

Hands in Motion

Homeschool Enrichment



Hands in Motion is proud to be offering academic and enrichment classes. It is our goal to provide the opportunity for children to explore their gifts; whether that is technology, sports, language, creative arts, math, writing, science, history, or building with their hands.

Come and join us in encouraging *your* child as we put their

["Hands in Motion" for learning!](#)

Independent and Charter Families Welcome

Spring Classes—Starting January 14th

Story of the World	STEM/ Drone Flying
Computers	Architectural Drafting
Lego Robotics/Engineering	Beg. -Adv. Electronics
Jr. Carpentry	Nerf Boot Camp
PE Sports/Tennis	Small Engines
Excellence in Writing	Rocketry and Astronomy
Model Building	Hands on Science & Labs

SPIKEBALL



[Register Online: HandsInMotion4Learning.com](http://HandsInMotion4Learning.com)

Hands in Motion Spring 2019 Class Descriptions

Architectural Drafting and Design I & II (Grades 5–H.S.) \$175

Continuing and new students welcome.

Favorite

"Take it to the drawing board." In this class we will be learning drafting techniques and designs. Students will draw two-dimensional building models to scale. We will be using pencils, drafting instruments, and graph paper to create our blue prints. This class is designed to work hand in hand with the Model Building Class. Students will use blue prints created in this class to build 3D models in the Model Bldg. class.

This class is a great complement to Jr. Carpentry and Model Building classes.

Some drafting instruments may be required for purchase.



****Targets State Standards for Fine Arts****



Rockets and Stars (Grades 4-8) \$185

"To go where no one has gone...."

Stars, Moons, Planets, and Galaxies. We will be discovering the Milky Way and other galaxies, reading a star atlas, learning how to measure far away objects, and studying planetary orbits. In this Hands-on science class we will be creating a solar system, exploring the usage of space tools, and discovering man's everlasting footprint on the moon. Using the students' hand-crafted rockets, we will be collecting data on speed, propulsion, and distance while our air pressurized rockets soar to the stars. Come join us and prepare to have fun with our wild soaring rocket launches.

****Target Standards for Science****



Computer: Key-boarding and PowerPoint (Grades 4-9) \$175

Continuing and new students welcome

Does your child “text” faster than he/she can type? In this class, we will be teaching the standard keyboard. Students will learn proper hand placement and focus on memorizing the keys in order to type. Games and friendly competitions with prizes will be incorporated. We will also explore the fantastic tools in PowerPoint. Students will learn to make slide shows with transitions, music, videos, and hyperlinks. Students will learn how to create story development and task-outlines in order to effectively captivate their reader. USB thumb drive is required in order to take work home to work on. Computers are provided.



****Targets Standards for Technology****

Drone Aviation I & II (Grades 6-H.S.) \$245-- STEM

STEM in the Sky

Continuing and new students welcome

This exciting new STEM course aims at immersing students in the unmanned aerial vehicles industry (UAV or Drones). This is an emerging industry. Students will be exposed to modeling and simulation technology that will prepare them for new in-demand career opportunities.

Our class objectives will focus on mastering the flight planes, execution of piloting the drones, and creating unique obstacle courses. Each drone is also equipped with a camera which we will use to create video clips of our adventures.

Space is limited.

****Targets State Standards for Science, Technology, and Mathematics****



Electronics -Level I Introduction to Coding (Grades 6-H.S.) \$210-- STEM

ELECTRONIC ENGINEERING WITH Arduino Uno Circuit Boards

Learn about real world engineering with hands-on tinkering that challenges students to use their intelligence and creativity to apply the concepts of electronic circuitry being discussed. Problem-solving, innovation, and experimentation take center stage as students take an authentic turn as young engineers. Breadboard circuits are a great way for students to learn about real electronics components and circuit design in less time without the need of soldering. Students learn building circuits with LEDs, batteries, resistors, capacitors, transistors and Light Dependent Resistors. At the end of the course, students get to take home the breadboard projects.

Completion of Electronics I- “Zap It” highly recommended by not required especially for the older student.

