

Lesson 3: Transferring information

Year 5 - Computing systems and networks – How is information shared?

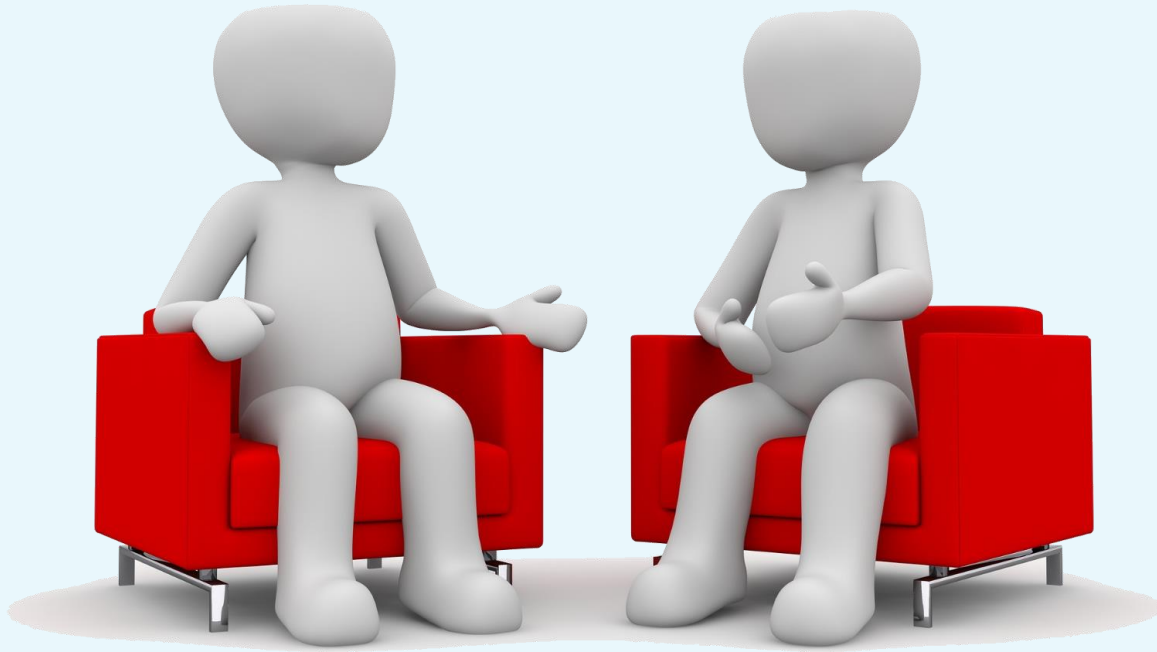
Lesson 3: Transferring information

To recognise how information is transferred across the internet

- I can recognise that data is transferred using agreed methods
- I can explain that networked digital devices have an address
- I can explain that data is transferred over networks in packets



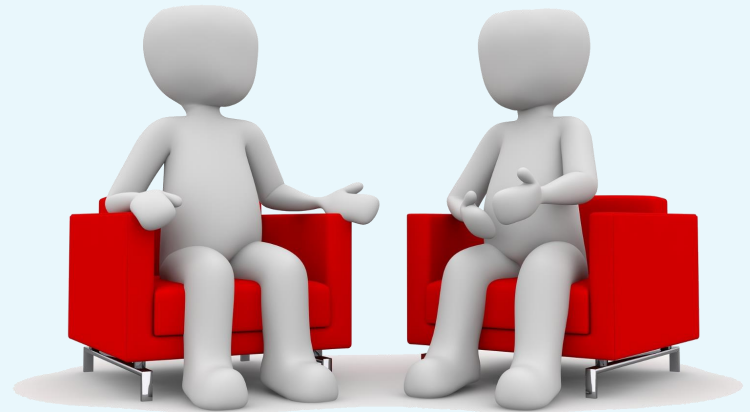
Can a system be described as many parts working together successfully?



How do you communicate with someone successfully?

