Resources for Addressing Common Core Standards in Math, Language Arts, and Next Generation Science Standards

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Abstract

Each of the new sets of Standards (Common Core Math and Language Arts Standards and Next Generation Science Standards) call for an interdisciplinary approach to teaching mathematics, science, and language arts. The Common Core Math Standards (CCMS) are the most prescriptive of the three and emphasize basic mathematical knowledge, but they too call for mathematical modeling, problem solving, solution of multi-step problems, and critical thinking tasks grades K-12, and allow for variability after completion of what we now call Math 11. The Language Arts Standards, are the most radical of the three, since they step outside of basic reading and writing and call for understanding technical prose and writing technical pieces. They also emphasize critical thinking skills and modeling though not in the same sense as the Math Standards. Not so surprising the Next Generation Science Standards, but in a radical departure from the NAS Science Standards, emphasize technology and mathematics as much as content in biology, chemistry, and physics.

Teachers are struggling to find resources to address each of these sets of Standards. It will be years before quality textbooks will reflect the new Standards. DIMACS, building on its success in producing modules in bio-math, computational thinking, and planning for sustainability, is pulling together these resources in packets for distribution to any teacher who asks for them. The packets will address specific areas of interest, such as critical thinking, modeling, computational thinking, reading and writing technical work, utilizing existing modules, pieces of modules, and developing new short pieces. This talk will describe these resources and tools and enlist audience help in the design and development process.