# Magnets and Engineering Design

Grade 3 Science Worksheet

Name _____ Date _____

Circle the answer.

1. A toy train uses magnets to join its cars. One car keeps pushing away from the next. What is the best fix?
   move the cars farther apart
   turn that car around so opposite poles meet
   add a second magnet with the same pole facing
   push the cars together harder

2. A magnet stays on a fridge door even though gravity pulls it down. Why does it not fall?
   gravity does not work on magnets
   the fridge is cold
   its pull on the steel door holds it up
   the fridge door is sticky

3. You rub a plastic comb on your hair. Now it can pick up small bits of paper. Which force is acting?
   magnetic force  electric force from static  a push from the paper  gravity

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

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

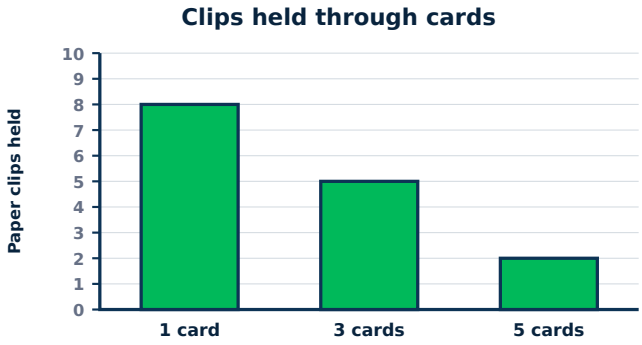
6. A student wants a magnet latch to keep a box lid shut. Which magnet ends should meet when the lid closes?
   two south poles
   two north poles
   any two ends, since it does not matter
   a north pole and a south pole

7. 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?
   magnets must touch to pull
   the string pulls the clip
   magnets can pull without touching
   paper clips are magnets

8. 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?
   the two balloons push apart
   the paper bits fall off
   the two balloons pull together
   nothing happens

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

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




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

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Answer Key - Grade 3 Science Worksheet

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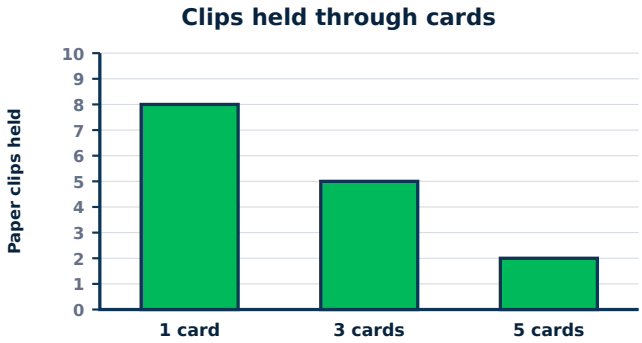
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