



**Andrew Simpkins**  
Innovation Foundation

# SPARKING INNOVATION IN OUR YOUTH

## OUR MISSION

ASIF is a non-profit, 501(3)(c) company located in Atlanta, GA. Our mission is to provide technology programs to communities at a rate of the nominal cost to help close the achievement gap in underprivileged and under resourced communities.

## TECHNOLOGY PROGRAMS

### SPARK "IT" SUMMER CAMP

- Coding- Students will use the Tynker platform and Codemoji.
- Electronics- Students will use LittleBits platform
- Robotics- Students grades K-2 will use Ozobots and grades 3-8 will use VexIQ and Lego Mind Storm. Grades 6-8 will be working in groups to prepare for the national robotics competition that we will sponsor for them to get exposure and earn a chance to gain scholarships.

## STEAM SCHOLARS AFTER SCHOOL PROGRAM

- Curriculum: Coding with Tynker and Codemoji. Robotics with Ozobots.
- Field Trips: Fun educational trips that inspire innovation and are STEAM related
- Project Days: Science experiments/projects, engineering and art projects
- STEAM Portraits: We have students dress up as astronauts, doctors, scientists and engineers to help develop positive affirmations of STEAM.



# HELP US GIVE BACK

& change lives for the better  
through technology



## PLATFORM & USES

- Tynker- Coding, basic concepts  
JavaScript, Python
- Codemoji- HTML, CSS, JavaScript
- Ozobots- Robotics
- LittleBits- Robotics
- Lego Mind Storms- Robotics
- VexIQ- Advanced Robotics and  
competition prep

## PROGRAMS & EXPERTISE

**PROGRAMMING** ●●●●●●

**ROBOTICS** ●●●●●●

**ENGINEERING** ●●●●●●

**SCIENCE** ●●●●●●

**ARTS** ●●●●●●

## PARENT PARTICIPATION

### PARENT TECHNOLOGY NIGHT

ASIF holds Family Nights to increase parent participation and involvement in the community. Our goal is to show them the importance of STEAM programs and the benefits that come from it for their children:

### ACTIVITIES DURING FAMILY NIGHT

- Motivational Speakers
- Speakers that currently work in STEAM fields
- Parent-Child Team building activities/  
challenges
- Dinner will be provided
- Role assignments are given for activities  
(Project Manager, Business Analyst,  
Programmer, Director)



# PROGRAM BENEFITS FOR STUDENTS

Research backs up the benefits of coding for kids especially in the classroom. Kids who learn coding and programming logic are better problem solvers, have stronger analytical reasoning skills, and become more involved, inquisitive learners and have a drive to construct knowledge. It also is a STEM discipline that teaches kids how the internet works and how many systems they rely on function. They develop skills critical for a global economy driven by technology.

The same goes for Electronics and Robotics. Computer Programming, Electronics and Robotics are branches of the computer science, the mechanical engineering, and the electrical engineering that deals with the construction, the design, the operation and the application of robots as well as the computer systems for their control, sensory feedback, and information processing. They strengthen and support students' skills, by developing their knowledge through the creation, the design, the assembly and the operation of robots and electronics. It is an easy and fun way to help the student become interested in science.

The activities are very educational exciting, and they help the students to understand beyond a working application. This program can help the teachers and the students in education,

become an active problem solver and they engage in their own learning, so, they can solve open ended problems. It can help the students increase the creativity with engineering disciplines. They can build and strengthen cognitive development such as mathematics, engineering and communication skills.

This program can build the engineering intuition through constant engineering process, and it can emphasize the meaningful problem-based learning through the integration and application of knowledge. It will engage the students in the complex, strategic problem-solving, computational thinking and higher order thinking in the successful research in science and engineering.

It can build the ability to think through the problems strategically with a focus on logical reasoning, analytical reasoning, and the critical thinking. This ability is required not only in the critical science fields but is required in a lot of other professional areas as well. It can prepare the students for the competitive workforce especially in science technology which will continue to be in great demand.



# BENEFITS TO STUDENTS CONT'D

## CHARACTER DEVELOPMENT ACTIVITIES.

Designed for assembly periods, special/ block or classes. Our program mirrors the “Pillars of Character” model (see page 3), which closely models the YMCA Character Development initiative. Through our camps and activities, we demonstrate these values in every game and lesson by creating the right balance through leveraging technology enhanced instruction. The use of these technological tools teaches our students several important character traits:

- Learn to navigate a keyboard, know what icons to click, and figure out what all the words mean.
- Students earn independence and gain more comfort with using technology over time, they actually begin to develop many soft skills that go beyond teaching them academic content or providing research information.
- Responsibility of managing and taking care of expensive equipment or materials correctly.
- Students become resourceful through knowledge transfer gained through our educators.
- Problem solving skills are critical in technology. Our advanced activities such as computer programming and robotics require users to identify a problem, find the root, and try different strategies to resolve the issue. This is where intelligence and intuition come in – in particular, those of our students.

