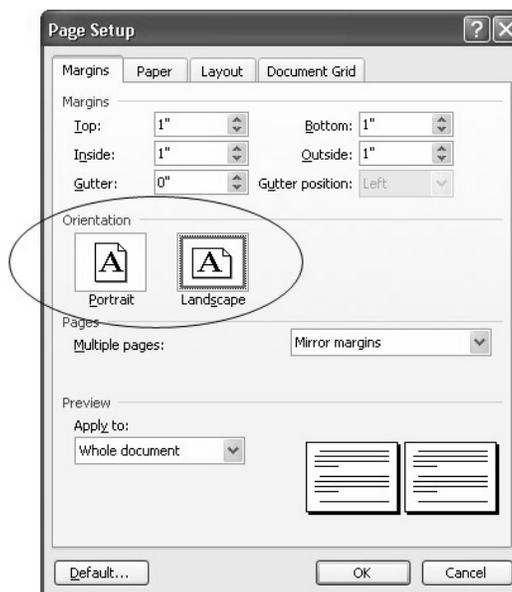


Fig. 3.3 The Page Setup dialog box, showing the page orientation icons

Notice that landscape orientation turns the page on its side. This mirrors the orientation of the computer screen and often makes it easier for you when you are working with drawing objects.

In order to see how **landscape orientation** looks, go to the **Standard** toolbar at the top of the window, click on the **zoom tool** (Fig. 3.4), and zoom to **75%**

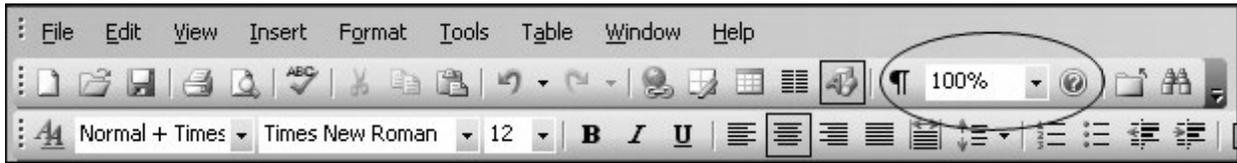


Fig. 3.4 The Zoom tool in the Standard toolbar

This will allow you to see the whole page at one time on the screen. Use the zoom tool to zoom in and out of the page. Zoom out when you need to see the page as a whole; zoom in when you want to work in detail on a particular object in your drawing. In the sections that follow, you will practice doing this and use most of the tools in the Drawing toolbar.

3.2 DRAWING, MOVING, ROTATING, RESIZING, AND OTHERWISE EDITING SIMPLE SHAPES AND LINES

Working with a drawing canvas

In this section, you will learn how to work with a drawing canvas (Fig. 3.5).

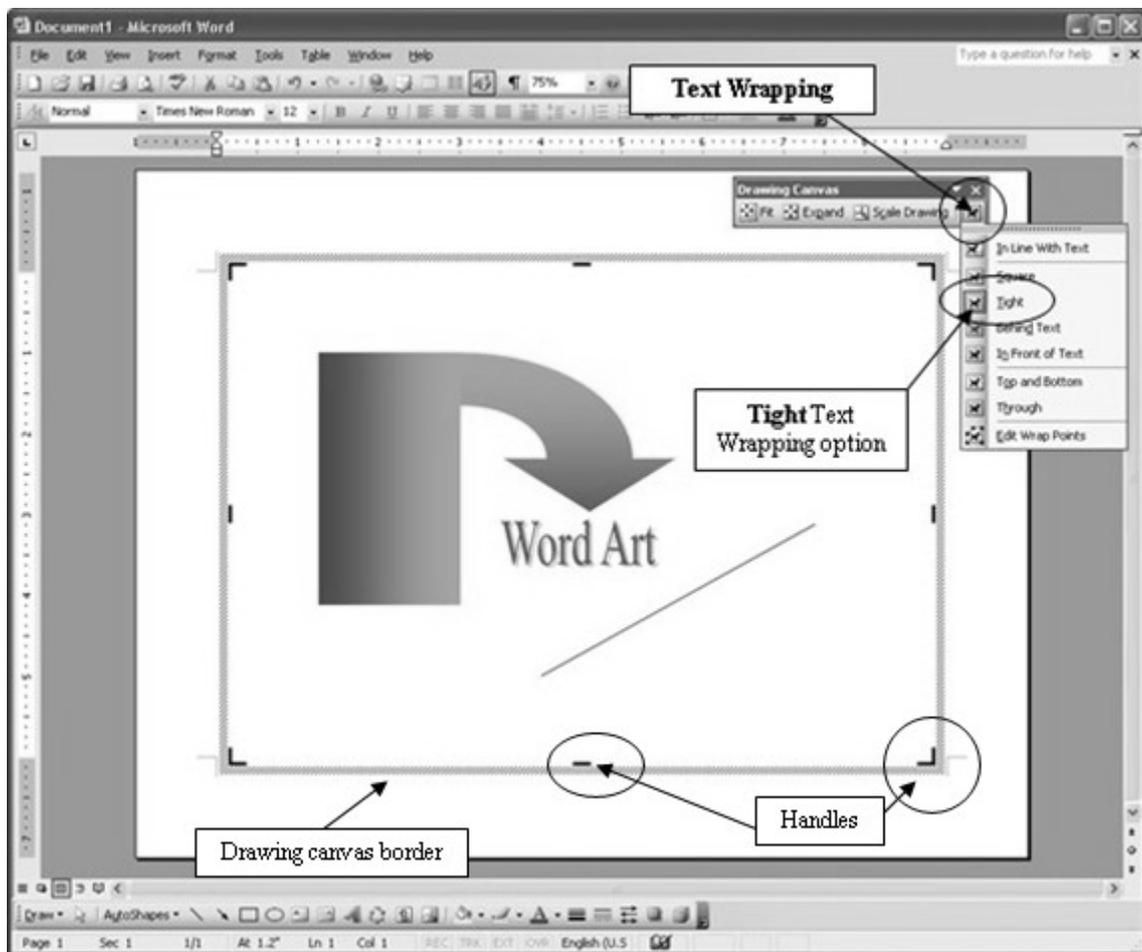


Fig. 3.5 The drawing canvas and the Drawing Canvas toolbar

When you first select a drawing tool from the toolbar at the bottom of the window, the drawing canvas appears on the document page (Fig. 3.5).

You don't have to use the canvas for your drawing. If you start drawing something outside the border of the canvas, the canvas will disappear off the screen, and you can proceed without it. But it is often useful to use the drawing canvas because the various objects you draw on the canvas (inside the bordered box) are thus treated as a single object when you are working with the canvas as a whole (moving it around on the page, copying it, or pasting it, for example).

The initial dimensions of the canvas are set by default. You can change the dimensions to suit your own purposes. This is easiest to do if you set the Text Wrapping option to "Tight."

To do this, click on the **Text Wrapping tool** to pull down the **Text Wrapping options** (Fig. 3.5)

Click on the **Tight** text wrapping option

Now use the **handles** that appear at the edges of the drawing canvas (Fig. 3.5) and grab **any handle** to drag it in or out to stretch or shrink the **drawing canvas** (end up with the size of the drawing canvas an inch or so less than the overall size of the page, as illustrated in Fig. 3.5)

In the next set of exercises, you are going to practice creating drawing objects using both the basic drawing tools for lines and rectangles and ovals, as well as some of the auto shapes available from the AutoShapes menu. If you are unsure where to find a particular tool, check Fig. 3.2 on page 75 above.

Drawing lines

Let's start with drawing lines.

In the **Drawing** toolbar at the bottom of your document window on the screen (Fig. 3.2 above, p.75), click on the **line** tool to select it

Word displays a bordered box (the Drawing Canvas) on the page, inviting you to "create your drawing here." This box is called a *drawing canvas* (see Fig. 3.5 on the previous page).

Use the mouse to draw a **line** object anywhere **inside** the drawing canvas (don't worry if you click outside the drawing canvas and it disappears; just go ahead and draw the line anyway)

Simple as that!

Working with the lines and arrows

Complete the following tasks to learn how to work with and draw different styles of lines and arrows.

Click anywhere **off** the line and notice that the **handles** (little circles) at each end of the line **disappear**

You can only edit or move a drawing object such as a line if the handles are showing. The handles indicate that the object is selected. Clicking ON the object selects it; clicking OFF the object deselects it.

Click anywhere **on** the line now, and notice that the **handles** (little circles) at each end **reappear**

Position the mouse pointer anywhere **on** the line and notice how the cursor changes to a **crosshair**, which tells you that the line object is selected (with handles at either end)

Now, with the handles showing, you can edit the line.

