

Programming Language:
Scratch

Supported Devices:
Mac
Windows
Chromebook

Instructional Models:
Direct Instruction
Instructional Scaffolding
Use of Learning Objectives
Relevant Vocabulary
Bloom's Taxonomy of
Questions
Project-Based Instruction
Independent Study

Supported Learning Models:
Classroom
Flipped Classroom
Blended
Hybrid
Synchronous
Asynchronous

*Aligned With National
CS Standards*

Reinforces:
Logical thinking
Creativity
Persistence
Resilience
Communication skills
Structural thinking
Problem-solving

INTRODUCTION TO PROGRAMMING WITH SCRATCH

PROGRAM DESCRIPTION

The Essentials Scratch course series features 48 lessons for each academic year in coding immersion. The program is designed with instructional scaffolding to promote academic equity and success across all learning levels. Students will begin with learning how to use Scratch to create projects. Once students have a good understanding of how to use Scratch, they will use it to learn programming concepts.

Each course is divided into two types of lessons: project and challenge, followed by a cumulative capstone project.

- **PROJECT LESSONS** guide students through the creation of fun, visually appealing, and engaging projects in Scratch. As students build projects, new concepts are introduced that further their understanding of coding logic.
- **CHALLENGE LESSONS** help develop students as programmers, allowing them to formulate solutions to problems independently.
- **CAPSTONE PROJECTS** act as milestones for students to apply everything that they have learned in an in-depth project..

Through guided instruction, Essentials teaches students how to independently debug their code, a critical skill used by programmers. Developing this learning is made easier by the Essentials methodology of integrating these concepts gradually. By the end of the course series, students will have the necessary skill sets to be comfortable coding in Scratch and creating projects.

LEARNING OBJECTIVES

CodeWizardsHQ developed Essentials to support students in real-world, comprehensive learning. Students not only learn how to code but to think like programmers. Each lesson is designed to build computational thinking while learning how to code using Scratch.

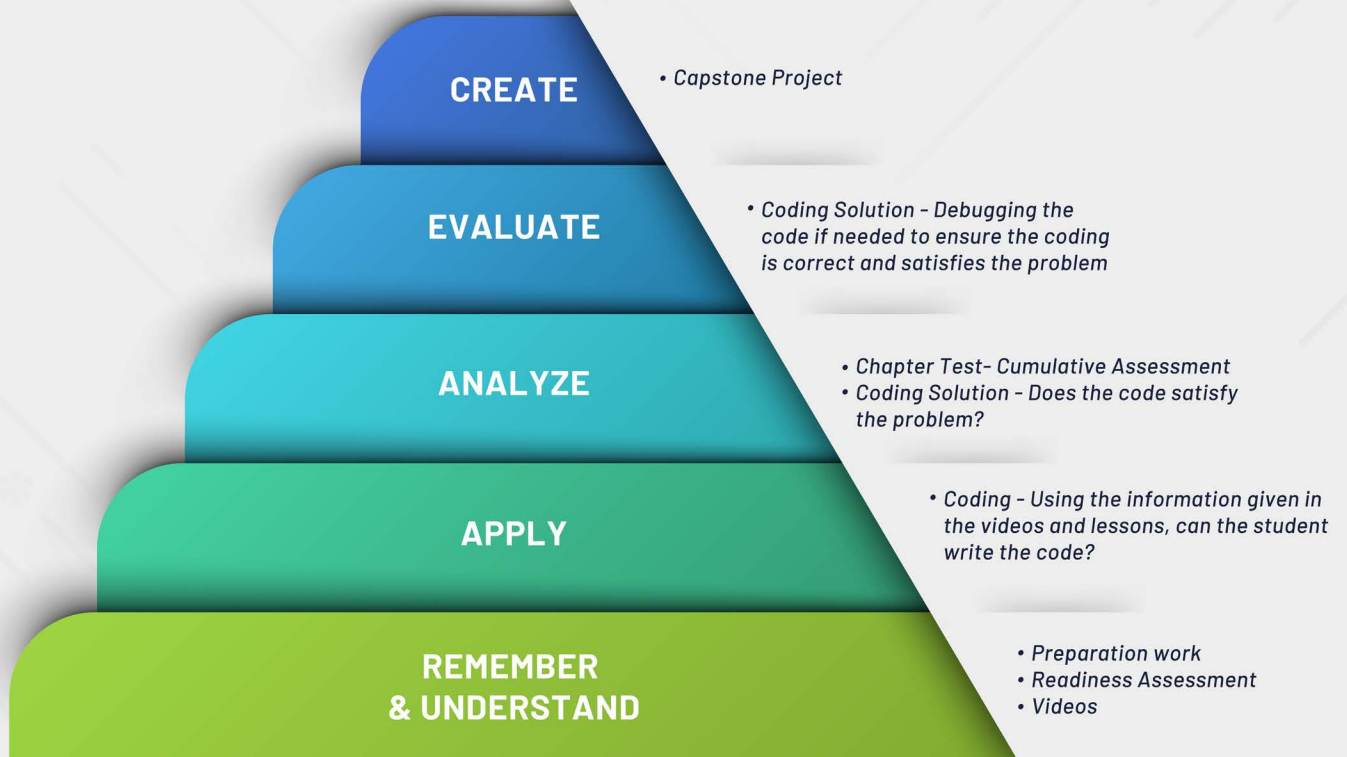
BY THE END OF THE COURSE SERIES STUDENTS WILL BE ABLE TO:

- Customize elements in Scratch using Paint Editor
- Add sounds to their projects and understand color values
- Understand that a script is a set of instructions that run in order
- Incorporate user interactivity in projects
- Learn how to implement and manage sprites in the Scratch environment
- Employ and understand the uses of various blocks
- Understand how to interact with the coordinate plane
- Create and utilize clones
- Know what variables are and understand their behavior
- Identify basic data types and how to correctly use them
- Confidently use decisions, loops, and functions to create various projects
- Use various Scratch extensions
- Learn about Booleans, their behavior, and how to use them
- Understand how, when, and why computer programs make decisions

RESOURCES INCLUDED:

- Learning Management System
- Cloud-based platform
- Administrative dashboard
- Learning targets and planning tasks
- Pre-lesson activities
- Teacher/student engagement actions
- Assessing and advancing questions
- Engaging concept videos
- Proprietary slide decks
- Comprehensive assessment tools
- Auto-graded quizzes and tests
- Common errors and their solutions
- Cumulative capstone projects
- Progress Tracking

ESSENTIALS CURRICULUM IN APPLICATION OF BLOOM'S TAXONOMY



BEGIN YOUR ESSENTIALS CODING JOURNEY TODAY!

CONTACT:

Venkatesh Keshavamurthy
venkatesh@codewizardshq.com
935-313-0335