UNIT 6: SCIENCE AND TECHNOLOGY

GRAMMAR & VOCABULARY

Exercise 1: Read the information. Then read the sentences. Choose the correct definitions of the underlined words and phrases. Use the context to help you.

Some words in English have more than one meaning. These words are called homonyms. Homonyms are words that are spelled or pronounced the same but have different meanings. True homonyms are words that are both spelled and pronounced the same. It is important to look at the word in context to work out the meaning. For example:

True homonym: park
1. a large area of land with grass and trees
2. to put a vehicle in a place where it can stay for a period of time

You are only allowed to park there between the hours of 8 p.m. and 6 a.m.

In the sentence above, the context tells us that park means to put a vehicle in a place where it can stay for a period of time.

1. We have seen huge advances in the field of 3-D technology in recent years, with engineers now able to print custom-made surgical tools.

- money paid to a person before they start working on a project
- specially made for a particular person or group
- the development or progress made in a field of study

2. It is evident that the digital divide between rich and poor countries is getting bigger and bigger.

- the different types of technology available to a person
- the gap between those with regular access to technology and those without it
- the process of separating different technologies into groups

3. The company is renowned for its innovative products, which are unlike any other products on the market.

- high-quality
- newly developed and original
- reliable

4. The concept of energy used by a wide variety of scientific disciplines dates back to the seventeenth century.

- a particular area of study or knowledge
- a person who has specialist knowledge in a particular area of study
- the ability to control yourself or other people

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5. Even though the group agreed that more funding was needed for the new research project, they were unable to reach a consensus on exactly how the money should be spent.

- a conclusion based on statistical data
- an agreement among a group of people
- a person who makes a decision

6. It wasn't until the discovery was published in the monthly scientific journal that the team received global recognition for all their hard work.

- a formal document used for writing notes about an experiment
- a serious newspaper or magazine that deals with a particular subject
- a written private record of what you have done each day

Exercise 2: Write the noun forms of the verbs. The first one has been done for you.

1 verify _____
2 accomplish _____
3 innovate _____
4 assess _____
5 justify _____
6 analyze _____
7 observe _____
8 prefer _____
9 assume _____
verification

Exercise 3: Read the extracts from a science class. Choose the correct verb forms to complete the sentences.

1 In today's lesson, *I'm explaining / I'm going to explain / I will explain* how an electrical circuit works.

2 Do the experiment carefully and *you are going to see / you'll see / you're seeing* the chemical change from a liquid to a solid.

3 Remember that you *aren't passing / won't pass / wouldn't pass* your exams if you don't start working harder.

4 Do you predict that the ice *is melting / melts / will melt* more quickly in that container?

5 What action do you think *is causing / will cause / will have been causing* the water to change from a liquid into a gas after we have poured it into the container?

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6 Tomorrow *I'm going to plan / I'm planning / I will plan* to repeat this experiment, but I'm going to make a few changes to see if we get a different result.

7 By the end of the lesson, *we will complete / we will have been completing / we will have completed* three experiments to show how an electrical circuit works.

8 This time next week, all the students *are doing / do / will be doing* a vocational placement in their chosen industries.

Exercise 4: Read the information. Then complete the sentences. Use the verbs in brackets in the correct form: the future perfect or the future continuous.

Read the following sentences:

This time next week, ***I will be working*** *as an intern for a publishing company.* ***I will have finished the internship*** *by the end of August.*

I will be working is an example of the *future continuous*. We use the future continuous to talk about something that will be in progress at a time in the future. *I will have finished* is an example of the *future perfect*. We use the future perfect to talk about something that will be complete by a particular time in the future.

The following time expressions are commonly used with the future continuous and the future perfect:

Future continuous	Future perfect
this time next week / next month / next year	**by** next week / next month / next year
next week / month / year	**by** the time
in tomorrow's meeting / lecture	**before** I leave university / the conference

1 By the end of the year, he_____(deliver) over 100 lectures on biochemistry.
2 Next week she _____ (conduct) a seminar on advances in space technology for a group of scientists from China.
3 The guest speakers _____ (discuss) the digital divide and its impact on global development in tomorrow's lecture.
4 Most students _____ (complete) the project on nanotechnology by the end of next week.
5 If all goes to plan, I _____ (write) my presentation before the conference begins next Wednesday.
6 Next Tuesday, on his day off from college, he _____ (prepare) his talk on relativity.
7 Even at the start of the advanced course, they _____ (analyse) some very complicated data.
8 We all hope that somebody _____ (discover) a way of preventing climate change by the end of the decade.

Exercise 5: Read the schedule. Then use the information in the schedule to complete the sentences. Use the correct future forms.

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Schedule for a visitor, Oliver Smith, attending a conference in Washington, D.C. next week.

	Monday	Tuesday	Wednesday
Morning	9–10 a.m.: Lecture on electric cars 10:30–11:30 a.m.: Lecture on driverless cars	9–10:30 a.m.: Seminar on traffic management 11–12:30 a.m.: Lecture on the future of the bicycle	9–10 a.m.: Guided tour of the transport museum. 10:30–11:30 a.m.: Lecture on flying cars – a dream or reality?
Lunchtime	FREE	FREE	Lunch as guests of the director of the transport museum
Afternoon	2–2:45 p.m.: Giving poster presentation: Fumes in the future	2–4 p.m.: Lecture on alternative sources of energy to power the automobile	2–3 p.m.: Closing remarks by the conference organiser – Where do we go from here?
Evening	Dinner with international colleagues	FREE	*Standby ticket to JFK (ring at 4 p.m. to confirm)*

1 By 11:30 a.m. on Monday, Oliver _____(attend) two lectures on automotive technology.
2 At 2:15 p.m. on Monday, Oliver _____ (give) a poster presentation on the effects of exhaust fumes on the environment.
3 Oliver _____ (have) dinner with his international colleagues on Monday evening.
4 On Tuesday, after the seminar on traffic management, there _____ (be) a lecture on the future of the bicycle.
5 At 2:30 p.m. on Tuesday, Oliver _____ (listen) to a talk on alternative sources of energy to power the automobile.
6 By the end of the conference, Oliver _____ (have) the opportunity to participate in a wide range of events relating to the past and future of transport.
7 The conference _____ (end) on Wednesday after the organiser's closing remarks.
8 If Oliver's flight ticket to JFK Airport is confirmed by the airline, he _____ (return) home on Wednesday evening.

