

Momentum: Building Capacity for Change through Connections to Children's Literature

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Project website: <http://www.apsu.edu/stem/momentum>

Go to Resources and scroll down to NCTM Dallas/Hartford

Momentum: Building Capacity for Change through Connections is an 18-month professional development project funded by the Tennessee Higher Education Commission First to the Top Program, supported by Race to the Top.

Goal: To increase student achievement in mathematics by increasing elementary teachers' capacity to teach mathematics in a STEM-centered environment.

Objectives:

- Deepen elementary teachers' content knowledge of the Common Core State Standards for mathematics through problem solving.
- Broaden elementary teachers' pedagogical content knowledge by making connections to children's literature and science and by incorporating appropriate technology.
- Strengthen teachers' understanding of the role of STEM in developing numeracy.
- Deepen students' understanding of the core concepts of algebraic thinking, measurement, and data analysis.

Children's literature and stories provide engaging contexts in which to address these objectives.

Attention to numeracy guides task selection in the Momentum Project. Numeracy is the capacity for quantitative thought and expression. Numeracy takes many forms.

- Practical numeracy – applications to daily life
- Civic numeracy – ability to draw inferences from data related to issues that benefit society.
- Professional numeracy – computational and analytical skills related to the workplace
- Numeracy for leisure and cultural numeracy – understanding of the role of mathematics in games, puzzles, art, music, and dance

Components of Momentum

- Eight Saturday workshops
- Problem solving journals
- Transitions to the classroom through development of lessons connecting literature, mathematics, and science.
- Support through materials, professional memberships, and conference attendance
- Online workshops
- Weeklong summer academy

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