



## **iROBOT CODING**

Mondays, January 24-May 2 (no class Feb 21, Mar 14, Apr 4; 12 weeks)

12:30pm-1:45pm

Ages 8-10

Kids are introduced to the basics of computational logic and programming as they learn to code each other and our Root® iRobots®. We complete tasks and challenges, troubleshoot coding errors and use robot features. Students are encouraged to bring their own device or laptop, but we have a few to share. All lab costs are included in registration fee.

Instructor: Diana Rodriguez, BEd

Location: Science Center (suite 5) - Roswell

Course fee: \$220 OR \$20/lab

10% sibling discount

Register for full semester or individual labs.

### **LAB SCHEDULE:**

**Building Robots** - Monday, January 24

Students brainstorm parts needed to build robots, design a prototype robot, learn about simple circuits, and build a scribbling robot.

**Think Like a Programmer** - Monday, January 31

Students use offline coding activities and games to maneuver each other and characters through mazes to begin to think like a programmer.

**Robots and Coding Languages** - Monday, February 7

Students are introduced to programming and coding languages and learn about Root® (our iRobot®) and its features as they program it to move and draw.

**Algorithms** - Monday, February 14

Students learn what algorithm is and how it is used in coding. We create programs to make a paper airplanes and code a dance.



### **Root® Skiing** - Monday, February 28

We explore how robots move by coding each other and our iRobots® to collect points, avoid obstacles, and win a race down a ski course.

### **Touch Sensors** - Monday, March 7

Students transform Root® into a robotic piano by coding responses to its touch and bump sensors.

### **Letters with Root®** - Monday, March 21

Today, students explore the blocks needed to code letters and program Root® to write and create letters on a whiteboard.

### **Writing with Root®** - Monday, March 28

Today, students code Root® to write and create letters on a whiteboard, and program it to automatically write a message.

### **Troubleshooting Root®** - Monday, April 11

This week, we explore what to do if something goes wrong with your code, learn what syntax is and how to troubleshoot and fix code as we go on a bug hunt and help Root® debug code to draw the picture that was intended.

### **Drawing with Root®** - Monday, April 18

In this coding challenge, we explore how Root® draws pictures, how to create shape wheels and collaborate to make a group picture.

### **Advanced Drawing** - Monday, April 25

We continue to work with drawing codes as we try to guess the picture Root® will draw by examining the code, and write code to draw pictures.

### **Free Code** - Monday, May 2

Students use coding skills they have learned to design and code robot challenges to share with their friends.

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