Standards and Competencies for Inventions and Innovations (Course # 735)

		Begin-End Yr
Standard 1 - The student will demonstrate leadership, citizenship, and teamwork skills required for success in the school, community and workplace through Technology Student Association.		2009 -
	1.1 - Exhibit positive leadership skills.	2009 -
	1.2 - Participate in the Technology Student Association (TSA) as an integral part of classroom instruction	2009 -
	1.3 - Evaluate school, community, and workplace situations by applying problem-solving and decision-making skills.	2009 -
	1.4 - Demonstrate the ability to work professionally with others	2009 -
	1.5 - Identify personal, teamwork and leadership skills used in various occupations	2009 -
Standard 2 - Safely use tools, materials, equipment and other technology resources		2009 -
	2.1 - Pass with 100% accuracy a written examination relating specifically to safety issues	2009 -
	2.2 - Pass with 100% accuracy a performance examination relating specifically to tools and equipment	2009 -
	2.3 - Maintain a portfolio record of written safety examinations and equipment examinations for which the student has passed an operational checkout by the instructor.	2009 -
	2.4 - List and explain the importance of safety guidelines for TSA competitive events	2009 -
Standard 3 - Develop an understanding of invention and innovation		2009 -
	3.1 - Apply a design process in the invention or innovation of a product or system.	2009 -
	3.2 - Safely use tools, materials, equipment and other technology resources in the invention or innovation of a product of system.	2009 -
	3.3 - Maintain an inventor"s notebook (portfolio) that details an invention or innovation	2009 -
Standard 4 - Develop an understanding of the core concepts of technology.		2009 -
	4.1 - Identify one or two major innovations or inventions for each category of the designed world.	2009 -
	4.2 - Disassemble a consumer product and discuss how its various components and systems relate to core concepts	2009 -
	4.3 - Understand and list how a simple system works.	2009 -
Standard 5 - Develop an understanding of the attributes of problem solving, design, troubleshooting, research and development, and experimentation.		2009 -
	5.1 - Apply the design process to solve a problem.	2009 -
	5.2 - Identify and describe the major steps in the engineering design process.	2009 -
	5.3 - Explain the troubleshooting process.	2009 -
	5.4 - List and describe the types of technological design.	2009 -
	5.5 - Use appropriate resources to troubleshoot a product or a system.	2009 -
	5.6 - Create a two-dimensional and three dimensional drawing of the design solution	2009 -
	5.7 - Test and evaluate the design in relation to pre-established requirements, such as criteria and constraints, and refine as needed.	2009 -
Standard 6 - Develop an understanding of the impacts of invention and innovation		2009 -
	6.1 - Select an invention and innovation and discuss how it has impacted society	2009 -
	6.2 - Describe important inventions and innovations in medical technologies and agricultural and biotechnologies that have impacted our lives.	2009 -
	6.3 - Describe the life cycle of a product.	2009 -
	6.4 - Discuss the impacts of "waste materials" on the environment.	2009 -
	6.5 - Discuss the importance of using data in making meaningful decisions	2009 -