

B2.II

UNIT 2

Exercise 1

Read the text and answer the questions.

Scientists: We're 'very close' to finding another Earth

Scientists looking for signs of life in the universe -as well as another planet like our own- are a lot closer to their goal than people realize.

That was the consensus of a panel on the search for life in the universe held at NASA **headquarters** Monday in Washington. The discussion focused not only on the philosophical question of whether we're alone in the universe but also on the technological advances made in an effort to answer that question. "We believe we're very, very close in terms of technology and science to actually finding the other Earth and our chance to find signs of life on another world," said Sara Seager, a MacArthur Fellow and professor of planetary science and physics at the Massachusetts Institute of Technology.

"Finding Earth's twin, that's kind of the **holy grail**," said John Grunsfeld, an astronaut who helped repair the Hubble Space Telescope in 2009 and is now an associate administrator at NASA. Scientists have made **stellar strides** in the past few years alone. "We already know that our galaxy has at least 100 **billion** planets, and we didn't know that five years ago," said Matt Mountain, director of the Space Telescope Science Institute in Maryland.

He credited the work of the Kepler Space Telescope for these new discoveries. The planet-hunting Kepler probe, launched in 2009, finds planets by looking for **dips** in the brightness of a star as a planet transits, or crosses, in front of that star. Kepler also found the first Earth-size planet that orbits in a star's habitable zone, the area around a star where a planet could exist with liquid water on its surface.

The Kepler mission builds upon the stalwart Hubble Space Telescope, which launched in 1990 and was the first of its kind to be placed in space. As Hubble orbits the Earth, it allows scientists to **peer back in time**, into distant galaxies, and **yields** stunning images of the cosmos. Hubble has helped shape our awareness of our planet's place in an ever-changing universe.

Spotting Earths

Finding small planets, ones the size of Earth, is challenging, in part because they produce **fainter** signals, said Dave Gallagher, director for astronomy and physics at NASA's Jet Propulsion Laboratory, who **likened** it to

spotting a **firefly** beside a **searchlight**. That difficulty doesn't **dull** the hunt for another Earth or signs of life. NASA administrator Charles Bolden said he counts himself among the people who "are probably convinced that it's highly improbable in the limitless vastness of the universe that we humans stand alone."

(Source: Presto,S. CNN)

Choose the correct answer based on information in the text:

1. Scientists are looking for:

- A. New intelligent life in another galaxy.
- B. Different expressions of life in Mars.
- C. Signs of life in the universe and on other Earthlike planets.

2. By saying: 'That difficulty doesn't dull the hunt for another Earth or signs of life.' The author means:

- A. In spite of the difficulty, it is possible.
- B. There is no way to achieve such a difficult challenge.
- C. The mission will not be accomplished easily.

3. By saying: "Finding Earth's twin, that's kind of the holy grail." John Grunsfeld means:

- A. Extremely easy.
- B. An unattainable goal.
- C. A far-fetched idea.

4. The discussion focused on:

- A. Whether we're alone in the universe or not.
- B. How to answer questions related to life in outer space.
- C. Philosophical questions and technological advances.

5. Dave Gallagher said that the task is challenging, comparing it to spotting a firefly beside a searchlight. He means:

- A. The Sun is as small as a star.
- B. The Moon is as big as the sun.
- C. The Earth is as big as the Sun.

Exercise 2

Match definitions listed with words in the box.

crescent –eclipse – equator – crater– giants – gibbous –hemisphere – high tide
leap year– low tide –phases – revolution –rotation –tides– waxing– waning

- a) When an extra day in a year is added to the calendar because of the extra 1/4 of a day it takes Earth to revolve around the Sun.
- b) The regular rise and fall of the ocean's surface on earth, influenced by the moon's gravity pull.....
- c) The different shapes of the moon you see from Earth, depending on how much of the sunlit side of the moon faces Earth.....
- d) Half of the Earth usually referred to as eastern or western; northern or southern.....
- e) An imaginary line around the Earth forming the great circle that is equidistant from the north and south poles.....
- f) Turning on an axis or a center point, or around an imaginary line running through the center of an object.
- g) Occurs when a shadow makes the Sun or Moon darken.....
- h) Outer planets
- i) Describes phases that occur after a new moon, as more of the Moon's lighted side becomes visible.....
- j) Describes phases that occur after a full moon, as the visible side of the moon gradually disappears.....
- k) The moon phase in which we see less than half of the moon's sunlit side.....
- l) Phase of the moon when it is more than half lit but not completely full.
- m) The highest point of the shore that the ocean reaches (occurs when the sun and moon are in line.).....
- n) A round pit on the moon's surface.
- o) The movement of an object around another object.
- p) The lowest level reached by the falling tide; the lowest point of the shore reached by the ocean (occurs when the sun and moon are not in line)

Exercise 3

Match each picture of Moon phases with words in the box.

waning gibbous – old – waxing crescent – full – waning crescent
 new – young – waxing quarter – waning quarter – waxing
 gibbous



1) _____ 2) _____ 3) _____ 4) _____ 5) _____



6) _____ 7) _____ 8) _____ 9) _____ 10) _____

