

Lesson Plan
Class – VI
Subject: Science
Topic: Fun with magnets

KPI DEFINITION ADDRESSED TO THE LESSON PLAN

KPI 1- To strengthen in- depth understanding of some complex scientific concepts

KPI 2- Application of scientific concepts in doing experiments

KPI 3- Promoting analytical thinking in order to establish connectivity with the real world situation and compare the different physical quantities.

TOPIC- Fun with magnets					
START DATE-					
KNOWLEDG E	UNDERSTANDIN G	APPLICATIO N	ANALYSI S	SYNTYHSI S	EVALUATIO N
S 3, 7	S 1, 2, 4,5, 8	S 6			
		B 1, 2, 3	B 4, 5,		
Act 1	Act 2, 3, 5, 6, 7, 8	Act 4			
				As 1, 2	

Brief Description of the lesson: This topic emphasizes on magnet, poles of a magnet. It also tells about the properties of magnet. They will learn about Earth’s magnetism , magnetic compass, magnetic field. By this the learner will be able to apply the concept to the applications making magnet and its uses.

Objectives:

I - Specific Objectives

To enable the students to-

- 1) Categorize a given substance as magnetic and non magnetic substances.
- 2) Differentiate between attraction and repulsion. (Comparing-U) **KPI 3**
- 3) Comprehend about the different types of magnet.. (Explaining-U) **KPI 1**
- 4) Explain the poles of a magnet and magnetic field. (Explaining-U)
KPI 1
- 5) Know the different uses of magnetic and non magnetic substances.(Recalling-K)
- 6) Exemplify the daily life applications of different types of magnet and its uses.(Exemplifying-U)
KPI 3

II - Behavioral Objectives

To enable the students to-

- 1) Recognize the magnets.(Knowledge)
- 2) Know about the discovery of magnets. (Knowledge)
- 3) Identify magnetic and non magnetic materials and poles of a magnet. (Executing-Ap)
- 4) Take safety measures before and after during the construction of magnet. (Executing-Ap)
- 5) Differentiate the magnetic and non magnetic substances and attraction and repulsion property of magnet (Organizing- An)

Process / Activities

Activity (to introduce the lesson)

Activity 1-(To introduce the poles of a magnet)

Spread some iron filings on a sheet of paper. Now, place a bar magnet on this sheet. What do you observe?

Do the iron filings stick all over the magnet?

Do you observe that more iron filings get attracted to some parts of the magnet than others . Repeat the



Fig. Iron filings sticking to a bar magnet

activity. Do you observe any change ? You can do this activity using pins or iron nails and also with magnets of different shapes.

We find that most of the iron filings are attracted towards the two ends of a bar magnet. These ends are the poles of the magnet.

Students were enabled to understand the poles of magnet.

Activity 2 (To introduce that a freely suspended magnet always come to north- south direction)

Take a bar magnet. Put a mark on one of its ends for identification. Now, tie a thread at the middle of the magnet . Mark two points on the ground to show the position of the ends of the magnet. Now, rotate the magnet by gently pushing one end in any direction and let it come to rest.

Does the magnet now point in a different direction? Rotate the magnet in other directions and note the final direction in which it comes to rest.



Do you find that the magnet always comes to rest in the same direction? Repeat this activity with an iron bar and a plastic or a wooden scale instead of a magnet. We find that a freely suspended bar magnet always comes to rest in a particular direction, which is the North-South direction

All magnets have two poles whatever their shape may be. Usually, north (N) and south (S) poles are marked on the magnets.

Students were enabled to understand that magnet always tends to north south direction .

