Coding Class Curriculum Overview

In Lando's Coding with Scratch, students will explore the fundamentals of coding by designing and building games using the Scratch platform. Designed for novice and experienced coders, our unique class system teaches students core coding concepts through creative challenges that are fun and provide opportunities for students to show what they have learned! Students will learn about coding concepts such as loops, sequencing, variables, conditionals, functions and events - allowing them to build creative and fun games for themselves and their friends. The class is self paced, allowing for kids of all skill levels to work through the class! We use group activities such as Kahoot quizzes to introduce new coding concepts and reinforce learning, before students switch to the class specific challenges. Each challenge has multiple versions with varying difficulty levels allowing for all kids to work on the same activities no matter their skill level.

Semester Overview

Class 1: Introduction to Scratch

Concepts Sequencing Events
- Learn to add sprites and backgrounds
- Learn how Event blocks work to control sets of code
- Discover how to make Sprites say things

Class 2: Introduction to Costumes

Concepts Sequencing Events
- Learn how to change a Sprite's size
- Learn how to change a Sprite's costume
- Explore Sensing blocks that make Sprites react to being touched

Class 3: Introduction to Sensing Blocks

Concepts Sequencing Events Conditionals
- Use motion blocks to move Sprites
- Learn to use If-Then statements

Semester Overview [Continued]

Class 4: Introduction to Effects

Concepts `Sequencing` `Loops` `Functions`
- Learn to make loops using functions that will affect a sprite over and over
- Use Effect blocks to adjust and modify the appearence of Sprites

Class 5: Exploration of Movement & Automation

Concepts `Conditionals` `Loops` `Functions`
- Explore multiple ways to program a Sprite to move
- Learn how to use Conditionals and Loops to automate Sprites' movement

Class 6: Introduction to Variables

Concepts `Variables` `Conditionals` `Loops`
- Introduce Variable blocks & assign them to Sprites
- Create games using Variables to keep score

Class 7: Exploring Variables & Clones

Concepts `Variables` `Conditionals` `Sequencing`
- Learn how to manipulate & automate Variables
- Learn how to create clones of Sprites

Class 8: Creating Worlds in Scratch

Concepts `Sequencing` `Functions` `Loops` `Conditionals`
- Create multiple worlds in a scratch project by having multiple backgrounds
- Create buttons that trigger a Sprite to move between worlds

Class 9: Building Games with Conditionals

Concepts `Sequencing` `Functions` `Loops` `Conditionals` `Events` `Variables`
- Learn to create sequences of Conditional statements to build games
- Create a Food Chain game where each Sprite is both predator & prey

Class 10: Create an Ask and Answer game.

Concepts `Sequencing` `Functions` `Loops` `Conditionals` `Events` `Variables`
- Create dynamic interaction games where the Sprite poses questions to the student & its response is dictated by the answer input from the student