



## STANDARDS ALIGNMENT EXPRESSIONS & EQUATIONS

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In this curriculum created for grades 7-9, students engage in learning experiences that address standards and practices identified in the Computer Science Teachers Association (CSTA) Computer Science standards and Common Core Math Standards. The standards addressed throughout the curriculum are listed below. For more detail about the learning activities within the curriculum please visit the Expressions & Equations Teacher Guide.

### COMMON CORE MATH STANDARDS

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- Content Standards
  - **6.EE.A.2:** Write, read, and evaluate expressions in which letters stand for numbers.
    - **6.EE.A.2.A:** Write expressions that record operations with numbers and with letters standing for numbers. For example, express the calculation "Subtract  $y$  from 5" as  $5 - y$ .
    - **6.EE.A.2.B:** Identify parts of an expression using mathematical terms (sum, term, product, factor, quotient, coefficient); view one or more parts of an expression as a single entity. For example, describe the expression  $2(8 + 7)$  as a product of two factors; view  $(8 + 7)$  as both a single entity and a sum of two terms.
    - **6.EE.A.2.C:** Evaluate expressions at specific values of their variables. Include expressions that arise from formulas used in real-world problems. Perform arithmetic operations, including those involving whole-number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations). For example, use the formulas  $V = s^3$  and  $A = 6s^2$  to find the volume and surface area of a cube with sides of length  $s = 1/2$ .

### COMPUTER SCIENCE TEACHERS ASSOCIATION (CSTA)

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- Concepts
  - **2-AP-11:** Create clearly named variables that represent different data types and perform operations on their values.
  - **2-AP-13:** Decompose problems and subproblems into parts to facilitate the design, implementation, and review of programs.
- Practices
  - Creating Computational Artifacts
  - Recognizing and Defining Computational Problems