Lunar Phase Viewer

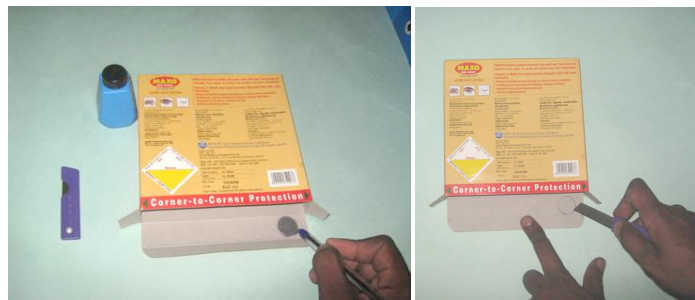| Goal	Build an easy device that illustrates the phases of the moon.
Age	6 upwards Adult supervision/intervention required when cutting
Difficulty	Easy to medium
Skills	Crafts, observation
Materials	A cardboard box, a pen, a cutting device, glue, a button or a coin
Pre-requisites	Awareness of the phases of the moon

Introduction

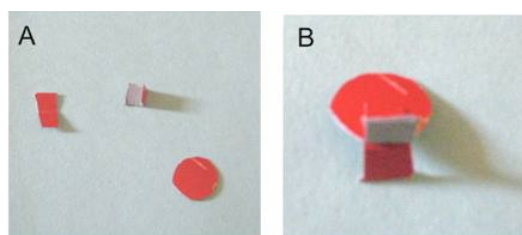This little device will display the phases of the moon beautifully.

Note: This does not explain the origin of the phases of the moon. The phases of the moon are not due to something hiding part of the moon, nor is it due to the shadow of the Earth. The phases of the moon are simply due to the fact that we only see the part of the moon that is illuminated by the sun.

Construction

- Draw a circle in one corner of the lid of the box. Use the round button or the coin as a guide.
- Cut the circle on the box neatly using the cutting device.
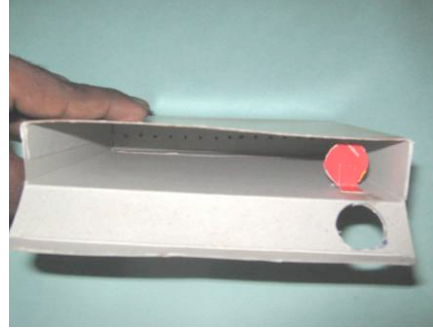- Remove the circle from the box and keep it safe.

- Cut out two rectangular strips of cardboard. Stick the two strips of cardboard to the cut out circle to make a stand for the circle.

- Stick the standing cardboard circle inside the cardboard box opposite the hole in the lid. Keep a gap of approximately 2cm between the lid with the hole and the stand.

- Mark 15 dots with an interval of about 1.5cm between each dot. Make holes on the marked dots with the pen.

- Close the cardboard box and look through the holes. Wow! You have done it.

You should see a luminous shape take change according to which hole you are looking through.

Extension

The round hole can be decorated with translucent paper to depict the light and dark patches on the moon.

You can also decorate the opening to depict other planets and moons.

This reinforces the message that all planets and moons are not sources of light but reflect the light from the sun or the start they are orbiting around. Therefore all planets and moons have phases if seen from the right place.

Source: Mr. Mani, UNAWE India – AID India