
Science & technology

1. Replace the words and phrases in bold in the sentences with a suitable alternative from the box.

advances analysed breakthrough combined cybernetics
development discovered experimented genetic engineering
innovations invented life expectancy molecular biology
nuclear engineering proliferated react research safeguards
a technophile a technophobe

1. The company is carrying out **scientific study** to find a cure for AIDS.
2. The **planning and production** of the new computer system will take some time.
3. Modern home entertainment systems and other **modern inventions** are changing everyone's lives.
4. Some elements **change their chemical composition** when mixed with water.
5. The scientists have **created** a new machine to automate the process.
6. Who was the person who **found** penicillin?
7. When the food was **examined closely and scientifically**, it was found to contain harmful bacteria.
8. Rain **joined together** with CO₂ gases produces acid rain.
9. Ron is **terrified of modern technology**.
10. Geoff is **very interested in modern technology**.
11. **Protection** against accidents in this laboratory are minimal.
12. The companies **performed scientific tests** with different types of glue before they found one that worked properly.
13. Brian is studying **the techniques used to change the genetic composition of a cell so as to change certain characteristics which can be inherited**.
14. Sarah is studying **the things which form the structure of living matter**.
15. Christine is studying **how information is communicated in machines and electronic devices in comparison with how it is communicated in the brain and nervous system**.
16. Neil is studying **the different ways of extracting and controlling energy from atomic particles**.
17. There has been a **sudden success** in the search for a cure for cancer.
18. **The number of years a person is likely to live** has increased a great deal thanks to modern medicine and technology.
19. The number of schools offering computer programming courses has **quickly increased** in the last ten years.
20. In spite of all the **progress** it has made in the last 50 years or so, medical science still knows little about the brain.

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2. The person describing their computer in this passage is not very familiar with computer terminology. Replace the phrases in bold with more appropriate words and phrases from the box.

base unit chat rooms components crashed download email
files gaming hardware Internet keyboard laptop load
log on monitor mouse PC printer scanner software stream
virus websites wireless

OK, here's my new desktop **computer which has been designed to be used by just one person** (1)..... . As you can see, it has five **parts which make up the whole thing** (2) Now, the **large box with the slots and sliding disc carrier** (3) is the most important part. It carries all the **stuff that makes the computer work** (4) You can also **put in** (5) your own games and other **programs used by computers for doing particular jobs** (6), like photo processing and office suites. Next to it there is the **thing that looks like a small television** (7) so you can see what the computer is doing. To the right of that, there is the **machine that lets you make colour copies of the documents and other things that you create on the computer** (8) (this particular one incorporates a **machine you can use to copy pictures on to your computer, a bit like a photocopier** (9)). You control the computer using the **rectangular flat thing with all the letters and numbers on** (10), or the **object with the little wheel on the top which you can move across the desk** (11) These usually have a lead connecting them to the computer, but as you can see, mine is **not physically connected to the computer, and instead sends electronic signals through the air** (12)

It's a very useful machine, of course. Once you **start using it by entering a password** (13), you can create **information that you store under a particular name** (14) and documents, **move** (15) pictures from your camera and, well, loads of things really. The best thing, however, is that you can access the **thing that links computers from around the world** (16) You can check out millions of **special computer pages created by companies, organisations and individuals all over the world** (17), go shopping, play games (I really enjoy **playing games on my computer** (18)), **play** (19) music and videos, and **send electronic letters to** (20) your friends and family. It's also great for contacting people using **online places where people communicate with each other in real time** (21) and other social networking sites.

Unfortunately, I can't let you use it at the moment because it **stopped working** (22) at the weekend, and I can't get it to work again. I'm rather worried that it's got a **technical fault that someone created on purpose to affect my computer** (23) However, you can have a go on my **small computer that I can carry around with me** (24) if you like. If I can find it. The last time I remember seeing it was last night on the bus, when I was coming home from my office at the Ministry of Defence.

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3 Now look at this essay and fill in the gaps with one of the words or phrases from Exercises 1 and 2. In some cases, more than one answer will be possible. You may need to change some of the word forms.

'Technology has come a long way in the last 50 years, and our lives have become better as a result. Or have they?'

The last 50 years have seen more changes than in the previous 200. There have been many remarkable advances in medicine and medical technology that have helped to increase our average 1..... way beyond that of our ancestors. Incredible 2..... such as satellite television have changed the way we spend our leisure hours. Perhaps the most important 3....., however, has been the microchip. Nobody could have imagined, when it was first 4....., that within a matter of years, this tiny piece of silicon and circuitry would be found in almost every household object from the kettle to the video recorder. And nobody could have predicted the sudden proliferation of computers that would completely change our lives, allowing us to access information from the other side of the world via the 5..... or send messages around the world by 6..... at the touch of a button. Meanwhile, 7..... into other aspects of information technology is making it easier and cheaper for us to talk to friends and relations around the world. Good news for 8..... who love modern technology, bad news for the 9..... who would prefer to hide from these modern miracles.

But everything has a price. The development of 10..... led to mass automation in factories, which in turn led to millions losing their jobs. The genius of Einstein led indirectly to the threat of nuclear war and the dangerous uncertainties of 11..... (we hear of accidents and mishaps at nuclear power stations around the world, where 12..... to prevent accidents were inadequate). The relatively new science of 13..... has been seen as a major step forward, but putting modified foods on to the market before scientists had properly 14..... them was perhaps one of the most irresponsible decisions of the 1990s. Meanwhile, pharmaceutical companies continue to 15..... on animals, a move that many consider to be cruel and unnecessary.

Of course we all rely on modern science and technology to improve our lives. However, we need to make sure that we can control it before it controls us.