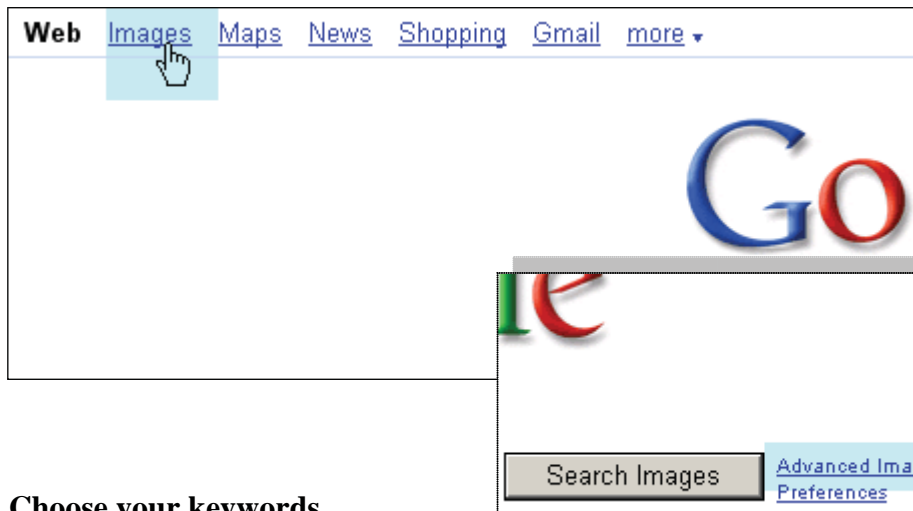


Methods for Incorporating Graphical Elements into the Curriculum using Microsoft Word 2007

How to Obtain an Image from the Internet

Finding a suitable image file

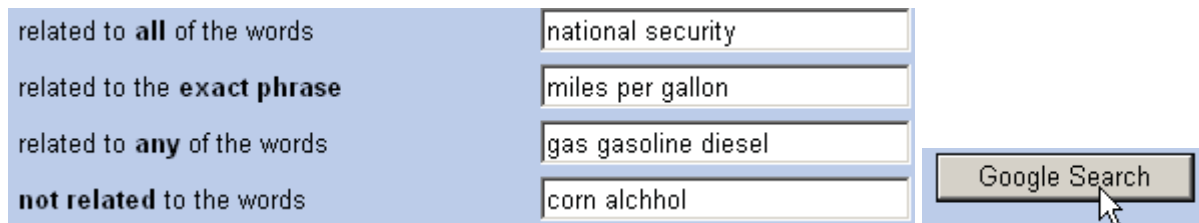


Many search engines have special “image only” search options. Although it is very handy, remember that all copyright and Fair Use rules still apply to these image files.

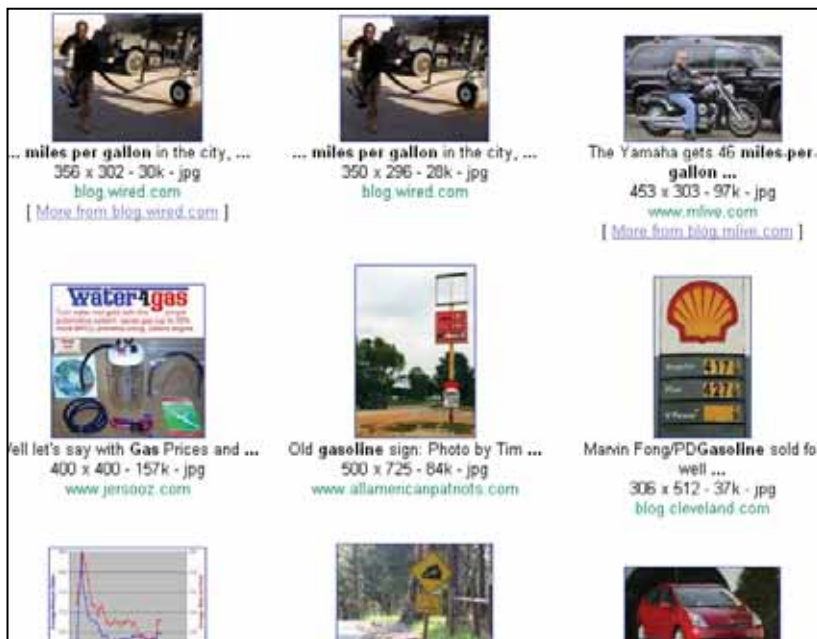
(See [Appendix A](#))

I recommend the “Advanced Image Search” option.

Choose your keywords.



The page below appears. Select the image which is the best fit for your learning outcome.



For example, click on the first image to select it.

The page below appears. It is split into two parts: the top with the image and the lower section which contains the web page that contains the image.



If you are only interested in the image and not the context or background information from its webpage, you may click on the [See full size image](#) link (highlighted at left).

Note the (partial) URL, area of the image (356 x 302) and file size (30k) are given, as well as the copyright disclaimer.

In the frame below is the webpage in which the image resides.



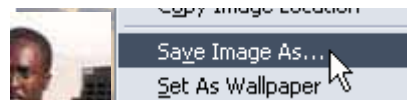
It may take a substantial amount of scrolling to locate the image in the webpage in order to get the context of it with respect to the publisher.

Obtaining the image file

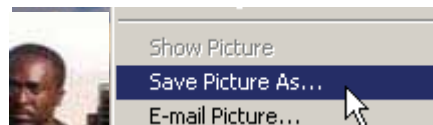
Place the cursor over the desired image file and right click.

