Name: _____ **Date:** _____

Answer Key: Giant Sized Science: A Heavyweight Kindergarten Safari

Will a paperclip float or sink next to a bowling ball? Evaluate weight and scale through complex logic puzzles and comparison challenges.

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1. A scientist needs to weigh a blue whale and a mouse. Why can't she use the same tiny kitchen scale for both animals?

Answer: B) The scale isn't strong enough for the whale's mass.

Different tools are built for different capacities; a kitchen scale would break under the weight of a whale because it is designed for much smaller units of mass.

2. If you have two boxes that are exactly the same size, they must always weigh the same amount.

Answer: B) False

Even if things look the same on the outside, what's inside (density) determines the mass. One box could be full of feathers and the other full of rocks.

3. You are building a tower to reach a high shelf. Which tool would help you best determine how many blocks you need to reach that height?

Answer: B) A measuring tape

A measuring tape measures length and height, which is the specific unit needed to figure out how tall the shelf is compared to your blocks.

4. If you use your own feet to measure the rug, and your teacher uses their feet, why will the final number of 'feet' be different?

Answer: C) Standard units like inches are better because feet come in different sizes.

Non-standard units like 'human feet' vary in size, which causes inconsistent measurements; this is why scientists use standard units like meters or inches.

5. A balance scale shows which side is heavier by tipping down toward the ground.

Answer: A) True

Gravity pulls harder on objects with more mass, causing the heavier side of a balance scale to drop lower.

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6. Imagine you have a giant balloon and a small marble. Which one do you predict will be harder to lift off the ground?

Answer: C) The marble because it has more mass in a small space.

Size does not always equal weight. A balloon is mostly air, while a marble is solid glass or stone, making it heavier despite being smaller.

7. Which measurement is most important if you are trying to find out if a toy car will fit inside a small tunnel?

Answer: B) The width of the car.

To see if an object fits inside another, you must compare their physical dimensions (width and height), not their weight or speed.

8. A thermometer can tell you how many inches long a lizard is.

Answer: B) False

A thermometer measures temperature (how hot or cold something is), not length. A ruler would be needed to measure the lizard.

9. If you want to bake the world's most perfect cupcake, why is it important to use a measuring cup for the flour?

Answer: B) To be precise so the recipe works every time.

Precision is key in science and baking; using exact measurements ensures that the results are consistent and successful.

10. You have three cups: one with water, one with honey, and one with air. Which cup will feel the lightest when you pick it up?

Answer: C) The cup with air.

Air has the least mass among the three substances, making that cup the lightest to lift.