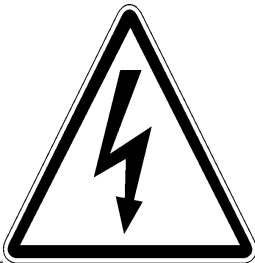


Glue here

Cut along  
the outer  
edges. Fold  
with a fan  
fold on the  
dotted lines.



An  
**ELECTRIC**  
Timeline



Glue here

Cut along  
the outer  
edges. Fold  
with a fan  
fold on the  
dotted lines.



# Electricity Timeline

For more info see <http://www.choptankelectric.com/kids/timeline.html>

1752

Benjamin Franklin conducts his famous kite experiment.

1820

Electricity and magnetism are proven to be related.

1821

Michael Faraday invented the first electric motor.

1876

Alexander Graham Bell invents the telephone.

1879

Thomas Edison invents the incandescent light bulb.

1903

Electric washing machine is invented.

1933

President Roosevelt and the New Deal create Tennessee Valley Authority.

1935

The first Major League Baseball game played under the lights.

1935

Rural Electrification Administration (REA) forms.

1935

First REA-financed electric co-op line goes up.

2003

Power grid failure darkens Northeast United States.

2005

Broadband over powerline may be the next frontier in electricity.



New  
Words







Research and complete a short report on electricity using the minibook at this address:

[http://www.abcteach.com/free/s/shortreport\\_electricity.pdf](http://www.abcteach.com/free/s/shortreport_electricity.pdf)

The report should answer these questions:

1. What is electricity?
2. What are electrons, neutrons, and protons?
3. What charge do electrons, neutrons, and protons carry?
4. How do we measure electric force?

# Positive/Negative Charges Experiments

## Materials Needed:

3 strips of newspaper  
Plastic wrap

## Procedure:

Holding 2 strips of newspaper up but not touching take the plastic wrap and rub it up and down the strips of newspaper. Now try and touch them together.

## What happened?

Now put one strip down and pick up the other. Rub only one strip with the plastic wrap and then put the strips close to each other.

## What happened?

## Materials Needed:

2 balloons,  
2-3 ft. of string  
Tape

## Procedure:

Blow up the balloons and tie the strings to the end. Now hang them beside each other in a door way.

## What happened?

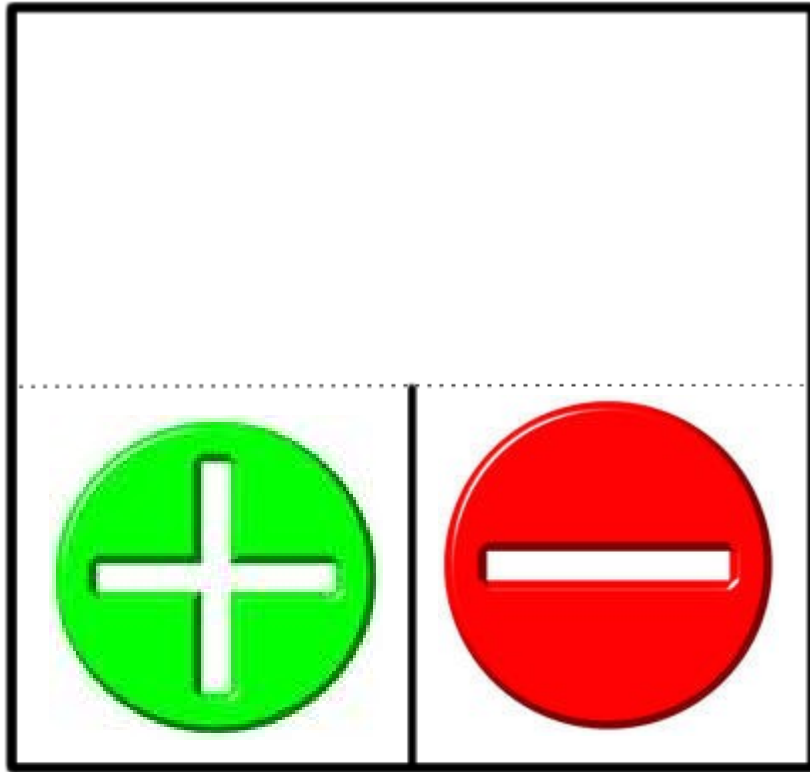
They should be close but not touching.

