

Astrobiology Basics

Biology · Answer Key · 8 Questions

1. What is the primary substance that scientists look for on other planets to determine if life could exist there?

- A) Liquid water**
- B) Liquid gold
- C) Liquid iron
- D) Liquid nitrogen

2. Which planet in our solar system is considered most similar to Earth in terms of its potential to host past microbial life?

- A) Venus
- B) Mars**
- C) Jupiter
- D) Saturn

3. What term describes the scientific study of the origin, evolution, and distribution of life in the universe?

- A) Astrology
- B) Astronomy
- C) Astrobiology**
- D) Anatomy

4. Extremophiles are organisms that can survive in extreme environments. Which of these is a known habitat for extremophiles on Earth?

- A) Hydrothermal vents**
- B) A clean kitchen
- C) A vacuum chamber
- D) A dry desert mirror

5. What molecule do all known forms of life on Earth require to function and reproduce?

- A) Helium
- B) Neon
- C) DNA**
- D) Argon

6. Which of the following is an example of an extremophile that can survive the vacuum of space?

A) Tardigrade

B) Goldfish

C) Earthworm

D) Housefly

7. What is the 'Habitable Zone' around a star?

A) The region where a star is brightest

B) The distance where liquid water can exist on a planet's surface

C) The area where a planet has no gravity

D) The region where a star creates gold

8. What do plants on Earth require from the sun to perform photosynthesis, a process often studied for future space agriculture?

A) Solar radiation

B) Sound waves

C) Dark matter

D) Wind energy