

Simple Homopolar Motor



What you will need:

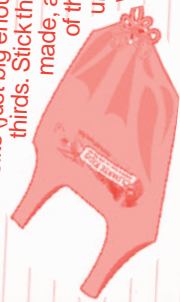
- AA battery
- Copper wire
- A strong round magnet (neodymium is the recommended type)

How to make it:

1. Attach the magnet to the negative (flat) end of the battery.
2. Shape the wire as seen in the photograph, with a slight bend at the top. Make sure that the bottom wraps around and touches the magnet.
3. Place the shaped wire onto the magnet and battery, with the bent end touching the positive side of the battery.
4. Watch the wire spin round and round.
5. Now flip the magnet over. When you place the wire back onto the battery, it should spin the opposite way.
6. You can also try to build other shapes out of the wire. Have fun and be creative!

Make a T-shirt Bag

You'll need an old T-shirt, scissors, and a large safety pin. Lay the shirt flat and cut off the sleeves, going about two inches past the shoulder seam towards the neck. Make the cut extend a couple of inches below the bottom of the sleeve to make the handle "holes" large enough to put over your shoulder. Cut the V or circle of the neck into a large square. Cut three strips of 1/2"-wide cloth from the sleeves, pulling them taut so they curl inward. On the bottom hem of the shirt cut three small slits (just big enough to slip in the safety pin) dividing the width into thirds. Stick the safety pin through the end of one of the strips you made, and close the pin. Insert the pin, with strip, into one of the slits in the hem. Work the strip through the hem until you reach the next slit then pull it out. Repeat with the other strips, working around the hem. Now tie all the strips together in a secure knot and you have a bag that's ready to go!



Web Picks Focus on Technology

Whether you know a little or a lot about technology, you are sure to find plenty of technology information on the PPLD website.

On the left-hand side of the PPLD website (ppld.org), under the "Research" heading, check out the "Recommended Websites" section of the website.

From there, type in the word "tech" in the "Search Websites" field.

Among the sites our PPLD librarians have listed with a tech influence are CNET, Colorado Virtual Library, and Discovery.com.

CNET has product reviews, news, price comparisons, software downloads, tutorials, podcasts, and much more technology-related content.

The Colorado Virtual Library has a "Tech Help" section which provides lessons on computing from the very basic to digital photography, eBooks, gadgets, etc.

And, Discovery.com has a Tech News section with current technology-themed articles. An excellent source for up-to-the-minute trends in technology.

So, whether you are a digital native or a digital immigrant, check out the "Recommended Websites" on ppld.org for all your technology-related information!

Fun Kids Reads

- J Easy
- The Berenstain Bears' Computer Trouble** by Jan Berenstain
- Patrick's Dinosaurs on the Internet** by Carol Carrick
- When Charlie McButton Lost Power** by Suzanne Collins
- The Computer Teacher from the Black Lagoon** by Mike Thalor
- Doug Unplugged** by Dan Yaccarino
- J Fiction
- Mousenet** by Prudence Breitrose
- The Homework Machine** by Dan Gutman
- Saving Thanehaven** by Catherine Jinks
- Brother From a Box** by Evan Kuhlman
- Hacked!** by Mur Lafferty
- Cyberia** by Chris Lynch

Teens and Technology: Stories to inspire

- Fiction
- The Future of Us** by Jay Asher & Carolyn Mackler
- Evil Genius** by Catherine Jinks
- Fever Crumb** by Philip Reeve
- Cinder** by Marissa Meyer
- Human.4** by Mike A. Lancaster
- Nonfiction
- 609.119
- Ideas That Changed the World** by Julie Ferris
- 790. U54
- Unbored: The Essential Field Guide to Serious Fun** by Joshua Glenn & Elizabeth Foy Larsen
- 629.892 F699L
- Lego Mindstorms NXT 2.0 for Teens** by Jerry Lee Ford, Jr.
- 973.7301 A431M
- Mr. Lincoln's High-Tech War** by Thomas B. Allen
- Magazine
- Make: Technology on Your Time**

Tell us what you think! We welcome topical ideas to enhance your educational endeavors. Contact gsohns@ppld.org.



