



Magnet (Type SB)

Experiment Sheet

Compliant with the new curriculum guidelines of the MEXT

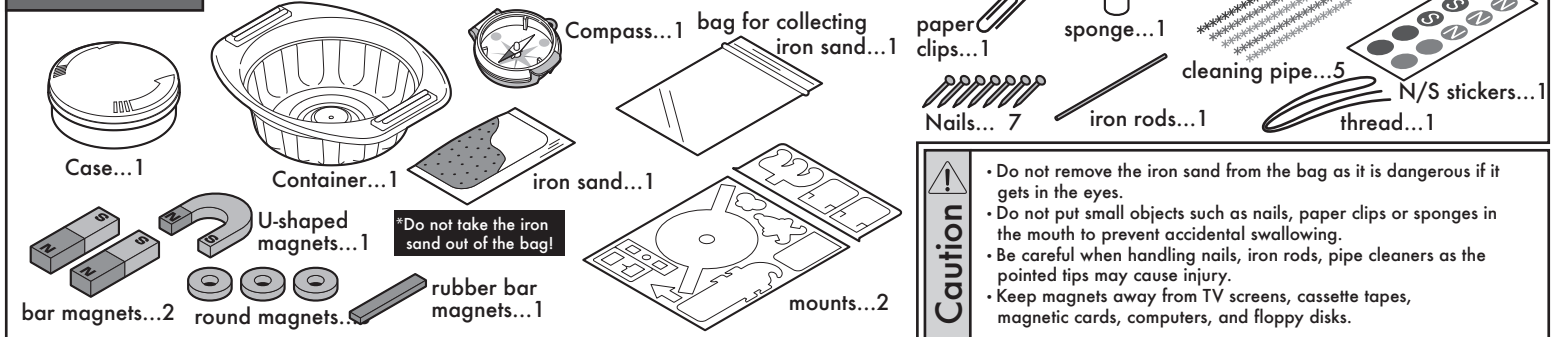
Name

Year

Class

Contents

*Before the experiment, make sure the contents are inside the kit.


Caution

- Do not remove the iron sand from the bag as it is dangerous if it gets in the eyes.
- Do not put small objects such as nails, paper clips or sponges in the mouth to prevent accidental swallowing.
- Be careful when handling nails, iron rods, pipe cleaners as the pointed tips may cause injury.
- Keep magnets away from TV screens, cassette tapes, magnetic cards, computers, and floppy disks.

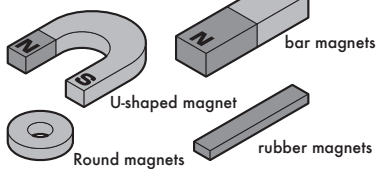
Let's look for things that can be attracted and cannot be attracted by a magnet.



What is attracted to magnets?

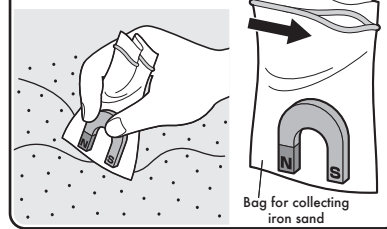
- Find out what kinds of things can be attracted by a magnet and write them down in the table on the right.

Various types of magnets



Collect iron sand

- Let's put the magnets in the sandbox.

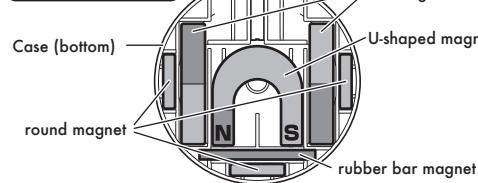


*Place the magnet in the bag and zip it up tightly.

☆ Circle the items that are attracted to magnets and draw a cross for items that are not attracted to magnets.

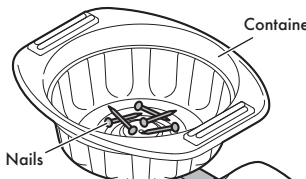
Attracted by magnets	Prediction	Result
Nail		
Paper clip		

How to keep the magnets



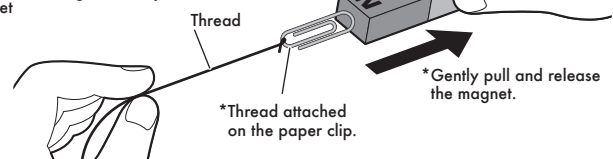
Strength of magnet

- Find out if the magnet can attract iron, even if there is non-magnetic material in-between.



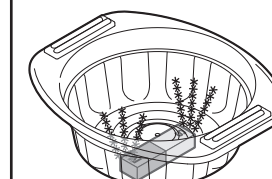
- Move the magnet from underneath the container.

