LEARN
SCIENCE & MATH CLUB

ANNUAL REPORT 6.14 TO 5.15

LETTER FROM THE PRESIDENT

Thanks to the wonderful mentors, volunteers and donors who make our programs possible, 2014-2015 was another wonderful year. Together, they made it possible for LEARN's kids to:

- **Attend Fun, Hands-On Classes:**
  - **Chariots, Trains & Planes, Oh My!** – A class on the physics and engineering of transportation throughout history for 5 to 9 year-old kids.
  - **Explore FLL Robotics – World Class** – A hands-on intensive in robot building and programming for 9 to 14 year-old kids.
  - **The FLL Seminars** – A series of seminars for FLL teams and coaches to prepare them for the project, programming and structural engineering aspects of FLL competition.
  - **Abracadabra! Is It Magic, or Is it Science** – A chemistry and physics class disguised as "The School of Wizardry and Magic" for 5 to 14 years olds
  - **Rockets Away**! – An aeronautical engineering class for 9 to 14 year olds
  - **The Mini-Bot Build** – Another hands-on intensive in robot building and programming, this time for high school kids
  - **Inside Electronics & Drones** – An exploration inside all those electronics devices we all carry

1. A Young Magician with His Magical Potions

- **Participate in One-Day Events:**
  - **Engineering Extravaganza** – A fun-filled day of learning disguised as play as kids travel from station-to-station designing their own solutions to our engineering challenges!
  - **City Imagineerium** – A day spent building the kids' City of Their Dreams.
- **Meet STEM Experts through TeamXchange** – A cross-pollination program, designed to bring together some of the 30,000 FIRST teams and other technical types from around the world to share their knowledge of robotics and work together on each year's challenge. This year our robotics and invention teams traveled to Massachusetts, New York, Washington D.C. and Kentucky.
- **Dive deep into STEM in Summer Camps**:
  - **Robo Camps 1 & 2** – A mini-competition in FIRST LEGO League robotics
  - **Chariots, Trains & Planes, Oh My!** – A camp on the physics and engineering of transportation throughout history for 5 to 9 year-old kids
  - **Rockets Away!** –A camp focused on making and blasting off lots of rockets

- **Get a taste of STEM in Community Events** – Girls in STEM, STEM Fest, Library Science Nights and School Science Nights.

1. **Members of the Techie Peppers, Celebrating Their Win**

In addition, we continued to field robotics teams. Our FIRST Tech Challenge (FTC) robotics team, The Red Hot Techie Peppers finished their fifth season with another bang. They won numerous first place awards at the two regional qualifiers they attended and advanced to the MO State Championship where they posted some of the highest scores of the day. While achieving all these things, the team mentored our younger robotics teams, served as counselors at our summer camps and participated in TeamXchange by traveling to France this summer.

Every one of these programs was a blazing success thanks to the wonderful kids who made us smile and the terrific mentors and sponsors who brought smiles to their faces. Read on to learn more about what the kids did!

Thanks for another wonderful year!

Rebecca Kidwell, President
LEARN Science & Math Club

CONTENTS

OUR PROGRAMS

LEARN Science & Math Club is a 501(c)3 non-profit. Since 2004, we have been providing kids from the Kansas City metropolitan area with rich science and math experiences through the use of robotics, engineering and programming projects and laboratory experiments. We actively foster the collaboration, organization and communication skills necessary to work and play together.

2. Our Kids & Their Balloon Rockets

At LEARN, we know there is a natural scientist inside every kid, and our mission is to foster those native abilities. Whether they plan to become lawyers, chefs or physicists, kids should feel bold and confident in a technical world; we work hard to make that possible. We use robotics programs such as the FIRST LEGO League and FIRST Tech Challenge as well as invention programs such as the Lemelson-MIT InvenTeam program as learning platforms as well as many home-grown curricula. Below, you will find a summary of our 2013 to 2014 programs.

