



One Greenwood Avenue  
 Montclair, NJ 07042  
 973-783-8333  
[Info@L3-Academy.com](mailto:Info@L3-Academy.com)  
[www.L3-Academy.com](http://www.L3-Academy.com)

## WINTER 2015 Schedule

### SCIENCE•TECHNOLOGY•ENGINEERING•MATH•YOUNG LEARNERS•LANGUAGES

Young Learners

Languages

Math

Coding

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
3:45-4:45PM Chess (Novice)	3:45-4:45PM I Love Math	3:45-4:15PM Keyboarding (Beginner to Novice)	3:40-4:40PM LEGO® Robotics: Jr. FIRST® LEGO® League training (GradesK-3 <sup>TT</sup> )	3:40-4:40PM I Love Math***	8:30-9:20AM Minecraft® Madness (Grades 2-6)
3:40-4:25PM Early Simple Machines: Critical thinking (PreK-K)	3:45PM-5:15PM Conquistadors/Spanish (Novice/Beginner)	3:45-4:40PM Intro to Engineering: Inventions that Changed the World (Grades 3-6)	3:45PM-5:15PM Conquistadors/Spanish (Novice/Beginner)	3:45PM-5:15PM Conquistadors/Spanish (Novice/Beginner)	8:30-9:15AM Jr Scientists: States of Matter (PreK-K)
3:55-4:55PM Science & Language Arts: The Magic School Bus (Grades K-2)	3:45-4:40PM Movie Making: Stop Motion Animation (Grades 2-4)	3:35-4:25PM LEGO® Robotics I (G 1-3)	3:30-4:15PM Jr. Scientists: Winter Science (PreK-K)	3:40-4:40PM I Love Math***	8:30 - 9:15AM I Love Math Primary A/B
4:50-5:50PM Coding Academy: HTML/CSS (Gr 3-6)		4:55-5:35 PM Jr. Engineers: How Stuff Works (Grades PreK-K)	4:30-5:30PM Toy Engineering: Industrial Design (Grades 3-6)		9:30-10:30AM LEGO® Robotics II (Grades 1-3) Note: There is no prerequisite
4:35-5:20PM Jr. Scientists: Winter Science (PreK-K)	4:45-5:45PM Coding Academy: Intro to Programming I/II (Grades 2-6)	4:20-5:15PM Engineering: How stuff works (Grades 2-5)			9:30-10:30AM Super Science: Electricity, Engines & Ions (Grades 1-3)
5:10-6:10PM Architecture & Design (Grades 3-6)	4:50-5:50PM I Love Math***	4:30-5:20 PM Architecture, Building and Design (Grades 2-6)	4:50-5:50PM Adv. Lego® Robotics: Sensors, Sounds and Action (Suggested grades 3-5)		9:30 - 10:15AM Early Simple Machines: Amusement park thrills and rides (PreK-K)
5:55-6:55PM Coding Academy: Mission to Mars Game Development (Gr 4-6)	5:30-6:30PM I Love Math**	5:25-6:25 PM Minecraft Madness (Grades 2-6)	6:05-7:05PM Super Scientists: Astonishing Astronomy (Grades 1-3)		10:40-11:40AM Coding Academy: Visual Programming & Problem Solving /Game for Xbox*** (Grades 2-6)
	5:55-6:50PM Intro to Robotics (EV3) (Suggested Grades 3-6)	5:30-6:25 PM Super Scientists: Astonishing Astronomy (Grades 1-3)	5:25-6:25PM The Stock Market Game*** (Grades 4-8)		10:25 – 11:10AM Jr. Engineers: How stuff works (PreK-K)
	5:55-6:40PM Early Simple Machines I(PreK-K)	5:45-6:45PM Prototyping: Industrial Design (Grades 6-8)	5:40-6:35PM Engineering: How stuff works (Grades 2-5)		

Most classes start the week of Jan. 12, 2015.

