

# Homeschool

Teach math and science concepts with our hands-on products.



education

## EARLY SIMPLE MACHINES SET WITH TEACHER'S GUIDE



Introduce pulleys, levers, gears, and wheels and axles to your young children. The 36-page teacher's guide includes excellent suggestions. DUPLO-size bricks. For ages 5+.

HM919654—\$118

## SIMPLE MACHINES MINI SETS



Use these mini sets to introduce the three classes of levers and gears with a merry-go-round and a fan. You can also investigate fixed and movable pulleys and belt drives and learn about single and separate axles, steering, rolling, and friction. For ages 8+.



## GEARS MINI SET WITH TEACHER'S GUIDE

HM919610—\$25.75

## LEVERS MINI SET WITH TEACHER'S GUIDE

HM919622—\$25.75

## PULLEYS MINI SET WITH TEACHER'S GUIDE

HM919614—\$25.75

## WHEELS & AXLES MINI SET WITH TEACHER'S GUIDE

HM919616—\$25.75



## SCIENCE AND TECHNOLOGY SET

### WITH ACTIVITY PACK

The Science and Technology Set presents students with 12 different models that demonstrate various physical science and technology concepts. These include force and motion, simple machines, measurement, energy, magnetism, and more. The activity pack comes in a three-ring binder and includes twelve 45-minute lessons, plus four extension activities, worksheets, teacher notes, and animations on CD-ROM. Appropriate for ages 9+.

HM919619—\$120

## MOTORIZED SIMPLE MACHINES SET WITH ACTIVITY PACK



This 219-element LEGO® set is a wide-ranging tool for exploring simple machines and adds the concept of motorization. The six units cover structures and forces, levers, wheels and axles, gears, pulleys, and more. There are outlines for 45 lessons, vocabulary words, worksheet answers, and possible models to solve the design challenges. For ages 8+.

HM919630—\$147



## Additional Curriculum For Motorized Simple Machines Set

### ELEMENTARY ENGINEERING TEACHER GUIDE & WORKBOOK

Five independent sections cover simple machines, structures, and forces. Includes diagrams, charts, illustrations, questions, challenges, and answer keys. Includes one Teacher Guide and one Workbook.

HM991272—\$35

### BRICK LAYERS II BOOK

Creative engineering challenges that are math intensive. Use with the Motorized Simple Machines Set.

HM990244—\$35.95

### THE BIG PICTURE: GEARS/LEVERS TEACHER PACK

Expand the use of your LEGO Motorized Simple Machines Set. Covers gearing up, gearing down, compound gears, gear trains, fulcrums, load, force, and classes of levers.

HM991168—\$49

### THE BIG PICTURE: PULLEYS/WHEELS & AXLES TEACHER PACK

Expand the use of your LEGO Motorized Simple Machines Set. Covers driver and follower pulleys; fixed, movable, and compound pulleys; pulley wheels and belts; flywheels; axles; inclined planes; and more.

HM991167—\$49

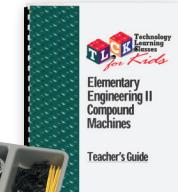
### ELEMENTARY ENGINEERING II

#### WITH TECHNOLOGY RESOURCE SET



Elementary Engineering pushes students to use simple machines in combinations to create more compound machines. Pack includes the LEGO Education Technology Resource Set with over 1,100 pieces, one Elementary Engineering Teacher's Guide, and one workbook. For ages 9+.

HM991342—\$91

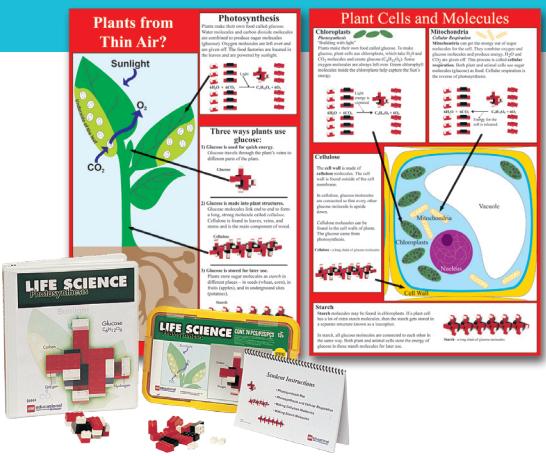


#### LEGO Technology Resource Set

HM979649—\$59



Items marked with a are specially bundled and priced for homeschool use.