FIRST Tech Challenge

In 2010, LEARN Science & Math Club launched a high school robotics program. Our rookie team, The Red Hot Techie Peppers, had a bang up first year – winning the 1st Place Connect Award and the 2nd Place Inspire Award at the Southeast Missouri State Qualifier and the 1st Place Motivate Award at the Missouri State Championship. Every year since, the triumphs have continued as the team earned top honors at nearly every tournament they have attended.

3. The Red Hot Techie Peppers

If you've not heard of FIRST Robotics, you've missed out on one of the coolest, hands-on learning platforms for building math and science skills. FIRST makes computer science and

engineering “hip” by building a sports-like, team-based competition around robotics. Hundreds of thousands of kids from around the world get together and build robots that solve weird, exciting and difficult challenges every year.

When

The high school team met fifteen to twenty hours per week during the competition season, and they met ten hours per week in the off-season.

For Whom

Kids do not have to be super-geeks to get involved. If they are interested in business, graphic design, marketing, accounting, computer programming or engineering, we have got something for them! The FIRST Tech Challenge program is for kids 13 to 18 years of age.

5. **A Red Hot Techie Pepper Loses His Peppers over His Team’s Success**

Fall Classes

This fall was filled with fun! LEARN offered three programs for kids from 5 to 14 years of age: The Icky, Sticky Human Body, Explore FLL Robotics – Nature’s Fury and The FLL Seminars.

Chariots, Trains & Planes, Oh My!

What makes a boat float? How does a wheel barrow make a heavy load easier to move? Why don’t bridges fall down when your heavy car drives across them? What keeps a tunnel that has been drilled through a mountain from collapsing? Have you ever considered what keeps you upright as you jump, hop and skip? (Well, you should! Bipedalism is a lot trickier than it might look.) In this class, we are diving into all forms of transportation. We will not only solve these mysteries – we will build more than a dozen models to test out our ideas. There were engineering challenges to remember!

The Projects

- The Science Behind Walking, Bipedalism and Balance
- Moving Large Objects Before the Wheel
- Roads - Surfaces, Friction and Inclines
- Tunnels & Subways
- Bridges – Forces and Motion
- The Invention of Motors

6. Kids Testing a Log-Rolling Method Used to Move Granite for the Great Pyramids

- Early Trains
- Mag-Lev Trains
- The Oldest Cars
- Rocket Cars
- Unsinkable Boats (a.k.a., buoyancy, density and displacement)
- Paddle Boats
- Submarines
- Futuristic Boats
- Rockets & Planes and the Lift and Thrust that Move Them
- The Logistics of Transportation

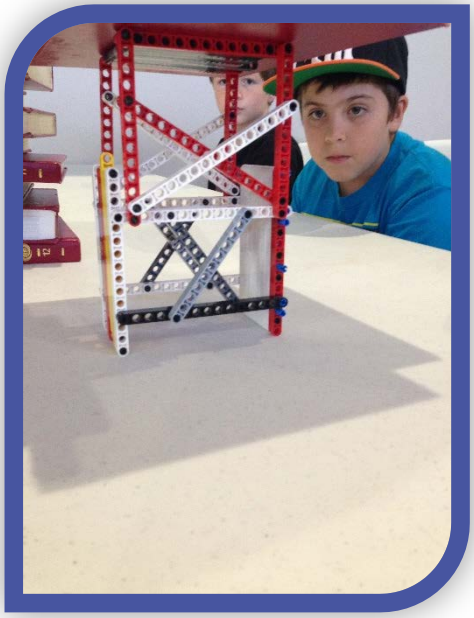
4. Young Roboticists Checking Out the Strength of their Structures

Explore FLL Robotics – World Class

Have your kids always been interested in robotics, but you found the thought of competing too daunting? Well, this was your chance! In this three-hour a week class, kids got a taste of all the components of this year's FIRST LEGO League (FLL) robotics challenge with all the fun and a fraction of the effort!

For kids who have to look under every hood, push every button and look behind every door, Explore FLL – World Class lit their fire! For the first ten weeks, they built robots, solved complex puzzles, designed cool contraptions and wrote practical programs. For the next six weeks, they learned what it takes to be an effective learner/teacher and then they developed a science fair-like invention to make learning/teaching truly "World Class."