## TEAM BUILDING/ COLLABORATION ACTIVITIES.

Every administration wants to do team building activities with their students, but very few teachers have the experience, that is where we can help.

- Building relationships is encouraged for team building. We ask our students to help each other find solutions to the problems they come across. A good example of this is a game we have the students participate in called, Lego Mind Storm. Students have to work together to create robots and define rules of how they would operate together as a team.



**MINDSTORMS**  
EV3

## FIELD DAYS/ IN-HOUSE FIELD TRIPS

Our lesson plans are designed to be integrated into any schedule to fit the needs of your school. Many schools do not have the ability to run their own “Field Day” program at the end of the year, or simply don’t want the headache or if a field trip was planned and was canceled due to severe weather, we can help. We could set up in one room and we can have the kids rotate through in segments.

# PILLARS OF CHARACTER MODEL

Character	Color	Description
Collaboration	Blue: Think Together	In fields like science and engineering, working well with teammates might be a greater challenge than the actual task itself. Teams require the ability to empathize with each other and come together around a single project in order to obtain an ultimate goal.
	Gold Think before Speaking	Training in the STEM fields provides ample opportunity to communicate with an assembly of people or even one-on-one. Regardless of one's career path, being a tactful yet assertive communicator can help contribute to productive teamwork and strong leadership.
Creativity	Green Think Outside the Box	The students who can take their technical skills and think outside the box might find themselves inventing something completely new in other fields as well!
	Orange: Think Deeper	Being able to conceptualize, analyze, and apply knowledge thoughtfully and reasonably can lead to so many different innovations people never thought possible. When you ask the tough questions and provide evidence for your conclusions, you can take technology to a whole new level
Tenacity	Red: Think of a Way	Often times, things don't go the way we want them to, especially in science and research fields. It's perfectly fine to get frustrated when things don't go our way in these situations. But sometimes that feeling of frustration can be overwhelming and cause us to give up. But if you have a tenacious attitude, you'll find that you not only have the determination to succeed and push through the hard times, you also have self-control over your behaviors and emotions in the face of those setbacks
	Purple: Think of Destination	Once you push through the hard times and setbacks, there's no greater joy than reaching that "aha! I get it!" moment. This can be especially true in the fast paced, ever-changing world of technology. But those who develop the perseverance to keep going and keep building, innovating, and improving will find the success that they've been waiting for at the end of the road.

# STANDARDS

The Andrew Simpkins Innovation Foundation understands the importance of educational industry standards. Our curriculum aligns closely with the Standards of many recognized Standards in the Technology and Educational industry. Below you will find some information on the standards and our platforms that meet each.



The International Technology and Engineering Educators Association has created the *Standards for Technological Literacy (STL)*. STL identifies content necessary for K-12 students, including knowledge, abilities, and the capacity to apply both to the real world. The standards in STL were built around a cognitive base as well as a doing/activity base. They include assessment checkpoints at specific grade levels (K-2, 3-5, 6-8, and 9-12). STL articulates what needs to be taught in K-12 laboratory-classrooms to enable all students to develop technological literacy. The goal is to meet all of the standards through the benchmarks, which are included in STL. Standards are written statements about what is valued that can be used for making a judgment of quality. STL is NOT a curriculum.



The Next Generation Science Standards (NGSS) are K-12 science content standards. Through a collaborative, state-led process, new K-12 science standards have been developed that are rich in content and practice and arranged in a coherent manner across disciplines and grades to provide all students an internationally benchmarked science education. The Next Generation Science Standards are based on the Framework for K-12 Science Education developed by the National Research Council

A goal for developing the NGSS was to create a set of research-based, up-to-date K-12 science standards. These standards give local educators the flexibility to design classroom learning experiences that stimulate students' interests in science and prepares them for college, careers, and citizenship.



The Common Core is a set of high-quality academic standards in mathematics and English language arts/literacy (ELA). These learning goals outline what a student should know and be able to do at the end of each grade. The standards were created to ensure that all students graduate from high school with the skills and knowledge necessary to succeed in college, career, and life, regardless of where they live. Forty-two states, the District of Columbia, four territories, and the Department of Defense Education Activity (DoDEA) have voluntarily adopted and are moving forward with the Common Core.

The standards define the knowledge and skills students should gain throughout their K-12 education in order to graduate high school prepared to succeed in entry-level careers, introductory academic college courses, and workforce training programs.

