Resources to Expand Your iSTEM Learning

# Books on Making & Tinkering

**The Art of Tinkering: Meet 150+ Makers Working at the Intersection of Art, Science & Technology**

By Karen Wilkinson & Mike Petrich (2013)

The Art of Tinkering is a collection of exhibits, artwork, and projects that celebrate a whole new way to learn, in which people create their own knowledge through making and doing, working with readily available materials, getting their hands dirty, collaborating with others, problem-solving in the most fun sense of the word, and, yes, oftentimes failing and bouncing back from getting stuck.

**Invent to Learn: Making, Tinkering, and Engineering in the Classroom**

By Sylvia Libow Martinez and Gary Stager, Ph.D. (2013)

Invent to Learn is a seminal work that should be included in any Maker library. Ideas and logical justifications for including Maker access in schools and libraries ae provided. The book also includes an impressive reference section full of helpful resources, websites, and videos.

**Paper Inventions: Machines That Move, Drawings That Light Up, Wearables and Structures You Can Cut, Fold, and Roll**

By Kathy Ceceri (2015)

Paper Inventions is a project-based book with full color illustrations, step-by-step instructions, supply lists, and templates that allow you to follow along with the book or devise something entirely new. Each chapter features new projects that will challenge and intrigue everyone, from beginning to experienced Makers.

**Rubber Band Engineer: Build Slingshot Powered Rockets, Rubber Band Rifles, Unconventional Catapults, and More Guerrilla Gadgets from Household Hardware**

By Lance Akiyama (2016)

Filled with vivid color photos, you'll be guided on how to create slingshot rockets, unique catapults, and even hydraulic-powered machines. Whether you build one or all 19 of these designs, you'll feel like an ingenious engineer when you're through. Best of all, you don't need to be an experienced tinkerer to make any of the projects! All you need are household tools and materials, such as paper clips, pencils, paint stirrers, and ice pop sticks.

**Start Making! A Guide to Engage Young People in Maker Activities**

By Danielle Martin and Alisha Panjwani (2016)

This book provides a step by step roadmap for starting a Maker club, group, or class in your educational setting. Ideas are low-cost and highly adaptable. I great place to start for any educator new to the Maker movement.

**Tinkering: Kids Learn by Making Stuff**

By Curt Gabrielson (2013)

The value of tinkering in the learning process is being rediscovered in classrooms and libraries, clubs and workshops across the globe. This book provides real-world examples of how hands-on, experiential learning can challenge students and help them learn the design thinking approach naturally.