

Moderator's Commentary

OCR Level 3 Nationals in ICT

Unit 10: Digital imaging and photography

This Support Material booklet is designed to accompany the OCR Level 3 Nationals specification.

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Introduction

OCR has produced these candidate exemplar portfolios to support teachers in interpreting the assessment criteria for the OCR Nationals specifications.

This exemplar material serves as a general guide. It provides the following benefits to a teacher:

- gives teachers an appreciation of the type of work that can be produced for this unit
- shows how the mark scheme has been applied by a senior assessor.

Please note that this resource is provided for advice and guidance only and does not in any way constitute an indication of grade boundaries or endorsed answers.

Moderator's Commentary: Unit 10

Digital imaging and photography

Candidate Name: ET

AO	Pass	Merit	Distinction
<p>Guidance for AO1</p>	<p>To complete this unit, candidates need to provide evidence in the form of completed assignments and amass a portfolio of written and pictorial work which covers all the assessment objectives.</p> <p>Candidates must explore digital photography through the use and experimentation with digital camera settings. This will consist of a portfolio of images, taken by the candidate, demonstrating the ability to alter settings. Candidates can provide evidence for this assessment objective by identifying the settings used for each photograph and explaining how the settings affected the final images.</p>		
<p>AO1 Investigate photography using a digital camera</p>	<p>Candidates demonstrate some knowledge of the functions of a digital camera and how to control them.</p> <p>They choose and set file size, resolution and selectively set focus and exposure.</p> <p>They produce a range of images that demonstrate a sound knowledge of digital photography, taking account of the characteristics of a digital camera.</p>	<p>Candidates demonstrate a good understanding of the digital format and its strengths and limitations.</p> <p>They use the characteristics of the digital camera to enhance a chosen photographic situation.</p> <p>They show a competent understanding of adjusting camera settings to achieve desired file size, resolution, focus and exposure.</p> <p>They capture creative visual images that take advantage of the digital camera format.</p>	<p>Candidates demonstrate a thorough understanding of digital image creation and production.</p> <p>They use the characteristics of the digital camera to enhance a chosen photographic situation.</p> <p>They show an advanced understanding of adjusting camera settings to achieve desired, resolution, focus and exposure.</p> <p>Candidates capture creative visual images that take advantage of the digital camera format.</p> <p>The candidate's digital photographs will show a thorough understanding of the digital format and its strengths and limitations.</p>
<p>AO1 NOTES MERIT</p>	<p>The candidate has provided notes on resolution, ISO & shutter speed, macro settings and optical and digital zoom. This covers most of the list in the KUS. The explanations show a clear understanding of the functions chosen. They are accompanied by exemplar photographs taken by the candidate to illustrate the points made. The results are compared in each case. There is some mention of strengths and limitations of the functions of the digital camera but the advantages of the digital camera format have not been fully exploited.</p>		

AO	Pass	Merit	Distinction
Guidance for AO2	Candidates should investigate the availability of different file types. They will compare the different file types and identify when each type is most suitable to use. Candidates can provide evidence for this assessment objective by also identifying that different data storage formats will have different maximum capacities or varying costs, for example.		
AO2 Investigate file types and data storage formats	Candidates demonstrate a good knowledge of file types for digital photographs and data storage formats.	Candidates demonstrate a detailed knowledge of file types for digital photographs and data storage formats. They explain and compare the different file types.	Candidates demonstrate a thorough understanding of file types for digital photographs and data storage formats. They explain clearly and compare the different file types and identify the situations when each type is most suitable for use.
AO2 NOTES MERIT	The candidate provides a list of five different file formats and follows it with an explanation of what they are and when best to use them. The explanations provided show the candidate has a very good knowledge of the subject. However, the notes on TIFF's are not strictly accurate. The candidate lists only four data storage formats and goes on to explain their capacities and ease of use. No mention is made of cost implications for the various devices. At the end of the candidate's report a further five storage devices are listed that appear in the KUS but no explanations about their use are present.		
Guidance for AO3	Candidates will investigate other sources for digital images, source images from a selection of these sources and save them in appropriate file formats. In Assessment Objectives 4 and 5, they will combine these sourced images with their own images to create new images.		
AO3 Investigate other image sources for digital imaging	Candidates identify and collect new images from other sources and save them in appropriate file formats. They should use these images in conjunction with their own images to produce new images for Assessment Objectives 4 and 5.	Candidates identify and collect new images from a range of other sources and save them in appropriate file formats. They will use these images in conjunction with their own images to produce a range of new images for Assessment Objectives 4 and 5.	Candidates identify and collect new images from a wide range of other sources and save them in appropriate file formats. They will use them in conjunction with their own images both digital and traditional to produce new, creatively rich images for Assessment Objectives 4 and 5.
AO3 NOTES MERIT	Images have been sourced from the internet, image libraries on the internet, the school intranet and scanned from a magazine. Although this covers the sources mentioned in the KUS it can not be considered a wide range of sources. The explanation of why images were saved in particular formats is weak. Images from the internet and intranet have been combined to produce a new image of New York. The candidate has also combined their own image exhibited in AO1 with images from the intranet to compose a new floral image.		

AO	Pass	Merit	Distinction
Guidance for AO4	Candidates will use image manipulation software to perform a range of basic editing techniques. Candidates should evidence the image manipulation by producing either annotated screenshots or printing before and after images. Candidates should identify the image manipulation techniques that they have used.		
AO4 Investigate basic digital image manipulation through the use of image manipulation software	Candidates demonstrate a good understanding of manipulating digital images and modify them suitably using digital software. They will use each editing technique listed in the knowledge, understanding and skills at least once.	Candidates competently manipulate digital images and creatively enhance them using digital software. They will use each editing technique listed in the knowledge, understanding and skills appropriately at least once.	Candidates demonstrate mastery of digital image creation and enhancement, using industry standard software tools to a professional level. This will include effective use of all the editing techniques listed in the knowledge, understanding and skills. Candidates will annotate their printouts to explain the choice of editing technique.
AO4 NOTES PASS	The candidate has produced notes and examples of before and after photographs to illustrate the basic editing techniques listed in the KUS. The notes demonstrate the candidate have a good understanding of the basic techniques. There is no explanation of why these techniques have been used. Further in the case of rotation of an image, it appears to simply to show the technique being applied. The candidate has only explained how to carry out the techniques but not put them into any context.		
Guidance for AO5	Candidates should demonstrate their ability to carry out a wide range of complex image manipulation skills on a range of photographs. Candidates should produce before and after images as well as annotated screenshots showing a range of tools and techniques used on a range of photographs. They must also explain why they have used those particular tools and techniques.		
AO5 Experiment with complex image manipulation and creation using image manipulation software	Candidates carry out complex image manipulation and creation using image manipulation software using a variety of advanced editing techniques. They will use each of the techniques listed in the knowledge, understanding and skills.	Candidates carry out complex image manipulation and creation using image manipulation software using a variety of advanced editing techniques. They will use each of the techniques and examples listed in the knowledge, understanding and skills.	Candidates carry out complex image manipulation and creation using image manipulation software using a variety of advanced editing techniques. They will use each of the techniques listed in the knowledge, understanding and skills as well as additional techniques. They will independently source professional standard images and combine these with their own creative images to produce new, original pieces of work.
AO5 NOTES PASS	The candidate has created two complex images from sourced images and one original image. The candidate has used image manipulation techniques in Photoshop but has not considered other software. The candidate has layered the images and described some of the techniques used on some of individual images. The choice of techniques used appears to be random, with no reasons given of why they have been chosen. For the Statue of Liberty image, the candidate states an effect has been added, but no evidence is present to support this, apart from possibly a transparent back ground. No explanation is offered about this image.		

AO	Pass	Merit	Distinction
Guidance for AO6	Candidates should present the photographs in a portfolio to a client. Candidates will need to demonstrate that they have understood the range of printing options and settings.		
AO6 Present photographs in a portfolio	Candidates present the edited and unedited photographs in a portfolio and produce limited or no evidence of feedback. The photographs are not presented to give the best effect and are accompanied by short annotations identifying the techniques used in creating, editing and printing the images.	Candidates present the edited and unedited photographs in a portfolio and produce some evidence of feedback. The photographs are clearly presented and accompanied by annotations describing the techniques used in creating, editing and printing the images.	Candidates present the edited and unedited photographs in a portfolio and produce detailed evidence of feedback. The photographs are presented in an interesting and creative way and accompanied by annotations describing and justifying the techniques used in creating, editing and printing the images.
AO6 NOTES	The candidate has presented some of the edited and unedited photographs to a group of students in the form of a slide show. Feedback has been obtained from each member of the group and there are brief comments on the feedback. The photographs are clearly presented with some descriptions of the techniques used in creating the images. Some descriptions are better than others. The candidate has provided written evidence to support the printing of the photographs and there is some discussion of DPI, print size, printer settings and different printer paper. Again some descriptions are better than others.		
Guidance for AO7	Candidates should evaluate their portfolio as well as their strengths and weaknesses in completing the portfolio.		
AO7 Evaluate photographic portfolio	Candidates provide a review of their work covering quality rather than fitness for purpose. They make few comparisons between their own work and that of professional photographers. Their evaluations show a basic grasp of the photographic process and how it is used professionally.	Candidates provide a review of their work covering quality and fitness for purpose. They make some comparisons between their own work and that of professional photographers. Their evaluations show a sound understanding of the photographic process and how it is used professionally.	Candidates provide a detailed analysis of their work in terms of quality and fitness for purpose. They make critical comparisons between their own work and that of professional photographers. Their evaluations show a complete understanding of the photographic process and how it is used professionally.
AO7 NOTES PASS	The candidate lists the photographic and editing techniques that have been used throughout the project. There is brief discussion the quality of the work with reference to the feedback. There is no mention of fitness for purpose. The candidate discusses the quality of the work compared to what could be produced by a professional photographer giving sensible reasons for the differences. The evaluation shows a basic grasp of the photographic process.		

AO1	AO2	AO3	AO4	AO5	AO6	AO7
MERIT	MERIT	MERIT	PASS	PASS	MERIT	PASS

With three passes and four merits, the evidence for some of which is weak, an overall **MERIT** is awarded.

Candidate's Work: Candidate ET

AO1 – Unit 10

Resolution

I have taken pictures on all 5 of the different resolution settings on the camera. The resolution settings allow you to decrease or increase the dimensions of the file and this also changes the file size of the image. A smaller resolution image will not have as good quality as a larger resolution image. The resolution of an image is the actual size of the image that the camera produces. Resolution is usually termed in megapixels. If a small file size is needed in order to maximise the space you have, then the smaller resolution setting will need to be used but if you are not worried about the file size then you can choose the resolution based on how good you want the quality of the picture to be.

The resolution settings and sizes on the camera I am using are;

Large	2592x1944
Medium 1	2048x1536
Small	640x480
Postcard	1600x1200
Wide	2592x1456



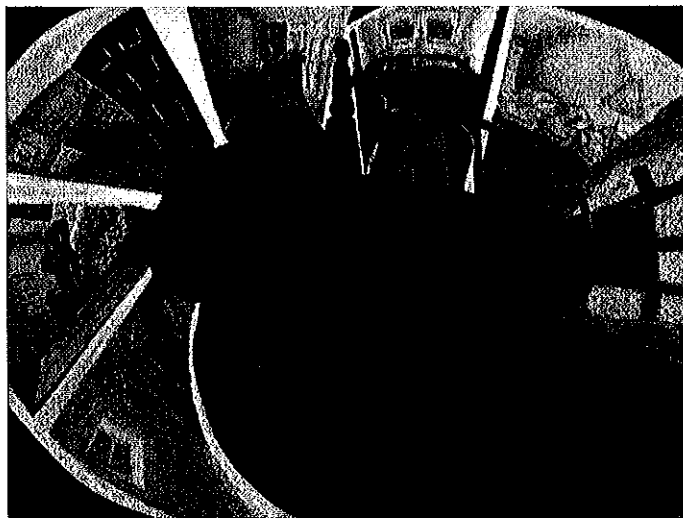
The picture above is of the Art Garden at college. The resolution of this picture is the Large (2592x1944) setting. This setting is the highest resolution setting on the camera. The picture quality above is visibly very clear. The art work in the picture is bright and stands out and the overall picture is true to life. The size of the picture is 1.82MB which is nearly 2MB which is quite a big file size for a picture like this.

Dimensions: 2592 x 1944
Date Picture Taken: 20/01/2010 11:12
Camera Model: Canon PowerShot A460
Type: JPEG Image
Size: 1.82 MB



The picture above is of some of the art work around college. The resolution of this picture is the Medium 1 (2048x1536) setting. The setting here is the second highest resolution setting on the camera. The picture is very bright with lots of different colours which all stand out. The smaller resolution setting here has not affected the quality of the picture as it is still very clear. The size of the picture is 1.04MB which is smaller than the large resolution size.