From the menu that appears choose:

Save Image As (Netscape/Mozilla)



Save Picture As (Internet Explorer)

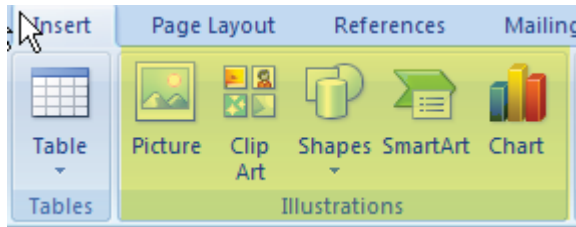


The default "Save" location for Internet Explorer is My Pictures (See [Appendix A](#))

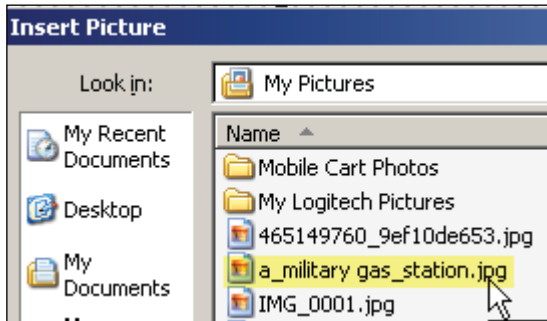
Be sure to take note of the filename: File name: 465149760_9ef10de653

Change it to something that makes sense to you. File name: a_military_gas_station

Inserting A Picture File Into A Word 2007 Document



Click the Insert tab – from the Illustrations section click on “Picture”.



From the My Pictures window choose a_military_gas_station.



It appears on the page of your document. Note how small it is relative to its size on the webpage. I believe that is due to the different resolution of webpages relative to printed documents. It takes approximately 9 of these smaller images to take up the same space as one image on the website. Printers typically print at a resolution of 600 dots /inch (dpi) while computer monitors only display a resolution of 72 dots/inch – which is about nine times less resolution.

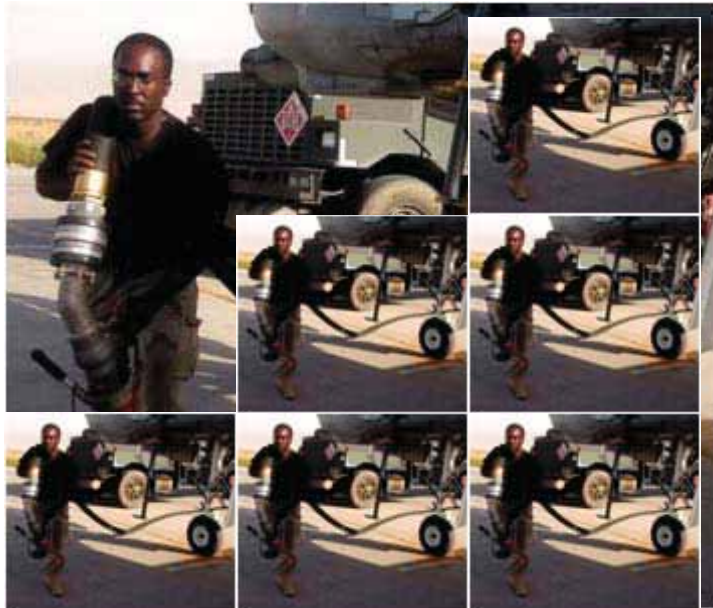


Figure 1: Nine printer resolution pictures fit inside one of web (monitor) resolution.

($9 \times 72 = 648$). Thus, since the word processor page is meant for a printer the picture will take up only 1/9 the space as on a webpage with a resolution of 72 dpi.

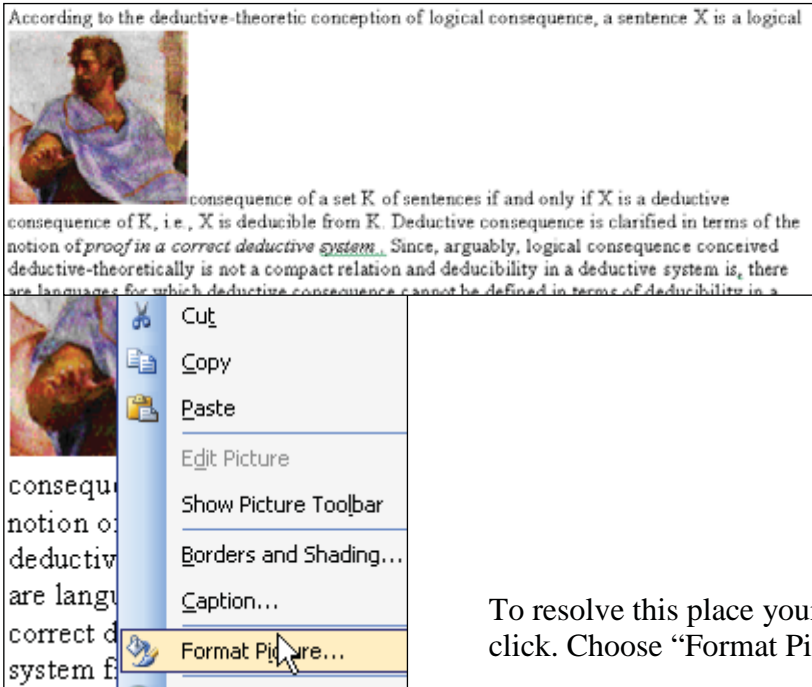
It is ok to resize that small image to the size it was on the internet **if** you do not intend to print it but only plan to display the file on a computer monitor. Otherwise if it is printed, with only 1/9 the needed resolution it will be of questionable quality.



To resize the small image click on it to make it active as is evident by the presence of circles and squares on the perimeter. Place your cursor over

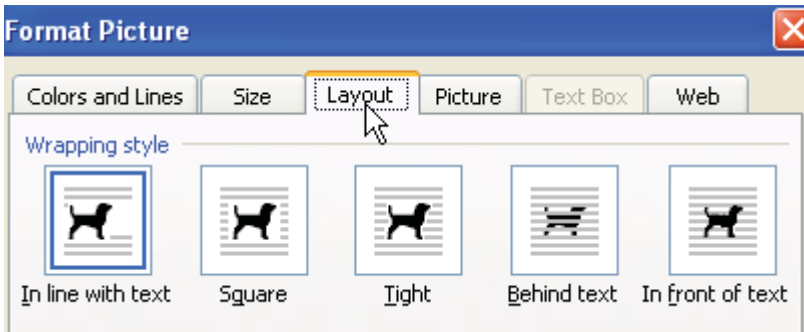
one at the corner, depress the mouse button (to grab it) and roll the mouse to “drag” it until it becomes the desired size

Format Pictures in Word 2007

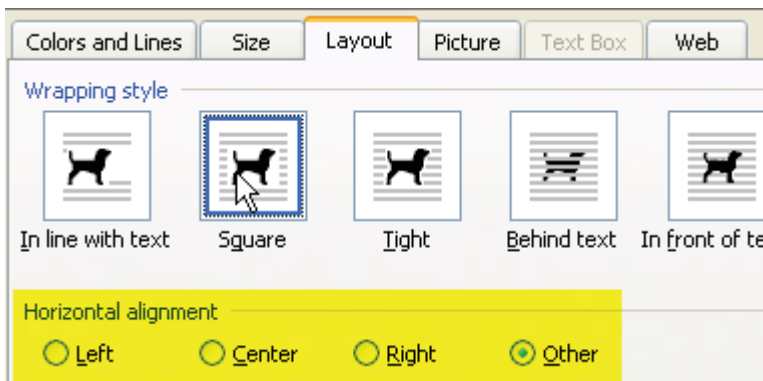


Typically when we insert an image among text it acts like a single “letter” with a huge font size separating the text above and below it. (This is an odd choice of default settings if you ask me.)