Students that have completed one semester of this class(Breadboarding), please see Electronics Level II Coding

****Targets State Standards for Science, Technology, and Mathematics**

Electronics –Level II- Coding (Grades 6-H.S.) \$210- STEM ELECTRONIC ENGINEERING WITH Arduino Uno Circuit Boards



Students must have completed Intermediate Electronics- Breadboard (above) or equivalent

Take electronics to a new level. This class is designed for the student that already has some experience with coding of Arduino Uno Circuit Board. We will be using Arduino boards to learn step-by-step intermediate electronic circuitry coding. Some projects covered in this course are LED circuits, Ohm's Law, RGB LED, GPS trackers, and Ultrasonic sensor applications. Come join us in this fast-moving world of electronics.

****Targets State Standards for Science, Technology, and Mathematics**

Jr. Carpentry (Grades 4-H.S.) \$210

Continuing and new students welcome

New Projects for Spring



Get to math skills through the back door. In this class students will practice measuring, plotting, graphing, arithmetic, geometry, and dimensions.... but they will be focusing on building their very own take-home project.... not the math. Tool safety and instruction will be emphasized for such tools as a screwdriver, wrench, hammer, saw, router, drill, and various others. We will take ideas, learn how to draw and plan them out, and then have the skills to create them. **We start with raw wood materials to make individualized wood projects.** Students learn how to measure and calculate angles creating a blue print design for their project. They will then measure, cut, assemble, paint, stain, and engrave their very own projects to take home.

****Targets Standards for Art and Math****



Lego® Movie Making (Grades 5-H.S.) \$185—STEM



Continuing and new students welcome

Lights . . . camera . . . action!

It's amazing what you can build with LEGOs... in this class we'll be bring those creations to life! Students will learn about the techniques of the trade to create distinctive lighting, camera angles, and special effects. This class makes use of computer hardware and software, Lego "Make your Own Movie," various Lego pieces, along with your camera to teach the basic concepts in computer and graphics engineering by making stop-action film productions. Story-boarding and task outlining are used to illustrate project management, story development, and Lego-scale production skills. Students create at least one full movie with sound and video.

Computers, Lego, and other stage props are provided. Students may be required to bring a camera or smartphone for filming. Some available for loan. **This class is a great complement to Model Building. Students may use their building creations in their Lego stories.**

Lego® Robotics (Grades 5-9) \$195—STEM

Continuing and new students welcome



In today's world, it seems all students need to be equipped with STEM (science, technology, engineering, and mathematics) knowledge and the creative problem-solving skills necessary to be innovative and creative thinkers.

This is a beginning course in robotics. We will be utilizing Lego Mindstorms NXT base sets. Lego Mindstorms uses a computer software platform and various Lego Robotics materials to introduce the student to computer robotic programming, building techniques, as well as problem solving strategies. Students will be involved in the development, building, and programming of a LEGO Mindstorms robot to perform desired tasks. Students will work hands-on in teams of two to design, build, and program selected robotic projects. Cause and effect learning is enhanced as the models work in conjunction with a computer and, similar to scientists working in labs, students can test and adjust their programming in real time. These projects will start with simple designs which will grow in complexity throughout the class. This robotics program was designed by the creators of the LEGO Mindstorms NXT Robotics Systems (for Middle & High School students) and is a great way to introduce young students to foundational building and programming concepts. Computers are provided. Students will learn –

- How to collaborate in groups and teams
- How to design robots for specific activities and scenarios
- How to use robotics programming software on a laptop
- To design, develop, and complete robotic activities and challenges



Computers and Lego Mindstorms provided

****Targets State Standards for Science, Technology, and Mathematics****

Model Building, I & II (Grades 6-H.S.) \$185

Continuing and new students welcome



Here things come to life!! In this class, students will learn & hone in on their drawing skills as they envision the house they may want to ultimately build one day. After drawing up their "blue prints," they will then be given the opportunity to have their design "leap off the paper and come to life!" Working with various sized balsa wood, they will create a model size version of their plans. This is an assisted project based class. Students will be challenged to their ability and beyond.

Returning students are welcome to continue to work on their plans/model as they move from single story models with living space and roof to multi floor designs.

This class is designed to complement Architectural Drafting Class as students use their 2 D drawings to create their 3D models. Drafting is Recommended but not required. Also, a great complement to Lego Movie Making as students may use their buildings in their Lego story creations.