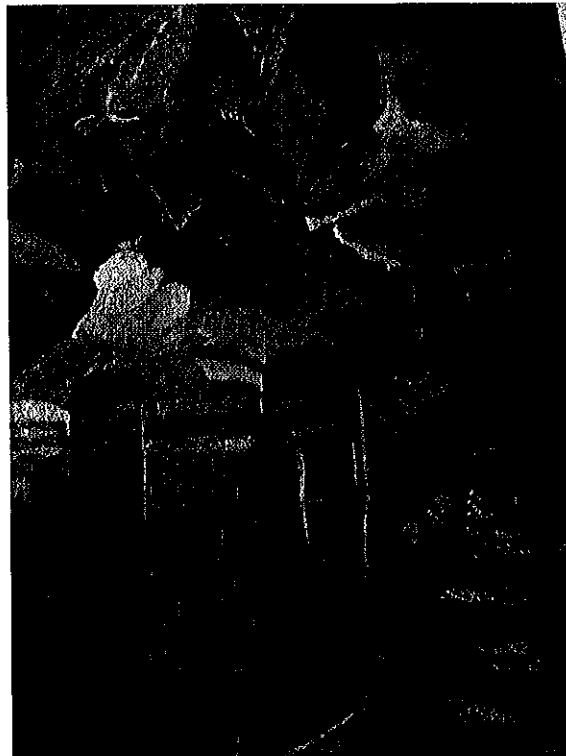
Dimensions: 2048 x 1536
Date Picture Taken: 20/01/2010 11:17
Camera Model: Canon PowerShot A460
Type: JPEG Image
Size: 1.04 MB



The picture above is of some of the art work around college. The resolution of this picture is the Small (640x480) setting. The setting here is the smallest resolution setting on the camera. Although

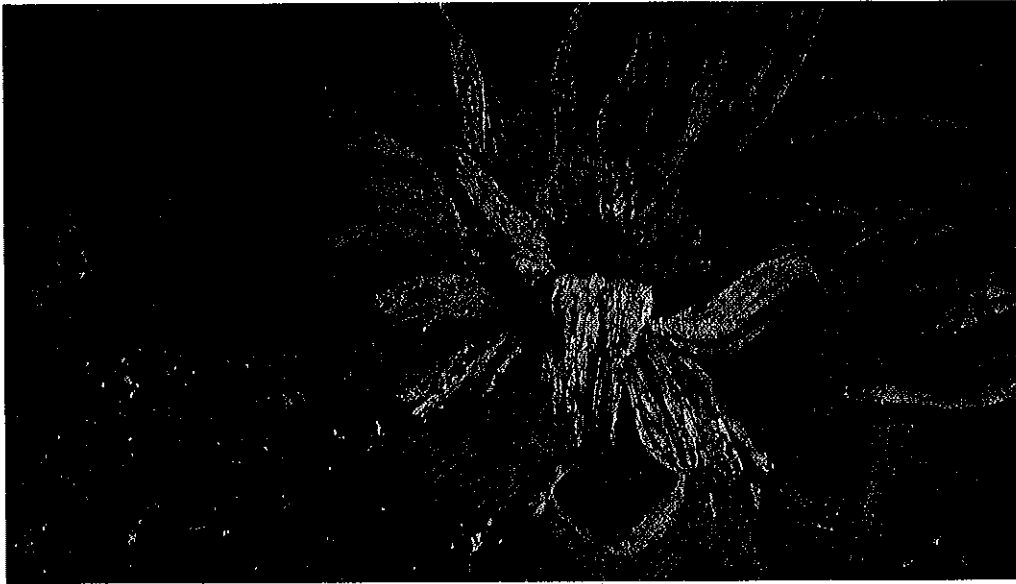
the picture is small, the quality is still quite good and the picture is clear. All the art work detail is shown. The size of the picture is 105KB which it is clear that the smaller the resolution of the picture is, the smaller the size of the file is.

Dimensions: 640 x 480
Date Picture Taken: 20/01/2010 11:14
Camera Model: Canon PowerShot A460
Type: JPEG Image
Size: 105 KB



The picture above is of some of the art work around college. The resolution of this picture is the Postcard (1600x1200) setting. This resolution setting is the third biggest setting. Again the resolution has not really affected the quality of the picture as it is still clear. The actual image is the size of what a postcard would be. The file size of the image is 690KB which is smaller compared with the Large and the Medium resolution setting; however it is a bigger file size than the Small resolution setting.

Dimensions: 1200 x 1600
Date Picture Taken: 20/01/2010 11:15
Camera Model: Canon PowerShot A460
Type: JPEG Image
Size: 690 KB



The picture above is of some of the art work around college. The resolution of this picture is the Wide (2592x1456) setting. The wide setting is a similar size to the Medium resolution setting, just a bit smaller. The quality of the picture is good and all of the detail is clear, hence the resolution setting has not affected the quality. As shown in the picture above, the picture is very wide but the length of it is not that big. The size of the file is 1.46MB which is actually a bigger size than the Medium resolution image even though the dimensions here are smaller.

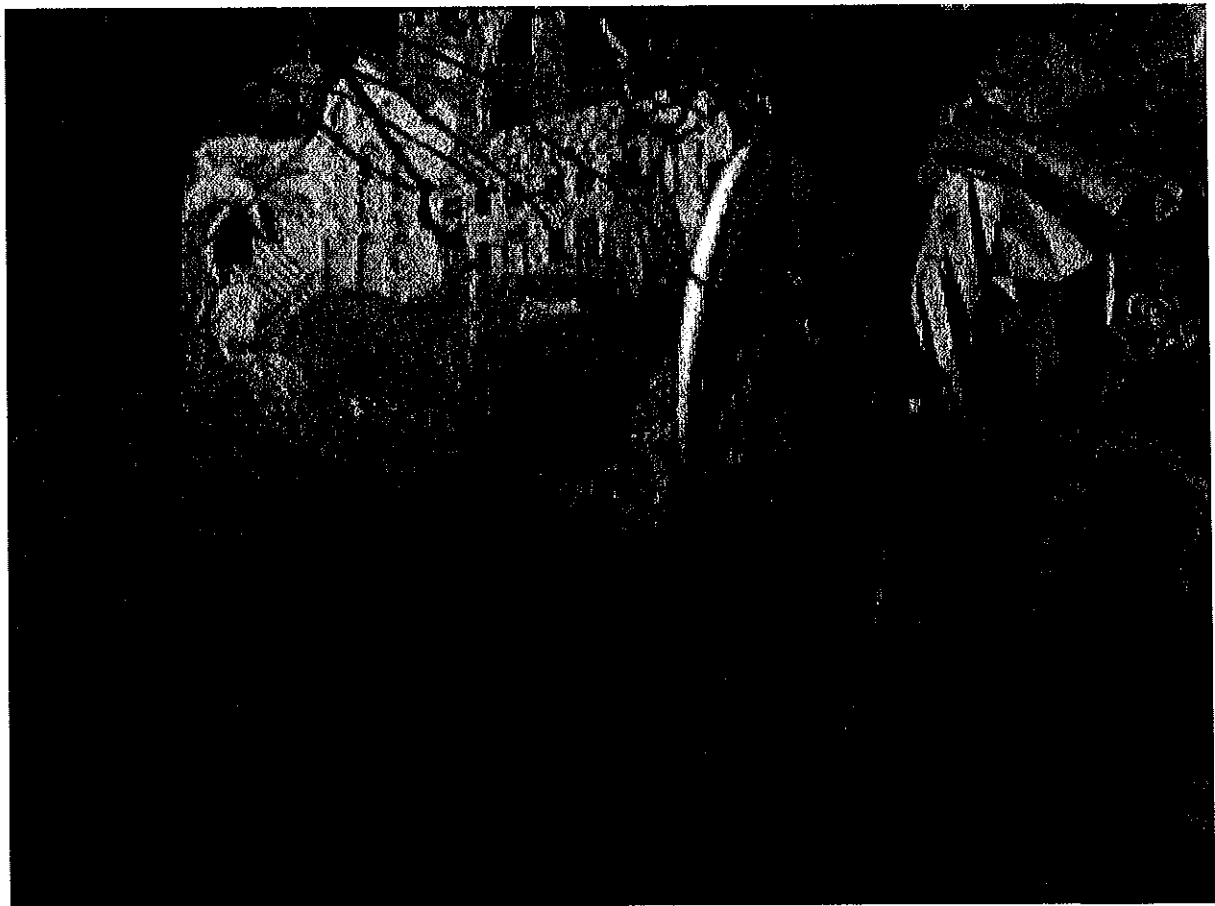
Dimensions: 2592 x 1456
Date Picture Taken: 20/01/2010 11:17
Camera Model: Canon PowerShot A460
Type: JPEG Image
Size: 1.46 MB

ISO

I have taken pictures on all 5 of the different ISO settings on the camera. The ISO settings allow you to change the shutter speed and the amount of light exposed to the picture. In the dark a higher ISO setting will be needed as more light will need to be exposed to the picture, whereas in the light the automatic ISO setting will be more appropriate. The higher the ISO, the less quality the picture has. Looking at all 5 of the pictures they do not look any different, but when I looked at them zoomed in on Adobe Photoshop, it was clear that the quality was very different. The dimensions of all of the pictures below are the Large setting (2592x1944). The file sizes of the images are inconsistent and therefore the ISO setting has not had an effect on the size of the image. The file size does not go up as the ISO setting does up or down.

ISO 400

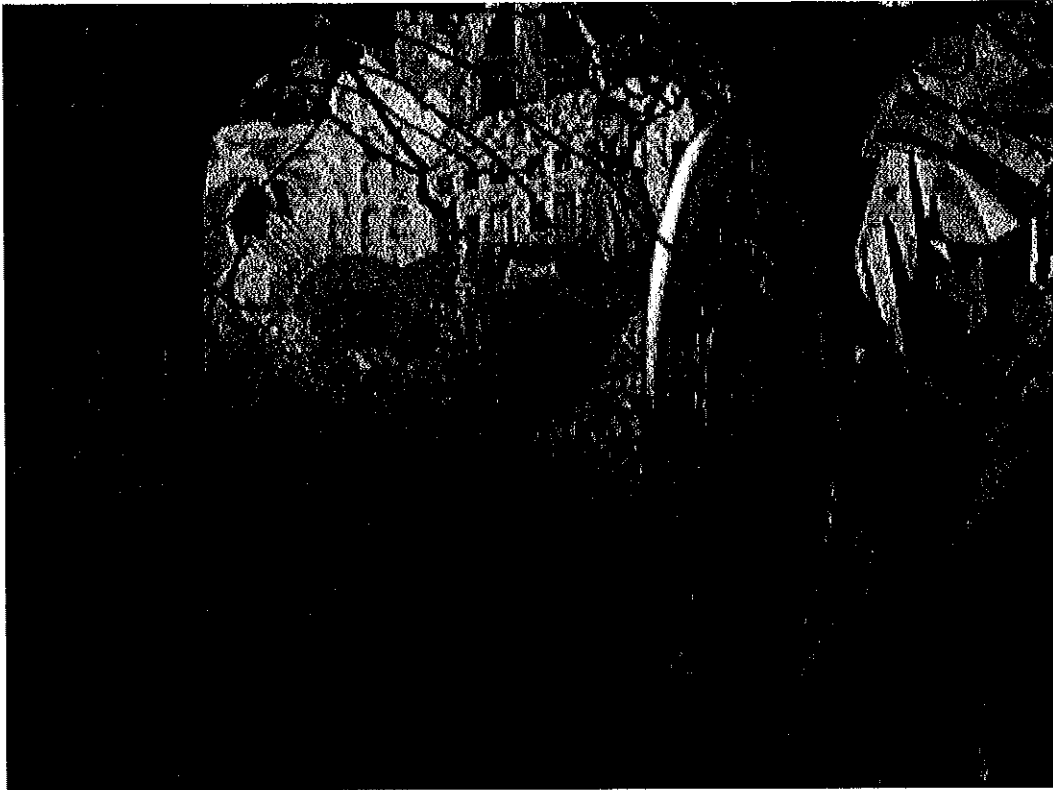
Shutter speed 1/160sec



It is clear from the picture above that zoomed in the quality is not very good. This is the highest ISO setting available which means there is a faster shutter speed and more light is exposed into the picture. This picture is quite dark when comparing it to the picture below at ISO 200.

ISO 200

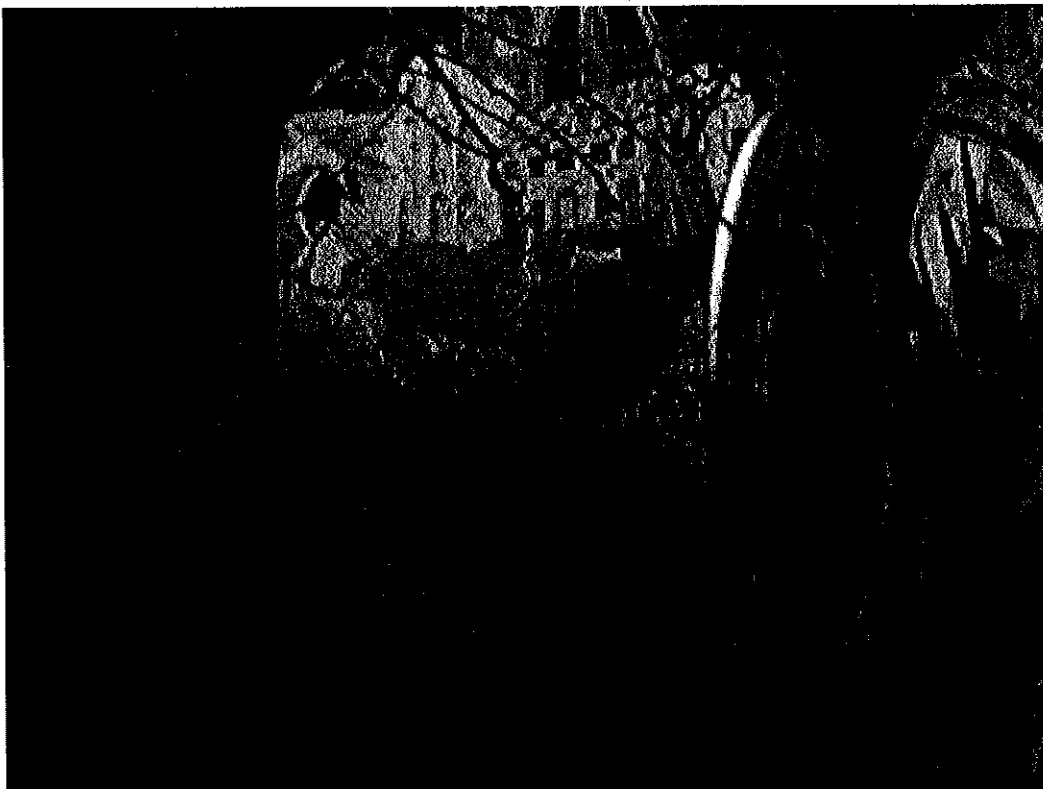
Shutter speed 1/100sec



The picture above is clearer than the picture at ISO setting 400, however the quality is still not very good. With the setting still being high, the shutter speed is fast and more light is let into the picture. This picture is lighter than the one above and if you look at the bottom left corner it shows this quite clearly.

ISO 160

Shutter speed 1/60sec



The picture above is again lighter than the picture at the higher ISO setting. Looking at the bottom left corner is a good example of clearly showing how the pictures lightness has changed through the different settings. The shutter speed is starting to go down now and this is having a great effect on the quality of the image.