To resolve this place your mouse over the picture and right click. Choose “Format Picture” from the menu options.



In the Format Picture dialog box click on the “Layout” tab; choose the desired “Wrapping style” format.



Note: “Horizontal Alignment” options become available once you deselect the default “In line with text” option.

After you select a wrapping style click “OK” which applies your choice and closes the Format Picture dialog box. Now you may discover you wish to reposition the image on the page.

Repositioning an image:

Reposition the image on the page using the “drag and drop” method. To “drag and drop” place your mouse over the picture and hold the button down while rolling the mouse. The picture will follow or

“be dragged by” the cursor until you release the button to “drop” it at a new location. Typically the cursor appears as four arrows during this process to indicate the omni-directionality of movement possible.

Layering Two (or more) Pictures

Insert two images into Word 2007. We will use the two used in the example above.



Name	Size
a_military_gas_station.jpg	30 KB
a_military_gas_station_websize.jpg	25 KB

Files used in this example. Note the size difference?

As above we will place the cursor over the image and right click to get access to the “Format Picture” dialog box. Apply this to the image you want on the bottom first and the image you want on the top second. Here’s how:

-Bottom image: In the Format Picture dialog box click the Layout tab and choose the desired format.



-Top image: the Format Picture dialog box click the Layout tab and choose “In front of text”.

Drag and drop the top image (in front) to the desired location.



Layering Pictures, Charts, and Clip Art

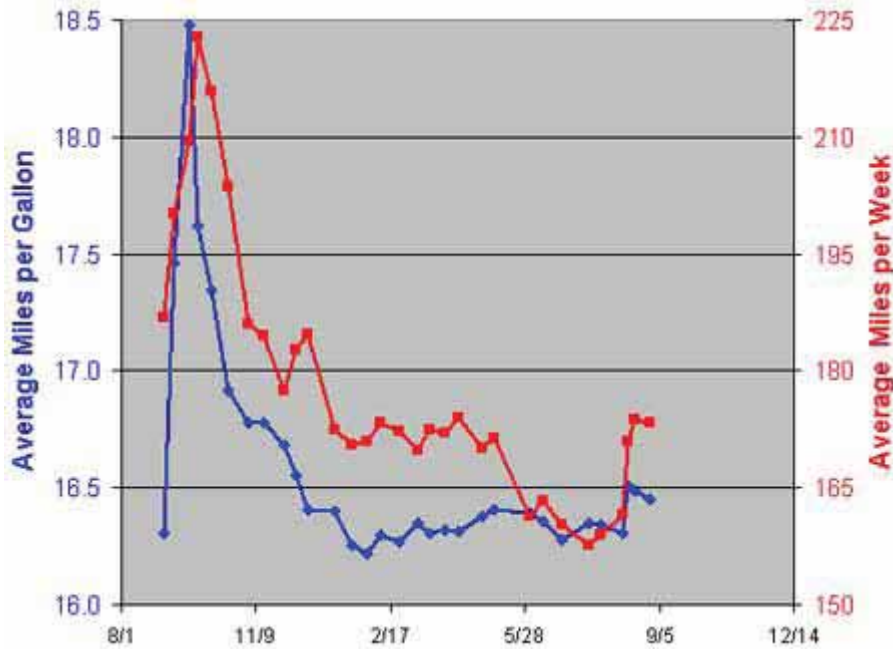
Charts

When you insert a chart you get the same old chart interface that has been used in PowerPoint for eons. It is not the most efficient but the good news is that you can copy from an Excel file and paste it into the chart Datasheet if you prefer. Simply be sure the number of

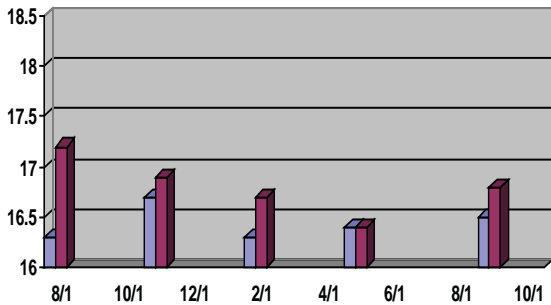
		A	B	C	D
		1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
1	East	20.4	27.4	90	20.4
2	West	30.6	38.6	34.6	31.6
3	North	45.9	46.9	45	43.9
4					

rows/columns copied matches the number of rows/cells highlighted for pasting.
 To place a chart over an image choose Insert-> Picture.
 Our picture is the graph shown below.

Name	Size
Graph x-bar_mpg_mpw over t.jpg	16 KB



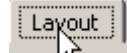
Choose Insert -> Chart. Right click over the chart and as described above choose



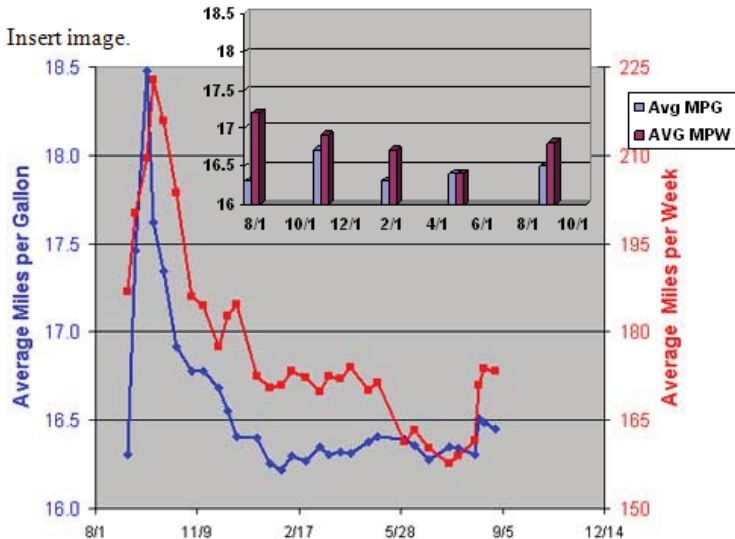
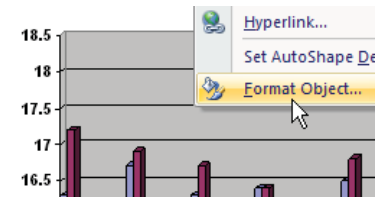
■ Avg MPG
 ■ AVG MPW