Better yet, those parents didn't have to lift a single calculator, microchip or slide rule. The LEARN team did all the heavy lifting in engineering, science and math – while parents sat back and watched the entertainment.



5. Two of our Super Robo Builders

The Projects

Play Team-Building Games – Solving big challenges requires great teamwork, and we foster these skills through games and a team-oriented approach to all our projects.

- **Learn How to Build Strong** – A lesson in structural engineering
- **Solve Engineering Challenges** – Putting those building lessons to work
- **Design Great Robots** – The kids will learn tips and tricks for building a robot that actually works

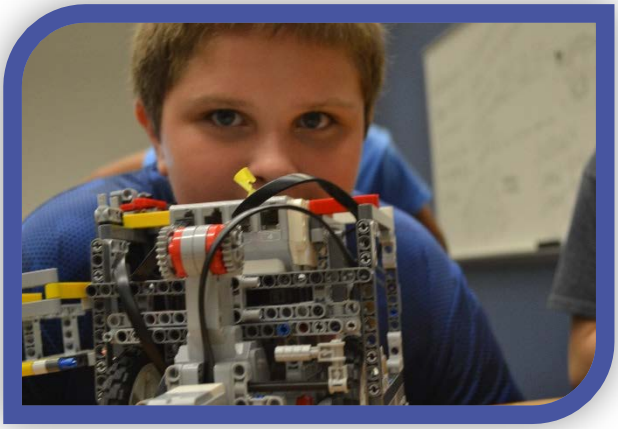
- **Scope Out the Playing Field** – See where you'll meet soaring success or crushing defeat…not really, competition is all for fun, right?
- **Build Lots of Cool Stuff** – This is where you get to put your mark on the robot world – add arms, design rams, create the next modern marvel…Navigating Effectively – You won't love your 'bot if it plays "dead bug" on the mat; so, we'll show you how to get it to jump tall buildings in a single leap…or, at least, go where it's supposed to go.
- **Take a Class in Programming 101** – A lesson in how to talk "robot"
- **Program Your 'Bots** – Putting that programming lesson to work
- **Put It All Together** - Test all that cool stuff you've been building and make it work.
- **Compete** – This is where you find out what your robot's made of! (Parents and grandparents are welcome to come, see what the kids have done and enjoy the show!)

What the Kids Learned

In this class, kids learn about structural engineering, strategic planning, software development and robotics. The learning does not stop with STEM education, however. When four or five kids share a robot the size of a bread-box, they learn how to collaborate, communicate and work as a team.

The FLL Seminars

LEARN Science & Math Club's FLL teams have taken one or more first place awards at every FLL tournament they have attended. And, they have proudly represented the Western Missouri and Kansas FLL Region at the North American Championship and World Festival on three occasions, bringing home the 1st Place Inspiration Award two out of three times.



6. A Boy and His Robot Are Never Far Apart

And, while we think our kids are the bee's knees, we know that every kid is wonderful. Our kids' success stems from investing a huge amount of time in FLL and developing a rich knowledge base. Not every team has the chance to make such big investments. So, we feel that it's time for us to pay forward the many wonderful experiences we have had in FLL. This year, our kids will not compete. Instead, our teams will host region-wide seminars to share what they have learned.

What the Kids Learned

- The Research Project – In this session, kids:
    - Received one-stop research – Get the inside scoop on the real-world problems from regional experts on learning and education.
    - Learned:
        - How to pick a winning topic
        - Choose a presentation format that wows your audience

        - Create a story with all the facts, but plenty of fun
        - How to created their own props
        - And, how to put those artsy types to good use
- Strategy & Structural Engineering – In this session, kids learned how to:
    - Maximize their points
    - Streamline the number of attachments they need
    - Identify "low hanging fruit"
    - Run their missions faster
    - Radically improve their handwork
    - Build easy-on and easy-off attachments
    - Combine missions for optimal performance
    - Score high – every time, not just once in a while
- Software Development – And, in the final two sessions of the Seminars, kids discovered how to:
    - Follow lines reliably and quickly
    - Save time and effort by creating reusable code
    - Improve the accuracy of your turns
    - Get better performance with multiple sensors
    - Cut time from your robot runs with code sets
    - Develop advanced programming techniques

Spring Classes

This year, LEARN hosted four spring classes: Abracadabra and Rockets Away! for younger kids and The Mini-Bot Build and Inside Electronics for older kids. All four were bang-up successes.

