

NPA Knowledge Organiser: Year 5 Computing - Autumn 1



Input - information going into the computer e.g. mouse, keyboard, swipe

Output - information that comes out of the computer e.g. sound, printing

Object - an element in a computer program that can be changed using actions or properties

Properties - all objects have properties that can be changed e.g. colour, scale

Repeat - this command can be used to make a block of commands run a set number of times, or forever



Sharing information

Overview



Systems

- You should also know that Information technology (I.T.) includes computers and things that work with computers.
- You should also know that computers have Input, Process and Output (IPO) components.
- Computer systems are built using a number of parts.
- Computer systems can communicate with other devices.
- There are many, many different kinds of computer systems all around the world, ranging from small-scale to large scale.

Transferring Information

Protocols and Packets

- Protocols are an agreed way of doing something. When we communicate, we use an agreed set of protocols (greeting, speaking, listening, etc.).
- In computing, agreed protocols are the way that computers communicate with one another.
- The digital information they send is called a 'packet.'



IP Addresses

- Computers and their users are not always in the same place as one another.
- With billions of computers around the world, computers need to send the information to the correct place.
- To do this, computers use special addresses called IP addresses. They may look like this:

From: 216. 58. 1. 214

To: 216. 64. 1. 20

My IP Address
63.255.173.183



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Systems

-Systems are a set of things working together as parts of a whole.
-Computer systems are made up of inputs (something that sends a message to the device), processes (the way the device acts on the message) and outputs (something that is sent out by the device). Below are some examples.

Washing Machine:

Input: Dials and buttons.

Process: The computer inside follows a program.

Output: The clothes are washed and the display shows the remaining time.



DVD Player:

Input: The disc is inserted and play is pressed on the remote.

Process: The system reads the information on the disc

Output: The screen displays the movie/ show.



Smart Locker:

Input: The customer scans in a barcode.

Process: The code is recognised by the system.

Output: The correct locker is opened.



Working Together

-Collaborating is another word for working together on something, to reach a shared goal.

-The internet can be used to help people collaborate online, even when they are a long distance apart!

-'Chat' functions can be used to keep each other updated with new information.

-Shared 'cloud' spaces and online drives can allow one or more people to have access to/ edit documents.

-When building upon someone else's work, you need to be aware of copyright and intellectual property rules.