Exercise 6: Read the information. Then complete the table with the verbs in the box.

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In English, some verbs are followed by a gerund or infinitive. For example:
He considered moving to the UK after he completed his studies in Germany.
She decided to do an internship in Sweden.
The verb consider is followed by a gerund. The verb decide is followed by an infinitive.
Some verbs are followed by an object and then an infinitive:
He persuaded me to buy a new computer.
It is important to learn the correct form as this will affect your Grammatical Range and Accuracy mark in the IELTS test.

forbid / risk / neglect / propose / approve of / discourage from recall / insist on / instruct / urge/ deny / proceed

verb + infinitive

verb + gerund

verb + object + infinitive

verb + preposition + gerund

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Exercise 7: Choose the correct verb forms to complete the sentences.

1 I regretted *being / to be* late for the interview for the lab technician job.

2 He remembers *talking / to talk* about the experiment yesterday.

3 I always remember *locking / to lock* the dangerous chemicals cupboard before I leave the lab.

4 The professor instructed his students *to wear / wearing* gloves while carrying out the experiment.

5 All the equipment needs *cleaning / to clean* after the experiments.

6 I stopped *to work / working* with radioactive materials for health reasons.
7 I can't remember *switching off / to switch off* the lights in the science lab.

8 I tried *doing / to do* the calculation but I couldn't.

9 The group risked *missing / to miss* the deadline if they didn't improve their work rate.

10 The company insisted on *using / to use* the latest edition of the software, despite the reservations of some colleagues.

Exercise 8: Read the information. Then read the sentences and choose the correct definitions.

Some verbs can be followed by either a gerund or an infinitive. Be careful, as the meaning will often change depending on whether the gerund or infinitive is used. For example:

The man stopped talking to his neighbour.
The man stopped to talk to his neighbour.

In the first sentence, the man finished talking to his neighbour. In the second sentence, the man stopped what he was doing to go and talk to his neighbour.

1 I love to start work early.
- It's a habit I love.
- It's an experience I love.

2 I forgot doing the experiment.
- I forgot that I had done the experiment.
- I forgot to do the experiment.

3 He stopped taking notes.
- He is no longer taking notes.
- He stopped doing what he was doing to take notes.

4 They tried to measure the amount of electricity.
- They experimented with measuring the electricity.
- They tried to measure the electricity but didn't succeed.

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5 I remembered watching a film about space technology last year.

- I didn't forget to watch the film.
- I recalled the film from my memory.

6 I won't forget to complete my notes.

- Completing my notes is so important for me that I won't forget the experience.
- I'll remember to complete my notes.

Exercise 9: Read the information. Then combine the sentences. Use the words in brackets. Remember, some of these sentences require punctuation to be marked as correct. The first one has been done for you.

Despite and although are both used to show contrast. While they are both similar in meaning, there is a difference in the way they are used. Despite is used before a noun or gerund. For example:

We had a great time at the science fair, despite the terrible weather.
Despite having a cold, David went to work.

Despite can also be used before the fact that. For example:

Despite the fact that there were a lot of changes in the company, people were happy with the new structure.

Although is used before the subject and the verb. For example:

Although the design of the new car was good, it wasn't environmentally friendly.

1 We were exhausted from our trip / we continued working on the presentation. (although)
Although we were exhausted from our trip, we continued working on the presentation.
2 He still enjoys working on the new research project / the long hours and complicated work. (despite)
He still enjoys _____ .
3 He has studied nanotechnology for several years / he still feels he has huge gaps in his knowledge. (although)
_____in his knowledge.
4 They informed us that all the tests had been carried out / scientists were still working on them when we arrived. (although)
_____ on them when we arrived.
5 She has impressive scientific qualifications / she hasn't been able to find a job in space technology. (despite)
_____a job in space technology.
6 We had been very careful in all our clinical research / we couldn't conclusively prove that excessive use of chewing gum has a negative effect on digestion. (although)
_____that excessive use of chewing gum has a negative effect on digestion.

Exercise 10: Put the words in the correct order to make sentences with participle clauses. The first one has been done for you.

1

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Being of the opinion / that / stem cells / will revolutionise / medicine over the next decade, / many scientists / are / enthusiastic / about the new / developments / in the cells / .

2

At an impressive rate / has since / initially launched / about two decades ago, / expanded / computer-assisted translation / .

3

The scientific equipment / been repaired / damaged / on display / during its installation, / has since / .

4

Are / intensifying / into this aspect of the universe / being convinced / there are / that / planets / that could sustain life, / their research / many / astronomers / .

5

Over 300 years ago, / published / today / Isaac Newton's Principia / accepted / widely / is still / .

6

Believing that / to maintain close contact / online / some students think / that / is the best way of maintaining friendships / than in real life, / it is easier / social networking

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