Abracadabra! Is It Magic, or Is It Science?

In this class, "The School of Wizardry and Magic" was in session! We mixed up chemical concoctions, performed feats of illusion and dazzled the audience with super science spells. Together, we demystified the most mystifying feats of magic as we explored:

- Magnetic Magic
- Freaky Optics Tricks
- Chemical Potions
- Hydro-Magic
- Abnormal Physics
- Elect-Tricks

7. A Junior Magician Demonstrating a Little Scientific Magic

And, as our magicians-in-training were waving their wands, they learned the science behind the magic. They learned about atmospheric pressure, polymers, thermodynamics, mass, gravity, acids, bases, indicators, chemical reactions, flame test, fluorescence, sublimation, exothermic and endothermic

reactions and lots more. On the last day, the kids put on a Marvelous Magic Show for family and friends as well as enjoyed a performance from a professional magician.

Rockets Away!

In this class, 9 to 14 year olds had to tighten those seatbelts and prepare to blast off for the ultimate experience in rocketry. For kids who like (harmlessly) blasting objects into the lower atmosphere, are intrigued with (benign) explosives and/or love to make things go (safely) "boom," this class was a blast!

They learned how to build and launch:

- Water Rockets
- Balloon Rockets
- Seltzer Rockets
- Bottle Rockets
- Solid-Fuel Rockets
- And, compete in the Mission to Mars Challenge

8. Rocket Scientists Enjoying Launch Day

While this class was all about fun, the kids also learned a lot of hands-on, applied physics and math while they built those rockets. Over the course of twelve weeks, they tested different nose cone and fin designs, tried out various payloads and tracked flight paths and altitudes as they flew various rockets. They also learned about kinematics, vectors, projectile motion, Newton's laws of motion, the chemistry of combustion reactions, aerodynamics and stability. And, with every 3-2-1-Liftoff!, they were a step closer to becoming a true rocket scientist!

On the final day, they tackled the "Mission to Mars." For this exciting challenge, the kids took their solid-fuel rockets for a test flight at a local park. Their families brought picnics and enjoyed the wildest, coolest blast offs yet. We set up launch pads, a control station and the kids tried to send their rockets to Mars – or, at least, to a variety of height and distance targets. It definitely was a blast – literally and figuratively.

The Mini-Bot Build

In this class, 13 to 18 year old kids designed, built and programmed four to six mini-'bots to compete in drag races, maze running, obstacle course races, soccer games and other challenges. This class was designed to build rapid prototyping skills in mechanical engineering and programming. Kids built and programmed new robots in just a few hours each week. Then, they put those 'bots to the test on the field to win prizes and learn a ton. The kids built with the Tetrix system and programmed in Java.

Inside Electronics & Drones

We've all been enchanted by iPods, cell phones, PlayStation devices and lots of other gadgets that make our lives so much fun. But, who knows what is going on inside those sleek cases? After "Inside Electronics & Drones," the 13 to 18 year olds in this class do! They learned what makes all those cool electronics of theirs tick. In this discovery-based class, the kids soon had lights flickering, bells ringing and all sorts of things happening as they designed circuit boards and did more than a dozen hands-on projects and experiments, culminating in building and flying their drones.

