

How Strong is That Magnet?

Use common items around the house to test a magnet's strength.

Materials Needed

Magnets, e.g., refrigerator magnets, toys, office materials, and items that are magnetic, such as paperclips, washers, individual staples, sewing pins. Contact the DuPage Regional Office (Dr. Mary Biniewicz STEM Coordinator mbiniewicz@dupageroe.org) to obtain sets of magnets if needed.

Procedure

Design and implement a way to test the strength of magnets. Examples: Determine how many small paperclips the magnet can pick up (pick them up one at a time), create a chain of paperclips to see how long "a chain" (how far away from the magnet) can be made.

Data Collection Use a table similar to this one to record your data.

Magnet	Number of paperclips held	Observations

Results Compare designs and results with classmates.

Teacher Notes

Discussion Questions

What test designs were most effective? Why?

What other ways could you determine if a magnet is strong?

Why could none of the magnets attract a paperclip from across the room?

What is a magnet?

Why are some objects magnetic, while others are not?

Resources

<http://sciencenetlinks.com/lessons/magnets-2-how-strong-is-your-magnet/>

https://www.sciencebuddies.org/science-fair-projects/project-ideas/Phys_p025/physics/how-the-strength-of-a-magnet-varies