### PHOTOSYNTHESIS TEACHER PACK

Includes teacher's guide and student materials along with two large posters. Build molecular models with LEGO bricks while learning about photosynthesis and cellular respiration. For ages 12+.

**HM909742—\$89**

**HM979742 Student Set only—\$29**



### CHROMOSOMES TEACHER PACK

Includes teacher's guide and student materials along with two instructional videos. Learn the intricacies of chromosomes with this custom LEGO set. For ages 12+.

**HM909743—\$149**

**HM979743 Student Set only—\$39**



### DNA SET TEACHER PACK

Includes teacher's guide and student materials. Students build models of DNA using LEGO elements. For ages 12+.

**HM991104—\$95**

**HM991103 Student Set only—\$65**



### RENEWABLE ENERGY SET WITH ACTIVITY PACK

Students experience wind, water, and solar energy as they build LEGO models of a waterwheel, Ferris wheel, and solar car. For ages 11+.

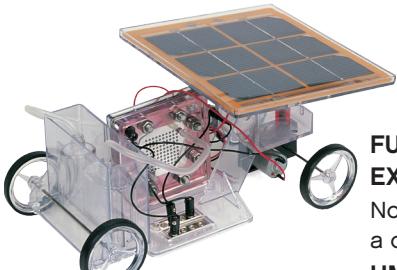
**HM919681—\$195**



### WIND GEN KIT

Build a windmill that catches a breeze from a fan and converts it into energy.

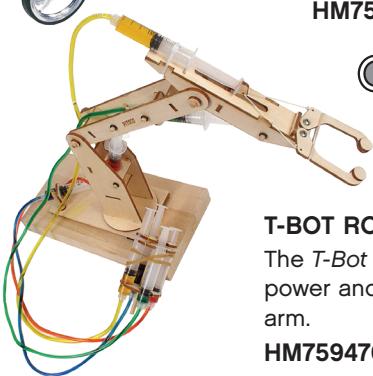
**HM732197—\$12.95**



### FUEL CELL CAR AND EXPERIMENT KIT

No batteries needed when you build a car that runs on water!

**HM758309—\$150**



### T-BOT ROBOT KIT

The T-Bot Kit illustrates the use of hydraulic power and mechanics to control a robot arm.

**HM759470—\$39.95**



### HOMESCHOOL MOSETRAP CAR PACK

Let your kids build a vehicle powered with a mousetrap while introducing them to physics. This pack includes one car kit and one *Mousetrap Powered Cars & Boats* book.

**HM917033—\$24**

### MEDIEVAL MACHINES PACK

Take a trip back in history to the medieval times. Students learn the math and science required to build siege machines. Pack includes one trebuchet kit, one catapult kit, and the book *Siege Machines*.

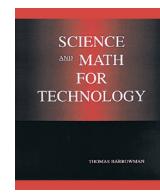
**HM991273—\$22.95**

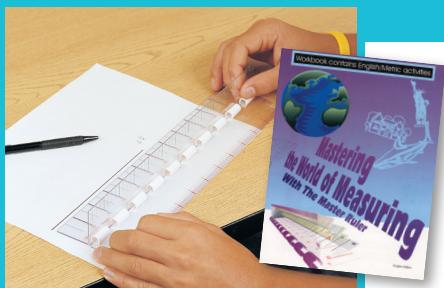


### SCIENCE AND MATH FOR TECHNOLOGY

Science concepts and math formulas and their relation to technology are explained in easy-to-understand text that is complemented by photographs and unusually descriptive drawings and cartoons. A reference book for students and teachers. Paperback, 241 pages.