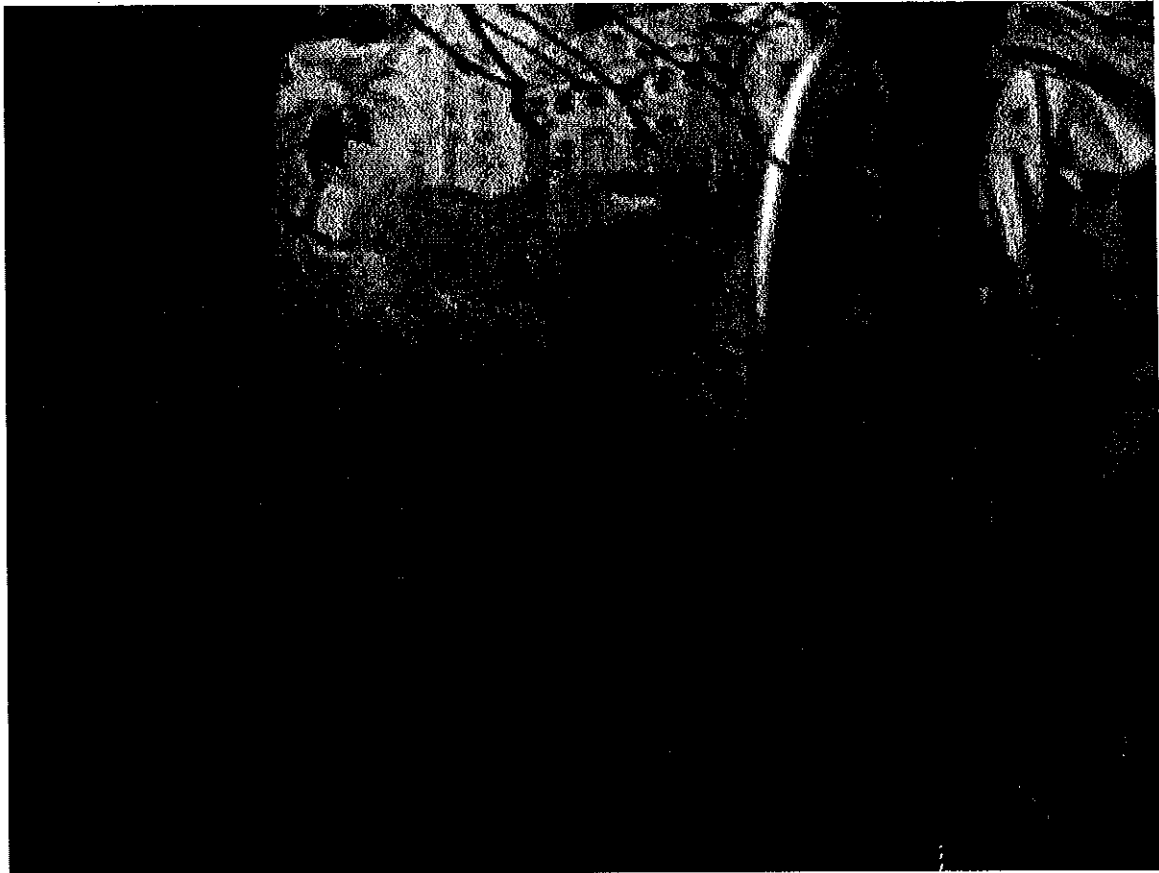
ISO 100

Shutter speed 1/40sec



The picture above is very light when it is compared to the pictures at the above ISO settings but mainly when comparing it to the highest ISO setting. Also in terms of quality, here the quality is very good when comparing this to the image taken at the highest ISO setting.

ISO Auto
Shutter speed 1/30sec

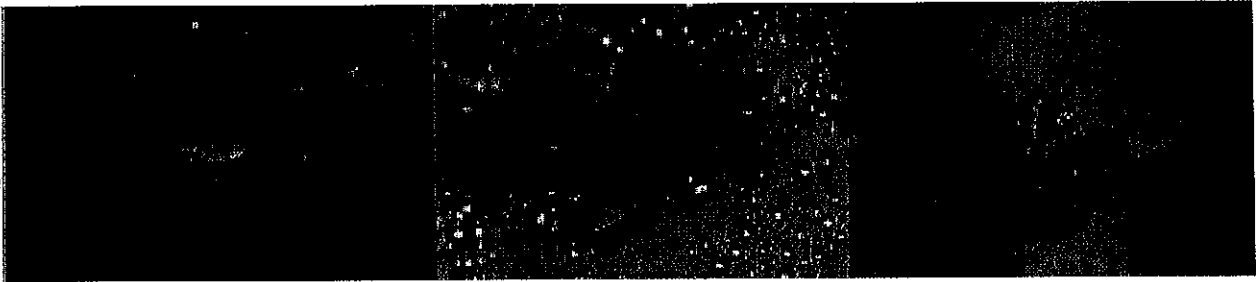


The above picture was taken with the Auto ISO setting on the camera. The Auto setting means that the camera adjusts the shutter speed and amount of light exposed itself according to the light. The picture above is very light and the grain of the picture is clear. Looking at the bottom left of this picture compared to the bottom left of the picture with the ISO setting of 400 the blue wood is a lot clearer.

Quality cannot be fairly talked about on the above 5 pictures in relation of the quality to the ISO setting as the bad quality of a picture could be due to the fact that a tripod was not used when the pictures were taken. This means that for each picture there will have been different amounts of camera shake and this is especially with those pictures with a low shutter speed.

Macro setting (Focus)

The macro setting on the digital camera allows the camera to understand that you want macro photography. This means that the digital camera will know that the picture you are taking is going to be quite close up and the camera will make sure that the detail in the picture is a lot better than when just on the ordinary setting. The macro setting is based upon the focus of the digital camera. When the macro setting is on the situation is a lot more focused when comparing it to when the macro setting is off. In the picture below the macro setting has been used and clearly here the detail of the picture is very good. The rain drops on the flower are very clear and this is what macro settings achieve. Some more examples of macro photography are below.



Optical zoom (In and Out)

Optical zoom magnifies the image through lens adjustment. It changes the focal length and magnification. With optical zoom the lens adjusts itself either when zooming in or zooming out. The image quality is still very good and the lens grasps the part of the image that you want perfectly with good detail and quality. Optical zoom is the true zoom, you get the picture exactly how it is, just a lot closer e.g. like using binoculars. Cameras allow you to change the distances' between the lenses' which means that different levels of this kind of zoom can be achieved. Optical zoom is measured like 2x, 4x and 8x. For example, this means that as '2x' it is bringing the image to 2x closer etc.

Digital zoom

Digital zoom is not a true zoom. When using digital zoom it is like cropping an image. The picture is zoomed in to where you want it, however, detail and quality is lost when comparing this to optical zoom. It enlarges a portion of the image. With digital zoom, this can be done on image editing software such as Photoshop exactly the same once the image has been taken, however, with optical zoom this cannot be done as it is the cameras lens what does the zooming. With digital zoom the optics in the camera that change for optical zoom, stay the same here which means that the actual photographic situation does not come any closer.

Comparing the two above zoom functions

Optical zoom is clearly the better zoom function as this is the only true to life zoom. Although digital zoom can be done exactly the same on editing software, this is good for people who are not very good on this type of software but still want to achieve exactly the same as zooming or cropping does on such a program. Optical zoom is obviously better in the way that the quality of the image is not adjusted and therefore is a lot better for professional photographers but people who are just taking pictures for the fun of it then digital zoom will be perfectly suitable for them. Digital zoom will effect

the image most when the image is printed out, so if people do not want to print the pictures and only want to put them on the computer or keep them on the camera then the quality of the image should not be visibly effected as much.

Strengths and limitations

A strength of using a higher resolution image is that the detail of the picture is extremely good, however a weakness is that at the higher setting the file size is very large. The higher resolution setting also allows for extremely good printing in images.

A strength of using a lower shutter speed means that the quality of the picture is quite detailed whereas a weakness of a high ISO setting is that the quality of the image is very poor.

A strength of a macro setting is that is concentrates on a close up part of the picture and gives a lot more detail.

Investigate file types and data storage formats

File types

A file type is the format of a file, commonly indicated by its file name extension. There are many different file types which include;

- TIFF
- JPEG
- BMP
- GIF
- PNG

TIFF is an abbreviation for Tagged Image File Format. It is a format for storing images and photographs. Adobe Systems has control over TIFF formats. It is a common type of file format for images and it contains a variety of descriptive information as well as the data of the image itself. It can have a maximum size of 4GB. It is strictly used for bitmap data. It is used only for images and does not store text files. This file type does not use any compression at all. The file extension for these files is '.tiff'. The best example of when to use this file type is for professional photography. The reason for this is because of the high image quality and the fact that the file type does not use any compression at all.

JPEG is an abbreviation for Joint Photographic Experts Group and it is commonly used to store digital photos. It is a compressed image file format. The file type stores up to 24-bit colour and this is why most digital cameras automatically save images as a JPEG file. It is good for maintaining a high image quality with good compression ratios. However, when images are compressed too much they can become blocky which means some of the detail of the image is lost. The degree of compression is also adjustable with this image file format. JPEG is commonly used for publishing web graphic images. The best example of when to use this file type is on a digital camera as the file size is quite small and therefore more pictures can be taken and stored.

BMP is an abbreviation for Bitmap. It is a raster graphic format that is commonly used for saving image files. It stores colour for each pixel in an image without any compression. This file format for storing images is good in the sense that all images are high quality when saved in this format; however, the file sizes are large. JPEG and GIF file formats are also bitmaps but their file sizes are smaller. BMP images are used for printable images rather than images on the web because they have such a large file size. The best example of when to use this file type is when wanting certain colours in the image.

GIF stands for Graphic Interchange Format. A GIF is also a compressed image file format. They are based on a palette of 256 indexed colours which helps to reduce their file size. This file type is often used on the internet due to it having wide support. It is also a relatively small file size which is better for the internet as it takes up less space and makes it run faster. All layers in this file type are compressed to a single layer. The best example of when to use this file type is when you want more storage space. It is not a very good file type for photographs as when enlarged data and quality is lost.

PNG is an abbreviation for Portable Network Graphics. It is designed for the web and again this file type is not good for photographs, just like GIF. It was designed to replace GIF file types but GIF file types are still used. Layers are supported in this file type. It is a bitmapped image format and it uses lossless data compression.

RAW image formats are images in their raw form from the sensor. It contains minimally processed data from the digital camera sensor. It is the equivalent of an old fashioned negative photograph and is often called a digital negative. Raw image files are not processed and that is the reason why they are named 'raw'. From the raw image they can then be changed to tiff, jpeg or bitmap file types, whichever is most appropriate. By processing them on the computer rather than on a digital camera, more degrees of freedom are available.

Comparing RAW and Exif files

Both of these file types are used in digital cameras and they both have metadata tags. Raw images have the higher image quality but Exif files are more popular and used more frequently. Exif files can tell the camera the location, also known as GPS, where the image is being taken whereas RAW image files do not have this.

Data storage formats

Data storage formats are the format in which data is stored on a particular device, for example a digital camera or a computer. Some types of data storage formats include;

- Secure Digital Cards (SD Cards)
- Compact Flash
- USB Flash Drive
- Multimedia Cards

Secure Digital Cards (SD) is a non-volatile memory card. This means that it can retain the stored information when it is not powered. It is for use in portable devices such as digital cameras, handheld computers etc. The standard size of an SD card is 4GB. It has been developed by San Disk. These cards are much smaller than Compact Flash cards; however they do not have as high rates of data transfer. SD cards also have a read-only switch which locks the data to protect anyone editing or deleting the information held on it.

Compact Flash Cards are a small flash memory module. It is a mass storage device that is used in portable devices. It was first produced by SanDisk. It was the most successful memory card that was first introduced. The memory chips in this card are in a plastic case which enables it to retain the data once it has been taken away from the system. It has the largest physical size of all competing memory card formats.

USB flash drives use flash memory data storage. They are a portable small storage device which is connected to an electronic device through a USB port. It can be used to transfer images from one place to another very easily. It is a very popular way of image transfer because of its ease of use and many people have them. It enables you to carry all of your images with you so you can access them on any computer, laptop or anything that supports USB and the file types you have on it. All images on it can be removed and wrote over. Storage on a device can be as big as 256 GB. This data storage

format is best use for students or business workers as they often have to work on more than computers than one. They can work on one computer and then open it on other computers.

Multimedia cards are a flash memory card standard. A digital camera uses this type of memory card to store images as well as SD cards. It enables image transfer to be quick and easy and that's why they are often used in digital cameras. Multimedia means that it can store a wide range of media. For example they are used for satellite navigation systems, digital cameras, smart phones, computers, laptops and video cameras. The size of a multimedia card is about the size of a postage stamp.

Other data storage formats include; mini SD cards, micro SD cards, memory sticks, Smart Media and xD-Picture Cards.

AO3

I am now going to investigate other image sources for digital imaging. I am going to collect some images together from a variety of sources such as the Internet, an Intranet, image libraries and scanning pictures into the computer from books etc. I am going to collect a range of images from each source named above.

