Smart homes

Match the vocabulary with the correct definition and write a–j next to the number 1–10.

1…	to monitor	a.	an original model
2…	frail	b.	a high-speed communications system
3…	elderly	c.	not strong
4…	usage patterns	d.	programs used by a computer
5…	a prototype	e.	to watch or observe
6…	a study tool	f.	quite old
7…	broadband	g.	something done in an organisation without any help from outside
8…	hardware	h.	something that is used to help you study
9…	software	i.	the way you use something which is repeated again and again
10…	in-house	j.	a computer and other equipment used in data processing

How is technology changing the homes we live in? How can hi-tech homes help old people to live independently? Read the article to find out about research and development into smart homes in the UK.

People taking care of the elderly or sick at home may get help from the house itself.

Big changes

The beginning of the 21st century saw a revolution in home-living with new technology changing the places where we live, from the wireless internet to TV screens that hang on walls, and it seems technology could be changing our homes again. A project conducted by Johann Siau, Senior Lecturer at the University of Hertfordshire's School of Engineering and Technology, builds on the University's InterHome project – aiming to create a home that monitors people living at home who are frail or elderly.

The InterHome

'We've developed a wrist-band type device,' says Johann Siau, 'which allows us to monitor the condition of an elderly person, or whoever is wearing the device. It allows us to collect data of a person, to detect if the person has fallen or is away from where they are supposed to be. It connects an elderly person with an assisted-living type device with the InterHome.' The assisted-living project is part of the University's wider InterHome project, which is the development of a smart house. The house stores the usage patterns of the person living there and can adapt to make it as energy efficient as possible. 'Linking the two together, and building the service element, allows us to introduce the assisted-living idea to care for the elderly. It's very important that these technologies are there to help and support rather than to replace any of the existing services.'

Built from zero

The InterHome is not just a prototype (a doll's house at the moment) or a vehicle for research, it's a study tool where students from a range of scientific disciplines get to learn and develop technology. The InterHome incorporates the latest broadband technology, mobile data and communication. Researchers and students make sure all

the technology works together. 'We've used this to teach our undergraduate students, as well as our postgraduate students, and gives us the flexibility to be able to design our systems because the hardware and software is developed in-house.' It requires a variety of skills from students – electronic engineers, embedded-system engineers, computer students, design students. 'The current plan we are working on is a smart home project in Watford with some commercial companies,' says Johann Siau. 'We are looking at how a smarter home can provide extra value services.'

Check your understanding: true or false
1.   The new project has the objective of creating a home where people who are quite old or not very strong can be observed to see if they need any help.
True   False
2. The wrist-band can tell if an old person is in the wrong place.
True   False
3. The assisted-living project is not connected to the InterHome project.
True   False
4. The InterHome will allow students to learn about technology.
True   False
5. All the students working on the project have the same skill.
True   False
6. The smarthome project in Watford also involves local government.
True   False

Check your vocabulary: gap fill
Complete the sentences with one word only. Here is an example:
People who _____ care of the elderly at home may get help from the house itself.   (Answer: take).
   1. Wireless internet and TV screens that hang on walls are two things _____ have changed life in our homes.
2. Johann Siau is the head of a project _____ objective is to create a home that monitors people who are delicate or quite old.
3. A wrist-band device has _____ developed by the project members.
4. The device has the ability to detect if a person _____ fallen or gone away from where they are supposed to be.
5. The InterHome is not just a prototype, it's _____ a study tool.
6. The InterHome incorporates broadband technology and mobile data as well _____ communication.
7. The project requires a _____ range of skills from students.
8. At the _____, the team are working on a smarthome project with some commercial companies.
Discussion What do you think houses are going to be like in the future? Will we all live in smart homes?

Linking words

Some questions test your knowledge of linking words and phrases.

9 Look at the bold linking words in the sentences (1–6). Match them to the synonyms (a–f).

1 We had the party at home **rather than** hiring a hall.
2 We'll go ahead, **as long as** you're happy with that.
3 The plane was late **owing to** the bad weather.
4 Everyone was early, **apart from** Leon.
5 He is still a formidable opponent, **despite** his age.
6 I turned the music down **so as to** hear him better.

a because of, due to, thanks to
b in spite of
c instead of
d in order to
e except
f if, provided that

10 Choose the correct linking words (A–D) to complete the sentences.

TIP: Make sure the word you choose fits with the words that come after the gap as well as those that come before.

1 We decided to take our own picnic, _____ than eating out.
   A instead   B whereas
   C rather   D by contrast

2 We needed to hurry up, _____ we would be late.
   A otherwise   B however
   C although   D except

3 The product was a success _____ its problems.
   A except   B in spite of
   C however   D although

4 I won't call you _____ there's a problem.
   A unless   B provided that
   C except   D owing to

5 The shop sold cards and magazines _____ books.
   A in addition   B in particular
   C as well as   D what's more

6 _____ the first experiments failed, she never thought about giving up.
   A However   B Nevertheless
   C In spite of   D Although

EXAM TASK

Read the text about preparing for a possible emergency and decide which answer (A, B, C or D) best fits each gap. There is an example at the beginning (0).

Preparing for the worst

We all depend on supermarkets for food and we **(0)** ___D___ it for granted that the shelves will always be full. But some people believe it's best to be prepared **(1)** _____ there's an emergency and normal life is disrupted for a while. They say there is a risk from extreme weather or an outbreak of flu, **(2)** _____ more serious natural disasters. People who prepare in this way are informally **(3)** _____ as 'preppers', and more and more people are now listening to their **(4)** _____ . Alison Jones from Cambridge, UK, is a typical example. She keeps a month's **(5)** _____ of food in a cupboard, along with bottled water and medicines that her family needs. She is aware that some people would **(6)** _____ her to be slightly odd, but says that, for her, it makes perfect **(7)** _____ to be prepared. 'We keep just enough to see us through a few weeks, so we can then **(8)** _____ our normal lives. Why would anyone not do that?'

0	A get	B have	C make	D take
1	A even if	B in case	C provided that	D whereas
2	A although	B as well as	C in spite of	D in contrast
3	A known	B called	C named	D entitled
4	A views	B wishes	C requests	D decisions
5	A donation	B number	C supply	D delivery
6	A decide	B accept	C realise	D consider
7	A sense	B reason	C idea	D judgement
8	A go through with	B put up with	C get on with	D get away with