

# 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.

### Before we begin

Recall from Lesson 1 that the default settings of your version of *Word 2007* may not show the ruler at the top of the page. You may also find that the default spacing is too wide. Let's start out by making sure you have these two settings the way we want them.

#### Open *Word*

If necessary, at the top of the window, click on the **View** tab to bring up the **View Ribbon**, then locate the **Show/Hide Group** and click to put a **check mark (tick)** in the box next to **Ruler**

This will display the ruler bar at the top of your *Word* document (Fig. 3.1).

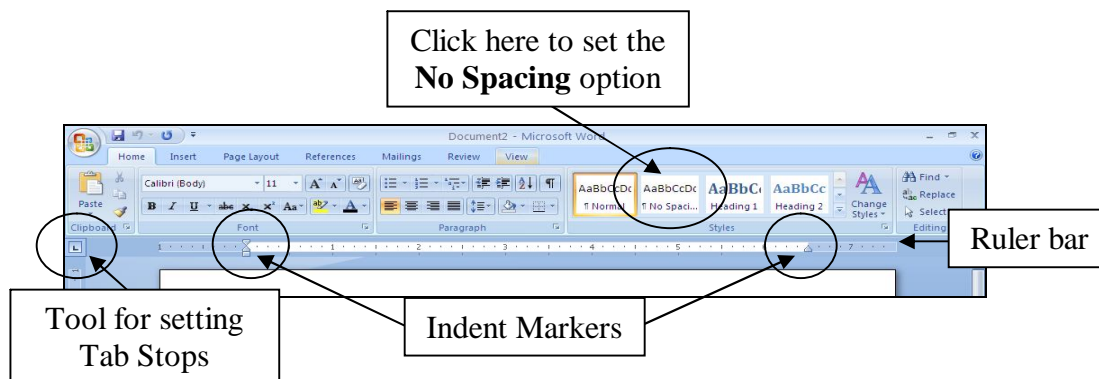


Fig. 3.1 The *Office 2007* ruler

You may also need to set the line spacing before you proceed because the default setting may be other than single spaced. Here's how you do this.

In the **Home Ribbon**, in the **Styles Group**, click **once** on the style icon for **No spacing** (Fig. 3.1 above)

For this lesson it will be good to have a separate folder inside your Data Files folder for all the documents you're going to create.

Go to **Start > My Computer > Your USB drive > Office 2007 Work Files folder > Data Files folder**, and create a new folder called **Drawing Documents**

### Accessing the Drawing tools

The Drawing tools are accessed quite differently in *Office 2007* than in earlier versions of Microsoft's Office software. There is also a significantly larger set of tools for you to use and they are organized according to the type of drawing work you are doing.

If you are working with Shapes of all kinds you will use the *Shapes tool* in the Illustrations Group of the Insert Ribbon (Fig. 3.2).

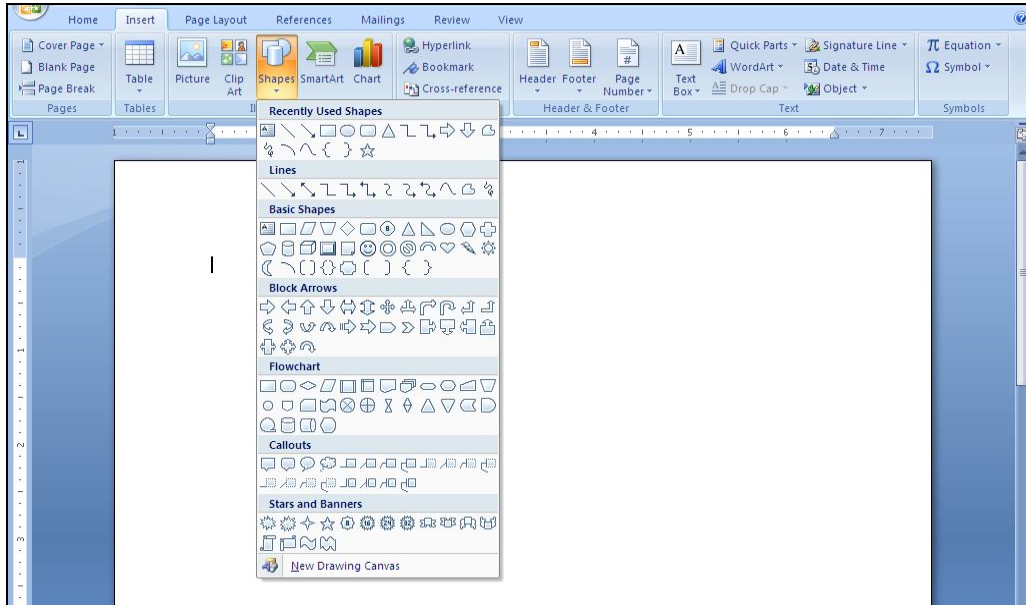


Fig. 3.2 The Shapes menu of tools

If you are working with a picture, such as a photograph, when the picture is selected (it has the handles around it), *Word* presents a wide selection of *Picture tools* in the Format Ribbon (Fig. 3.3). We'll check out these Shape styles, Shadow and 3-D effects, Arrange and Sizing tools in the course of this lesson.

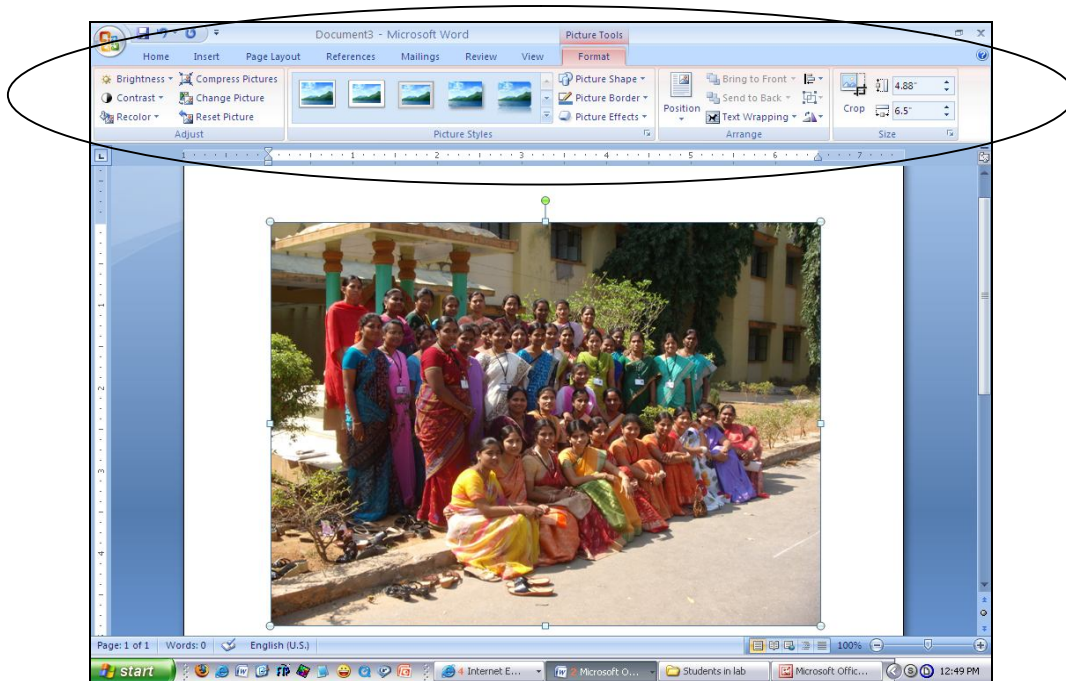


Fig. 3.3 Word 2007 Picture tools

There is a large selection of Clip Art you can use in your documents. You go to the Insert Ribbon > Illustrations Group to access the clip art task pane (Fig. 3.4).

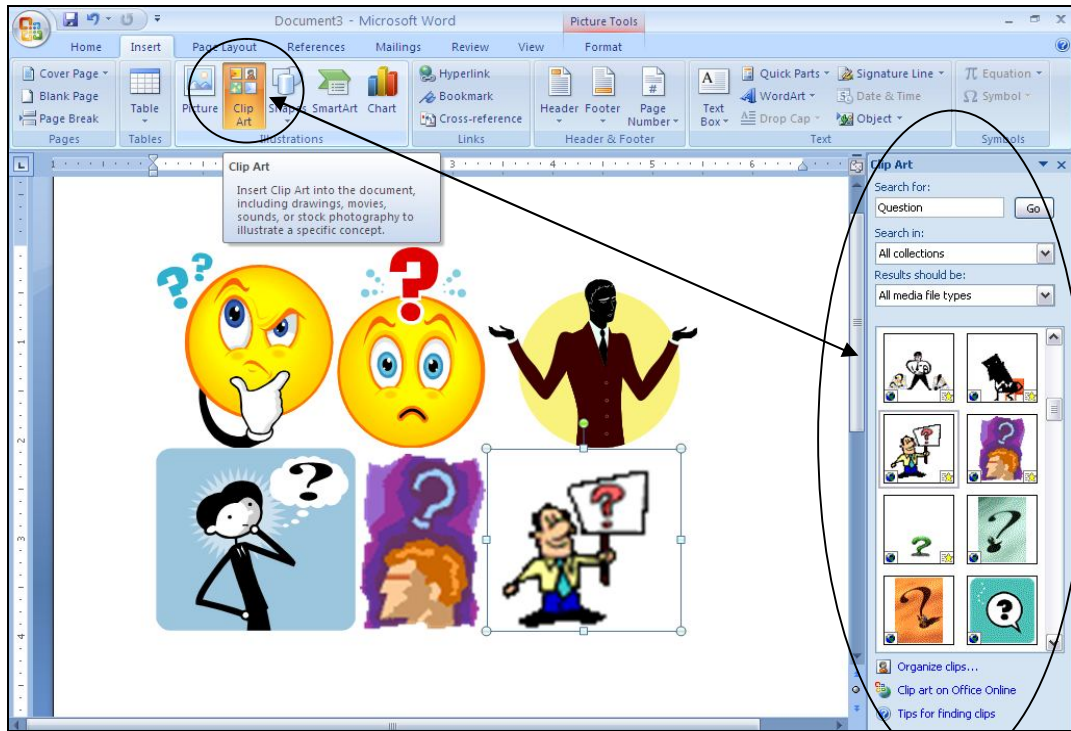


Fig. 3.4 The Clip Art task pane

Then there is a tool, also in the Illustrations Group of the Insert Ribbon, for creating what is called *Smart Art* (Fig. 3.5).

