

## UNIT 12: LIFE ON OTHER PLANETS

### A. PHONETICS

I. Add *ful* or *less* to these words to make an adjective (some words can use either suffix). Then mark the stressed syllables.

- |             |       |             |       |
|-------------|-------|-------------|-------|
| 1. sound    | _____ | 11. wonder  | _____ |
| 2. harm     | _____ | 12. weight  | _____ |
| 3. hope     | _____ | 13. speech  | _____ |
| 4. thought  | _____ | 14. power   | _____ |
| 5. help     | _____ | 15. breath  | _____ |
| 6. colour   | _____ | 16. peace   | _____ |
| 7. water    | _____ | 17. home    | _____ |
| 8. forget   | _____ | 18. beauty  | _____ |
| 9. care     | _____ | 19. success | _____ |
| 10. delight | _____ | 20. emotion | _____ |

II. Complete the sentences with the words in the box. Then read the sentences aloud.

|          |            |            |            |            |
|----------|------------|------------|------------|------------|
| useless  | thoughtful | flightless | meaningful | purposeful |
| tearless | truthful   | wonderful  | homeless   | careless   |

- The data isn't very \_\_\_\_\_ to anyone but a scientist.
- Daisy is absolutely \_\_\_\_\_! She isn't afraid of anyone or anything.
- Looking at the Earth from outer space is \_\_\_\_\_, especially at night.
- One of the \_\_\_\_\_ birds we studied is the ostrich.
- My score was low because I made some \_\_\_\_\_ mistakes.
- What a lovely present! That was very \_\_\_\_\_ of you.
- Mom and Dad taught us that it is important to be \_\_\_\_\_.
- They are going to build temporary accommodation for the \_\_\_\_\_.
- You must remember to recharge your phone. Without its battery, it's \_\_\_\_\_.
- He desired to lead a more \_\_\_\_\_ life.

### B. VOCABULARY AND GRAMMAR

I. Match the planets with their descriptions.

|            |                                                                                               |
|------------|-----------------------------------------------------------------------------------------------|
| 1. Mercury | a. It is nicknamed "The Red Planet" because of the rust on its surface.                       |
| 2. Venus   | b. It is often called "The Water Planet".                                                     |
| 3. Earth   | c. It has a rocky surface. It is the smallest in our solar System and the closest to the sun. |
| 4. Mars    | d. It is the largest planet in our solar System and the fifth planet from the sun.            |

|            |                                                                                                                                                                                                                 |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5. Jupiter | the sun. It is composed of mostly gas and has a great red spot.<br>e. It is the coldest planet in our solar System and is the seventh planet from the Sun. It is a giant gas planet and it rotates on its side. |
| 6. Saturn  | f. It is the hottest planet in our solar system and is the closest planet to Earth in size.                                                                                                                     |
| 7. Uranus  | g. It has a cold surface, is blue in color from the gas in its atmosphere and is the furthest from the sun.                                                                                                     |
| 8. Neptune | h. It is the second largest planet and is known best for its rings made of ice and rock chunks.                                                                                                                 |

## II. Complete the sentences with the words or phrases in the box.

galaxy      planet      flying saucer      solar system      astronaut  
outer space      space buggy      weightless      aliens      traces

1. A \_\_\_\_\_ is sometimes referred to as an Unidentified Flying Object (UFO).
2. An \_\_\_\_\_ is a person who is trained for travelling in a spacecraft.
3. Researchers made the amazing findings of \_\_\_\_\_ of water on Mars.
4. A \_\_\_\_\_ is a vehicle used for driving on the moon.
5. Our \_\_\_\_\_ is made up of the sun and all the objects that travel around it.
6. Earth is the only known to be habitable to \_\_\_\_\_ life.
7. Do you believe \_\_\_\_\_ exist on other planets?
8. Spacecraft are vehicles used for travel in \_\_\_\_\_.
9. Our \_\_\_\_\_, the Milky Way, consists of 100 - 400 billion stars.
10. Astronauts on the orbiting space station are \_\_\_\_\_ because they do not experience a force of gravity.

