

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Your GPS and the Quantum World: Modern Physics Quiz for 6th Grade

Identify how atomic clocks and light sensors apply 20th-century discoveries to everyday technology through this mixed-format assessment.

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**1. Which famous scientist figured out that time can actually slow down or speed up depending on how fast you are moving?**

- A. Isaac Newton
- B. Albert Einstein
- C. Marie Curie
- D. Galileo Galilei

**2. True or False: Modern physics tells us that light can act like both a moving wave and a tiny particle.**

- A. True
- B. False

**3. In the famous equation  $E=mc^2$ , the 'c' stands for the speed of \_\_\_\_\_.**

- A. Sound
- B. Electricity
- C. Light
- D. Gravity

**4. Which everyday technology relies on Einstein's theory of relativity to give us accurate directions?**

- A. Toasters
- B. GPS Satellites
- C. Bicycles
- D. AM Radio

**5. True or False: Quantum mechanics is the study of very large objects like galaxies and stars.**

- A. True
- B. False

**6. An object with gravity so strong that not even light can escape its pull is called a \_\_\_\_\_.**

- A. White Dwarf
- B. Black Hole
- C. Nebula
- D. Supernova

**7. What happens to an astronaut's clock if they travel through space at a very high speed compared to a clock on Earth?**

- A. It stops completely

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- B. It ticks faster
- C. It ticks slower
- D. It ticks at the exact same speed

**8. The tiny 'packets' or particles of light used in modern physics are called \_\_\_\_\_.**

- A. Electrons
- B. Photons
- C. Neutrons
- D. Protons

**9. In modern physics, gravity is not just a pull, but a 'curve' or 'warp' in what?**

- A. The Ocean
- B. The Atmosphere
- C. Spacetime
- D. Magnetic Fields

**10. True or False: According to the Uncertainty Principle, we can never know the exact position and speed of a particle at the same time.**

- A. True
- B. False