Georgia CTAE

Invention and Innovation Grade 7 (2019)

Demonstrate employability skills required by business and industry. MS-ENGR-II-1	**A** Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities MS-ENGR-II-1.1
	B Demonstrate creativity by asking challenging questions and applying innovative procedures and methods. MS-ENGR-II-1.2
	C Exhibit critical thinking and problem solving skills to locate, analyze and apply information in career planning and employment situations. MS-ENGR-II-1.3
	D Model work readiness traits required for success in the workplace including integrity, honesty, accountability, punctuality, time management, and respect for diversity. MS-ENGR-II-1.4
	E Apply the appropriate skill sets to be productive in a changing, technological, diverse workplace to be able to work independently and apply team work skills. MS-ENGR-II-1.5
	F Present a professional image through appearance, behavior and language. MS-ENGR-II-1.6
Demonstrate proper safety techniques and tool usage in the Engineering and Technology Laboratory. MS-ENGR-II-2	**A** Accurately interpret and adhere to safety signs, symbols, and labels. MS-ENGR-II-2.1
	B Demonstrate and incorporate safe laboratory procedures in lab, shop, and field environments. MS-ENGR-II-2.2
	C Identify, select, and use appropriate Personal Protective Equipment (PPE), follow work area organization procedures and follow Standard Operating Procedures (SOP) when performing work. MS-ENGR-II-2.3
	D Identify, select, and use appropriate tools and machines for specific tasks. MS-ENG.4R-II-2
	E Demonstrate safe use of tools and machines. MS-ENGR-II-2.5
Investigate inventions an	**A** Students will differentiate between invention and innovation MS-ENGR-II-3.1

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their impact in society. MS-ENGR-II-3	**B** Examine the role that Engineering & Technology and society play in the invention and innovation process MS-ENGR-II-3.2
	C Identify an important past and current invention or innovation and its impact on society MS-ENGR-II-3.3
	D Research an artifact related to Engineering and Technology that is at least 25 years old and how it has changed over time MS-ENGR-II-3.4
	E Examine the patent process and the protection of intellectual property MS-ENGR-II-3.5
Demonstrate an understanding of the Engineering Design Process through various problem-solving activities. MS-ENGR-II-4	**A** Describe the steps of the Engineering Design Process MS-ENGR-II-4.1
	B Construct a simple technological system MS-ENGR-II-4.2
	C Explain how your technological system operates MS-ENGR-II-4.3
	D Reverse engineer a consumer product MS-ENGR-II-4.4
	E Utilize an Engineering Design Notebook as a record of process MS-ENGR-II-4.5
Invent and/or innovate a technological product or system that addresses a societal need using the Engineering Design Process. MS-ENGR-II-5	**A** Research a societal problem MS-ENGR-II-5.1
	B Show evidence of the steps of the Engineering Design Process in an Engineering Design Notebook. MS-ENGR-II-5.2
	C Construct a prototype or model of the solution to the societal problem MS-ENGR-II-5.3
	D Use mathematical and scientific reasoning as evidence to support an engineering solution MS-ENG.4R-II-5
Explore how related career and technology student organizations are integral parts of career and technology education courses. Students will develop leadership, interpersonal, and problem-solving skills through participation in co-curricular activities associated with the Technology Student Association. MS-ENGR-II-6	**A** Explain the goals, mission and objectives of CTSO organizations. MS-ENGR-II-6.1
	B Explain how participation in career and technology education student organizations can promote lifelong responsibility for community service and professional development MS-ENGR-II-6.2
	C Demonstrate teamwork, leadership, interpersonal relations, and project management skills. MS-ENGR-II-6.3