

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

## Zap the Particle: 3rd Grade Quantum Tiny World Quiz

Can something be a wave and a ball at the same time? Shadow the secret lives of atoms through light patterns and glowing toys.

---

**1. Imagine you have a magic ball that behaves like a tiny atom. If you throw it at two doors at once, what would a 'quantum' scientist say happens?**

- A. It must turn into a ghost and disappear
- B. It can act like a wave and go through both at once
- C. It stops moving immediately
- D. It turns into a piece of gravity

**2. True or False: Tiny particles like electrons act exactly like marbles that you can always find in one spot.**

- A. True
- B. False

**3. The glow-in-the-dark stickers on your ceiling work because they soak up light energy and release it slowly. This is a real-life example of \_\_\_\_\_ physics.**

- A. Bicycle
- B. Ocean
- C. Quantum
- D. Dinosaur

**4. If you are riding a super-fast rocket ship across the galaxy, what happens to your clock compared to a clock left on Earth?**

- A. Your clock ticks faster
- B. Your clock ticks slower
- C. Your clock melts
- D. Both clocks stay exactly the same

**5. True or False: Gravity can be thought of as a heavy bowling ball sitting on a soft trampoline, bending the space around it.**

- A. True
- B. False

**6. A laser pointer uses a special beam where all the light particles are marching together like soldiers. This tool was invented using \_\_\_\_\_.**

- A. Steam engines
- B. Modern physics
- C. Magnifying glasses

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

D. Wind power

**7. Scientists use the 'Heisenberg' rule to say we can't know everything at once about a tiny particle. If you know exactly WHERE it is, what do you 'lose track' of?**

- A. Its color
- B. Its name
- C. Where it is going and how fast
- D. Its weight

**8. True or False: Modern physics teaches us that energy and matter (the 'stuff' things are made of) are actually related to each other.**

- A. True
- B. False

**9. When a very large star collapses and creates a hole in space that not even light can jump out of, we call it a \_\_\_\_.**

- A. White dwarf
- B. Shining sun
- C. Black hole
- D. Space rock

**10. Why do computers and smartphones need modern physics to work?**

- A. To keep the screen clean
- B. Because they use tiny switches that follow quantum rules
- C. To make the battery heavier
- D. They don't actually need it