Technology 6-8

Standards & Units	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June
NJ Core Curriculum Content Standards > Technology > Grades: 6-8(2014)										
{TECH.8.1.8} All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.										
6th grade, Unit #1, Technology, Building Character	■									
6th Grade, Unit #8, Technology, Critical Thinking										■
7th Grade - Unit 2 - Technology, Research Project			■							
{TECH.8.1.8.A} Students demonstrate a sound understanding of technology concepts, systems and operations.										
6th Grade, Unit #6, Technology, Square of Life Project						■				
7th Grade - Unit 1 - Technology, Financial Literacy	■									
7th Grade - Unit 2 - Technology, Research Project			■							
{} Create a document (e.g. newsletter, reports, personalized learning plan, business letters or flyers) using one or more digital applications to be critiqued by professionals for usability.										
6th grade, Unit #1, Technology, Building Character	■									
{TECH.8.1.8.A.CS2} Select and use applications effectively and productively.										
7th Grade - Unit 1 - Technology, Financial Literacy	■									
7th Grade - Unit 2 - Technology, Research Project			■							
7th Grade - Unit 5 - Technology, Programming								■		
{TECH.8.1.8.A.4} Graph and calculate data within a spreadsheet and present a summary of the results										
6th Grade, Unit #6, Technology, Square of Life Project						■				
7th Grade - Unit 1 - Technology, Financial Literacy	■									
{TECH.8.1.8.A.5} Create a database query, sort and create a report and describe the process, and explain the report results.										
7th Grade - Unit 1 - Technology, Financial Literacy	■									
{TECH.8.1.8.A.3} Use and/or develop a simulation that provides an environment to solve a real world problem or theory.										
6th Grade, Unit #6, Technology, Square of Life Project						■				
{TECH.8.1.8.A.2} Create a document (e.g. newsletter, reports, personalized learning plan, business letters or flyers) using one or more digital applications to be critiqued by professionals for usability.										
6th grade, Unit #1, Technology, Building Character	■									
6th grade, Unit #4, Technology, Word Processing				■						
7th Grade - Unit 2 - Technology, Research Project			■							
7th Grade - Unit 6 - Technology - Inventions									■	
{} Graph and calculate data within a spreadsheet and present a summary of the results										
7th Grade - Unit 1 - Technology, Financial Literacy	■									
{TECH.8.1.8.A.CS1} Understand and use technology systems.										
{TECH.8.1.8.A.1} Demonstrate knowledge of a real world problem using digital tools.										
6th grade, Unit #5, Technology, Child Labor					■					
6th Grade, Unit #6, Technology, Square of Life Project						■				
6th Grade, Unit #8, Technology, Critical Thinking										■
7th Grade - Unit 5 - Technology, Programming								■		
{} Create a database query, sort and create a report and describe the process, and explain the report results.										
7th Grade - Unit 1 - Technology, Financial Literacy	■									
{TECH.8.1.8.B} Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.										
6th grade, Unit #2, Technology, Photography		■								
6th grade, Unit #3, Technology, Rube Goldberg			■							
8th Grade - Unit #4 - Digital Citizenship									■	
{TECH.8.1.8.B.CS2} Create original works as a means of personal or group expression.										
6th grade, Unit #2, Technology, Photography		■								
6th grade, Unit #4, Technology, Word Processing				■						
6th Grade, Unit #7, Technology, Understanding Our World									■	
7th Grade - Unit 5 - Technology, Programming								■		
7th Grade - Unit 6 - Technology - Inventions									■	
8th Grade - Unit #4 - Digital Citizenship									■	
{TECH.8.1.8.B.CS1} Apply existing knowledge to generate new ideas, products, or processes.										
6th grade, Unit #2, Technology, Photography		■								
6th grade, Unit #4, Technology, Word Processing				■						
8th Grade - Unit #4 - Digital Citizenship									■	

{TECH.8.1.8.B.1} Synthesize and publish information about a local or global issue or event (ex. telecollaborative project, blog, school web).										
6th grade, Unit #2, Technology, Photography		■								
6th Grade, Unit #7, Technology, Understanding Our World									■	
8th Grade - Unit #4 - Digital Citizenship									■	
{TECH.8.1.8.C} Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.										