****Targets State Standards for Math and Fine Arts****

PE—Games in the Gym (Grades 4-9) \$175

Continuing and new students welcome

Parents, are you looking for a fun place for your children to get out and be active? Build friendships? In this class, the students will be playing, exercising, and learning all at the same time. Students will be exposed to sports such as basketball, soccer, volleyball, and others. Teamwork and sportsmanlike conduct will be encouraged in non-competitive games. They will learn the proper techniques in stretching, strengthening, and conditioning for better health. Come join us for some healthy play.

****Target Standards for Physical Education****

PE- Nerf Boot Camp-Outdoor Style (Grades 6-H.S.) \$195

Continuing and new students welcome



Dodge the Bullet!!!!... This class is created around the military boot camp format. A “Master Drill Sargent” will train the students in hurdling walls, shooting range/target practice, calisthenics, & obstacle courses, as they train to succeed at the “Nerf War Games!” ALL the exercise with DOUBLE THE FUN!!

This Nerf class is geared towards the older student with more military structure, physical conditioning, and Nerf games. We will be using the new Rival Nerf Guns in battle outside on our Nerf battlefield. **This is an outdoor “rain or shine class.”** “What kid wouldn’t want to battle in the rain and mud?! Children need to come prepared for the weather. (on days of extreme weather instructor may cancel class) Part of the class time will be focused on strength training, obstacle course achievements, team work, and self-discipline. Objectives covered will be developing an appreciation of the importance of physical fitness, basic first-aid, and developing knowledge of team building and basic military skills. Rival Nerf Guns and safety glasses are provided for class time. T-Shirt and Hats included. Purchase of Army tactical pants required.

****Targets State Standards for Physical Education****

Nerf Rival Wars (Grades 4-H.S.) \$185

Continuing and new students welcome



This Nerf class is for the kid who wants to see a little more action using the new Nerf Rival Guns. We will be focused mostly on fast pace Nerf Games in the gym along with battle strategies. We’ll talk about how warfare has changed throughout history as we discuss some “famous and not so famous” battles that the US Military was engaged in. Bring lots of **WATER and wear good gym shoes**- you’ll need it as you run around battling it out! Nerf Rival guns and safety glasses will be provided for class time. T-shirt included.

****Targets State Standards for Physical Education****

Science- Hands On: (Grades 4-8) \$210--Tuesdays

With Labs (Some books available for loan)

Continuing and new students welcome. Our curriculum is year-long

Come learn about science in a fun, hands on class that will target your science standards for the year. No boring lectures just lots of creative activities and experiments to promote learning. Building a solid science foundation for your elementary- and junior high-age kids so they will be well-prepared for high school is our goal! We use Real Science 4 Kids as our curriculum. Real Science 4 Kids is engaging and focuses on fundamentals, giving your child a confidence with essential concepts and terms. Chemistry I is the first part of the Level I curriculum, which includes basic **Chemistry** (introduces children to college-level chemistry concepts such as the atom and periodic table, molecular bonding and chemical reactions. acid-base reactions, mixtures and separating mixtures, and large molecules such as carbohydrates, polymers and enzymes), **Physics** (concepts covered are: Laws of physics and the scientific method; force, work and energy; potential and kinetic energy; motion; chemical and electrical energy; current, magnets and electromagnets; light and sound energy; and conservation of energy). **Biology** (topics covered: taxonomy, the cell, the specialized organelle (the chloroplast), plants, protozoa, frog and butterfly life cycles, ecosystems and cycles).

Class runs for the entire school year; however, new students are welcome in Spring. Prices are per semester.

Text: Real Science 4 Kids Level I or Middle School by Rebecca W. Keller

Text books are available for loan during semester. Lab materials will be provided; however, Lab Manuals are optional and can be purchased separately.

Books can be ordered on [Amazon](#) or [Rainbow Resource](#)

Fall: Chemistry/ Physics

Spring: Physics/Biology

Students that have completed one year of this course, please see Monday's Advanced Middle School Science Labs below.

