

Name: _____ Date: _____

Blast Off with Bluey: Pre-K Quantum Particle Quest

Can a toy be in two places at once? Analyze the weird ways very tiny particles behave through interactive play scenarios.

1. If Bluey's 'Magic Xylophone' made her disappear and reappear behind a wall without walking around it, which tiny science secret is she using?

- A. Quantum Tunneling
- B. Super Strength
- C. Heavy Gravity
- D. Time Travel

2. In the world of the very small, a ball can be a speck of dust (particle) and a _____ at the same time!

- A. Square
- B. Wave
- C. Banana
- D. Mountain

3. True or False: If you are hiding in a box, a scientist can know EXACTLY where you are and EXACTLY how fast you are wiggling at the same time.

- A. True
- B. False

4. Imagine a cat in a box that is both 'happy' and 'grumpy' UNTIL you open the lid. What do scientists call this mix-up?

- A. Nap Time
- B. Superposition
- C. The Big Bang
- D. Magnetism

5. If you have two 'Best Friend' particles, and you tickle one on Earth, the other one wiggles on the Moon instantly! This is called _____.

- A. Baking
- B. Sleeping
- C. Entanglement
- D. Running

6. True or False: If you fly in a rocket ship super fast, your birthday would happen slower than your friend's birthday on Earth.

- A. True
- B. False

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7. Heavy things like a Giant Bowling Ball stretch Space and Time like a trampoline. What do we call this stretching?

- A. General Relativity
- B. Cooking
- C. Painting
- D. Singing

8. A Black Hole is so heavy and curvy that not even _____ can escape its pull!

- A. Light
- B. Noise
- C. Smells
- D. Wind

9. True or False: Energy and Mass are like two different outfits for the same person ($E=mc^2$).

- A. True
- B. False

10. If you look at the smallest piece of a LEGO brick through a super-science lens, you find things are made of 'packets' called:

- A. Sandwich
- B. Quanta
- C. Pillow
- D. Bubble