- Format Object

-The "Layout" tab



- In front of text



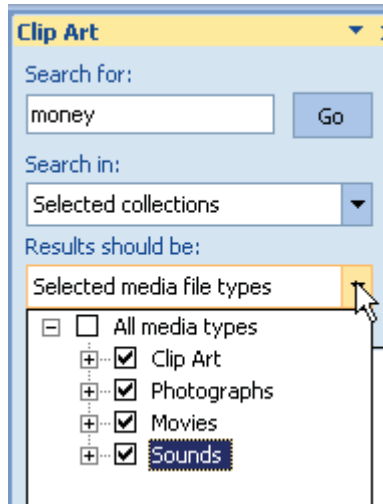
Now that the chart is "in front" drag and drop it over picture. Reverse procedure to place picture over the chart.

If you want text beside the image/chart use the bottom/top strategy described above by formatting the bottom element before the "In front of" top one.

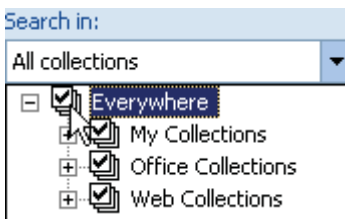
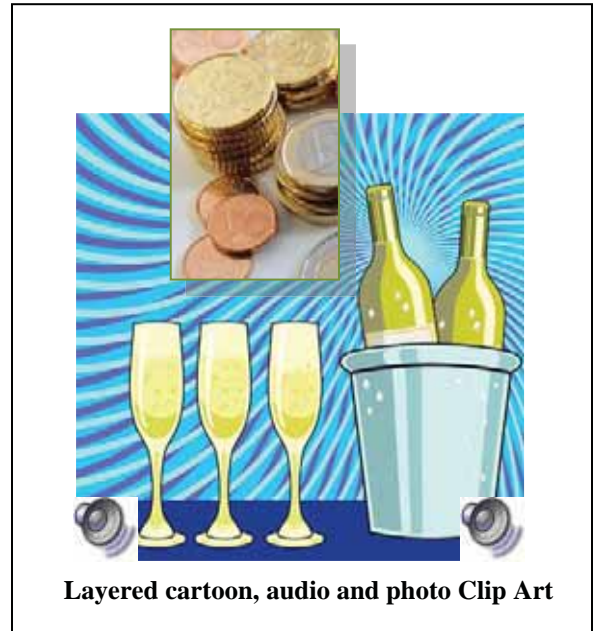
This juxtaposition of two images of the same data using different representations (continuous vs. discrete) can be a good example of either sampling methods or data representations for students.

Layering Clip Art

Be aware that these days Clip Art is more than cartoon characters. It also includes:



The example at right demonstrates this.



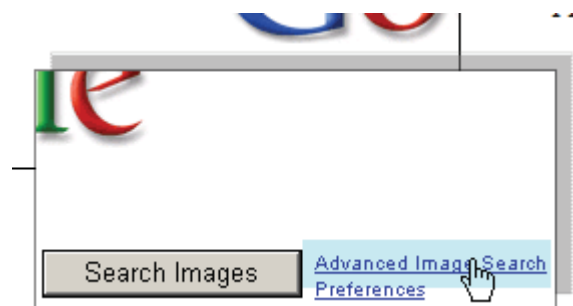
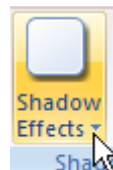
Albeit it appears only a fraction of the available Clip Art files have been made available to you until you choose the *Everywhere* “Search in” option.

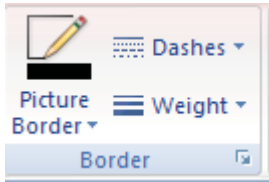
Jazzy Stuff: The Format Picture Toolbar

Double clicking on an image activates the Format Picture toolbar providing the additional menu options shown below.

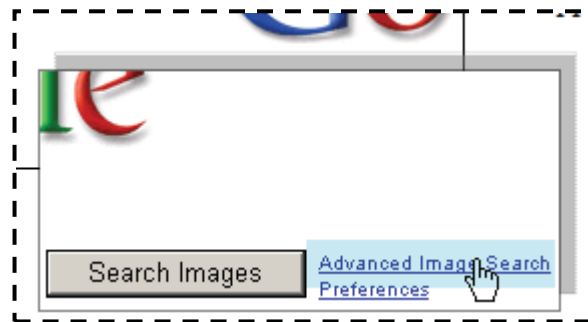
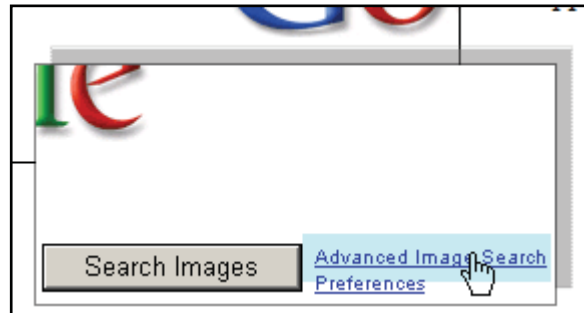
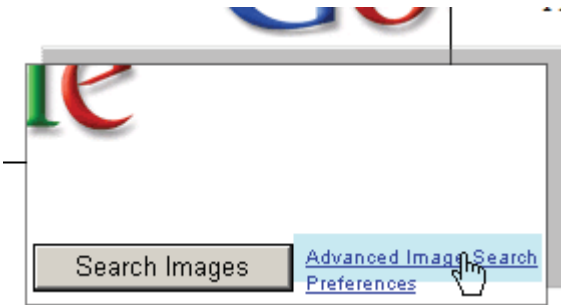


“Shadow Effects” add depth. This can help differentiate layers as was the intent for the dissected Google window on the first page.