Use your mouse pointer to locate the **Line Style** tool on the **Drawing toolbar** at the bottom of the document window. Then click on the **Line Style** tool to show the pop up **menu of line styles**

Select several of them to try out different **styles** and **thicknesses** for the selected line

Now use your mouse pointer to locate the **Dash Style** tool on the **Drawing toolbar** and click on the **Dash Style** tool to show the pop up **menu of dash styles**—select several of them to try out the different **dash styles** for the line that you've drawn

Next, use your mouse pointer to locate the **Arrow Style** tool on the **Drawing toolbar** and click on the **Arrow Style** tool to show the pop up menu of **Arrow styles**—select several of them to try out different **arrow styles** for the line that you've drawn

You can also draw arrows using the Arrow tool, which is immediately to the right of the line tool (Fig. 3.2). You can then use the Arrow Style tool to edit the arrow that you have already drawn.

When you are done editing the line, hit the **Backspace** key or the **Del** key to delete it from the drawing canvas

Working with rectangles and ovals

Creating and editing lines is simple enough. How about shapes such as rectangles or ovals?

Locate the **Rectangle** tool in the **Drawing toolbar**, click on it to select it, and use the mouse to draw a **rectangle** on the drawing canvas, then draw an oval, too

Notice the handles that surround the rectangle shape, four in the corners and four at the middle of each side. Notice, too, the ninth handle outside the rectangle—a small green circle (Fig. 3.6).

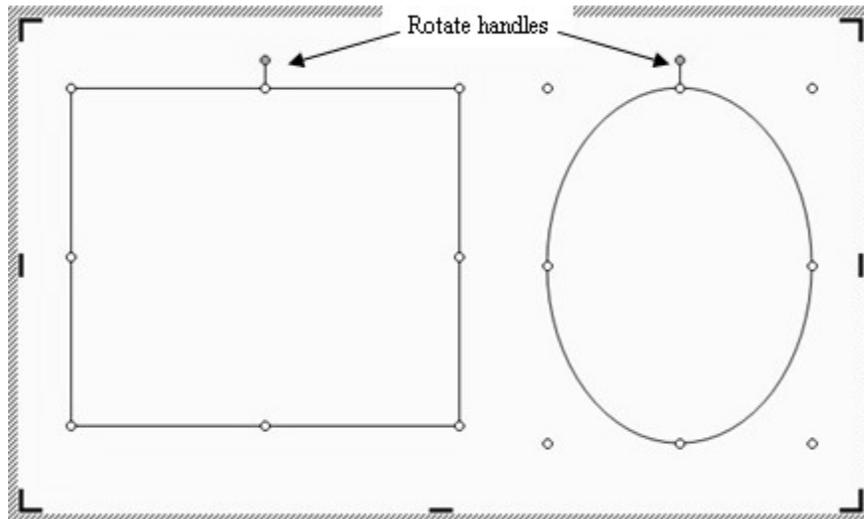


Fig. 3.6 The handles that accompany solid shapes such as ovals or rectangles

Rotating Objects

This small green handle enables you to rotate the shape very precisely either clockwise or counter-clockwise. Try this now.

Use the mouse to point at the **small green handle** (the rotate object handle) and drag from left to right or vice versa to **rotate** the rectangle object

While you have the rectangle selected, use the line style tool to change the border of the shape to **6 pt triple line**

When you are done editing the rectangle shape, hit the **Backspace** key or the **Del** key to delete it from the drawing canvas

Now for the Oval tool.

Locate the **Oval** tool in the **Drawing toolbar**, click on it to select it, and use the mouse to draw an **oval** on the canvas

Notice again the small green handle that enables you to rotate the shape. Try this now.

Use the mouse to point at the **small green handle** (the rotate object handle) and drag from left to right or vice versa to **rotate** the oval object

While you have the oval shape selected, use the **line style tool** to change the thickness of the border of the shape to **6 pt**

When you are done editing the oval shape, hit the **Backspace** key or the **Del** key to delete it from the drawing canvas

Drawing a perfect square or circle

If you want to draw a perfect square or a perfect circle, you must hold down the shift key at the same time as you draw with the rectangle tool or the oval tool. Try this now.

Select the **Rectangle** tool, hold down the **shift** key, and draw a **rectangle** of any size

Notice that it'll always be a square as long as you hold down the shift key.

Delete the square shape you just drew

Select the **Oval** tool, hold down the **shift** key, and draw an **oval** of any size

Once again, notice that it'll always be a perfect circle as long as you hold down the shift key. Remember this neat trick. It'll work with other software, too.

Moving drawing objects

Creating lines and other shapes is simple enough. But once you have a shape drawn, how about editing it and moving it around on the drawing canvas? To do either of these things, the line or rectangle or oval or other drawing object must first be selected (which means clicking on it so that you can see the handles around it). Let's practice doing this.

Slide the mouse pointer over the **Circle** and notice that the pointer changes to a **crosshair**

Hold down the **left mouse button** and **drag** to move the circle anywhere you like inside the drawing canvas

Resizing drawing objects

How about resizing drawing objects—changing their size and shape? To do this, the line or rectangle or other drawing object must be first selected so you can see the handles.

Make sure the **Circle** from the previous exercise is still selected—you should be able to see the handles around it

You must use a combination of the Shift key and one of the four corner handles (not the 4 handles on the sides and top and bottom) if you want to keep the shape perfectly circular and not distort it into an oval. Try this first.

Hold down the **Shift** key, then position the mouse pointer on one of the small **white** handles in a **corner of the shape** (not the green rotate handle), hold down the **left mouse button** and **drag** in or out to stretch or squeeze the circle

Notice that the shape keeps its regularity as a perfect circle. If you're not concerned about distorting the circle into an oval you can drag on any of the handles without holding down the Shift key. Try this now.

Position the mouse pointer on any of the small **white** handles, hold down the **left mouse button** and **drag** to stretch or squeeze the circle anyway you want

The same thing applies to rectangular or irregular shapes such as polygons in general or freeform drawings. When you click on the shape, it shows the handles around it. By holding down the Shift key and grabbing one of the handles in the corners, you can make the shape smaller or larger *without otherwise distorting it*. By grabbing any of the handles around the shape *without* simultaneously pressing the Shift key, you can distort the shape by making it thinner or fatter, taller or shorter—whatever.

Try this now.

Make sure the **Circle/Oval** is selected—you should be able to see the handles around it—then hit the **Backspace** key to delete it

In the **Drawing toolbar** select the **Rectangle tool**, and draw a **rectangle** on the canvas

Position the mouse pointer on any of the small **white** handles (not the green rotate handle), hold down the **left mouse button** and **drag** to stretch or squeeze the rectangle anyway you want

Now try it again, but this time hold down the **Shift** key, and notice the **difference** between using the **corner handles** or the **handles at the middle of each side**

When you are done practicing, hit the **Backspace** key to delete the rectangle shape

Editing (changing) straight lines or arrows

Editing a straight line or an arrow works a little differently than solid shapes such as ovals, polygons, or other irregular shapes, since you only have two handles to worry about—one at either end of the line or arrow. You use either of the handles to lengthen or shorten the line. You also drag on either handle to rotate it from either end.

Let's try this now.

Use the **Line** tool to draw a straight line anywhere on the drawing canvas, then grab a hold of the **handle** at either end and **drag the handle** in or out, up or down, so you can get a feel for how to change the **length** and **orientation** of the line

3.3 AUTOSHAPES

There is an item called AutoShapes in the Drawing toolbar which makes available quite a nice selection of pre-defined shapes for lines, connectors, arrows, flowchart symbols, and so forth.

Locate the **AutoShapes** tool in the **Drawing** toolbar and click on it to view the AutoShapes pop up menu (Fig. 3.7)

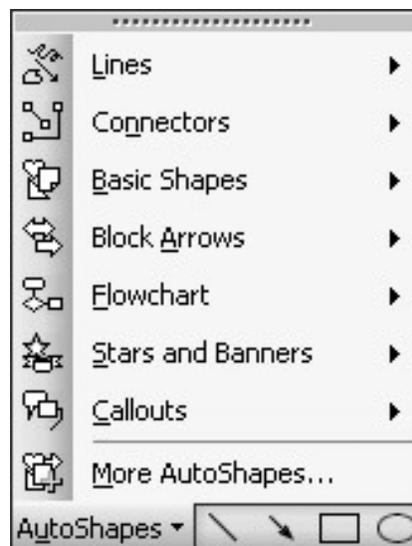


Fig. 3.7 The AutoShapes menu

Spend a few minutes now checking out the many shapes available to you, and try as many of them as you have time for, so you can see how easy they are to use

For example, draw at least one auto **Line** shape

Draw at least one auto **Connector** shape

Draw at least one auto **Basic** shape

Draw at least one auto **Block Arrow** shape

Draw at least one auto **Flowchart** shape

Draw at least one auto **Star or Banner** shape

Draw at least one auto **Callout** shape

Finally, check out and draw at least one amongst the auto **clip art** shapes from the **More AutoShapes...** option

Clear any objects you create from off the **drawing canvas** when you're done practicing with the AutoShapes

Tools are designed to make your life easier. Why would you go to all the trouble of creating your own shapes when many of them are already designed for you? You could use these AutoShapes with a class to help them learn the geometric shapes, could you not? This is included as one of the exercises in the SKILLS CONSOLIDATION section at the end of the lesson.

