Computing

Lesson 3: Real World Networks

KS4 Networks

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Task 1 - Build a business network - Scenario

You have been commissioned by Fabgadget Inc., a start-up manufacturing company, to design and install their network and computing facilities. They have supplied you with a list of requirements that their network needs to meet (detailed on the next slide).

Task 1 - Build a business network - Scenario requirements

- We have two buildings: an admin office and a manufacturing plant. Both require access to the network

- There is a small room in the admin office that can be used to put the servers in, there also needs to be a printer in here.

- We need a file server, an email server, and a print server.

- Each building and the server room needs to have 'door access control' fitted.

- Each building should have two external CCTV cameras.

Task 1 - Build a business network - Scenario requirements

- The internet connection needs to come into the server room.
- We have five people working in the admin office. Each person in the admin office has a PC and an IP phone.
- The manufacturing plant needs two printers.
- We have ten people working in the manufacturing plant. Each person in the manufacturing plant uses a tablet to exchange details about the job that they are working on with staff in the admin office.
- The boss only uses a smartphone, and needs to move between both buildings

Task 1 - Build a business network

Guide:

- Start by drawing a plan of the buildings on a large sheet of paper
- In accordance with the network requirements draw the icons to build a network. Use a pencil as you may need to rub out and rearrange.
- Indicate how devices are connected to each other by drawing lines between them on the piece of paper
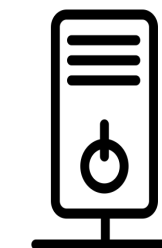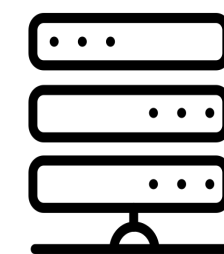- Use one colour for wired connections and another for wireless

Task 1 - Build a business network

On the following slides you will find icons for specific pieces of networking hardware.

Alternatively, print these icons and cut them out so that you can arrange them on your paper and move them around if needed.
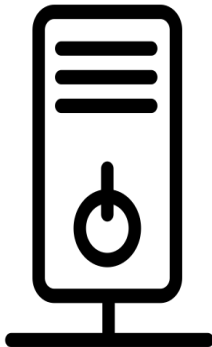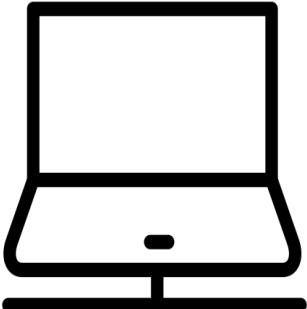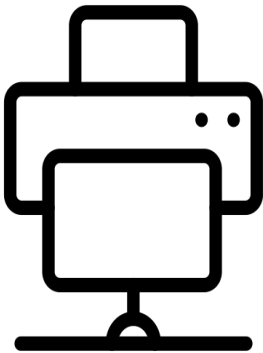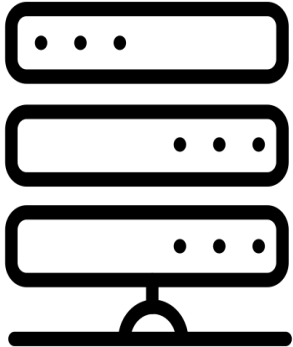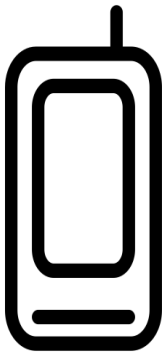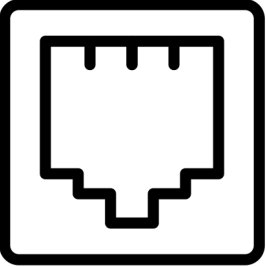
Note: You will need multiples of some.

Credit: The Noun Project
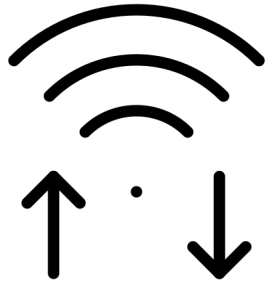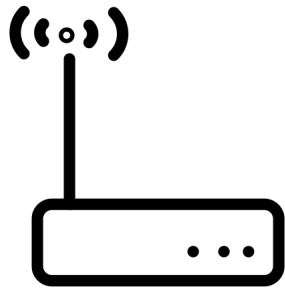
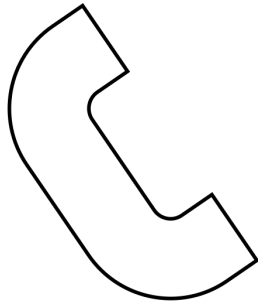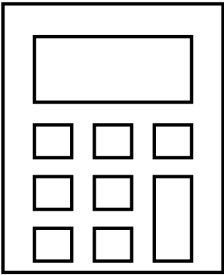# Networking hardware icons

PC — has a wired network connection	Laptop — has both a wired and wireless network connection	Printer — has a wired network connection	Print/File/Email/ Login server — has a wired network connection	Smartphone — has a wireless network connection	Network switch — 24 wired network connections

Networking hardware icons

Wireless access point — up to 10 wireless connections, 1 wired	Internet modem — has a wired network connection	CCTV camera — has a wired network connection	IP phone — has a wired network connection	Tablet — has a wireless network connection	Door access control — has a wired network connection