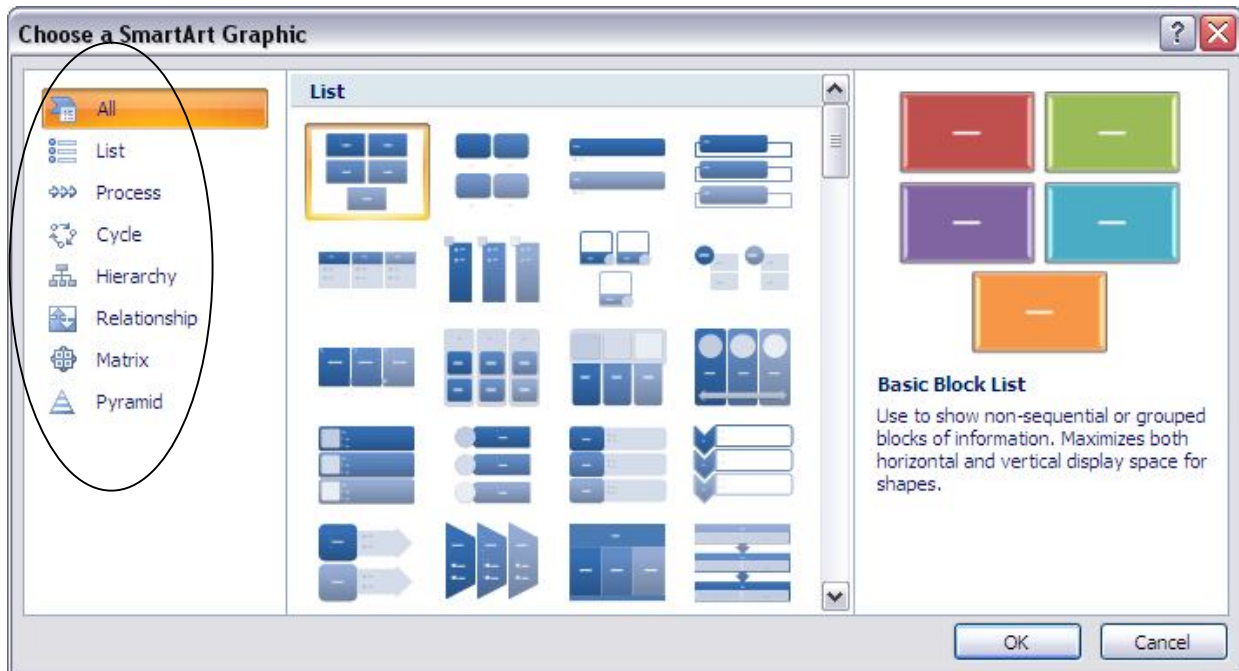


Fig. 3.5 Smart Art tools

The *Smart Art* Diagram Gallery makes it easy to create graphical Lists, Process and Cycle diagrams, Hierarchy charts, Relationship diagrams, graphical matrices, and Pyramid charts. Lesson 3 will provide you with the opportunity to learn how to use all these drawing tools.

Another useful drawing tool is called *WordArt* which makes it easy for you to insert decorative text into your document (Fig. 3.6).

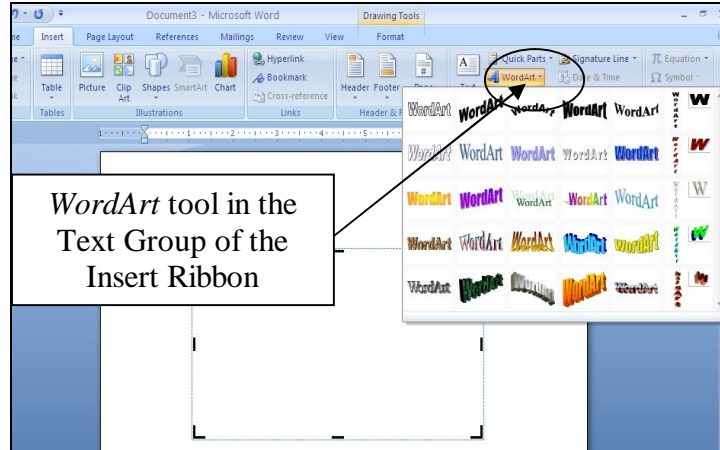


Fig. 3.6 WordArt Gallery

### 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 **Page Layout Ribbon > Page Setup Group** click on **Orientation** and select **Landscape**

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. Though there will be many occasions when you will want to work in Portrait orientation, too, of course.

In order to see how **landscape orientation** looks, go to the **zoom tool** (Fig. 3.7), and zoom to, say, **60%**

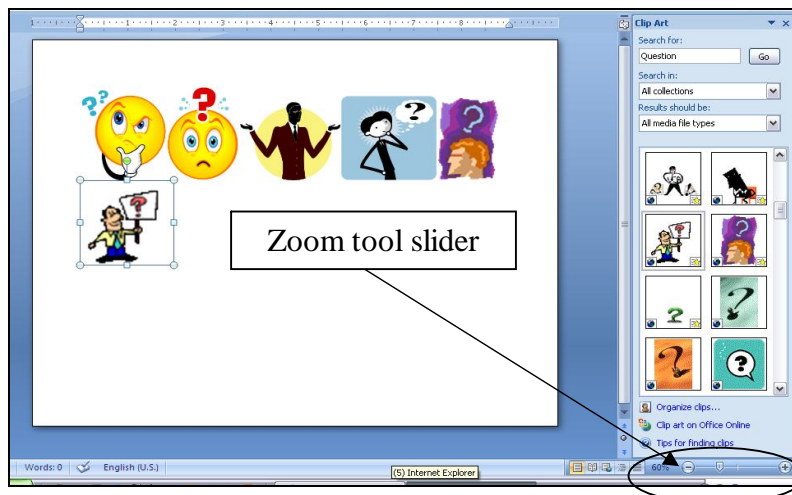


Fig. 3.7 The Zoom tool in the Standard toolbar

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.

Time to get down to work.

## 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. A drawing canvas is a convenient tool to use when you want to keep all the objects in a drawing together as a single unit yet still be able to manipulate, change, edit, work with them one by one. Fig. 3.8 illustrates the Drawing Canvas.

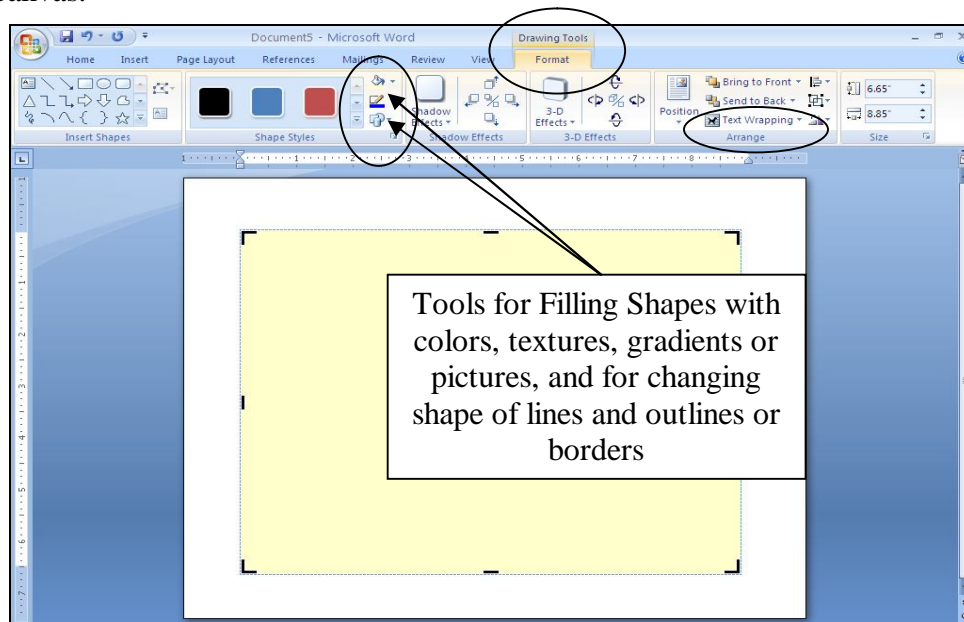


Fig. 3.8 The drawing canvas and the Drawing Tools Format Ribbon

In the **Insert Ribbon > Illustrations Group**, click on the **Shapes tool** to bring up the menu of Shapes, then click on the last item in the Shapes menu—**New Drawing Canvas**

The initial dimensions of the canvas are set by default. You can change the dimensions to suit your own purposes. You can also move the drawing canvas around on the page. 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.3.8 above) and click on the **Tight** text wrapping option

Now use the **handles** that appear at the edges of the drawing canvas (Fig. 3.8) 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. 3.8

The drawing canvas helps you arrange a drawing in your document by providing a frame-like boundary between your drawing and the rest of your document. By default, the drawing canvas, when you print it out or Print Preview it, has no border or background, but you can apply formatting to the drawing canvas as you would any drawing object. Let's try this.

In the **Drawing Tools Ribbon**, click on the **Format Tab** to bring up the **Format Ribbon** with its many tools for working with drawing objects on the drawing canvas (Fig. 3.8 above)

In the **Format Ribbon > Shape Styles**, click on the **small arrow** next to the **Shape Fill** tool and try out (**Live Preview**) any color, gradient, or texture you like from the **Theme Colors** menu

When you've made up your mind, click on your selection and we'll move on

The drawing canvas also helps you keep parts of your drawing together, which is especially helpful if your drawing consists of several shapes. The best practice is to insert a drawing canvas if you plan to include more than one shape in your illustration.

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).

In the next set of exercises, you are going to practice creating simple drawing objects using both the basic drawing tools for lines and rectangles and ovals.

### Drawing lines

Let's start with drawing lines.

In the **Format Ribbon > Insert Shapes Group**, click on the **line** tool to select it

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 click back on it, select the Line tool again, and go ahead and draw the line)

Simple as that!

### Working with 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.

In the **Format Ribbon > Shape Styles Group**, click on the small arrow next to the **Shape Outline** tool to show the pop up **menu of line colors and styles**

**Live Preview** several of them to try out different **styles** and **thicknesses (weight)**, **dash styles**, and **arrow styles** for the selected line—take your time; have fun

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?

In the **Format Ribbon > Insert Shapes Group**, click on the **rectangle** tool to select it, and use the mouse to draw a **rectangle** on the drawing canvas

Notice the handles that surround the rectangle shape, four in the corners and four at the middle of each side. You use these handles to change the shape of the object.

Try this now

### Rotating Objects

Notice, too, the ninth handle outside the selected rectangle—a small green circle (Fig. 3.9).

