

Magnets Lab¹

Magnets are mysterious objects. They have an invisible force, by which they can attract or repel other objects.

Magnets have a section where the magnetic force is the strongest, the weakest and where there is no force at all.

Procedure:

1. Take your magnet and predict which is the strongest, weakest, and the non-magnetic section of your magnet.

2. Sketch the magnet as you experienced it in step 1.

3. Explain why you think magnets have a non-magnetic section

4. Use your magnets and find out which items are attracted to or no attracted by your magnet. Make a list of the items that are attracted and repelled by your magnets.

Magnetized	Non-magnetized
1. _____	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____
5. _____	5. _____

5. Discuss with your team what would happen if a barrier were placed between a magnet and an object. (Choose various possible barriers and various magnets sizes. One of the barriers should be a sheet of paper)

Note: for 6 and 7 use the same magnet.

6. Predict how many sheets of paper you need to put on top of an object before a magnet can not pick it up.

Prediction _____

7. Do the actual experiment to find out how many sheet of paper you need on top of an object before a magnet can not pick it up.

Result _____

¹ Created by Mr. Mariaca for Bay Meadows Lab Club

8. Use a piece of paper, your magnets, iron filling, and the magnetic viewing film to find out the magnetic field of several magnets. Compare the results with your prediction in step or procedure number 1.

9. Use your compass and your magnet and then record what happens to the compass as you move the magnet around the compass at different angles and distances from the compass.

10. You can make a compass yourself, by rubbing 20 times with the south pole of a magnet in the length over the eye of a needle. Fasten a long small thread to the middle of a needle and the needle will point to the north.

11. Use the balls out of the ball-bearing to do the following experiment. Hang the balls one by one on the magnet and find out what happen to the magnetic field as you hang the ball after ball.

Explain your results

12. Based on your experiments with magnets, you need to design an experiment or explain other ways people can use magnets.
