Name _____ Date _____

Properties of Matter: Telling Materials Apart

Directions: Read about Jada's mystery bag. Then answer each question.

The Mystery Bag

Jada's teacher gave her a mystery bag. Inside were a steel paper clip, a ball of aluminum foil, a plastic bead, and a clear glass marble. The clip and the foil were both shiny and silver. Jada had to tell them apart by testing their properties. A **property** is something about a material that you can observe or measure.

First, Jada held a magnet near each one. Only the clip moved toward it. Something a magnet pulls on is **magnetic**. A magnet pulls iron and most kinds of steel. It does not pull every metal.

Next, she used a tester made of a battery, a bulb, and wires. The bulb lit for the clip and the foil. They are **conductors**: they carry electricity well. The bead and the marble are **insulators**, so the bulb stayed dark.

Last, Jada looked through each one. Only the marble was **transparent**. She could see clearly through it.

1. Match each word from the passage about Jada's bag with its meaning.
Write the letter of the matching answer on each line.

1. _____ magnetic
2. _____ conductor
3. _____ insulator
4. _____ transparent

A. Does not carry electricity well
B. Clear enough to see through
C. Able to dissolve in water
D. Carries electricity well
E. Pulled toward a magnet

2. Which of these is a *property* of the glass marble, in the way the passage uses the word?

A. It was the last object Jada tested.
B. It was inside Jada's bag.
C. Light passes through it, so you can see through it.
D. It belongs to Jada's teacher.

3. Jada's friend says that every metal sticks to a magnet. Which result from Jada's tests shows that this is not true?

A. The magnet pulled the steel paper clip.
B. The bulb stayed dark for the plastic bead.
C. The glass marble was transparent.
D. The magnet did not pull the aluminum foil, even though foil is a metal.

4. When Jada touched the tester's wires to the plastic bead, the bulb stayed dark. What does that result tell her?

A. The plastic bead is a conductor.

B. The plastic bead is magnetic.

C. The plastic bead does not carry electricity well.

D. The tester's battery had run out.

5. Use the word bank to finish the sentences about a window and a rubber band.

Word bank
insulators • transparent • magnetic • conductors

A clear window lets you see the yard, because its glass is _____. A rubber band does not carry electricity well, so rubber is one of the _____.

6. Jada finds a second bead that looks just like the plastic one. When she tests it, the bulb lights. What idea does this test support?

A. The two beads are made of the same material.

B. The tester is broken.

C. The second bead is probably made of a different material from the first bead.

D. The second bead must be transparent.

7. Which two test results together tell the aluminum foil apart from every other object in the bag?

A. It lit the bulb, but the magnet did not pull it.

B. It was shiny, and it was silver.

C. It kept the bulb dark, and the magnet did not pull it.

D. It lit the bulb, and the magnet pulled it.

8. The paper clip, the foil ball, and the plastic bead spill onto a plate of dry rice. What would happen if Jada held the magnet just above the plate?

A. Nothing would move, because rice blocks a magnet's pull.

B. The clip and the foil would both jump up, because both are metal.

C. Only the paper clip would jump up to the magnet.

D. The rice would stick to the magnet.