

Who Said Grape?

Name _____ Per _____

Your Goal: is to investigate the variety of ways in which different objects or materials interact with magnets, using a very strong “super magnet” and then an ordinary bar magnet.

- Obtain a super magnet from your teacher and do **all of Parts 1, 2 and 3.**
- **Return the super magnet** to your teacher and get an ordinary bar magnet.
- Repeat all of the investigations using the bar magnet.

Part 1: What common objects might be magnetic?

Caution! The super magnet is also **very powerful!** Hold on to it at all times. ***Do not set it down.***

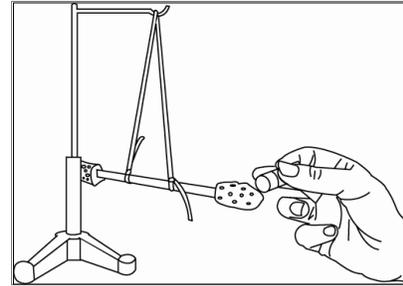
Investigate how each of the following objects is affected by each end of the magnet. Clearly describe the interactions that occur (weakly attracted, strongly repelled, no interaction, etc.).

	With super magnet	With bar magnet
Paper clips 		
Nails 		
Nickel 		
Wood stick 		
Plastic ruler 		
Paper money 		

Experiments in Magnetism Across Scale

Part 2: Could a pickle be magnetic?

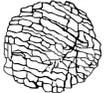
Make a V-shaped harness of string for the stick so that you can hang it from a support and it will move freely. Put a grape (or half a pickle) on each end of a wooden stick. Make sure the apparatus is **perfectly still** before your test. Bring the magnet toward and away from the pickle several times. **Get as close as you can without touching the grape.** Try each side or end of the magnet. Record your findings.



	With super magnet	With bar magnet
Grapes/pickle 		

Part 3: Are there different kinds of magnetism?

Hang each of the following objects on a string. When the object is **perfectly still**, move the magnet **toward and away** from the object several times, again getting as close as you can without touching. Try each side or end of the magnet. Describe what you observe.

	With super magnet	With bar magnet
Copper tubing 		
Aluminum can 		
Graphite (carbon) 		

Now, return the super magnet to your teacher and repeat Parts 1, 2 and 3 using an ordinary bar-shaped magnet. Again, try each end or side of the magnet to see if it makes a difference.

