Name _____ Date _____

Magnets: What Sticks and What Does Not

Directions: Read about Omar's magnet test and look at the table. Then answer each question.

Will It Stick?

Omar wanted to find out which things a magnet would pull. He touched a bar magnet to eight objects. Then he wrote down what happened.

A **magnet** pulls on things made of iron and most kinds of steel. A few other metals, such as nickel and cobalt, are pulled too. But many metals are not. A magnet does not pull aluminum or copper. It does not pull most coins, either.

Magnets also push and pull on other magnets. A bar magnet has two ends called **poles**, a north pole and a south pole. Two like poles, such as two north poles, push apart. A north pole and a south pole pull together.

A magnet can pull on an object without touching it. Its pull can reach through paper, cloth, or a thin table.

What happened when Omar touched a bar magnet to each object

Object	Made of	Pulled by the magnet?
Steel paper clip	Steel	Yes
Iron nail	Iron	Yes
Steel soup can	Steel	Yes
Aluminum soda can	Aluminum	No
Copper wire	Copper	No
U.S. penny	Zinc with a thin copper coat	No
Plastic spoon	Plastic	No
Wooden craft stick	Wood	No

1. Which objects in Omar's table did the magnet pull?
   A. The copper wire and the U.S. penny
   B. The plastic spoon and the wooden craft stick
   C. The steel paper clip, the iron nail, and the steel soup can
   D. The steel paper clip, the aluminum soda can, and the copper wire

2. The steel soup can and the aluminum soda can are both metal cans. Why did the magnet pull only one of them?

A. The soup can was bigger than the soda can.
B. The magnet pulls only cans that have food in them.
C. The soda can was too heavy for the magnet.
D. The magnet pulls steel, but it does not pull aluminum.

3. Use the word bank to finish the sentences about two bar magnets.

Word bank
pull • push • spin • stick

Omar holds two bar magnets so that their south poles face each other. The two poles _____ each other away. Then he turns one magnet around, so a north pole faces a south pole. Now the poles _____ toward each other.

4. Omar sets a steel paper clip on top of a thin wooden table. He moves the magnet under the table. The clip slides along with it. What does this show?

A. A magnet must touch an object to pull it.
B. The wooden table pulls the paper clip.
C. A magnet's pull can reach through the thin table.
D. The table was shaking, and that moved the clip.

5. Omar's sister says, "A magnet pulls all metals." Which object in the table shows she is wrong?

A. The copper wire, a metal that the magnet did not pull
B. The plastic spoon, which is not a metal
C. The iron nail, a metal that the magnet pulled
D. The steel paper clip, a metal that the magnet pulled

6. Omar finds a coin from Canada. How can he find out if a magnet will pull it?

A. Look at the coin's color.
B. Check whether the coin is shiny.
C. Count how many coins he has.
D. Touch the magnet to the coin and see if it is pulled.

7. Which of these would a magnet pull?

A. A cast-iron frying pan
B. A plastic cup
C. A rubber ball
D. A wooden spoon

8. Omar mixes some steel paper clips into a pile of plastic beads. What would happen if he moved the magnet over the pile?

A. The magnet would probably pull out the steel paper clips and leave the plastic beads.
B. The magnet would pick up the whole pile.
C. The magnet would pick up the plastic beads and leave the paper clips.
D. The magnet would pull nothing, because the objects are mixed.