

Basics of Block Programming: Scratch Junior Level I Suitable for: G1 - G3

Prerequisite: None

Duration: 15 Weeks

Classes per Week: 1 class (45 minutes each)

Course Overview:

This course introduces young learners to the world of block-based programming through Scratch Junior. Students will develop fundamental coding skills by learning how to control characters, create animations, and interact with objects. This course is designed to enhance problem-solving abilities, logical thinking, and creativity through engaging projects.

Covered Topics

Unit 1: Introduction to Scratch Junior and Programming Basics

- Overview of the Scratch Junior platform and its interface.
- Getting started with basic blocks and simple projects.
- Introduction to block-based coding concepts.
- Creating basic movement and animations with blocks.

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Unit 2: Motion and Animation

- Moving characters in different directions.
- Learning how to control movement with motion blocks.
- Creating more complex character movements like gliding and rotating.
- Combining motion blocks for smooth animations.

Unit 3: Looks and Sounds

- Changing character appearances with looks blocks.
- Adding sound effects to make animations more engaging.

Unit 4: Control Blocks and Sequencing

- Introduction to control structures like loops.
- Automating repetitive actions in projects using loops.
- Using conditionals to program actions based on specific triggers.
- Combining multiple control blocks to create structured project flows.

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Unit 5: Loops and Event Handling

- Learning event-based programming, such as character interactions and collisions.
- Implementing loops for repeated actions in projects.
- Using message blocks to allow characters to communicate and coordinate actions within a project.

Course Materials

- Tools Needed:
 - A laptop or PC with a Chrome browser.

Assessment

- At the end of the each lesson, students will be assessed on all concepts learned, including motion, sounds, loops, conditionals, and event handling.

Certification:

- A certificate of completion will be awarded upon course completion.