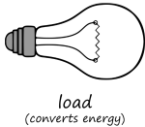
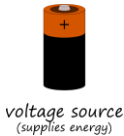


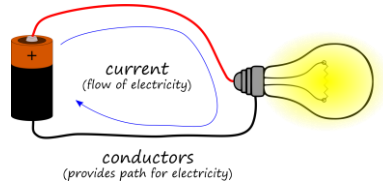
Jocelyn H. Lee Innovation Lab

- Grand opening in February 2015 – the first dedicated public library makerspace in southeast Texas
- Three functions supporting the mission of HCPL:
 - Provide access to tools
 - Offer classes for all ages
 - Foster a community of makers
- Users range from homeschoolers to hobbyists to entrepreneurs to small businesses

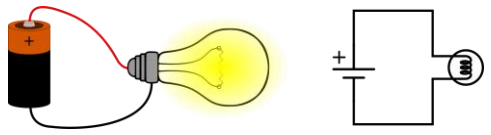
What is a circuit?



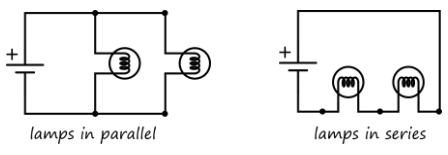
What is a circuit?



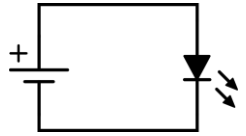
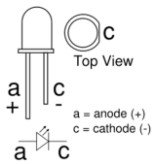
What is a schematic?



Parallel v. Series Circuits



LED: Light Emitting Diode



LEDs often require a resistor in the circuit, but it is generally safe to leave out the resistor when using 3-volt coin cells.

Paper Circuit Supplies

3V Lithium Coin Cell
(voltage source)



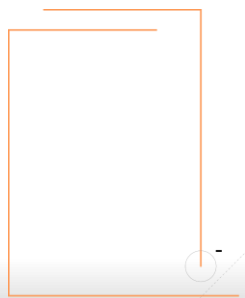
LED
(load)



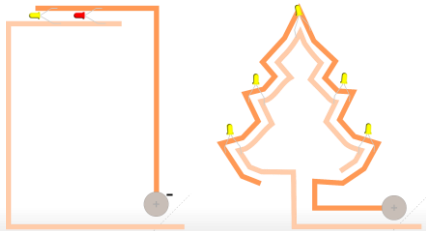
Copper Foil Tape
(conductors)

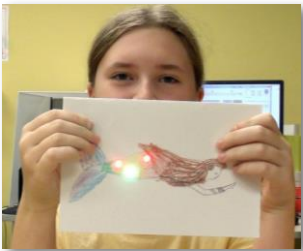
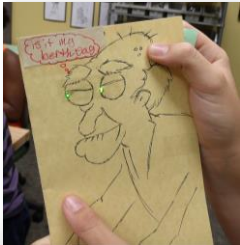


... plus paper, tape, scissors and other crafting supplies.



Paper Circuit Examples







More Ideas...

- Use LEDs to illuminate famous illustrations or book covers
- Incorporate paper and copper-tape switches
- Solder LEDs and other components to copper tape
- Build complex and interactive circuits using additional components
- Use conductive ink
- Use special 'circuit stickers' to conveniently add LEDs, sensors and microcontrollers
- Incorporate origami or pop-up book construction



Online Resources

"Paper Circuits with Copper Tape"; High-Low Tech / MIT Media Lab
<http://highlowtech.org/?p=2505>

"Copper Tape for Paper Circuits"; Jie Qi / Chibitronics
<http://chibitronics.com/copper-tape-tutorial/>

"Paper Circuits"; The Tinkering Studio / Exploratorium
<http://tinkering.exploratorium.edu/paper-circuits>

"Great Big Guide to Paper Circuits"; Sparkfun Electronics
<https://learn.sparkfun.com/tutorials/the-great-big-guide-to-paper-circuits>

Circuit Stickers: www.chibitronics.com

Circuit Scribe (conductive ink): www.electroninks.com





Paper Circuits

Online Resources

“Paper Circuits with Copper Tape”; High-Low Tech / MIT Media Lab
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“Copper Tape for Paper Circuits”; Jie Qi / Chibitronics
<http://chibitronics.com/copper-tape-tutorial/>

“Paper Circuits”; The Tinkering Studio / Exploratorium
<http://tinkering.exploratorium.edu/paper-circuits>

“Great Big Guide to Paper Circuits”; Sparkfun Electronics
<https://learn.sparkfun.com/tutorials/the-great-big-guide-to-paper-circuits>

Circuit Stickers: www.chibitronics.com

Circuit Scribe (conductive ink): www.electroninks.com

Example Supply List

Costs \$0.75 - \$1.00 per participant (in reasonable quantities)

Eunicell CR1220 5012LC Lithium 3 Volt Coin Cell Batteries (40 pcs)

<http://amzn.com/B00PNW5PDW>

300Pcs 3mm and 5mm Assorted Clear LED Light Emitting Diodes 5 Colors

<http://amzn.com/B018NQ77HG>

Bluecell 50 pcs RGB Full Multi color Flashing LED

<http://amzn.com/B006LUZLNY>

1/4 inch x 55 yds Copper Foil Tape - EMI Shielding Conductive Adhesive

<http://amzn.com/B00CBPK0FW>

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