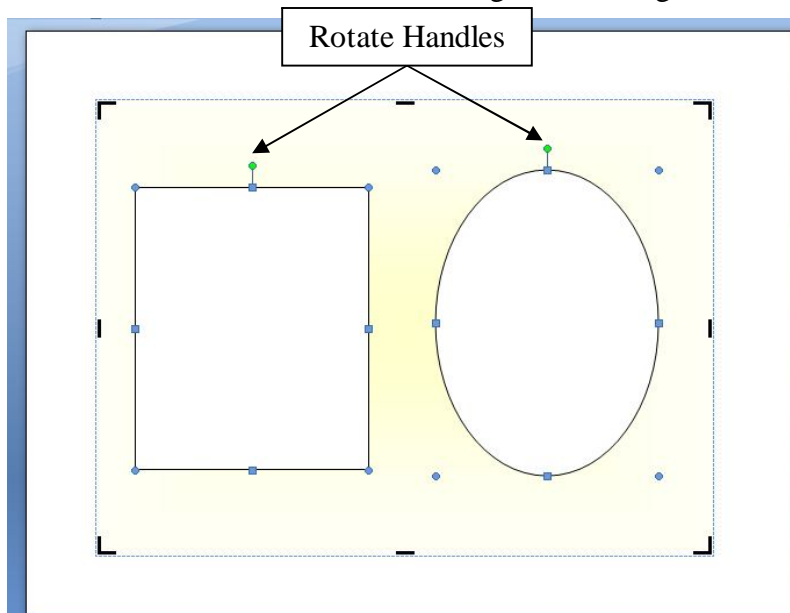


Fig. 3.9 The handles that accompany solid shapes such as ovals or rectangles

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



Use the mouse to point at the **small green handle** (the rotate object handle) and drag from left to right in a circular motion to **rotate** the rectangle object

While you have the rectangle selected, use the tools in the **Shape Styles Group** to change the **Fill** to any color, texture, or gradient you want, change the **border** of the shape to **6 pt triple line**, and change the **color** of the **border** to any color you want

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.

In the **Format Ribbon > Insert Shapes Group**, click on the **oval** tool to select it, and use the mouse to draw an **oval** on the drawing 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 in a circular motion to **rotate** the oval object

While you have the oval selected, use the tools in the **Shape Styles Group** to change the **Fill** to any color, texture, or gradient you want, change the **border** of the shape to **6 pt triple line**, and change the **color** of the **border** to any color you want

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 the rectangle will always be a perfect square as long as you hold down the shift key. After you've drawn the square, if you let go of the Shift key you can then go ahead and use the handles to make the rectangle any shape you want.

**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 the oval will 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.

Click on the **circle**, slide the mouse pointer over it 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 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 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

Draw a **rectangle** on the canvas, hold down the **Shift** key, then position the mouse pointer on any of the small handles (again **not** the green rotate handle), hold down the **left mouse button** and **drag** to stretch or squeeze the rectangle anyway you want—it should remain a square

Now try it again, but this time without holding the **Shift** key, and notice the **difference**—use all the handles and notice the difference there, too, 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 can drag on either handle to rotate it from either end.

Let's try this now.

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

**Clear the Drawing Canvas** of lines when you are done

### 3.3 OTHER DRAWING SHAPES

There is a wide selection of predefined shapes that you can use to create your drawings. These shapes are accessed from the Insert Shapes Group of the Drawing Tools Format Ribbon (Fig. 3.10).

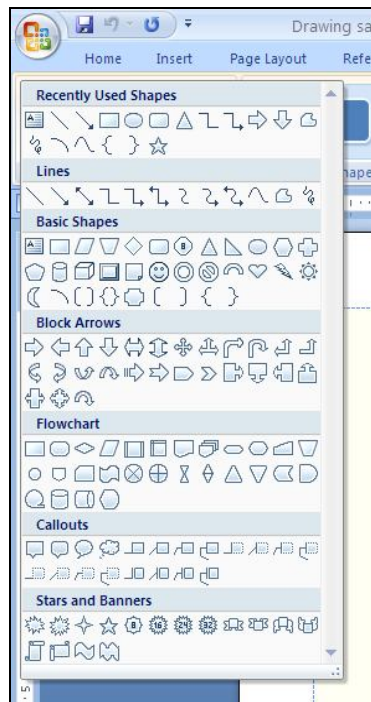


Fig. 3.10 Other Shapes for Drawing

Specifically, there are Basic Shapes like text boxes, triangles, cylinders, and so forth, all of which would take you quite a while to create from scratch on your own—unless you're a talented artist, of course. Then there are shapes designed to help you draw Block Arrows, and shapes to help you create Flowcharts—very useful for planning diagrams. If you want to add “voices” to characters in a diagram, there is a nice selection of Callouts you can use. Finally, when you want to create certificates and such, you can use the Stars and Banners shapes. For the next exercise, you are going to Save the file so that you can send it to your instructor as an attachment in email.

In the **Office button menu** select **Save As...**, navigate to the **Office 2007 Work Files > Data Files folder** on your disk drive (USB drive), name the file **Practice Drawing 1**, and hit **Save**

Now, in the **Drawing Tools Format Ribbon > Insert Shapes Group**, drop down the **Shapes menu** (Fig. 3.10 above)

Spend a few minutes now checking out the many shapes available to you, then try as many of them as you want, but specifically try the following exercises on the Drawing Canvas—don't delete any of them because you're going to send the file to your instructor when you have finished.

Draw at least three **Basic Shapes**

Draw at least three **Block Arrows**

Draw at least three **Flowcharting Shapes**

Draw at least three **Callouts**

Draw at least three **Stars and Banners**

Now use the tools in the **Shape Styles Group** of the **Format Ribbon** to add **Shape Fills** to each of the objects you have drawn

Save the file again with the name **Practice Drawing 1** and send it **as an attachment in email** to your instructor

Now, **clear** any objects you created from off the **drawing canvas** to prepare for the next exercise

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 ready-made shapes with a class to help them learn the geometric shapes, for example. 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 2007* 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. 3.11 illustrates the Theme Color options menu that pops up when you click on the small arrow next to the Shape Fill tool in the Drawing Tools Format Ribbon.

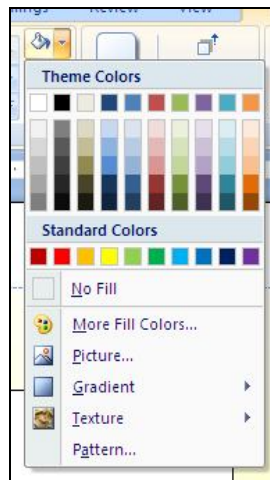


Fig. 3.11 The Theme Colors options menu

You need a new name for this next drawing exercise, so in the **Office button menu** select **Save As...**, navigate to the **Office 2007 Work Files > Data Files folder** on your disk drive (USB drive), name the file **Practice Drawing 2**, and hit **Save**

Notice that you have options for a *transparent* object (*No Fill*), or for an object filled with any one of a *range of colors*, or you can fill a shape or object with a *picture*, a *gradient*, a *texture*, or a *pattern*. 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 **Shapes Fill** tool to bring up the **Theme Color options** menu

Scroll over any of the **60 or so colors** you see displayed in the dialog box to **Live Preview** them, and notice how your rectangle is **filled** each time with the color you point at

Click again on the **small arrow** next to the **Shape Fill** 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. 3.12.

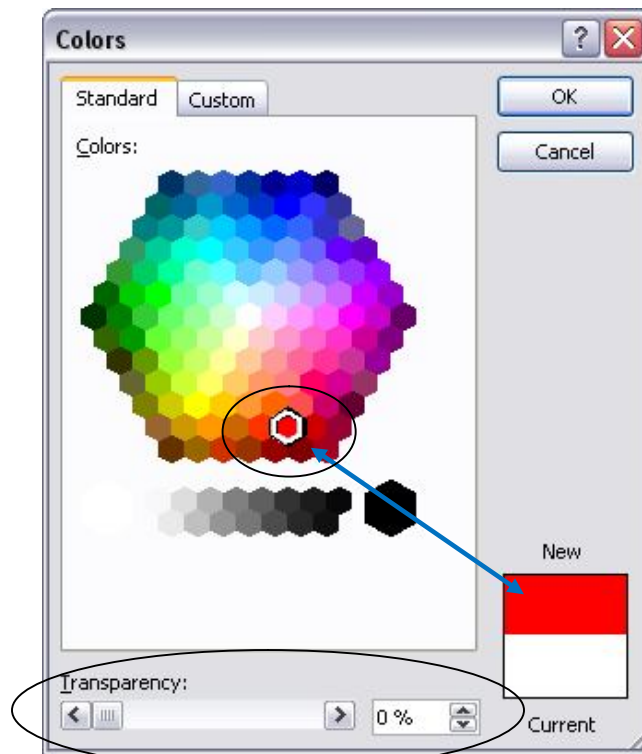


Fig. 3.12 The Standard Colors dialog box

The Standard Colors palette gives you a selection of 256 colors to choose from (binary  $2^8$ ). 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 (see Fig. 3.12) 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 (see Fig. 3.12 above, thus allowing a drawing object that is hidden behind a shape to show through. Let's try this too...

Select the **Oval** tool from the Shapes tools and on the drawing canvas draw an oval so that it **overlaps** the rectangle to some extent

Click on the **small arrow** next to the **Shapes Fill** tool to bring up the **Theme Color options** menu and, from the **Shape Fill 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 **Shape Fill options** again, 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 material. If the 256 colors of the Standard Colors palette aren't enough for you, you can use the Custom Colors palette instead (Fig. 3.13).

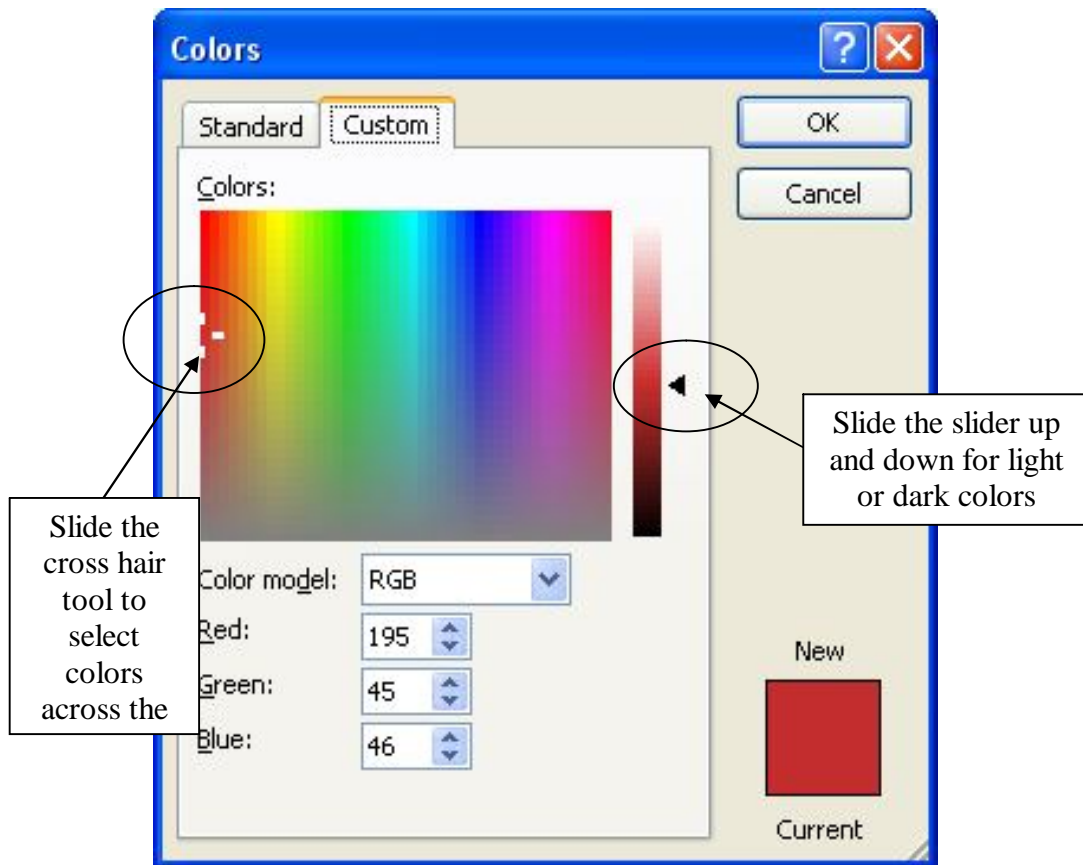


Fig. 3.13 The Office 2007 Custom Colors palette

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!* That’s because the Custom color palette uses 24 bits to store the colors in the computer memory. That’s 2 times 2 *24 times*. It’s called 24-bit color. So the computer only needs 24 switches (microscopic magnets) to store 16+ billion different colors—hundreds of thousands of shades of green or blue or pink, for example. Binary is a wonderful way to represent information. Let’s try the Custom Colors palette now...