Internet



Image name: New York.jpg

Image format: JPEG

Source: Internet

URL:

<http://sitemaker.umich.edu/shilling.356/files/nyc.jpg>

Date found: 26/03/2010

Image name: Flower.png

Image format: PNG

Source: Internet

URL:

http://images.google.co.uk/imgres?imgurl=http://hank.liquidskies.net/e107/e107_images/newspost_images/opng24.png&imgrefurl=http://hank.liquidskies.net/e107/news.php%3Fcat.1&usg=__8FGjqAxrBioDwJ6FG60Zl-dgkUI=&h=400&w=400&sz=305&hl=en&start=2&itbs=1&tbnid=bJZwovfKKPfccm:&tbnh=124&tbnw=124&prev=/images%3Fq%3Dpng%2Bimages%26hl%3Den%26sa%3DN%26gbv%3D2%26ndsp%3D18%26tbs%3Disch:1

Date found: 26/03/2010



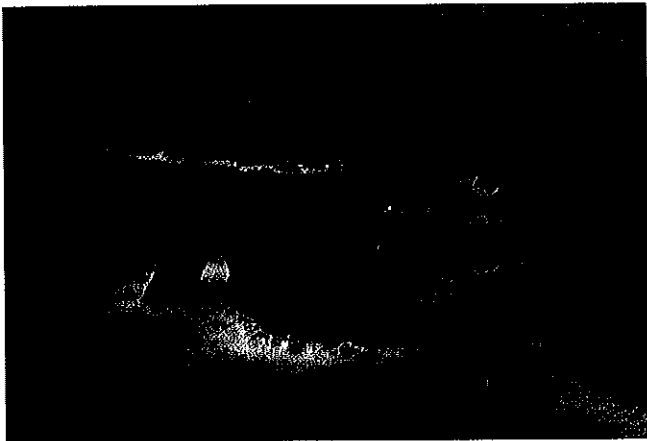


Image name: Sea.jpg

Image format: JPEG

Source: Internet

URL:

<http://www.adamburtonphotography.com/>

Image name: Beach.jpg

Image format: JPEG

Source: Internet

URL:

<http://www.flickr.com/photos/patrick-smith-photography/4134224957/sizes/o/>

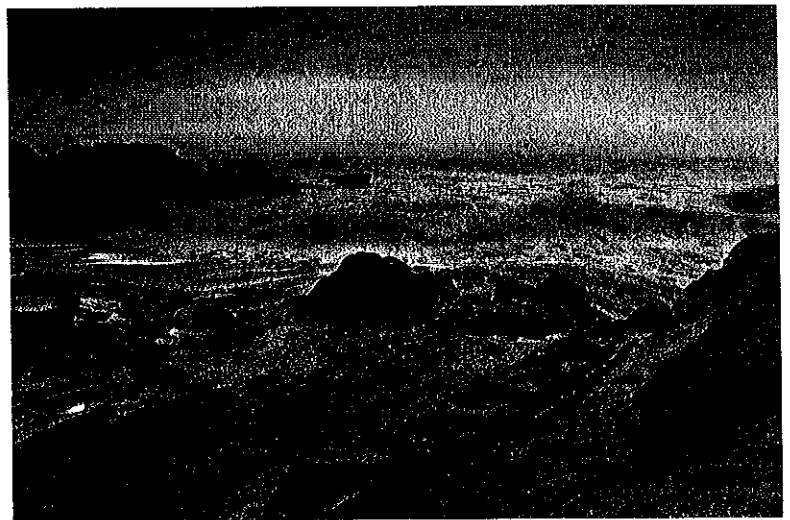


Image name: Snow.jpg

Image format: JPEG

Source: Internet

URL:

<http://www.flickr.com/photos/visbeek/4200565955/>



Intranet

I am now going to collect some images from the college Intranet.

Image name: Statue of liberty.jpg

Image format: JPEG

Source: Intranet

Date found: 26/03/2010



Image name: New York cab.jpg

Image format: JPEG

Source: Intranet

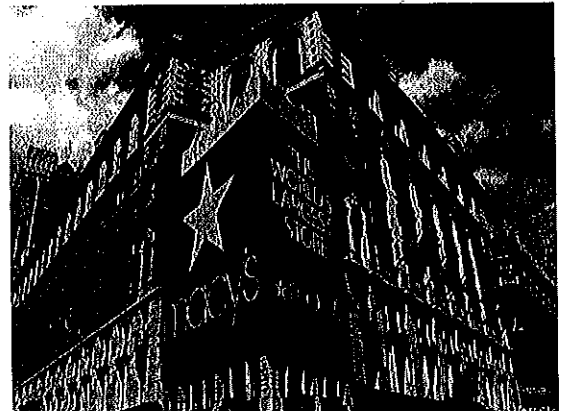
Date found: 26/03/2010

Image name: Maycs.jpg

Image format: JPEG

Source: Intranet

Date found: 26/03/2010



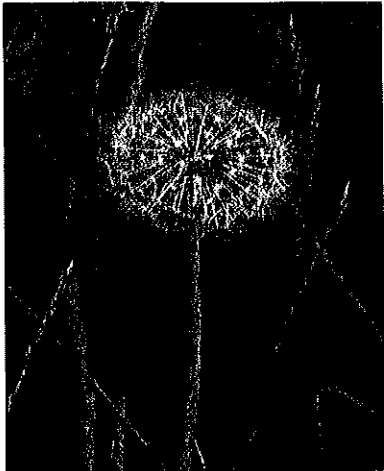


Image name: Wish.jpg

Image format: JPEG Image

Source: Intranet

Date found: 26/03/2010

Image name: Flower.jpg

Image format: JPEG Image

Source: Intranet

Date found: 26/03/2010



Image name: Shells.jpg

Image format: JPEG Image

Source: Intranet

Date found: 26/03/2010

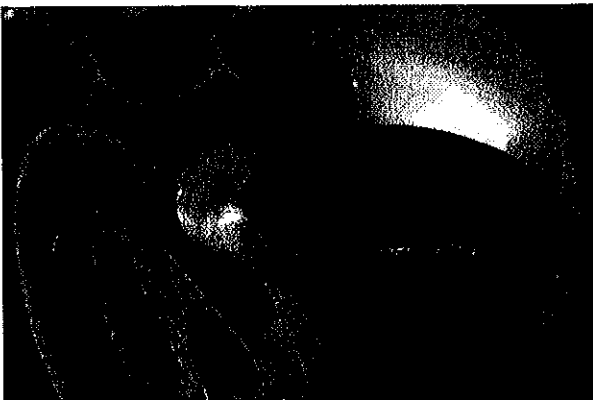
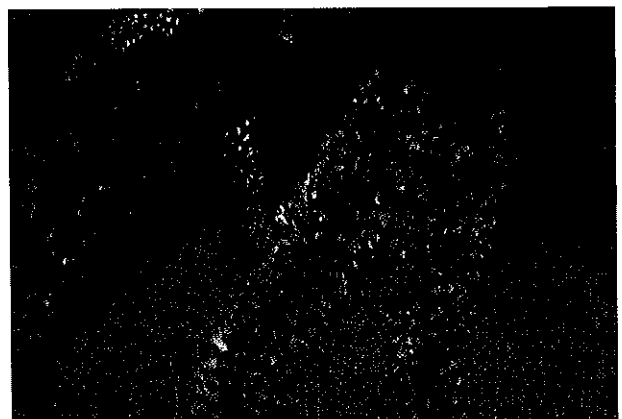


Image name: Pink purple green blue.jpg

Image format: JPEG Image

Source: Intranet

Date found: 26/03/2010



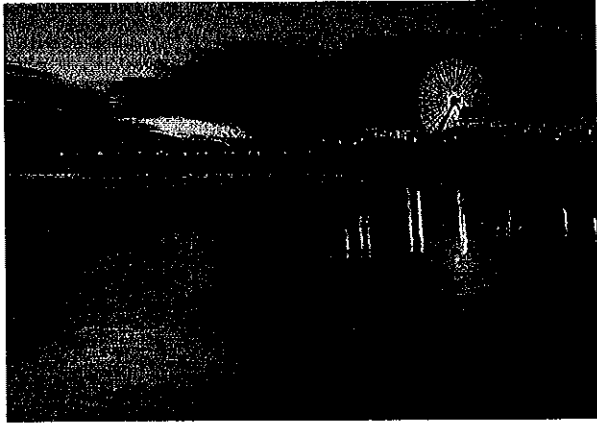


Image name: Santa monica pier.jpg

Image format: JPEG

Source: Intranet

Date found: 26/03/2010

Image name: Sunset.jpg

Image format: JPEG

Source: Intranet

Date found: 26/03/2010



Scanned images

I am now going to scan some images in from a magazine.

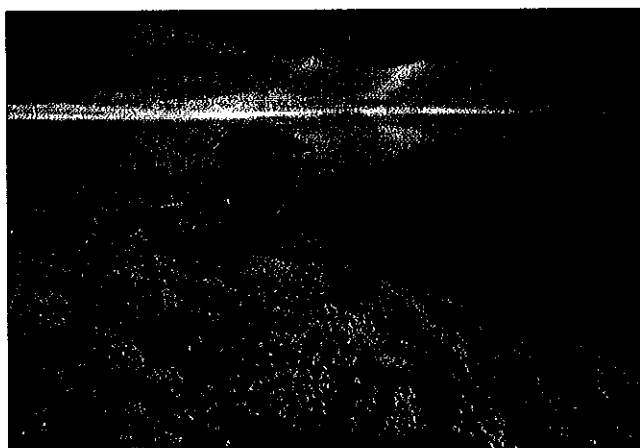


Image name: Cornish spring.jpg

Image format: JPEG

Source: Landscaper Magazine

Date found: 26/03/2010

Image name: Irish shore.jpg

Image format: JPEG

Source: Landscaper magazine

Date found: 26/03/2010

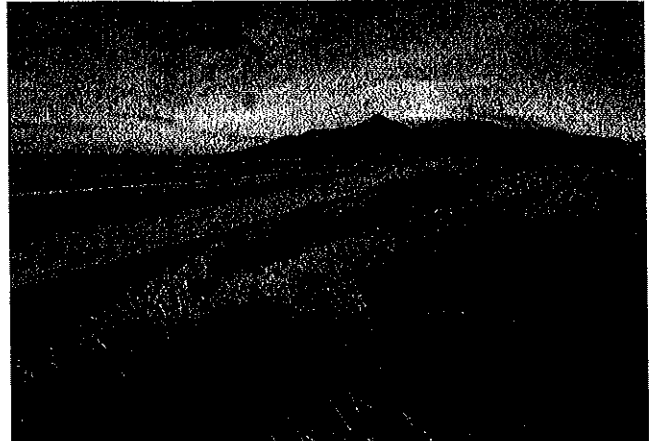


Image name: Woods.jpg

Image format: JPEG

Source: Landscaper magazine

Date found: 26/03/2010

Image libraries

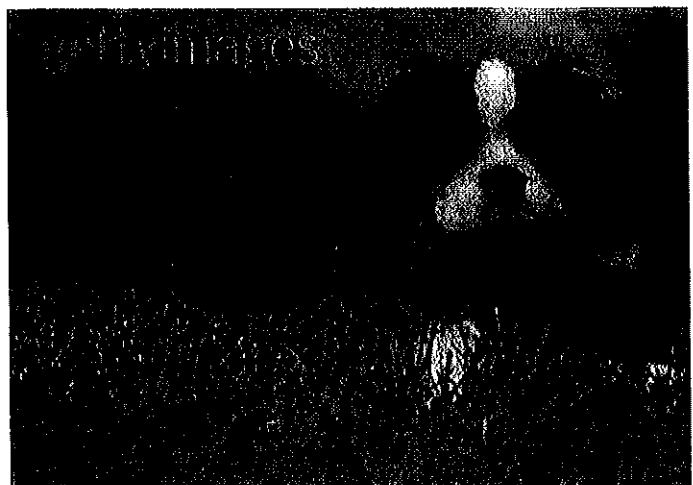
I am now going to get some images from image libraries off the internet.

Image name: King charles.bmp

Image format: BMP

Source: Image library

URL: <http://www.gettyimages.co.uk>



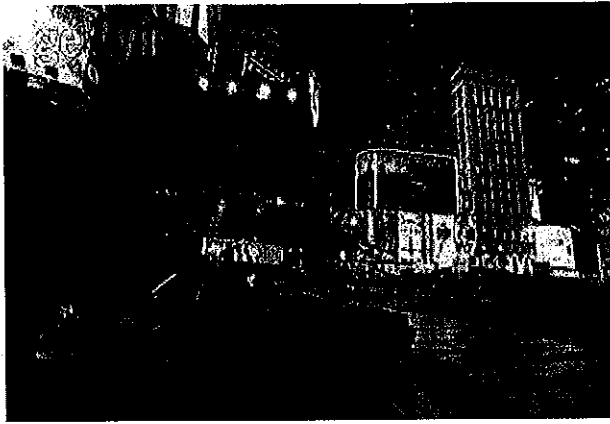


Image name: Times square.jpg

Image format: JPEG

Source: Image library

URL: <http://www.gettyimages.co.uk>

Image name: Bridge.jpg

Image format: JPEG

Source: Image library

URL: <http://www.gettyimages.co.uk>

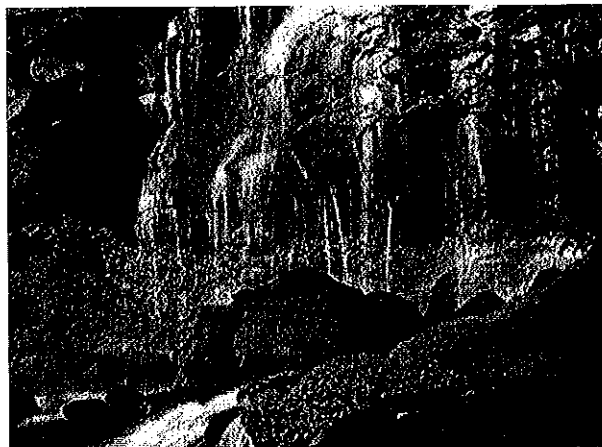
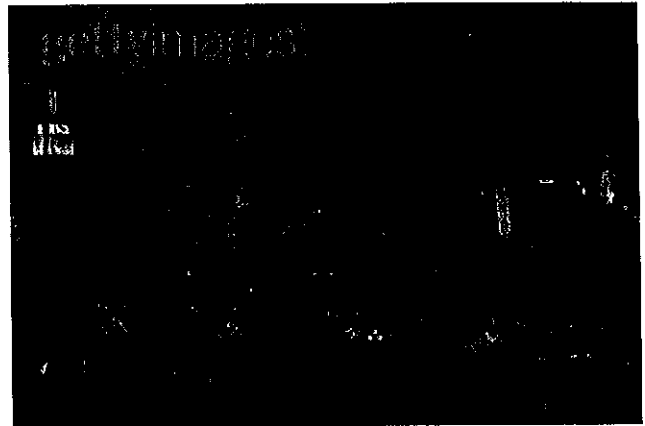


Image name: Waterfall.jpg

Image format: JPEG

Source: Image library

URL: <http://www.thinkstockphotos.co.uk>

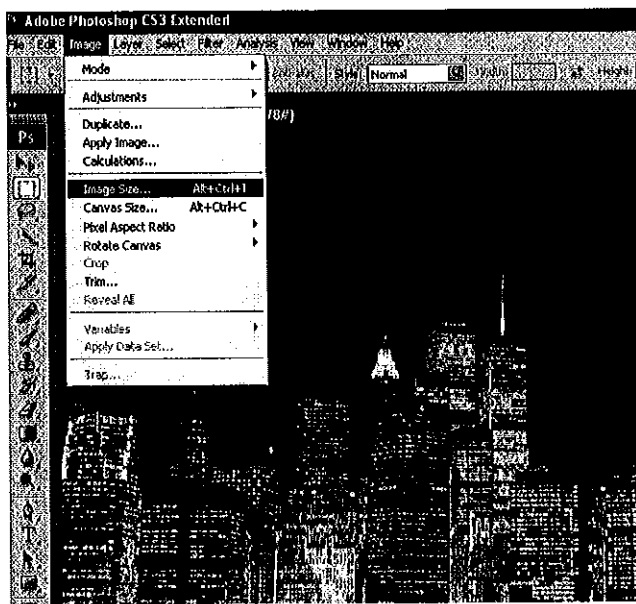
Most of the above images I saved as JPEG files as I think this is the most appropriate file type for the kind of images that I have got. There are two images that I haven't saved in this file type. I have saved the image of the dog as a BMP file and the image of the flower as a PNG file. The reason behind this is because I feel this is most appropriate for these images.

