STEAM Resources and Children’s Literature
Curriculum Materials Department
David & Lorraine Cheng Library, William Paterson University

A selected list of resources available at the Cheng Library that support the exploration of STEAM (Science, Technology, Engineering, Art, Mathematics) topics. They can be extended for use in Makerspaces for grades K-12.

Teaching Resources:

Call Number: Curr.Mats. QA11.2 .B3653 2002


Call Number: Curr.Mats. QA19 .A78 K64 1996


Call Number: 2nd floor LB1592 .M36 2016

Call Number: 2nd floor LB1591 .S68 2013
**Juvenile Literature:**

Demonstrates the principles of flotation and density through the use of everyday objects.
**Call Number:** j532 Adl

Washington, DC: National Geographic. (Grades 4-7).
Evaluates Mars as a potential planet for human colonization and describes what Mars residents might experience while traveling to and living on the Red Planet.
**Call Number:** j523.43 Ald

Austic, G. (2014). *Game design.* Ann Arbor, MI: Cherry Lake Publishing. (Grades 6-8).
Discover new processes, integrate visual information with text, and learn technical word meanings as you find out how games are designed and what makes a good game.
**Call Number:** j794.8 Aus

From a windmill to a lighthouse, this book portrays homes that work while also introducing simple engineering concepts to the young architect.
**Call Number:** j728 Bai

Chronicles the life and achievements of the NASA engineer and inventor, from his childhood to his accidental invention of the Super Soaker water gun.
**Call Number:** j609.2 Bar

The story of Joe and Bob Switzer who experimented with ultraviolet lights and fluorescent paints and invented a new kind of color called Day-Glo.
**Call Number:** j535.352 Bar

Louis Braille was just five years old when he lost his sight. He was determined to live like everyone else and wanted to be able to read, so he invented his own alphabet.
**Call Number:** jB Braille

Learn about science in your home kitchen using everyday materials.
**Call Number:** j507.8 Mak
An island is about to be born. One that in time will become the home of plants and animals that exist nowhere else on Earth.
**Call Number:** j508.866 Chi

Discover the true story of how James Naismith invented basketball.
**Call Number:** j796.323 Coy

A counting book which shows what can be done with ten black dots.
**Call Number:** PJ Cre

Gregory, J. (2014). *From butterfly wings to…display technology*. Ann Arbor, MI: Cherry Lake Publishing. (Grades 5-8).
Takes a look at how innovators of today use the bright color detail of nature to create the current sharpness of flat-screen displays.
**Call Number:** j621.3815 Gre

Explores the life of butterflies through photography following the growth process of a monarch butterfly.
**Call Number:** j595.78 Her

Learn the strange stories behind inventions you eat every day.
**Call Number:** j641.309 Hig

How Kool Herc became a DJ and how the music he invented defined a culture and transformed the world.
**Call Number:** j782.4 Hil

Explore math skills when each time the doorbell rings, there are more people who have come to share Ma’s wonderful cookies.
**Call Number:** [Big Book] PJ Hut

Animals can be amazingly colorful. Find out why they are found in so many hues, how their brilliant outer coverings help them survive, and how color warns off their predators.
**Call Number:** j591.47 Jen
   William Kamwamba’s village was hit with a drought and the crops began to fail. He figured out how to build a windmill to irrigate the fields from a book in the library.
   Call Number: j621.4 Kam

   The scientific principles and working of hundreds of machines are explained in this book.
   Call Number: j600 Mac 1998

   L. T. wants a brand new bike but his father builds one from recycled bikes. He isn’t happy with the bike so he starts collecting used bikes to build a good-as-new bike, but also provides a new fence for his yard.
   Call Number: PJ Nol

   Introduces the lives, sayings, and dreams of sixteen women over four centuries in the math and science fields.
   Call Number: j509.2 Noy

   Learn how the different materials, location, size, and purpose factor in to the building process.
   Call Number: [Big Book] j720 Rin

   Explains how flight works. Looks at the history of human attempts at flight, and describes the different roles and responsibilities of aerospace engineers.
   Call Number: j629.1 Roo

   Readers will take a trip inside a Maker Faire to see how makers come together to share ideas and projects.
   Call Number: j607.34 Ros

   Text and pictures try to make possible the conceptualization of a million, a billion, and a trillion.
   Call Number: j513.25 Sch
When a teacher tells her class that they can think of almost everything in life as a math problem, one student acquires a math anxiety that becomes a math curse.

*Call Number: P J Sci*

Simple text and illustrations describe technological advancements in the field of robotics.

*Call Number: j629.802 Son*

Alexander Calder creates a circus sculpture with odds and ends. This book introduces the juxtaposition between visual art, math, and science.

*Call Number: jB Calder*

Puppeteer Tony Sarg invented upside down puppets to soar above Broadway. Learn how different materials with the help of helium made his dream possible.

*Call Number: j791.5 Swe*

A series of rhymes about artists and their works introduces counting and grouping numbers, as well as artistic styles such as cubism, pointillism, and surrealism.

*Call Number: j510 Tan*

Describes the development of one hundred world-changing inventions, including rockets, the internet, refrigerators, blue jeans, light bulbs, and antibiotics.

*Call Number: j609 Tur*

How Ada Byron Lovelace’s fascination with mathematics and science lead her to develop a groundbreaking algorithm for Charles Babbage’s analytical engine.

*Call Number: j510.92 Wal*

This biography of John Coltrane focuses on his childhood and how he interpreted environmental sounds that influenced his artistic compositions.

*Call Number: jB Coltrane*
What happens when a camera becomes a piece of flotsam. Illustrations provide great
examples of visual art as text.
**Call Number:** PJ Wie

York, NY: Viking. (Grades 6-10).
Journalist Simon Winchester has been shaken by earthquakes, and skied through
Greenland to look at the science, technology, and impact of these interconnected natural
phenomena.
**Call Number:** j551.22 Win

**Online Resources:**

**Education Closet.**
Digital learning hub for arts integration and STEAM. Includes resources, professional
development, book lists, and lesson plans.

**KitHub: Environmental Monitoring and STEAM Education Kits**
Resources available to equip your Maker Program and enhance your STEAM program. Also has
free resources and a blog spot that lists children’s books.
[http://kithub.cc](http://kithub.cc)

**Teach. Learn. Grow. The education blog**
An education blog for educators with resources in many topics. Use the search box to find
different blogs on STEM that includes literature resources. The *STEM and Children’s Literature: 3 Classroom Resources* has links to children’s books from [nstao.org](http://nstao.org).
[https://www.nwea.org/blog/](https://www.nwea.org/blog/)

**The Show Me Librarian.**
Website developed by the Youth & Family Supervisor, Amy Koester for the Skokie Public
Library in Illinois. She has an *All Things STEAM* tab with resources for STEAM programs from
Preschool through school age with how-tos and maker resources. This site is not updated
frequently but is used as a repository for her STEAM programs and favorite resources.
[http://showmelibrarian.blogspot.com/](http://showmelibrarian.blogspot.com/)

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