

# KS3 Computer Science

## Computer Hardware: The Motherboard

Name:

Class:

Teacher:

### The Purpose of the Motherboard

The purpose of the motherboard is to manage the computer subsystems:

- Graphics Processing Unit (GPU)
- Sound Card
- Hard Disk Drive (HDD)
- Solid-State Drive (SSD)
- Random Access Memory (RAM)
- Read Only Memory (ROM)
- Basic In Out System (BIOS)
- Computer Processing Unit (CPU)

### The Parts of the Motherboard

#### Busses

These are circuits on a motherboard. Like a bus would transport lots of people from one place to another, the job of the busses on a motherboard is to transport data and instructions between different devices. The buses on a motherboard are called the:

- Front Side Bus (FSB)
- Back Side Bus (BSB)

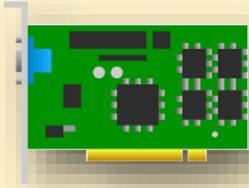
#### Bridges

These manage how the data and instructions are transferred between the components.

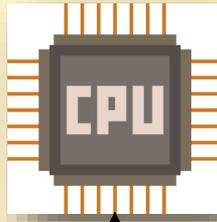
There are two bridges:

- Northbridge - Connects the CPU, RAM and GPU
- Southbridge - Connects the **Northbridge** to all the other devices.

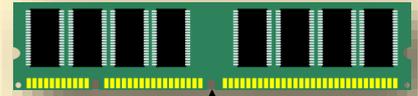
GPU



CPU



RAM

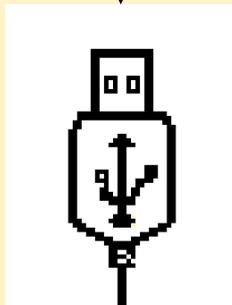


Northbridge

Southbridge



Storage

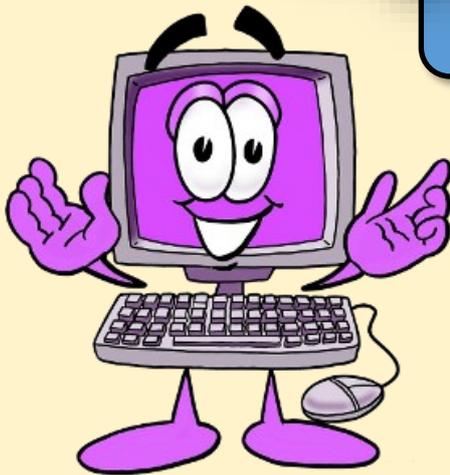
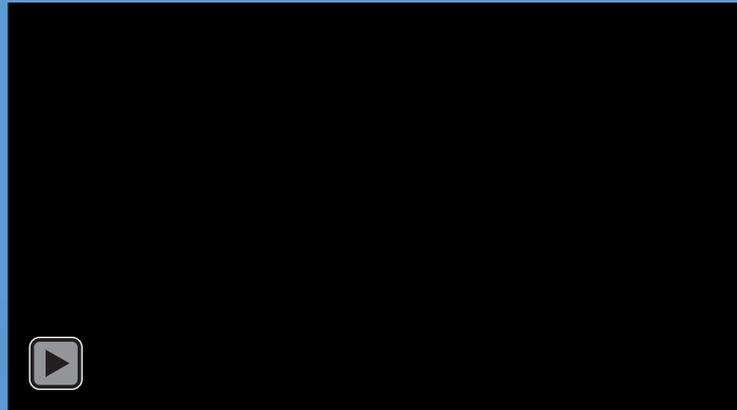


USB Devices



Input/Output  
Devices

Watch this to learn more about the motherboard.



## Activity 1: BIOS and CPU

### Question 1

What is the purpose of the motherboard?

### Question 2

State **three** subsystems that the motherboard manages?

Subsystem 1:

Subsystem 2:

Subsystem 3:

### Question 3

What is the purpose of the **busses** on the motherboard?

### Question 4

What is the purpose of the **bridges** on the motherboard?

### Question 5

Explain the purpose of the **FSB** and the **BSB**?

### Question 6

What does the **Northbridge** control?

### Question 7

What does the **southbridge** control

## **Investigation Activity: Name the parts of the motherboard?**

What are the names of the different sockets used on a motherboard and what are they used for?

# HOUSE POINT ACTIVITY

## Bus Speed

Explain what **bus speed** is and what is is measured in.