Editing techniques

I am now going to use editing techniques to edit some images in Adobe Photoshop.

Image sizing and scaling

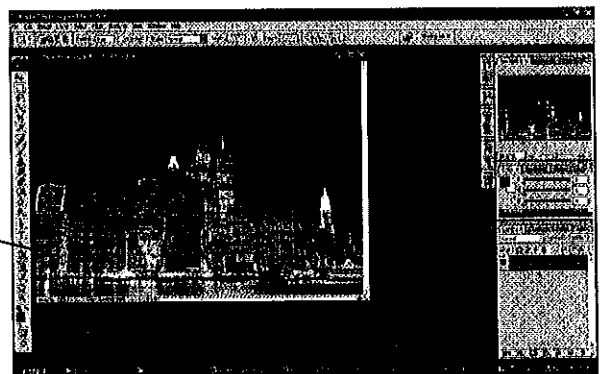
Changing the image size includes changing both the width and the height to suit the size in which you want. In Adobe Photoshop in the Image drop down list go to the Image Size menu. A box will then appear that will allow you to change these. The new, edited, image will appear on the screen in Adobe Photoshop and in order to make sure that you keep the original version of the image, the edited photo should be saved as a new version.



Original size:

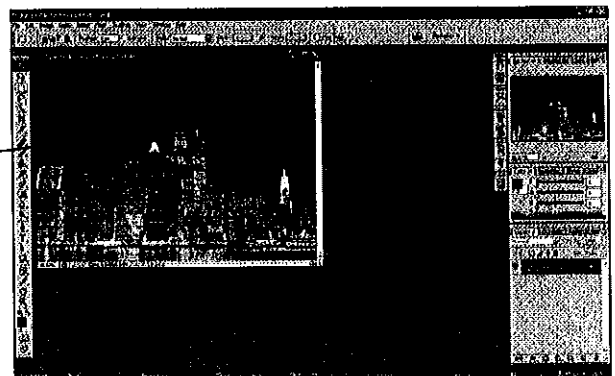
Width - 1075 pixels

Height - 1600 pixels



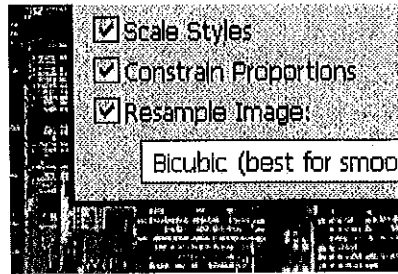
Changed to:

Width - 900 pixels



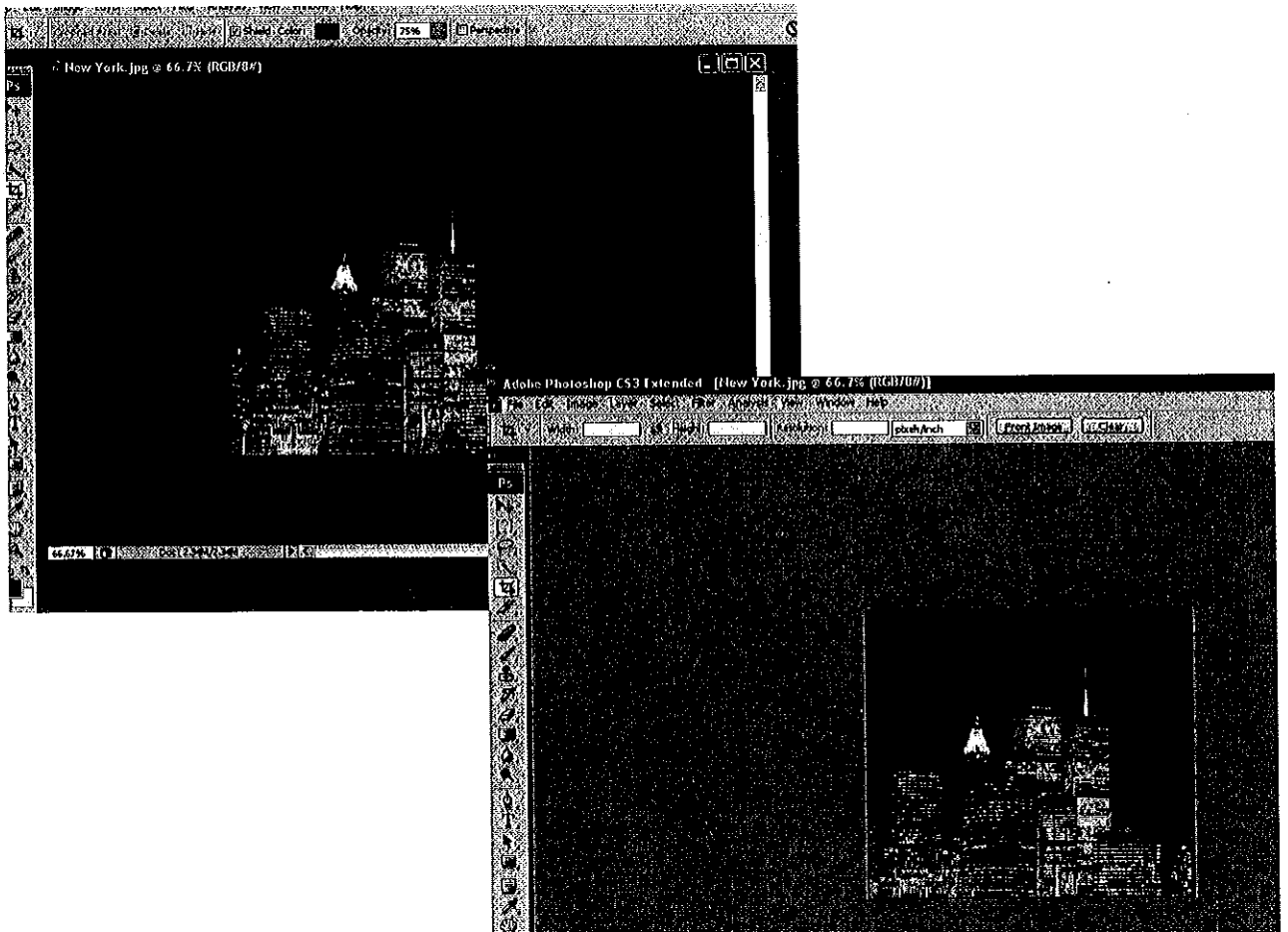
Height – 636 pixels

The Constrain Proportions box was checked on the pop up box so that when the image size changes the image is scaled correctly.



Cropping

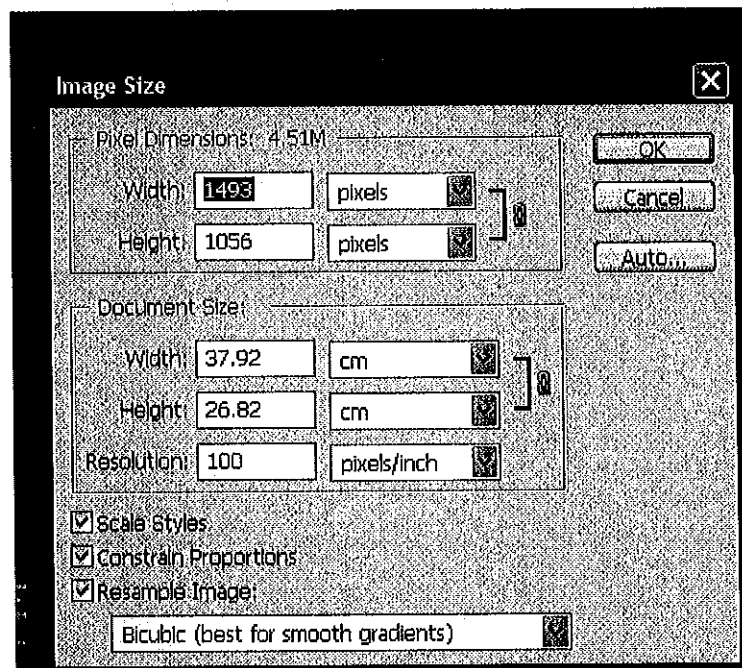
The crop tool allows you to choose an area of an image that you want to take out and gets rid of the part of the image that you don't want. The crop tool is on the left hand side tool menu in Adobe Photoshop and is selected in the screenshot of the first image below. The area that I want to crop out is brighter than the area that I will not be using anymore. Once you have chosen the area that you want, press the enter key and the part of the image you have chosen to crop will appear and the rest of the image will disappear.



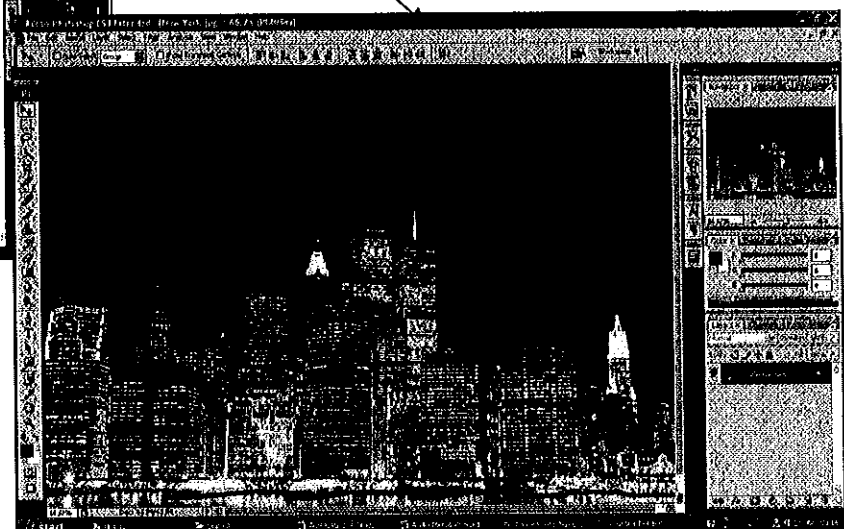
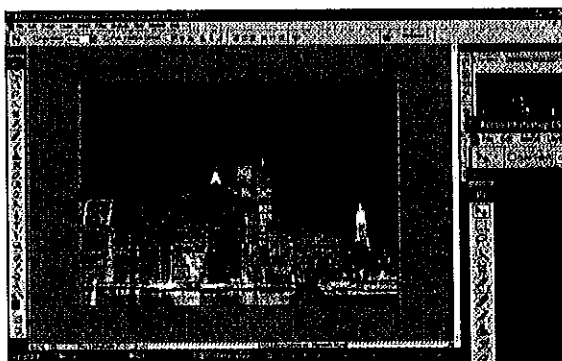
The above image has been cropped to the part of the image that i selected.

Resolution

The resolution of an image is the quality of the detail in the image. For example a higher resolution image will be more detailed than a lower resolution image. A high resolution means that the detail in the picture is very sharp and clear and therefore the quality of the image is really good. A low resolution means that the picture is not so sharp and clear and therefore the quality of the picture will not be so good. A higher resolution image however is a lot bigger file size than a lower resolution as it has more detail to store. In the Image drop down menu and on the Image size selection a box will appear to change the Image size and the Resolution option is also in this box. I am now going to change the resolution of the image. The original resolution of the image is 72.



