

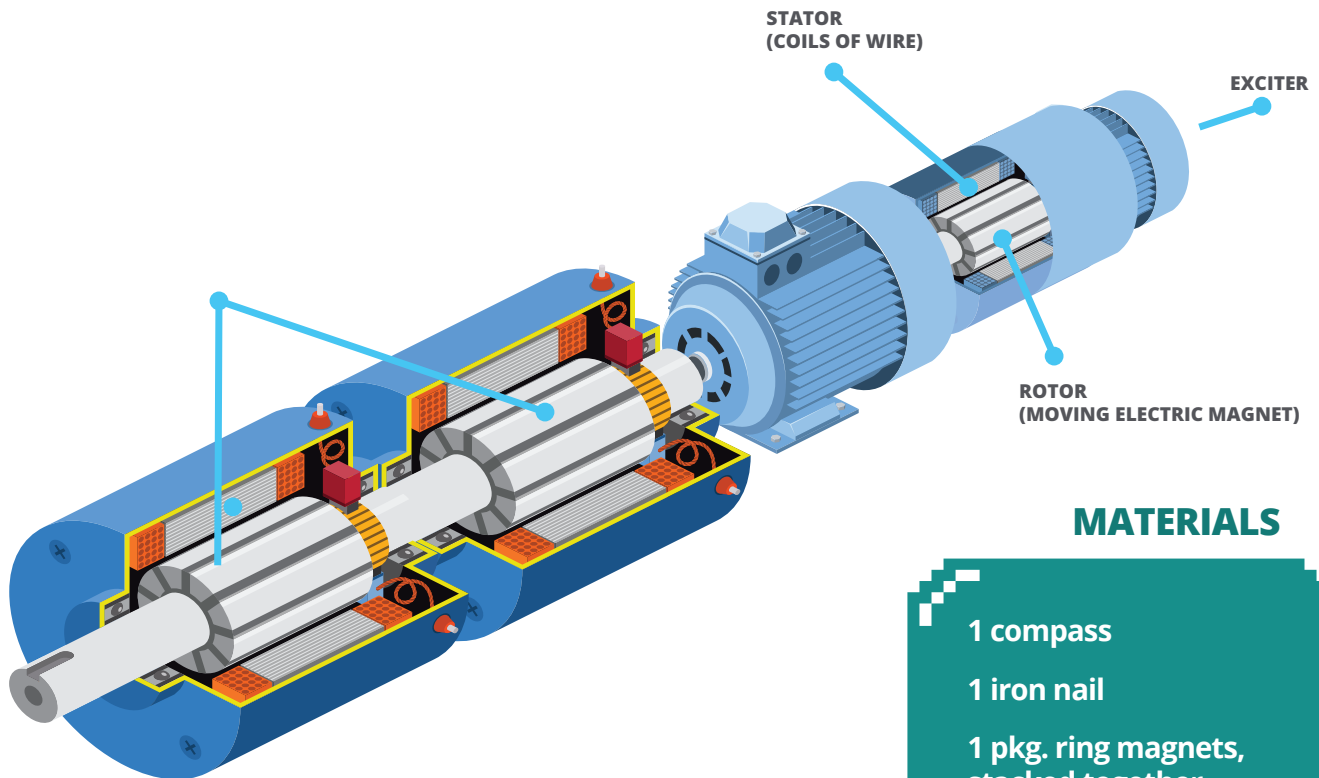


ELECTROMAGIC (1 OF 3)

BACKGROUND

Your local utility delivers electricity to your home, but where does the utility company get the electricity? They make it in a generating plant by changing mechanical energy (motion) into electrical energy. Giant coils of wire are moved past powerful magnets—then presto! The pull of the magnets causes the electrons in the metal wire to move. It's not magic. It's electromagnetic induction.

In this activity, you'll use a stack of magnets to generate current in a wire. You'll use a homemade galvanometer (a compass wrapped in wire) to detect the current.



MATERIALS

- 1 compass
- 1 iron nail
- 1 pkg. ring magnets, stacked together
- 2 pcs. 18-22 gauge wire, each 50 inches long with ends stripped
- 1 D battery
- electrical tape
- wire cutters