3.4 USING COLORS, PATTERNS, AND OTHER VISUAL EFFECTS

Colors and transparencies

The *Word* drawing tools give you lots of control over colors, patterns, and other visual effects, such as shadows and 3-D. Let's start with colors and transparencies.

Fig. 3.8 illustrates the Fill Color options dialog box that pops up when you click on the small arrow next to the Fill Color tool in the Drawing Toolbar (see Fig. 3.2 or use your mouse to point at the various tools in the Drawing toolbar till you find the Fill Color tool).

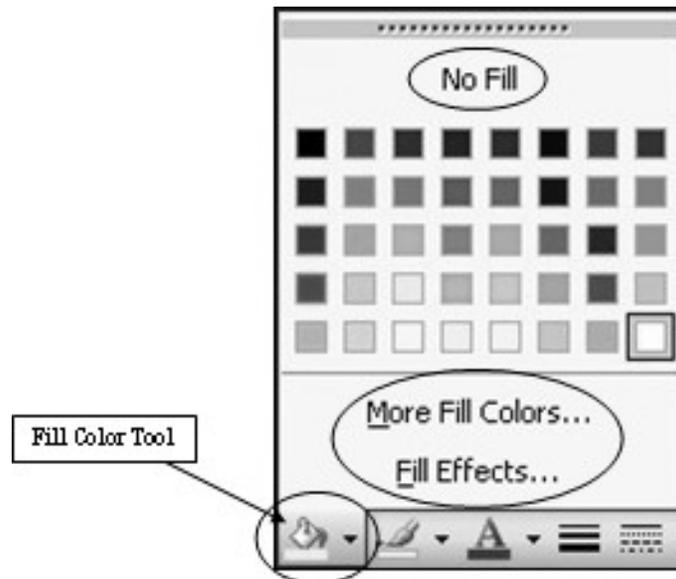


Fig. 3.8 The Fill Color options dialog box

Notice that you have options for a **transparent** object (**No Fill**), for an object filled with any one of a **range of colors**, or you can fill a shape or object with a **Fill Effect**.

Let's try each of these options now.

Start by drawing a rectangle on the blank drawing canvas that you already should have open on the screen, then click on the **small arrow** next to the **Fill Color** tool to bring up the **Fill Color options** dialog box

Click on any of the **40 colors** you see displayed in the dialog box and notice how your rectangle is **filled** each time with the color you choose

Click again on the **small arrow** next to the **Fill Color** tool and this time select the option for **More Fill Colors...**

You should now see the Standard and Custom Colors dialog box illustrated in Fig. 3.9.

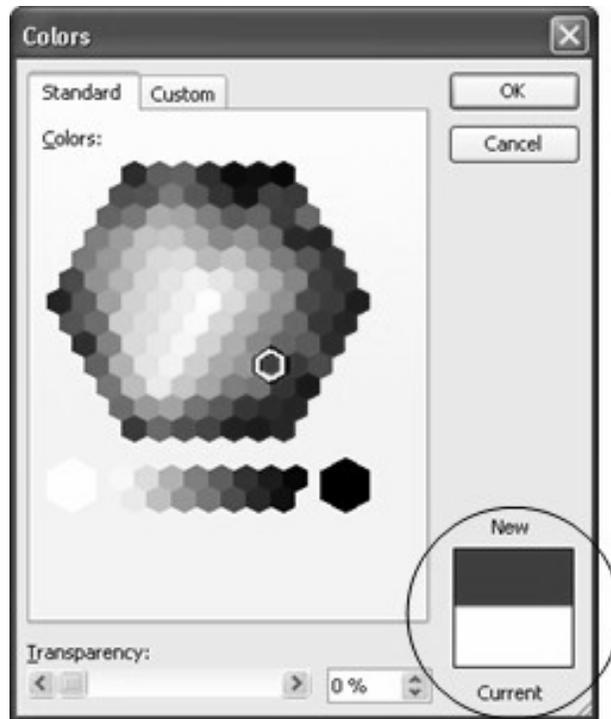


Fig. 3.9 The Standard Colors dialog box

The Standard Colors palette gives you a selection of 256 colors to choose from. All you do is click on a color in the palette. You'll see the **New** color immediately displayed in the box in the lower right corner of the dialog box so you can compare it to the **Current** color. Try this now...

Click on any color you like, check the **New** and **Current** color box to verify your selection, then click **OK** to see the new color of the rectangle

You can also set the **Transparency** of the Fill Color, thus allowing a drawing object that is hidden behind a shape to show through. Let's try this too...

Select the **Oval** tool in the **Drawing Toolbar** and draw an oval so that it **overlaps** the rectangle to some extent

Click on the **small arrow** next to the **Fill Color** tool and, from the **Fill Color options** dialog box, select the option for **More Fill Colors...**

Fill the **oval** shape with any color you like from the Standard Colors palette and click **OK**

Notice how it completely obscures the part of the rectangle that it overlaps.

Now select the **Fill Color options** in the **Drawing Toolbar**, select the option for **More Fill Colors...**, and this time drag the **Transparency slider box** at least half way across so you have at least a **50% transparency**, then click on **OK**

Neat, huh?

The oval shape looks like a piece of glass or transparent plastic or sheer silk. If the 256 colors of the Standard Colors palette aren't enough for you, you can use the Custom Colors palette instead (Fig. 3.10).

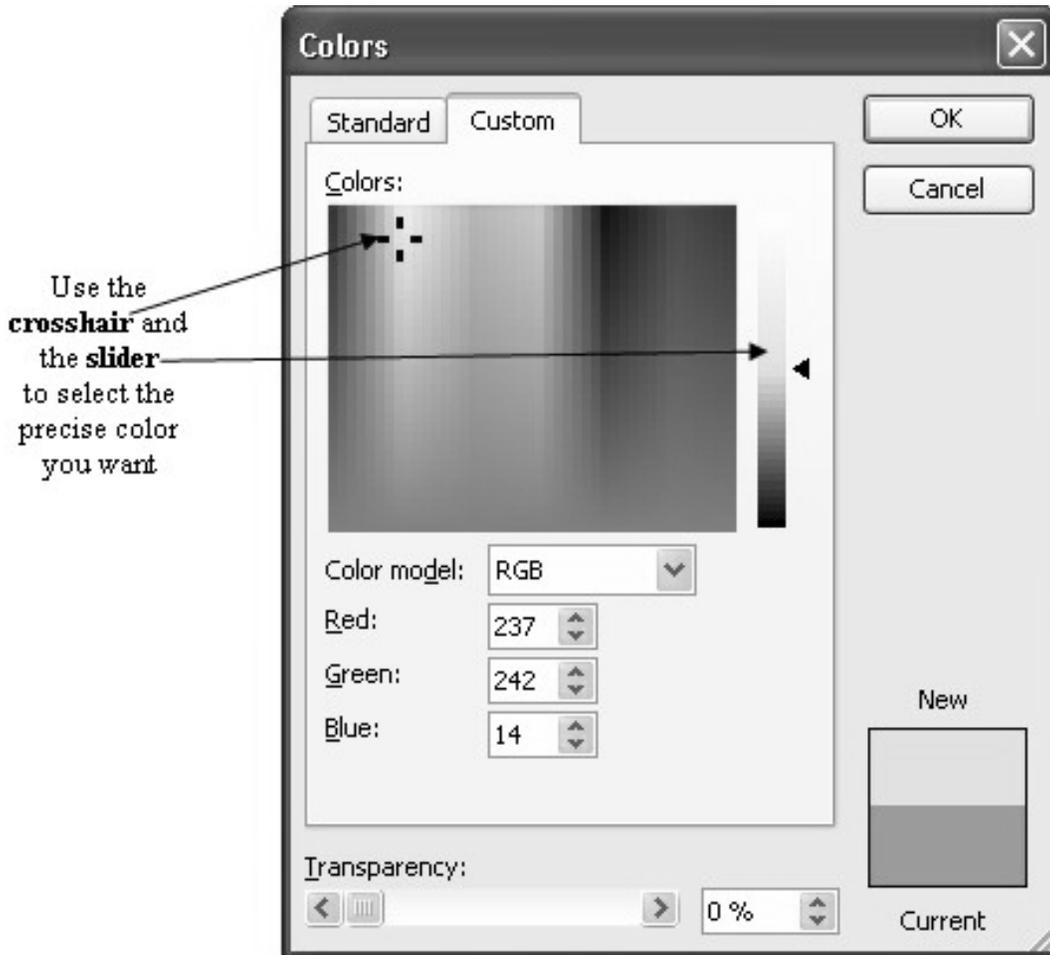


Fig. 3.10 The Custom Colors palette

Hold onto your seat, OK? Believe it or not, the Custom Color palette allows you to choose from any of over *16 million different colors!* Let's try this now...

