



Provincial Educational Department – Sabaragamuwa – Weekly School

Subject - Science

Week – September 12-18

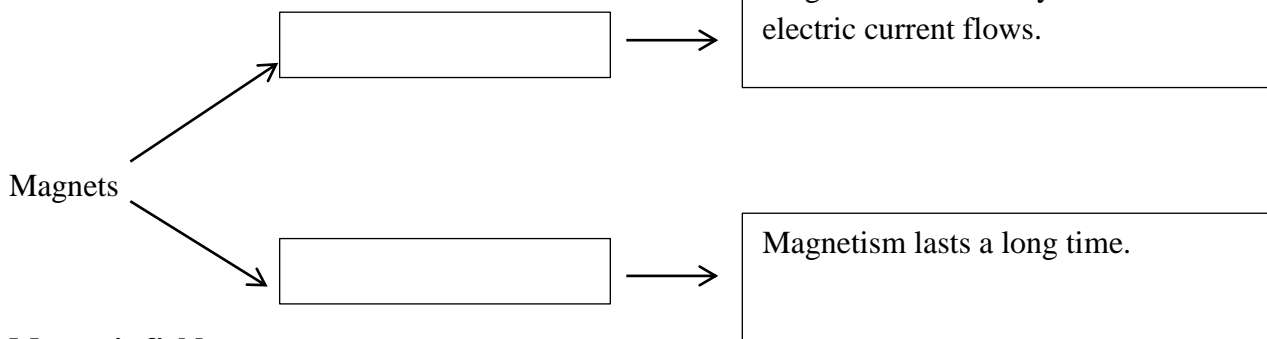
Grade - 11

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Electric magnetism and Electromagnetic induction

Magnetism

Mainly, 2 types of magnets



Magnetic field

❖ The space around a magnet that can be affected by magnetism is the “Magnetic field”.

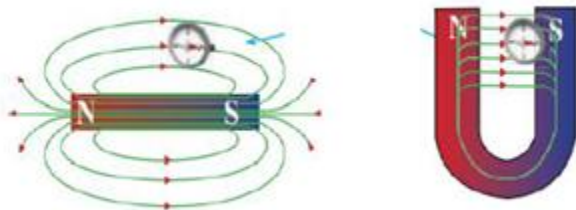
Demonstration that a magnet creates a magnetic field around it.

Keep a compass on the table. Note in the table whether the compass indicator is triggered or not when the given objects bring close to it.

Closing objects	The compass indicator is triggered/ isn't triggered.
A piece of iron	
A piece of glass	
A magnet	
A piece of plastic	

- ❖ Here, the compass indicator rises when bring close to it.
- ❖ Accordingly, the magnet can exert a around it.

- ❖ When a compass is placed in a certain point in the magnetic field, the direction of the magnetic field is shown by the compass indicator.
- ❖ Except for that, the magnitude of the magnetic field also varies at each point.
- ❖ Accordingly, a magnetic field has a physical mass of and

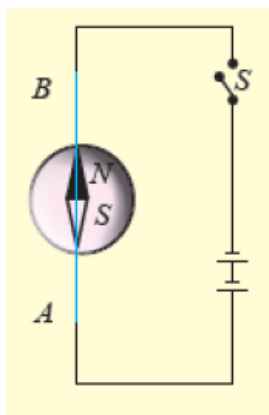


- ❖ The above activity show, the way of finding using a compass.

The magnetic effect of the current

- ❖ The scientist Pointed out that a current produces a magnetic field.
- ❖ The following is a diagram of an activity that can be used to show that a magnetic field is generated when an electric current flows through a direct conductor.

Note down the observations in each of the following instance.



Instance	Observation
When there is a conductor above the compass	
When the switch is opened (When the current stops flowing)	
When there is a compass above the conductor	

- ❖ According to the observations you mentioned above, the reason for the rise of the compass is
- ❖ Accordingly, it can be said that occurs when a current flows through a conductor.
- ❖ Also, it can be said that the direction of the also depends on the direction in which the current flows.