- Projects
  - Blow Out a Circuit
  - Burn Out a Battery
  - Taste Electricity
  - Turn on the Lights (i.e., build circuits that turn on LEDs)
  - Resistance is Futile (also known as "all about resistors")
  - Learn to Read (electronic schematics, that is)
  - Magento Goes Wild (all about magnets)
  - Playing in Traffic (designing standard and interactive traffic light controllers)
  - Catch a Crook (build your own Piezo Sounder Alarm)
- What They Learned
  - The basic principles of electricity and electronics
  - The purpose and methods of circuitry and bread board design
  - How to read simple electrical diagrams
  - How to create useful electronics

LEARN Events

Here at LEARN, events are short-term programs that last for just a day or two. Some repeat every year. Others are one-time events, and the remainder rotate through our program line-up every few years. They all have something in common, though. They are whole lot of fun! Below, you will find a list of this year's events.

Engineering Extravaganza

Kids from five to fourteen years of age joined us for a fun-filled day of learning disguised as play! Inside every child there is an engineer just waiting to create a…

- Catapult
- Spaghetti tower or a bridge
- LEGO city
- Confetti launcher
- Better rat trap
- And more!

12. A Flight Test at Engineering Extravaganza

Move from station-to-station building cool things all day long with our fun and wacky technical mentors, or settle in and work on a project for hours. We provide the challenges, the supplies and the engineering guidance; you build whatever you can dream. Your imagination is the only limit!

City Imagineerium

Saturday, March 9th, kids from 5 to 18 years of age gathered to build the most amazing city! Kids from all over town were invited to spend the day building the City of Their Dreams! As kids arrived for this huge event, they "applied" for a building permit, were issued a "plot of land" and mountains of recycled materials. Then, they spent the day building their dream city.

13. A Young Builder with His Volcano-Topped Museum

This was the third City Imagineerium build. And, we found that kids create the most amazing cities - eco-friendly, beautiful and fun to live in. So, it was no surprise that the volunteer city planners, architects, builders and engineers who were on hand to help the kids say they have learned as much from the kids as the kids have learned from them. This year, as always, the kids just kept on "wow'ing" us! To watch the kids as they built their city, click on **City Imagineerium**.

For older kids, there was a special challenge – to build the strongest spaghetti bridges. At the end of the day, teams competed for design awards. Then, we put those bridges to the test. Teams brought their bridges to the testing station. Amid explosions and spaghetti spray, we discovered which bridge deserved the title of "monster bridge." (The kids swore that's the most fun, but we're sure they enjoyed the cool prizes, too!)

9. Young Builders with their Bridge

Summer Camps

Weekdays, from May 26th thru July 3rd 9a to 4:30p, LEARN Science & Math Club hosted the coolest summer camps! This summer, we hosted for week-long camps.

Chariots, Planes & Trains, Oh My!

The first camp was an exciting exploration of transportation throughout history. The kids built and tested dozens of modes of transportation and transportation-related structures.

Robo Camp – Body Forward

Robo Camp puts all those physics and engineering lessons to work, challenging kids to build LEGO Mindstorm robots that can conquer the world. (Well, maybe not the world - just fourteen tough missions.)

Rockets Away!

For our second camp, the kids had a Math Blast; even kids who think that math stinks loved this "all play" program. The kids were so busy running, jumping and building, they didn't even realize that they were honing their basic math, algebra and geometry skills.

Robo Camp – World Class

The last camp of summer was another session of Robo Camp – with a whole new challenge. Kids had a chance to dive deeper into the skills they learned in the previous Robo Camp. They built designed new attachments and wrote new programs. And, because the challenges get harder with each competition season, they had to really stretch those skills!

15. Rocket Scientist Giving Their Rocket Launchers a Firm Stomp

TeamXchange

As wonderful as FIRST programs are, they have one significant gap – the programs do not encourage cross-pollination between teams. The kids within a team learn from each other, but they rarely have the opportunity to observe much less share their experiences and lessons with other teams.

During the preparation period, the challenges are so intense that the kids must focus on their homework. During competition, they are so wildly busy doing their jobs, they just don't have time to observe much less interact with other teams.