Spend a few moments using the color mixers in the Custom Colors palette to practice creating a few of the multitude of colors available to you

Fill Effects

There are Fill Effects you can use along with color to improve the appearance of the objects you draw. For example, there are different gradients you can use to fill shapes with smoothly graded shades of color, different textures such as marble, slate, wood, cloth or canvas, different patterns, and so forth. You can even fill shapes with any picture you want—pictures that you may have taken yourself or which you might find amongst collections of pictures and other art work that are freely available on the web.

Let's try some of these options now.

Make sure you still have the **oval shape** selected, bring up the **Fill Color options** in the **Drawing Toolbar**, then select the option for **Fill Effects...** (see Fig. 3.8 above on page 82)

This will bring up the Fill Effects dialog box (Fig. 3.11).

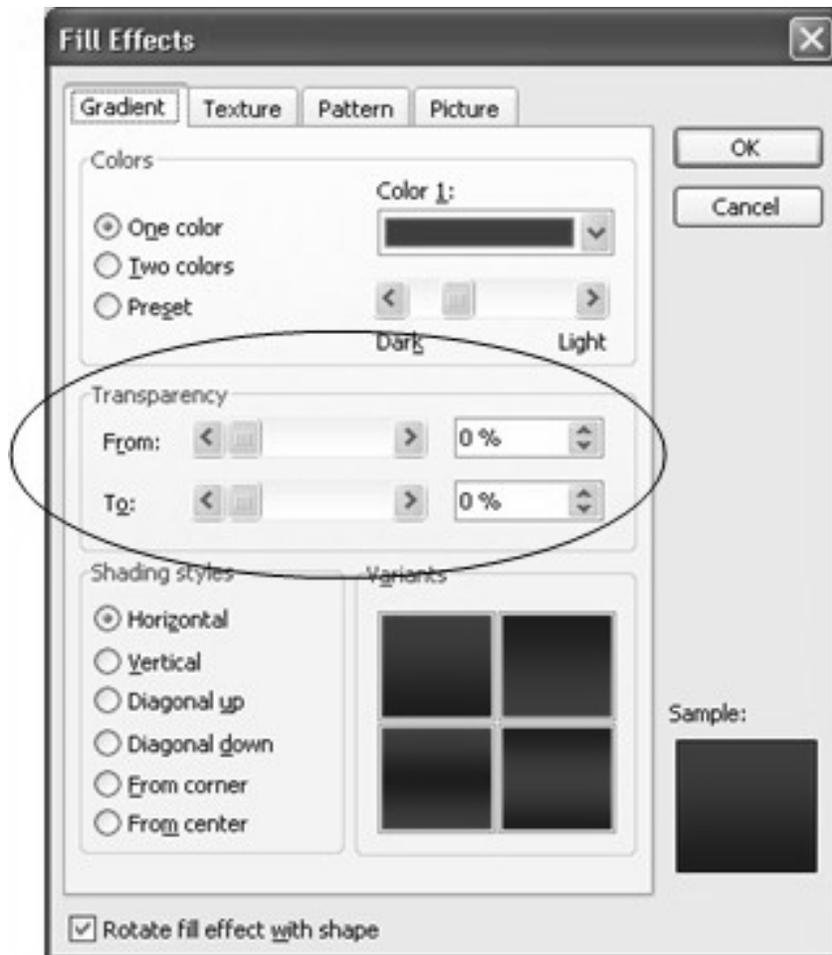


Fig. 3.11 The Fill Effects dialog box

Gradients

Let's spend a few minutes checking out some of the **gradients** first. When we talk about “gradients” we mean the way you can fill drawing objects (rectangles, ovals, etc.) with graded shades of different colors (check out Fig. 3.11 above).

For example, in the **Fill Effects** dialog box, click on the radio button next to **One color**, then click on the **down arrow** to bring up the **color palette** and select any color you like, then click on **OK**

Try the **Two color** option—see what kind of gradients you get when you combine two colors

Next check out the **Preset** options; try them as fillers for your drawing object—some of them are quite impressive though some are more impressive than others, depending on your tastes!

Finally, try the **Shading Styles**, and notice how the **Shading Styles** (horizontal, Vertical, and so forth) also are affected by the color combinations you choose

Notice, too, that the transparency tool is an option available to you with the gradient fill effect (Fig. 3.11 above). This tool enables you to make an otherwise “filled” drawing object more or less transparent (like a veil allowing you to see what’s behind it) depending on the effect you want to achieve. In other words, you might have one drawing object which can be partially “seen” through the drawing object on top of it, as illustrated in Fig. 3.12.

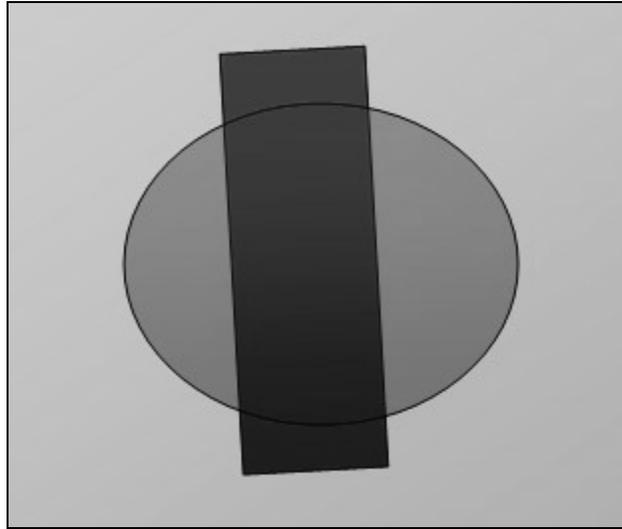


Fig. 3.12 The Transparency tool for the Gradient Fill Effect

Try this now.

Overlay one filled drawing shape **on top of another** and then experiment with the **Transparency tool sliders** (Fig. 3.11) to vary how much of the hidden drawing object you want to reveal—try varying the transparency from 0% (completely **opaque**, that is non-transparent) to 100% (completely **transparent**, that is without any fill whatsoever to hide what’s behind)

Do this exercise **at least three times with different degrees of transparency** so that you can see for yourself how much control you have over the drawing objects you create

Textures

This time, click on the **rectangle** shape to select it, bring up the **Fill Color options** in the **Drawing Toolbar**, then select the option for **Fill Effects...**

Next click on the **textures** tab towards the top of the **Fill Effects dialog box** and try some of the built-in textures that come with the Drawing Tools

Click on **OK** after choosing each texture so you can see how it looks in the rectangle shape

Try a couple of them on the oval shape, too

Notice that you can select textures that you may have created yourself or downloaded from the web, for example, and saved on disk.

Notice, too, that you do not have an option to set the transparency of a textured shape ahead of time (as you could using the Gradients option). The same applies to the Patterns and Picture effects that you learn about next. To make a textured effect (or a Pattern or Picture effect) transparent, here are the steps to follow.

Right click on the **oval textured shape** to bring up the pop up menu (Fig. 3.13) and select the menu item **Format AutoShape...**

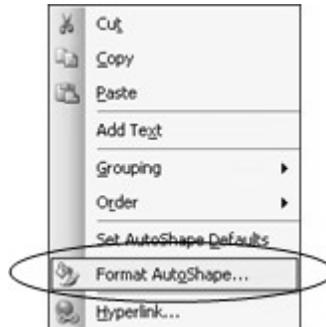


Fig. 3.13 Format AutoShape...

This brings up the Format AutoShape dialog box in which you can adjust the Transparency slider (Fig. 3.14).



