**Electrical energy from chemical energy**

Get several pennies and a piece of aluminum foil. Clean the coins well with steel wool or fine sand paper. Cut the aluminum foil and paper towels into discs of so that they are slightly larger than the coins. Soak the paper in salt water. Place a coin on top of a paper disc, then a tinfoil disc and then a penny as shown in the diagram. Be sure that a penny is on the bottom of the stack. Hold them between your thumb and finger. Connect both ends of the coil from your sensitive meter to the coins and watch the compass.

**The Voltaic Pile**

- The Voltaic pile is regarded as the first electric battery, it was invented by Alessandro Volta in 1800.
- The original Voltaic pile was a stack of alternating layers of zinc, blotting paper soaked in salt water, and silver.

**Our Version:**

An alternating pile of pennies (copper) and nickels (nickel) was made. Paper towels soaked in NaCl solution was placed between the coins to increase conductivity. The pile was placed horizontally in a tray.

**Result:**

A voltage of 0.607 V was obtained when the length of the coin pile was 20.3 cm.

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