




Legend:

X The standard is clearly addressed by program activities.

- This standard potentially could be addressed as part the program either by actions that the coach or teacher takes when working with the students or by conditions established by the program.

		Engineering and Technology - Middle Level				
Domain 1	General Engineering and Technology Concepts					
Core Standard 1	Students will examine how engineering and technology helps improve, manage, and control natural and engineered environments.					
	ETE - 1.1	Illustrate the purpose of engineering and technology in society.	X	X	X	
	ETE - 1.2	Identify how engineering and technology impacts individuals, society, and the environment.	X	X	X	
	ETE – 1.3	Apply the universal systems model when studying areas of engineering and technology.	-	-	-	
	ETE – 1.4	Demonstrate safe practices and procedures with tools and equipment.	X	X	X	
Core Standard 2	Students will integrate engineering and technology into academic fields, including the STEM disciplines.					
	ETE – 2.1	Analyze the interdisciplinary nature of engineering and technology.	X	X	X	
	ETE – 2.2	Apply knowledge and skills learned in science, mathematics, language arts, fine arts, and social studies classes when completing engineering and technology-based assignments.	X	X	X	
Core Standard 3	Students will investigate the evolution of engineering and technology of products, structures, and systems.					
	ETE – 3.1	Analyze how the eras in history are based on technological innovations and practices of the period.	-	X	-	
	ETE – 3.2	Investigate inventions and innovations of products, processes, materials, and tools.	X	X	X	
	ETE – 3.3	Compare technology inventions and innovations and the positive/negative impacts on society and the environment.	-	-	-	
Domain 2	Engineering Design and Development					
Core Standard 4	Students will apply engineering principles when planning, developing, implementing, and analyzing technological solutions.					
	ETE – 4.1	Apply the steps of the design process.	X	X	X	
	ETE – 4.2	Use the design process to create a product that addresses a real world problem.	X	X	X	
	ETE – 4.3	Create a technical sketch of a design with appropriate annotation.	X	X	X	

	ETE – 4.4	Develop a product using the design process, while maintaining appropriate documentation.	x	x	x
	ETE – 4.5	Develop various types of models (graphical, physical, or mathematical) that help communicate solutions to peers.	x	x	x
Core Standard 5	Students will apply the principles of automation and robotics.				
	ETE – 5.1	Differentiate between the functions of motors, gears, sensors, wheels and control systems.	x	x	x
	ETE – 5.2	Interpret a technical document to build a working prototype of an automated system.	x	x	x
	ETE – 5.3	Design a working prototype or mechanical system to solve a pre-designated task.	x	x	x
	ETE – 5.4	Utilize the principles of computer science and information technologies by developing applications and codes applying to automation and robotics.	x	x	x
Domain 3	Producing and Using Technology				
Core Standard 6	Students will select, use, create, and evaluate transportation technologies.				
	ETE – 6.1	Compare and contrast the different types and uses of land, sea, air, space, and intermodal transportation.	-	-	-
	ETE – 6.2	Differentiate between the technical sub-systems common of all vehicles, including propulsion, structural, suspension, control, information, and support systems.	-	-	x
	ETE – 6.3	Design, develop, and evaluate transportation systems.	-	-	-
Core Standard 7	Students will select, use, create, and evaluate construction technologies.				
	ETE – 7.1	Investigate various types of construction systems including residential, industrial, commercial, and civil.			
	ETE – 7.2	Utilize appropriate designs, techniques, tools, and processes for construction systems.			x
	ETE – 7.3	Construct simulations, models, and/or structures for specific construction systems.			x
Core Standard 8	Students select, use, create, and evaluate manufacturing technologies.				
	ETE – 8.1	Investigate various types of manufacturing systems including continuous, batch, and custom.	-	-	-
	ETE – 8.2	Utilize appropriate designs, techniques, tools, materials, and processes for manufacturing systems.	-	-	-
	ETE – 8.3	Produce simulations, models, and/or prototypes for specific manufacturing systems.	x	x	x
	ETE – 8.4	Describe and create a logistical path a product takes from its point of origin to its destination.	x	x	x
Core Standard 9	Students select, use, create, and evaluate biotechnologies.				
	ETE – 9.1	Investigate various types of biotechnologies including agricultural, genetics, medical, and imaging technologies.			

	ETE – 9.2	Examine appropriate designs, techniques, tools, and processes for medical or genetic engineering.			
	ETE – 9.3	Construct simulations, models, and/or prototypes for specific biotechnology disciplines.			
Core Standard 10	Students will identify, select, and use energy and power technologies.				
	ETE – 10.1	Analyze a variety of power and energy technology systems.	x	x	x
	ETE – 10.2	Solve a simple power and energy challenge and create an efficient solution.	x	x	x
	ETE – 10.3	Utilize appropriate designs, techniques, tools, and processes for energy and/or power systems.	x	x	x
	ETE – 10.4	Design and construct simulations, models, and/or prototypes for specific power systems.	x	x	x
Core Standard 11	Students will select, use, create, and evaluate communication technologies.				
	ETE – 11.1	Evaluate the parts of a communication system.	x	x	x
	ETE – 11.2	Investigate various types of communication technologies including analog and digital technologies.	x	x	x
	ETE – 11.3	Design and construct simulations/models/prototypes for specific communication systems.	x	x	x
	ETE – 11.4	Analyze how information technology impacts modes of communication.	x	x	x
Domain 4	Engineering and Technology Careers				
Core Standard 12	Students will explore engineering and technology related careers.				
	ETE – 12.1	Investigate careers in engineering and technology pathways.	-	x	-
	ETE – 12.2	Analyze education and skill requirements for engineering and technology professions.	-	x	-
	ETE – 12.3	Report the outlook, demand, and projected wages for engineering and technology careers.	-	x	-