

COMPUTING · Y4-Y6

Networks & the Internet

Knowledge Organiser — KS2 Computing

Key vocabulary

1

Network

A group of computers connected so they can share information.

2

Internet

The huge global network of networks — billions of computers connected together.

3

World Wide Web (WWW)

All the websites that you can visit using a browser. The web USES the internet.

4

Browser

A program that lets you view websites. Examples: Chrome, Safari, Edge, Firefox.

5

Server

A powerful computer that stores websites and serves them to your browser when you ask.

6

IP address

A unique number that identifies each device on the internet — like a postal address for your computer.

7

URL

The address of a webpage, like <https://www.bbc.co.uk>.

8

Packet

A small piece of data. When you send information across the internet, it's broken into many packets.



9

Wi-Fi

Wireless internet — your device connects to a router using radio signals.

10

Router

A device that sends data between your home network and the internet.

Internet vs World Wide Web

Many people get this wrong

- INTERNET = the big network of cables, wires, and signals connecting computers.
- WORLD WIDE WEB = all the websites you can visit.
- The web is just ONE thing the internet does — like roads (internet) and cars (websites).
- Other things the internet does: email, video calls, online games, file transfers.
- The internet was invented in the late 1960s. The World Wide Web was invented by Tim Berners-Lee in 1989.
- Tim Berners-Lee is British, and the WWW was first used at CERN in Switzerland.

How the internet works

When you visit a website

- 1. You type a URL into your browser (e.g., bbc.co.uk).
- 2. Your computer asks a SERVER 'where is bbc.co.uk?'
- 3. The DNS (like a phonebook) translates the name to an IP address.
- 4. Your request is split into PACKETS and sent across the internet.
- 5. Each packet finds its way to the server, hopping between routers.
- 6. The server sends back the webpage in packets.
- 7. Your browser puts the packets back together and shows you the page.
- All this happens in less than a second.



an email travels

An everyday example

1. You type your email and click SEND.
 2. Your email goes to YOUR email server (like Outlook or Gmail).
 3. Your server looks up the recipient's email server (e.g. @school.org).
 4. Your email is broken into packets and sent across the internet.
 5. The recipient's server stores the email.
 6. When the recipient opens their email app, the email arrives in their inbox.
- Important: an email passes through many computers, just like a letter passes through many sorting offices.
- Emails are not very private — many copies exist on different servers.

