We built our own PC!

This year, we decided to build a computer as part of our Young Scientist project. We built a basic one last year as a bit of fun – and it worked brilliantly. We got a bit carried away this year and build a state-of-the art machine – we look forward to showing it at our stand. The following is a list of some of the parts we used and a little about what they do!

We are showing last year's computer also, but running a different operating system to Windows. We had wonderful help from Paul O'Malley of the Irish Linux Users' Group, who gave very freely of his time to show us Ubuntu, a version of Linux. We have just changed this marginally to Edubuntu – the Educational and schools' version. The best thing about it – IT'S FREE!!!.

The Hard Drive

Hard disks were invented in the 1950s They started as large disks up to 20 inches (25 cm) in diameter and holding just a few megabytes. They were originally called "fixed disks". The Hard Disk is located inside the computer.


CD-ROM

CD ROM stands for Compact Disk Read Only Memory. CD ROM (Read Only Memory) drives are found at the front of the computer and provides access to CD-ROM disks. A CD ROM has a 650 Mb capacity.These are being replaced by DVD Drives which have a far greater memory capacity – about 4.5 Gigabytes. DVD Drives play movies as well as`read CD-ROMs. Some early types of DVDs were created in 1993.

RAM

Random Access Memory (RAM) is the best known form of computer memory. It takes the information stored on the Hard Drive and moves it to the processor. When you turn off your computer, information in RAM is lost. Our computer has one RAM module of 512 megabytes but we could insert more. There are four slots on our motherboard for extra modules. Generally speaking, the more RAM in the computer, the faster the computer will work.
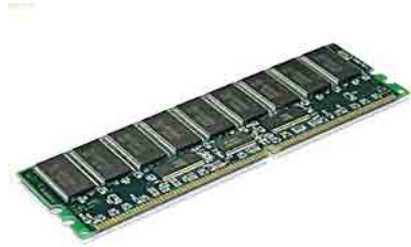
Motherboard

A motherboard allows all the parts of your computer to receive power and communicate with one another. It acts like the computer's nervous system. This motherboard is the one we used when building our computer. We bought it in Peat's of Parnell Street and you can see it in action on our stand at BT/Esat's Young Scientist exhibition in January.

Central Processing Unit

The CPU, or the Central Processing Unit is the brain of the computer – it is the most important chip in the machine. There are many chips out there, but we opted to use an AMD Athlon 64 bit chip.

These chips run very hot and very fast, so a heat sink and cooling fan has to be installed and plugged into the motherboard.