**Batteries with pennies and nickels**

Here's a fun little experiment that is unusual and sure to capture the attention of your Brightest Kids. Basically, you build a battery using pennies, nickles and salt water.

To generate about 1 volt you will need: six pennies, six nickles, six squares of paper towel cut smaller than the nickels, a glass of water, 2 tablespoons of salt.

**How....**  
  
Pour two tablespoons of salt into a glass of water and try to keep it mixed with the water.

Put in the pieces of paper towel that were cut to the size of the nickel.

Once you have each piece of salt moistened paper placed on the nickel, place a penny on top of each nickel.  
  
Now stack all of the coins. The sequence should be:  
  
(The Nickel, is the bottom)  
Nickel  
Paper  
Penny  
Nickel  
Paper  
Penny  
Nickel  
Paper  
Penny  
etc...  
etc...

Now it is time to test your battery with a Multimeter. The multimeter measures how much voltage is coming from the coin battery.  
  
Please note, you can continue to add more coin sequences to the top of the other coins to get more voltage. Eventually you should be able to stack enough coins to generate enough energy to light a single LED bulb.   
  
For the Multimeter: Turn it to the number "20" for voltage, to get an accurate reading.

If your battery does not make any voltage, check the following:  
  
1)Make sure the coins are stacked in an orderly fashion. Make it as upright as possible.  
2)If your multimeter does not show any number, do #1, and also try switching the multimeter leads around.  
3)Taste the paper to make sure it is quite salty.  
4)Make sure the pieces of paper are not touching each other.  
5)Add more coins! If you don't see much voltage, just add ore and more coins to get it to a good amount of voltage.



[*i*](http://www.instructables.com/id/Penny-and-Nickel-Battery/?ALLSTEPS)

**How Does It Work?**

Well, its quite simple you see this is a single cell of a battery, so the zinc nickel and copper penny are called electrodes. The salt is called the electrolyte. As we know, all batteries have a "+" and a "-" terminal. Electric current is a part of current using electrons. Certain materials called conductors allow the electrons to flow through them. The two metals are good conductors, and so the current will flow from the "-" terminal through a conductor(salt mixture) to the "+" positive terminal.

These types of batteries are known as Voltaic Piles. You can learn more about them here: [Voltaic Pile](http://en.wikipedia.org/wiki/Voltaic_pile)