



iROBOT® CODING

Thursdays, September 23-December 16 (no class Nov 25; 12 weeks)

11:00am-12:15pm

Ages 8-10

Kids study the basics of computational logic and programming as they learn to code our Root® iRobots® to complete tasks and challenges, troubleshoot coding errors and use robot features, including touch and light sensors. 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: Tina Oresteen, BSc

Location: Discover Science Center Peachtree City

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

Early registration (10% off) through August 6

10% sibling discount beginning August 7

Register for full semester or individual labs.

LAB SCHEDULE:

Building Robots - Thursday, September 23

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

Think Like a Programmer - Thursday, September 30

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 - Thursday, October 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 - Thursday, October 14

Students learn about algorithms, create programs that make a paper airplane and code a dance.



Root® Skiing - Thursday, October 21

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

Touch Sensors - Thursday, October 28

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

Writing with Root® - Thursday, November 4

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

Troubleshooting Root® - Thursday, November 11

This week, we explore codes with syntax errors to learn how to troubleshoot and fix them as we go on a bug hunt and help Root® debug code to draw the picture that was intended.

Intro to Drawing with Root® - Thursday, November 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 - Thursday, December 2

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.

Obstacle Course - Thursday, December 9

In lab today, we practice collaboration and communication skills to conquer a class robot obstacle course, and create a custom course to challenge each other.

Free Code - Thursday, December 16

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

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