



Solar System

Name: _____

Date: _____

Grade: Grade 5

Part A: Multiple Choice

Circle the best answer for each question.

1. Scientists want to send a rover to study a planet with evidence of ancient water. Which planet would be the best choice and why?

- A) Venus, because it is closest in size to Earth and may have had oceans.
- B) Mars, because it has ancient river valleys and is close enough to reach with current technology.
- C) Jupiter, because its large size means it could hold the most water.
- D) Mercury, because its craters could contain frozen water from comet impacts.

2. If the Sun suddenly lost half of its gravitational pull, what would most likely happen to the planets?

- A) All planets would crash into each other because their orbits would become unstable.
- B) Planets would drift farther from the Sun into wider orbits or escape into space.
- C) Nothing would change because planets have their own gravity to keep them in orbit.
- D) Only the inner planets would be affected because they are closest to the Sun.

3. A spacecraft takes four years to reach Jupiter but twelve years to reach Neptune. What is the main reason for this difference?

- A) Neptune has stronger gravity that slows the spacecraft down as it approaches.
- B) Neptune is much farther from the Sun than Jupiter so the spacecraft must travel a greater distance.
- C) Jupiter pulls the spacecraft toward it with its strong gravity, making the trip faster.
- D) Neptune's thick atmosphere creates drag that slows the spacecraft during approach.

4. Why would a space colony on Mars need a greenhouse to grow food instead of planting crops outdoors?

- A) Mars has too much sunlight which would burn the crops without a filter.
- B) Mars has a thin atmosphere with little oxygen and extremely cold temperatures.
- C) Mars soil contains too many nutrients which would cause crops to grow too fast.
- D) Mars has constant rain storms that would flood any outdoor crops.

Part B: Fill in the Blank

Write the correct answer on each line.

1. Rovers like Curiosity and Perseverance explore the surface of _____ searching for signs of past life.

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Part B: Fill in the Blank

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1. Rovers like Curiosity and Perseverance explore the surface of Mars searching for signs of past life.
2. An astronomical **unit** is the average distance from Earth to the Sun, about 93 million miles.