Science- Advanced Middle School (Grades 6-H.S.) \$210 -- Mondays

With Labs

Continuing and new students welcome. Our curriculum is year-long

Kids ask real science questions. Our Advanced Science Labs for middle school enables them to discover real science answers. Science disciplines are so interlaced, to learn one subject requires a foundational understanding of another. This year-long curriculum, with its fun-filled Hands on Labs, addresses this by focusing on the five core scientific disciplines of chemistry, biology, physics, geology, and astronomy. Learn about acids, bases, pH, and acid-base neutralization, plus plotting data and nutritional chemistry. Discover different types of microscopes and their functions. Explore different types of protists and fungi (molds, yeasts, and mushrooms). Examine inertia, mass, friction, momentum, plus linear and non-linear motion. Study Earth as a system, its geosphere and atmosphere, how to use a star atlas, measuring time, different objects in our solar system, Earth's stellar neighbors, and exoplanets.

If you have completed the Hands-on Science Labs from above, this is the next class for you. Older grades may take this as a stand-alone class as Hands on Science is recommended but not required as pre-req. High School students are welcome with the understanding this class does not qualify for A-G labs for H.S.

Required Text- Exploring the Building Blocks of Science Book 6 Student Textbook by Rebecca W. Keller
Books can be purchased on [Amazon](#) or [Rainbow Resource](#)

Please realize this book covers the entire school year. However, new students are welcome in Spring.

****Targets State Standards for Science- Experimentation****

Small Engines and Machines (Grades 5-H.S.) \$195

One semester class for new students.



This hands-on course introduces 4-stroke engine components and system through labs. Students use small engine blocks to learn how each piece fits and works together to power the operation of four-cycle engines commonly found on lawn mowers, garden tractors, snow blowers, rotary tillers, chainsaws, and other equipment. Instructional topics include: principles of operation of internal combustion engines, routine maintenance along with disassembly of engine. Engine part identification and definitions of terms, such as torque and horsepower, are emphasized. Students will be paired up in teams to work on individual engines. In addition to the above topics, this class will give the students opportunities to become familiar and experienced in using mechanical hand tools. This class is designed to prepare students for our Small Engine Repair class. All tools will be provided.

****Targets State Standards for Science****

Small Engines Repair (Grades 5-H.S.) \$195

Must have completed Small Engines and Machines

This class is designed for the student that wants to “fix small engines and make some money.” Having completed our Small Engines and Machines class, these students will be able to take that knowledge and apply it to real world engine problems. Students will be instructed and trained to maintain and repair the most common small engines problems. This class covers, but is not limited to, troubleshooting and repairs, restoring of lost power, smoking lawnmower, starter rope problems, lawn mower carburetor repair, oil change, and engine tune-ups. Through the use of hands-on labs, videos, and personal expertise, students will gain the necessary skills to perform repairs for family and friends. Students will be paired up in teams to work on individual engines.

****Targets State Standards for Science****

Spikeball (Grades 4-H.S.) \$175

Continuing and new students welcome



Join us for one of the fastest growing sports around. This class was created to give children who have an interest in playing sports an opportunity to engage with, practice with, and **compete against** other groups of children. Our goal is twofold; to come along side and train, teach character, build confidence, teach healthy life styles, and to help children perform better in school academics through team building. Whether your child has played in sports or is wanting to, this class is for them.

Class is held at Cresthaven Park 401 Community Dr. Roseville (a few blocks from our classroom)

****Targets State Standards for Physical Education****

Story of the World- Medieval Times (Grades 4-8) \$185



Continuing and new students welcome. Our curriculum is year-long

Let's explore history in a fun and interactive way. We'll take a captivating tour through The Middle Ages as we work with maps, timelines, and PowerPoints. We'll turn the pages of "The Story of the World" history curriculum as we take an integrated approach to the history of the whole world. Creating such projects as sugar-cube castles, make our own paper, and concoct a cauldron of Eye-of-Newt Soup.

Required Text: Students are required to purchase The Story of the World **textbook** Volume2: The Middle Ages by Susan Wise Bauer. Books can be purchased on [Amazon](#) or [Rainbow Resource](#)

****Targets State Standards for History****

Writing- Excellence in Writing (Grades 4-8) \$175- Tuesdays Student Intensive Group A. Continuation



Continuing and new students welcome. Our curriculum is year-long

Do you struggle with getting your student to write? Are you not sure what is enough for their grade level? Or do they love to write but need some help with structure and description? Then... we have the answer! Join us as we use Andrew Pudewa's nationally acclaimed curriculum from the Institute for Excellence in Writing. We will take foundational writing styles one step at a time. Students will work on assignments in class with teacher support as well as peer support. Take home assignments with teacher grading and editing will be included. We will be using IEW Group A. Class is taught by Jennifer Androkitis who has a Master's Degree in Special Education with an emphasis in English.