HOMESCHOOL CONNECTIONS

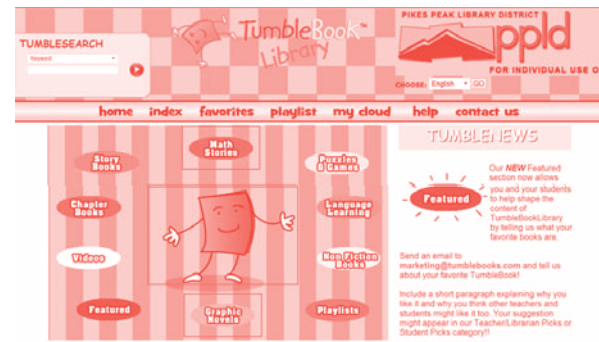
An Educational Resource Tool

Winter 2013/2014

Once upon a time . . .

when homeschooling was new in Colorado, and you needed an outline map, you would BUY a book with outlines, go to a copy store, and make copies. This was only 25 years ago, and my, how things have changed! Now, there are so many possible online ways to find an outline map that they probably cannot be counted.

Technology should, first and foremost, save time. Pikes Peak Library District has oodles and oodles of resources that will both save you time and provide quick and easy access to all kinds of things you can use in your homeschool.



TumbleBooks

From the ppld.org home page, look for the KIDS WEB icon on right side of screen. When you click on this, the next screen will show a busy page, with a little blue book rolling across the bottom of the screen. Click on the rolling book, and enter the TumbleBook world. There are hundreds of books available, both fiction and nonfiction, that can be listened to as you read along the highlighted words. Games based on the books include puzzles, word catch (a spelling identification game), memory - with words, not pictures, match the sentence to the picture, and more. Over 80 video clips from National Geographic are available. There is an iPad app, and has an excellent record in helping children with reading. Anyone can use TumbleBooks – no library card required.

and a "tour" that explains the many, many things you can do. TumbleBooks is a top notch reading technology tool, and has an excellent record in helping children with reading. Anyone can use TumbleBooks – no library card required.



CultureGrams Do you plan on studying the 50 states? Canadian provinces? Countries of the world? From KIDS WEB, click on Homework Help and then look for the star in the left-hand column and click Kids Databases. You will see CultureGrams on the list. There are photos from the country, videos, recipes, outline maps, as well as standard information that is available to print as a PDF, email, or read the entire report online. All of the following resources can also be found on this same list.

BrainFuse HelpNow! Free online tutoring. Live homework help and skills building from expert tutors in math, science, social studies and English plus writing and reading assistance. Designed for grades K - Adults. Tutors available online Monday - Sunday from 2 - 11 p.m.

Mango Languages Are you wanting to learn a foreign language? Mango is for you. Learn a new language. Choose from 22 foreign languages plus 14 English as a Second Language options.

Searchasaurus - Do you need to find some children's magazines? Informational magazines, with articles, maps, flags, etc? Everything comes with a "Lexile level" - a reading level, which can be helpful in directing your reader to appropriate difficulty articles. There are outline maps here, too.

World Book Online for Kids This GREAT resource is the very last listing under Kids Databases, so many people never find it. Explore this and see what it can do for you and your family. Maps here? Of course!

PPLD continues to add new resources. Stop by your favorite library if you have more questions, or use the online ask PPLD chat feature on the right-hand side of ppld.org. Happy homeschooling with the library!

To contact PPLD's Homeschool Committee, please email gsohns@ppld.org.

The ^{new} BookShelf
 – great new books for homeschoolers

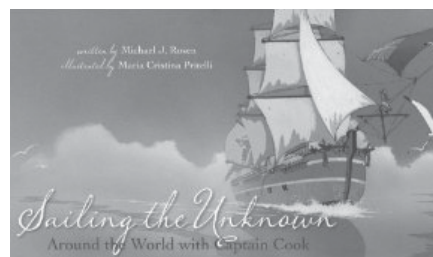


Henry and the Cannons:
An Extraordinary True Story of the American Revolution
 By Don Brown Published 2013

In 1775 in the dead of winter, a bookseller named Henry Knox dragged 59 cannons from Fort Ticonderoga to Boston across 225 miles of lakes, forest, mountains, and few roads. It was a feat of remarkable ingenuity and determination and one of the most remarkable stories of the revolutionary war.

