

# Computer Science/Programming: Grades K-12

## COMPUTATIONAL THINKING <sup>1</sup>

- 1 Create algorithms, or series of ordered steps, to solve problems.** 1.1

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- 2 Decompose a problem into smaller more manageable parts.** 1.2

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- 3 Collect, analyze, and represent data effectively.** 1.3

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- 4 Demonstrate and understanding of how information is represented, stored, and processed by a computer.** 1.4

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- 5 Optimize an algorithm for execution by a computer.** 1.5

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- 6 Create simulations/models to understand natural phenomena and test hypotheses.** 1.6

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- 7 Evaluate algorithms by their efficiency, correctness, and clarity.** 1.7

## PROGRAMMING <sup>2</sup>

- 1 Write programs using visual (block-based) programming languages (scratch, code.org).** 2.1

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- 2 Create and modify animations, and present work to others.** 2.2

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- 3 Write programs using text-based programming languages.** 2.3

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- 4 Create web pages with a practical, personal, and/or societal purpose.** 2.4