

Dates: 8/27-12/10

No Class Days: 9/24,10/15, 11/5,

11/26

Fee (Early/Regular)
Early registration by: 8/10
\$276/\$296

Time:

2:15-3:30

Your child's STEM adventure into Robotics, Coding, Stop Motion and Technology. Click name of program below for full details.

## **Frey:** Tuesday

**Grades 2-5:** RoboTech: An Adventure into Coding, Stop Motion, Robotics and Machines

<u>Register Now</u> **Split Payment Available** 

## **Imagine That! and Future Tech**

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## RoboTech Class Details

## **Grades 2-5:** RoboTech: An Adventure into Coding, Stop Motion, Robotics and Machines



Please Note: Due to the large number of subjects included, the following subjects will be covered over the course of the year. Each semester will teach different subjects so more time will be available to learn the concepts being taught.

**Robotics:** 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! Dizze 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:** Programming! We are so happy to offer Pivot Animator this year! Pivot Animator is a user-friendly platform creating 2D stick-man animations. The stick figures can be easily moved by dragging handles. The animation is made frame by frame. While Pivot Animator is very easy to use, very complicated animations can be created. Your student's animation can be exported to several formats to use as a GIF or on YouTube!

**Makerspace:** What is a Makerspace? This is a place that students can meet to create and engineer items that might solve a problem. With Lego <sup>®</sup> Education Simple Machines kits and supplies from your closet or around the room, students will Define a problem to solve, Brainstorm together for ideas, Identify Design Criteria, Go Make, Review and Revise and finally Communicate the Solution through their Maker project! 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!

**Stop Motion Video:** Then we are on to Stop Motion Video Production exploring Fictional Characters in a graphic novel style genre! (think "Captain Underpants") Creating a storyline based around their fictional character, students will lay out a plan that starts with a story-line followed by the storyboard. As students begin to set the stage, they will have to check and test all equipment for glitches! In stop motion filming, every step must be taken in the correct order, one small movement at a time, just as a robot is programmed to move from point A to point B. This helps students to gain an understanding of the concepts introduced in coding! Using logic and creativity results in all around great fun!

**Coding: New!** Imagine That! kids will learn LUA, a Coding Language using CodeCombat! Students will use this platform to learn the science behind computer programming. We choose an Avatar to win armor and gems while writing LUA code and play the game in real time. Writing Basic Syntax first, students move to higher levels using Loops, Algorithms and Conditionals battling their way to victory with each correct coding sentence.

**Gaming: New!** Let's create our own game using Roblox Studio! While your child has been busy playing everybody else's games on Roblox, they could have been making their own! Well, we'll fix that! Students will create and play their game as they learn all about directionals, anchors and how to make a game that others will be challenged by. Each week we will progress until all students test each other's game out. This is too much fun!!

**Machines:** With Lego ® Simple and Powered Mechanisms our students will become scientists and engineers while understanding mechanical and structural principles in machines used in everyday life. Using technic bricks our students will build the Sweeper, the Flywheel and more!