

Physical Science: Boy Meets Machine

age range - 4th - 6th

Core Book:

[The Way Things Work](#) by David Macauley. It's the perfect spine for a study of engineering and machines with young boys. We've been affectionately referring to our science this year (4th grade) as **Boy Meets Machine** - it's been a lot of fun!

Supporting books:

- :: [Mistakes that Worked](#) by Charlotte Jones
- :: [Rube Goldberg Inventions](#) by Maynard Wolfe
- :: [Gizmos and Gadgets: Creating Science Contraptions](#) by Heath Robinson
- :: [Physics For Every Kid](#) by Janice Van Cleave
- :: [Engineering for Every Kid](#) by Janice Van Cleave
- :: [Machines: Mind Boggling Experiments You Can Turn Into Science Fair Projects](#) by Janice Van Cleave
- :: [Simple Machines: Starting With Science](#) by Deborah Hodge
- :: [The Wind at Work: An Activity Guide to Windmills](#) by Gretchen Woelfle
- :: [Can You Feel the Force?](#) by Richard Hammond (This was a favorite book! Not to be missed!)
- :: [The Cartoon Guide to Physics](#) by Larry Gonick
- :: [The Physics Coloring Book](#) by Coloring Concepts, Inc.
- :: [Michael Faraday: Father of Electronics](#) by Charles Ludwig
- :: [Usborne Book of Science: An Introduction to Biology, Physics and Chemistry](#) - Physics section only
- :: [Simple Machines for Beginners](#) (DVD)
- :: The Way Things Work DVD's - check your library for these. Their production has been discontinued.
- :: [The Way Things Work game](#) - lots of fun!!

Hands-on building fun:

- :: An [Erector Set](#)
- :: Our [Electronic Snap Circuits](#)

The **MOST** helpful tools in assisting our learning for this study have been the **K'Nex simple machines kits**:

- :: [Levers and Pulleys](#)
- :: [Gears](#)
- :: [Wheels, Axles and Inclined Planes](#)

An [Engineering Notebook](#) is a fun thing to keep current as you progress through this study. It's a place to record vocabulary and sketches of projects that have been built as well as those in the design phase.