

Some Natural Phenomena

Q1. Describe with the help of a diagram an instrument which can be used to detect a charged body.

Ans. An electroscope may be used to detect whether a body is charged or not.



Image from NCERT

Construction of a simple electroscope

- i. Take an empty jam bottle.
- ii. Take a piece of cardboard slightly bigger in size than the mouth of the bottle.
- iii. Pierce a hole in it so that a metal paper clip could be inserted.
- iv. Open out paper clip as shown in Figure.
- v. Cut two strips of aluminium foil about 4 cm × 1 cm each. Hang them on the paper clip as shown.
- vi. Insert the paper clip in the cardboard lid so that it is perpendicular to it. Charge a refill and touch it with the end of the paper clip.

Observation:

- i. The aluminium foil strips receive the same charge from the charged refill through the paper clip. The strips carrying similar charges repel each other and they become wide open.
- ii. Touch the end of the paper clip gently with hand and you will find a change in the foil strips. They come back to their original state. The reason is that the foil strips lose charge to the earth through your body.