JOHNS HOPKINS
CENTER *for* TALENTED YOUTH

Scratch Programming for Elementary School Students

Placement Test Available   **Enroll in this Course**

Prerequisites: Completion of grade 2 in school and a qualifying math score
Course Format: Individually Paced
Course Length: Typically 3 months
Course Code: ESP

Description   Materials Needed   **Detailed Course Information**   Technical Requirements   Reviews

Detailed Course Information

What is SCRATCH?

- Scratch Interface
- Creating A New Scratch Project

Getting Started

- Start Moving
- Add a Sound
- Start Dancing
- Repeating Actions
- Control Block – Green Flag
- Change Color
- Control Actions
- Create a Sprite
- Say and Think Blocks
- Animation
- Make a Block

Motion

- Move and Turn
- Pointing
- Go and Glide
- Changing Positions
- Bouncing
- Locating the Sprite

Looks

- Changing Costumes
- Changing Backdrops
- How to Make a Sprite Say Something
- Graphic Effects
- Changing the Size of a Sprite
- Working with Multiple Sprites
- Moving Sprites

Sound

- Associating Sounds with a Sprite
- Play Sound
- Play Drums Part I
- Play Drums Part II
- Play Note and Play Instruments Part I
- Play Note and Play Instruments Part II

Pen and Color Control

- Pen Down and Pen Up
- Changing Pen Color
- Changing Pen Shade
- Changing Pen Size
- Stamp

Sensing

- Mouse Report
- Pressing Keys
- Touching and Over
- Reporting Distance
- Using the Timer
- Using the Loudness
- Ask and Wait
- Video Motion
- Calculating Location/Date

Control

- Wait Blocks
- Forever Block
- Repeating Actions
- Conditional Actions
- Cloning
- Stop Block

Events

- Beginning Actions
- Controlling Backdrops Part I
- Controlling Backdrops Part II

- Checking Volume/Motion

Data

- Variables and Data

Operators

- Arithmetic Operators
- Random Numbers
- Comparing Numbers
- Logic Operations

CTY is accredited for grades K through 12 by the Middle States Association of Colleges and Schools Commissions on Elementary and Secondary Schools.