

## 4º ESO -Unit 4- 2024

Student name \_\_\_\_\_

Group/Class \_\_\_\_\_

Date \_\_\_\_\_ Score \_\_\_\_\_

### LISTENING

- 1 Listen to a talk about using technology in conservation. Are the sentences True (T) or False (F)?**

 Unit 4 Audio

- |   |                                                                                    |       |
|---|------------------------------------------------------------------------------------|-------|
| 1 | According to the World Wildlife Fund, wildlife has decreased by 50%.               | T / F |
| 2 | There have been puffins on the Isle of Man since 1987.                             | T / F |
| 3 | People worldwide helped stop poaching in Balule Nature Reserve.                    | T / F |
| 4 | Scientists are using microphones to learn more about how endangered whales behave. | T / F |
| 5 | Satellites can survey about 600 km <sup>2</sup> in a day.                          | T / F |
| 6 | Computers will soon be able to instantly identify animals in photos.               | T / F |

Score:     / 6

### VOCABULARY

- 2 Match the words (a–h) to the definitions (1–7). There is one extra word.**

a anatomy    b archaeology    c biomedicine    d engineering    e genetics  
f neuroscience    g psychology    h sociology

- |   |                                                                                                             |
|---|-------------------------------------------------------------------------------------------------------------|
| 1 | the study of ancient societies, done by looking at tools, buildings, bones, etc. ____                       |
| 2 | the scientific study of the nervous system ____                                                             |
| 3 | the study of the mind and how it affects behaviour ____                                                     |
| 4 | the study of how the individual features of living things are passed on from one generation to another ____ |
| 5 | the scientific study of the way people behave in relation to each other ____                                |

- 6 the principles of biology and biochemistry applied to the practice of treating and preventing illnesses \_\_\_\_
- 7 the activity of designing things like roads, railways or machines \_\_\_\_

Score:    / 7

**3 Choose the correct alternative.**

- 1 Because of the recent *drawbacks/cutbacks* we do not have as much money to spend on research.
- 2 They have done a huge amount of research and are hoping for a *breakthrough/crackdown* in the next few months.
- 3 We only started recently, so we are just at the *outcome/outset* of the project, but we hope to achieve great things.
- 4 We have made good progress with the project despite an initial *feedback/setback* that we were fortunately able to sort out.
- 5 There was a huge *outcry/outlook* when they announced that they would be closing the research laboratory.
- 6 We don't know what will happen in the *long-term/full-scale*, but we need to take action on climate change now.

Score:    / 6

**4 Complete the sentences with the words in the box.**

an impact    brought about    give rise    prompted    side effects    sparked off  
stemmed

- 1 The accident \_\_\_\_\_ her to make some big changes in her lifestyle.
- 2 If we want to have \_\_\_\_\_ on global warming, we need to reduce carbon emissions.
- 3 Huge progress in many areas has been \_\_\_\_\_ by new technology.
- 4 Many medicines can have \_\_\_\_\_ but these are not usually significant.
- 5 We are experiencing a number of problems, and any delay in dealing with them could \_\_\_\_\_ to further problems.

- 6 Harriet's fear of spiders \_\_\_\_\_ from an incident she had as a child involving a spider.
- 7 The question \_\_\_\_\_ a really interesting discussion, with everyone contributing their ideas.

Score: / 7

#### GRAMMAR

##### 5 Choose the best answers.

- 1 I didn't study for the test. If I \_\_\_\_\_, I would have got a better mark.  
A study B had studied C will study
- 2 If it \_\_\_\_\_, the grass and trees get wet.  
A will rain B rained C rains
- 3 I \_\_\_\_\_ to the party if I'm not too tired.  
A go B will go C would go
- 4 I usually see Sara after school. If I \_\_\_\_\_ her today, I'll ask her to come to the café tomorrow.  
A see B will see C saw
- 5 I didn't tell Nate because I forgot. If I'd remembered, I \_\_\_\_\_ him.  
A will tell B told C would have told
- 6 I don't know where the new cinema is. If I \_\_\_\_\_, I'd tell you.  
A know B knew C would know
- 7 It's getting late. If I \_\_\_\_\_ to bed soon, I'll be tired tomorrow.  
A won't go B wouldn't go C don't go

Score: / 7

##### 6 Complete the sentences with the words in the box.

as long as    if only    in case    provided    suppose    unless

- 1 \_\_\_\_\_ that we win this match, we'll be in the final.
- 2 \_\_\_\_\_ we have a party, how many people would we invite?