Picture Borders make the picture into an individual entity whereas the same background color makes it difficult to distinguish where the picture's edges end and the page begins. The color, line style (Dashes) and thickness (Weight) of the border are additional options I find less is more here. Unless there is an instructional advantage a small black border is non-distracting and sufficient.



Parkside green?

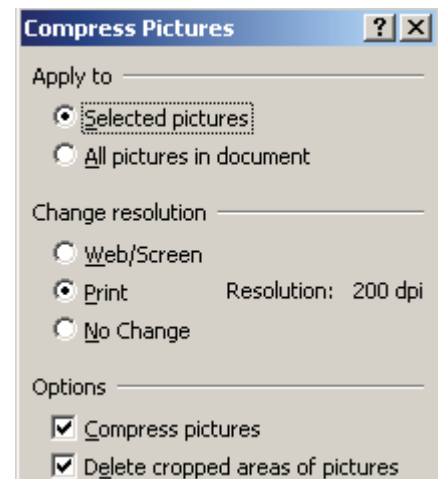
Dashes can imply a inset, exploded view or a permeable boundary.

Adjust Options



The Compress Pictures option allows one to change the picture resolution as shown at right. It can be a strategy to make images acquired from the Internet have acceptable quality on the printed page.

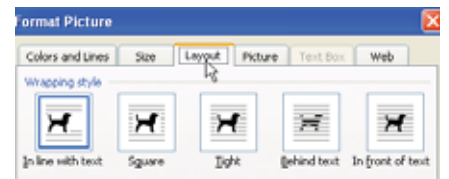
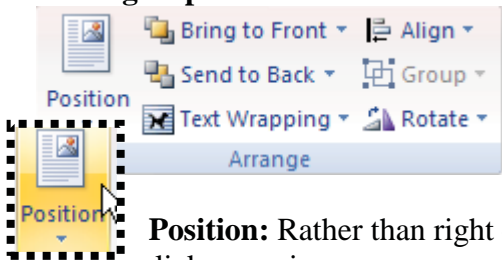
Brightness, Contrast and Recolor are best left for a more suitable program (e.g. Photoshop) but could be used in a pinch.





The photo at left will be used for the live Brightness, Contrast and Recolor examples.


Arrange Options

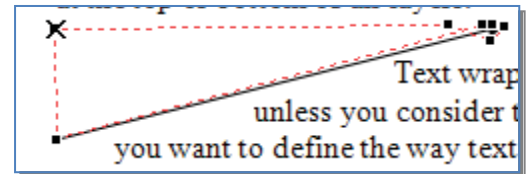


Position: Rather than right click to access the Format Picture dialog box once you double click on an image you may choose Position to get too many of the same text wrapping choices. This is true of the Text Wrapping choices as well.

The “Bring to Front” and “Send to Back” options for whether the selected item will be layered at the top or bottom of all layers.

Text Wrapping may seem to be redundant unless you consider that there are occasions when you want to define the way text wraps around a graphical object.

Use  **Edit Wrap Points** to do this. Drag the squares to create an area that excludes text.



Please experiment with all of these options.

Layering of Pictures and Shapes

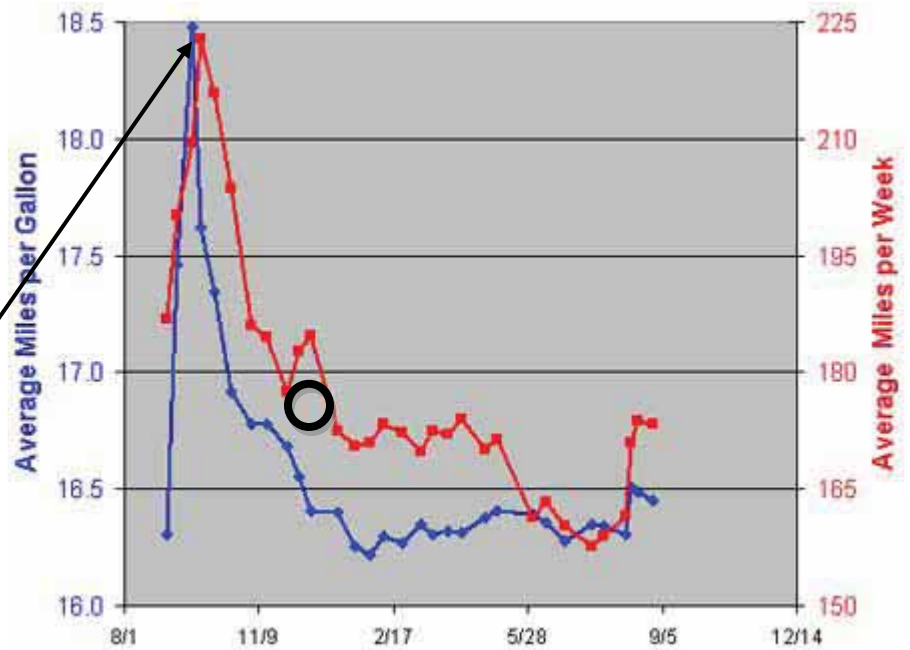
Let's go back to the picture of the graph we used earlier. Suppose you want to point out a detail of reference it in the text and relate that reference to the picture. Insert Shape will achieve this goal.

Sample Problem:

On the graph at right what is the maximum Miles Per Week value for the interval 11/9 to 5/28

Solution: 17.2.
(denoted by the black circle)

It is not the function's maximum value of 18.45 because it falls outside the given interval.



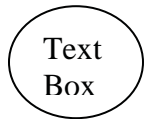
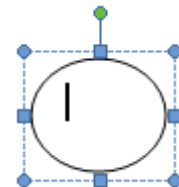
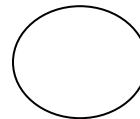
If you double click on an object (shape) it will become active as denoted but the “handles” around its border In addition a Format toolbar will appear providing editing options for the selected shape.



