

Activity-57: Prepare your own magnifier.

Requirements:

1. A non-frosted light bulb that does not work anymore.
2. A thick polythene bag.
3. A string
4. Woollen gloves or thick cotton gloves.
5. Pliers.
6. Coarse sand paper.
7. Smooth sand paper.
8. Water proof tape is preferred if available else use wide Cello tape (Scotch brand).
9. Water.
10. Protective eyewear.

The inside of the light bulb has a gas under very, very low pressure. If you do not carefully break it, it leads to an implosion and the resulting glass splinters can cause serious injury.

Strategy:

1. Put on your eyewear.
2. Put on your gloves.
3. Take the glass bulb and cover it with the polythene bag leaving out only the stem (the metal cap). Now securely tie it with a string.
4. Now take the pliers and try to slowly twist the metal cap and remove it.
5. Now you will see the narrowed glass lead with the filaments protruding out.
6. Now crush it and remove the filaments.

7. Slowly start chipping away the edge of the glass bulb. Do not use excessive force which might lead to cracks.
8. Before continuing dispose the cut glass pieces wrapped in paper.
9. Now take out the glass bulb and rub the edge on the sand papers.
10. Now tape the edge (margins). Be very generous with the tape. This is to prevent you from injuring your hand if there are sharp, rugged edges.
11. Now fill the bulb with water.
12. Now start reading the text in the book with it by holding it horizontally. Try changing its position.
13. Does the text appear large or small? Why?

