

Technological Systems Grade 8 (2019)

Demonstrate employability skills required by business and industry. **MS-ENGR-TS-1**

- A** Communicate effectively through writing, speaking, listening, reading, and interpersonal abilities. **MS-ENGR-TS-1.1**
- B** Demonstrate creativity by asking challenging questions and applying innovative procedures and methods. **MS-ENGR-TS-1.2**
- C** Exhibit critical thinking and problem solving skills to locate, analyze and apply information in career planning and employment situations. **MS-ENGR-TS-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-TS-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-TS-1.5**
- F** Present a professional image through appearance, behavior and language. **MS-ENGR-TS-1.6**

Demonstrate proper safety techniques and tool usage in the Engineering and Technology Laboratory. **MS-ENGR-TS-2**

- A** Accurately interpret and adhere to safety signs, symbols, and labels. **MS-ENGR-TS-2.1**
- B** Demonstrate and incorporate safe laboratory procedures in lab, shop, and field environments. **MS-ENGR-TS-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-TS-2.3**
- D** Identify, select, and use appropriate tools and machines for specific tasks. **MS-ENGR-TS-2.4**
- E** Demonstrate safe use of tools and machines. **MS-ENGR-TS-2.5**

Examine the variety of components that make up several examples of a

- A** Understand the components of a systems model: input, process, output feedback. **MS-ENGR-TS-3.1MS-ENGR-TS-3.1**

system model. MS-ENGR-TS-3

B Compare open-looped and closed-looped systems. MS-ENGR-TS-3.2

C Understand and identify the resources of technology. MS-ENGR-TS-3.3

D Explore a variety of system types. (i.e. mechanical, fluid, etc.) MS-ENGR-TS-3.4

E Understand different types of subsystems and how they interact with each other. MS-ENGR-TS-3.5

Use the engineering design process along with the knowledge of a systems model in the production of a prototype solution to a design problem. MS-ENGR-TS-4

A Utilize the Design Process to create a prototype. MS-ENGR-TS-4.1

B Identify how systems are used to solve problems. MS-ENGR-TS-4.2

C Illustrate how the systems model is used in industry MS-ENGR-TS-4.3

D Apply mathematical and scientific reasoning for engineering design solution. MS-ENGR-TS-4.4

E Utilize an Engineering Design Notebook to document the design process. MS-ENGR-TS-4.5

Develop an understanding of how humans interact with systems. MS-ENGR-TS-5

A Operate systems. MS-ENGR-TS-5.1

B Maintain technological systems. MS-ENGR-TS-5.2

C Troubleshoot technological systems. MS-ENGR-TS-5.3

Describe how technological systems continuously improve from one iteration to another. MS-ENGR-TS-6

A Illustrate the evolution of a variety of technological systems. MS-ENGR-TS-6.1

B Investigate the cause of system failure or improvement. MS-ENGR-TS-6.2

C Analyze the reason for the evolution of technological systems. MS-ENGR-TS-6.3

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-TS-7

A Explain the goals, mission and objectives of CTSO organizations MS-ENGR-TS-7.1

B Explain how participation in career and technology education student organizations can promote lifelong responsibility for community service and professional development. MS-ENGR-TS-7.2

C Demonstrate teamwork, leadership, interpersonal relations, and project management skills. MS-ENGR-TS-7.3

