UNIT 6 IT1 Network systems
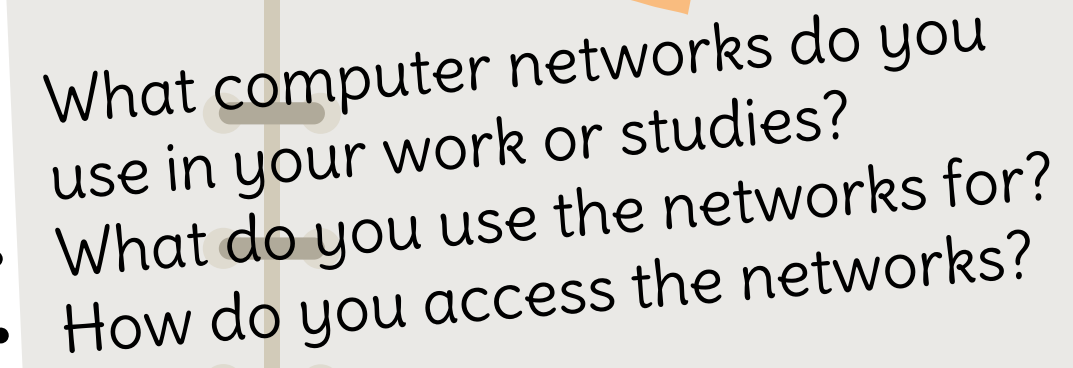
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Types of network

speaking:

H.W.

- What computer networks do you use in your work or studies?
- What do you use the networks for?
- How do you access the networks?

Listening:

H.W.

Agatha is the owner of a small flower shop. Katharina is a network architect. Agatha needs some advice from Katharina about a network solution for her company.

Listen and answer these equations:

1 What does Agatha think she should do?
2 What does Katharina recommend?
3 What does Katharina say she will do?
4 When does Agatha want the network to be ready?

Reading **3** Read Katharina's email to Agatha. Complete this email with the words in the box.

| equipment | Internet | LAN | recommend **5** |
| remote | should | VPN | WAN |

Dear Agatha

Following our meeting last week, please find my recommendations for your business. I think you (1) _____ set up a LAN, or Local Area Network, and a WAN, or Wide Area Network, for your needs. A (2) _____ connects devices over a small area, for example your apartment and the shop. In addition, you should connect office (3) _____ , such as the printer, scanner and fax machine, to your LAN because you can then share these devices between users.

I'd recommend that we connect the LAN to a (4) _____ so you can link to the Internet and sell your products. In addition, I'd (5) _____ we set up a Virtual Private Network so that you have a (6) _____ access to your company's LAN, when you travel.

(7) _____ is a private network that uses a public network, usually the (8) _____ , to connect remote sites or users together.

Let's meet on Friday to discuss these recommendations.

Best regards
Katharina

Giving reasons

Language

Giving reasons

We use **because** to say something was the reason for an action or situation. (We can start a sentence with **because**.)	You should connect office equipment to the LAN **because** you can then share devices between users.
	I'd recommend a Dell computer **because** it is cheaper.
	Why do you use encryption? **Because** it's safer.

-Which of the items below do you know? What are they? What do they do?

Vocabulary

H.W.

-Match the words 1-8 to the descriptions a-h.

Vocabulary 3 Match the words 1–8 to the descriptions a–g.

1 a modem a) is an entrance to another network

2 a repeater b) channels incoming data but maintains the bandwidth speed

3 a bridge c) allows wireless devices to connect to the network

4 a router d) modulates and demodulates the data into a digital or an analog signal

5 a gateway e) channels incoming data but shares the bandwidth among the devices present on a network

6 a switch f) sends the digital signal further on in the network

7 a hub g) connects networks and sends packages of data between them

8 a wireless access point h) connects networks that use the same protocol

Listening:

Listen and repeat these words

1 modem
2 repeater
3 bridge
4 router
5 gateway
6 switch
7 hub
8 wireless
9 access point
10 network connectors
11 network interface card

Listening:

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H.W.

Listen and complete this dialogue with the words in the box.

| about | change | devices | necessary | problem |
| speed | should | user | What | |

Boris: I have a problem with the network download (1) _____ . What can you suggest?

Ahsan: Why don't you (2) _____ the hub?

Boris: I don't think that will work. The hub is fine.

Ahsan: OK. How (3) _____ adding a repeater then?

Boris: Hmm, I'm not sure it will help. It's not a (4) _____ with the signal strength.

Ahsan: OK, then you should check the cables and network (5) _____ to make sure that they are compatible with your network.

Boris: (6) _____ about changing the modem?

Ahsan: I don't think it's (7) _____ . I think it's a problem with the bridge, switch or the router. You (8) _____ look at the specifications.

Boris: OK, I will. Thanks for your help.

Ahsan: Why don't you check (9) _____ recommendations on the Internet as well?

Boris: Good idea. I'll do that.

Making suggestions

Language

Making suggestions

We can make suggestions with:

Why don't we/you + infinitive without *to*.	**Why don't you call** the IT help desk? *That's a good idea.*
What about + *-ing*	**What about buying** a new router? *I don't think that will work.*
How about + *-ing*	**How about reading** the instructions first? *I'll do that.*

Listening:

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H.W.

Listen and repeat these suggestions

1. Why don't you change the modem?

2. How about connecting a repeater?

3. What about looking on the website?

Complete these sentences with the words in the box.

between	on	over	to	with

1 Is this software compatible _____ this computer?
2 A LAN connects devices _____ a small area.
3 Is the computer connected _____ the modem?
4 The LAN allows you to share information _____ users.
5 Why don't you look _____ the Internet?

