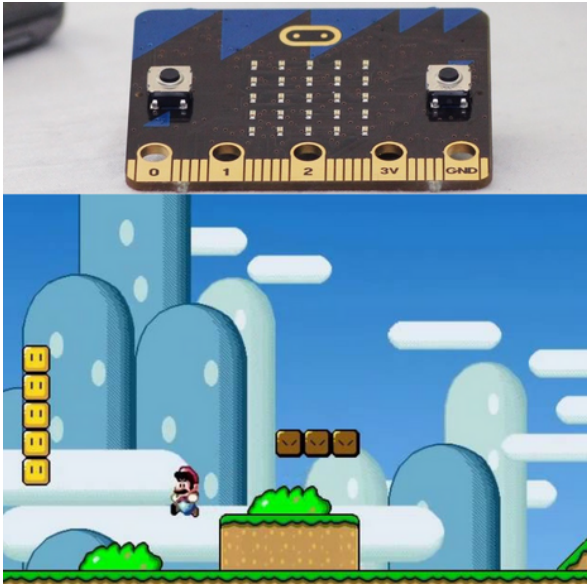


# 2019 Spring Tech Camp

**April 15 - 19**



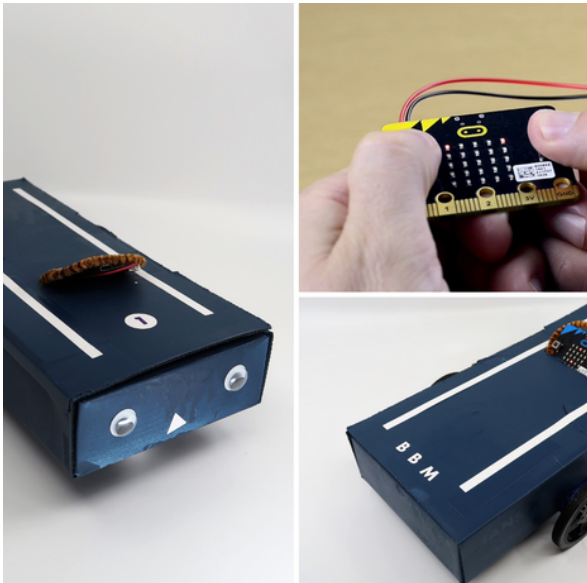
## Be the Game Designer

**Grades K - 7**

*\$449 (5 days) / \$89 day*

Using Scratch, a programming platform geared towards children developed at MIT, and micro:Bit, participants will be the game designer. During the week, campers will learn about different game mechanics and how to build them in Scratch. They will also have the opportunity to develop a game remote to work with their Scratch game creations using the micro:Bit (microcontroller).

At the end of the week, they will have a remote that they take home with them and access to all their game creations (for campers who enrolled in the full 5-day program).



## Robot Olympics

**Grades 4 - 8**

*\$499 (5 days) / \$89 day*

This camp provides a fun environment to expose participants to robotics, coding and design thinking. Each participant will build and program a radio-controlled robot using two micro:Bits, a microcontroller, and coding in JavaScript Block programming language. Then participants team up to design and build challenges.

At the end of the camp, each child will get to take home their remote control and robot. They can continue the adventure at home and tinker with the two sets of micro:Bits (for campers who enrolled in the full 5-day program).

*9am - 3:30pm*

*Early drop off and extended day available*

Learn more and register online at [builtbyme.com/spring19](https://builtbyme.com/spring19)

866-75BUILT (866-752-8458)

makers@builtbyme.com

[builtbyme.com](https://builtbyme.com)



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# Spring Tech Daily Schedule