## III. Choose the best answers to complete the sentences.

1. \_\_\_\_\_ is the name of a planet that matches the Roman God of the sea.  
A. Mars      B. Sun      C. Venus      D. Neptune
2. Discovered in the Kuiper belt beyond Neptune, \_\_\_\_\_ is a dwarf planet.  
A. Jupiter      B. Pluto      C. Saturn      D. Mercury
3. Unidentified Flying Objects or “\_\_\_\_\_” haven’t been formally recognized.  
A. UFOs      B. spaceships      C. space shuttles      D. spacecraft
4. Some people believe the \_\_\_\_\_ was created by a big explosion.  
A. galaxy      B. atmosphere      C. universe      D. outer space
5. \_\_\_\_\_ is named after the Roman God of war.  
A. Uranus      B. Jupiter      C. Mars      D. Venus

6. A (n) \_\_\_\_\_ is a scientist who studies the stars and planets.  
**A.** captain      **B.** alien      **C.** astronaut      **D.** astronomer
7. Astronauts \_\_\_\_\_ around in space because there is no gravity in space.  
**A.** fly      **B.** float      **C.** walk      **D.** trace
8. In a weightless environment, everything floats \_\_\_\_\_.  
**A.** uncontrollably   **B.** downwards   **C.** smoothly   **D.** constantly
9. On June 2, 1966, Surveyor 1 becomes the first U.S. \_\_\_\_\_ to land on the moon.  
**A.** flying saucer   **B.** airplane   **C.** spacecraft   **D.** helicopter
10. Mars is the most \_\_\_\_\_ planet in our Solar System besides Earth.  
**A.** powerful      **B.** notable      **C.** appropriate      **D.** habitable

**IV. Complete the sentences using may (not) or might (not). Where two answers are possible, write them both.**

- Aliens \_\_\_\_\_ exist in ways that we can't even imagine.
- Many scientists think that there \_\_\_\_\_ be life on other planets.
- Scientists said that farthest stars in Milky Way \_\_\_\_\_ be cut by another galaxy.
- I \_\_\_\_\_ go to the party because I'm not feeling very well.
- In the future, it \_\_\_\_\_ be possible to build a spaceship that can travel to distant planet.
- I have an appointment at the dentist's at 4.00. \_\_\_\_\_ I leave half an hour early?
- Astronomers thought the dwarf planet 2007 OR10 \_\_\_\_\_ have a moon.
- If we found water on Mars, we \_\_\_\_\_ use it to make rocket fuel.
- The examiner says we \_\_\_\_\_ leave when we've finished.
- Some scientists think aliens \_\_\_\_\_ have two legs, or any legs at all.

**V. Underline the correct answers.**

- Levy asked me **what / why** the future life looked like.
- Mr. Brown asked me **if / how** I had ever visited NASA.
- Dr. Memphis asked me where humans **could / may** live besides Earth.
- Stoner asked me if Voyager 2 **had passed / has passed** Saturn.
- Davy asked me what the aliens **will / would be doing** when he might saw them.
- Christina asked me **where / if** scientists had responded to the signs from outer space.
- Norman asked me **when / whether** Mercury had been discovered.
- Jacob asked me how much I **knew / had known** about the Red Planet.
- Richard asked his teacher **whether / why** there was life on other planets.
- Roy asked me if I **was meeting / had met** Val the previous day.

## VI. Complete the reported yes/ no questions.

1. 'May I ask you a few questions?'

The woman asked John \_\_\_\_\_

2. 'Have you done your project about space exploration?'

The teacher asked me \_\_\_\_\_

3. 'Will we be able to live on Mars in 2050?'

Debbie asked her father \_\_\_\_\_

4. 'Are you having a barbecue tonight?'

I asked the Browns \_\_\_\_\_

5. 'Do you like sci-fi films that feature extraterrestrial life?'

Jane asked Tom \_\_\_\_\_

6. 'Did scientists find life on Mars many years ago?'

Val asked me \_\_\_\_\_

7. 'Are aliens or UFOs real?'

Many people wondered \_\_\_\_\_

8. 'Can we go to the National Museum tomorrow?'

Sally asked her best friend \_\_\_\_\_

9. 'Do you know NASA has found two new planets?'

Duc asked Trang \_\_\_\_\_

10. 'Were you here yesterday?'

She wanted to know \_\_\_\_\_

## VII. Complete the reported wh- questions.

1. 'Where will we live in 20 years' time?'

Jane asked me \_\_\_\_\_

2. 'How was your trip to Toronto?'

I asked Peter \_\_\_\_\_

3. 'Why didn't Judy wait for fireballs last night?'

Sue asked \_\_\_\_\_

4. 'How many planets are there in the solar System?'

The teacher asked us \_\_\_\_\_

5. 'How many days does it take to get to Mars from Earth?'

Elliot wanted to know \_\_\_\_\_

6. 'What are you staring at?'

I asked Sally \_\_\_\_\_

7. 'Who discovered the planet Neptune?'

Joe asked his teacher \_\_\_\_\_

8. 'How long have you been living on the International Space Station?'

He asked the astronaut \_\_\_\_\_

9. 'When will humans go to Venus?'

The students wanted to know \_\_\_\_\_

10. 'Where are you going this summer holidays?'

I asked Sally and Andy \_\_\_\_\_

**VIII. Rewrite each sentence as reported speech with tense and time and place expression changes.**

1. 'I was here three months ago,' Tim said.

2. 'When does the next train leave?' He wanted to know.

