

The Electric Notebook

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...developing the engineering
mind in children by making
simple paper circuits, simple
programming, and simple robots

Welcome!

Agenda

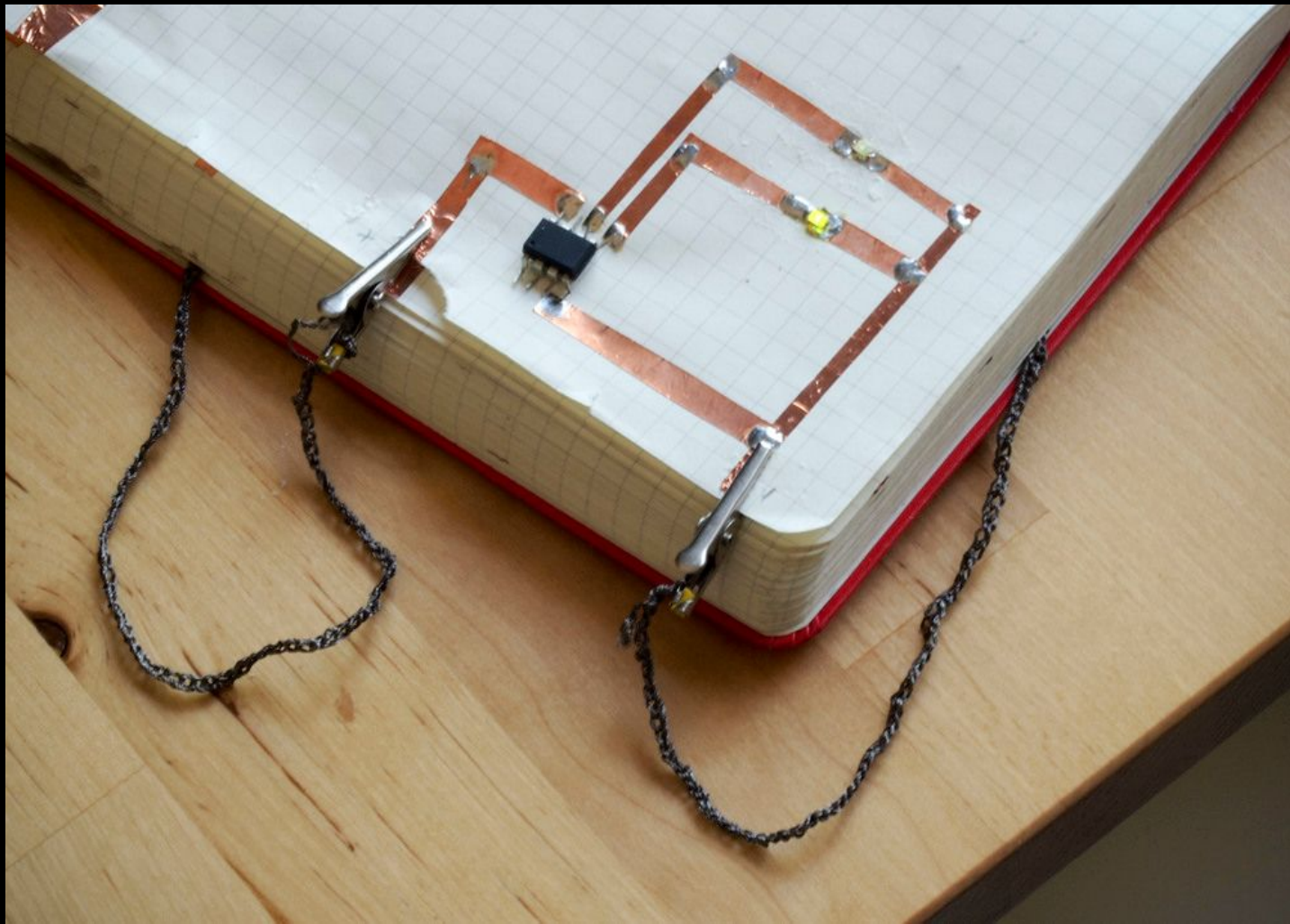
- Introduction
- The 21st Century Notebook: video
- Creating a single circuit page
- Demo introduction for the page
- Hack your Notebook!
- Share project on Google+
- Resources



Hack your Notebook!

What is The Electric Notebook?

- [What if ...](#)
- [The Tide Book by Natalie Freed at Nexmap](#)
- [Tide Book interview with David Cole of CV2](#)
- [Dandelion Painting by Jie Qi](#)



It is easy to learn to program your notebook to light up!

What are the possibilities?

- **CCSS.ELA-LITERACY.CCRA.W.3**

- Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details and well-structured event sequences.

- Next Generation Science Standards (NGSS)

Cross cutting concepts:

- Patterns
- Cause & Effect
- Scale, Proportion, Quantity
- Systems & Systems Models
- Energy & Matter
- Structure & Function
- Stability & Change

- **Studio Habits of Mind**

- Develop Craft
- Engage and Persist
- Envision
- Express
- Observe
- Reflect
- Stretch and Explore
- Understand the Art World

Materials

- **COPPER TAPE** Available as a snail repellent from home improvement stores (non-conductive adhesive) or with conductive adhesive from electronics and DIY sources.
- **LED**
- **SURFACE-MOUNT (SMD) LEDs** designated as 1206 are much larger and easier to solder if you drop a bead of solder down first, lay down the SMD, then heat copper tape.
- **AXIAL LEDs** from <http://www.digikey.com/product-search/en?keywords=516-1398-ND>
- **CHIBITRONICS CIRCUIT STICKER LEDs** Available in many sizes and colors and comes with extra adhesive if you want to reuse the stickers.
- **3V COIN BATTERIES** These can be bought in bulk online for much lower prices than through retail stores.
- **SOURCES**
- jameco.com
- amazon.com
- sparkfun.com
- adafruit.com
- nexmap.com
- digikey.com

Creating your page

*You can access
nexmap.org to
review steps at
your leisure

- [Simple Circuit Demonstration](#)
- [Simple Circuits](#)

Developing the Engineering Mind

...what begins as a simple paper circuit can lead to learning simple programming, and to simple robots

Simple Red Cardinal Robot

Free Resources

Share your Project on Google + with the

- [21st Century Notebooking Community](#)
- [Nexmap - free notebook downloads](#)
- [Chibitronics - free tutorials and project ideas](#)
- [Sparkfun - free paper circuit guide and downloads](#)
- [Hack Your Notebook - Teaching Materials](#)
- **Google Soft Circuit to find inspirational ideas to make your own!**

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