Focus Topic: Standard 8.1: Educational Technology   TSW = The Student Will

Objective(s)	NJCCCS Alignment	Essential Questions	Understandings	Suggested Assessment & Activities
TSW use appropriate digital tools and resources to accomplish a variety of tasks	8.1.5.A.1	Why do I need to use technology?	The use of technology and digital tools requires knowledge.	Ongoing observation & questioning during class discussions
TSW format a document to enhance text including graphics, symbols, and pictures	8.1.5.A.2	What are common uses of technology?	Media rich resources enhance creativity.	Performance tasks
TSW use a graphic organize to organize information about an issue	8.1.5.A.3	Why is safety important?	Digital tools assist in gathering and managing information.	Self-Assessment
TSW graph data using a spreadsheet, then analyze and produce an explanation report	8.1.5.A.4	What purpose do digital tools serve?	Technological development creates societal concerns.	NJ TAP IN Checklist
TSW create and use a database to answer basic questions	8.1.5.A.5	What impact do global issues have on technology?	Technology impacts our lives	Projects
TSW analyze and produce a report that explains the analysis of data	8.1.5.A.6	How do digital tools affect our lives?		Differentiated Instruction
TSW produce a digital story on an issue based on first person interviews	8.1.5.B.1			Technology Integration
TSW evaluate findings and present possible solutions using online discussions	8.1.5.C.1			
TSW explain the need for and uses of copyrights	8.1.5.D.1			

TSW analyze the resource citations in online materials for proper use	8.1.5.D.2			
TSW understand cyber security and cyber ethics when using technology and social media	8.1.5.D.3			
TSW explain consequences of inappropriate use of technology and social media	8.1.5.D.4			
TSW evaluate the accuracy of, relevance of, and appropriateness of using print and non print information	8.1.5.E.1			
TSW identify and define authentic problems and significant questions for investigation	8.1.5.F.1			
TSW plan and manage activities to develop a solution or complete a project	8.1.5.F.1			
TSW collect and analyze data to identify solutions and/or make informed decisions	8.1.5.F.1			
TSW use multiple processes to explore alternative solutions to a problem	8.1.5.F.1			

Focus Topic: Standard 8.2: Technology Education, Engineering, and Design   TSW = The Student Will

Objective(s)	NJCCCS Alignment	Essential Questions	Understandings	Suggested Assessment & Activities
TSW compare and contrast how products made in nature differ from human made products	8.2.5.A.1	How does technology help us in our everyday lives?	The design process is a systematic approach to solving problems	Ongoing observation & questioning during class discussions
TSW compare and contrast how products made in nature differ from products that are human made in how they are produced and used	8.2.5.A.1	What are the advantages and. disadvantages of technology?	Products and systems are created through application and resources	Performance tasks
TSW investigate and present factors that influence the development and function of a product and a system	8.2.5.A.2	How does technology affect our environment?	Resource selection affects the development of a product	Self-Assessment
TSW investigate and present factors that influence the development and function of products and systems, e.g., resources, criteria and constraints	8.2.5.A.3	How do parts of a system work together?	Choice of resources impacts the environment & economy	NJ TAP IN Checklist
TSW compare and contrast how technologies have changed over time due to human needs and economic, political and/or cultural influences	8.2.5.A.4	What impact do parts have on a system?		Projects
TSW identify how improvement in the understanding of materials science impacts technologies	8.2.5.A.5	How does recycling affect our environment and economy?		Differentiated Instruction

TSW design and create a simple product working with specific criteria	8.2.8.B.1			Technology Integration
TSW identify ethical considerations in the development of a product through its life cycle	8.2.5.B.1			
TSW examine systems used for recycling and recommend simplification of the systems	8.2.5.B.2			
TSW investigate ways that various technologies are being developed and used to reduce improper use of resources	8.2.5.B.3			
TSW design a prototype with science and mathematical principles in mind	8.2.8.B.3			
TSW research technologies that have changed due to society's changing needs and wants	8.2.5.B.4			
TSW explain the purpose of intellectual property law	8.2.5.B.5			
TSW discuss how technologies have influenced history	8.2.5.B.6			

TSW collaborate with peers to illustrate components of a designed system	8.2.5.C.1			
TSW understand the need for patents and the registration of a patent	8.2.8.C.1			
TSW explain how specifications and limitations can be used to direct a product's development	8.2.5.C.2			
TSW compare and contrast current and past incidences of labor in the United States	8.2.8.C.2			
TSW research how design modifications have led to new products	8.2.5.C.3			
TSW collaborate with peers to solve a problem evaluating all solutions	8.2.5.C.4			
TSW provide the best results to a problem with supporting sketches or models	8.2.5.C.4			
TSW explain the functions of a system	8.2.5.C.5			

TSW have a basic understanding of a sub system	8.2.5.C.5			
TSW examine a malfunctioning tool and troubleshoot the repair process	8.2.5.C.6			
TSW present options to repair a malfunctioning tool	8.2.5.C.6			
TSW work with peers to redesign an existing product for a different purpose	8.2.5.C.7			
TSW identify the role of ethics and bias on the development of a product in the United States	8.2.8.D.1			
TSW identify a problem that can be solved by technology	8.2.5.D.1			
TSW collect information about a problem that can be solved by technology	8.2.5.D.1			
TSW generate ideas to solve the problem	8.2.5.D.1			

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TSW identify constraints and trade-offs to be considered	8.2.5.D.1			
TSW evaluate alternative solutions to a problem identified in the design process	8.2.5.D.2			
TSW evaluate potential solutions to a design process problem	8.2.5.D.2			
TSW follow step by step directions to solve a problem	8.2.5.D.3			
TSW follow directions to assemble a product	8.2.5.D.3			
TSW explain why systems, products, and environments need to be constantly monitored, maintained, and improved	8.2.5.D.4			
TSW describe how resources such as material, energy, information, time, tools, people and capital are used in products or systems	8.2.5.D.5			
TSW explain the positive and negative effect of products and systems on humans, other species and the environment	8.2.5.D.6			

TSW identify when the product or system should be used	8.2.5.D.6			
TSW explain the impact that resources such as energy and materials used in a process to produce products or system have on the environment	8.2.5.D.7			
TSW work in collaboration with peers to develop a product using the design process recording the development cycle	8.2.8.E.1			
TSW identify how computer programming impacts our everyday lives	8.2.5.E.1			
TSW demonstrate an understanding of how a computer takes input of data, processes and stores the data through a series of commands, and outputs information	8.2.5.E.2			
TSW use a simple, visual programming language, create a program using loops, events and procedures to generate specific output	8.2.5.E.3			
TSW use appropriate terms in conversation	8.2.5.E.4			