



Name _____ Class _____ Date _____

1- 60-watt sealed beam flood light bulb
1- ceramic light base
1- lamp cord
1- 4 X 4-inch utility box

1- Romex connector
1- piece of scrap wood for a mounting base
1- cardboard box with a 1 inch diameter hole cut in it
1- roll of black electric tape to secure wires and insulation

Construction of Egg Candler

1. Attach 4 x 4-inch box to scrap wood that is used for a base.
2. Punch out one of the access holes on the utility box and run the lamp cord through it leaving 4-5 inches of wire inside the box.
3. Using wire strippers, strip the ends of the wire inside the box about 1-quarter (1/4) of an inch.
4. Tighten connector screws for Romex connector. Make sure lamp cord is secured.
5. Wire lamp cord to the ceramic light base. One wire to the dark screw, one wire to the silver screw. NOTE: It does not matter which wire goes to which screw.
6. Secure the lamp base to the box using screws provided.
7. Install the flood light bulb into the light base.
8. Cut a small hole, approximately 1 inch in diameter, into the cardboard box. This hole will be used to concentrate the light.
9. Put the box over the bulb and put an egg over the hole to start candling.
10. Remember safety. Make sure the box is large enough to not come into contact with bulb. The bulb gets extremely hot. Never leave bulb on and unattended.

Candling Incubated Eggs

Incubated eggs are candled to determine whether they are fertile and, if fertile, to check the growth and development of the embryo. White eggs should be tested for fertility on the third day. Brown shelled eggs on the fifth or sixth day because it is difficult to see the embryo clearly before this time.

What to Look for When Candling

A small reddish area with blood vessels extending away from it will be visible in fertile eggs. This is the embryo floating around inside the egg, looking like a huge red spider. If the embryo dies, the blood draws away from the embryo and forms what is called a blood ring. All clear eggs and eggs showing blood rings or streaks should be removed from the incubator. If eggs are not candled during the early stages of incubation, it will be difficult to determine whether the egg was fertile; embryos that die early soon decompose and are not easily distinguished from rotten eggs.