Your notes

KS3 Computing: revision notes

Networks and the internet

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Networks

- A **network** is two or more computers connected to share data and resources.
- A LAN (local area **network**) covers a small area, such as a home or school. A WAN (wide area **network**) covers a large area; the **internet** is the biggest WAN.
- **Networks** let people share files, printers and **internet** connections, but viruses can spread and they need to be kept secure.
- Hardware: **routers** direct data between **networks**, switches connect devices in a LAN, and wireless access points provide Wi-Fi. Data travels through copper cables, fibre-optic cables (pulses of light) and radio waves.

The internet and the Web

- The **internet** is the worldwide **network** of **networks**: the cables, routers and connections.
- The **World Wide Web** is a service that runs on the **internet**: web pages linked by hyperlinks and viewed in a **browser**.
- Every device on a **network** has an **IP address**. The domain name system (DNS) turns web addresses such as www.example.com into **IP addresses**.

Sending data

- Data is split into **packets**. Each **packet** carries the destination address and a number, so the **packets** can take different routes and be put back in order.
- A **protocol** is a set of rules for communicating: HTTP and HTTPS for web pages (the S means secure, because data is encrypted), and SMTP for sending email.
- **Bandwidth** is the amount of data that can be sent each second, measured in megabits per second (Mbps).
- Search engines use web crawlers to visit pages and build an index, then rank the results.

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Key terms

Network	Two or more computers connected to share data and resources.
LAN	A local area network, covering a small area.
WAN	A wide area network, covering a large area.
Internet	The worldwide network of networks.
World Wide Web	Web pages linked by hyperlinks, viewed over the internet.
Router	A device that directs data between networks.
IP address	A unique number that identifies a device on a network.
DNS	The system that turns web addresses into IP addresses.
Packet	A small chunk of data sent across a network.
Protocol	A set of rules for how devices communicate.
Bandwidth	The amount of data that can be sent each second.
Browser	Software used to view web pages.

Quick questions

Cover the answers and test yourself: remembering is what makes it stick.

1. What is a LAN?
2. What is the internet?
3. What is the difference between the internet and the World Wide Web?
4. What does a router do?
5. What is an IP address?
6. What does DNS do?
7. What are packets?
8. What does the S in HTTPS stand for?

Answers

1. A network covering a small area, such as a school
2. A worldwide network of networks
3. The internet is the network; the Web is the web pages viewed over it
4. Directs data between networks
5. A unique number that identifies a device on a network
6. Turns web addresses into IP addresses
7. Small chunks of data sent across a network
8. Secure: the data is encrypted

What to do next

Practise 13 questions on this topic

Try 4 exam questions, with mark schemes

Your notes

Read the lesson, one step at a time

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