## Be the Game Design

Day 1	Day 2	Day 3	Day 4	Day 5
<b>Game Type of the Day: Collection Game</b>  Introduction to Basic Game Elements Real Life Game Examples Introduction to Scratch Sample Scratch Sample Walkthrough <ul style="list-style-type: none"> <li>• Sprite Creation</li> <li>• Sprite Controls</li> <li>• Sprite Positioning</li> <li>• Looping</li> <li>• Conditionals</li> <li>• Variables</li> <li>• Counter</li> <li>• Initialization</li> <li>• Design Elements</li> <li>• Instructions</li> </ul> Independent Creation <ul style="list-style-type: none"> <li>• Identify Game Elements</li> <li>• Research</li> <li>• Peer Programming</li> <li>• Presentation</li> </ul> Game Controller Build	<b>Game Type of the Day: Chase</b>  Review Basic Game Elements Examine Real Life Game Elements Sample Scratch Sample Walkthrough <ul style="list-style-type: none"> <li>• Multiple Sprite Creation</li> <li>• Multiple Sprite Controls</li> <li>• Multiple Sprite Positioning</li> <li>• Looping</li> <li>• Conditionals</li> <li>• Variables</li> <li>• Counter</li> <li>• Initialization</li> <li>• Broadcast</li> <li>• Design Elements</li> <li>• Instructions</li> </ul> Independent Creation <ul style="list-style-type: none"> <li>• Identify Game Elements</li> <li>• Research</li> <li>• Peer Programming</li> <li>• Presentation</li> </ul> Game Controller Build	<b>Game Type of the Day: Simulator</b>  Identify Basic Elements in Simulator Game Sample Scratch Sample Walkthrough <ul style="list-style-type: none"> <li>• Multiple Sprite Creation</li> <li>• Multiple Sprite Controls</li> <li>• Multiple Sprite Positioning</li> <li>• Complex Looping</li> <li>• Complex Conditionals</li> <li>• Variables</li> <li>• Counter</li> <li>• Initialization</li> <li>• Broadcast</li> <li>• Design Elements</li> <li>• Instructions</li> </ul> Independent Creation <ul style="list-style-type: none"> <li>• Identify Game Elements</li> <li>• Research</li> <li>• Peer Programming</li> <li>• Presentation</li> </ul> Game Controller Build	<b>Game Type of the Day: Simple Platformer</b>  Identify Basic Game Elements in Platformer type Sample Scratch Sample Walkthrough <ul style="list-style-type: none"> <li>• Multiple Sprite Creation</li> <li>• Multiple Sprite Controls</li> <li>• Multiple Sprite Positioning</li> <li>• Looping</li> <li>• Conditionals</li> <li>• Variables</li> <li>• Counter</li> <li>• Initialization</li> <li>• Broadcast</li> <li>• Define Functions</li> <li>• Design Elements</li> <li>• Instructions</li> </ul> Independent Creation <ul style="list-style-type: none"> <li>• Identify Game Elements</li> <li>• Research</li> <li>• Peer Programming</li> <li>• Presentation</li> </ul> Game Controller Build	<b>Camper's Arcade</b>  Build original games combining many elements learned during the week.  Present their games to fellow campers  Fellow camper will beta test each other's game and give constructive feedback.

## Robot Olympics

Day 1	Day 2	Day 3	Day 4	Day 5
<b>Introduction to Basic Electronics</b>  Build Simple Motor Learn to Breadboard Build Simple DC Motor Circuit - Speed Control Build Simple DC Motor Circuit - Direction Control Introduction to Servos and microcontrollers (micro:Bit) Robot Assembly and Bodywork	<b>Introduction to Programming</b>  Learn to Program Different Motions Create Code to Complete Olympic Events Dead Reckoning Speed Track Navigation Compulsory Figure Drawings	<b>Introduction to Radio Communication</b>  Program Radio Communication Between Robot and Controller Design R/C Controller Enclosure Olympic Events: Speed Track Navigation Compulsory Figure Drawings	<b>Introduction to Racing Basics</b>  Analyze Different Track Configurations and Identify Different Challenges Robots Compete and Test Different Racetrack Configurations	<b>Robot Build and Sumo Challenge</b>  Design and Build Robot Chassis and Electronics with Random Materials Provided Test Robots in Sumo Competition