Spend a couple of minutes 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.

### 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. 3.14).

Click to select the **rectangle shape** on the drawing canvas, bring up the **Shape Fill options** in the **Drawing Toolbar**, then select the option for **Gradient**

This will bring up the Gradients dialog box (Fig. 3.14).

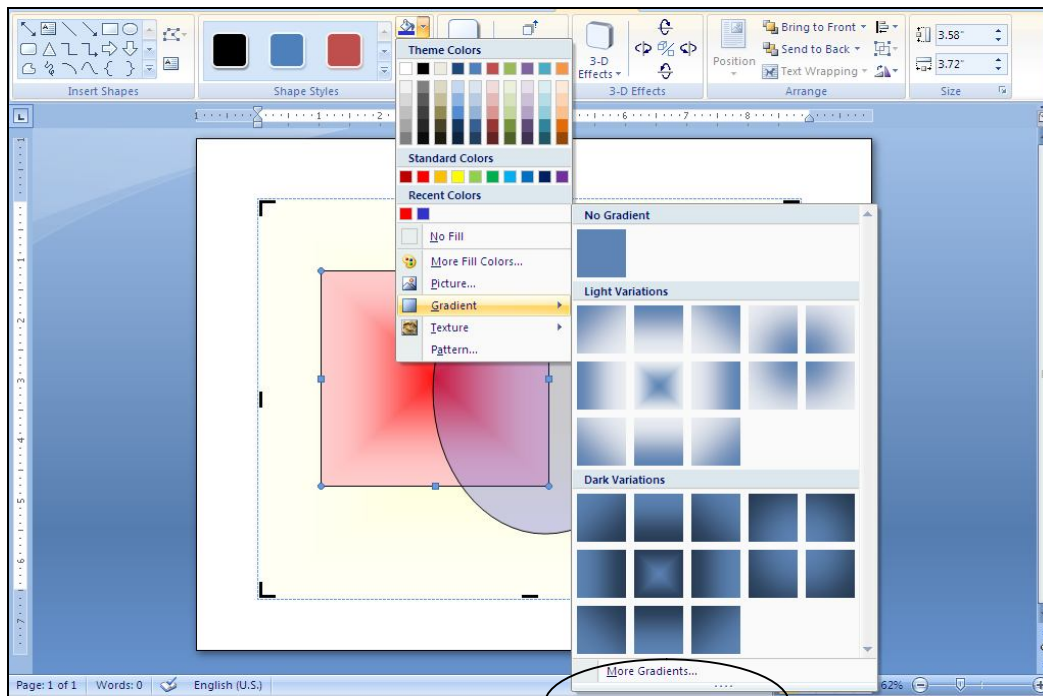


Fig. 3.14 The Gradients dialog box

**Live Preview** some of the gradient styles now to see how they look in your **rectangle** shape (still partly obscured by the oval shape)

Now, in the **Gradients dialog box**, click on **More Gradients...** (Fig. 3.14)

This will bring up the *Fill Effects* dialog box (Fig. 3.15).

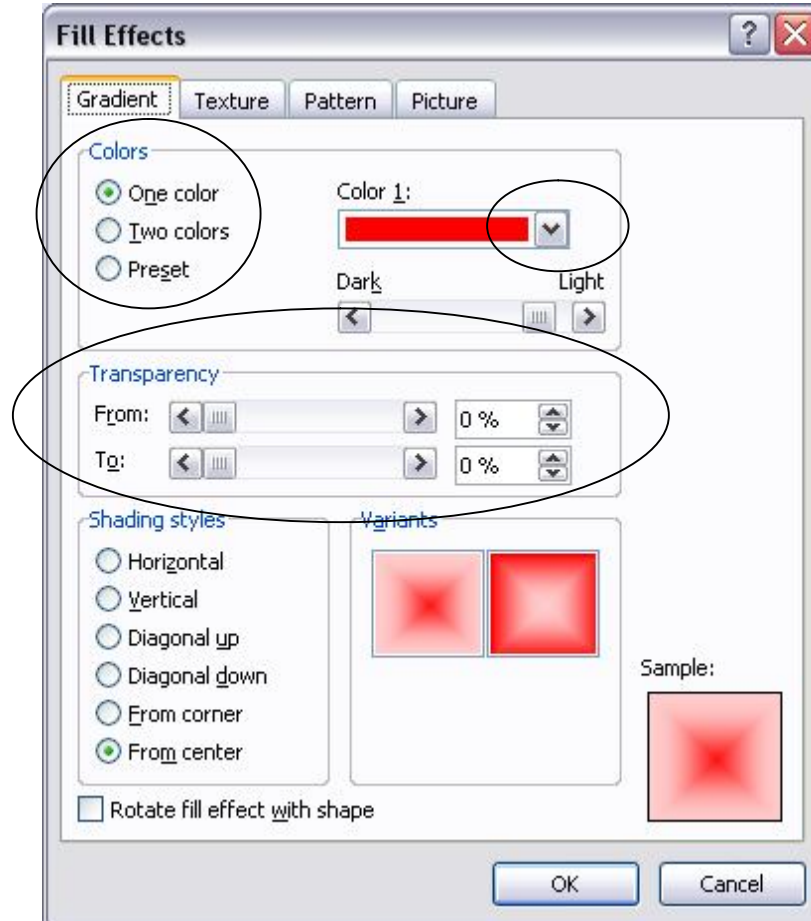


Fig. 3.15 The Fill Effects dialog box

In the **Fill Effects** dialog box, make sure the Gradients tab is selected, then click on the radio button next to **One color**, then click on the **down arrow** next to **Color 1**: 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

Finally, try the **Shading Styles**, and see 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. 3.15 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 we already discovered in the previous exercise.



## Textures

This time, click on the **rectangle** shape to select it, bring up the **Shape Fill options** again, then select the option for **Textures...**

**Live Preview** some of the textures in the **rectangle shape**

If you wanted to use textures of your own creation, you would click on *More Textures...* and navigate to your disk drive to access them for your drawing.

**Live Preview** some of the **Textures** on the **oval shape**, too, and when you find one you like, click on it to select it for the oval shape

Notice that the transparency of the oval shape is still preserved and you can see the rectangle behind it.

Notice, though, 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 will learn about next. To make a textured effect (or a Pattern or Picture effect) transparent, you must do it ahead of time when you first create the shape, as we did earlier in this section of the tutorial.

## 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 select the different patterns in the oval and rectangle shapes

**Save** the file (**Practice Drawing 2**) before proceeding with the tutorial

## 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 a picture of Bernie Poole (that's me—no comments, please!).

**Right click** on the **picture**, from the pop up menu select the option to **Save Picture As...** (**NOT Save Target As...**) and save the picture on your **desktop** for now (the image has the file name **BJPoole.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 **Shape Fill options** select the option for **Picture...**, navigate to your **desktop** and **double click** on the picture **BJPoole.jpg** to put it in the oval shape

Hey presto! You've just created a cameo of your favorite professor! If you prefer to put a picture of yourself there, or any other picture you like, go ahead.

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 in the *Shadow Effects* and *3-D Effects Groups* of the *Drawing Tools Format Ribbon*. They're both easy enough to use. It'll be best to see the effect of these tools if you have both shapes selected.

Hold down the **Shift** key and click on each of the shapes to select **both shapes** together

Click on the **Shadow Effects** tool and **Live Preview** 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!

**Save** the file (**Practice Drawing 2**) before proceeding with the tutorial—send the file as an email attachment to your instructor, along with the other Practice Drawing files you have collected at the end of the tutorial

### 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 also can *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 do so.

Use the **zoom** tool in the lower right corner of the *Word 2007* window to **zoom out to 50%**

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

You need a new name for this next drawing exercise, so in the **Office button menu** select **Save As...**, navigate to the **Office 2007 Work Files > Data Files folder** on your disk drive (USB drive)

Name the file **Practice Drawing 3**, and hit **Save**

In the **Shapes menu > Basic Shapes** select the **Hexagon (six-sided shape)**

Draw a **hexagon** (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 hexagon with **any color** you like (**different** from the oval and rectangle colors)

Now use the **Shape Styles > Shape Outline** tool to increase the thickness (**weight**) of the hexagon's border to at least **6pt**, and use the **Shape Styles > Shape Outline > Theme Colors** tool to select a **different color** and **line pattern** for the border than the plain black default color

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. 3.16)

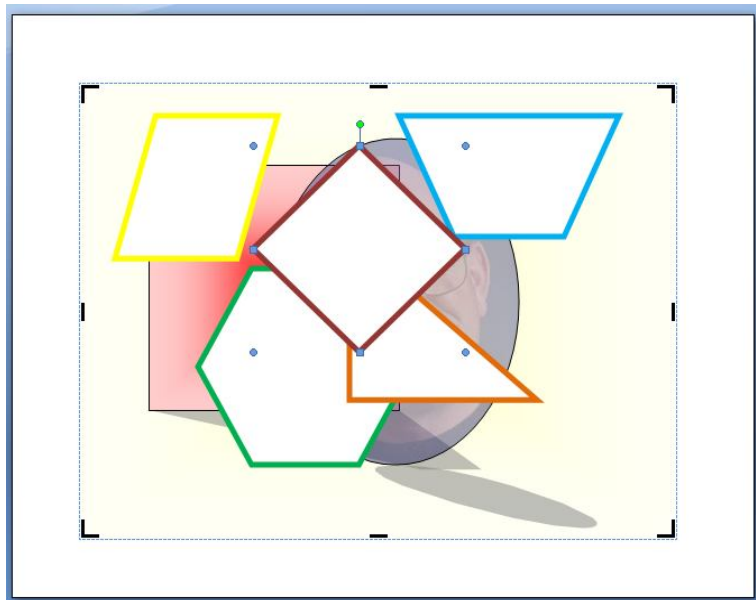


Fig. 3.16

Next, fill each of the five shapes you just added with a different color, gradient, texture, or pattern (**Shape Styles > Shape Fill > Theme Colors**)

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 save it (Practice Drawing 3) so that you can email it in to your instructor at the end of the lesson along with the other practice drawings.

