# Magnets and Engineering Design

Grade 3 Science Worksheet

Name _____ Date _____

Circle the answer.

1. A magnet pulls a steel can but not an aluminum can. Which design could sort cans for recycling?
   a magnet that lifts the steel cans out
   a sieve with holes as big as cans
   a magnet that lifts the aluminum cans out
   a net that catches cans by color

2. Two magnets pull together hard when they are 1 cm apart. What happens when they are 5 cm apart?
   they pull with the same force
   they pull together more strongly
   they pull together more weakly
   they push apart

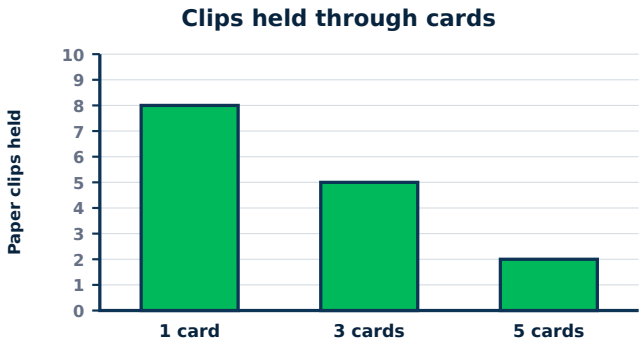
3. A student wants a magnet latch to keep a box lid shut. Which magnet ends should meet when the lid closes?
   two north poles
   a north pole and a south pole
   any two ends, since it does not matter
   two south poles

4. A paper clip hangs from a string. A magnet comes close without touching it, and the clip moves toward the magnet. What does this show?
   paper clips are magnets
   the string pulls the clip
   magnets must touch to pull
   magnets can pull without touching

5. A balloon rubbed on a sweater picks up tiny bits of paper. A second balloon rubbed the same way is held near the first. What happens?
   nothing happens
   the paper bits fall off
   the two balloons push apart
   the two balloons pull together

6. Which design uses magnets to solve a problem?
   a sponge mop for spills
   a plastic rake for leaves
   a paper bag for trash
   a magnetic sweeper that picks up dropped nails

7. A student counts how many paper clips a magnet holds through cardboard cards. Use the graph. What pattern does it show?




5 cards held the most clips
more cards between means fewer clips
the cards make no difference
more cards means more clips

8. A magnet pulls a steel screw, but not a brass key. What can you conclude?
brass is a kind of steel
all metals are pulled by magnets
not all metals are pulled by magnets
magnets pull only screws

9. Two ring magnets on a pencil float one above the other. Why?
the pencil is a magnet
their facing poles are the same, so they push apart
air holds the top magnet up
their facing poles are opposite, so they pull

10. Which object is attracted to a magnet?
a steel screw  a copper wire  a glass marble  a gold ring

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Answer Key - Grade 3 Science Worksheet

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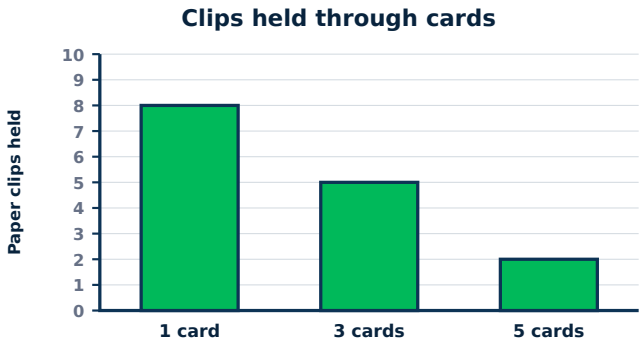
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