



Code Wiz - Quincy, MA  
Braintree Rec After School Program  
Class Descriptions

## **FOUNDATIONAL CODING**

### **Drag n Drop Coding w Scratch**

Dive into the world of code by coding your own space shooter games, trivia games, music bands, beautiful computer-generated art and math simulations or tell a story! Perfect for the young beginner, drag n drop coding is the perfect way to start learning to code all while having a good time! Using code blocks that snap together, you can go from newbie to pro without a ton of typing. All you need is a little imagination and you can start to create anything you want including drawing your own characters!

Concepts students will learn: Problem solving skills, basic coding concepts such as variables, conditionals, loops, functions, events and communication skills. They will also learn mathematical concepts such as x-y coordinates, negative numbers, angles, percentages, remainders and more!

### **Visual/Game Based Python**

Like the idea of animations, funny storytelling with characters or making 2 player games to share with friends? With our visual and interactive Python course, you will get to use a unique drag-to-text platform that guides you through text-based Python in a fun and interactive way using sprites and animations! Whether you're a beginner or have some experience with drag and drop coding, visual Python is a great intermediate step between platforms like Scratch and pure text based courses like Java!

Concepts students will learn: Python in a visual format, problem solving skills, basic coding concepts such as variables, conditionals, loops, functions, and events! They will also learn mathematical concepts such as x-y coordinates, negative numbers, angles, percentages, remainders and more!

## **GAMING / GAME DEVELOPMENT CODING**

### **Minecraft Coding**

Explore, create or survive! Mine deep into the Minecraft world and create the future! In our modding with Minecraft course, you'll challenge the odds, craft your own kinds of weapons and build dream worlds using code. You will do this while also learning fundamental programming concepts, level design and problem solving skills. You will make use of ready made coding blocks to create their mini versions of Minecraft games all throughout the course.

Concepts students will learn: Introduction to debugging programs, Code using drag and drop or Java, problem solving and learn transferable programming skills. They will also learn how to make mods and make your own Texture Packs!

### **Roblox Game Development**

Anyone can build a game in Roblox! Roblox studio has all the tools to make your wildest gaming imaginations a reality. You tell us what game you want to make and we'll teach you the fundamentals and coach you through bringing that game to life! Whether you're new to coding or have some experience, you will be challenged and have fun while bringing your game to life. Through drag and drop techniques or pure scripting, you'll be creating extensions to the Roblox game while fostering your creativity and learning real-world computer coding.

Concepts students will learn: Learn to use Roblox Studio 3D game engine to design a 3D world, game design using Roblox Studio, mathematical concepts and write code scripts to program characters and objects in the game. They will also learn the life cycle of game development (from planning to design to their finished product) and finding and fixing errors in their code.