- 3 We'll go for a meal \_\_\_\_\_ the café is open.
- 4 \_\_\_\_\_ the weather wasn't so awful!
- 5 \_\_\_\_\_ Jack arrives soon, I'll go home. I'm not waiting much longer.
- 6 I brought extra food \_\_\_\_\_ everyone was really hungry.

Score:     / 6

**7 Complete the sentences with the correct form of the verbs given.**

- 1 We couldn't stay out late yesterday because we have to get up early today.  
If we didn't have to get up so early, we \_\_\_\_\_ (**stay**) later yesterday.
- 2 My sister is annoyed because I forgot to give her a message.  
If I \_\_\_\_\_ (**not forget**) to tell her, she wouldn't be annoyed.
- 3 I haven't got my driving licence because I'm not old enough.  
If I \_\_\_\_\_ (**be**) old enough, I'd have got it.
- 4 We're lost because we didn't bring a map.  
If we'd brought a map, we \_\_\_\_\_ (**not be**) lost now.
- 5 Rob doesn't speak Chinese so he couldn't talk to them.  
If he spoke Chinese, he \_\_\_\_\_ (**talk**) to them.
- 6 Dan is pleased because he passed his exam.  
He wouldn't be pleased if he \_\_\_\_\_ (**not pass**) the exam.

Score:     / 6

USE OF ENGLISH

**8 Read the text and decide which answer (A, B, C or D) best fits each gap.**

**An amazing inventor**

Gitanjali Rao is only 16 years old, but she's already achieved a lot. It

1 \_\_\_\_\_ have been easy, but she has managed to create several useful inventions. She 2 \_\_\_\_\_ science since she was a child. She

3 \_\_\_\_\_ research her ideas and when she was ten years old, she surprised her parents by asking if she could do some research at a laboratory. Gitanjali has always tried 4 \_\_\_\_\_ science and technology in a positive way to create social change. One of her recent inventions is an app called Kindly which helps prevent cyberbullying.

5 \_\_\_\_\_ you have the app installed on your phone, when you type messages, the app will notice any words or phrases that could be bullying. Then it gives you the choice of changing them or sending them as they are. This means you 6 \_\_\_\_\_ change things if you don't want to, but over time it helps make people aware of the language they use and hopefully it helps 7 \_\_\_\_\_ remember to be kind. That's not all Gitanjali's invented, though. She's also developed a device that can identify lead, a dangerous metal, in water. I 8 \_\_\_\_\_ I'd studied more science at school, then maybe I could invent something useful, too!

- |   |           |                  |             |                   |
|---|-----------|------------------|-------------|-------------------|
| 1 | A can't   | B must           | C could     | D ought           |
| 2 | A loves   | B loved          | C has loved | D has been loving |
| 3 | A used    | B always         | C will      | D would           |
| 4 | A using   | B to use         | C use       | D used            |
| 5 | A Unless  | B Providing that | C As long   | D In case         |
| 6 | A needn't | B mustn't        | C shouldn't | D can't           |
| 7 | A they    | B their          | C them      | D theirs          |
| 8 | A only    | B wish           | C want      | D providing       |

Score:    / 8

READING

## 9 Read the text.

### Solving crime

Forensic science, commonly known as forensics, can play a crucial role in solving crimes and catching criminals. It is the application of scientific techniques and methods to crime investigation and the law, but when exactly did it begin?

