

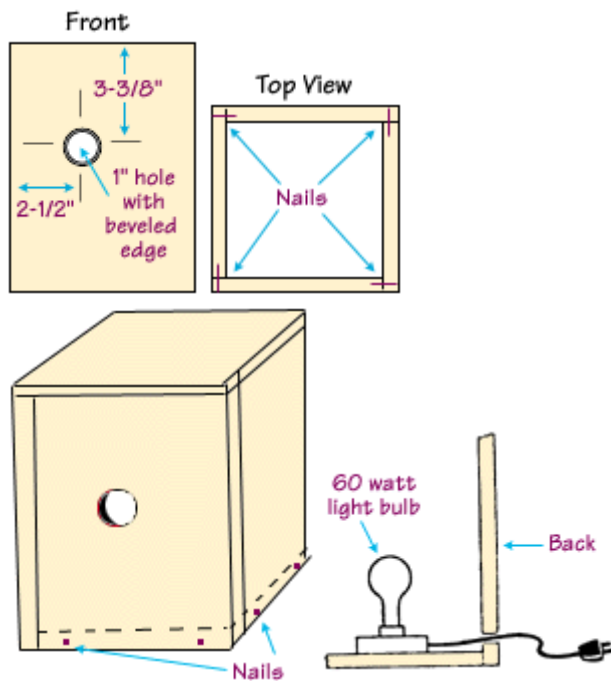
# Constructing an Egg Candler

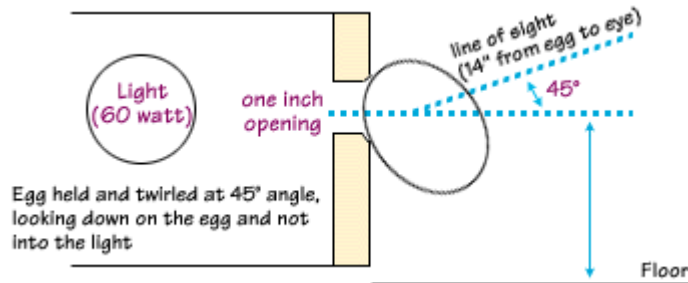
## For Wooden Candler

### Materials

- 1 60 watt bulb
- 1 porcelain socket
- 1 piece of stock lumber - 1 inch by 6 inches by 38 inches
- 2 No. 8 round wood screws, 1 inch in length
- 1 piece plywood 1/2 inch by 6 3/8 inches by 6 3/8 inches
- 1 male electric plug
- 4 small brads
- 6 feet of extension cord
- 16 seven-penny coated box nails

### Procedure



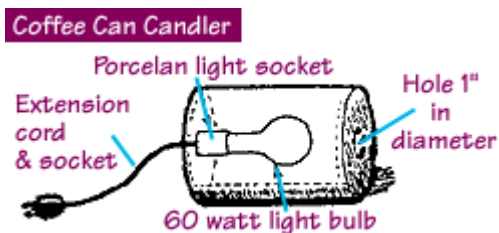


1. Cut four pieces 8 inches long from the 1 by 6 board.
2. Drill a 1 inch hole in one of the pieces.
3. Bevel the edge of the hole.
4. Nail the four 8-inch pieces together as shown.
5. Cut the remaining piece of board to fit inside the candling box as a bottom.
6. Before nailing the bottom piece in place, screw the porcelain socket to the center of this piece.
7. Wire socket with extension cord and then nail bottom in place.
8. Drill a hold in back of the candler for extension cord, and wire male plug to cord after feeding the cord through the hole as shown in figure above.
9. Nail two small cleats to the 6 3/8 inch by 6 3/8 inch plywood. This piece will act as a removable top that will be held in place by the cleats.

## For "Coffee-Can" Candler

### Materials

- 1 one or two pound coffee can or similar metal can
- 1 porcelain socket
- 1 60 watt bulb
- 1 4 to 6 foot extension cord
- Tape to fasten the end back in the can



### Procedure

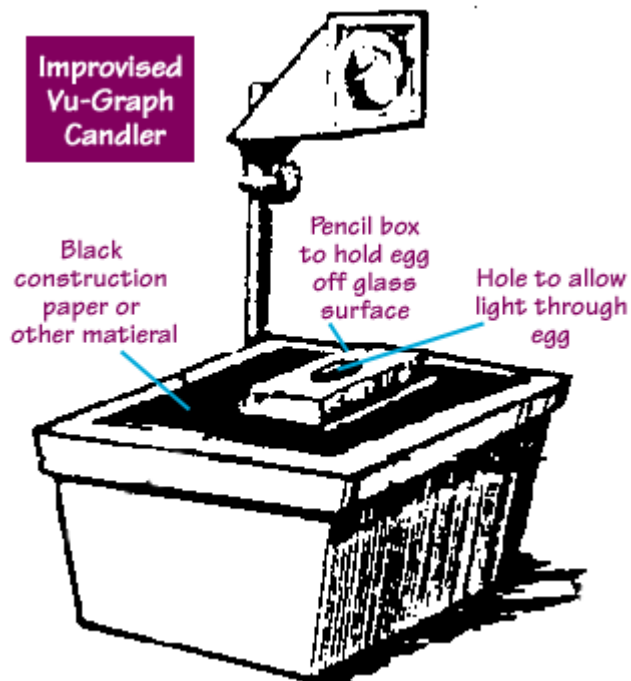
1. Remove one end of the can in such a way that the heavy rim of the can remains on the removed end. This will make it much easier to replace and can be done quite easily if the can opener is reversed from the usual method of end removal.

2. Drill a hole approximately one inch in diameter in the end of the can that has been removed or in the plastic lid.
3. Mount the porcelain socket in the inside of the can opposite the end that has been removed.
4. Drill a small hole through this opposite end and attach the extension cord to the terminals of the socket.
5. Screw in the light bulb.
6. Replace the end of the can where the large hole has been drilled and tape securely or use the plastic lid that has been darkened.
7. Hold the egg in front of the hole.

### For Improved Vu-graph Candler in the Classroom

#### Materials

- 1 overhead projector
- Black construction paper or other opaque material
- 1 small thin box similar to a pencil box or small candy box (1/2 pound size)



## **Procedure**

1. Cut a hole approximately one inch in diameter in the center of the sheet of black construction paper or other opaque material. Place this on the glass top of the vugraph.
2. Cut holes in the sides of the small pencil or similar type box. This box is to hold the egg in place so the embryo can be observed by the students.
3. Lay the egg on the box for observation of embryonic growth.

## **Flashlight and Black Paper Candler**

### **Materials**

- One 8-1/2 by 11 inch, or similar size, piece of black construction paper
- One flashlight
- Tape

### **Procedure**

1. Roll the 8 1/2 by 11 inch, or similar size, piece of black construction paper into a cone. Make opening at the small end of the cone approximately 1 inch in diameter.
2. Place a flashlight in the large end of the cone, darken the room, turn on the flashlight, hold the large end of the egg at an angle to the small end of the cone examine the interior contents of the egg.