Fig. 3.14 The Transparency slider in the Format AutoShape dialog box

Slide the **slider box** all the way **to the left** so that you have **0% transparency**, then click on **OK** (now the oval textured shape will now be opaque—not transparent at all)

Patterns

While learning about the Patterns option in the Fill Effects, let's learn how you can fill more than one shape at the same time.

Hold down the **Shift** key and keep it down while clicking on the **oval** shape and then on the **rectangle** shape

Notice that you can see the handles around both shapes now. This allows you to make changes to both shapes at the same time.

Bring up the **Fill Color options** in the **Drawing Toolbar**, then select again the option for **Fill Effects...**

This time, click on the **Pattern** tab to display the set of pre-defined patterns you also can use to fill a shape

Notice that you can vary the foreground and background colors of the patterns, too.

Try some of the **patterns** now, selecting different foreground and background colors before clicking on **OK** to check out the different patterns in the oval and rectangle shapes

Filling Shapes with Pictures

Finally, you can fill a shape with any picture or image that you have saved on disk.

Open **Internet Explorer** and go to <http://www.pitt.edu/~poole>

In the left hand frame of the web site owner's home page you'll see his name (Bernie Poole) at the bottom of the set of menu options.

Click on the web site owner's **name (Bernie Poole)** and you'll see a picture of him in his office (spare any comments, please!)

Right click on the **picture**, from the pop up menu select the option to **Save Picture As...** and save the picture on the **desktop** for now (the image has the file name **dayone.jpg**)

Now you're ready to fill a shape with the picture you just saved.

Start by clicking **anywhere off** the oval and rectangle shapes to **deselect** them, then click on **just the oval shape**

In the **Drawing Toolbar**, bring up the **Fill Color options**, and select the option for **More Fill Colors**

Set the **Transparency to zero percent (0%)**, then click on **OK**

Now, in the **Drawing Toolbar**, bring up the **Fill Color options**, and select the option for **Fill Effects...**, click on the **Picture** tab, then click on the **Select Picture...** button

You are now prompted to select the picture that you'd like to use to fill the highlighted shape (the oval).

In the dialog box asking you to find the picture you want to use, go to the **desktop** and double click on **dayone** (it's a jpeg file)

Hey presto! You've just created a cameo of your favorite professor! You now know all about using colors, patterns and other Fill Effects. All that remains is to try out the Shadow Style and 3-D Style tools. These are located at the far right end of the Drawing Toolbar. They're both easy enough to use. It'll be easiest to see the effect of these tools if you have both shapes selected.

Use the **Shift** key to select **both shapes** together

Click on the **Shadow Style** tool and try out a few of the styles in the pop up menu of Shadow Styles

Notice how the shadows are the same for both the selected objects. This is a good way to add consistent shading and depth to a drawing you're creating. The same applies to 3-D effects.

Click on the **3-D Style** tool and try out a few of the styles in the pop up menu of 3-D Styles

Very simple, and very effective. Actually, if you were aware of the math that is necessary to create these shadowed and 3-D effects, you'd be very impressed indeed!

3.5 GROUPING, ORDERING, AND ALIGNING OBJECTS

You've probably noticed that when you put one shape, or drawing object, on top of another, it stays there, overlapping the other shape, as with the oval and rectangle shapes in the previous exercises.

With the Drawing Tools, every object you create is always separate from the other objects on the page, even if they overlap. You can group objects together if you want, as we'll see in a moment. When you group them, they effectively become one object as long as they are grouped. But you can always ungroup them whenever you please. This is because all the drawing objects are like pieces of a jigsaw puzzle or a deck of cards. You can group the jigsaw pieces by fitting them together, or you can group the cards in a deck by gathering them into a pack of cards, or you can ungroup them. Let's see how this works.

It will be easiest to do the next exercise if you zoom out on the page. This will allow you to view the whole page on the screen if you can't already.

In the **Standard** toolbar at the top of the *Word* window, use the **zoom** tool to **zoom out to 50%** (Fig. 3.15)

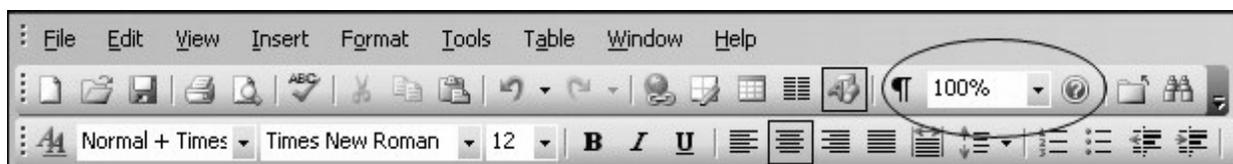


Fig. 3.15 The Zoom tool in the Standard toolbar

There, now you can see what you're doing.

In the **Drawing Toolbar**, go to the **AutoShapes** menu and, from the **Basic Shapes**, select the **Octagon (eight-sided shape)**

Draw an **octagon** (not too big) so that some part of it **overlaps** either the oval or the rectangle or both, but **doesn't actually hide** either the **oval** or the **rectangle**—make sure you can still see at least a piece of **all three shapes**

Fill the octagon with **any color** you like (**different** from the oval and rectangle colors)

Now use the **Line Style** tool to increase the thickness of the octagon's border to at least **6pt**, and use the **Line Color** tool (Fig. 3.16) to select a **different color** and **line pattern** for the border than the plain black default color

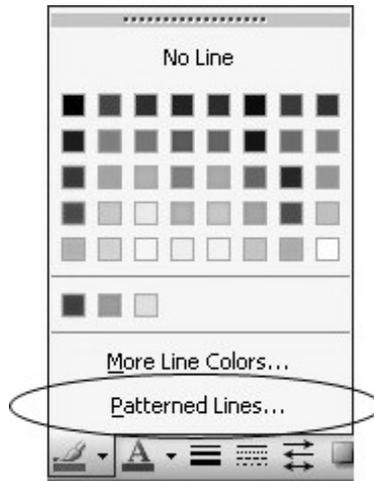


Fig. 3.16 The Line Color palette showing the option for Patterned Lines

Repeat the same steps to draw a small **parallelogram**, **trapezoid**, **diamond**, and **triangle** (again making sure none of the objects actually hides any of the others completely—you should be able to see a piece of all seven (7) shapes when you're done, something like Fig. 3.17)

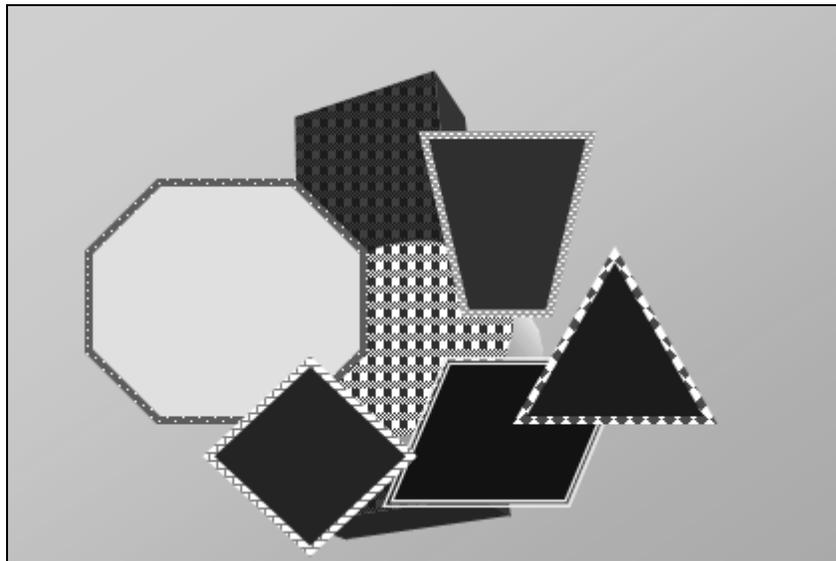


Fig. 3.17

So now you should have on your page (screen) seven different shapes with seven different fill colors and various other effects. The reason you need to be able to see at least a piece of each shape is to make it easier for you to do the next exercise. If you wanted to, you could completely cover one shape with another. It just depends what you want to do.

No doubt your drawing canvas now looks like a work of art! So let's print it out so that you can hand it in to your instructor.

Print the contents of the drawing canvas before proceeding with the next step in this exercise

Grouping the drawing objects

Grouping objects

Right now, all the objects are separate—ungrouped. Let's group them into three groups.

First, click anywhere **off all the shapes** so that none of them is selected

Using the mouse, and holding the **Shift** key down, click on the **oval** shape and the **rectangle** shape

Now, let go of the **Shift** key and from the **Draw** menu (lower left corner of the document window) select the **Group** option (or you could just **right click** on the shapes and, from the pop up menu, select **Grouping > Group**)

Check your drawings now and notice that the oval and rectangle shapes have just one set of handles. Now you can treat them as one object and move them around on the screen as one object, independently of the other objects.