**Save** the contents of the drawing canvas (**Practice Drawing 3**) before proceeding with the next step in this exercise

### Grouping drawing objects

You need a new name for this next drawing exercise, so in the **Office** button menu select **Save As...**, navigate to the **Office 2007 Work Files > Data Files** folder on your disk drive (USB drive)

Name the file **Practice Drawing 4**, and hit **Save**

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, **right click** on the selected shapes and, in the context menu select the **Grouping > Group** option

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 and rectangle shapes** with the mouse and slide them over to the **right edge** 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, **right click** on the selected shapes and, in the context menu select the **Grouping > 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 **hexagon** shape, the **parallelogram** shape, and the **diamond** shape, **right click** on the selected shapes and, in the context menu select the **Grouping > Group** option

Slide this final group of shapes down towards the **left center** 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 Skill Consolidation exercises at the end of the lesson.

### Resizing objects

This is easy.

Click on any of **the shapes** to select a group and grab hold of one of the corner handles (not the green rotate handle) and drag in to make the group smaller

Do the same thing to reduce the size of the other two groups, then drag the oval and rectangle group to the **top right corner** of the drawing canvas, the trapezoid and triangle to the **lower center**, and the hexagon, diamond and parallelogram to the **top left corner**

Your drawing should now look a bit like figure 3.17.

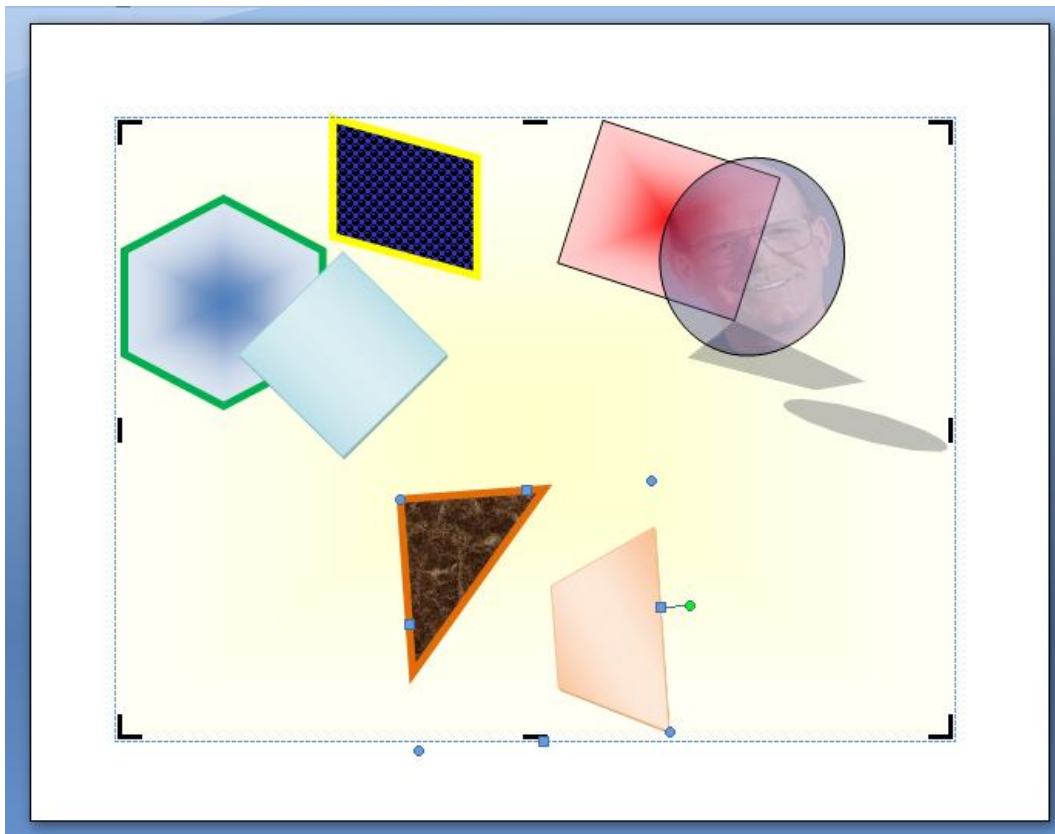


Fig. 3.17

**Save** the contents of the drawing canvas (**Practice Drawing 4**)

## Aligning drawing objects

You need a new name for this next drawing exercise, so in the **Office button menu** select **Save As...**, navigate to the **Office 2007 Work Files > Data Files folder** on your disk drive (USB drive)

Name the file **Practice Drawing 5**, and hit **Save**

The Drawing Tools come with some useful alignment and rotation 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, or to rotate them 90<sup>0</sup>, and so forth. The following steps show you how to do this.

Click anywhere **off all the shapes** so that none of the groups is selected

Now locate and click on the **parallelogram-diamond-hexagon group**

In the **Format Ribbon > Arrange Group**, select **Align** (Fig. 3.18)

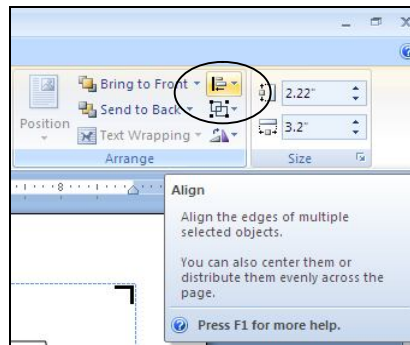


Fig. 3.18 The Align tool in the Arrange Group

This will bring up the Align or Distribute sub-menu (Fig. 3.19).



Fig. 3.19 The Align menu

Select the option to **Align Left**, and notice how the two shapes are aligned to the left of the Drawing Canvas

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

Now click on the **rectangle-oval** group and select **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 **Align** them in various ways until you are familiar with how the alignment options work

End up by aligning the **oval-rectangle group top and center**, the **hexagon-diamond-parallelogram group middle and center**, and the **triangle-trapezoid group bottom and center** on the drawing canvas

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.

### Rotating drawing objects

In the Arrange Group of the Format Ribbon, there also is a selection of rotation tools (Fig. 3.20).

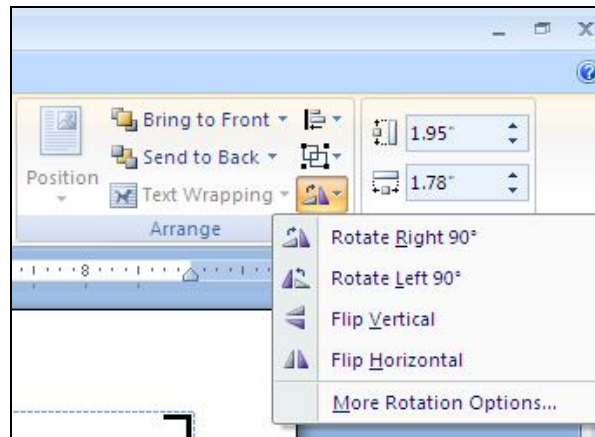


Fig. 3.20 Rotation tools

Click on **each group** of shapes in turn and **rotate** or **flip** them any way you want till you feel familiar with these **Rotation tools**

**Save** the contents of the drawing canvas (**Practice Drawing 5**) before proceeding with the next step in this exercise

You need a new name for the next drawing exercise, so in the **Office button menu** select **Save As...**, navigate to the **Office 2007 Work Files > Data Files folder** on your disk drive (USB drive)

Name the file **Practice Drawing 6**, and hit **Save**

### Ungrouping objects

This is easy, too.

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

Click on the **oval-rectangle** shape, right click on it and, from the context menu, select **Grouping > Ungroup**

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-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. 3.21)

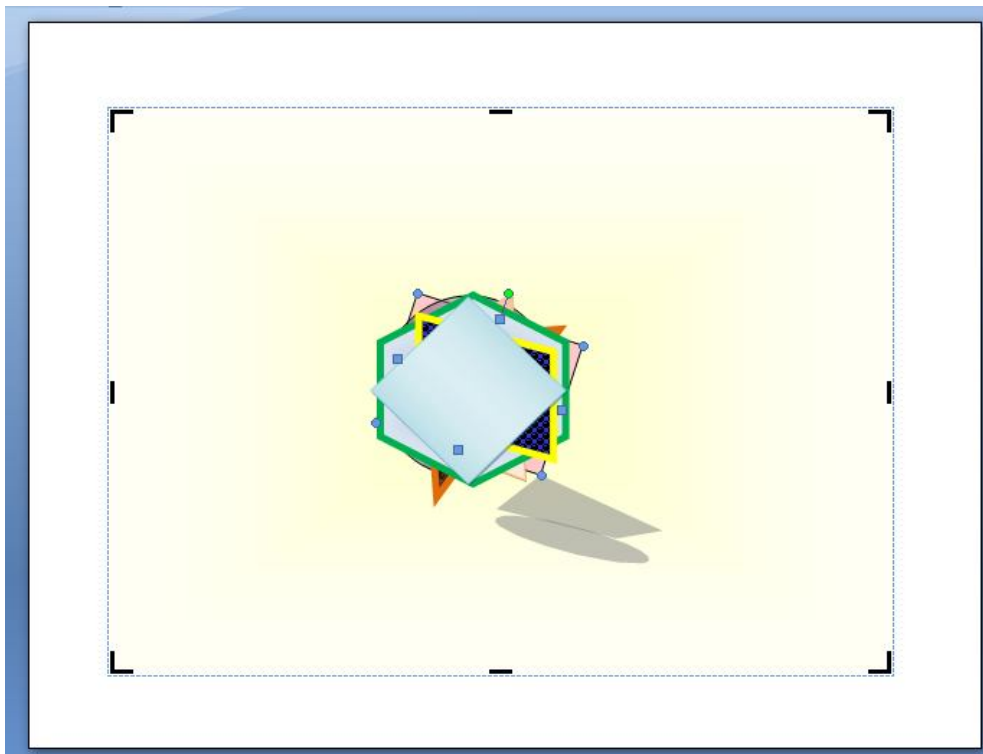


Fig. 3.21 Drawing objects layered on top of each other

Notice how they are all still layered in the order that you originally created them, so the last object created (in Fig. 3.18 it's the diamond) is on top.