Now rub them in your hair or use a piece of wool cloth. Let go and see what happens.

They should push away from each other.

## Why?:

Two like charges repel each other but opposite charges attract each other. You can not put 2 positives or 2 negatives together.

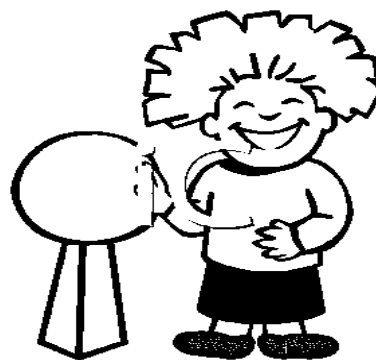


Cut along solid lines. Fold on dotted line.

Inside, write about the results of your experiment. What happened? Why did it happen?

Cut out along outer lines. Fold on dotted lines.  
Flap the smaller over the top like a matchbook.

*Static Electricity*



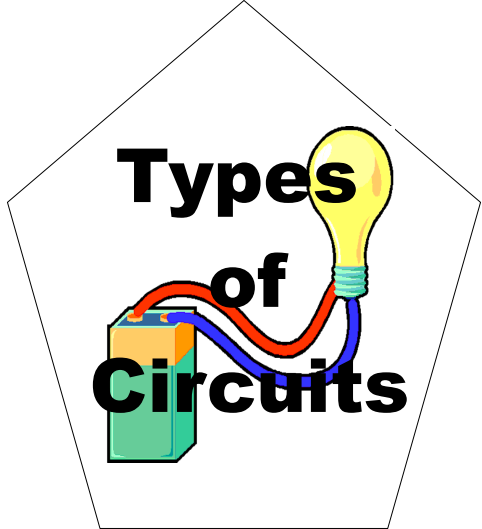
Rub a balloon against your hair vigorously.  
Hold a piece of tissue paper close to the  
balloon. What happens? Record your  
results inside the matchbook.  
Also, define static electricity on the cover of  
the matchbook.

What is an electric circuit?

What is a series circuit?

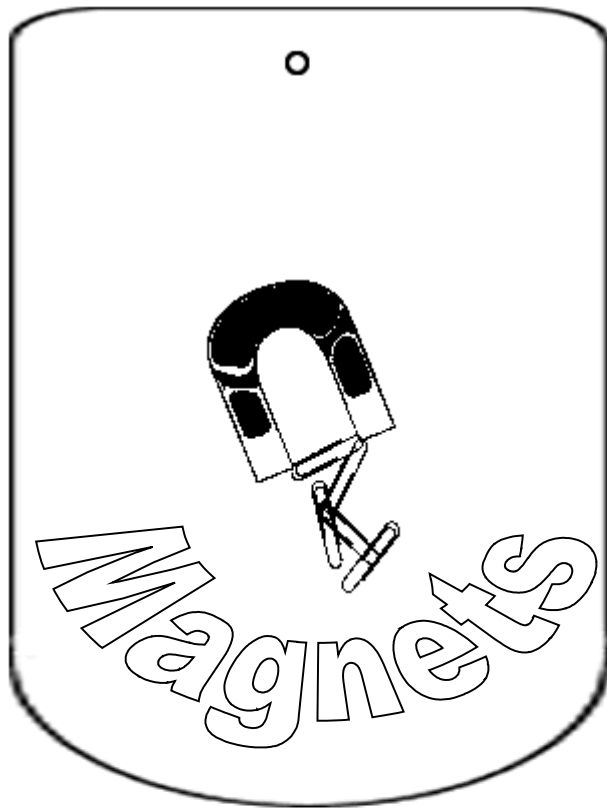
What is a parallel circuit?

