# Kemnal Technology College – Computer Science Kemnal Key – Year 8 Term 5

#### **KEMNAL KEY QUESTIONS**

What components make up the internals of a PC?

What is an Input device / output device?

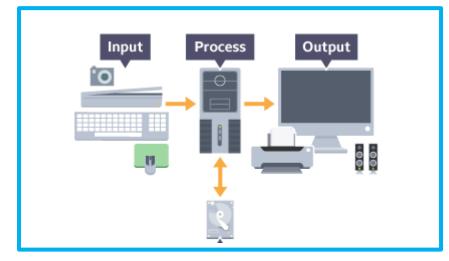
Describe what happens at the process stage.

Evaluate the effectiveness of chosen type of software.

#### Logic gates

In its most basic form, a computer is a collection of powered and unpowered *circuits* and *transistors*. A *logic gate* is a series of transistors connected together to give one or more *outputs*, each output being based on the *input* or combination of inputs supplied to it. There are three types of gate to consider:

AND gate OR gate NOT gate



## **Functions of operating systems**

An operating system is a collection (or suite) of programs that manages and controls the computer. Operating systems have many functions:

controlling hardware components
providing a platform for software to run on
providing a user interface
managing processes
managing the computer's memory
managing input and output devices
managing applications
managing security

Microsoft Windows Apple OS X Linux Android IOS

#### Software

The software in a computer system enables the hardware to function and the user to perform tasks. Software within a computer system is divided into two main types, system software and application software.

# System software

System software is any software that assists with the running or management of the computer system. This can include operating systems, security software and file management software.

#### **Application software**

Application software is any software added to the system that enables the user to perform a task. For example, a word processor allows the user to type a document and a browser allows the user to view web pages.

### Capacity

Size	Unit
8 bits	1 byte (B)
1,000 bytes (1,000 B)	1 kilobyte (KB)
1,000 kilobytes (1,000 KB)	1 megabyte (MB)
1,000 megabytes (1,000 MB)	1 gigabyte (GB)
1,000 gigabytes (1,000 GB)	1 terabyte (TB)

# **Utility programs**

Utility software helps maintain the system. Utility software includes:

encryption software defragmentation software data compression software backup software

## **Encryption software**

Encryption software disguises the contents of files so they can only be understood by authorised users. The software uses a complex algorithm to scramble the content so that it appears to be gibberish. Only authorised users can unscramble the content.