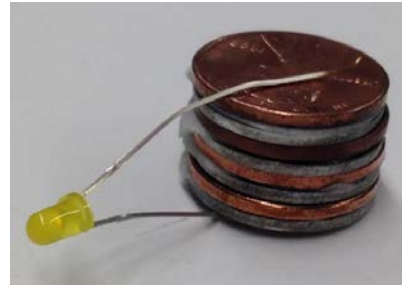


Coin Battery

1. **Cut** out circles the size of a coin, out of thick paper towels.
2. **Soak** paper circles in a solution of vinegar and salt.
3. **Stack** circles and metals to make a battery cell: zinc washer, paper, copper penny. Continue stacking in order.
4. **Measure** the voltage with a multimeter. Try to light an LED.



It's Electric!

A **battery** stores chemical energy and converts it to electrical energy. In the coin battery, two different metals, called **electrodes**, are stacked. One metal is more reactive than the other, creating an electrical potential difference, called **voltage**. Electrons move from one metal to the other through an **electrolyte** solution (vinegar and salt water). The movement of electrons creates an electrical **current** that powers the LED.

The Power of Money

- Try different types of metals such as coins or aluminum foil. Does it work if you stack only one type of metal?
- Try different solutions to soak the paper.
- How does increasing the number of stacks change the voltage?

NAVY NOTES



Corrosion is also an electrochemical process. It can occur when two different metals are immersed in salt water. The Navy must prevent corrosion on ships.