You can 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 **top** shape first, right click on it, then from the **context menu** select the **Order > Send Backward** (Fig. 3.22)

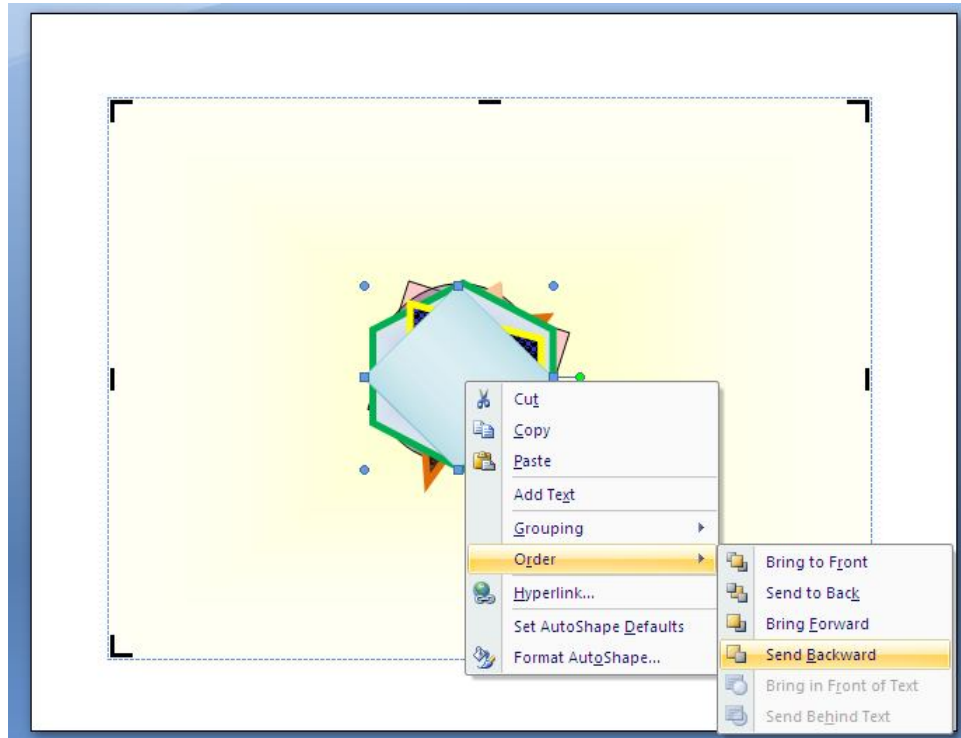


Fig. 3.22 The Order option in the Draw menu

This drops the top shape back behind the next shape in the heap (or deck, if you think of the shapes as a deck of cards).

Select the **top** shape again, right click on it, then from the **context menu** select the **Order > Send to Back**

The shape is now on the bottom of the deck. As you can see from the Order options illustrated in Fig. 3.22, 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, then **Save** the file (**Practice Drawing 6**) when you're ready to move on

### 3.6 WORKING WITH TEXT AND WORDART

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

In the **Office button menu** select **Close**, then in the **Office button menu** select **New > Blank Document**

You need a new name for this next exercise, so in the **Office button menu** select **Save As...**, navigate to the **Office 2007 Work Files > Data Files folder** on your disk drive (USB drive), and name the file **Practice Drawing 7**, then hit **Save**

## Using the Text Box tool

In the **Drawing Tools** click on the **Insert** tab to bring up the **Insert Ribbon**

In the **Insert Ribbon > Text Group** select the **Text Box** tool, then In the menu of **Built-In** text box options click on the first **Simple Text Box**

Type (or copy and paste) into the text box **the following text**:

**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!**

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

Now position the mouse pointer anywhere 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 on the page

Laying out a page for a class magazine is the kind of thing you 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 to put the cursor at the **beginning** of the text in the **Text Box** (before the words **The beauty of these drawing tools...**), hit **Enter twice** to move the text down a two lines, then click at the **top left** just inside the text box

In the **Home Ribbon > Paragraph Group** select **center** alignment

In the **Insert Ribbon > Text Group**, click on the **WordArt** tool (see Fig. 3.23)

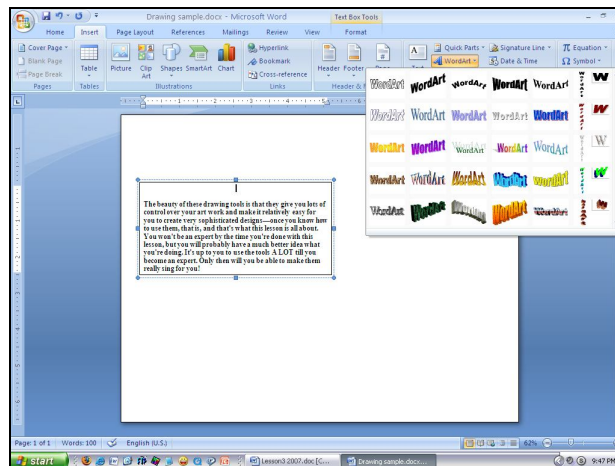


Fig. 3.23 The WordArt Gallery

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

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 *Edit WordArt Text* dialog box comes up on the screen (Fig. 3.24).



Fig. 3.24 The WordArt text box

Type your **First and Last name**, 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.

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

**Double click** on the **WordArt of your name** to view the **WordArt Tools Format Toolbar** (Fig. 3.25)

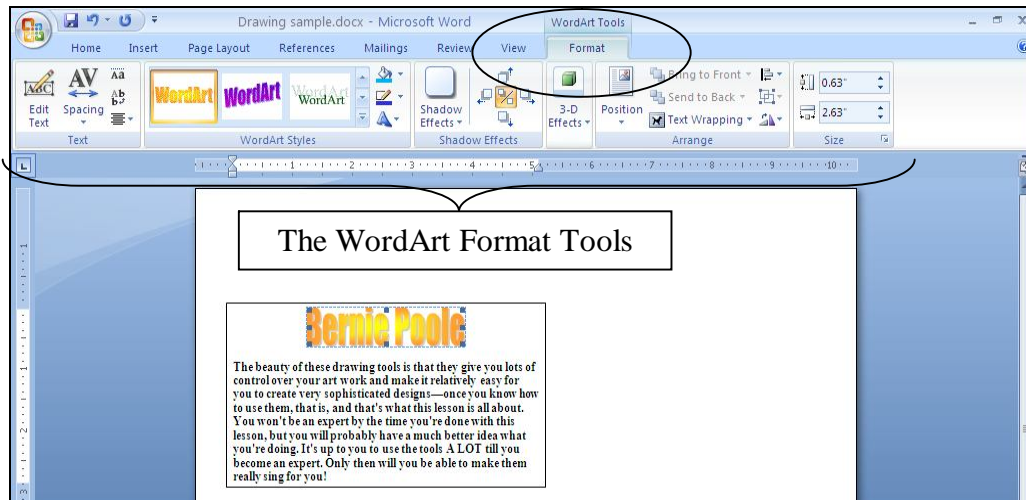


Fig. 3.25 The WordArt Tools Format Toolbar

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

**Save** the final version of this exercise (**Practice Drawing 7**)

### 3.7 WORKING WITH DIAGRAMS, ORGANIZATION CHARTS AND CLIP ART

Word's drawing tools include a very useful one, called *SmartArt*, for creating different types of classic diagrams, including the traditional hierarchy chart. Fig. 3.26 is an illustration of each of the diagram types.

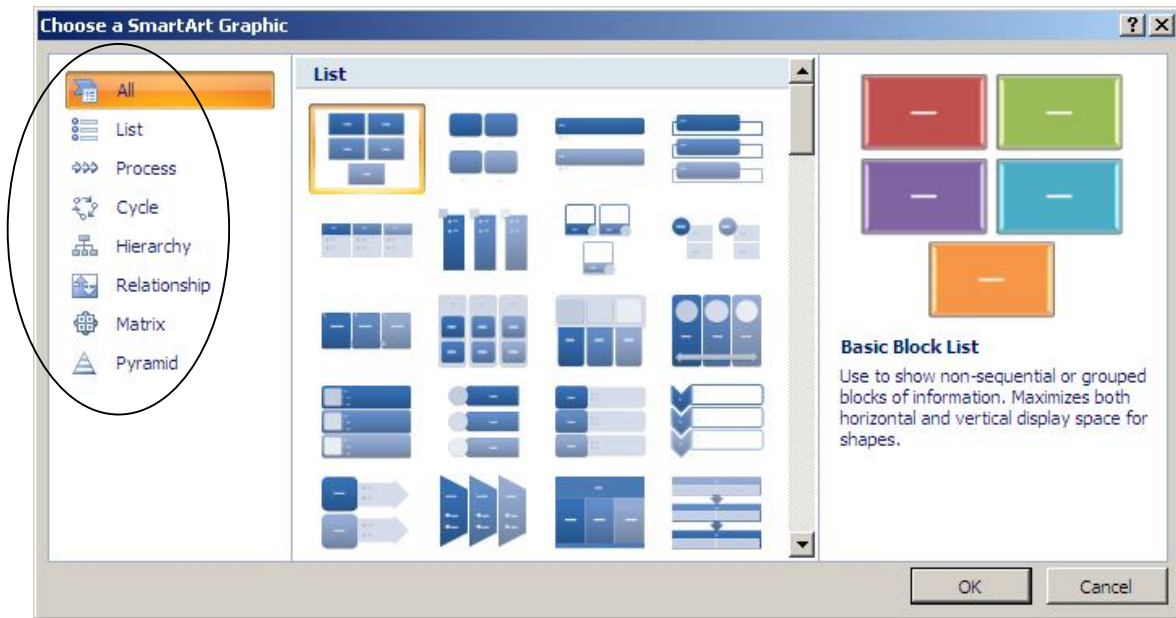


Fig. 3.26 Charts and Diagrams available as *SmartArt*

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 such 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.

Again, it will be easiest to start over with a new Word document for this part of the tutorial.

In the **Office button menu** select **Close**, then in the **Office button menu** select **New > Blank Document**

You need a new name for this next exercise, so in the **Office button menu** select **Save As...**, navigate to the **Office 2007 Work Files > Data Files folder** on your disk drive (USB drive), and name the file **Practice Drawing 8**, then hit **Save**

In the **Insert Ribbon > Illustrations Group** click on the **SmartArt** tool

This brings up the *SmartArt* Graphic Templates Gallery illustrated in Fig. 3.26 above.

