

# Cosmic Facts: A Physical Science Quiz

Physical Science · Practice Test · 15 Questions

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**1. What is the primary component of the Sun, making up approximately 74% of its mass?**

- A) Helium
- B) Oxygen
- C) Hydrogen
- D) Carbon

**2. Which planet in our solar system is known for its prominent rings, composed mainly of ice particles and dust?**

- A) Jupiter
- B) Saturn
- C) Uranus
- D) Neptune

**3. What phenomenon causes the Earth's magnetic field, protecting us from harmful solar wind?**

- A) Convection currents in the mantle
- B) The movement of molten iron in the outer core
- C) The gravitational pull of the Moon
- D) The reflection of sunlight off the atmosphere

**4. The Great Red Spot on Jupiter is a persistent storm that has been observed for centuries. What gas is believed to be responsible for its distinct red color?**

- A) Methane
- B) Ammonia
- C) Sulfur compounds
- D) Nitrogen

**5. Which of the following is the closest star to Earth, besides our Sun?**

- A) Sirius
- B) Alpha Centauri A
- C) Proxima Centauri
- D) Barnard's Star

**6. What is the term for a region of spacetime exhibiting such strong gravitational effects that nothing--not even particles and electromagnetic radiation such as light--can escape from inside it?**

- A) Nebula
- B) Quasar
- C) Pulsar
- D) Black hole

**7. Which terrestrial planet has the highest average surface temperature in our solar system?**

- A) Mercury
- B) Venus
- C) Earth
- D) Mars

**8. The process by which stars generate energy is called nuclear fusion. What element is primarily fused into helium during this process in stars like our Sun?**

- A) Carbon
- B) Oxygen
- C) Hydrogen
- D) Iron

**9. What celestial bodies are remnants of stars that have exhausted their nuclear fuel and collapsed, often resulting in a dense core?**

- A) Comets
- B) Asteroids
- C) White dwarfs
- D) Meteoroids

**10. Which planet is tilted on its side at an axial tilt of approximately 98 degrees, causing extreme seasonal variations?**

- A) Saturn
- B) Uranus
- C) Neptune
- D) Mars

**11. What is the name of the galaxy that contains our solar system?**

- A) Andromeda Galaxy
- B) Triangulum Galaxy
- C) Milky Way Galaxy
- D) Whirlpool Galaxy

**12. The distance light travels in one year is known as a light-year. What is the approximate speed of light in a vacuum?**

- A) 300,000 kilometers per hour
- B) 300,000 kilometers per second
- C) 150,000 miles per hour
- D) 150,000 miles per second

**13. What is the name given to a celestial body consisting of a nucleus of ice and dust and, when near the Sun, a 'tail' of gas and dust particles pointing away from the Sun?**

- A) Asteroid
- B) Meteor
- C) Comet
- D) Planetoid

**14. Which layer of the Sun's atmosphere is the outermost layer, visible during a solar eclipse as a faint halo?**

- A) Photosphere
- B) Chromosphere
- C) Corona
- D) Radiative Zone

**15. The expansion of the universe is evidenced by the redshift of light from distant galaxies. What does redshift indicate?**

- A) Galaxies are moving towards us
- B) Galaxies are moving away from us
- C) Galaxies are stationary
- D) The universe is contracting