Simple Circuits

Grade 4 Science Worksheet - Challenge Me

Name _____ Date _____

Circle the answer.

1. Students compare two buzzer designs. Design A runs 2 hours on a battery. Design B runs 5 hours and is just as loud. Which is better if both meet the loudness goal?

   Design A, because shorter is safer

   Design A, because it is used up faster

   Design B, because it uses energy more slowly

   Design B, because it is quieter

2. A circuit goes battery → wire → bulb → wire → battery, but one wire touches the bulb's glass. The bulb is dark. Why?

   glass does not conduct, so the loop is open

   the bulb needs two wires on the glass

   the battery is connected backward

   glass makes the current too strong

3. Two circuits use the same battery. Circuit A has one bulb. Circuit B has three bulbs in one loop. Which bulbs are brightest?

   all bulbs are equally bright

   none of the bulbs light

   the bulb in Circuit A

   the bulbs in Circuit B

4. Designers want a toy that moves and beeps. Which two parts must be in the circuit?

   a bulb and a buzzer a motor and a buzzer two bulbs a motor and a bulb

5. A fan in a circuit spins and its motor gets warm. Which energy change explains both?

   heat to electrical energy only

   electrical energy to sound and light

   electrical energy to motion and some heat

   motion to electrical energy and light

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Answer Key - Grade 4 Science Worksheet - Challenge Me

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