

# Year 8- Unit 1 Control technology

Computers follow instructions or sequences programmed into them. A flowchart can be used to help design a sequence. Actions can be ordered, reordered or removed if no longer necessary.

## Keywords for Control :

|                           |   |
|---------------------------|---|
| <b>RFID</b>               | RFID stands for Radio Frequency Identification, these are used in many stores to track location and amounts of items. |
| <b>Control Technology</b> | Control Technology is used to operate systems, e.g. traffic lights, control actions and robot's movement.             |
| <b>Circuit</b>            | Computers are constructed from electrical circuits and through these circuits there are two states.                   |
| <b>Systems</b>            | A system is a collection of parts that work together for a common purpose .   |
| <b>Car Manufacturing</b>  | Robots are used to manufacture cars for their precise accuracy and efficiency.  |
| <b>Mars Exploration</b>   | Robots can be programmed to search Mars without loss of human life.   |

### Control Technology

In modern life we are surrounded by technology which controls many machines and everyday objects. These include using sensors to open doors, turn on lights, check a door is closed etc.

**Embedded computers:** these are when a circuit board is installed inside a machine, e.g. inside a washing machine or car sensor system.

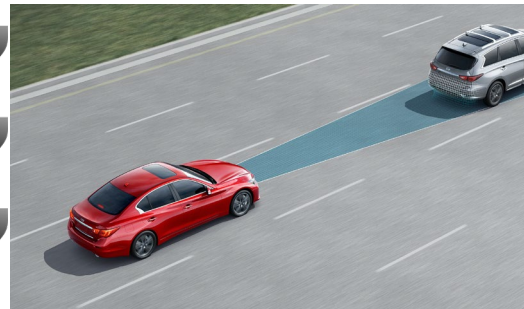
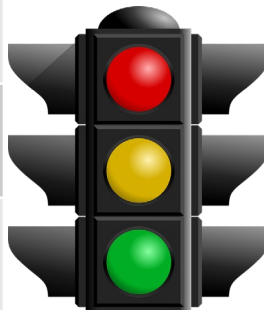
**Input devices:** these can be switches or sensors used to control when the computer runs a program.

**Output devices:** these electrical devices start and stop when the computer sends a signal.

**Microprocessors:** used in all sorts of technology, including entertainment systems such as satellite or TV set-top boxes, which can be programmed to record or show particular programmes.

Microwave ovens can be **programmed** to cook at a particular heat and for a certain duration.

**RFID :** Radio-frequency identification uses electromagnetic fields to automatically identify and track tags attached to objects. The tags contain electronically-stored information.



### Advantages of computer control systems include:

1. Computers do not need a break
2. Computers can repeat actions in an identical way indefinitely.

### Disadvantages of computer systems include:

1. If a computer is underpowered it might take too long to do something.
2. Programming errors can cause delays.

## Keywords

Airbrush  
Background  
Blur  
Cut  
Edit  
Effect  
Feathering  
Filter  
Focus  
Graphics  
Image  
Inspiration  
Lasso  
Magic Wand  
Manipulate  
Masterpiece  
Paste  
Realistic  
Resize  
Risk  
Stuck  
Tools  
Transform

Can you think  
of any other  
keywords  
relating to  
this topic?



# ICT – Year 8 – Learning Mat

## Unit: Image editing

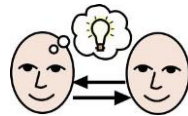
### Self-Assessment



- Who is my target **audience**?
- What is the **purpose** of my work?
- What are the **strengths** of what I have produced?
- How can I **improve** my work?
- Is my work **detailed**?
- Have I made the best use of the **tools/resources** available?
- What do I **imagine** my work to look like once it is finished?

### Peer Assessment

- Is the work suitable for the **audience & purpose**?
- What did they do **well**? What is **positive** about the work?
- What could be **better**? How can it be **improved**? Why do I think this?
- Are my comments **constructive** and **helpful** to my peers?
- What can I **learn** from my peers?



### Example:

"I think your Masterpiece image is suitable for a teenage audience because ... I particularly like the way you ... and this has a positive affect because ...

It is/is not suitable for the purpose because ...

To improve the image, you could ... Also, it would be even better if you ... I think this would enhance your work because ...".



THINK:  
Audience &  
Purpose

### Sentence Types



**REMEMBER:**  
Always proof-read  
your work!

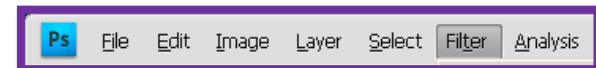
**Simple Sentence:** Effects  
have been added to the  
image.

**Compound Sentence:** Effects have been added to the image and it looks more realistic now.

**Complex Sentence:** To make the image more professional, the Filter menu was used to add special effects; such as changing the brightness and contrast.