## *WINTER 2015 Schedule*

### SCIENCE•TECHNOLOGY•ENGINEERING•MATH•YOUNG LEARNERS•LANGUAGES

#### Young Learners (PreK-K)

##### Monday

3:40-4:25PM Early Simple Machines: Critical Thinking  
3:55-4:55PM Magic School Bus: Sci. & Lang. Arts  
4:35-5:20PM Jr. Scientists: Winter Science

##### Tuesday

5:55-6:40PM Early Simple Machines I

##### Wednesday

4:55-5:35pm Jr. Engineers: How Stuff Works

##### Thursday

3:30-4:15PM Jr. Scientists: Winter Science

##### Saturday

8:30-9:15AM Jr. Scientists: States of Matter  
9:30-10:15AM Early Simple Machines: Amusement Park Thrills & Rides  
10:25-11:10AM Jr. Engineers: How Stuff Works

#### Lower Elementary (1-3)

##### Monday

3:55-4:55PM Magic School Bus: Sci. & Lang. Arts  
4:50-5:50PM Coding Academy: HTML/CSS (3-6)  
5:10-6:10PM Architecture & Design (3-6)

##### Tuesday

3:45-4:40PM Movie Making: Stop Motion (2-4)  
4:45-5:45PM Intro to Programming I/ II (2-6)  
5:55-6:50PM Intro to Robotics (3-6)

##### Wednesday

3:35-4:25PM LEGO® Robotics (1-3)  
4:20-5:15PM Engineering: How stuff works (2-5)  
4:30-5:20PM Architecture, Building & Design (2-6)  
5:25-6:25PM Minecraft Madness (2-6)  
5:30-6:45PM Super Scientists: Astronomy (1-3)

##### Thursday

3:40-4:40PM Robotics Team: Jr. FIRST®  
LEGO® League (ages 6-10)  
4:30-5:30PM Toy Engineering: Industrial Design (3-6)  
4:50-5:50PM Advanced LEGO® Robotics: Sensors, Sounds and Action (3-5)  
6:05-7:05PM Super Scientists: Astonishing Astronomy (1-3)  
5:40-6:35PM Engineering: How Stuff Works (2-5)

##### Saturday

8:30-9:20AM Minecraft® Madness (2-6)  
9:30-10:30AM LEGO® Robotics II (1-3)  
9:30-10:30AM Super Science: Electricity, Engines, & Ions (1-3)  
10:40-11:40AM Coding Academy: Visual Programming & Problem Solving/Game for Xbox (2-6)

#### Upper Elementary to Middle School (4-8)

##### Monday

4:50-5:50PM Coding Academy: HTML/CSS (3-6)  
5:10-6:10PM Architecture & Design (3-6)  
5:55-6:55PM Coding Academy: Mission to Mars Game Development (4-6)

##### Tuesday

3:45-4:40PM Movie Making: Stop Motion Animation (2-4)  
4:45-5:45PM Intro to Programming I & II (2-6)  
5:55-6:50PM Intro to Robotics (3-6)

##### Wednesday

3:45-4:40PM Intro to Engineering: Inventions that Changed the World (3-6)  
4:20-5:15PM Engineering: How stuff works (2-5)  
4:30-5:20PM Architecture, Building & Design (2-5)  
5:25-6:25PM Minecraft Madness (2-6)  
5:45-6:45PM Prototyping: Industrial Design (6-8)

##### Thursday

4:30-5:30PM Toy Engineering: Industrial Design (3-6)  
4:50-5:50PM Advanced LEGO® Robotics: Sensors, Sounds and Action (3-5)  
5:25-6:25PM The Stock Market Game (4-8)  
5:40-6:35PM Engineering: How Stuff Works (2-4)

##### Saturday

8:30-9:20AM Minecraft® Madness (2-6)  
10:40-11:40AM Coding Academy: Visual Programming & Problem Solving/Game for Xbox (2-6)

