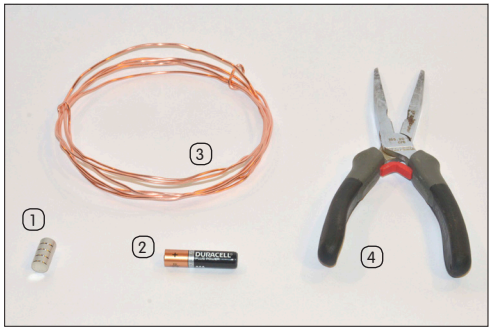
SIMPLEST ELETRIC MOTOR

Get things moving with just a battery, some magnets and a bit of copper wire!

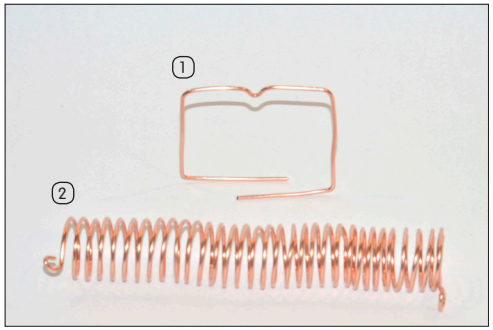
BEE CREATIVE

Tools and materials



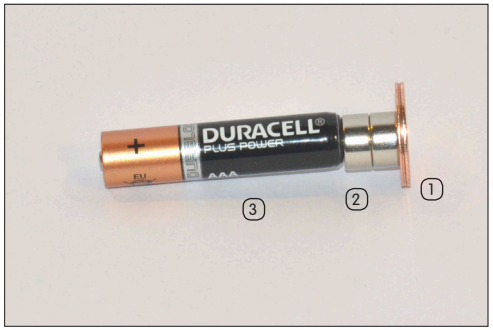
1. 4x Neodym-magnets or rare earth magnets with a diameter bigger then the battery
2. 1x Batterie AAA or AA
3. 2 to 3 meters bare copper wire
4. Pliers

Step 1 – Bend



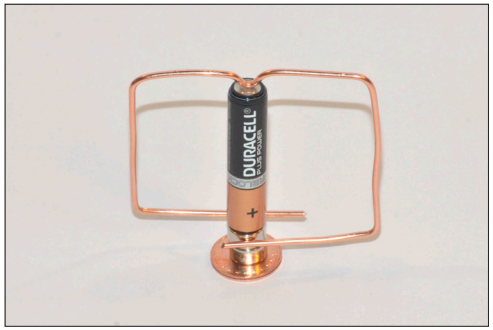
1. Use the pliers to form a square with some of the bare copper wire. The height of the square should be similar to the length of the battery plus magnets
2. With the help of a stick you can make a coil using around 2 meters of the bare copper wire.

Step 2 – Prepare the motor



1. Use a 5 cent copper coin as a base for the motor
2. Place the 2 magnets on the 5 cent piece
3. Then place the battery on top of the magnets.

Step 3 – Start your motor

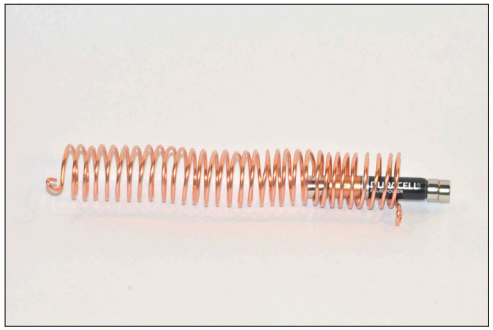


1. Insert the battery into the square shaped piece of wire you created previously as shown in the picture.
2. Enjoy the magic as the wire begins to turn!

Step 4 – Prepare Coil Motor

1. Place 2 magnets on one side of the battery
2. Place 2 magnets on the other side but with the pole turned in the opposite direction:
   [+-] [+-] [battery] [-+] [-+]

Step 5 – Assemble



1. Place the battery in the coil
2. Watch the battery move through the coil like a train
3. Enjoy the maker-magic!

(The homopolar motor is a direct current electric motor with the magnetic poles aligned in such a way that the battery travels through a coil of conductive wire with the force of the generated magnetic field)

Notes