Locate and **double click** on the **Relationship > Converging Radial** diagram template (Fig. 3.27)

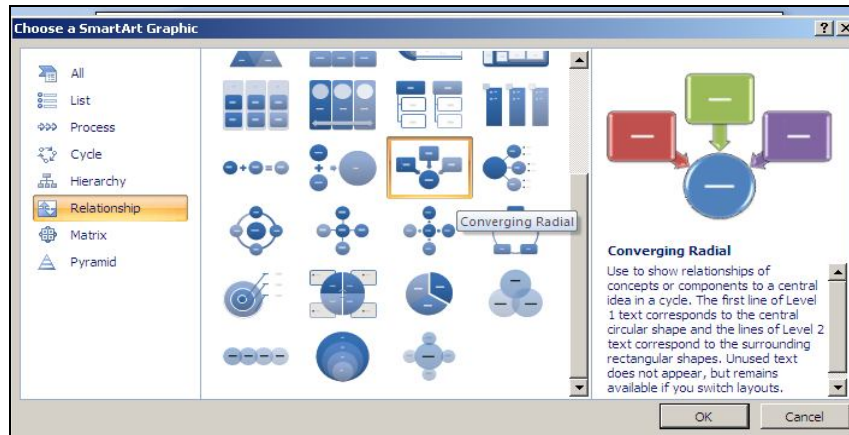


Fig. 3.27 The Converging Radial Relationship Diagram template

You should now see a diagram template with the basic components of a Converging Radial diagram set up ready for you to provide text to go with the shapes, as illustrated in Fig. 3.28.

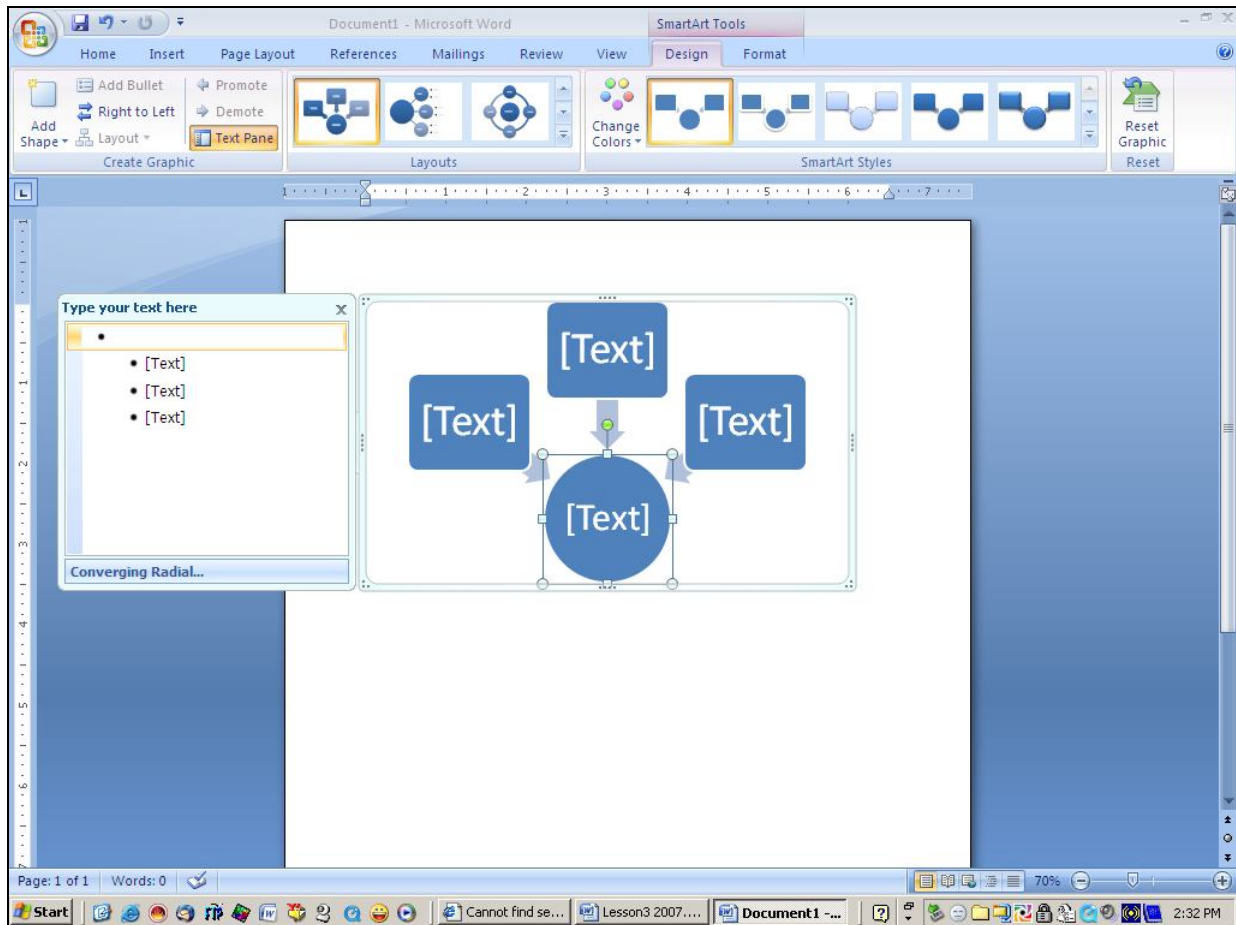


Fig. 3.28 Basic Converging Radial template

Wherever you see the word [Text] in the brackets, you would type whatever you wanted to show a converging relationship between information or ideas. For example, Fig. 3.29 shows a converging relationship between Fruits and Veggies, Exercise, Relaxation, Good Relationships and Good Health.

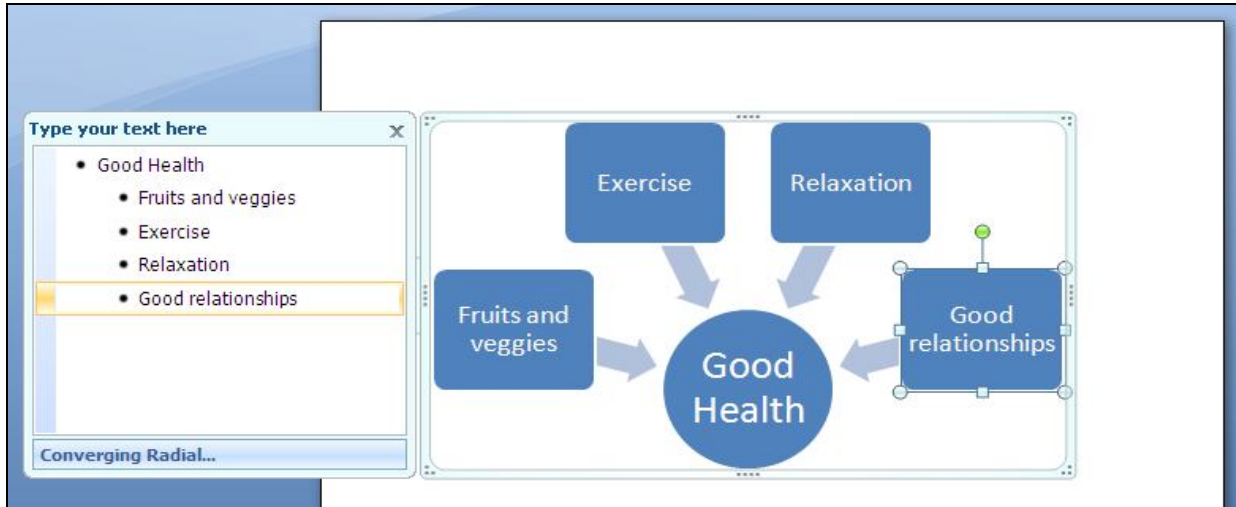


Fig. 3.29 “A picture is worth a thousand words...”

When you think about it, there are very few ideas or concepts that cannot be reduced to diagrammatic form like this. The beauty of it is that concepts and ideas represented diagrammatically are easier to grasp and understand. As they say: “A picture is worth a thousand words.”

The best way to find out what you can do with diagrams like this is by discovery, so try the following exercises.

Go ahead and enter the data shown in Fig. 3.29 for this **Good Health relationship diagram** (to type the **fourth** item in the list, you just hit the **Enter** key)

Clicking to the right or left of the diagram removes the box around it so you can see how it would look on an overhead or in a handout; clicking above or below the diagram does nothing. Clicking on the diagram brings back the box so that you can continue to edit the diagram and make changes to it. Try this now.

Click **above** or **below** the diagram—nothing happens

Click to the **right** of the diagram—the box around the diagram is gone and the diagram is ready to display or to print out

Click **back on the diagram** anywhere—the box around the diagram and the accompanying text entry box are back, and you can make changes

Let’s do that.

Click at the end of the last item in the list in the box on the left (at the end of the text **Good Relationships**), hit **Enter**, then type the new item **Routine Medical Checkups**

Get the idea? You can change the appearance of any of the shapes and fonts, too. Very simple.

Right click on the **central shape** in the Converging Relationship diagram (the **Good Health circle**) and, from the context menu, select **Format Shape...**

This brings up the Format Shape dialog box with which you are already familiar (Fig. 3.30).

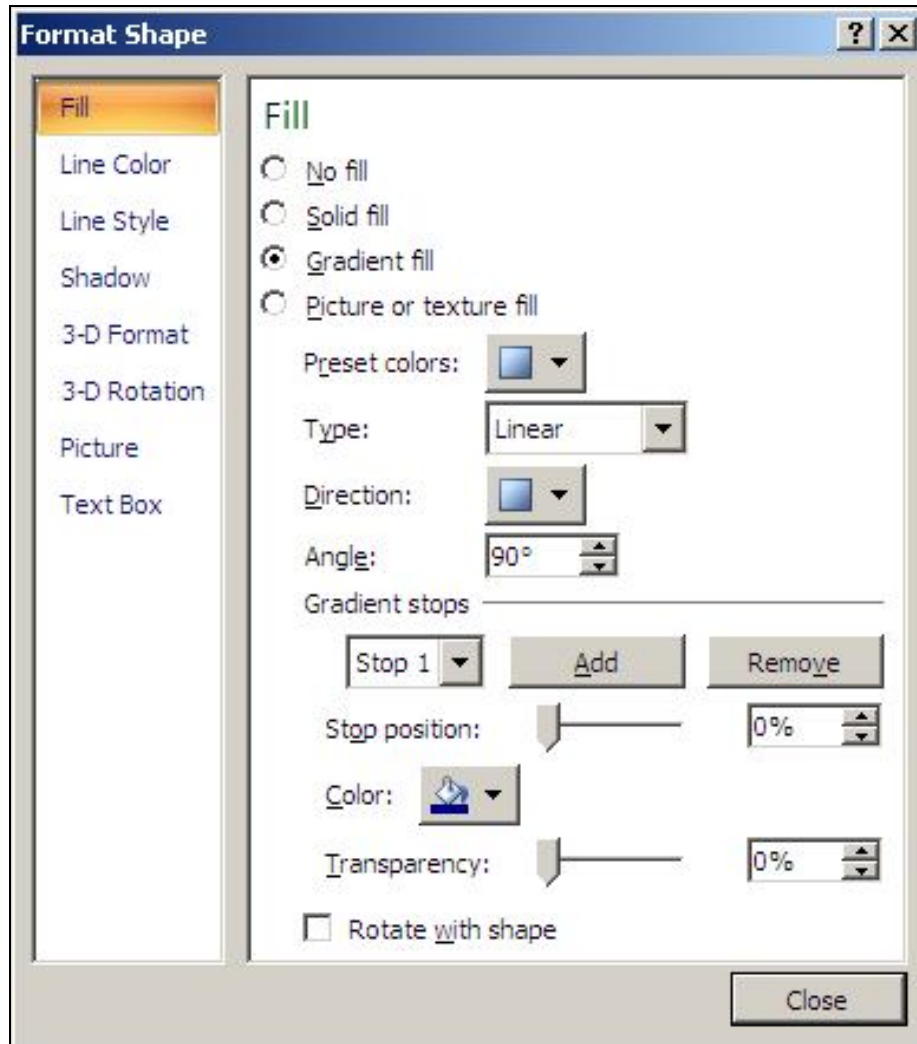


Fig. 3.30 Format Shape dialog box

Use the tools in the **Format Shape dialog box** to create a **different** format (**Fill, Line Color, Line Style, Shadow, and 3-D Format**) for **each** of the **six shapes** in the **Good Health Converging Relationship diagram**

**Save** the diagram (**Practice Drawing 8**) when you're done experimenting with each of the shapes

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 by either positioning the cursor in one of the bracketed items in the text entry box on the left and then hitting the *Enter* key, or by right clicking on a shape and, from the context menu selecting *Add Shape....* Try this now.

