

Build a light box

Demonstration Mission 2

Objectives

Create an environment where plants can receive adequate and controlled lighting
Create a space for future plant experiments in the classroom

Materials

- One empty "copy paper" box, (e.g., Xerox)
- Aluminum foil (approximately 10-15 feet)
- Electrical cord with socket
- Plastic plate or lid (5-10 inches in diameter)
- Glue stick
- Clear tape
- Scissors
- 30-watt fluorescent circle light OR a 39-watt fluorescent circle light

Procedure

1. Cut a 1-inch hole in the center of a plastic plate or lid and trim off edges to make approximately a 4-5 inch disk with a center hole.
2. Cut several 4 X 14-cm ventilation slots in top, upper sides and back of box as shown.
3. Cut a 1-inch diameter hole in the center of box.
4. Apply glue stick to the each inner surface of the box and paste in aluminum foil to cover entire surface. Use tape to reinforce corners and edges.
5. Insert light fixture base through hole in top and through plastic plate from the inside of the box. Secure fixture by attaching socket from the outside of the box.
6. Tape an aluminum foil or reflective full-length mylar curtain to the top front edge of box. Let curtain hang down in front.
7. Strengthen curtain edges with tape.