#### Miscellaneous

##### Monday

3:45-4:45PM Chess (Novice)

##### Mondays, Tuesdays, Saturdays

Various times I Love Math

##### Wednesdays

3:45-4:15PM Keyboarding

##### Tuesdays & Thursdays

3:45-5:15PM Spanish Immersion

**L3 Academy**  
One Greenwood Avenue  
Montclair, NJ 07042  
973-783-8333  
Info@L3-Academy.com

## WINTER 2015 Schedule

### YOUNG LEARNERS

**Early Simple Machines with LEGO® (Grades PreK-K)** Young learners will experiment by creating simple machines – gears, wheels, pulleys and axles. Our young learners will build models as well as be given challenges. *8 wks \$185; 12 wks: \$265 before 1/12/15 or \$277.50 after*

**Jr Engineers: How Stuff Works (Grades PreK-K)** Inquisitive young minds that continuously ask “how does it work?” will love this class. Jr. Engineers will explore how things work – from taking apart a mechanical toy to building a mechanical arm model. *10 wks \$250*

**Jr. Scientists Program (Grades PreK, K)** Our young scientists will learn through discussion, creation and hands-on experimentation in areas such as earth science, physics and chemistry. Each session has themed topics with an overall learning objective. Themes during winter session: Winter Science & States of Matter. *8 wks \$190; 12 wks \$285*

**The Magic School Bus (Grades K-2)** Blending Science & Language Arts, students will read one or two books from the *Magic School Bus* series and create hands-on projects that garner a deeper understanding of the science concepts within the story. *8 wks \$285*

### ROBOTICS

**Intro to Robotics (Grades 3-6)** This program is an introduction to the LEGO® Mindstorm® EV3 system including form and function, programming, behaviors, system sensors and feedback. This class is a prerequisite for future robotics classes. *8 wks \$325*

**LEGO® Robotics & Advanced LEGO® Robotics (Grades 1-6)** Using the LEGO® WeDo® system, your future engineer will build simple to complex mechanisms and program it to move, make sounds or even react to external stimulus using sensors by using an icon-based software program. *8 wks \$185; 12 wks \$270*

**TEAM: Jr. FIRST® LEGO® League (Grades K-3; Ages 6-9)** L3 Academy instructors coaches LEGO® teams for children. The Jr. FIRST® LEGO® League is a non-competitive “sport for the mind.” Each season culminates at a competition/review process where the team explains their project and research to judges. Robotics experience is not necessary. *12 wks \$399 or \$325/individual with team (includes cost of registration)*

### ENGINEERING, ARCHITECTURE & DESIGN

**Architecture & Design (Grades 3-6)** This class is an introduction architecture and design. Students will use technical drawing to create architectural concepts. Instruction will be given in the following areas: elements of design, a brief architectural history, and technical drafting lessons. No computers will be used in the design. *8 wks \$275*

**Architecture, Building & Design (Grades 2-6)** Art meets engineering. In this class, students will design and build a model of a structure. *10 wks \$350*

**Early Simple Machines with LEGO® (Grades PreK-K)** See *Young Learners* section.

**Engineering: How Stuff Works (Grades 2-5)** The curriculum for this class is entirely driven by students. Students will submit questions as to how something works and we'll build a class around it to answer the question. *10 wks \$350*

**Industrial Design: Prototyping (Grades 6-8)** Taught by an Industrial Designer, students team-up to design products using the Engineering Design Process steps used by real design companies. Students will develop products individually as well as collaboratively. *10 wks \$350*

**Intro to Engineering: Inventions that Changed the World (Grades 3-6)** From Leonardo Da Vinci's flying machine to the steam engine to bionic limbs, these inventions changed the world. Students will explore various world-changing inventions and will build prototypes. *10 weeks \$285*