### Graphics Editing Techniques

- Adding **effects** to images using the Filter menu;



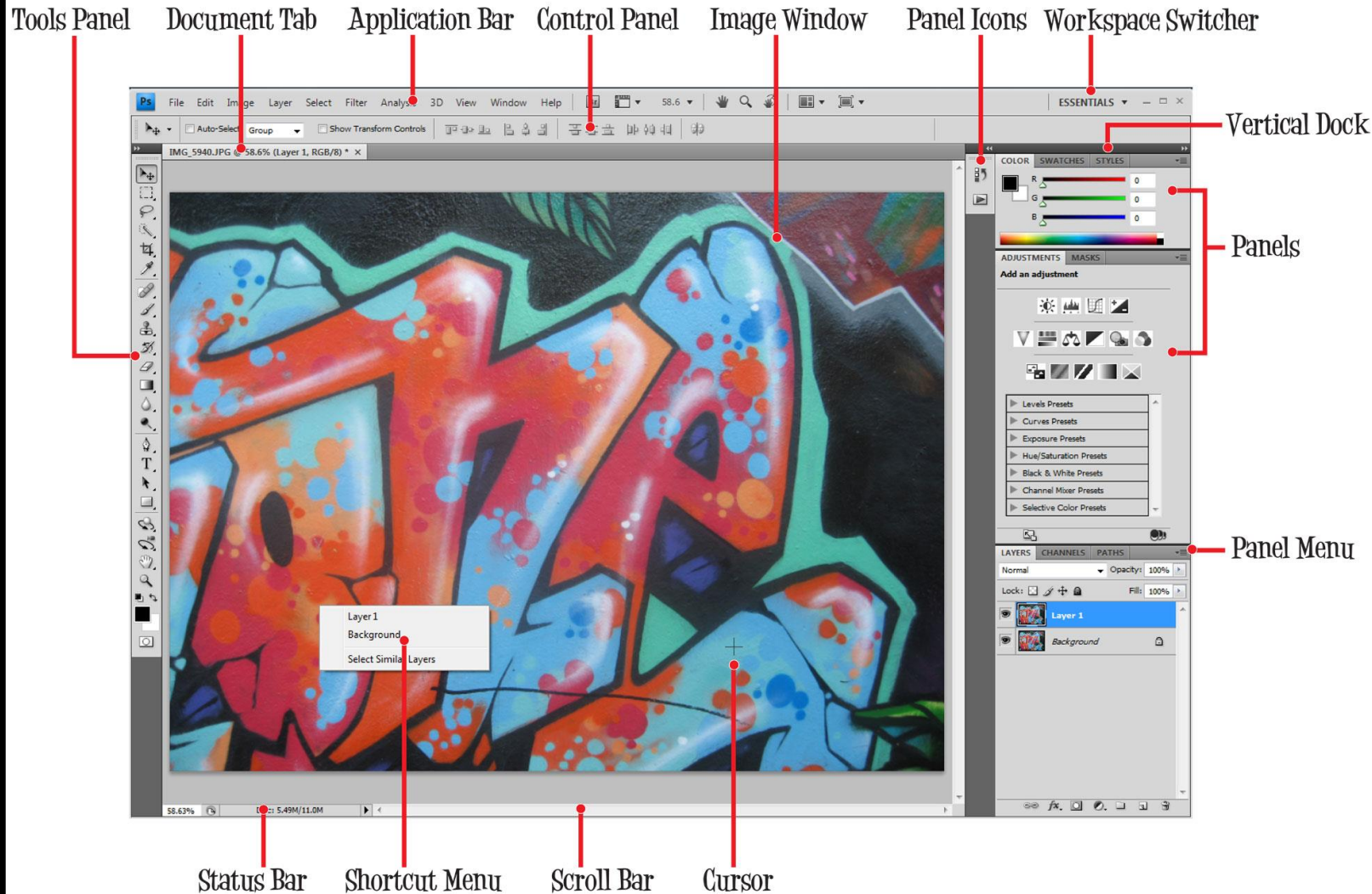
- **Cutting and cropping** using the Magic Wand and Lasso tools;



- **Airbrushing** techniques  
e.g. changing eye/hair colour,  
removing blemishes, teeth whitening.



# Photoshop CS4 Workspace



## Airbrushing

Airbrushing is a 'touch-up' technique used on digital photos to enhance them or make them look better. It is often used by fashion magazines, where models are airbrushed to change their features, giving them unrealistic looks, like longer necks, bigger eyes, and no marks on the skin.

### Why is it bad?

Airbrushing used on celebs in adverts that are aimed at teens has a negative effect on young people. It puts pressure on them to look 'perfect', something that no one can live up to in real life.