3. To introduce the shapes of magnet with diagram demonstration.



Bar-magnet



Horseshoe magnet



Needle magnet



Cylindrical magnet

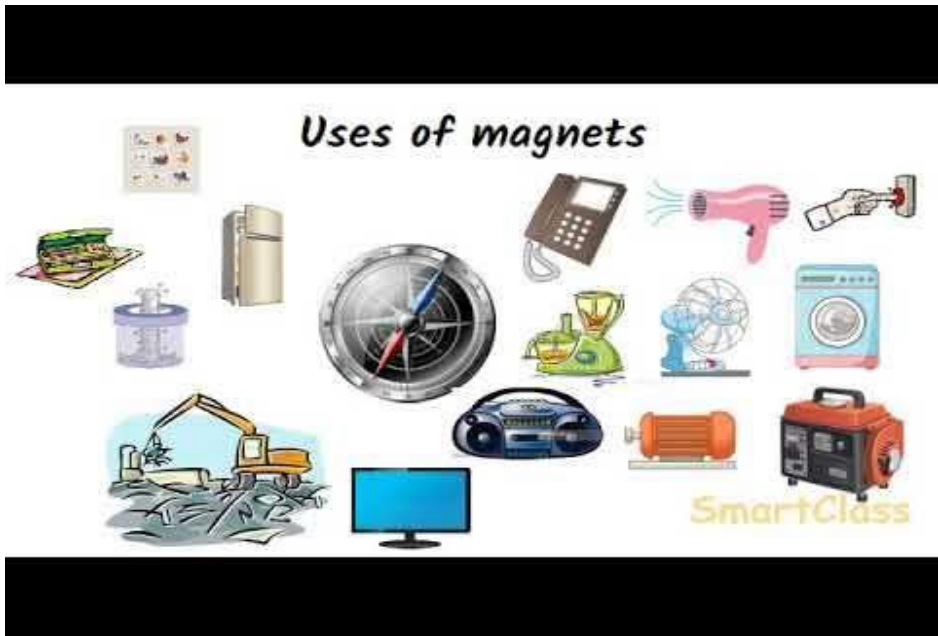


Oval shape magnet



Ring magnet

4 To explain the different uses of magnet with diagram demonstration.



Digital Content to be used:

Video demonstration
<https://youtu.be/UDupgqzQQ24>

Video showing method of making magnet
<https://youtu.be/FjuhKs8aFSs>

Expected Learning Outcomes

Students will be able to

1. Know about the magnet and its uses in daily life. (Recalling-K)
3. Identify the poles of a magnet
4. Recognize the magnetic and non magnetic substances(Recognizing-K)
5. Compare the different types of magnets.(Differentiating-An)
6. Understand how magnetic field developed.
7. Use magnetic and non magnetic material available at their home and study their features. (Executing-Ap)
8. Students can select magnetic and non magnetic substances on the basis of purpose of use.
9. Construct their own magnets .

Assessment Activity: (To introduce magnetic needle as compass)

Magnetise an iron needle using a bar magnet. Now, insert the magnetised needle through a small piece of cork or foam. Make sure that the needle does not touch the water .Your compass is now ready to work. Rotate the cork, with the needle fixed in it, in different directions. Note the direction in which the needle points when the cork begins to float again without rotating. Does the needle always point in the same direction, when the cork stops rotating?

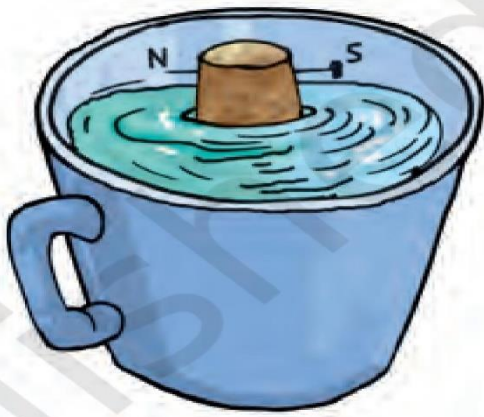


Fig. 13.12 A
compass in a cup

1 Demonstration of videos

Video showing method of making magnet
<https://youtu.be/FjuhKs8aFSs>

Video demonstration

<https://youtu.be/UDupgqzQQ24>

Review of the Lesson Plan: To be done when the lesson gets over

Problems faced –

Success-

Failure-

Real Learning Outcomes-

Students Response / Participation-

Teachers Learning to be added.