Cut along outer lines. Fold into thirds.




*circuit  
experiments*

**Glue here**

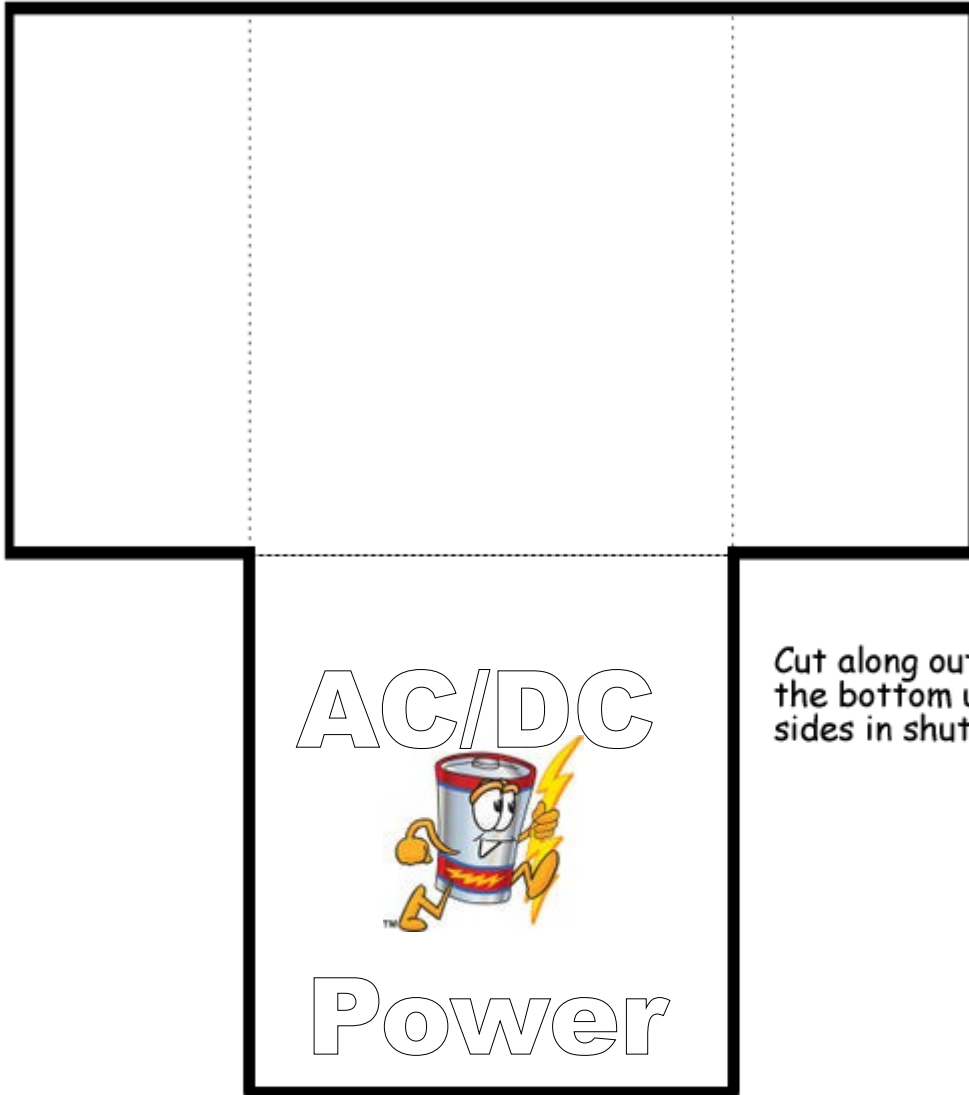


Cut out all shapes and punch holes in each. Stack them up and fasten them together with a brass fastener. They will now be like a fan.