Grab the oval or rectangle shape with the mouse and slide them over to the **right side** of the drawing canvas

Complete the following steps to create groups of the other objects.

Again, click anywhere **off all the shapes** so that none of them is selected

Using the mouse, and holding the **Shift** key down, click on the **trapezoid** shape and the **Triangle** shape, and from the **Draw** menu select the **Group** option

Next, click anywhere **off all the shapes** so that none of them is selected and slide the trapezoid and triangle shapes up towards the **top center** of the drawing canvas

Using the mouse, and holding the **Shift** key down, click on the remaining 3 independent shapes: the **octagon** shape, the **parallelogram** shape, and the **diamond** shape, then from the **Draw** menu select the **Group** option

Slide this final group of shapes down towards the **lower left corner** of the drawing canvas

Check your drawings, click on **each group in turn**, and **slide them around** on the page

Notice that each group now has just one set of handles and that they move as a group. You can even rotate them as a group.

Try this now by clicking on any of the three groups, grabbing the **small green handle** and **rotating** the grouped shapes

This is often very useful when you create a complicated drawing using several objects, like lines and shapes, and you want to move them all around together or rotate them as one object. Just group them all together, and Bob's your uncle! You'll have a chance to practice this when you do the exercises at the end of the lesson.

Ungrouping objects

This is easy.

First, click anywhere **off all the shapes** so that none of them is selected

Click on the **oval** shape and the **rectangle** shape and from the **Draw** menu select the **Ungroup** option

Look at the oval and rectangle shapes now and notice that all the handles for each shape have reappeared.

Now click anywhere **off the oval and rectangle shapes** so that neither of them is selected, then click on **just the oval shape** and notice that it is now independent of the rectangle shape

Repeat this to **ungroup all** the other objects—be sure to ungroup them all for the sake of the following exercises; it'll also give you extra practice and, remember, **Practice makes perfect!**

Ordering the drawing objects

The order of the shapes right now should still be the same as the order in which you created them. So the rectangle is in the back, the oval on top of the rectangle, and so forth. Think of the objects as layered one on top of the other—even if they aren't actually touching. But because you've moved them all around, they may no longer all be touching each other. So let's slide them all back on top of each other in the middle of the drawing canvas so you can see how the ordering function works.

Rearrange all the shapes so they are overlapping each other in the center of the drawing canvas (something like in Fig. 3.18)

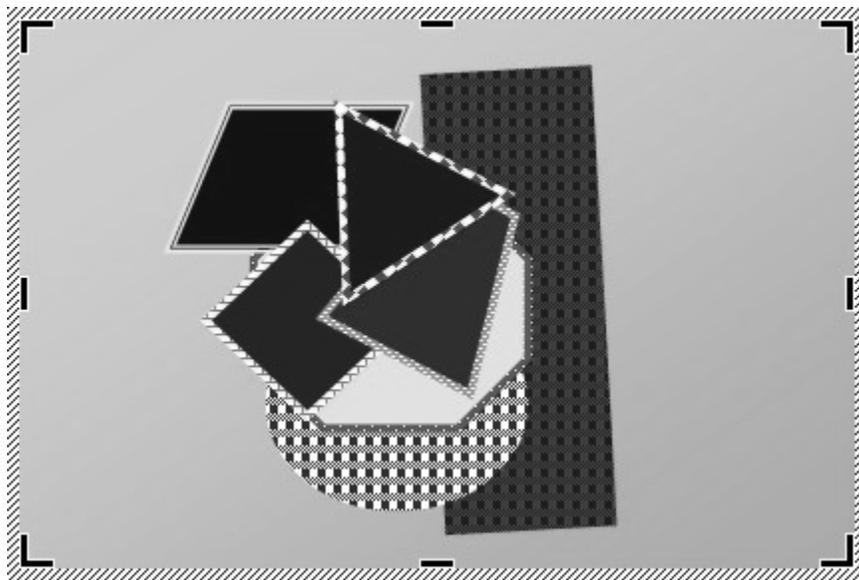


Fig. 3.18 Drawing objects layered on top of each other

Notice how they are all still layered in the order that you originally created them, the last object created (the triangle?) on top.

You can quickly move (re-order) objects backward or forward in the layers. To do this, you select the object you want to re-order and then select the appropriate option in the Draw menu.

Time to try this out; then you'll see how it works.

Click to select the **oval** shape first, right click on it, then from the **pop up menu** select the **Order** option (Fig. 3.19)

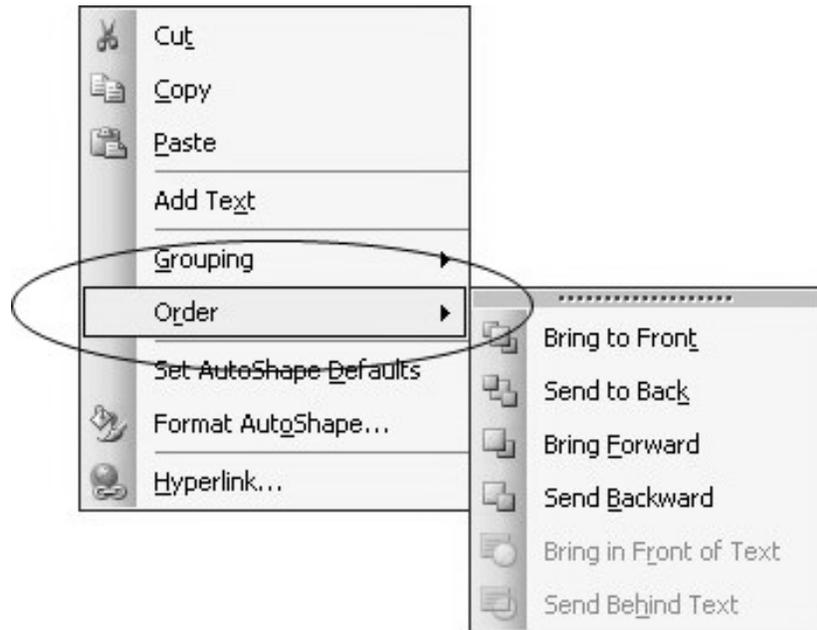


Fig. 3.19 The Order option in the Draw menu

Slide the pointer across to the **Order sub-menu** and select the option to **Bring to Front** (Fig. 3.19)

Look at the oval shape now and notice that it's on top of all the other shapes. As you can see from the Order options illustrated in Fig. 3.19, you can bring objects forward or send them back, either one layer at a time, or all the way forward or all the way back in one go.

Try this now with **several** of the objects, using **each one of the Order options** till you get the hang of it

Aligning the drawing objects

The Drawing Tools in Office come with some useful alignment tools which save you dragging drawing objects into place on the page when your goal is to align them symmetrically on the right or left, and so forth. The following steps show you how to do this.

First, click anywhere **off all the shapes** so that none of them is selected

Now locate and click on the **parallelogram**, hold down the **Shift** key, and locate and click on the **triangle** so you have both shapes selected

Go to the **Draw** menu in the **Drawing Toolbar** and select the option for **Align or Distribute**

This will bring up the Align or Distribute sub-menu (Fig. 3.20).



Fig. 3.20 The Align or Distribute option in the Draw menu

Select the option to **Align Left**, and notice how the two shapes are aligned left on each other

If you want to align drawing objects on the left or right edge of the canvas (or top or bottom edge) you must select the *Relative to Canvas* option in the Align or Distribute menu.

Select **Draw > Align or Distribute > Relative to Canvas**

Now select **Draw > Align or Distribute > Align Right** and notice how the selected objects are **snapped** to the **right edge** of the drawing canvas

Now click on the **rectangle**, hold down the **Shift** key, and click on the **octagon** so you have both shapes selected

Select **Draw > Align or Distribute > Align center** and notice how the selected objects are **snapped** to the **center** of the drawing canvas

Try this on your own now with **the remaining objects** and with the **other Align or Distribute tools** till you are familiar with what they do

End up by **aligning all the objects center** and **distributed horizontally** on the drawing canvas, then print out the resulting page to give to your professor

You can align all the objects at once, or you can align them one, two, or three at a time. It just depends on what you have in mind.

3.6 WORKING WITH TEXT AND WORDART

It will be easiest to start over with a whole new document for this part of the tutorial.

