



Provincial Department Of Education – Sabaragamuwa  
WEEKLY SCHOOL

Subject : Science

Grade 7

Week : 07<sup>th</sup> of 1<sup>st</sup> Term

## Unit 2 – Static Electricity(2)

### ➤ Charging an object

#### Activity 2.3

**You will need :-** Clean and dry drinking straws, drawing pins, a glass, sheet of polythene

**Method :-**

- Charge the drinking straw by rubbing it with the sheet of polythene.
- Balance the charged drinking straw on an upturned glass using a drawing pin as showing in the Figure 2.5 (a)

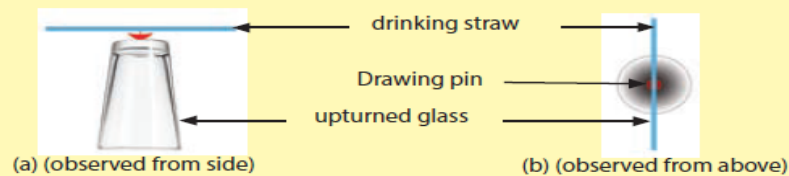


Figure 2.5 ▲

- Keep a finger near the charged drinking straw (about 1 cm away). Figure 2.5 b, shows how it is seen when observed from above
- Now, keep the polythene used to charge the drinking straw near it.
- Then, keep another charged straw near the charged straw.
- Discuss the reasons for the observations.

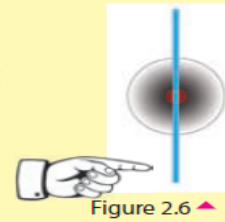


Figure 2.6 ▲

Figure 2.7 ▲

### • Generation of static electric charges

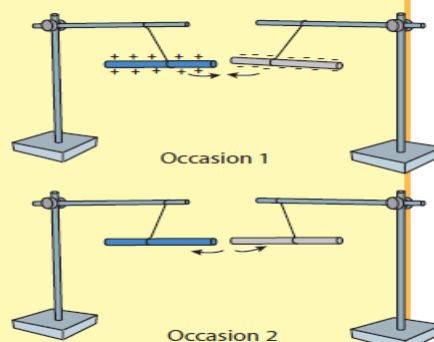
#### Activity 2.4

**Testing the neutralization of charged objects due to the exchange of static electric charges**

**You will need :-** A glass rod and an ebonite rod of equal size, a piece of silk cloth, a piece of woolen cloth, two stands, pieces of thread

**Method:-**

- Rub the silk cloth against the glass rod and rub the woolen cloth against the ebonite rod. Hang the two rods separately on two stands with pieces of thread.
- Bring two rods close to each other slowly.
- Record the observations.
- Repeat the previous step several times and observe what happens
- Can you observe the same observation as in the previous occasion?
- Discuss the reasons for your observations.



- **Mention a few Phenomena associated with static electricity.**

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- **Capacitors**



### Assignment 2.2

Observe the electronic circuits and identify the types of capacitors in radios, televisions and CFLs.



### Activity 2.6

#### Identification of charging and discharging of a capacitor

**You will need :-** 1000  $\mu\text{F}$  capacitor, three dry cells, a small LED, pieces of wire

**Method :-**

Connect pieces of wire to the terminals of the capacitor.

Connect the other ends of the wires to dry cells correctly. After few seconds, remove the dry cells and connect the LED correctly to the capacitor and observe (Positive terminal of the dry cell should connect with the positive terminal of LED). Discuss the reasons for your observations.

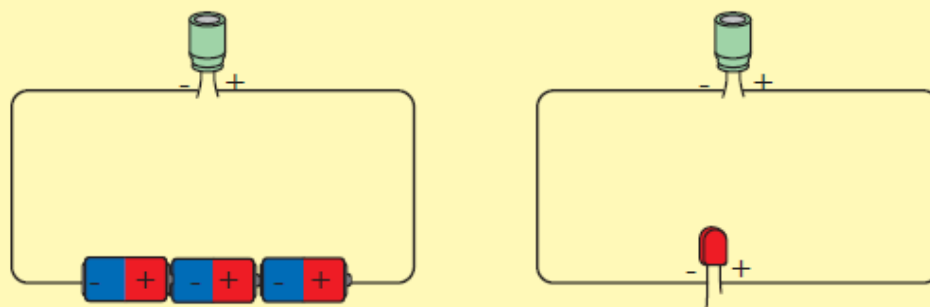


Figure 2.16 ▲ Charging and discharging of a capacitor