**Jr Engineers: How Stuff Works (Grades PreK-K)** See *Young Learners* section.

**Toy Engineering: Industry Design (Grades 3-6)** Taught by an Industrial Designer, students will team up to design toys the way a professional toy maker would do it. Using the Engineering Design Process, students will do market research, perfect their art design, and engineer a prototype. Kids will brainstorm, design and build individually and collaboratively. Please note that computers are not used in this class. *10 wks \$350*

### CODING ACADEMY

Create your own adventure, interactive story or video game and start learning how to program. Our classes can be taken as a standalone class or as a way to build competency. Each class builds competency within a specific software program. The progression starts with drag and drop icon-based programming to ends with script programming. We have suggested grade levels for each of the programming courses, but if your child(ren) has/have taken courses previously or shows a propensity for this subject matter, please contact us for an assessment and placement. Please note that we use Scratch, Kodu, HTML/CSS, among others.

**HTML/CSS (Suggested Grades 3-6)** Students can create their own website or landing page. *8 wks \$200; 12 wks \$300.*

**Intro to Programming I/II (Suggested Grades 2-6)** In the first session, students will learn the framework for creating a program from if/then statements to how to control movement on an X/Y axis to customizing avatars and their environments. In the second session, students will take the knowledge and apply it to creating a program from scratch. *8 wks \$200; 12 wks \$300.*

**Mission to Mars Game Development (Suggested Grades 4-6)** Our space explorers will have a chance to explore Mars surface using the Mars Rover. Using object-oriented, drag and drop programming, students will be given the opportunity to terraform Mars, program the Rover and explore various programming concepts. *8 wks \$200; 12 wks \$300.*

**Videogame/Interactive Story: Visual Programming & Problem Solving (Suggested Grades 2-6)** Using icon-based, object-oriented software program, students will create video games and trouble shoot each other's creations. *8 wks \$200; 12 wks \$300.*

### SCIENCE

**Jr. Scientists Program (Grades PreK, K)** See *Young Learners* section.

**Super Scientists Program (Grades 1-3)** Through madcap, explosive fun, our super scientists actively participate in hands-on experiments in areas such as earth science, physics and chemistry. Each Super Science program is based around a themed topic – such as Newton's Three Laws, Crazy Chemistry, Astonishing Astronomy and the like. *8 weeks: \$190; 12 weeks \$285 (cost of materials included)*

**The Magic School Bus (Grades K-2)** See *Young Learners* section

### OTHER

**Chess (Grades 1-6)** Students learn to play chess and learn chess strategy. *8 wks: \$185; 12 wks: \$265 before 1/12/15 or \$277 after*

**Keyboarding (Novice)** Students learn to type faster with better accuracy. Students may sign in from home to practice. *First 12 wks: \$275; continued 12 wks \$265 or \$100/ 4-wk cycle.*

**Minecraft® Madness (Grades 2-6)** Students collaborate in the world of Minecraft to explore programming and computer science, collaborate together for challenges and other challenges. *8 wk: \$250; 12 wks \$365*

**Movie Making: Stop Motion Animation (Grades 2-5)** Lights! Camera! Action! Students create a mini stop motion animal short film using different materials – from LEGO® to clay to any household materials. *10 wks: \$315*

### L3 MATH ACADEMY

Stanford mathematics professor, Jo Boaler, is a strong advocate for rethinking math education to teach kids to love math, not just get through math. Whether you want your child to move ahead or build a stronger foundation, we are focused on teaching our students to love math and building a better foundation for the future. Class size will vary from 2 to 6 and placement is based on assessments.