3. 'Are you meeting Judy at four o'clock today?' She asked me.

4. 'I've already seen this exhibition,' Jane told me.

5. 'Who did you meet at the party last night?' My mother asked.

6. 'We are having dinner now, so I can only talk for a minute,' Miki said.

7. 'May I use your phone?' I asked Peter.

8. 'Public spending will be increased next year/ the Prime Minister announced.

9. 'My father drinks a cup of coffee every morning before going to work.' Peter said.

10. 'How long have you lived here?' Cheryl asked the old woman.

**IX. Choose the correct answers.**

1. 'There was an accident outside the supermarket.'

A. He said there had been an accident outside the supermarket.

B. He said there was an accident outside the supermarket.

C. He said there has been an accident outside the supermarket.

2. 'Have you ever seen a UFO?'

A. Jim wanted to know if had I ever seen a UFO.

- B. Jim asked if I had ever seen a UFO.  
C. Jim asked whether I ever saw a UFO.
3. She asked if you'd seen her painting on display in the exhibit.  
A. 'Will you see my painting on display in the exhibit?'  
B. 'Did you see my painting on display in the exhibit?'  
C. 'Have you seen her painting on display in the exhibit?'
4. I'm flying to India tomorrow.'  
A. Yesterday, Matt said that he was flying to India tomorrow.  
B. Yesterday, Matt told me that I was flying to India the next day.  
C. Yesterday, Matt said that he was flying to India the following day.
5. 'Why did you go out last night?'  
A. She asked me why I had gone out the night before.  
B. She asked me why did I go out the previous night.  
C. She wanted to know why I went out that night.
6. My instructor said that we were the best class he'd ever taught.  
A. 'You are the best class I've ever taught,' my instructor said.  
B. 'You were the best class I ever taught/ my instructor said to me.  
C. 'They are the best class he's ever taught,' said my instructor.
7. 'Can you help me with my homework?'  
A. Nick asked whether his sister can help him with his homework.  
B. Nick asked his sister could she help him with his homework.  
C. Nick asked his sister if she could help him with his homework.
8. Bill wanted to know when Susan was going out with Tony.  
A. 'When you are going out with Tony, Susan?'  
B. 'When was you going out with Tony, Susan?'  
C. 'When are you going out with Tony, Susan?'
9. 'I will come if I can finish work early.'  
A. He said that he will come if he can finish work early.  
B. He told that he would come if he could finish work early.  
C. He told me that he would come if he could finish work early.
10. 'What is the closest planet to Earth?'  
A. The student wondered if the closest planet to Earth is.  
B. The student asked what the closest planet to Earth was.  
C. The student asked what was the closest planet to Earth.

**X. Supply the correct form of the words in brackets.**

- John Young, NASA most \_\_\_\_\_ astronaut, flown into space six times. (**experience**)
2. The high concentration of carbon dioxide in the atmosphere makes it \_\_\_\_\_ to humans. (**poison**)
3. \_\_\_\_\_ have just discovered a giant, Jupiter-like planet. (**astronomy**)
4. The planet Mars has been \_\_\_\_\_ remotely by spacecraft. (**exploration**)
5. Saturn's moon Rhea may have a \_\_\_\_\_ atmosphere that is very similar to Earth's. (**breathe**)
6. The term UFO stands for "\_\_\_\_\_ flying object". (**identify**)
7. A \_\_\_\_\_ is a native inhabitant of the planet Mars. (**Mars**)
8. How can someone fight hunger, \_\_\_\_\_, and radiation on Mars? (**lonely**)
9. That film about aliens might \_\_\_\_\_ be classified a horror film. (**appropriate**)
10. What \_\_\_\_\_ could you propose for humans to live in a City on the moon? (**accommodate**)

**XI. Fill in each blank with an appropriate preposition.**

1. The children were excited \_\_\_\_\_ Star Wars: The Last Jedi.
2. Yuri Gagarin was the first person to fly \_\_\_\_\_ space.
3. NASA scientists are looking \_\_\_\_\_ habitable planets.
4. Mercury is the closest planet \_\_\_\_\_ the Sun.
5. He saw aliens coming \_\_\_\_\_ of the UFO.
6. Venus is very similar \_\_\_\_\_ Earth in terms of size and surface gravity.
7. Mars is named \_\_\_\_\_ the Roman God of war.
8. If intelligent aliens exist, how could we communicate \_\_\_\_\_ them?
9. Humans will be living \_\_\_\_\_ Mars far sooner than most people think.
10. Neil Armstrong took the first steps on the moon's surface \_\_\_\_\_ July 20, 1969.

