

Blocking Out Magnetic Attraction

Purpose

I want to find out if the magnetic attraction of a strong neodymium magnet is strong enough to see if it travels through the width of matter and still receives magnetization through different varying amounts of paper plates.

Background

The use of paper plates to block the magnetic attraction changes how the magnetic field of how the neodymium magnet (strong magnet) and the metal paper clip. This does not however block it entirely just weakens it as such this does not lead to a magnetic insulator.

Hypothesis

The strong magnet's force seemed to be an indicator that this is going to have a strong pull on any metal object in the proximity despite its minimal size but I've expected that the magnet's pull would be affected by distance the width of the paper plates would certainly affect the pull force.

Materials

Strong magnet
String or thread
Stick/ meter stick

Ruler

Tape

Paper clip

Several books/ cardboard/ paper plates/ index cards

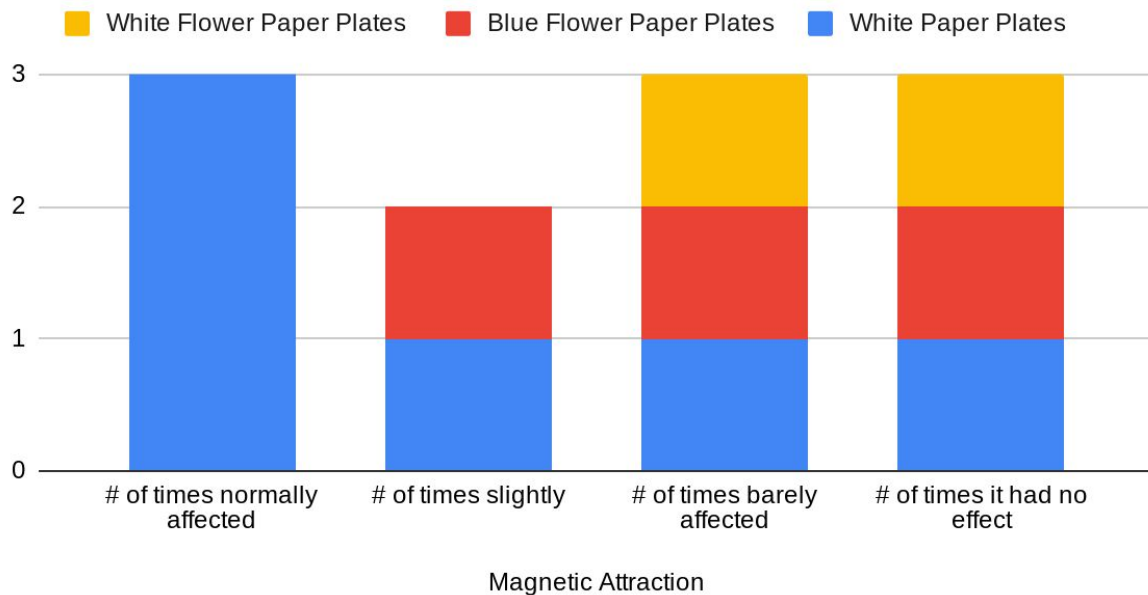
Procedures

1. Start by properly securing the strong magnet with a string or thread. While the magnet has been secured to the string/ thread tie the string/ thread holding the magnet to the edge of a stick.
2. Lay the paper clip flat on the ground.
3. Place the paper plate on top of the paper clip.
4. Then begin trials by testing how each magnetic attraction is affected by the width of how plates or the width of the paper plates.
5. Then adjust accordingly the strong magnet's positioning on the paper clip.

Data Tables

Magnetic Attraction Classification

White Paper Plates , Blue Flower Paper Plates and White Flower Paper Plates



Conclusion

That the magnetic attraction between the neodymium magnet and the paper clip weakened each time the paper plate's width increased or base width. The data collected show that 6 white plates used 3 or under plates stacked had zero or minimal effect on the magnet and the paper clip. The 4 white paper plates used had slightly affected the magnet and the paper clip by when moving the magnet it had weakened the attraction for the paper clip when moving it around the plate as previously for the 3 white paper plates and under. The 5 white paper plates used had caused the magnet to barely have any attraction to the paper clip. The 6 white paper plates used this time had no magnetism between the magnet and paper clip. The blue flower paper plate had slightly affected the magnet and the paper clip. The 2 blue flower paper plates caused the magnetism had caused barely any attraction. The 3 blue flower paper plates caused no attraction at all. The white flower paper plate caused barely any attraction between the magnet and the paper clip. The 2 white flower plates caused no attraction at all. The data shows that non-metal objects affects the magnetic attraction between the neodymium magnet and paper clip that no matter if the neodymium magnet is the strongest magnet on the market, that doesn't change the attraction that could change by interference of non-metal objects