Communicating

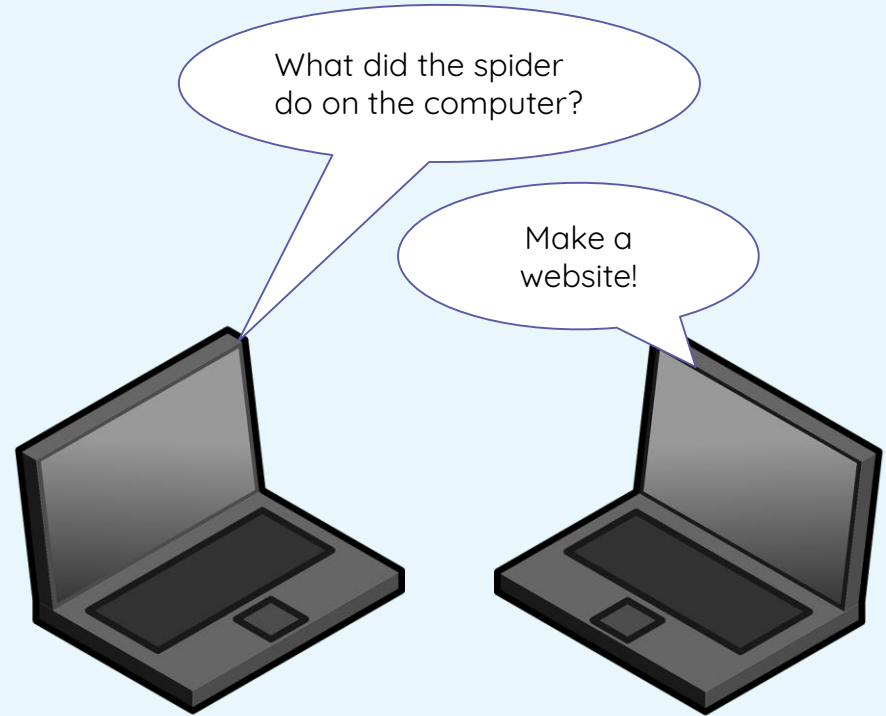
- A message
- From someone, to someone
(e.g. a speaker and a listener)
- Taking turns
- Understanding
(same language)



The things above are a **protocol**: an agreed way of doing something.

Communicating

- A message
- From someone, to someone (e.g. a speaker and a listener)
- Taking turns
- Understanding (same language)



Computers communicate using agreed **protocols**.

J Smith
256 High
Bigton

256 High Street
BI6 1ON

J Smith
BI6 1ON

J Smith
256 High Street

J Smith
256 High Street
Bigton
BI6 1ON

J Smith
High Street
Bigton
BI6 1ON

Which of these do you think will reach the person at their destination?

J Smith
256 High
Bigton

☐

256 High Street

BL6 1ON

☐

J Smith

BL6 1ON

☐

J Smith
256 High Street

☐

J Smith
256 High Street
Bigton
BL6 1ON

☒

J Smith
High Street
Bigton
BL6 1ON

☐

This one will definitely get to the person at their house. Some of the others **might** get there.

192.168.1.200

Computers use special addresses called IP addresses. This is an example of an IP address.

From: 192.168.1.200
To: 192.168.1.21

When a message is sent from one computer to another, both the destination and start address are included. Why do you think that might be?

Sending messages



Think about the things you have learnt in this lesson as you watch this video.

Sending messages

To: ---	From: ---	Message no. --	of	Total no. of messages. --	—	—	—	—	—	—	—	—
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Computers send messages in packets. This is an example.