{TECH.8.1.8.C.CS3} Develop cultural understanding and global awareness by engaging with learners of other cultures.										
6th grade, Unit #1, Technology, Building Character	■									
6th Grade, Unit #6, Technology, Square of Life Project						■				
6th Grade, Unit #7, Technology, Understanding Our World									■	
{TECH.8.1.8.C.CS4} Contribute to project teams to produce original works or solve problems.										
6th grade, Unit #1, Technology, Building Character	■									
6th Grade, Unit #6, Technology, Square of Life Project						■				
{TECH.8.1.8.C.CS1} Interact, collaborate, and publish with peers, experts, or others by employing a variety of digital environments and media.										
6th grade, Unit #1, Technology, Building Character	■									
6th Grade, Unit #6, Technology, Square of Life Project						■				
6th Grade, Unit #7, Technology, Understanding Our World									■	
{TECH.8.1.8.C.1} Collaborate to develop and publish work that provides perspectives on a global problem for discussions with learners from other countries.										
6th grade, Unit #1, Technology, Building Character	■									
6th Grade, Unit #8, Technology, Critical Thinking										■
{TECH.8.1.8.C.CS2} Communicate information and ideas to multiple audiences using a variety of media and formats.										
6th grade, Unit #1, Technology, Building Character	■									
6th grade, Unit #3, Technology, Rube Goldberg			■							
6th Grade, Unit #7, Technology, Understanding Our World									■	
{TECH.8.1.8.D} Students understand human, cultural, and societal issues related to technology and practice legal and ethical behavior.										
8th Grade - Unit #4 - Digital Citizenship									■	
{TECH.8.1.8.D.CS2} Demonstrate personal responsibility for lifelong learning.										
6th Grade, Unit #7, Technology, Understanding Our World									■	
8th Grade - Unit #4 - Digital Citizenship									■	
{TECH.8.1.8.D.2} Demonstrate the application of appropriate citations to digital content.										
6th Grade, Unit #7, Technology, Understanding Our World									■	
7th Grade - Unit 2 - Technology, Research Project			■							
8th Grade - Unit #4 - Digital Citizenship									■	
{TECH.8.1.8.D.3} Demonstrate an understanding of fair use and Creative Commons to intellectual property.										
6th Grade, Unit #7, Technology, Understanding Our World									■	
6th Grade, Unit #8, Technology, Critical Thinking										■
7th Grade - Unit 2 - Technology, Research Project			■							
8th Grade - Unit #4 - Digital Citizenship									■	
{} Understand appropriate uses for social media and the negative consequences of misuse.										
6th grade, Unit #1, Technology, Building Character	■									
{TECH.8.1.8.D.CS1} Advocate and practice safe, legal, and responsible use of information and technology.										
6th Grade, Unit #7, Technology, Understanding Our World									■	
7th Grade - Unit 2 - Technology, Research Project			■							
8th Grade - Unit #4 - Digital Citizenship									■	
{TECH.8.1.8.D.1} Understand and model appropriate online behaviors related to cyber safety, cyber bullying, cyber security, and cyber ethics including appropriate use of social media.										
8th Grade - Unit #4 - Digital Citizenship									■	
{} Demonstrate the application of appropriate citations to digital content.										
6th Grade, Unit #7, Technology, Understanding Our World									■	
{TECH.8.1.8.D.CS3} Exhibit leadership for digital citizenship.										
6th Grade, Unit #7, Technology, Understanding Our World									■	
6th Grade, Unit #8, Technology, Critical Thinking										■
8th Grade - Unit #4 - Digital Citizenship									■	
{TECH.8.1.8.D.5} Understand appropriate uses for social media and the negative consequences of misuse.										
6th Grade, Unit #8, Technology, Critical Thinking										■
8th Grade - Unit #4 - Digital Citizenship									■	
{TECH.8.1.8.D.4} Assess the credibility and accuracy of digital content.										
6th Grade, Unit #7, Technology, Understanding Our World									■	
6th Grade, Unit #8, Technology, Critical Thinking										■
7th Grade - Unit 2 - Technology, Research Project			■							

8th Grade - Unit #4 - Digital Citizenship									■	
{} Understand and model appropriate online behaviors related to cyber safety, cyber bullying, cyber security, and cyber ethics including appropriate use of social media.										