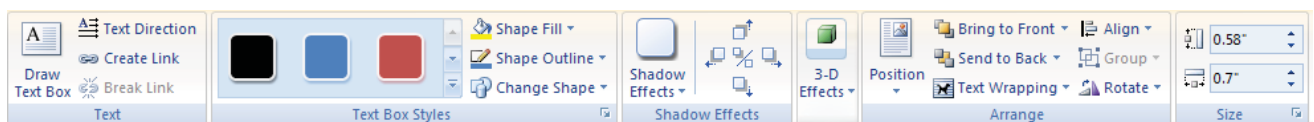
Insert Shapes:



The Edit Text is likely the most useful tool here. It places a cursor inside the shape.



Once you add text it is considered a text box – not a shape. Double clicking on it now reveals the Textbox Tools Format toolbar.




We will discuss this more later.




Shape Styles: The colors are fill colors.




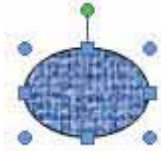
 The paint bucket is a fill color tool with more options.



 **Shape Outline** sets border thickness and color.



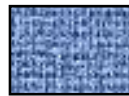
 **Change Shape:** This option allows you to change the shape of an already inserted object while preserving all the formatting.



Double click on the shape.



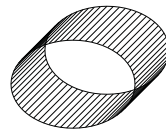
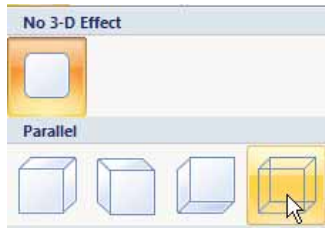
Select a Square.



Result.

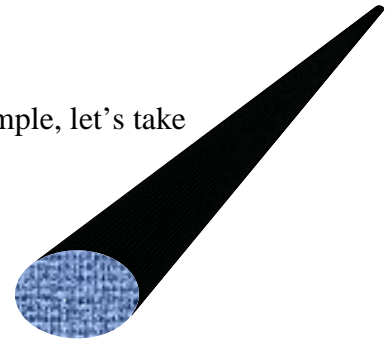
Shadow Effects are as previously discussed.

3-D Effects are rather jazzy and can be quite useful as well as engaging. For example, let's take our circle from above and roll your mouse over the choices to preview the effect.



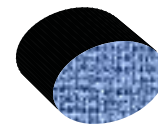
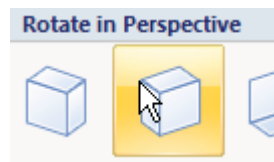
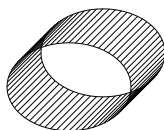
Result

OR



Result

It may or **may not** be possible to Rotate in perspective and maintain the formatting



Result

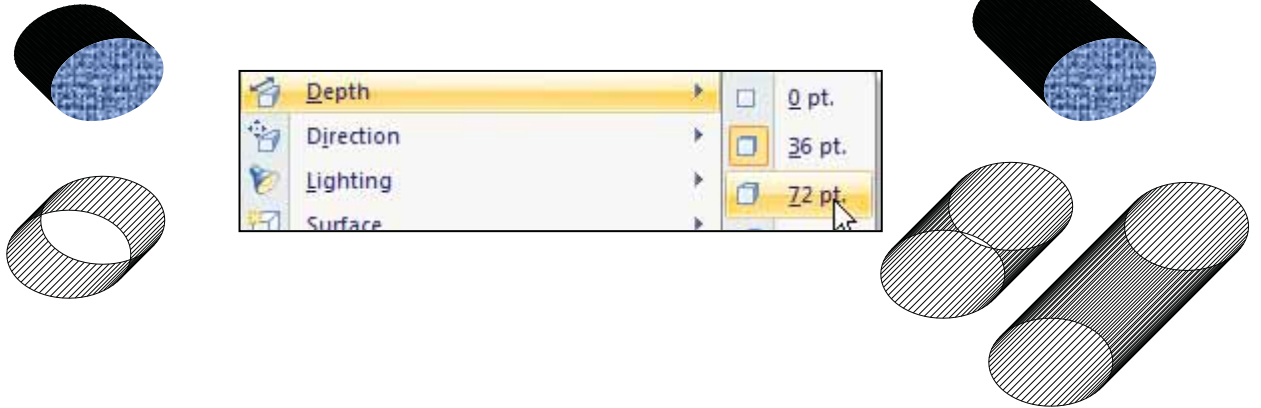


The last set of 3-D menu options for shapes are powerful and all have multi-option sub-menus.

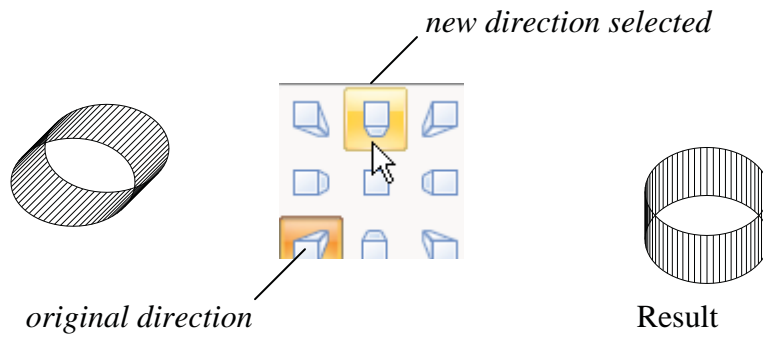
3-D Color:



Depth:



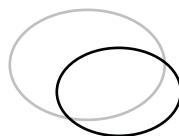
Direction:



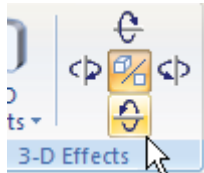
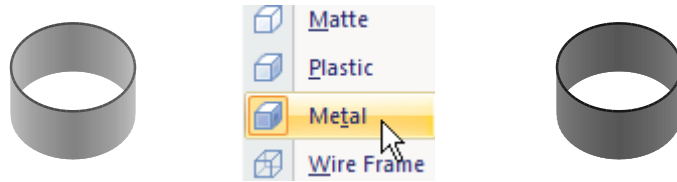
Lighting:



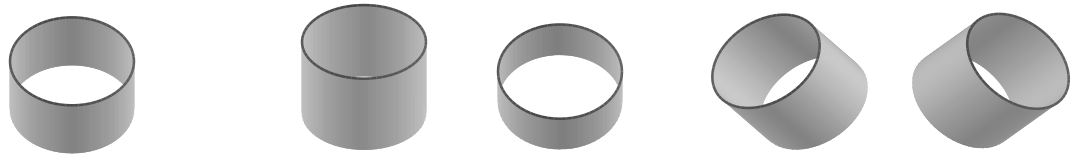
Note: you may also try various Shadow Effects for different lighting perspectives



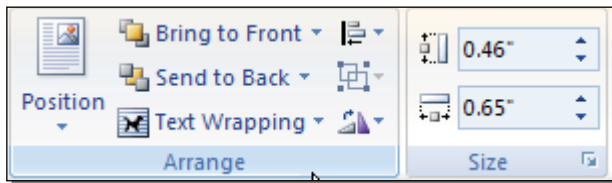
Surface: This did not affect a profound change with these sample shapes.