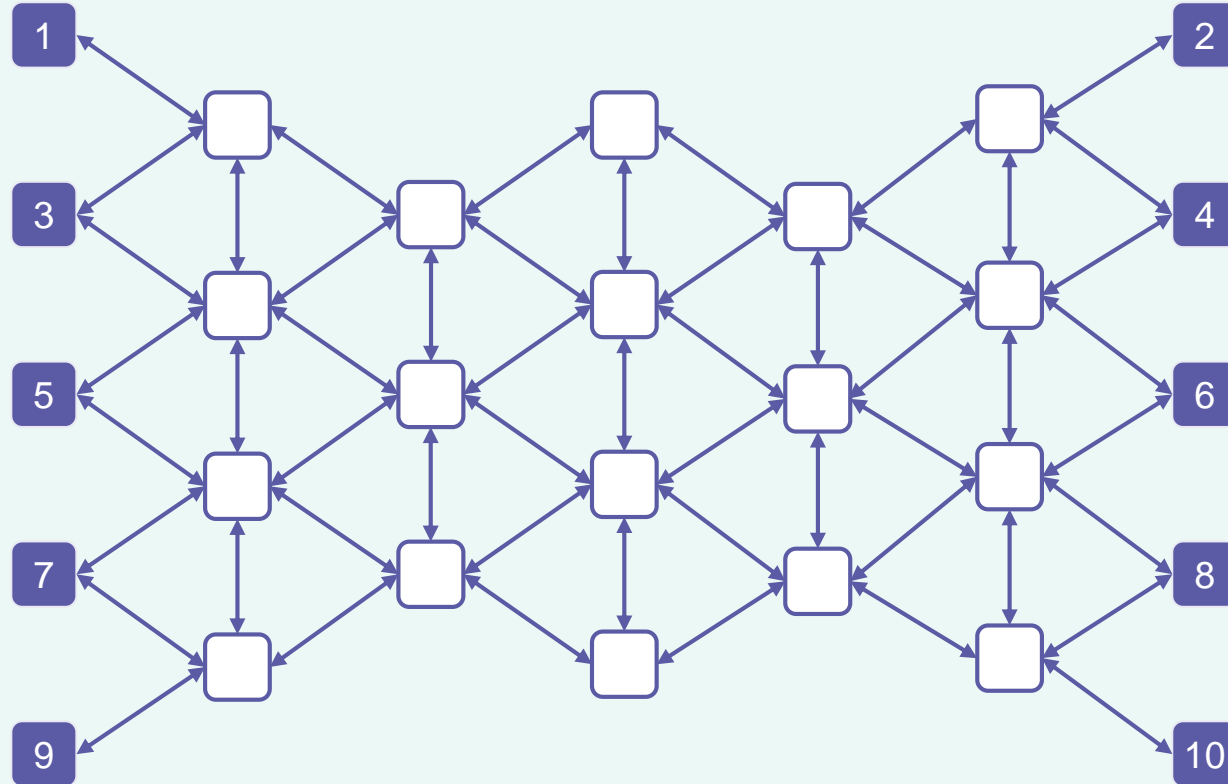
Sending messages

To:	From:	Message no.	of	Total no. of messages.	H	i	,		h	o	w	
<u>10</u>	<u>7</u>	<u>1</u>		<u>2</u>	—	—	—	—	—	—	—	—

To:	From:	Message no.	of	Total no. of messages.	a	r	e		y	o	u	?
<u>10</u>	<u>7</u>	<u>2</u>		<u>2</u>	—	—	—	—	—	—	—	—

Filled in, it might look like this.

Sending messages

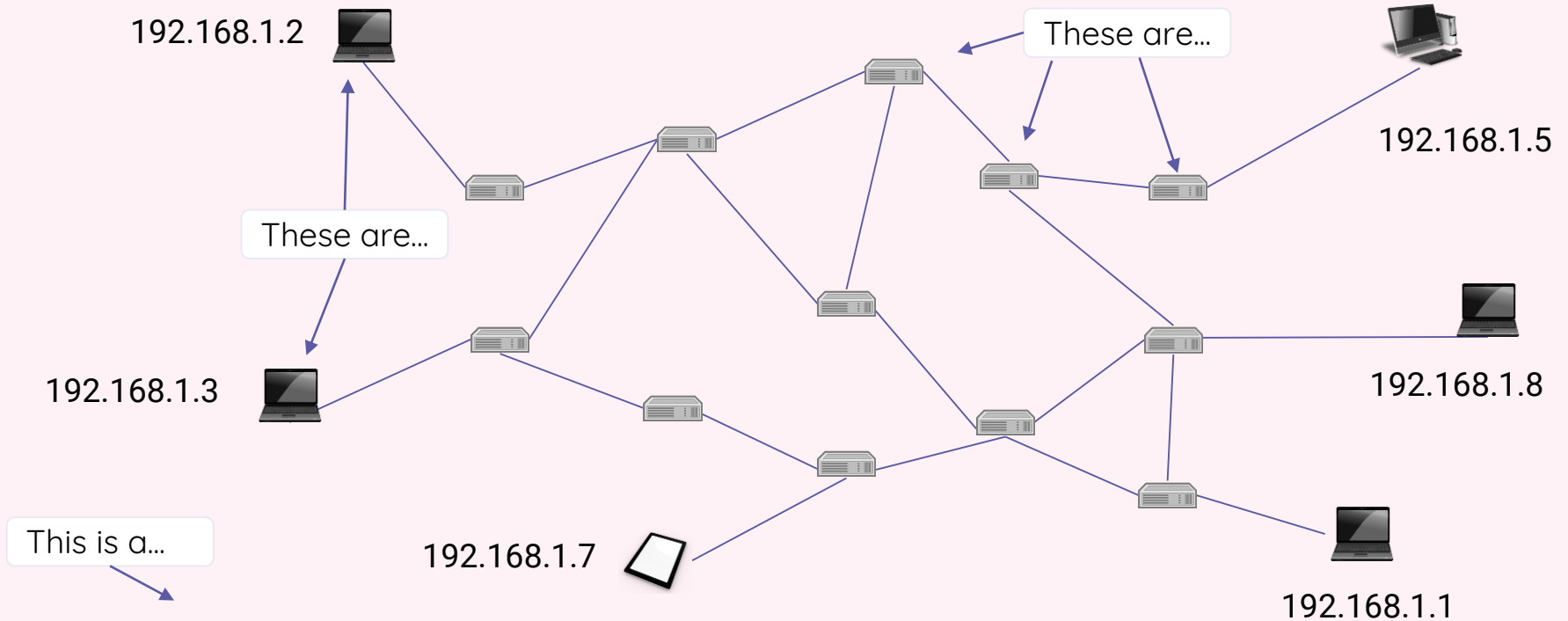


Sending messages

Reflection

- Did the system work?
- Did all message packets travel to their destination along the same route?
- If the packet was not written correctly, would it get to its destination?

Sending messages



To:	From:	Message no.	of	Total no. of messages.	H	e	l	l	o			
192.168.1._	192.168.1._	1		1								

How confident are you? (1-3)

- I can recognise that data is transferred using agreed methods
- I can explain that networked digital devices have unique addresses
- I can explain that data is transferred over networks in packets

3 – Very confident



2 – Unsure



1 – Not confident



Next lesson

In this lesson, you...

Looked at how information is transferred between systems and explored the important things needed for communication in systems to work

Next lesson, you will...

Look at how people can work together over large distances, and start some online group projects