Ages 5 - 10 – American history, character study, perseverance

Sailing the Unknown: Around the World with Captain Cook
 by Michael J. Rosen Published 2012



This beautifully illustrated book is written as the journal of Nicholas Young, a ship's boy during the three year voyage around the world with Captain Cook aboard the Endeavor. The title page shows the approximate route the ship sailed, leaving Plymouth, England in 1768.

Ages 6 - 10 – History, journal writing



Brothers at Bat: The True Story of an Amazing All-Brother Baseball Team
 By Audrey Vernick Published 2012

Imagine a time when there were baseball teams made entirely of brothers; there were 29 such teams, and this is the story of the Acerra boys. This is their story, and it is a wonderful book to read. They started playing in 1938 and their final game was in 1952.

Ages 5 - 10 – American history, baseball, family stories

Helen's Big World: The Life of Helen Keller
 By Doreen Rappaport Published 2012

This big, new picture book biography about Helen Keller is a delight to read. The book is full of quotes from Helen Keller which gives the entire book the feeling that she is telling the story. Each illustration clearly carries the story along.

Ages 5 - 10 – Biography

The Tapir Scientist
 By Sy Montgomery, photos by Nic Bishop Published 2013

Animal books are a top reading choice for many children, and here is a brand new book that not only teaches about animals in South America, but about how science works, what questions can be asked, and just how do they get the animals to be still. The answer to that last question is darting, but did you know that it is not as easy as it would seem to be? Look for other books by this author and photographer, and write each title you use under "SCIENCE."

Ages 5 - 12 – Science

Pikes Peak Library District

Secrets

Treasures in the PPLD website



Little-Known

Universal Class
 One of the biggest obstacles to finding treasures is not knowing where to look. Here is the easiest way to find this particular pearl: From the library homepage at ppld.org, click on the Career Compass icon from the list of links in the middle of the page, then scroll all the way to the bottom. There are other gems under this heading, so scroll slowly.

One of the biggest obstacles to finding treasures is not knowing where to look.

Universal Class is a huge treasure trove, and as of September 2013, contains over 500 classes that are all FREE to participate in. You take all of the classes online through your computer, so you will need Internet access. Classes are listed by subject and by titles. You can browse through the list before setting up an account.

The username you register with will be the username for your student account, and your postings in class will all bear your username.

"Continuing Education" credits are available for each class; you can print these when you complete your coursework. Participation in class includes posting to discussions, commenting on discussions, posting pictures of your work, etc. There will be reading to do, websites to visit, and activities to complete. You will have to do the work to get the credits.

Homeschooling is a category listed and there are about 40 classes on the current list. Some of these sound great – ABCs of Algebra, ABCs of Geometry, Biology 101, Greek Mythology. Others on this list, like Basic Parenting 101 and Autism Spectrum Disorder for Teachers, might appeal to some homeschoolers. Looking through the Teacher Tools list, I found one called Fourth Grade Curriculum that sounded great, so take the time to look at all the interesting course titles. There is an overview provided for each class, and at the very bottom of this you will find a recommended booklist.

PROGRAMS

Homeschool Science Lab
 Use PPLD's science equipment for parent-assigned experiments. Watch for news about occasional special lessons and programs planned during lab time. Contact Tori at vsparrow@ppld.org for more information or visit ppld.org/homeschool-hub.

3rd Friday of each month
 1 - 3 p.m. – East Library

Homeschool Lunch Bunch
 There's a different family learning experience every time. Enjoy your sack lunch while socializing with other homeschooling families after the program.

Fountain Library
 3rd Tuesday • 11:30 a.m. - 1 p.m.
 Contact Jessica at jfreeland@ppld.org for more information.

High Prairie Library
 4th Wednesday • 11:30 a.m. - 1:30 p.m.
 Contact Julie at jsimmons@ppld.org for more information, or call 260-3650 to register.

Rockrimmon Library
 Thu., Dec. 12 • noon - 1:30 p.m.
 Science Matters/Winter Chemistry.
 Contact Tina at tlewis@ppld.org or register at 593-8000.