**C. SPEAKING**

**I. Complete the dialogue with the appropriate sentences (A - H).**

- A.** It's so interesting!
- B.** It's a ring of icy bodies just outside of Neptune's orbit.
- C.** It's a dwarf planet that lies in the Kuiper belt.
- D.** Because it did not meet the three criteria the IAU uses to define a full-sized planet. It is not big enough to clear smaller bodies close to it.
- E.** Well, you should read astronomy books.
- F.** Sure. Eight planets.
- G.** Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, and Neptune.
- H.** Yes. A while back, Pluto was the ninth planet from the sun, but it is not counted as a planet any more.

Minh: Emily! Do you know how many planets there are in our solar System?

Emily: (1) \_\_\_\_\_

Minh: What are they?

Emily: (2) \_\_\_\_\_

Minh: How about Pluto? Have you ever heard about it?

Emily: (3) \_\_\_\_\_

Minh: Why is Pluto no longer a planet?

Emily: (4) \_\_\_\_\_

Minh: So what is Pluto?

Emily: (5) \_\_\_\_\_

Minh: I still don't know much about this. What's the Kuiper Belt?

Emily: (6) \_\_\_\_\_

Minh: Oh... I think I'll have to learn more about astronomy. (7) \_\_\_\_\_

Emily: (8) \_\_\_\_\_. There are plenty of great books on space and universe.

## II. Reorder the sentences to make a dialogue.

\_\_\_\_\_ What? Well, I did have a few beers, but I'm telling the truth.

\_\_\_\_\_ Wait, tell me exactly what you saw.

\_\_\_\_\_ Well, I stopped to watch the light when it disappeared behind a hill about a kilometer ahead of me.

\_\_\_\_\_ Well, I'd like to report a UFO sighting.

\_\_\_\_\_ What do you mean, "the alien"?

\_\_\_\_\_ What do you mean "what?" An unidentified flying object!

\_\_\_\_\_ Now, have you been taking any alcohol in the last 24 hours? You mentioned you went to a party.

\_\_\_\_\_ Well, I was driving home from a party about three hours ago, so it was about 2:00 AM, when I saw this bright light overhead.

\_\_\_\_\_ Okay. And then what happened?

\_1\_ Officer Jones speaking. What do you want to report?

\_\_\_\_\_ Now, how do you know it was a UFO? Perhaps you only saw the lights of an airplane, or the headlights of an approaching car. Things like that happen, you know.

\_\_\_\_\_ A what?

\_\_\_\_\_ Well if it was that, how do you explain "the alien"?

\_\_\_\_\_ Okay. I kept driving for about five minutes when all of a sudden, this giant, hairy creature jumped out in front of my car.

## D. READING

### I. Complete the passage with the words from the box.

surface   survive   frozen   universe   explore   missions   down   might

As we explore the (1) \_\_\_\_\_, we naturally ask, "Is there life on other planets?" In 1976, NASA's twin Viking landers touched (2) \_\_\_\_\_ on Mars in an attempt to answer a weighty question: Is there life on the Red Planet? Since then, NASA and other space agencies have sent many more (3) \_\_\_\_\_ to Mars. However; the answer so far is, "We don't know, but we'll keep searching." All life on Earth needs liquid water to (4) \_\_\_\_\_. Since spacecraft haven't found any liquid water on Mars' (5) \_\_\_\_\_, scientists think that there is no life there. But what about below the surface? Spacecraft have discovered (6) \_\_\_\_\_ water in Mars' polar ice caps and in clouds of ice crystals. This means that there (7) \_\_\_\_\_ be liquid water below the surface where it's warmer. NASA plans to continue to (8) \_\_\_\_\_ Mars every two years. In future missions, we'll explore below the surface and search for liquid water - and life!

### II. Read the passage, then do the tasks

#### THE INNER PLANETS

Planets are large bodies that rotate around the sun. The inner planets, or terrestrial planets, are the four planets closest to the Sun: Mercury, Venus, Earth, and Mars. Even though these planets are all small and rocky, they have more differences than they have things in common.

Because Mercury is the closest to the sun, the side that faces the sun gets as hot as 427° Celsius. At the same time, the side that faces away from the sun is a freezing -173° Celsius. The extreme temperatures alone make it a very unlikely place for life. With an atmosphere too thin for human breathing, it's obvious that people won't be living on Mercury any time soon.

The next planet from the sun is Venus. Below clouds of sulfuric gas lies 96% carbon dioxide atmosphere. That might be nice for a plant, since a plant "breathes" carbon dioxide, but not for a person. If you managed to survive the atmosphere, the surface of the planet is hot enough to melt solid metal. Venus has a temperature that is maintained at 462° Celsius, no matter where you go on the planet.

You are probably most familiar with Earth because it is your home planet. It has the perfect conditions for life. Earth's atmosphere and oceans help control the trickiest part of making a planet life-friendly: temperature. Earth is the only planet known to have liquid water.