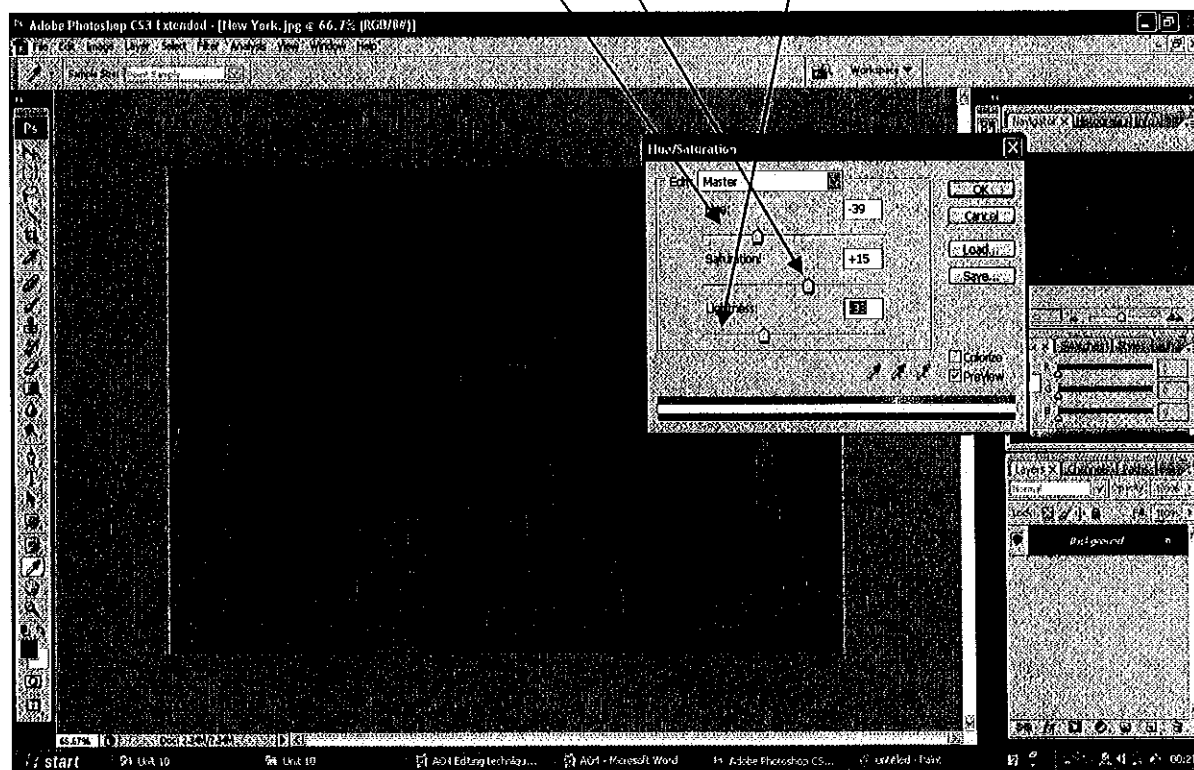
I have changed the resolution of the image to 100. This means that I have changed the picture to be of better quality than it was originally and there is more detail. The changes are shown below.



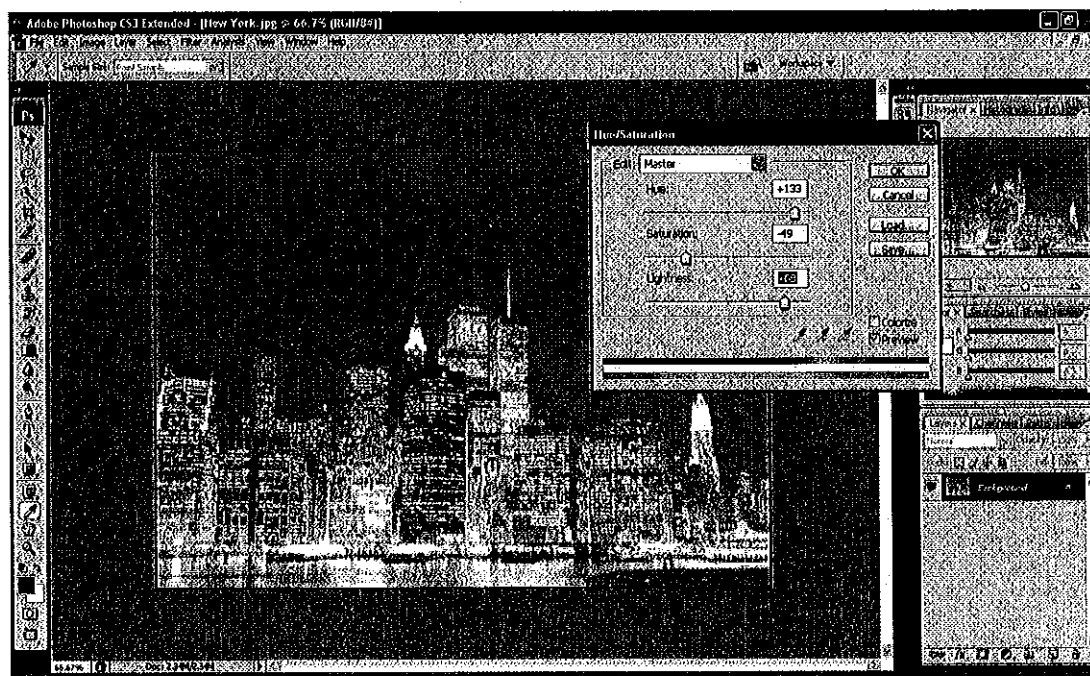
Hue and Saturation

Hue and saturation are the aspects of colour in the red blue and green scheme. All colours can be made through these three colours by changing the level of each one.

In the image below i have adjusted the hue, saturation and the lightness of the image in order to change it. As shown below i have made the colour of the picture pink. I have changed the Hue to be minus, the Saturation to be plus and the lightness also to be minus.

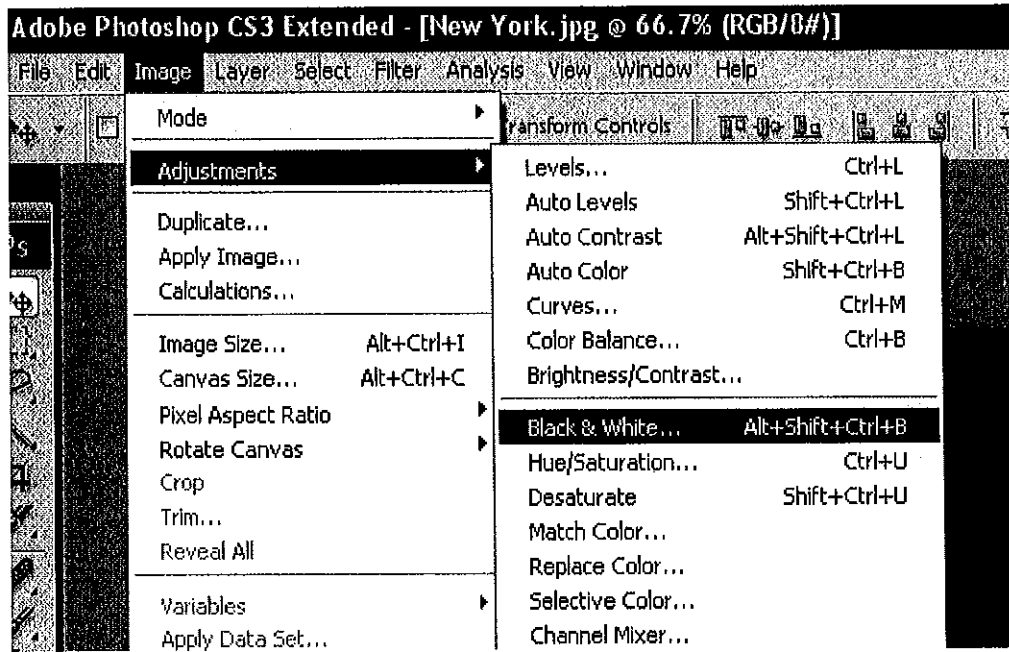


Another example of changing the Hue/Saturation is shown below. This shows how different the images can be just by changing the hue and saturation to different levels.

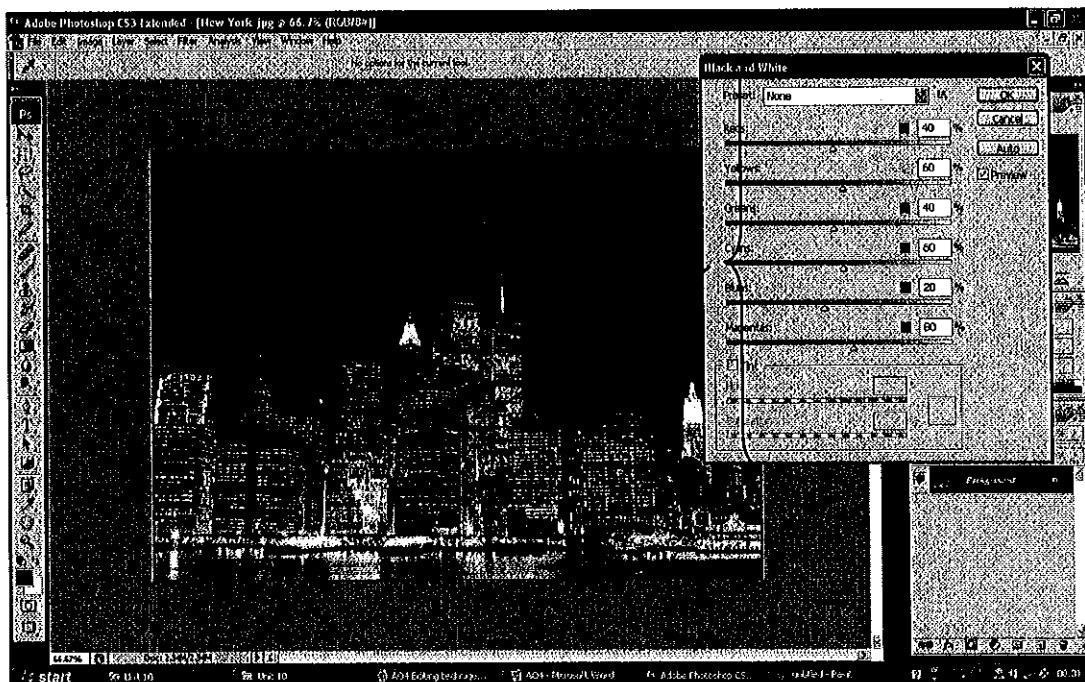


Black & White effect

This effect is quite old; however it is becoming popular in professional photography images. The effect takes out the entire colour originally in the image and replaces the darker colours to be more dark grey and black and the lighter colours to be a lighter grey and white. On the Image drop down menu scroll to Adjustments and then choose the Black & White option.

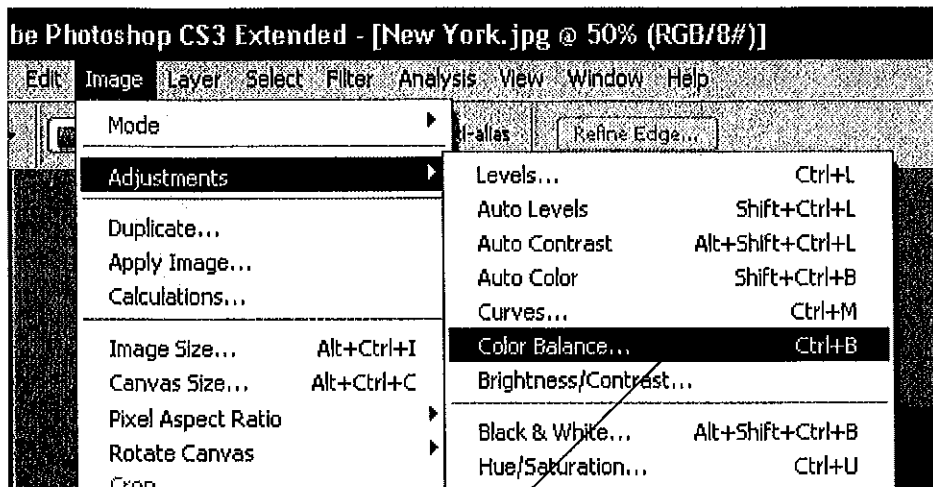


The black and white levels can be adjusted in the pop up window shown below that will change the effect of the image but if these are not adjusted then the image will turn to the standard Black & White effect.



Colour balance

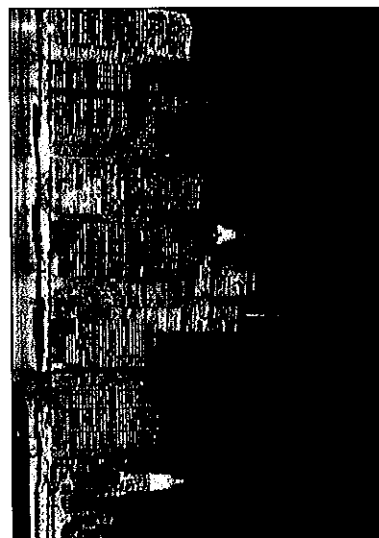
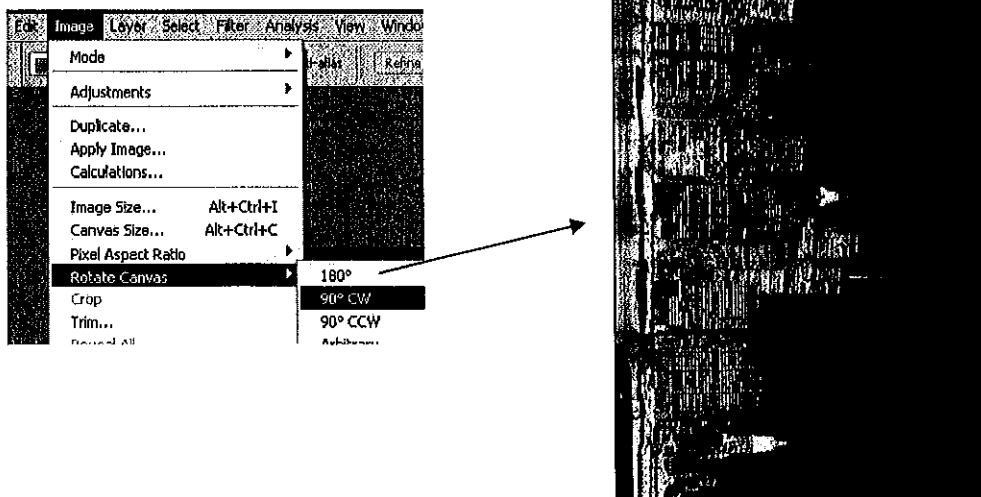
By changing the colour balance, it adjusts the colour intensities in the image. In the Image menu in Adobe Photoshop, you can change the Colour Balance of the image from there.



A box then appears that enables you to change the red blue and green colours in the image. I have done this and got the picture to the left. I changed the red and green levels to -100 and the blue level to +100.