In ancient times, there were no standard ways to investigate crimes and forensic science as we know it today evolved over hundreds of years. The ancient Chinese used fingerprints to identify business documents. In the 13<sup>th</sup> century, the first known book about using medicine and entomology (the study of insects) to find the cause of death was published in China by Song Ci and included ways to decide if a death was accident or murder. In the 16<sup>th</sup> century, doctors started studying the effects of disease and violent death on bodies, and by the 18<sup>th</sup> century there were many important books on the subject. The idea of collecting evidence and using logic to catch and try criminals slowly took hold. One of the early examples of this was in England, in 1816, when a man was convicted of a crime as a result of footprints found at the scene by police.

Two important breakthroughs – fingerprints and using DNA – have helped shape modern forensics. Francis Gaulton produced the first fingerprint classification system, describe in his 1892 book, *Finger Prints*. Edward Henry later based his own system on this, using the pattern, direction and flow in fingerprints to accurately classify and identify them. The Henry Classification System is still used worldwide today. DNA matching proved to be another huge step forward. DNA is present in nearly all living things and it carries genetic information. In 1984, a genetic scientist Alec Jeffreys discovered that DNA was an extremely accurate form of identification, making it an incredible tool in crime-solving.

Since then, forensics has come a long way and is regularly used by police everywhere. Specialised crime scene teams collect evidence such as fingerprints, footprints, traces of hair, skin, blood, dust and other materials. DNA is used to match to suspects or people in DNA databases. In Britain alone, the police have a database of around six million people. Legally, DNA alone cannot prove guilt, there must be other evidence, but it often plays an important part in catching criminals.

Forensics has also had a big impact on solving past cases, often called 'cold cases', where criminals were never caught. However, evidence can be used years later. For example, in 2009, police in Louisiana, USA, were unable to solve a crime because the DNA from the crime scene wasn't a match for anyone in their database. However, in 2015 a new technology called DNA phenotyping led to them catching the criminal. DNA phenotyping allows experts to find out what someone probably looks like, based on DNA samples. Once the police had a sketch of their suspect, he was soon identified and caught.

Forensics is not without its difficulties. One of the biggest challenges is that it is not a single area of science, but involves knowledge of different subject, such as anatomy, engineering, chemistry and genetics. In addition, any analysis must be precise and even small mistakes can seriously affect the results, and even when the results are clear, different forensic scientists may interpret the results differently. On a practical level, the machinery and tests can be extremely expensive and tests can take a long time. Moreover, ensuring all the results remain private and confidential can present problems. Despite these challenges, it is clear that the advantages far outweigh any disadvantages.

What of the future? Nobody really knows what forensic science will be like or what forensic scientists will be able to do. One prediction is that there will be sophisticated computer programmes to reconstruct crimes. These programmes will be able to produce different theories of what happened using all the physical and digital evidence and test results and say precisely which theory is most likely.

## 10 Choose the best answers.

- 1 What does the writer say about forensic science?
  - A It is used in all crime investigations nowadays.
  - B It can sometimes be important in solving crimes.
  - C It is applying scientific techniques to solve crimes.
- 2 During the early development of forensics, ...
  - A the Chinese used fingerprints to find criminals.
  - B Song Ci wrote a book about finding cause of death.
  - C the science of entomology was invented.

- 3 Forensic evidence ...
- A was used to catch a criminal in 1816.
  - B was used by doctors in the 16<sup>th</sup> century.
  - C was widely used in the 18<sup>th</sup> century.
- 4 The method of classifying fingerprints that we use today ...
- A was developed by Edward Henry.
  - B was the work of Francis Gaulton in 1892.
  - C only uses pattern and direction of a fingerprint.
- 5 DNA matching ...
- A is enough to convict someone of a crime.
  - B is a very reliable way to identify people.
  - C has been used to catch over six million criminals.
- 6 Something that makes forensic science hard is ...
- A although they are quick, many tests are expensive to do.
  - B small mistakes are really hard to detect so often occur.
  - C that you have to know a lot about different areas of science.

Score: / 6