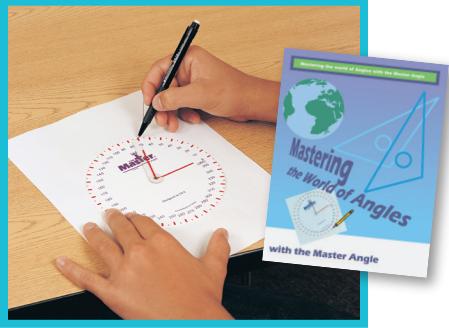
**HM757918—\$21.95**





## The Master Ruler Tip

Increase the understanding by measuring LEGO® bricks of various sizes and adding the lengths together.



## THE MASTER ANGLE PACK

The Master Angle makes it easy to make, visualize, and understand all kinds of angles – acute, obtuse, straight, interior, exterior, and so on. Reproducible workbook has 60 pages. Pack includes one Master Angle and one workbook.

**HM919645—\$13**

**HM759215 Master Angle \$4**

**HM991309 Master Angle Workbook \$10**



## THE MASTER CLOCK PACK

With clear overlays and color-coordinated hands, students can easily see and understand hours, half hours, quarter hours, minutes, and seconds. Reproducible workbook has 60 pages. Pack includes one Master Clock and one workbook.

**HM991343—\$21**

**HM759214 Master Clock \$12.50**

**HM991311 Master Clock Workbook \$10**



## THE MASTER FRACTION PACK

The Master Fraction uses clear overlays to show how a large unit breaks down into smaller units. Teaches equivalent fractions, reducing, mixed numbers, decimals and percent equivalents, and much more. Reproducible workbook has 60 pages. Pack includes one Master Fraction and one workbook.

**HM991345—\$24.50**

**HM759213 Master Fraction \$15.95**

**HM991310 Master Fraction Workbook \$10**



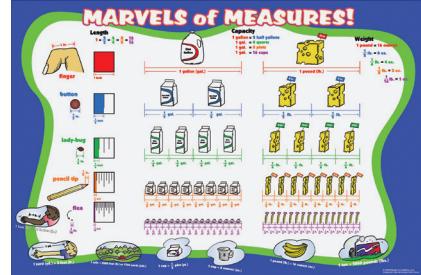
## HOMESCHOOL FRACTION PLUS

The Fraction Plus cards and activity booklet were designed to aid students in middle-level math. The cards cover fractional parts of the whole from tenths to halves, and feature four “suits” – decimals, percents, fractions, and circle graphs. The activity book features 10 activities for students working in pairs, groups of four, or small groups. Pack includes one activity book and two decks of cards.

**HM991347—\$9**

**HM991317 Activity Book \$5**

**HM991318 Additional Card Deck \$2.50**



## MARVELS OF MEASURES POSTER

The *Marvels of Measures* Poster can help students make sense of a confusing concept. The poster shows common measuring estimates (example, one finger knuckle = 1 inch) and also shows the breakdown of 1 inch, 1 gallon, and 1 pound.

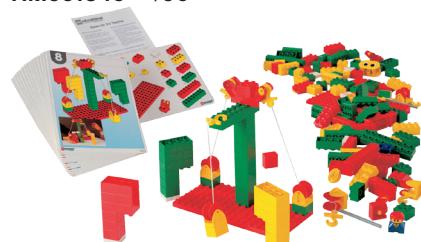
**HM991312—\$10**

## HOMESCHOOL

### MASTER MATH SET II

Set includes one each of *The Master Ruler Standard*, *Master Ruler Metric*, *Master Ruler Workbook*, *Master Angle*, *Master Angle Workbook*, *Master Clock*, *Master Clock Workbook*, *Master Fraction*, *Master Fraction Workbook*, and *Marvels of Measures Poster*. (\$95.95 value)

**HM991346—\$90**



## EARLY STRUCTURES SET

Introduce basic structure concepts. Includes teacher materials and 16 activities. For ages 5+.

**HM779660—\$80**



## STRUCTURES SET

### WITH ACTIVITY PACK

Students use a variety of LEGO materials to build structures and then test them to determine the force the model can sustain. For ages 8+.