What is a magnet?

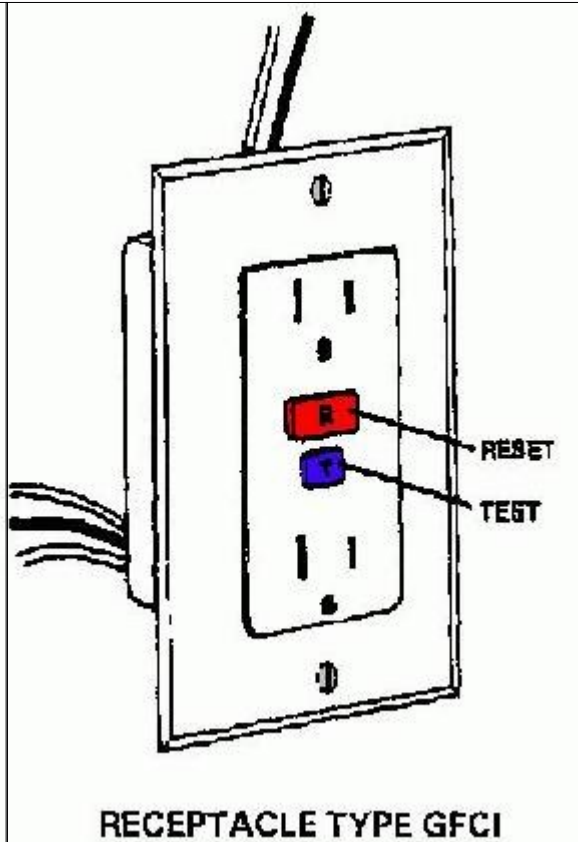
Using 2 bar magnets and a compass, investigate your magnet. Write down 5 things you observed.

- 1.
- 2.
- 3.
- 4.
- 5.



Cut along outer edges. Fold the bottom up, then fold the sides in shutter style.

Inside the minibook, explain the difference between AC and DC power.



Inside the minibook, answer these questions:

1. What is a GFCI outlet?
2. Where are they usually located? Why?

# WHY...



does electricity shock people?

Electricity flows through water almost as easily as it travels through the wire that brings electricity to your house.

Your body is 70% water. So if you touch electricity, it will flow through you, and you will be badly hurt.

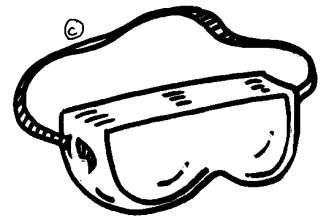
The amperage of the electric current and length of time you're in contact with it, determines the injury.


**S**



**A**

**F**



**E**

**lectrical**

**T**

**ips**

**Y**

Avoid Electric  
Shock!



# Be Safe

## Around Electricity!

the truth about electric shock!

This is so important! Electricity can shock, burn or kill you! You never know when contact with electricity will be fatal, but you can count on it hurting. It's not only power lines that can kill or injure you if you contact them, you can also be killed by shock from an appliance or power cord in your home if you don't know how to take precautions!

### Avoid Electric Shock!

- Never climb utility poles or play on fences around substations.
- Keep electrical cords and wires away from heat and water.
- If you are touching water, never touch electrical devices such as light switches, hair dryers, curling irons, mixers, or toasters.
- Don't pull on electric cords to unplug them.
- Keep kites away from power lines, and never fly metallic balloons outside.
- Don't put your fingers in a light bulb socket.
- If you see a fallen electrical wire, stay away!
- Disconnect appliances before cleaning them.
- Tell someone if you see a frayed cord.
- Don't swim during an electrical storm.
- Don't touch overhead wires when you're carrying a ladder, pool skimmer, or any other long object.
- Don't climb a tree that has power lines running through or near it.
- Don't use an electrical appliance when you're wet.
- Tell your parents about damaged plugs and cords on outdoor and indoor appliances.
- Don't touch anyone or anything that is touching a downed wire.