

Python with Robots Pacing Guide

Week 1	First Days Set-up, Unplugged Activities <i>Dedicate time to getting to know your students, assess their knowledge, and built a foundation of computer science basis.</i>	Project 1 Welcome to CodeBot <i>A visual and hands-on tour of the components of your 'bot.</i>
Week 2	Project 2 Time and Motion <i>This project takes you step-by-step through coding projects involving sequences of motor control and LED lights. Learn how to use the CodeSpace debugger. Use the button-switches and Python's 'if' statement to alter the flow of your program while it's running.</i>	
Week 3	Project 3 Animatronics! <i>You've been hired by a major theme park to create a new animated robot exhibition. Use CodeBot's speaker to add sounds to the mix. In this project you'll learn a little more Python, and apply your creative skills to making an awesome show!</i>	
Week 4	Project 4 Fence Patrol <i>Learn to use CodeBot's advanced Line Sensors to detect a boundary line against a contrasting background. This project takes you step-by-step to the creation of an autonomous fence-patrol robot that roams inside a defined boundary!</i>	
Week 5	Project 5 Fence Patrol <i>Take your mastery of the Line Sensors to the next level, and learn about Python lists as you tackle the challenge of making a competitive Line Follower.</i>	
Week 6	Project 6 Hot Pursuit <i>This project will get you familiar with the Proximity Sensors. Start by writing code to rotate your 'bot to face a detected object. Next you'll gain more Python coding skill as you enhance your program to make CodeBot pursue a moving target.</i>	
Week 7	Project 7 Navigation <i>Can CodeBot move with precision? Only if you write the code to make it so! Learn about your 'bots Wheel Encoders and create Python functions to move exact distances and angles.</i>	
Week 8	Project 8 Obstacle Course <i>This project is your first robotics "object avoidance challenge" - Combine your navigation and proximity sensing knowledge as you write code to negotiate an obstacle course.</i>	
Week 9	Project 9 All Systems Go <i>Learn how to monitor battery voltage, system temperature, and physical orientation with the built-in Accelerometer.</i>	Project 10 Multitasking <i>This project introduces you to BotServices, CodeBot's event-driven programming support, so your robot can do all those tasks at the same time!</i>