

**Experiment III :**  
Move the metal cup slightly outside the tube and fix it using wing nut.  
Now where will you observe the flower?  
What is the size of the flower?

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**What is going on?**

The experiment-I proves the fact that if an object is placed at the centre of curvature (C) of a concave mirror, its image is formed at 'C' only. It is real, inverted and same in size as that of the object. Whatever adjustments you make with position of the metal cap, it is to see that the object lies in 'C' of the concave mirror.

In **Experiment-II** you will move the metal cup inside the tube. This ensures that the object lies between C & F of the concave mirror. As a result you will observe that the image is formed beyond C and is real inverted and is magnified in size.

In **Experiment-III** you will move the metal cup outside the tube. This ensure that the object lies beyond C. As a result you will observe that the image is formed between C & F and is real, inverted and diminished in size.

In this model we can also show that without screen also you can observe the real image.

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THE WAY TOWARDS PRACTICAL SCIENCE

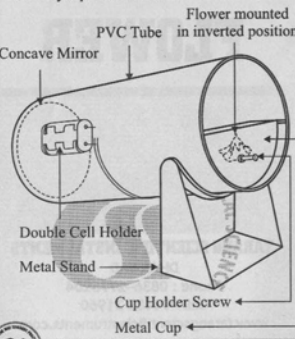


**MAGIC FLOWER**

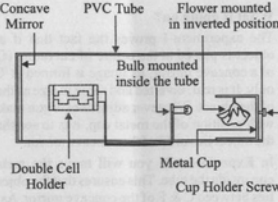
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**MAGIC FLOWER**  
Catch the flower, if you can!

**Assembly :**  
Consists of a blue coloured PVC tube. A concave mirror (of dia 75 mm & f=10 cm) is fixed to the inner face of a blue coloured circular cap. This cap is fixed to the one end of the tube. At the other end of the tube a metal cap is glided inside the through the slot provided to the tube. This metal cap can be moved to and fro inside the tube using cup holder screw and can be fixed using wing nut provided to it. A plastic flower is mounted inside this metal cap with inverted position. This flower is not visible. A plastic double cell holder is connected to a 3V bulb which is fixed inside the tube and in front of the flower. A metal stand for keeping assembly is part of the kit.

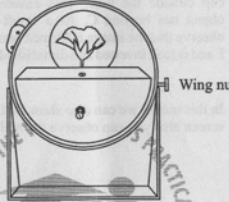


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Longitudinal cross section of the PVC tube

**To do and observe :**  
**Experiment - I**



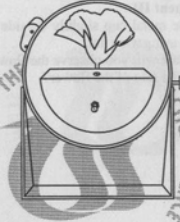
**Step 1 :**  
Insert 2 pencil cells inside the double cell holder

**Step 2 :**  
Observe that the bulb inside the tube glows

**Step 3 :**  
Place the metal frame on a table and then PVC tube on the frame as shown in the fig.

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**Step 4 :**  
Now sit in front of the PVC tube on the chair. You will observe the image of the flower inside the tube. If you observe the flower exactly over the screw head (fixed to the metal cup) it is OK otherwise using cup holder screw adjust the position of the metal cup such that the flower appears on the screw head.  
Now try to catch the flower with two fingers if you can!



**Experiment II :**  
Move the metal cup inside the tube using cup holder screw to the possible extent.  
Now where will you observe the flower?  
What is the size of the flower?

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