**HM919618—\$109**



# Robotics



## LEGO MINDSTORMS EDUCATION NXT HOMESCHOOL PACK

The latest generation of LEGO Education robotics is all here in this pack, designed specifically for homeschoolers! This essential core building set and programming software serve as the base for endless NXT robotic creations. The building set includes 431 elements, featuring:

- NXT intelligent brick
- Rechargeable lithium battery and charger
- 3 intelligent servo motors with built-in rotation sensors
- 1 each: light sensor, sound sensor, ultrasonic sensor
- 2 touch sensors
- Connector cables and USB wire
- Converter cables for connecting existing sensors to NXT brick
- Hundreds of TECHNIC building elements
- Plastic storage bin with sorting trays

The new NXT software features an icon-based programming environment, and it's easy to get started. Built into the software is Robot Educator, a set of 39 tutorials complete with electronic building instructions, programming guides, and animations.

**HM979917—\$284**

## TEAM CHALLENGE SET WITH SOFTWARE AND MANUAL USB CABLE

The first version of LEGO® MINDSTORMS® for Schools, includes the Team Challenge Set with over 800 pieces, the ROBOLAB™ software, and the *Engineering with LEGO Bricks and ROBOLAB* book. This provides the basis for future robotics activities and can be used with all of the camps-on-a-disk or in an FLL competition.

**HM991112—\$299**

### We Accept:



ORDER TOTAL	SHIPPING CHARGES
\$0 to \$99	\$7
\$100 to \$499	8%
\$500 to \$999	7%
\$1,000 to \$1,999	6%
\$2,000 to \$2,999	4%
\$3,000 – up	2%

Items marked with a  are specially bundled and priced for homeschool use.

LEGO Education is a joint venture between

**PITSCO** and 

## 2007 Homeschool Guide

## Use these items to expand usage to a homeschool support group.

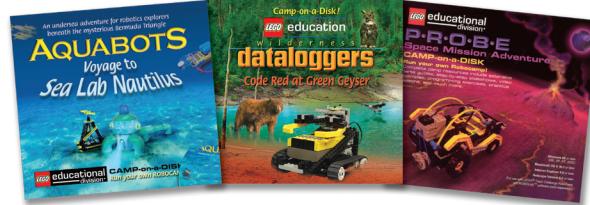
### CURRICULUM

Two independent CD sets comprise the new LEGO MINDSTORMS Education curriculum. The first, *Mobile Robotics*, provides six weeks of activities including an exhaustive introduction to robotics, programming, and building, all while addressing math, science, and technology concepts. The second CD set, *Engineering Projects*, encompasses 12 weeks of guided research and applied engineering robotics projects. Paired together, the two sets provide a full 18 weeks of curriculum for your children. Each CD set includes a teacher and a student CD. The teacher CD includes tips, notes, standards addressed, assessment rubrics, and more. The student CD provides great interactive instruction complete with video tutorials, building instructions, programming assistance, and much, much more! Developed at Carnegie Mellon University.



**HM991282 Mobile Robotics Curriculum—\$225**

**HM991283 Engineering Robotics Curriculum—\$225**



### CAMP-ON-A-DISK: SOFTWARE

Energize your homeschool support group with a *Robocamp*. In *Aquabots*, campers plunge beneath the Bermuda Triangle. In *PROBE*, campers depart on a fun- and fact-filled expedition into deep space. And *Wilderness Dataloggers* finds campers conducting recovery efforts following a natural disaster. Developed at the Carnegie Mellon Robotics Academy, each CD-ROM contains all of the information and curriculum to operate an independent robotics camp.

**HM991163 Camp-on-a-Disk: Aquabot—\$100**

**HM991122 Camp-on-a-Disk: PROBE—\$100**

**HM991254 Camp-on-a-Disk: Wilderness Dataloggers—\$100**

Prices listed here for Camp-on-a-Disk are for schools or homeschool support groups only.  
For commercial pricing call 800-362-4308.

*Do you have a homeschool group interested in competing in a national robotics competition? FIRST LEGO League (FLL) offers team competitive events. For more information about FLL, visit [www.usfirst.org](http://www.usfirst.org).*

*Reasons to visit [LEGOeducation.com](http://LEGOeducation.com)*

- Spare parts
- Clearance items
- Online resources
- Free Activities



[www.LEGOeducation.com/homeschool](http://www.LEGOeducation.com/homeschool)  
Call toll-free 800-362-4308