Make Your Own Incubator

Materials

- 20 gallon aquarium (does not need to be watertight)
- Heavyweight clear plastic
- Strong tape
- Small lamp that can use up to 75-watt bulb
- Thermometer (0-100º C). (preferably in a clear plastic thermometer case)

Instructions

1. Turn the aquarium so that the opening faces the front instead of the top.
2. Cut the plastic slightly wider than the opening and about 2 inches longer than the height of the opening.
3. Tape the plastic to the top of the aquarium, so that the plastic falls over the opening at the front. This is your "door."
4. Place the lamp in the aquarium, letting the cord come out the front under the plastic covering.
5. Place the thermometer in the aquarium so that you can read it without opening the plastic "door."
6. Try different bulbs until you find one that gives you the temperature you need for your incubator.

You can be really fancy and attach a dimmer to the lamp so that you can regulate the temperature by using the dimmer switch.

This incubator and a genetic engineering experiment using *E. coli* are described by John Iovine in "The Amateur Scientist" in Scientific American, June, 1994 pp. 108-111.