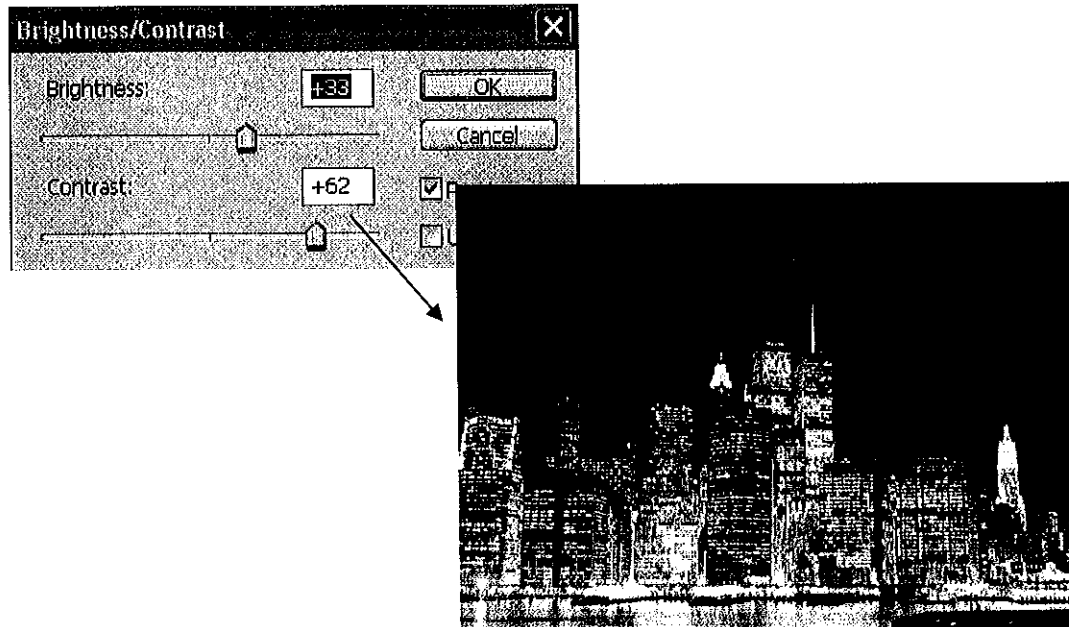
Rotating

I then rotated an image 90 degrees clockwise. This is in the Image menu and then the Rotate Canvas option.



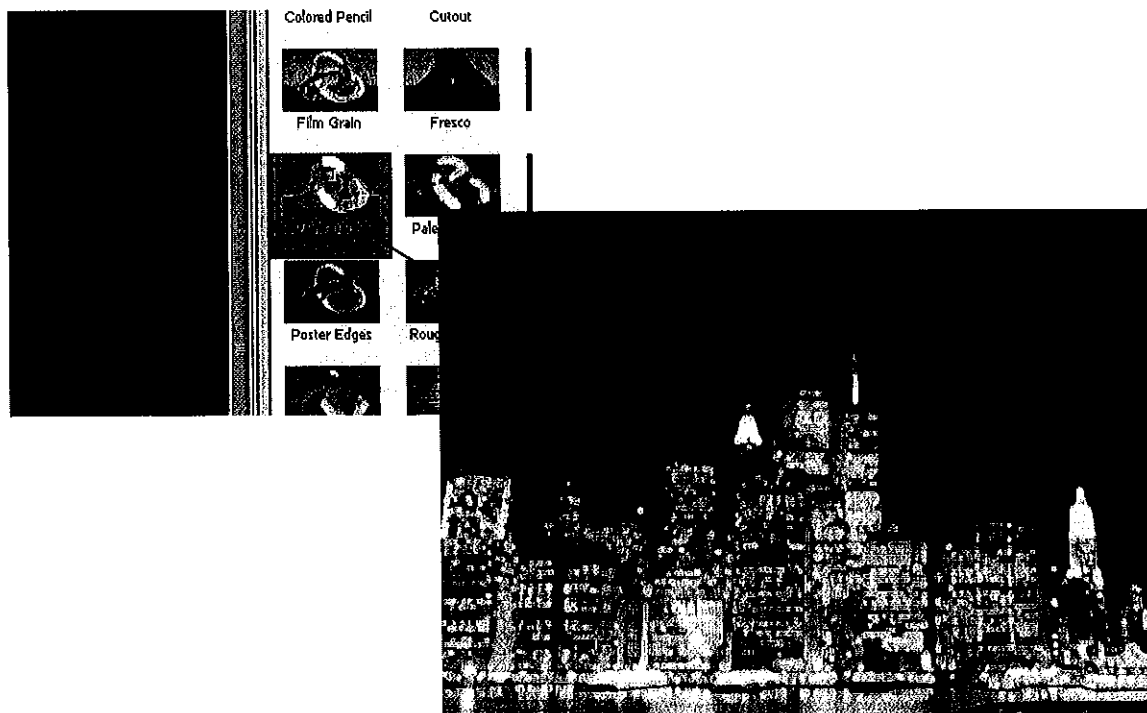
Brightness/Contrast

I changed the contrast and the brightness of the image by adjusting their levels. On the Image menu and then adjustments, I clicked on this option and a box appeared that allowed me to change the levels of both of these.



Filter effects

I then used some effects to make the picture more interesting. The effect that I used was Paint Daubs. It made the picture seem quite blurred but I think that it added an effective difference to it.

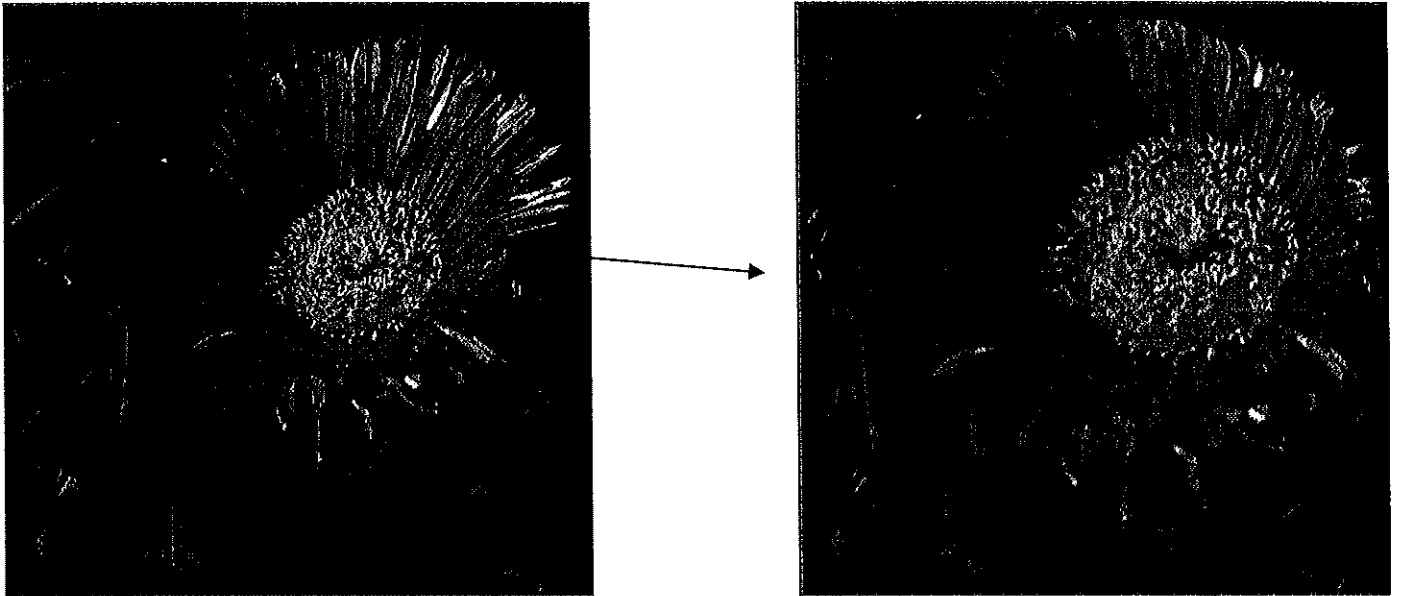


A05

I am now going to experiment with complex image manipulation and creation using image manipulation software. The software that I am going to use is going to be Adobe Photoshop.

Filtering

The first effect that I am going to investigate is the use of filtering, I am going to use an image and make it appear closer to me by using an effect.



These are my images, both before and after, as you can see the finished image is clearly distorted and makes the flower look both larger and closer.

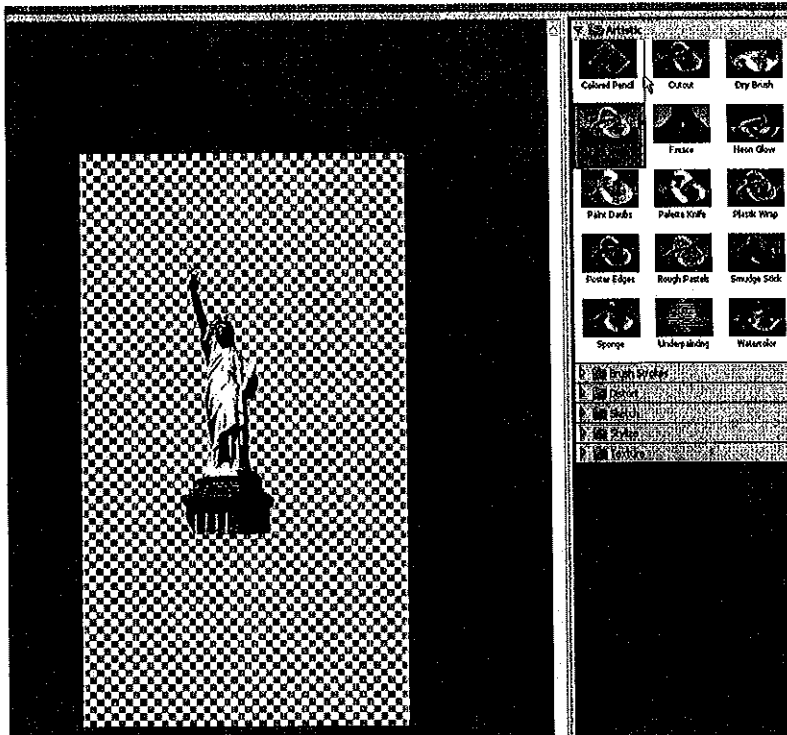
Using Magnetic Lasso



The next thing I looked at was using the magnetic lasso tool to select a part of a picture, I used it to cut out the New York skyline and pasted it onto a new page, then I moved it and positioned it where I wanted it and pressed enter. Then I used the paint bucket tool to colour in the background and make the sky look darker, I think that this looks effective. I tidied it up with the paintbrush tool.



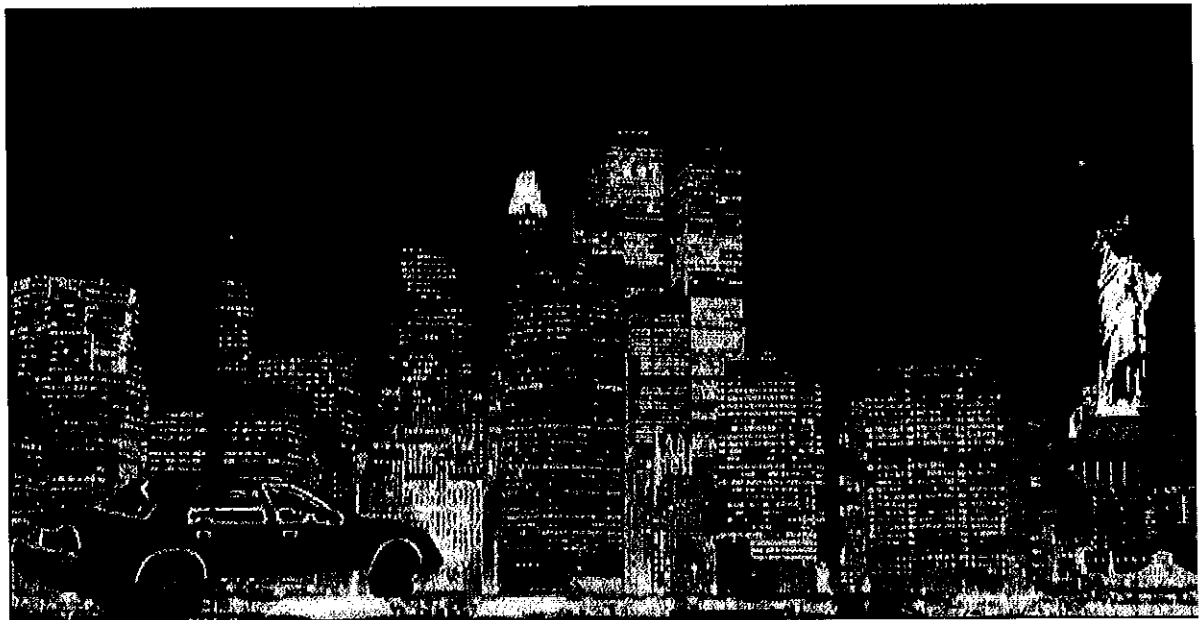
Adding a new layer and effect



I am going to add a new layer to the New York skyline picture, I thought of doing a New York themed photograph so I got a picture of the Statue of Liberty and added that into Photoshop, then I made it a new layer and added it into the skyline picture, I then added an effect and pressed enter and moved it to where I wanted it on my screen.

Stylizing

The next thing I did was stylized a part of the picture, I chose to add a picture of an American Cab and I added glowing edges. I then made it bigger and placed it where I wanted it within the photograph so that it would look most effective.



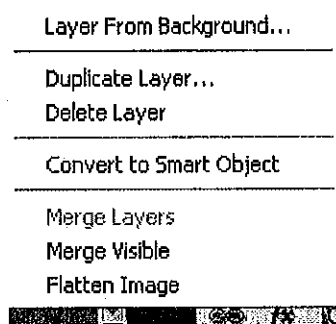
Filter Effects

The next thing that I did was find a picture of Macy's department store and used the lasso tool to cut it out then I made a new layer within my photograph. Then I cut out a part of the store and added an effect to that so that it would stand out more.



In the above picture I have superimposed both images and text. I have done this by adding places/things that relate to New York into the New York skyline picture. I think that this has really enhanced the photo and made it really creative and effective.

When I was sure everything was positioned where I wanted them and that all of my effects were right, I flattened the layers so that the picture became a whole picture and nothing could get moved about.



I did this by right clicking on the background layer and choosing the 'flatten image' button. This makes sure that when the photograph is re-opened by anyone it cannot be changed, e.g. one of the pictures moved to another place.

