

# 5.1 Computing systems and networks - Systems and searching – Knowledge Organiser

Year 7 Topic number Hyperlink to planning

**Key** prior learning is highlighted in green, but must be revisited and reinforced during this teaching sequence.

## 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

## 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.'
- Media, files and information can be shared on the internet either privately via email/cloud or publicly on

### 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

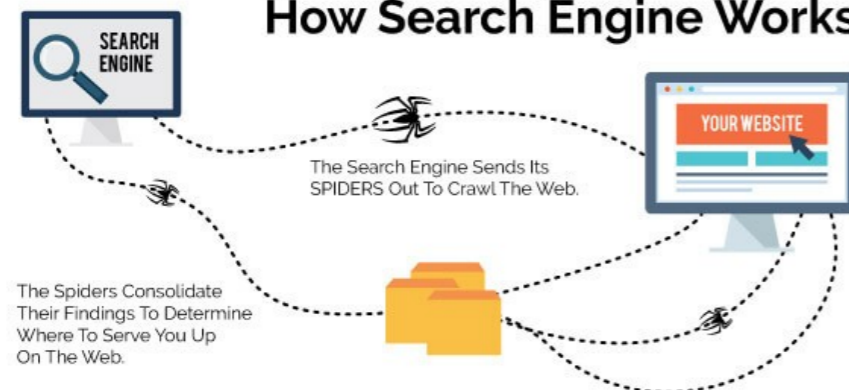
**My IP Address**  
63.255.173.183



## Searching the internet

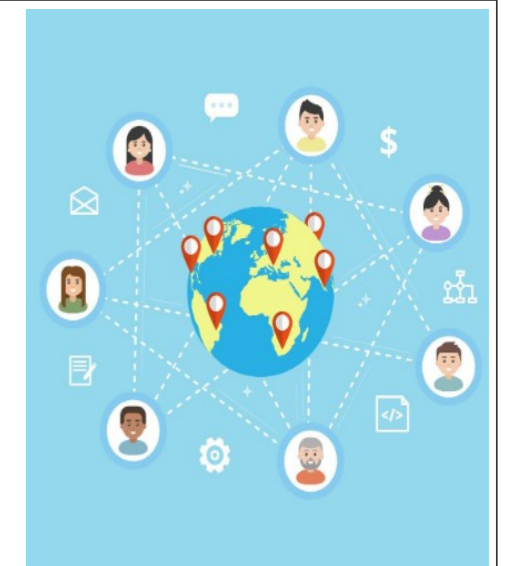
- **A search engine is an online tool that is designed to search for websites on the internet based on the user's search query.**
- It looks for the results in its own database, sorts them and makes an ordered list of these results using unique search algorithms.
- The order of results can be changed by advertising as well as algorithms.
- This list is called a 'results page'

### How Search Engine Works



## 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 keep each other updated with new information.
- Shared 'cloud' spaces and online drives can allow one or more person to have access to/ edit documents.
- When building upon someone else's work, you need to be aware of copyright and intellectual property rules.



## Important Vocabulary

System Connection Digital Input Process Output Protocol Address Chat Collaboration IP Address Communication