

Connection and Support of K12 STEM Education

Sample of Project Activities and High School Level Content Standards Addressed

	State of Colorado Model Content Standards		National Standards
GK-12 Activity	Standards	Benchmarks: Grades 9-12	Content Standards: 9-12
Science	Std 1: Scientific method and processes of scientific investigations	#2: Use of appropriate technology #5: Constructing scientific models and explanations #6: Communications of results	Content Standard A: Science as Inquiry - - Ability to do and understand scientific inquiry
	Std 2: Physical sciences	#3: Use of physical & chemical properties for comparisons	Content Standard B: Physical Science -- Understanding of matter and energy and their interaction
	Std 3: Life sciences	#4: Energy used in life systems #5: Human body functioning through systems	Content Standard C: Life Science -- Understanding of matter, energy and organization of living systems.
Mathematics	Std 2: Algebraic methods	#1: Real-world modeling of functions	Content Standard: Algebra
	Std 3: Data collection and analysis	#4: Draw conclusions from data	Content Standard: Measurement
	Std 5: Use of tools to communicate results	#1: Measurement of quantities indirectly #3: Determine accuracy of measures	Process Standard: Representations, Connections and Communications
Engineering and Technology	Std. 14: Understand, select, and use medical technologies	#M: Science of biochemistry and molecular biology	Process Standard: Applied molecular research and diagnostics to disease states and predispositions
	Std. 9: Understanding and applying the engineering design process	#I: Evaluate design principles #K: Design modeling #L: Design factors; reliability, economics, safety, quality control, environmental, ergonomics	Process Standard: Engineering design process. Problem I.D., Data collection, analysis, modeling, prediction, optimization, testing, specifications
<p>Note and Sources: Science -- Colorado Department of Education, (2007a); Mathematics -- Colorado Department of Education, (2005); Science -- National Academy of Sciences, (1996); Mathematics -- National Council of Teachers of Mathematics, (1989), Standards for Technological Literacy: Content for the study of technology – International Technology Education Association (2000).</p>			