

Subject: Science

Activity - Types of Charges

Chapter- Some Natural Phenomena

Class: VIII

Duration: 30 minutes

Nature of the activity: Group

Learning Outcome: Students will be able to demonstrate that like charges repel each other while unlike charges attract each other.

What we have to do?

To demonstrate the interaction between the different charges.

What do we need?

2 Ball point Pen Refills(made out of same material), piece of polythene(made out of polythene) to charge the refills and a beaker.

What you need to know?

There is two types of electric charges one is positive (proton) and the other is negative (electron).

How do we proceed?

- **Teacher's activity:**

Teacher will arrange activity kits with the above mentioned material and will give instructions to the students for the activity.

- **Student's activity:**

1. Rub one of the refills with a piece of polythene and carefully place it a beaker.
2. Now, rub the other Ballpoint pen refill with a piece of polythene and bring it close to the refill kept in the beaker.

What do we observe?

The refill kept in the beaker will move _____ the second refill brought near to it.

What have you learnt?

Like charges _____ (attract/repel) each other.

Unlike chargers _____ (attract/ repel) each other.

What more can we do?

1. Rub a ballpoint Pen Refill with a piece of polythene and keep it in a beaker. Bring a Balloon rubbed with a piece of woollen cloth close to it and record your observations
2. Rub a plastic comb with dry hair and bring it close to tiny pieces of paper. Record your observations
3. Take an empty jam glass bottle. Cut a piece of cardboard slightly bigger than the mouth of the jar. Make thin hole in the middle of the cardboard piece. Now take a metal wire and make a hook of shape 5 out of it. Take an aluminium strip, fold it in the middle and suspend it from the hook. Lower the hook it into the glass bottle through the hole made in the cardboard. Charge a glass rod by rubbing with a piece of silk cloth and bring it in contact of the free end of the hook lowered into the jam bottle and record your observations.

EXTENDED LEARNING WORKSHEET:

1. What will happen when the balloon charged with woollen cloth is brought close to the Ballpoint Refill kept in the beaker? Give reason.

2. What will happen when a charged comb is brought in contact with bits of paper?

3. Plastic straws A and B are rubbed with dry cotton cloth. What will happen if they are brought near each other?

4. In an electroscope if a negatively charged body is brought in contact with the metal clip, the strips of the electroscope diverge. If now another charged object carrying equal amount of positive charge is brought in contact with the clip, what will happen?

5. You might have observed on a dry day that when you touch the screen of a television or computer monitor (with picture tube), you get a slight shock. Why does it happen?
