We describe three NSF-funded collections of educational modules: BioMath Connection (BMC), The Value of Computational Thinking Across Grade Levels 9-12 (VCTAL), and Planning for a Sustainable Future (PS-Future). Each module is designed to provide anywhere from one 30 minute “teaser” mini-module up to 4 to 6 class periods of hands-on high school classroom activities that engage students in using mathematics, computational thinking, and technology to explore a variety of topics such as: Habitat Selection, Medical Imaging, Disease Transmission, Solar and Electric Power, the NFL Draft, Internet Privacy, and Sustainable Use of Water. Both a Student Version of self-contained text with problem material and a Teacher Guide are included. The modules allow flexible adaptation for use in a variety of courses (including math, science, and even social science courses) at a variety of grade levels (9-12). Sponsorship comes from the Center for Discrete Mathematics and Theoretical Computer Science (DIMACS), the Consortium for Mathematics and Its Applications (COMAP), Colorado State University, and the National Science Foundation. (Received September 21, 2015)