To address this gap, LEARN introduced TeamXchange in 2010. We have brought together many hundreds of teams over the last three years. Our kids have hosted a German team for a month. They have also traveled to Ohio, Florida, Oklahoma, New Mexico, Arizona, Colorado, California, New York, Massachusetts, Washington D.C. and France – not to mention all over Missouri. In their travels, they have met other FIRST teams, college roboticists and professional engineers. With these fellow technical types, they have taken tours, given presentations and classes and shared tips and tricks. TeamXchange has created a revolution in knowledge-sharing amongst these kids.

We hope to expand TeamXchange in the future. If we are able to attract funding, we will:

- Build a Web site to support kids around the world. This site will:

    - Promote robotics and other tech training for primary school kids
    - Provide a forum for teams to meet and discuss their projects, questions and opportunities
    - Offer tips and ideas for working together
    - Provide resources for this year's topic
    - Encourage and support teams who want to meet in person
- Provide events for all the teams in our region. These programs will include:
    - Field trips to businesses, museums, government offices, research centers and other destinations related to the annual FFL topic
    - Guided discussions to encourage kids, coaches and mentors to explore the challenges their communities face on the topic, identify what they have in common and what's different and how they could work together to create innovative solutions and change
    - Region-wide training

16. One of The Red Hot Techie Peppers Conquering Paris while on TeamXchange

Community Events

To extend our reach, LEARN Science & Math Club also sponsors activities at many free community events. This year was no exception. We hosted booths with lots of fun, hands-on projects at a variety of events. These included Girls in STEM and school Science Nights.

THE RESULTS

At LEARN Science & Math Club, we operate on the assumption that kids can do extraordinary things. And, they always prove us right! Our kids:

17. Our Rock'n Robo Rabbits FLL Team with Friends at The North American Championship in San Diego, CA

Build Teams and Communicate Effectively

Our programs teach kids to:

- Work closely with other kids to analyze and solve complex, on-going challenges
- Treat others with respect, kindness and appreciation for the skills and abilities they bring to the project
- Research a topic, identify opportunities and present new ideas to professionals, government officials and the community

Build Life Skills

Our kids:

- Develop Strong Technology Skills – Not all of our kids want to be engineers; some want to be doctors, programmers or lawyers. All of them, however, know they benefit from being able to put technology to use. They learn sound engineering principles, strong computer, project management, mechanical and electrical engineering skills.
- Build Business Skills – Building and programming robots is cool, but solving real-world problems is even better. So, our team does more than compete in FIRST robotics challenges. They are launching a technology-related business. We bring in marketing, sales and accounting professionals to help them commercialize concepts like:
- Created Script Alert – One of our FLL teams proposed an innovative, Web-based product to prevent millions of injuries and deaths related to prescription drug dosing errors. Several members of that team moved up to our new high school team, and they won the Lemelson-MIT InvenTeam grant to fund the prototyping of this product.
- TeamShare – In conjunction with our FLL teams, our FTC team is developing a Web site to help FIRST Robotics teams share their questions, tips, tricks and techniques – with the goal of improving everyone's capabilities.

Make a Difference

Our kids have:

- Worked to reduce energy usage and pollution. They:
    - Developed a Web application that encourages people to carpool by helping them to easily catch a ride with their Facebook and My Space friends
    - Presented a proposal to the KC City Council and the Missouri State Legislature, encouraging them to implement a metro-area wide ride- and bike-sharing project
    - Built emissions-free pedal cars and displayed them at the Nelson-Atkins Museum of Art and the KC Zoo on Earth Day to demonstrate it's possible to get around town without polluting
    - Conducted a flash mob event called, "FREEZE to Save the Planet," to promote awareness of the many small things we can all do to reduce energy usage and pollution. To see a video of this event, visit FREEZE.
- Created a patented biomedical engineering product called Script Alert that could save thousands of lives each year
    - Developed two food safety product concepts:
    - One, called Food Tracker, uses RFID technology to trace foods from farm to fork, ensuring the CDC and other experts can quickly track and stop food poisoning and contamination.
    - The other, called Stick EZ, uses existing immunoassay technology in the form of a small sticker to identify foods that are contaminated with food poisoning or pesticides.
    - Host Open Houses and Science Fairs