Select **File > Close** and, when prompted, save the document in your **Data Files** folder with the name **Shapes**

Using the Text Box tool

In the **Drawing Toolbar** click on the **Text Box** tool (if necessary, check Fig. 3.2 or use your mouse to see where this tool is in the toolbar), then click anywhere on the drawing canvas

Type your **first and last name** in the **Text Box** that appears on the screen, hit **Enter**, then type **the following text** and notice as you go along that you have to **make the box bigger** to fit all the text—just stretch on the handles to do this so you can see what you're typing:

The beauty of these drawing tools is that they give you lots of control over your art work and make it relatively easy for you to create very sophisticated designs—once you know how to use them, that is, and that's what this lesson is all about. You won't be an expert by the time you're done with this lesson, but you will probably have a much better idea what you're doing. It's up to you to use the tools A LOT till you become an expert. Only then will you be able to make them really sing for you!

When you finish typing, make any final adjustments to the box to make it **big enough so everything fits nicely**

Play with the **handles**, stretch the **Text box** up and down and from side to side and notice that you can make the Text Box any shape you want to fit the contents you have put inside it

Once you have the text nicely filling the text box, position the mouse pointer on the **outside border** of the text box, hold down the **left mouse button** and **drag** the **text box** from right to left or up and down—you decide where its final position will be inside the drawing canvas

Print out the final version of this exercise and hand in the document to your instructor

Imagine you're creating a class newsletter (or, even better, you are organizing your students who are doing this for you). You're laying out a page for publication and these are the kinds of things you and your students need to know how to do.

Using the WordArt tool

WordArt is a set of graphic fonts that add a touch of flair or pizzazz to your text. The best way to see what this means is to try it for yourself.

Click on the **border** of the Text Box object you just created in the previous exercise so as to select it (not *inside* the Text Box because then *Word* will think you want to edit the text)

Hit the **Backspace** or **Del(ete)** key to remove the text box from the drawing canvas

In the **Drawing Toolbar**, click on the **WordArt** tool (see Fig. 3.2)

This brings up the WordArt Gallery (Fig. 3.21) from which you can choose whichever style of font graphics appeals to you.

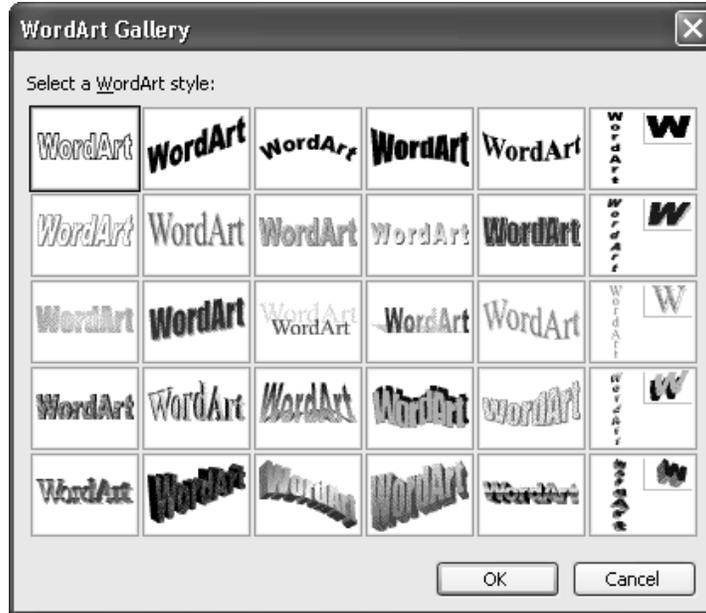


Fig. 3.21 The WordArt Gallery

Take a look at the various word art **styles** in the WordArt Gallery, then select one that you like by **double clicking** on it (you can easily change it later if you change your mind)

The **WordArt Text Box** appears on the screen (Fig. 3.22).

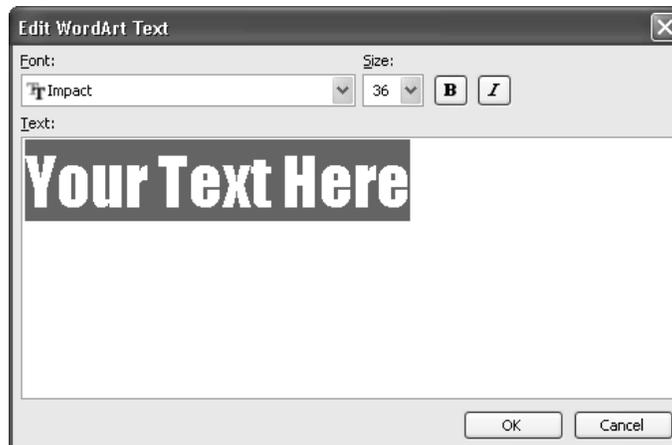


Fig. 3.22 The WordArt text box

Type your **first and last name**, select any font you like from the drop down **Font** menu, leave the **Font Size** as is for now (36 pt), and click **OK**

What do you think? With very little effort on your part, you can create banners and other visuals which are eye-catching and tasteful. Are these drawing tools useful, or what?

There are a couple of other things you need to learn about the WordArt tools. Let's try some of them now.

Click on the **WordArt of your name** to view the **WordArt Toolbar** (Fig. 3.23)

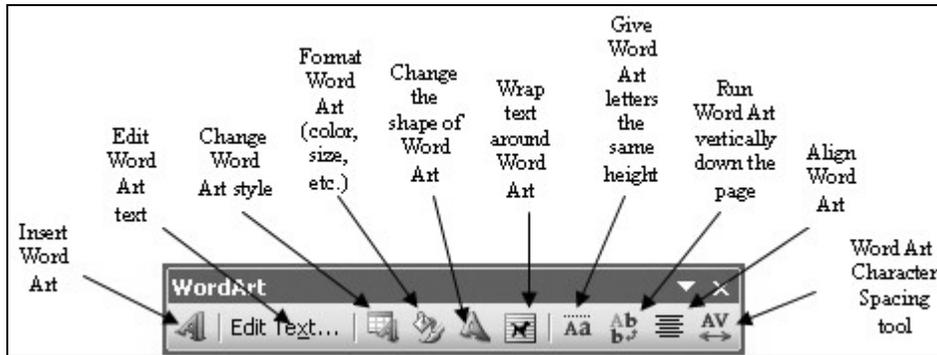


Fig. 3.23 The annotated WordArt Gallery

With your **WordArt** selected, take a few minutes now to try out each of these WordArt tools—edit the text, change the style, color, size of your word art, and so forth—enjoy!

WORKING WITH DIAGRAMS, ORGANIZATION CHARTS AND CLIP ART

Word's drawing tools include a very useful one for creating six different types of classic diagrams, including the traditional hierarchical organization chart. Fig. 3.24 is an annotated illustration of each of the diagram types.

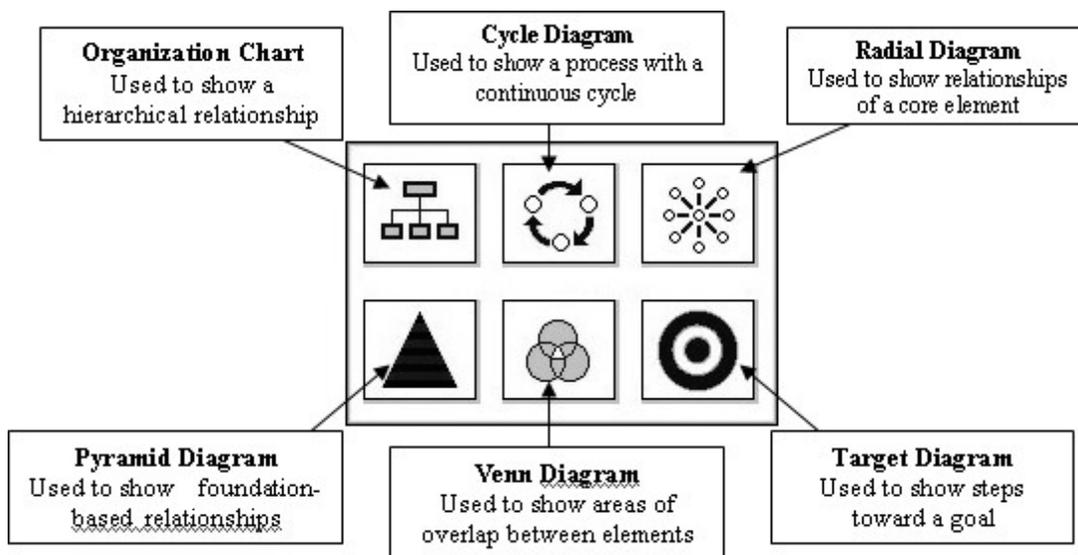


Fig. 3.24 Charts and Diagrams available in the Drawing toolbar

Although it is beyond the scope of these tutorials to teach you when to apply each of these tools in actual projects, it will be useful for you to learn how to create each of the diagrams. Then, when you come to need one of them for teaching or administration or classroom management, you will know what to do. Let's start with the organization chart.

