# Unit 1.4 Wired and Wireless Networks – Lesson 1

## Activity 1 – Local area network (LAN) vs Wide area network (WAN)

### Higher ability

Research the key areas below about each type of network. Complete the boxes for each network.

| **Key point to research** | **LAN** | **WAN** |
| --- | --- | --- |
| Area it covers |  |  |
| Connection |  |  |
| Speed |  |  |
| Cost |  |  |
| Security |  |  |
| Example |  |  |

**Extension:**

1. You have recently had an Internet connection put into your home and decide to set up a LAN so that you can connect your PC, tablet, mobile phone and game consoles to share The Internet and also photos/videos from these devices.
2. Why is a LAN the most appropriate choice?

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|  |

1. What hardware would you need to buy?

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1. How would each device connect to the network?

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|  |

1. Discuss the factors that would affect the speed of the network

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1. If a company wanted to connect to a WAN – they may make use of a Dedicated Line or a Leased Line – discuss the difference between these two.

## Activity 1 – Local area network (LAN) vs Wide area network (WAN)

### Low ability

Research the key areas below about each type of network. Complete the boxes for each network.

| **Key point to research** | **LAN** | **WAN** |
| --- | --- | --- |
| How big is the area that this type of network covers?   * Geographically small? * Geographically large? |  |  |
| How are computers normally connected together in this type of network   * Wired (Ethernet) * Wirelessly * Dedicated Lines * Leased Line * The Internet * Satellite * Phone Lines |  |  |
| What is the average speed of data transmission on this type of network?   * Kbps? * Mbps? * Gbps? * Tbps? |  |  |
| What kind of costs are involved in setting up this type of network?   * Initial purchase of hardware? * On-going costs (subscriptions)? * Cable costs |  |  |
| How secure is this type of network?   * What security risks are there? * What could be done to help the security? |  |  |
| Can you give an example of this type of network? |  |  |

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