18. Our Shadow Knights FLL Team Presenting Sticky EZ

- Mentored Our FLL And Jr.FLL Teams – Most of our high school team members volunteer four to ten hours a week year-round to coach the younger kids in our program. This year, they led these teams to three 1st place awards.
- Hosted Summer Camps and STEM Classes – Our Club hosts three to five week-long science and math enrichment programs each year. Team members volunteer as camp counselors. These camps serve as both community outreach and a principal fundraiser for the team; last summer, they earned $9,800. Our high school team also puts on a variety of STEM classes for the community including Circuit Board Design & Production, AutoCAD Inventor, the annual Engineering Extravaganza and Programming in Robot-C. They produce on a number of free community service events as well such as Science Night at the Kansas City Public Library and a LEGO Building Blow-Out at Makers Faire.

Achieve Big Things

Our teams:

- Took 1st Place awards in local and Regional competitions every year (and they've often taken home more than one award)
- Won 1st Place for the Chairman's Award – the top honor – the last two years
- Represented the Western Missouri and Kansas Region at North American Championship and at World Festival – making them one of the top 79 teams out of over 22,000 teams for the last two years. On both occasions, they finished in the top ten teams, earning the 1st Place Award for Inspiration.
- Been nominated twice and won an International Core Values Award for being one of a handful of teams from around the world that best demonstrates gracious professionalism, kindness and support for other teams

OUR TEAM

LEARN Science & Math Club is an all-volunteer organization. We owe huge thanks to our wonderful Board members, mentors, coaches and teachers for their tireless devotion to making so many opportunities possible for kids from all over the Kansas City metropolitan area and around the world. Many of our team members work twenty to forty hours per week at LEARN after putting in full days at their "real" jobs.

Our Board

We have a strong and diverse Board that provides guidance and unflagging support for our programs. Our Board includes:

- President – Rebecca Kidwell
- Vice President, Technology – David Sherrick
- Vice President, Security – Jeff Stice-Hall
- Secretary – Amanda Madrigal

19. Volunteers from Kohl's Cares

Our Volunteers

LEARN simply could not function without the many people who give their time to helping kids. For some of our larger events, we have as many as fifty volunteers devoted to helping, encouraging and keeping kids safe. This is equally true of our on-going programs. Week after week, dozens of parents and professionals band together to mentor and guide our kids.

OUR DONORS

LEARN's donors bring joy, opportunity and a life-long love of science and math to kids throughout our community. With immense gratitude, we thank all our donors for making our work possible. Some of you are individuals, and others are large organizations. Whatever the size, your contributions are invaluable. You made so many children happy this year.

$10,000 or More

- Synthesis Solutions, Inc.

$1,000 to $10,000

- Rockhurst University
- Time Warner Cable
- The United Way
- Script Pro
- UMKC's School of Computing & Engineering
- Kohl's Cares Foundation

$500 to $1,000

- Custom Color
- FIRST
- Garmin
- Henderson Engineers
- PTC
- Rentech Systems

20. Kids Enjoyed Catapulting Raw Eggs across Science City at the Girls in STEM Event

HOW TO HELP

As we all know, success is expensive. Parents and kids continue to ask LEARN Science & Math Club for more – more classes, more camps, more events, more advice. While this is a wonderful situation to be in, it comes at a cost.

Over the last eleven years, LEARN has grown significantly each year. Demand has outstripped our resources. We need to buy more computers, robots and other STEM equipment to meet the need. We also need dedicated meeting space to offer more programs, more often. And, we've done all this with no paid staff. Everyone involved has volunteered their time; some Board members have routinely volunteered 20 to 40 hours per week for nine years.

To continue to grow, we will need to eventually offer some form of compensation to those who are giving full-time service. In addition, we would like to offer scholarships for those kids who can't afford

LEARN's very modest fees. Currently, fees are set at or below direct costs; as a consequence, we cannot easily afford to waive fees, but many families have asked for help. Presently, when we waive fees, a Board member will step in and pay the child's costs. We would like to be able to do more.