- Find out if the magnet can attract the iron even when you move magnet away from the iron.



Play with pipe cleaners

- Place a bar magnet under the container and let the pipe cleaners stand on it.

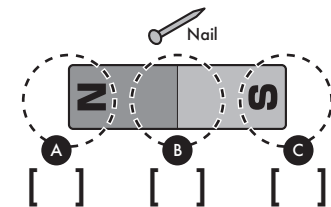


What are the properties of the magnet?



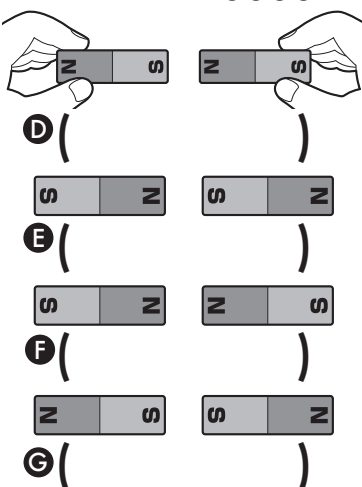
Poles of the magnet

- Find out which point (A, B, C) of the bar magnet is the nail attracted to the most



☆ Tick in the box the point where the nail is most attracted to.

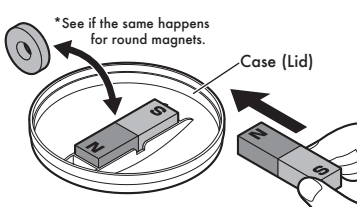
Move the two bar magnets close to each other and check the response at points D, E, F, G.



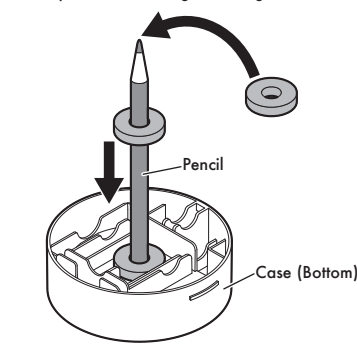
☆ Write down in the brackets what happened to the magnet

Various experiments with poles

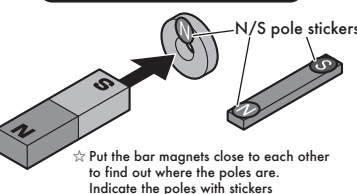
- Place a bar magnet on the lid of the case and bring another bar magnet close to it.



- Place the pencil at the bottom of the case and pass a round magnet through it.



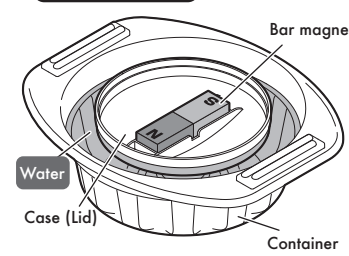
Magnetic poles are not known



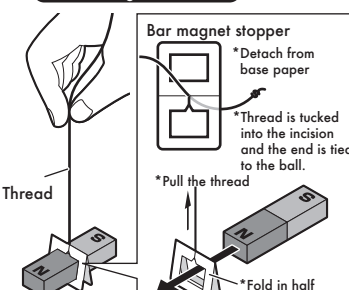
Magnet suspended by string

- Find out what happens to a magnet that is allowed to move freely, as shown in the diagram.

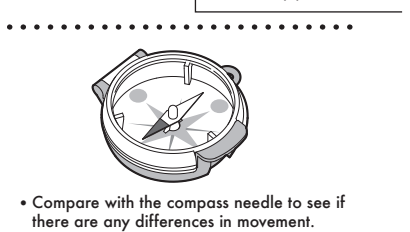
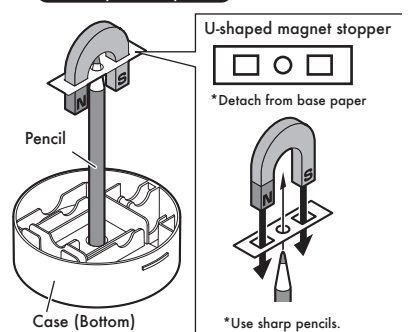
How to float on water



How to hang on a thread

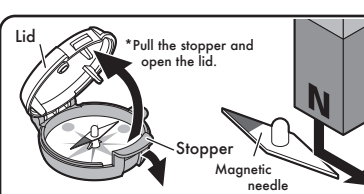


How to place on pencil



- Compare with the compass needle to see if there are any differences in movement.

When the compass is wrong



- Take the magnetic needle and rub the red side (S-pole) of the magnetic needle 2-3 times with the N-pole side of the bar magnet, as shown in the diagram.