Maybe I didn't make my meaning clear. (You don't understand انت لاتفهم)	ربما لم أجعل المعنى واضحًا
Cut it out	كف عن ذلك
Hold your nerve	تمالك اعصابك
Don't distract me	لاتشتت انتباهي (لاتلهيني)
I'm speechless	انا عاجز عن الكلام

Reading

How much do you know about the history of networking? Can you match these events 1-4 to the dates a-d?

1. The creation of the Word Wide web
2. The start of Facebook
3. The launch of Twitter
4. The beginning of Myspace

a-2006, b- 1990, c- 2003, d-2004

Speaking

H.W.

What social networks do you use? How much time do you spend on them?

Example: I use…… I spend about………

Speaking

1. When did Karl go to university?
2. When did he leave university?
3. What did he do after university?
4. Where did Karl go in 2006?
5. When did he go to Seattle?

Read this text about Karl's IT career up until now and answer these questions.

'I left school in Cambridge in the UK at the age of 18 and went straight to the University of Bristol to study computing in 2000. I graduated in 2004 and decided to travel around the world for a year.

In 2006 I got a job back in Cambridge with the software company Arm. I stayed with Arm for two years and then went to work for Microsoft in Seattle in the USA. This is where I am now and I love it!'

Writing

1. Write three or four sentences about your own computing education and/or work up until now. Use the text to help you.

2. Ask and answer questions about your education and/or work.

Read this text about Karl's IT career up until now and answer these questions.

'I left school in Cambridge in the UK at the age of 18 and went straight to the University of Bristol to study computing in 2000. I graduated in 2004 and decided to travel around the world for a year.

In 2006 I got a job back in Cambridge with the software company Arm. I stayed with Arm for two years and then went to work for Microsoft in Seattle in the USA. This is where I am now and I love it!'

Language

We use the **past simple** tense to talk about finished actions in the past.	When did I/she/he/we/they create the network? She **created** the network in December 2008. I **started** the network last year.
Time expressions	I looked at that **yesterday**. I had broadband connected **three days/a month/two years ago**. I used that system **last week/year/month**. I started that user group **on Monday/in June/in 2001**.

Listening:

Listen and repeat these sentences

H.W.

1. When did they start work?
2. They installed the computers yesterday.
3. We didn't work last week.
4. She went to the office on Sunday.
5. Did you finish the report?

Speaking

1. Practise asking and answering questions about what you did yesterday or last week in your work or studies.

2. Talk about what you do on your day off?

Example:
A: what did you do last week?
B: I worked on the new network.

Example:

A) What did you do on your day off?
B) I went to the gym.

Language

Regular past tense endings	look	looked
	use	used
	install	installed
	connect	connected
	work	worked
Irregular past tense endings	set up	set up
	go	went
	see	saw
	do	did
	buy	bought
	be	was

Network range and speed

Listening:

H.W.

Listen and complete this dialogue between Karoline and Sam.

Karoline: How do you describe network speed?

Sam: In bits, kilobits, megabits and gigabits. They describe network speed. For example, dial-up connections allow (1) _____ kilobits per second and DSL from (2) _____ kilobits per second to (3) _____ megabits per second.

Karoline: OK. I've got that. What about the range?

Sam: Range is the distance of network coverage, so distance units represent network range. Most countries use metric but some use feet as units of measurement. Metres or feet usually describe the range of a network. Home networking routers support a range up to (4) _____ feet or (5) _____ metres indoors and (6) _____ feet or (7) _____ metres outdoors.

Karoline: Thanks.

Listening:

H.W.

Listen and repeat these speeds and ranges.

1. 77 Kilobits per second
2. 5 megabits a second
3. 2 gigabits per minute
4. 250 meters
5. 40 feet

Speaking:

Say these speeds and ranges.

1. 156 feet
2. 12 Kbit/s
3. 4 Gbit/m
4. 7,000 meters
5. 95 Mbit/s
6. 65 Mbit/s

H.W.

Read these texts and answer these questions.

Range

Wireless networks have limited range. Network range depends on the type of 802.11 protocol, strength of the device transmitter and the architecture of the surrounding area. Some structures, such as walls and metal frames, reduce the range of a WLAN by 25%. However, users can extend the range of a WLAN. Repeaters forward the wireless signal to access points or routers and increase the range of a network.

Speed

Bandwidth and latency are the measures of computer network speed, or data transfer rate. Bandwidth is the maximum throughput of data in bits per second.

Some modems support 100 Gbit/s but speed depends on the hardware and software used. Latency is the delay that network creates during the transfer data. Users have no, or very little, control over bandwidth and latency.

1 How many things does network range depend on?
2 What can reduce network range?
3 What can improve network range?
4 What two things affect speed?

You are my rock	انت سندي
Don't make me lose my temper	لا تجعلني افقد اعصابي
I have no clue	ليس لدي أي فكرة
My heart shattered	قلبي تحطم
Go easy on him	لا تقس عليه

Year	Left events	Right events
1990	World Wide Web is born	
1991		MP3 becomes a standard
1992	First webcam	
1993		First graphical browser
1994	YAHOO!	
1995	eBay	amazon.com
1996		
1997		Weblog term emerges
1998	napster	Google
1999		
2000		Dot.com bubble bursts
2001	WIKIPEDIA	
2002		Linked in
2003	myspace	skype
2004	Web 2.0 era begins	facebook
2005	YouTube	
2006	Spotify	twitter
2007	Apple iPhone (mobile web)	Gmail