The last section in 3-D Effects contains **Tilt** options; up, down, left, right respectively



Original orientation



The **Arrange** for shapes functions the same as for pictures [as described above](#).

Size enables one to adjust the horizontal or vertical dimensions.

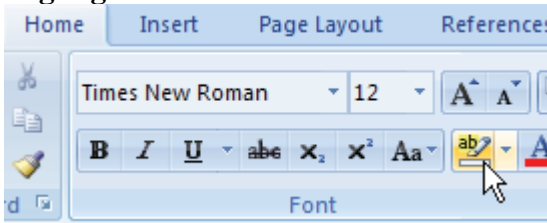
Sample Problem:



What is the minimum gap of the spaces in the weave of a pair of blue jeans that will assure they will have a SPF rating of 50? (Hint: use the UVB wavelength value.)

Additional Visual Considerations

Highlighter Tool:



Under the “Home” tab in the “Font” area of the toolbar you will find the Highlighter tool. Select the tool and roll the mouse over the text to be emphasized. Be sure there sufficient contrast between the text, background and highlighter shade.

Readability is key.

Readability is key.

Readability is key. 12 pt

Readability is key.

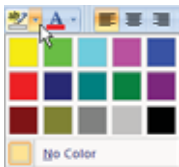
Readability is key.

Readability is key. Bold 12 pt

Readability is key.

Readability is key.

Readability is key. 14 pt



To change highlighter colors click the down arrow to the right of the highlighter icon

Is color printing an option?

Color Coding Text

In general with color coding options do not forget disability considerations. It is desirable to change the font and perhaps all bolding for **emphasis**.

[APA Example](#)



SnagIt Software

“In the preparation of this text relied on extensive use of SnagIt software. One can select anything on the monitor screen - an area, image, article, or entire Web page - and either save it as a picture file or copy and paste it into a document. I have found the latter to be the quickest and easiest way to incorporate graphical elements. It also has its own set of picture editing features so that often adjustments can be made before you insert the image into the text. Usually I find this more efficient than using the picture editing features in Word. There is educational pricing available (See [Appendix C](#)). It has additional graphical and video features... but that is another workshop. <http://www.techsmith.com/snagit.asp>

More Visual Resources

I would encourage you to consider locating and using animations and simulations in the classroom. They are far more powerful than text and can be the launch point for discussion.

Animation Example: [The Universe Within](#)

Simulation example: [Projectile Motion](#)

Referencing

The APA webpage link below provides referencing information for web-based media:

<http://www.apastyle.org/electmedia.html>

Broader Applications of this Workshop's Material

Due to the integration of MS products the same visual editing tools are available to you using Outlook e-mail. When you reply the toolbar is the familiar one from MS Word 2007 that we just learned about. [See Appendix E](#)

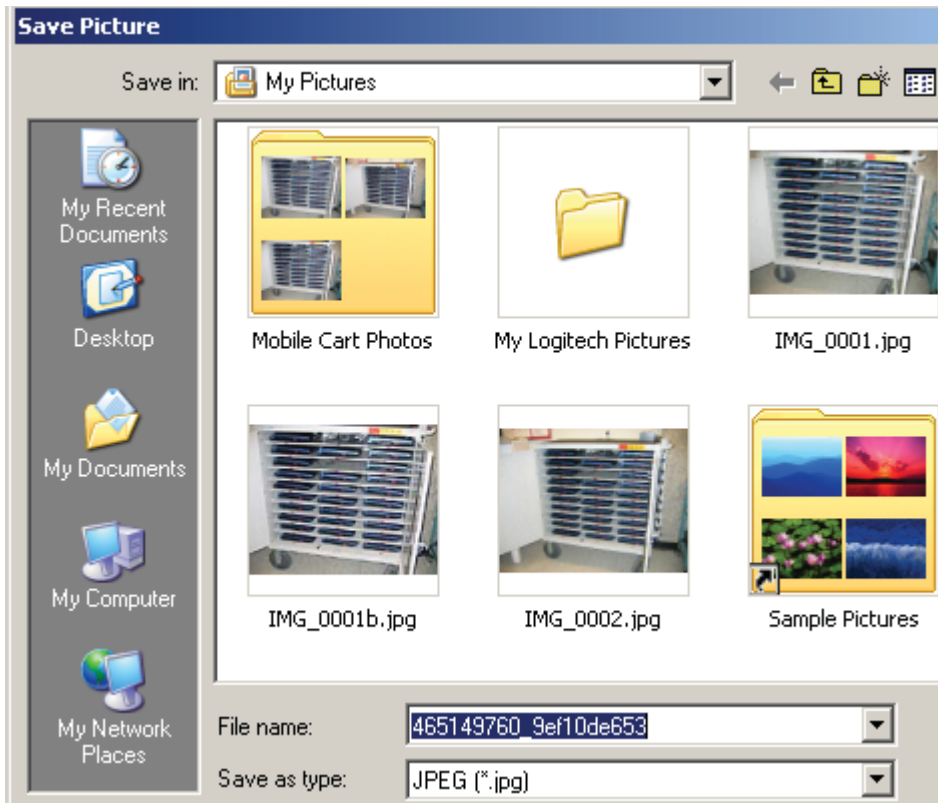
Appendix A

Try performing an image search using “royalty free” in the “exact phrase” text box to minimize the possibility of copyright infringement.

related to all of the words	<input type="text" value="logos"/>
related to the exact phrase	<input type="text" value="royalty free"/>

[Back](#)

Appendix B



[Back](#)

Appendix C

Note: the updated Price list as of 10-7-08.