Required Text: [Student Writing Intensive Level A \[Notebook & Packet\]](#) can be purchased through Excellence in Writing web site. www.iew.com \$19 for binder/notebook or \$10 for download.

****Targets State Standards for Language Arts****

Creative Writing- (Grades 6-9) \$195- Mondays



Continuing and new students welcome. Our curriculum is year-long

Do you struggle with getting your student to write? Are you not sure what is enough for their grade level? Or do they love to write but need some help with structure and description? Then... we have the answer! Join us as we use Andrew Pudewa's nationally acclaimed curriculum from the Institute for Excellence in Writing. We will take foundational writing styles one step at a time. The focus of this semester is Creative Writing. Students will work on assignments in class with teacher support as well as peer support. Take home assignments with teacher grading and editing will be included. We will be using IEW Group A. Class is taught by Jennifer Androkitis who has a Master's Degree in Special Education with an emphasis in English.

Completion of Excellence in Writing Group A or familiarity of the IEW program highly recommended.

If you have questions, please let us know.

****Targets State Standards for Language Arts****

Hands in Motion

Homeschool Enrichment

HandsInMotion4learning.com
 (916) 412-4331
 HandsInMotionHomeschool@gmail.com

Spring Session: 1/14-4/12
 301 W. Whyte Ave.
 Roseville, 95678

MONDAYS



9:30-10:20	10:30-11:20	11:30-12:30	1:00-2:15	2:30-3:45
Jr. Carpentry Grades 4-H.S. \$210 Projects included NEW Projects for Spring	Drone Aviation I & II STEM Grades 6-H.S. \$245 <hr/> Engine Repair Grades 5-H.S. \$195 Sm. Engines Req.	Intermediate Electronics Level II- Coding STEM Grades 6-H.S. \$210 Breadboard/ level I req.	Advanced Middle School Science Labs Grades 6-H.S. \$210	Creative Writing Grades 6-H.S. \$195 IEW Grp A or other IEW recommended <hr/> Nerf Boot Camp Grades 6-H.S. \$195

Nibble & Dribble Lunch 12:30-1:00



TUESDAYS

9:30-10:20	10:30-11:20	11:30-12:20	1:00-2:15	2:30-3:30
Keyboarding and PowerPoint Grades 4-9 \$175	Games in the Gym Grades 4-9 \$175	Lego Robotics I & II STEM Grades 4-9 \$195	Hands on Science Labs Grades 4-8 \$210	Excellence in Writing Grp A. Continuation Grades 4-8 \$185

Nibble & Dribble Lunch 12:30-1:00





TUESDAYS

2:45-3:45
Spikeball
Grades 4-H.S. \$175 Meeting at Cresthaven Park

Favorite

WEDNESDAYS



9:00-9:50	10:00-10:50	11:00-12:00	12:30-1:20	1:30-2:20
Jr. Carpentry Grades 4-H.S. \$210 Projects Included NEW Projects for Spring	Nerf Wars Grades 4-H.S. \$185 ----- Small Engines Grades 5-H.S. \$195 	Electronics: Level I-Intro To Coding STEM Grades 4-8 \$195	Rockets & Stars Astronomy & Science of Propulsion Grades 4-8 \$185	Story of the World Medieval Times Continuation Grades 4-8 \$185

Nibble & Dribble Lunch 12:00-12:30



FRIDAYS

12:30-1:20	1:30-2:20	2:30-3:30
Architectural Drafting, I & II Grades 5-H.S. \$175	Model Building I & II Grades 5-H.S. \$185	Lego Movie Making STEM Grades 5-H.S. \$185

TENNIS

We also offer Private and Semi
Private Tennis Lessons
Contact us for available times

HandsinMotionHomeschool@gmail.com

*301 W. Whyte Ave.
Roseville, CA 95678
Off Hwy 80 and Riverside*

(916) 412-4331

Independent and Charter Families Welcome

See complete class descriptions and Register online:

www.HandsinMotion4learning.com