Right click on any shape **other than the Good Health circle**, then in the context menu select **Add Shape...**

In the new box, type the text: **Clean air**

You also can delete shapes, of course. Try deleting a shape now.

Click on any shape **other than the Good Health circle** to select it, then hit the **Del(ete)** key on the keyboard to remove the shape

Simple. Notice that the *SmartArt* tool readjusts the objects in the diagram so they look balanced. To enter text into a shape, just follow the directions by clicking on the shape and typing away.

To add a second or third diagram on a page, you must first deselect the diagram you're working on by clicking off to the right of it, and then hitting the *Enter* key to move down the page for a new diagram. Let's do this now.

Click anywhere **off to the right** of the **Good Health Relationship** diagram, then in the **Insert Ribbon > Pages Group** select **page break** to go to a new page

In the **Insert Ribbon > Illustrations Group** click on the **SmartArt** tool, then, in the **SmartArt Graphics gallery** of diagrams, click in the **left hand frame** on the **Hierarchy** option, and locate and **double click** on the **Organization Chart** template

You should now see a template with the basic components of an organization chart, as illustrated in Fig. 3.31.

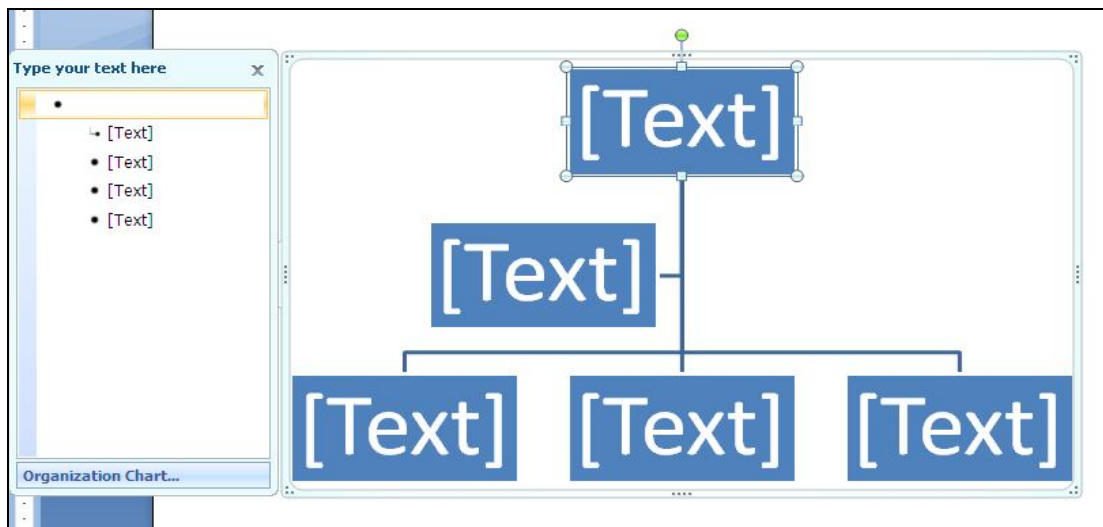


Fig. 3.31 The template for an organization chart



It is easy to add shapes (boxes) to the chart by right clicking on any shape and selecting the option you want from the context menu that pops up (Fig. 3.32).

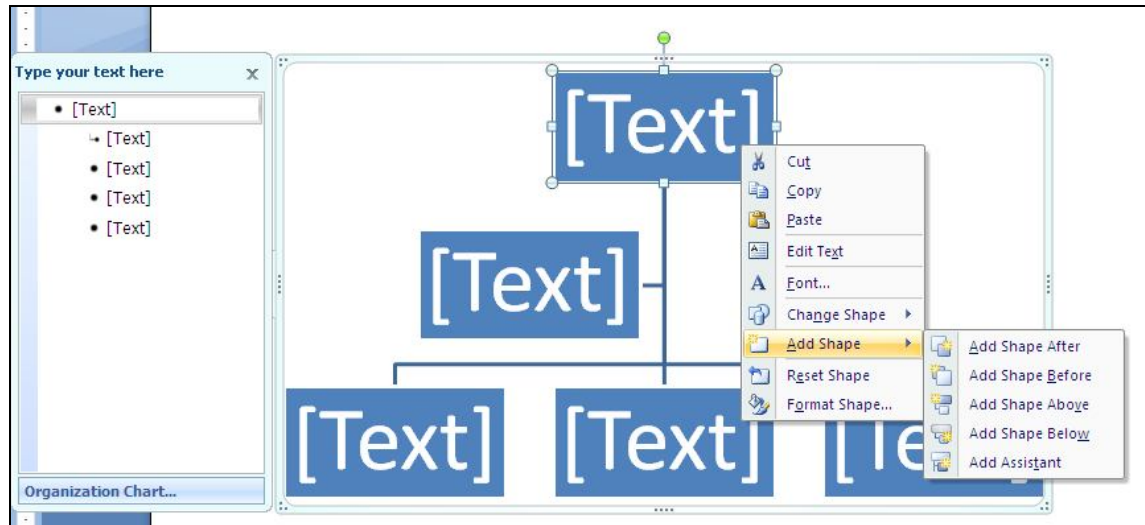


Fig. 3.32 The Organization Chart context menus

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 (the boss of the organization), the right click in the empty box, and in the **context menu** select **Add Shape > Add Assistant**

This puts a second (Assistant) shape immediately below the top level (boss) of the organization.

Now, still working with the top level (boss) box, **add 2 more shapes** to the chart, namely **Add Shape Below** and **Add Assistant**

Notice how this affects the chart.

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

Now add **at least 2 shapes** at a **4<sup>th</sup> level** of the chart

Visit each box in the Organization Chart now and fill in hypothetical titles for an organization (you could start with **President** in the top box, then move on down through the chart, creating your own fictional organizational hierarchy)

**Save** the diagram (**Practice Drawing 8**) when you're done setting up the organization

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 context menu.

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

You also can vary the look-and-feel—the *format*—of your chart. Once again, the best way to understand this is to try it out.

Right click on the **topmost shape** in the Organization Chart and, from the context menu, select **Format Shape...**

This brings up the Format Shape dialog box with which you are now familiar (Fig. 3.30 above).

Use the tools in the **Format Shape dialog box** to create a **different** format (**Fill, Line Color, Line Style, Shadow, and 3-D Format**) for the shapes at **each level** of the **diagram**—so the **Boss** would have a different look than the **Assistants**, and the **subordinates** different again

**Save** the diagram (**Practice Drawing 8**) when you're done experimenting with each of the shapes

### Discovery is the best way to learn

Spend some time now experimenting with a few of the other *SmartArt Graphics* templates for making diagrams

Click to the **right** of the **Organization Chart** example to **deselect** it, then in the **Insert Ribbon > Pages Group** select **page break** to go to a new page

Start with an example of a **List diagram**

Notice that when you select a template in the gallery, an explanatory box pops up on the right side of the gallery to explain what you would use that particular diagram for (Fig. 3.33).

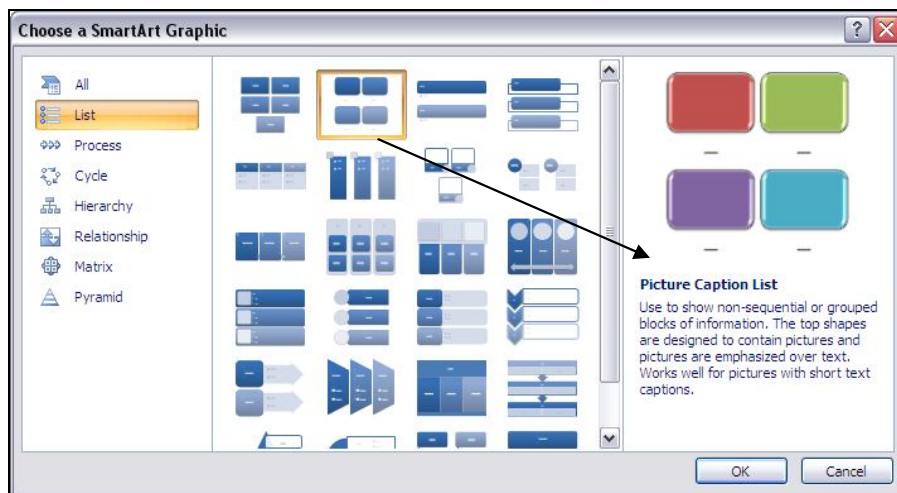


Fig. 3.33 Explanatory window in the *SmartArt Graphics* Gallery

**Double click** on a **List template** in the **gallery** and check out how it looks on the page, add a couple of shapes to the diagram

**Insert** a **page break** when you're done

Next create any one of the **Process diagrams**, check out how it looks on the page, add a couple of shapes

**Insert** a **page break** when you're done

Now create a **Cycle diagram**, followed by a **Matrix diagram**, and lastly a **Pyramid diagram**, in each case adding a couple of shapes or levels or cells, and inserting a **page break** between each one

**Save** the document (**Practice Drawing 8**) when you have created the **seven** different diagrams (on seven different pages)

## 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 7 will give you the opportunity to further practice your word processing skills by integrating them with other *Office* components, including mail merge. Meanwhile, in Lessons 4 and 5 you will move on to learn about the *Excel* Spreadsheet component of *Office 2007*—and where you will also learn about the tools for creating Graphs and Charts.

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**

