



Credit: Corbis

# Coin battery

It is possible to make a simple chemical battery using the materials listed below. This activity demonstrates that a battery is a storehouse of energy which stops working when the chemicals are used up. An ordinary non-rechargeable battery is made up of a zinc container and a carbon rod separated by absorbent paper soaked in a strong

acid. A chemical reaction produces a flow of electrons (electricity) between the two poles. In this activity vinegar has been substituted for the strong acid and different types of coins for the zinc and carbon.

## You will need

- Vinegar
- Small bowl
- Strips of paper towel, 2.5 x 2.5 cm (19 in all)
- 10 copper-coloured coins (i.e. 1p, 2p)
- 10 other coins (any metal except copper)

## Steps

1

Pour the vinegar into the bowl. Soak the paper strips in the vinegar and make a pile of the coins, alternating copper coins with the other ones. Separate each coin with one of the vinegar-soaked paper strips.

2

Moisten one fingertip on each hand and hold the pile of coins between these fingers – you should get a slight electric shock. The vinegar acts as a conductor, allowing a flow of electrons to occur between the separated metals of the two coins, effectively turning the stack into a battery.

## Analysis/ discussion

**How many objects that you rely on use some sort of battery? You might be surprised.**