

Instructional Model:

Teacher Led
Engaged Learning
Project Based Lessons

Course Category:

Programming

Minimum Grade Level:

3rd Grade

Prerequisites:

None

Programming Language:

Scratch

Software used in Course:

Scratch,
Google Chrome

Technology Options:

Mac
Windows
Chromebook

COURSE DESCRIPTION

Students understand foundational computer science principles such as loops, debugging, and conditional statements in this project-based course. Using Scratch, an open-source block-coding language created by the MIT Media Lab, students build games and solve puzzles to develop computational thinking and analytical skills. Educators introduce students to safe Internet behaviors, a variety of STEM careers, and real-world computer science vocabulary through participation in group discussion activities. After completion of this course, students will gain the basic skills needed to take higher-level, computer science classes.

STANDARDS COMPLIANCE

- 100% national and state computer science standards alignment - standards map provided
- Reinforces Math, ELA, and Social-Emotional Learning competencies

STUDENT OUTCOMES

Each lesson plan is designed to achieve specific student outcomes related to computer science competencies.

Sample outcomes for this course include:

- Evaluate and address errors in an algorithm by testing and debugging.
- Identify and explain how to deal with suspicious websites through discussions with classmates.
- Apply an understanding of loops, events, randomness, and conditionals through creating programs.
- Utilize loops by creating algorithms to navigate a maze.
- Apply software planning concepts.
- Understand the role and career of a web designer through discussions with their classmates.

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PROGRAMMING 101

Introduction to computational thinking with Scratch

RESOURCES INCLUDED

- Teacher Training videos
- Summative Assessments
- Formative Assessments
- Syllabus
- Computer science standards compliance mapping
- Full year of step-by-step lesson plans
- Pacing guide
- Vocabulary words and definitions
- Coding activities
- Unplugged activities
- Digital citizenship activities
- Hardware activities (Optional)

PILLARS OF ENGAGEMENT



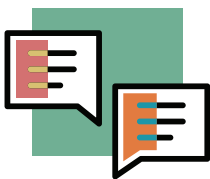
CODING
visual

Codelicious engages visual learners with computer-based projects, vocabulary activities, as well as written and visual imagery, while building foundational and advanced computer science skills.



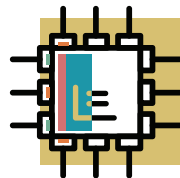
UNPLUGGED
kinesthetic

Designed to be conducted off-line with creative activities or movement, Codelicious leverages unplugged activities to reinforce computer science concepts.



DIGITAL CITIZENSHIP
auditory

With discussions, collaboration sessions, and student presentations, Codelicious provides computer science curriculum that enables the auditory learner to thrive.



HARDWARE
tactile

Hands-on learning with Codelicious curriculum builds upon computer science principles through hardware projects, problem solving activities involving everyday materials, and real-world applications.