

## Robo-Tech: Your child's adventure into Robotics and Technology

Ages 8-12

Our students will go technically crazy as they MINDSTORM their way through robotics and programming creating amazing robots with sensors in our Robotic Reality challenge game.

Would your child like to create their own game? This is their chance with reasoning, sequential thought and Scratch Programming!

Our students will light up with amazement with LEGO® builds that magnetically move around the floor and use "Fiber Optics" to light a room!

Engineering and Architectural skills will be utilized as we create motorized towers, build bridges and employ pneumatic energy as we create builds such as a Scissor Lift.

Watch the love for technology spark in your child as we make learning FUN!

### LEGO® NXT MINDSTORMS® Robots

Our older students will be excited to build and program robots. We will learn to use and program sensors such as the ultrasonic sensor and the touch sensor. These will be programmed to either stop their robots from bumping into something or.... maybe we'll use it so they will! These robots will enhance their Programming experience as they learn to build sequences and understand the complexities of the programming blocks. View our video here

### Programming

To further your students programming abilities we offer LEGO and MIT created Scratch programming. Creating will be a large part of the older student's session as they are encouraged to build a "Maze" game and let their fellow students play it.

Does your child like music? Scratch programming allows you to write a symphony or just a catchy tune.

### Motorized and Fun Simple Machines

As we build with LEGO Education® technology and bricks we will explore all types of engineering and architectural skills as they build Bridges and a scissor lift using Pneumatics. The Trapdoor Cable Car will run into the wall causing the trapdoor to open and the Lego® man to parachute out the bottom to escape.

Using magnetic forces your student will build a Magno Bird (Dragon) that swoops through the air and collects treasures from the ground and a Lego® man who glides across the dance floor using nothing but magnets and his skills!

Lastly, we will build race cars that use motors to challenge the classmates to build the best race car. Will Friction help our speed or hurt it? Do we need more Friction or less and how do we get it?