

JAF02 Unit 8 Technology in Use

Task 1 Speaking

What do you know about Global Positioning System (GPS) devices? In pairs, describe their main function and give examples of different applications.

Task 2 Describing technical functions

a) Listening (1.1)

Paula, a design engineer for a GPS manufacturer, is discussing product development with José, a senior manager new to the company. Listen to the conversation and complete the following notes.

- the primary application of GPS (1) _____
- associated applications tracking systems for (2) _____
tracking systems for (3) _____
- more creative features (4) _____ alarms
(5) _____ buttons
- not technical innovations (6) _____ the technology

b) Complete the following extracts from the discussion with words that come from *use*.

- 1) ... then you've got associated applications, _____ that are related to navigating...
- 2) ... tracking systems you can _____ for monitoring vehicles...
- 3) ... from the end- _____ point of view, accuracy is no longer the main selling point. Most devices are accurate enough. The key is to make them more _____ .

c) Match the GPS applications (1-6) to the descriptions (a-f).

- | | |
|---------------------------|--|
| 1 topographical surveying | a) navigation and safety at sea |
| 2 geological exploration | b) setting out positions and levels of new structures |
| 3 civil engineering | c) mapping surface features |
| 4 avionics equipment | d) applications in mining and the oil industry |
| 5 maritime applications | e) highway navigation and vehicle tracking |
| 6 GPS in cars and trucks | f) air traffic control, navigation and autopilot systems |

d) Practise explaining the applications of GPS to a colleague who has limited knowledge of the devices using the following phrases:

used for doing useful for another/a similar use

e) Complete the following extracts from the conversation by underlying the correct words.

1. ... there's a setting on the GPS that **allows/ prevents** it to detect the movement...
2. ... an alarm sounds to warn you, and **allows/prevents** the boat from drifting unnoticed.
3. ... and **enables/ensures** that you don't lose track of where you were, which then **enables/ensures** you to turn round and come back to the same point...

Now match the words from above with synonyms:

1. _____ = makes sure
2. _____ / _____ = permits
3. _____ = stops

f) Complete the following extract from the user's manual of a GPS device using the verbs in Exercise e. Sometimes, more than one answer is possible.

The core function of your GPS receiver is to _____ you to locate your precise geographical position. To _____ the device to function, it receives at least three signals simultaneously from the GPS constellation – 30 dedicated satellites which _____ receivers can function anywhere on earth. To _____ extremely precise positioning and _____ errors, this device is designed to receive four separate signals.

(Task 1 and 2 adapted from Ibbotson, M. (2008). *Cambridge English for Engineering*. CUP.)

g) In pairs, study and then explain the main functions and applications of the products below. Decide who will talk about which device. Use the language from this unit.

A **heart rate monitor** is a personal monitoring device which allows one to measure his/her heart rate in real time or record the heart rate for later study. It is largely used by performers of various types of physical exercise. Modern heart rate monitors usually comprise two elements: a chest strap transmitter and a wrist receiver or mobile phone. Strapless heart rate monitors now allow the user to just touch two sensors on a wristwatch display for a few seconds to view their heart rate. These are popular for their comfort and ease of use though they don't give as much detail as monitors which use a chest strap. There are a wide number of receiver designs, with various features. These include average heart rate over exercise period, time in a specific heart rate zone, calories burned, breathing rate, built-in speed and distance, and detailed logging that can be downloaded to a computer.

A **pacemaker** (or **artificial pacemaker**, so as not to be confused with the heart's natural pacemaker) is a medical device that uses electrical impulses, delivered by electrodes contacting the heart muscles, to regulate the beating of the heart. The primary purpose of a pacemaker is to maintain an adequate heart rate, either because the heart's natural pacemaker is not fast enough, or there is a block in the heart's electrical conduction system. Modern pacemakers are externally programmable and allow the cardiologist to select the optimum pacing modes for individual patients. Modern pacemakers usually have multiple functions. The most basic form monitors the heart's native electrical rhythm. When the pacemaker does not detect a heartbeat within a normal beat-to-beat time period, it will stimulate the ventricle of the heart with a short low voltage pulse. This sensing and stimulating activity continues on a beat by beat basis.

(www.wikipedia.org)

Task 3 Language: *Used to and be/get used to*

Study the structures:

used to + infinitive: to talk about things that happened in the past – actions or states – that no longer happen now

be used to + -ing: to talk about things you are accustomed to - you don't find them unusual

get used to + -ing: to become accustomed to sth. – it was strange, now it's not so strange

Note: **Be/get used to** can be used with past, present and future tenses.

E.g. You might find it strange at first but you'll soon get used to it.

He wasn't used to the heat and he caught sunstroke.

Complete the sentences with *used to/ get used to (be getting used to)/ be used to*

1. She _____ be a long distance runner when she was younger.
2. I _____ driving on the right.
3. I _____ eat meat but I became a vegetarian 5 years ago.
4. I can't _____ to getting up so early. I'm tired all the time.
5. He _____ the weather here yet. He's finding it very cold.
6. Since we had the baby I _____ not getting enough sleep.

(<http://learnenglish.britishcouncil.org/en/grammar-reference>)

Think about things you used to do, things you are getting used to and things you are used to. Tell your partner.