Homeschool Programs @ Monument
 Come for a different presentation every time. Contact Sandy at syates@ppld.org for more information.
 4th Monday of each month
 1 - 2:30 p.m.

Homeschool Science Fair
 Open to students in grades K – 12. This is your opportunity to show other families what you've learned in Science! Create a display and be prepared to explain what you've done and answer questions. Participants will receive a certificate, but no prizes will be awarded. Contact Tori at vsparrow@ppld.org for more information.
 Fri., Feb. 21 • East Library

7th Annual Homeschool Art Show
 It's time to get your creative juices flowing! Homeschooled students of all ages can submit one drawing, painting, photo, sculpture, etc. during the last week of March 2014 to the Children's Department at East Library. All artwork will be on display during the entire month of April and we'll end with a reception for friends and family. Watch for more information as we get closer to March. The art show will not be juried.

Study Buddies
 Teen volunteers help students in kindergarten through fifth grade with homework or reading practice. Call 531-6333, x1407 or x1403 for more information.
 Tuesdays • 6:30 - 8 p.m. - East Library

Family Fun
 Enjoy performers, animals, crafts and much more at monthly programs. Fun for the whole family! Check online at ppld.org, or at your local library, to find out what's happening at that location.

Join a Teen Advisory Council!
 Go to ppld.org/teens and click on the volunteer tab to get more info and fill out an application.

Want to play Chess?
 This club is for all ages. All skill levels welcome.

Chess Club: 1st and 3rd Friday
 3:30 - 5 p.m. • East Library

Chess and Checkers: 2nd and 4th Fridays
 3 - 5 p.m. • Briargate Library

Not sure what to do tonight? Come watch a movie in the East Teen Center
 3rd Tuesday • 6:30 - 8:30 p.m.
 For more info or movie titles, email vsparrow@ppld.org.

FEATURED HOMESCHOOL FAMILY
The Lewis Family (Part II)

With this winter issue of Homeschool Connections, we conclude our interview with the Lewis family.

In the fall PPLD Homeschool Connections, we interviewed Greg and Tina Lewis. They homeschooled six children for over 20 years. Now, here are a few comments from their grown children and a last bit of encouragement from Tina.

- I appreciated being able to use my imagination and play with my siblings. When I was young, our family did everything together. I loved going to the library every week!
- My memories are filled with lots of outdoor play, our animals, watching for my dad to come home at night, reading (a lot), and painting.
- I was able to grow into who I am and not have to be exactly like everyone else. I love my brothers and sisters and have a special bond with them.
- We had books and our imaginations! We were very active, and my parents taught us real-life skills.
- When I went to college, I was one of a few who knew that a gerund was not an alien from space. My Mom would not let me graduate high school until I knew how to count back change! (:
- My mom said music instruction was part of my education even when I wanted to quit! She never let us just quit anything. She gave us opportunities to try many different activities.
- My siblings are the world to me. Even though we are sometimes far apart geographically, I know they are my best advocates, and I will always support them too.
- My Dad read through the Little House books every winter. When my little brother and I knew those well, he read the Tom Swift books! My parents took us to visit older people and help families in need.
- I am able to confidently speak to all ages since we spent time with such a variety of people.



I (Tina) want to encourage homeschool moms to enjoy what you are doing right now. Wake up every day and look at your children knowing you only have this day with them once. There will be many physical, emotional, or spiritual difficulties. Play with and read to your children every day. A solid education that builds self esteem comes from lots of quality time with you and not just from being busy running around to activities. Your children WILL grow up so fast. Also, it is fine to get help or trade teaching from other sources. Share your talents with other families while gleaning their strengths. It is okay to make a choice to participate part time in a Colorado dual enrollment program. Homeschooling really means giving your children a secure, loving, grounded academic and real life foundation. I also encourage home education parents to continue their own interests and education. Finally, persevere and keep in mind you are doing what is best for your particular family. Commitment and perseverance are what help us excel in whatever life journey we take.

Duty makes us do things well, but love (caring) makes us do them BEAUTIFULLY!
 — Zig Ziglar

Would you like to be a Featured Family?
Contact Tina at tlewis@ppld.org.

Home School Connections • Winter 2013/2014