



## SCIENCE, ROBOTICS, TECHNOLOGY, STOP MOTION AND CODING

**Dates: 8/26-12/16**

**No Class Day: 9/2, 10/14, 11/25**

**Fee (Early/Regular)**

**Early registration by: 8/16  
\$308/\$328**

**Time:**

**2:30-3:45**

**STEM at it's BEST! In other words: Let's make biology, chemistry, and technology FUN!**

**Click name of program below for full details. Short details on back.**

### **River Eves: Monday**

**Grades 2-5: RoboAnatomy: An Adventure Into Science, Physiology, Robotics. Video Animation and Technology**

**Grades K-2: Icky Techy: An Adventure of Fun Hands-On Science, Boost Robots, Stop Motion, and Machines**

***Register Now***

***Split Payment Available***

**Imagine That! and Future Tech**

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770-455-1980

# Science, Robotics and Tech Club Details

**Grades 2-5:** [RoboAnatomy: An Adventure Into Science, Physiology, Robotics, Video Animation and Engineering Technology](#). Lots more detail on-line.

## Technology:

**Robotics: Brand New Builds!** With Lego® MINDSTORMS EV3's students will build a walking man able to push a cart loaded with supplies! Students will program cart races with classmates. Who can dump the cart first and move on to the balance to ride with friends? This session will be "cart loads" of fun! Lego® MINDSTORMS NXT's are all new this year! Dize Bot has monster tires to navigate around and over any obstacle course while students learn programming blocks. How fast will the Grasshopper race it across the room. The Chick has an issue with balancing on his 2 feet. Would an effective program help with his wobble?

**Pivot Animator: NEW Programming!** Pivot Animator is a user-friendly platform creating 2D stick-man animations. The animation is made frame by frame. Your student's animation can be exported to several formats to use as a GIF or on YouTube!

**Makerspace: New!** This is a place that students can meet to create and engineer items that might solve a problem. Possible projects are Digital Accessories, Mechanical Toys, a Wearable, a Carnival Ride and so much more. Let's see what the kids design and Make!

## Science:

We will make lung models and blood flow models to understand how our bodies exchange CO2 and Oxygen at the cellular level. We will perform blood typing, create a GAC cell model and make a DNA Model.

We hear a lot about pathogens. We will investigate pathogens by seeing what is in pond water and why we would never drink it! Just how could we purify it if we were caught out in the wild? We will explore the methods.

Just how do our muscle system work? What kind of lever is our arm? We will discover these and many more mysteries of our bodies at work.

**Grades K-2:** [Icky Techy: An Adventure of Fun Hands-On Science, Boost Robots, Stop Motion, and Machines](#)

## Technology

**Boost: Fantastic Creations** for younger robotics kids. Students will build a base robot as they begin to learn the programming process. All instructions and programming are on an App called Boost® by Lego. From the base bot students build **Fantastic Creations**; robots that walk, wiggle and squirm their way through the room and your child's imagination!

**New! Claymation Stop Motion:** We will also reinforce frame by frame videos with Claymation/Lego Stop Motion! Students create their own stop motion film laying out a plan that starts with a storyline, character development staging and more.

**Machines:** Students will build pulley systems with Lego® **Simple and Motorized Machines**. We explore how pulleys work building the different stages of pulleys with a Crane and a Conveyor Belt. Both can be motorized with your students engineering skills.

## Science

We will start off mild and build to wild! It is hard to divide biology and chemistry since there is so much chemistry going on with all biology! We will start with our observation test, decaying a tooth, elephant toothpaste and our much-needed Grossness rating system.

We will investigate recycling and decomposition. What icky thing helps with decomposition you may ask? Spiders. This will be a fun and educational exploration of why we should consider spiders our friends.

Then it is on to oil spills and how we can help! We will learn about how oil and water don't mix and how we can change that with our beautiful rainbow burst.

Now, as promised, we are on to the fun and icky part. Here we will learn about our bodies and how our lungs and blood work. We will make lung models and blood flow models. We will learn about the three types of blood cells and what they are good for! We will also make a GAC cell model. We will learn to look through microscopes to see the normally invisible.

But that is not all! We will learn about spit power, make edible barf, burping balloons and find out why our socks smell!