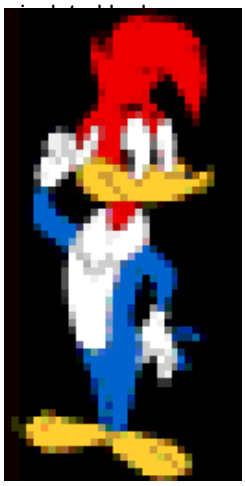
There are 2 Types of Files in the Graphics World

Bit Mapped (RASTER)

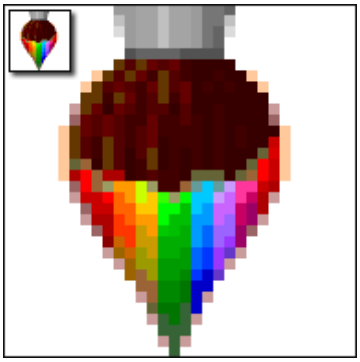
- There are two kinds of computer graphics: **Bit Mapped (RASTER)** and **Object Oriented (**VECTOR). Bit mapped graphics are graphics that are stored in the form of a bitmap. They are a sequence of bits that get drawn onto the screen. You create bit mapped graphics using a painting program.
- When you enlarge a bit mapped image, you will get a pixelated look. If you are planning to print out an image that was originally 3 inches on 3 inches as 6 inches by 6 inches, you will get a very
- Bit mapped graphics tend to create larger files than object oriented graphics.



- As you can see from these two pictures, when a bitmapped image gets scaled up, the detail is lost, as opposed to an object oriented drawing where no pixelation occurs.

Key Points of Raster Images

pixels in a grid
resolution dependent
resizing reduces quality
easily converted
restricted to rectangle
minimal support for transparency



Object Oriented (VECTOR)

Definition: Vector graphics are made up of many individual objects. Each of these objects can be defined by mathematical statements and has individual properties assigned to it such as color, fill, and outline. Vector graphics are resolution independent because they can be output to the highest quality at any scale.
Software used to create vector graphics is sometimes referred to as object-based editing software. Common vector formats include AI (Adobe Illustrator), CDR (CorelDRAW), CGM (Computer Graphics Metafile), SWF (Shockwave Flash), and DXF (AutoCAD and other CAD software). Vector graphics tend to have much smaller file sizes than raster-based bitmaps.

Key Points of Vector Images

scalable
resolution independent
no background
cartoon-like
inappropriate for photo-realistic images
metafiles contain both raster and vector data

Discover These 4 File Formats!

1. **EPS (Encapsulated PostScript)** is a standard format for importing and exporting PostScript language files in all environments. The purpose of the EPS file is to be included as an illustration in other PostScript language page descriptions. The EPS file can contain any combination of text, graphics, and images.

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2. **TIFF (Tagged Image File Format)**, one of the most widely supported file formats for storing bit-mapped images on personal computers (both PCs and Macintosh computers). It is a format for storing and importing images into a page layout program like InDesign, PaqeMaker and Quark Express. It does not compress your files.

With the explosion of scanners, digital cameras and the World Wide Web, the JPEG image format has quickly become the most widely used digital image format. It's also the most misunderstood. Here's a collection of some common misconceptions and facts about JPEG images.

3. **JPEG (Joint Photography Experts' Group)** is a format used to compress graphics. One of the formats used for Web graphics.

Don't believe everything you hear about JPEGs. Get the facts here:

JPEGs lose quality every time they are opened and/or saved.
False. Simply opening or displaying a JPEG image does not harm the image in any way. Saving a JPEG repeatedly during the same editing session (without ever closing the image) will *not* accumulate a loss in quality.

JPEGs lose quality every time they are opened, edited and saved.
True. If a JPEG image is opened, edited, and saved again it results in additional image degradation. It is very important to minimize the number of editing sessions between the initial and final version of a JPEG image. If you must perform editing functions in several sessions or in several different programs, you should use a image format that is not lossy (TIFF, BMP, PNG) for the intermediate editing sessions before saving the final version. Repeated saving *within the same editing session* does not introduce additional damage. It is only when the image is closed, re-opened, edited and saved again.

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4. **PSD** (**Photoshops' native file format)**. The native file format is the default file format used by a specific software application. The native file format of an application is proprietary and these types of files are not meant to be transferred to other applications.
Usually special software-specific image properties can only be retained when an image is saved in the software's native format. For example, layer styles and text in Photoshop will only remain editable when it the image is saved in the native Photoshop (PSD) format.

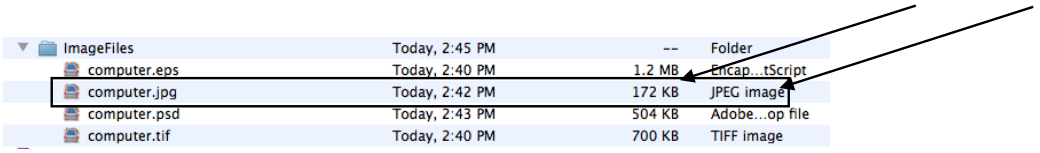
... and now a word on Standard Image Formats:

A standard image format is one that is cross-platform compatible and supported by the majority of graphics applications. **The most common standard bitmap-based formats are TIFF, JPG, GIF, and PNG**. On the **Windows platform BMP** is a standard format and **PICT is a standard bitmap format on the Macintosh**. Photoshop's PSD format, though proprietary, is supported to some degree by most graphics applications, but be aware that transferring PSD between non-Adobe applications may give unexpected results.
The most common standard vector-based formats are **EPS and AI.** On the Windows platform, most vector-based software also supports **WMF and EMF formats**.
When you are sending files over the Internet or transporting them between graphics applications, it is important to use one of these standard formats, or you may not get the results you expect. When sending graphic images via email and the Web, it is best to use **JPEG or GIF format**, which can be displayed by any Web browser on any computer. When in doubt, ask the recipient of your files which image formats they can accept.

Name: _____ Period: _____ Date: _____

Worksheet on File Types and File Sizes

1. Open the file computer.jpg in Photoshop.
2. Save in 4 different formats. **Make sure you call up the original record each time.**
3. To find out the size in KB's, Open the folder in List view and look at the details to see file size and type.



	What is the file size in KB's?	Why would you save it as this file type?
2. Save as a Photoshop EPS file 		
3. Save as a tif/tiff file 		
4. Save as a JPG file Quality 8 		
5. Save as a Photoshop PSD file