Start by **clearing** any **WordArt designs** from off the document that you have open on your screen

In the **Drawing toolbar** click on the tool to **Insert Diagram or Organization Chart**

This brings up the Diagram Gallery dialog box illustrated in Fig. 3.24 above.

Double click on the Organization Chart tool

You should now see a drawing canvas with the basic components of an organization chart, as illustrated in Fig. 3.25.

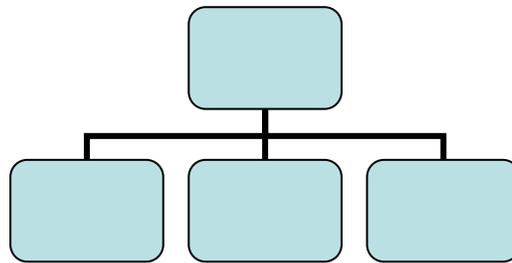


Fig. 3.25 The basic components of an organization chart

There are lots of things you can do to the chart to improve its “look and feel.” With the drawing canvas still showing in your document, you should see the Organization chart toolbar floating on your screen (probably towards the top right of the document window (Fig. 3.26).



Fig. 3.26 The Organization Chart toolbar

The best way to find out what you can do with an organization chart is by discovery, so try the following exercises.

Click on the **topmost** organization chart shape, then in the **Organization Chart toolbar** click on **Insert Shape** to see the **drop down menu of options**

Now select each available option in turn and **add at least 2 shapes** to the chart (say, **one Subordinate** and **one Assistant**)

Notice how this affects the chart.

Do the same with **at least 2** of the shapes at the **next lower level** of the chart, clicking on them one by one and adding **at least 4** more shapes at the same level or below

Now add **at least 2 shapes** at a **3rd or 4th level** of the chart

Get the idea? As you do these exercises, you should be noticing how to build a chart from scratch, adding new shapes at the same or lower levels simply by inserting them using the Organization Chart toolbar.

You can also delete shapes, of course, though you can't delete the topmost shape. Try deleting some shapes now.

Click on **any shape below the top level** to select it, then click on the **shaded border around the shape** and hit the **Del(ete)** key on the keyboard

Simple. To enter text into a shape, just follow the directions by clicking on the shape and typing away.

Click on the **topmost** level and type **Our Town**, then click on **each of the other shapes** in your chart and type some aspect of the town or township where you live, such as **Sports** or **Restaurants** or **Events** or **History** or **Geography** or **Services** and so forth (use your imagination or, if your imagination is tired, get ideas from a friend!)

So, as you can see, the Organization Chart tools make it easy to create a basic organization chart.

You also can vary the basic *layout* of your chart. Once again, the best way to understand this is to try it out.

Click on **any shape** to select it, then click on the **Layout** option in the **Organization Chart toolbar** and try out the options for “hanging” one chart level off another (if you choose the **Auto layout** option, it automatically “hangs” everything off to the right)

In the **Drawing toolbar** click on the tool to **Insert Diagram or Organization Chart**

Discovery is a good way to learn

Spend some time now **experimenting with each of the other tools** for making diagrams (save **each diagram** in your **Data Files** folder on your **Work Files for Office 2003 Tutorials** disk)

Start with a **Cycle diagram** (depicting the stages in the life cycle of a butterfly, for example), then create a **Radial diagram** (showing the different components of a family, say), then a **Pyramid diagram** (of the food pyramid, for example), then a **Venn diagram** (showing the overlapping properties of colors, say—red, blue, green make what overlapping colors?), and finally a **Target diagram** (what steps do you take to prepare a lesson plan, for example)

Print each diagram when you're done with them—5 diagrams in all—and hand them in to your instructor)

LOOKING BACK

You have practiced using the drawing tools that are built into *Word*. If this has been the first time you've used these tools, you may have found them awkward at first since manipulating them involves a new set of skills. But like everything else, the more you use the tools, the more skilled you will become. This lesson is merely an introduction and overview.

The beauty of these drawing tools is that they give you lots of control and make it easy to create sophisticated designs—once you know how to use them, and that's what this tutorial is all about. You won't be an expert by the time you're done, but you will know what you're doing. It's up to you to use the tools till you become an expert, and then you'll make them really sing!

LOOKING FORWARD

Lesson 6 will give you the opportunity to further practice your word processing skills by integrating them with other *Office* components, including mail merge. Meanwhile, in Lesson 4 you will move on to learn about the *Excel* Spreadsheet component of *Office*.

You should be starting to feel reasonably comfortable using the computer. No doubt you find some of the work tedious, especially that process of backing up all your data. This is because you are learning the computing skills. When you become proficient with the hardware and software, you will find that you can complete your work quickly and be more productive with regard to many of the activities of your profession. You should indeed by now be striking out on your own, already using *Word* to support your work in the classroom.

You have a responsibility to establish the best possible learning environment for your students. The best teachers lead by example. If you have worked your way through the first two of these tutorials, you have increased the chances that your students will benefit from an enriched learning experience, because of your increased facility with, and enthusiasm for, the computer. Your use of the computer as a learning tool will overflow into your classroom. Well done!

SKILL CONSOLIDATION

Complete as many exercises as you can so as to reinforce what you have learned in Lesson 3.

1. Make a list of at least 10 handouts or other documents that are relevant to the school environment for the creation of which you would use the drawing tools.
2. Team up with a group of your classmates and use the *Word* drawing tools to create at least 5 of the documents from the list you drew up in Exercise 1. Save them on disk.
3. Open a new blank page and in Page Setup select **Landscape** orientation. Complete the following tasks:
 - Start a new canvas and draw a perfect square, fill it with color, and make the line color the same as the fill color.
 - Draw a perfect circle, fill it with a different color from the square, and make the line color the same as the fill color.
 - Move the circle on top of the square and adjust the size of the circle so it fits exactly inside the square where the border of the circle touches the border of the square at four points, north, south, east, and west.
 - Group the circle and the square, then rotate the grouped object 45 degrees, so that the shape resembles a diamond.
 - Use the AutoShape of an Octagon to draw an octagon large enough to completely cover the diamond, fill it with a different color from either the square or the circle, and make the line color the same as the fill color.
 - Move the Octagon shape to the back. Select all the objects and center them on the canvas. Group the objects.
 - Use Word Art to write the following title for the drawing: A Circle inside a Square inside an Octagon. Save the drawing with the name **Geometric Shapes**.

4. Open a new blank page and in Page Setup select **Landscape** orientation. Draw a picture of a house (yours if you want), including the following items (with colors and effects of your choosing):
 - Stretch the canvas so it's the size of the page. Draw the house itself with at least two windows and a front door and a separate roof (you'll need to use the freeform drawing tool for the angled roof so that you can fill it with color and a pattern). The roof must have shingles, the walls must be of brick or siding (unless you want to draw a log cabin!).
 - A front lawn with shrubs and flowers here and there
 - At least two trees
 - The sky with a couple of clouds scudding by...
 - Save the drawing with the name **House**.
5. Open a new blank page and in Page Setup select **Landscape** orientation. Stretch the canvas so it's the size of the page. Draw a picture of a technology-ready classroom. Use clip art, if you want, for the objects in the classroom, including the items in the list that follows (with colors and effects of your choosing). Arrange the desks and so forth according to your own concept of the ideal classroom. Save the drawing with the name **House**.
 - desks for 20 students
 - At least 6 computer workstations (position them so the teacher can easily see the screens)
 - A desk for the teacher
 - A separate computer workstation for the teacher
 - A reading center
 - Any other items you would want to include in your ideal classroom.
6. Use the AutoShapes menu to draw at least ten (10) Basic Shapes and use an associated Callout to name each of them. Fit everything on one side of an 8 ½" by 11" page. Use either Portrait or Landscape orientation. Color the shapes, fonts and callouts with Fill Colors, Font Colors, and Line Colors.
7. Open a new blank page and in Page Setup select **Landscape** orientation. Stretch the canvas so it's the size of the page. Then complete the following tasks:
 - In the top left corner of the page, draw a self-portrait as best you can, using colors and so forth
 - Add a callout that looks like it's coming from your mind (see figure below)
 - Select all the parts of your drawing and group them together as one object
 - Copy the object, then duplicate it 8 times as illustrated in the figure below
 - In the callouts, add the text of any story you like
 - Save the strip cartoon with the name **Strip Cartoon**

