UNIT 1 – 5G

Reading 1

Skills:

- Scanning
- Establish connections
- Identify synonyms
- Identify antonyms

Getting started: What is the 3G, 4G or 5G message that appears on your cell phone about?

5G



_____(1). What does it say? The chances are it reads '4G'. If you visit a city, this might change to '4G LTE'. This means you'll get slightly faster internet. Or if you travel to the countryside, it could say '3G '. Here your video streaming might play with some interference. But now, if you're in the right place with the right device, that top corner will say something new: 5G. This means that nothing will be the same

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again. The 'G' stands for 'generation'. 5G is the fifth generation of mobile connectivity, combining revolutionary research and the latest technology.

_____(2). "It will have the same impact as electricity and steam had in the previous industry revolutions," says Asa Tamsons, the head of new businesses at Swedish telecom equipment maker Ericsson. What makes 5G different from previous generations is that it works over higher radio frequencies. While all radio waves travel at the same speed, the wavelength of a particular frequency directly affects how fast it can transmit data. There is a rule, the higher the frequency, the shorter its wavelength and the more bandwidth it has to send information.

_____(3). The 5G phone towers that are being turned on right now transmit between 3.5GHz and 6GHz. This is why 5G can offer download speeds of up to ten gigabits per second (Gb/s), ten times what 4G could ever achieve. This will allow you to download HD movies in seconds, not minutes.

_____(4). The part of the spectrum between 30GHz and 30oGHz is known as the millimeter band for its extremely short wavelengths- just 1-10mm wide. These so-called 'millimeter waves' (or 'mmWaves') have been used for radio astronomy and radar guns in the past. Once we start using these frequencies, 5G will stop feeling like good Wi-Fi and will deliver the benefits it promises.

_____(5). The short wavelengths can't travel long distances and are easily disrupted. Millimeter waves, in particular, can be blocked by walls or even rain. This means, we'll have to build more antennas in our towns and cities so that we're always close enough to pick up a signal. However, higher frequencies only need small antennas, so rather than high phone towers around the cities, transmitters will be built into posts and traffic lights.

**Adapted from How it Works – World of Tomorrow. Fifth Edition. DK Publishing.*

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The first sentence of each paragraph has been removed. Read the sentences below and match them with the corresponding paragraph.

a. But this new generation of network will change more than just how we use our mobile phones

b. The highest frequency 4G uses is 2.6 gigahertz (GHz)

c. However, higher frequencies imply more infrastructure

d. Look at the top-left or top-right corner of your phone screen

e. But in the next few years, 5G could get even faster, as internet providers plan to use frequencies way beyond 6GHz.

Scan the text and look for synonyms of these words:

1. Could
2. Correct
3. director
4. Accomplish
5. Interrupted

Scan the text and look for antonyms of these words:

1. Different
2. Next
3. Receive
4. Prohibit
5. Lower

What do you think?

What did 4G bring us? Are you aware of how that technology changed our life?

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