SnagIt 9.0 Volume Education Pricing:

1 – 4 Licenses: \$37.95 each + \$9.49 each for Maintenance
5 – 9 Licenses: \$28.46 each + \$7.12 each for Maintenance
10 – 24 Licenses: \$22.46 each + \$5.62 each for Maintenance
25 – 99 Licenses: \$17.96 each + \$4.49 each for Maintenance
100- 499 Licenses: \$13.46 each + \$3.37 each for Maintenance
500 - 999 Licenses: \$11.21 each + \$2.80 each for Maintenance
1000 – 1999 Licenses: \$7.46 each + \$1.87 each for Maintenance
2000 – 2999 Licenses: \$5.21 each + \$1.30 each for Maintenance
3000 – 4999 Licenses: \$3.71 each + \$.98 each for Maintenance
5000 – 7499 Licenses: \$2.21 each + \$.55 each for Maintenance
7500 – 14999 Licenses: \$1.50 each + \$.38 each for Maintenance

Please let me know if I can be of further assistance.

Kind Regards,

Arwen Robinson

Inside Sales Specialist

TechSmith Corporation

Toll Free 888.750.0685

Direct Dial +1 517.381.5598

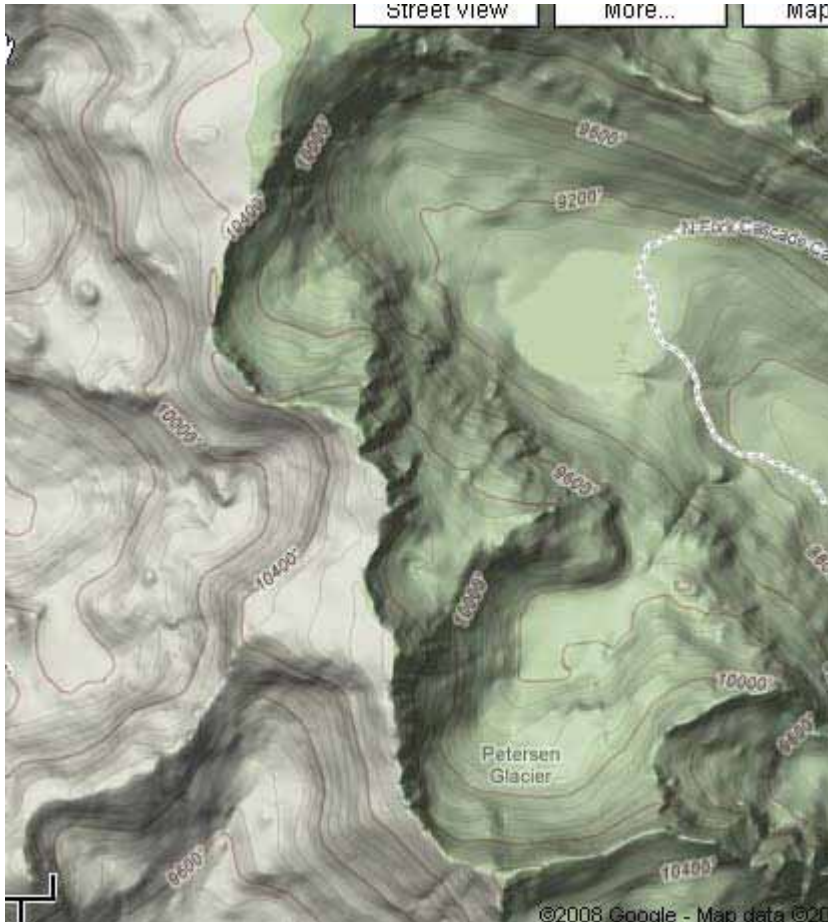
www.TechSmith.com

Appendix D


Student graphic manipulations that are digital can be submitted to the D2L dropbox.

Sample HW/Quiz Problem -

From the Insert -> Shapes menu use the star shape () to identify cirques on the map below by placing the star over a location where a cirque exist.



Sample HW/Quiz Problem -

For the two sentences below use the square shape () from the Insert -> Shapes menu to:

- place a box around the entire sentence that is grammatically correct
- place a box around the word (and only the word) that reflects the verb-subject agreement error in the incorrect sentence (student response modeled below).

Careful planning and a clear mind is important for writing a good essay.

Careful planning and a clear mind are important for writing a good essay.

One could achieve the same results with the highlight tool using different colors:

Careful planning and a clear mind **is** important for writing a good essay.

Careful planning and a clear mind are important for writing a good essay.

Appendix E

The graphic below shows an e-mail reply window in Outlook. Note the same Toolbar that is used in Word is available to you including all the graphical options under the Insert tab (**highlighted** below). This e-mail contained the standard text and an image with an arrow overlay from the “Shapes” option.

RE: Smart Board classrooms - Message (HTML)

Message **Insert** Options Format Text Adobe PDF

Attach File Attach Item Business Card Calendar Signature Table Tables Picture Clip Art Shapes SmartArt Chart Hyperlink Bookmark Text Symbols

To... Wawiorka, Linda L

Cc...

Subject: RE: Smart Board classrooms

Jim,
I did note it underneath the class room listings on both the Classroom by Technology and Classroom by Capacity pages.

Classroom by Technology

Level 0	Level 1	Level 2	Level 3	
Molinaro <u>161</u>	Molinaro <u>314</u>	Molinaro <u>D101</u> <u>D105</u> <u>D107</u> <u>D128</u> <u>D132</u> <u>107</u> <u>109</u> <u>112</u> <u>114</u> <u>116</u> <u>128</u> <u>142</u> <u>144</u> <u>149</u> <u>165</u> <u>167</u>	Molinaro <u>212</u> <u>213</u> <u>215</u> <u>216</u> <u>218</u> <u>222</u> <u>226</u> <u>317</u> <u>322</u> Comm-Arts <u>125</u> <u>129</u> <u>135</u> <u>137</u> <u>140</u> <u>141</u> <u>143</u>	Molinaro <u>D137</u> <u>D139</u> <u>105</u> Greenquist <u>101</u> <u>103</u> Level 4 Comm-Arts <u>D155B</u>

All rooms listed in bold text contain rear projection interactive white boards