

## Our Upper School Math Program

The Massachusetts Department of Elementary and Secondary Education adopted revised frameworks for mathematics in March 2017. Upper school math coaches, math teachers and the CPS Mathematics Department are currently re-aligning our curriculum maps to the new [2017 Massachusetts Mathematics Curriculum Framework standards](#), using Understanding by Design, which focuses first on teaching and assessing for understanding and learning transfer, and then designing curriculum that meets those ends.

The Cambridge Public Schools is committed to providing all students with experiences that create lifelong problem solvers, who can collaborate, adapt, and adjust to a diverse and an ever-changing society. Our K-5 curriculum supports the development of algebraic concepts across the grades and prepares students for upper school mathematics and algebraic representation. This continuous exposure to algebraic concepts from kindergarten onwards provides all students with a rigorous progression of skills and knowledge that includes regular opportunities to examine and understand patterns, relations, and functions, represent and analyze mathematical situations and structures using algebraic symbols, use mathematical models to represent and understand quantitative relationships and analyze change in various contexts.

To achieve mathematical understanding, students should be actively engaged in meaningful and rigorous mathematics. The Mathematics Curriculum Framework's *content standards* and *practice standards* focus on developing students in the all of the following areas:

- **Making Sense of Mathematical Concepts** – make sense of the math, reason about and understand math concepts and ideas
- **Performing Mathematics Procedures Fluently** – know mathematical facts, compute and do the math
- **Using Mathematical Concepts in Problem Solving Applications** – solve a wide range of problems in various contexts by reasoning, thinking, and **applying** the mathematics they have learned.

