This introductory talk will provide an overview of some of the ways in which applied mathematics and modeling content can be incorporated into (middle and) high school programs. The use of contests has proved a valuable motivator. Some of these contests and their effect on student performance will be presented. Other resources that are available to students and their teachers will also be described. With the increased flexibility in mathematics curricula under the proposed common core standards, the inclusion of modeling and applications is likely to be of growing importance in the next few years. (Received September 17, 2010)