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### CodeWorld: Teaching at the Intersection of Algebra, Computer Science, and Creativity

Chris Smith, Google LLC

Digital Media Center Theatre  
June 06, 2018 - 02:00 pm

**Abstract:**

For different reasons, algebra and computer science have both been hot topics in K-12 education. One has been called the gateway to STEM, and the other the new literacy for this century. At worst, different priorities can compete for time and resources. But if approached in the right way, these fields are closely related and support each other. Computer science can give students meaning and purpose for algebra as a language for communicating their ideas and expressing their creativity. On the other hand, algebra supports the formal language, abstractions, and logical reasoning skills that build deeper understanding in computer science principles. We will present CodeWorld, a platform for connecting algebraic thinking and functional programming with creative expression, and share the lessons from six years of teaching middle school students in this setting.

**Speaker's Bio:**

Chris Smith is a senior software engineer at Google, an amateur ring theorist, and a volunteer teacher who has spent more than a decade sharing creative approaches to science, mathematics, and technology with children in schools, after-school programs, and home-schooling support groups. He is the creator of the CodeWorld platform.

