Glad Academics LLC
(310) 893-5551 | info@gladacademics.com | www.gladacademics.com

Scratch Class

Course Scope and Sequence

Scratch is a block-based, visual programming language that allows students to create their own interactive stories, games and animations. As students design, they learn to think critically and creatively, work collaboratively, and discover the functionality of the program. This is a great introduction to coding because understanding the logic that coding requires can assist in learning other languages easier. Several companies utilize the block features of Scratch, so exposure can be multi-faceted, whether it be in robotics or in Advanced Placement computer science classes.

Unit	Lessons	Topics
Unit 1 Welcome to Scratch (approx. 4-5 hours, extended version approx. 8-10 hours)	1.1 - Jumping into the Platform	• Intro to the user interface • Motion • Looks • Sounds
	1.2 - Why Block-based Coding?	• Purpose of coding to make music • Writing • Discovery
	1.3 – Basic Blocks	• Events • Control • Sensing • Operators
	1.4 – Additional Blocks	• Lists • My Blocks • Extensions
	Resources	• Game 1 Lecture • Unit 1 Formative Assessment
Unit 2 Interaction (approx. 8-10 hours, extended version approx. 24-30 hours)	2.1 – Beginning programs	• Project intent • Inputs • Outputs • Comments • Variables
	2.2 – Selection	• If • If else • Nested ifs

	2.3 – Repetition	• Repeat • Repeat Until • Broadcast • Sounds • Parameters
	Resources	• Game 2 Lecture • Unit 2 Formative Assessment
Unit 3 Quiz (approx. 8-10 hours, extended version approx. 24-30 hours)	3.1 – Data Types 1	• Strings • Concatenation • Operations • Length
	3.2 - Data Types 2	• Elements • Index • Append • Insert
	3.3 – Planning ahead	• Count variables • User control variables • Sensing • Credit • Design
	Resources	• Game 3 Lecture • Unit 3 Formative Assessment
Unit 4 Creativity (approx. 8-10 hours, extended version approx. 24-30 hours)	4.1 – Procedures	• Parameters • Calls • Arguments
	4.2 - Abstraction	• Variables, Lists, Procedures • Organization • Paper trail
	4.3 – Operators	• Random • Mod • And • Or • Not
	Resources	• Game 4 Lecture • Unit 4 Formative Assessment
Unit 5 Student Developed	5.1 – Simplification	• Criteria • Iteration replacement • Selection replacement

(approx 15-20 hours, extended version approx. 30-50 hours)	5.2 – Tracing code	• Find errors • Predicting outputs
	5.3 – Review	• Writing • Code
	Resources	• Course Summative Project