

Fuel cell

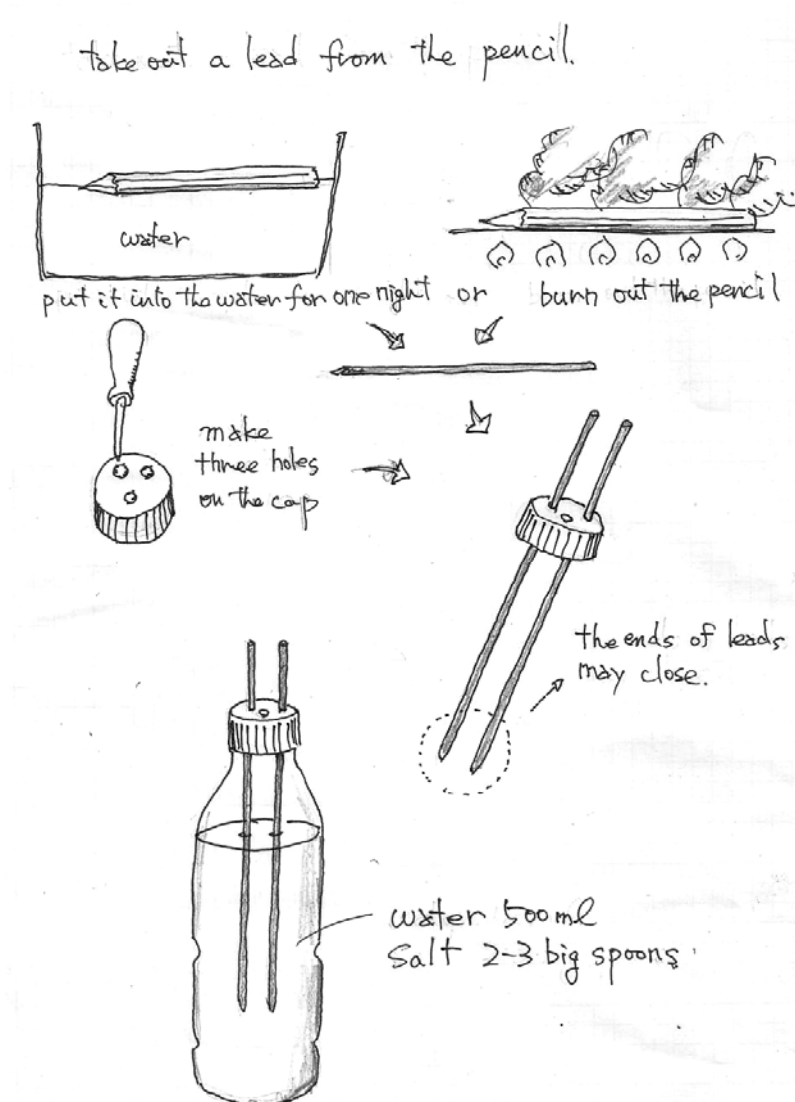
Level Elementary

Materials

lead of a pencil (2), PET bottle, dry battery (4) or power-supply unit, salt, light emitting diode(LED), music addition greeting card, sandpaper, and conducting wire(2)

Fabrication

- (1) The surface of a pencil lead is rubbed lightly by the sandpaper. Three holes are made for the cap of PET bottle. Two leads of the pencil are passed through two holes. The ends of pencil leads are brought close well.
- (2) The salt of 2-3 big spoons is put in water 500ml, and pour it in the PET bottle. The cap is sealed and the leads are dipped in the salt water.



Working

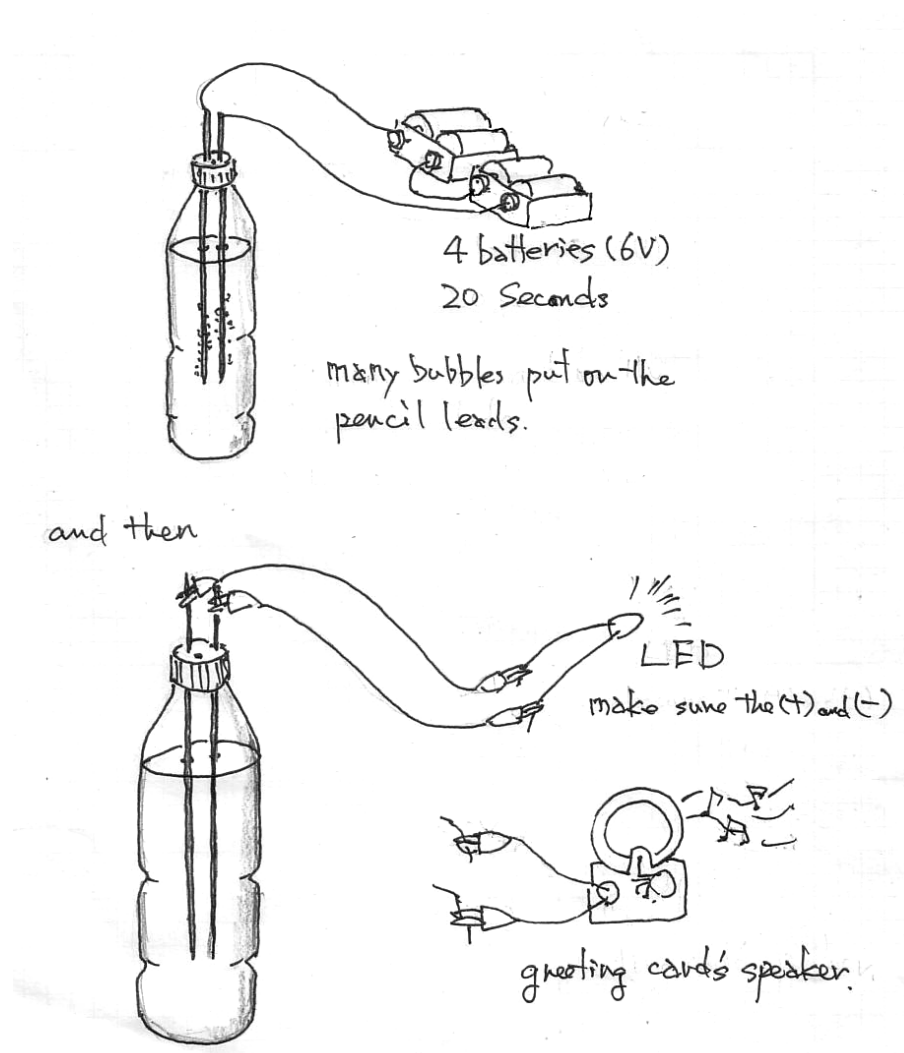
(1) Connect the pencil leads to dry batteries, and pass an electric current for about 20 seconds.

Hydrogen gas and oxygen gas begin to attach to the surface of the pencil leads.

(2) The batteries are removed, and you connect the lead to a light emitting diode (LED).

When not lighting, the pole is connected oppositely.

You may replace the light emitting diode with the speaker taken out of a music greeting card.



Science

Any kind of electrode water solution can be used but potassium nitrate is the best. When electrodes are connected the batteries, hydrogen and oxygen are produced.



In the case of salt solution, hydrogen and chlorine gas are produced.

Fuel cell reaction is vice versa.