We also need to find a permanent home. LEARN always needs computers, supplies, accounting, marketing, legal and printing services. To meet these objectives, we will need to raise over $100,000. And, our kids always need mentors. So, there are many ways you can contribute. Get involved, and make a lasting difference in kids' lives.

OUR BUDGET

For its first two years, LEARN Science & Math Club was funded largely by Kauffman Foundation grants and private donations. Since then, we have been almost entirely self-supporting. This year, we are so grateful to report that we have become a recipient of the United Way small organization grants.

	2014-2015 Actual	2015-2016 Projected
Income		
Contributions and Support	$19,947	$15,000
Earned Revenues	0	$0
Fund-Raisers	$8,238	$26,000
Services	$41,537	$40,000
Total Income	**$70,616**	**$81,000**
Expenses		
Advertising	$485	$600
Bank Charges	0	$144
Contractor Expenses	$255	$30,000
Insurance - Corporate	$735	$735
Legal Fees	0	$0
Office/Gen. Admin. Expenses	$416	$1,200
Payroll Expenses	0	$0
Postage and Delivery	0	$150
Printing and Reproduction	$196	$500
Professional Services fees	$1,516	$1,500
Salaries and Related Expenses	0	$0
Rent	0	$1,440
Supplies and Materials	$55,433	$29,781
Taxes	0	$0
Telephone	0	$0
Tournament Fees	$360	$1,500
Travel	0	$0
Refund Expenses	0	$0
Utilities	0	$0
Web Development and Maintenance	0	$1,000
Total Expenses	**$60,536**	**$68,850**
Net Profit/Loss - Total	**$10,080**	**$12,150**

June 2014 to May 2015

Income

From 2004 to 2014, LEARN Science & Math Club grew substantially each year. This year, LEARN Science & Math Club's income was similar to the previous year. This stasis is due to lack of resources. Demand exceeds our physical capacity. We need more space, more instructors and more supplies to host more classes, camps and events. Our current partners cannot lend us any more space, provide more time or funds; their resources are tapped out. We need to find new partners or new sources of income to pay for this space.

Contributions and Support

The largest share of our income came from services fees, primarily earned through classes and camps. The second largest source of income was contributions, contributed largely by Synthesis Solutions, Time Warner Cable, The United Way and Script Pro.

Fundraisers

LEARN conducts a variety of fundraisers each year. Some are reoccurring events, and others are one-time activities. In addition each year, we carry out a letter-writing campaign, called Brick Drive. The Brick Drive asks prospective donors to help our organization buy LEGO bricks and other supplies for our kids.

Our largest fundraisers this year, in order of importance, were:

- Summer Camps
- The Engineering Extravaganza
- City Imagineerium

10. Kids Loving City Imagineerium's Easter Bunny

Expenses

Through its history, LEARN's expenses have been largely those needed to deliver its services to the community. We have had incredibly low administrative expenses, and this year was no exception.

Our largest expense categories this year were those that represent LEARN's Cost of Goods which are the funds spent to serve our kids. The expense categories included in COG are: Supplies & Materials, Contractor Fees and Tournament Fees. Combined, these categories represent 94 percent of LEARN's expenses.

Administrative expenses included advertising, insurance, professional services, contractor expenses and printing expenses. Together, these expenses amounted to $3,603 or 6% of our total expenses. This

administrative to production expenses ratio is so low because LEARN has operated as an all-volunteer organization throughout its history and has channeled nearly every dollar into services for kids.

2015 to 2016 Projected Budget

We have projected a 15% increase in income for next fiscal year. We will achieve this by increasing enrollment in our current programs, rather than increasing the number of programs offered next year. Until we attract new supporters, we simply cannot do more. Unfortunately, this means that we will fall short of the requests we have received for services.

Our goal is to dramatically increase the number of programs we host over the following three years to meet demand. To do this, we will have to make some changes in our operating plan. Our projected budget reflects some of these changes. We will seek more community support so that we can buy the equipment and find the permanent "home" we need to deliver expanded services.