I used an image that I originally took in AO1 and used some pictures from AO3 and put them together to make the final picture below. Screenshots of me doing this are then shown below that.

This picture was also another part of a picture that I used in A03.



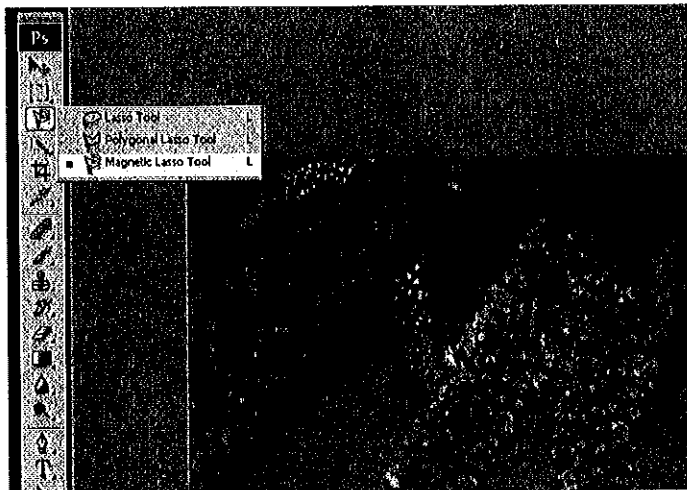
This image was the background layer and this is an image that I took for A01.

I used this from a picture that I found in A03 and used the lasso tool to select this part of the image. I used the magic select tool to rub parts of the layer that I added on top away.

I used the magnetic lasso tool to select this part of a picture that I found in A03. I then enlarged it and added it on as a new layer to this picture.

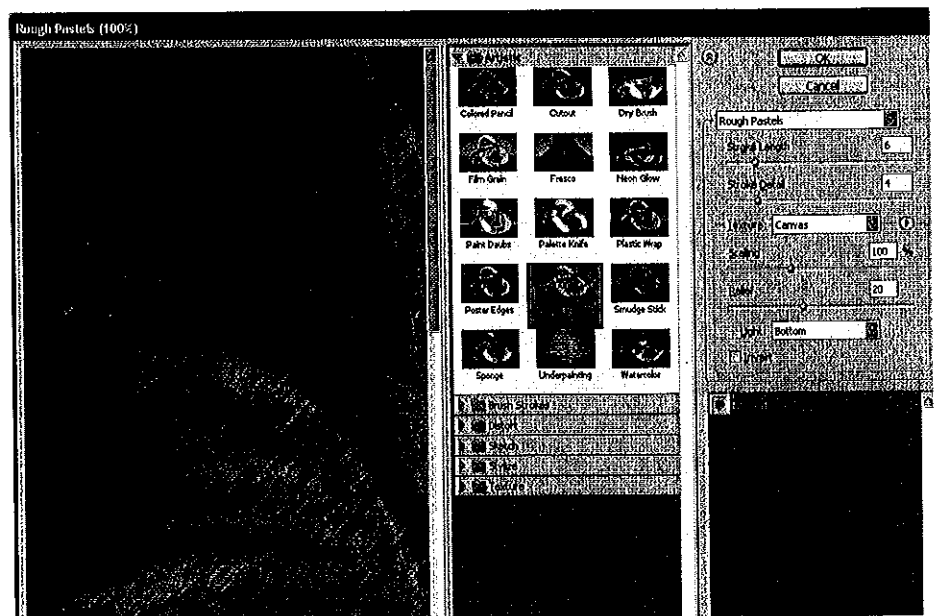
I used the eraser tool here to cut out a part of the original picture that I took and added a black background colour.

I added an overall black background colour to finish the effect of the picture.



This shows me using the magnetic lasso tool to get the purple and green parts of this picture and add it onto the background layer.

I added a filter effect to the background layer. This was a coloured pencil effect and I used the rough pastel one.





This screenshot shows all of the layers together before I added the black background colour. As shown here the background colour creates a really good effect.

Here I used the magic select tool to erase the green in the picture to leave just the dandelion.

Once the picture was completed I flattened the layers to make one single layer which basically grouped them all together. This meant that each layer individually cannot be moved or changed.

AO6

I have presented both my edited and unedited pictures in a separate PowerPoint presentation and I am now going to get feedback of both my edited and unedited images off some of my classmates.

Image 1 - New York (Image size adjusted)	
Sophie	I think that the picture here looks better originally at the bigger size. I think it takes away how lovely the picture is by making it smaller.
Jodie	Some images look good when their image size is reduced, however personally I think that this image is better at its normal size.
Robert	I think this image looks good both at its original size and its reduced size but I think that by just adjusting the size of the image is quite boring but it depends on what the image is going to be used for.
Liam	I think the image looks good smaller as it looks brighter and good when everything is closer together.
Image 2 – New York (Cropped image)	
Sophie	I think the part of the image that is cropped here is a good part to crop as it is the centre of the image and it looks better closer up.
Jodie	I think the image looks good close up but I also like the full image as it looks really effective all of the buildings and lights.
Robert	I prefer the image bigger rather than the image cropped.
Liam	I like the way that the image is focused on the centre here. It makes the picture look more full compared to the original image.
Image 3 – New York (Resolution adjusted)	
Sophie	I think when the resolution of this image has been changed it has made the image look a lot more effective. The picture is larger and the detail is clearer.
Jodie	I like the detail and quality of the picture since the resolution has been changed in the image.
Robert	The image is clearer at the higher resolution setting and it makes all of the lights and buildings look more effective when looking at the picture as a whole.
Liam	This picture looks good and more detailed when the resolution setting has been adjusted but I prefer the image smaller.
Image 4 – New York (Hue and Saturation changed)	
Sophie	I think the pink image change looks good and very girly, but I prefer the light blue/grey hue and saturation change as I think it looks really effective and the image stands out more.
Jodie	I like the pink hue and saturation change because it is my favourite colour and I think the new York skyline in this colour looks cool and very different. I also think the other hue and saturation change looks good but I prefer the pink one.
Robert	I think the pink picture does look good but I wouldn't have chosen that type of editing. I prefer the lighter colour in the image.
Liam	I think the picture itself does not suit to be pink and I think it spoils the effectiveness of the picture. It makes the picture look tacky.
Image 5 – New York (Black & White effect)	
Sophie	I love the black & white effect on all images but I especially like it on this one. I think it is good because it shows all the lights as being white and the buildings as grey and black.
Jodie	I think this image looks good in black and white because there was not much colour in the original picture and when it has been changed to black and white it looks effective.
Robert	I really like this image in black and white and I think it stands out more with this effect rather than the original image.

Liam	I think this image looks good in Black & White but I think the actual Black & White effect is boring. I think with a picture as nice as this it should have more interesting and creative effects.
Image 6 – New York final picture 1	
Sophie	It is an interesting overall picture as there is a use of many images here. The effects in the picture make it look better than it would if there was no effects added to the layers that have been put in to it.
Jodie	I like the way that all images in here represent New York in some kind of way. The use of layers is really good
Robert	All of the pictures are something to do with New York and I think that this is really effective.
Liam	The final picture when compared to the original picture is very creative and interesting. The effects that have been used make the image look original.
Image 7 – Flower final picture 2	
Sophie	I like the collection of different types of images and the floral theme here. I think that the image has been put together well and the effects that have been added make it look better.
Jodie	I like the effect on the background image. I think that the colours together look interesting and effective.
Robert	The image here is very artistic and looks quite professional. There has been a good use of layers and although all of the flower pictures are very different in colour and size it has been put together in a way that makes it look really good.
Liam	The angle of the purple flower draws attention to the overall image and matches really well with the orange in the background.

As I can see from looking at all of my feedback for each image off my four classmates there has been a range of mixed comments from each of them. I do think that overall my pictures and editing have gone quite well and I think that my classmates think this also. I think that they especially liked my final two images shown in the portfolio which were the two that I worked on most to achieve my desired outcome.

Printing

When printing images it is important that you have got the settings adjusted correctly on the printer and the right type of paper in the printer. This is so that your image will print to the best of the printer's ability for your kind of image. If you use the wrong type of paper or wrong setting the image could possibly look poor and un-professional. The printer allowed me to choose what type of paper I wanted to use as well as choosing the DPI setting for printing my pictures. By adjusting these settings it helped me to get the best possible outcome for the printed picture.

DPI

DPI means dots per inch. When printing images printers with a higher DPI will print a much more clear and detailed image rather than those with the lower DPI. Not all printers have a single DPI measurement it just depends on the print mode that the printer is set to. In digital printing it is used for the number of resolution dots per inch. All printers are different so if you use the same DPI setting on one printer does not mean to say that if you use it on another printer then the quality and the image will be exactly the same because it will not. Different printers apply the ink to the image in

a different way. For example a dot matrix printer uses tiny rods striking an ink ribbon and has a low resolution, whereas an inkjet printer sprays the ink through small nozzles and has a lot higher resolution than a dot matrix printer. A laser printer applies the DPI through a toner which is controlled by an electrostatic charge. Laser printers can have a range of DPI from 600-1800. I printed the same picture on a dot matrix printer and an inkjet printer and the picture from the inkjet printer was a lot better quality than the dot matrix printer. This proved to me that the higher DPI of the printer, the higher the quality of the image is and therefore to make my entire printed images look professional, I chose to use the higher DPI setting.

Print size

There are many print size options available on the computer and the printer that you have to choose before you print. I printed out the same picture on A4 and A5 and decided that from this the A5 picture was a lot better quality and looked more professional and therefore decided to use this size to print all of my pictures. The A4 picture looked unprofessional and the detail was not clear and effective like the A5 size was. It was easy to change the printer paper to A5 instead of A4 and set it up correctly.

Printer settings

Before you print your images, there are many options and settings available on the computer and the printer. It is important that you choose the right settings that you are wanting before you print. You should set the printer up correctly to have the DPI that you want as well as putting in the correct size and type of paper into the printer. You can choose to print the picture either portrait or landscape on the computer as well as many other settings such as copies, page margins and you can also see a preview of how your image will look to save you wasting paper, ink and time.

Printer paper

There are many different types of printer paper available to use and you have to choose the best type for you that you want to use for your pictures. Some of these include; laser paper, inkjet paper, photo paper and computer paper. Paper also comes in two different types which are matte and glossy.

- Laser paper is designed for the use of toners in laser printers.
- Photo paper is mainly for use when printing photos out of a printer and it produces sharp and good quality images.
- Matte paper is white and dries very quickly and it is recommended for everyday printing.
- Glossy paper has a shiny surface and is used commonly for printing photographs and posters.

Other types of printer paper include inkjet paper, copy paper, recycled copier paper, computer paper and printer paper.

I printed out a picture using matte and glossy paper and found straight away that clearly the best paper to use to print my images would be glossy paper. This is because it looks a lot more

professional for a picture and the quality is better. Images print better onto glossy paper. I also printed out using laser paper and photo paper. I found that photo paper produced a more sharp and better quality image and therefore I come to the conclusion that I would use photo glossy paper to print my images.

AO7

After working on this unit I have looked at a wide range of photographs. My main focus was on New York and flowers. In my AO5 I created new images based on these themes. I have used many of the settings manually on a digital camera in order to enhance and get different photographic situations and compare them. I also edited many of my images in order to achieve desired effects and create new images in Adobe Photoshop.

I used settings and editing techniques such as:

- Adjusting resolution settings on the digital camera in order to change file size, detail and quality of the pictures.
- Adjusting ISO settings on the digital camera to experiment with shutter speed and light exposed into the picture and see the outcome of them both.
- Using the macro setting on the digital camera when focusing on close up images in order to gain better detail.
- Looking at digital and optical zoom and comparing them
- Sizing, scaling and cropping images
- Changing hue and saturation
- Changing colour balance
- Photo enhancements
- Superimposing images and text into images
- Adding and creating multiple layers to images
- Magic select tool
- Magnetic lasso tool
- Lasso tool
- Using filters
- Using different effects
- Changing to Black & White
- Using masks and paths
- Using multiple images
- Photo restoration tools – correcting patches and healing
- Sharpening and softening
- Changing contrast
- Rotating the image 90 degrees
- Built-in effects
- Making images more interesting

Clearly from the above list, in this unit I have experimented a lot with digital imaging and photography. I have used lots of techniques both on a digital camera and in editing image software. I changed the resolution and ISO settings on the camera to gain different qualities of images and to allow different light intensities to be exposed into the images. This helped me in dark and dull situations to make the photographic situation look better than it was.

I presented my final edited images as a portfolio in a PowerPoint presentation. This enabled me to present my both edited and unedited photographs professionally and easily to my classmates in

order to gain feedback from them. Each photo on each new slide was presented exactly the same so the portfolio was consistent and simple to understand. The colour scheme of the portfolio was also consistent throughout and each slide was only different by explaining and showing the different editing techniques. I think that this was the best possible way to present my pictures. I presented the images by using 'Before' and 'After' to clearly show the changes made to each image.

Overall I think that all of my pictures are of good quality and I have covered a wide range of editing techniques. I think that my images fit together well to the themes that I used. I used New York as one theme, I used flowers and then I used different sceneries. I think that my original pictures were good, however I think without them being edited they would not have been effective at all.

I think that my work fit the purpose and the aim of what I had to do which was to show my editing skills and understanding of digital image creation to create new images.

When comparing my work to professional photographers I do think that I have done quite well although obviously my work is nowhere near as good as theirs. I did not have a clue how to use any image editing software or all of the different functions of a digital camera before I started this unit and therefore this is why I think I have done so well do create the new images that I have. When looking at my feedback from others it does seem that they thought the images looked good and professional for most of them. I think that the main difference between mine and professional photographers work would be the quality of the image. This could be due to the fact that they used a tripod which would mean there would be no shake when the image was being taken. Also it could have been due to the fact that they possibly could have had a better camera than I was using with more megapixels, meaning more detailed and better quality pictures. They would know camera angles and how to take images better than I did as they are professional and had experience as well as them being able to use editing software better than I could. I think that the overall quality of my work was good, however if I was to do a similar task again I would more images than I did when I edited them to see lots of different effects on different pictures. I was very happy with the two final pictures that I created and I do think that my task has been successful as although I found it difficult to use the image editing software at first, I got used to it to complete my task.