**The Stock Market Game (Grades 4-8)** Starting out with \$100,000 in virtual cash, students will make real-world financial decisions, while learning financial concepts – from investment portfolio strategies to long-term savings to compound interest. This program is taught by a former financial analyst. *12 wks: \$360*

**I Love Math\*\*\*** Using a combination of the Singapore Math curriculum and supplemental materials (from logic problems to math games), students who show promising math abilities will work in a small group setting to develop their math logic skills. This math program will introduce logic, algebra, geometry and higher math concepts. *Weeks in Session: Ongoing 4-wk rolling enrollment Day/Time: Dependent on placement*

**WINTER 2015 PRICING**

Program	Grades	Pricing	
<b>Robotics &amp; Brick Academy (LEGO®-based learning)</b>			
Early Simple Machines (LEGO® Duplo)	PreK, K	8-week \$185	12-week \$265 <sup>o</sup> /\$277.50
LEGO® Robotics I/II Advanced LEGO® Robotics Intro to Simple & Motorized Machines	1-6	8-week \$185	12-week \$265.00
LEGO® Robotics Club: Jr FIRST® LEGO® League	K-3 (must be 6)	12-week \$399 (single registration)	\$325 per individual (with team, 3-6 children) Team registration included
Intro to Robotics	3-6	8-week/\$325	
<b>Architecture &amp; Engineering</b>			
Jr. Engineers: How Stuff Works	PreK-K	10-week/\$250 (incl. materials cost)	
Intro to Engineering: Inventions that Changed the World	1-3	10-week/\$285 (incl. materials cost)	
Engineering: How Stuff Works	2-5	10-week/\$350 (incl. materials cost)	
Architecture, Building & Design	2-6	10-week/\$350 (incl. materials cost)	
Architecture & Design	3-6	8-week/\$275	
<b>Industrial Design</b>			
Toy Engineering: Industrial Design	3-6	10 wk/\$350 (incl. materials cost)	
Prototyping: Industrial Design	6-8	10 wk/\$350 (incl. materials cost)	
<b>Coding Academy**</b>			
Tier 1 programming classes (Scratch, Kodu, Alice)	2-6	8-week \$200	12-week \$285 <sup>o</sup> /\$300
Tier 2 programming classes (HTML/CSS or scripting)	3-6	10-week \$350	12-week \$400 <sup>o</sup> /\$420
<b>Science*</b>			
All Super & Jr. Science Classes	PreK to 4	8-week \$190	12-week \$270 <sup>o</sup> /\$285
The Magic School Bus: Science & Language Arts	K-2	8-week \$285	
<b>Strategy</b>			
Chess	1-6**	8-week \$185	12-week \$265 <sup>o</sup> /\$277
<b>Math</b>			
I Love Math (incl. Singapore Math)	By level	Year-round	4-week: \$165 1X a week or \$490 for three 4-week cycles
<b>Other</b>			
The Stock Market Game	4-8	12 week \$360	
Minecraft Madness	2-6	8 week \$250	12 week \$365 <sup>o</sup> /\$375
Movie Making: Stop Motion Animation	2-5	10 week \$315 (incl. materials cost)	
Keyboarding		Initial 12 sessions \$275 (with access to software) Continued sessions: 12-wk/\$265 or 4-wk/ @\$100	
<b>Homework Helpers</b>			
One session/one hour	1-12	\$75/hour (booked with at least a 48-hour notice) or \$90/hour (24-hour notice or less) Pre-paid 4 sessions▲ \$280 Pre-paid 8 sessions▲ \$544 (\$68/hour)	

\*\*\*Placement based on assessment. <sup>TT</sup> Must be 6 years old by 1/1/15 <sup>††</sup> MUST be an advanced builder. Assessments available. <sup>2nd graders admitted with assessments.</sup> <sup>o</sup>There is no need to take Early Simple Machines I, but the child should be able to build with DUPLO® independently in order to get the best from this class. Cost of materials included. <sup>\*\*</sup>The grade range is a suggested range for each programming course. However, if your child has a propensity for this subject or taken previous course, we can assess them for placement. <sup>†</sup> Sibling discounts are available. Discounts cannot be combined with other discounts. <sup>o</sup>Fee for extended session will be honored if student is registered by first session. Otherwise, extended 4 weeks will be at full class fee. **Most classes start the week of Jan. 12, 2015.**