6th Grade, Unit #8, Technology, Critical Thinking										■
{TECH.8.1.8.E} Students apply digital tools to gather, evaluate, and use information.										
{TECH.8.1.8.E.CS3} Evaluate and select information sources and digital tools based on the appropriateness for specific tasks.										
6th grade, Unit #2, Technology, Photography		■								
6th Grade, Unit #7, Technology, Understanding Our World									■	
7th Grade - Unit 6 - Technology - Inventions									■	
{TECH.8.1.8.E.1} Effectively use a variety of search tools and filters in professional public databases to find information to solve a real world problem.										
6th Grade, Unit #6, Technology, Square of Life Project						■				
7th Grade - Unit 6 - Technology - Inventions									■	
{TECH.8.1.8.E.CS2} Locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media.										
7th Grade - Unit 6 - Technology - Inventions									■	
{TECH.8.1.8.E.CS4} Process data and report results.										
7th Grade - Unit 6 - Technology - Inventions									■	
{TECH.8.1.8.E.CS1} Plan strategies to guide inquiry.										
6th Grade, Unit #6, Technology, Square of Life Project						■				
6th Grade, Unit #7, Technology, Understanding Our World									■	
7th Grade - Unit 6 - Technology - Inventions									■	
{TECH.8.1.8.F} Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.										
{TECH.8.1.8.F.CS1} Identify and define authentic problems and significant questions for investigation.										
7th Grade - Unit 2 - Technology, Research Project			■							
{TECH.8.1.8.F.CS2} Plan and manage activities to develop a solution or complete a project.										
6th grade, Unit #3, Technology, Rube Goldberg			■							
{TECH.8.1.8.F.CS3} Collect and analyze data to identify solutions and/or make informed decisions.										
7th Grade - Unit 2 - Technology, Research Project			■							
{TECH.8.1.8.F.CS4} Use multiple processes and diverse perspectives to explore alternative.										
6th grade, Unit #3, Technology, Rube Goldberg			■							
{TECH.8.1.8.F.1} Explore a local issue, by using digital tools to collect and analyze data to identify a solution and make an informed decision.										
6th grade, Unit #5, Technology, Child Labor					■					
7th Grade - Unit 2 - Technology, Research Project			■							
7th Grade - Unit 4 - Technology, Polling, Surveying, Data Analysis							■			
{TECH.8.2.8} All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.										
{TECH.8.2.8.A} Technology systems impact every aspect of the world in which we live.										
7th Grade - Unit 6 - Technology - Inventions									■	
{TECH.8.2.8.A.CS2} The core concepts of technology.										
{TECH.8.2.8.A.2} Examine a system, consider how each part relates to other parts, and discuss a part to redesign to improve the system.										
7th Grade - Unit 3 - Technology, Engineering Design Process					■					
{TECH.8.2.8.A.3} Investigate a malfunction in any part of a system and identify its impacts.										
7th Grade - Unit 3 - Technology, Engineering Design Process					■					
{TECH.8.2.8.A.CS1} The characteristics and scope of technology.										
7th Grade - Unit 6 - Technology - Inventions									■	
{TECH.8.2.8.A.1} Research a product that was designed for a specific demand and identify how the product has changed to meet new demands (i.e. telephone for communication-smart phone for mobility needs).										
7th Grade - Unit 3 - Technology, Engineering Design Process					■					
7th Grade - Unit 6 - Technology - Inventions									■	
{TECH.8.2.8.A.CS3} The relationships among technologies and the connections between technology and other fields of study.										
6th grade, Unit #5, Technology, Child Labor					■					
{TECH.8.2.8.A.4} Redesign an existing product that impacts the environment to lessen its impact(s) on the environment.										
7th Grade - Unit 3 - Technology, Engineering Design Process					■					
{TECH.8.2.8.A.5} Describe how resources such as material, energy, information, time, tools, people, and capital contribute to a technological product or system.										
7th Grade - Unit 3 - Technology, Engineering Design Process					■					
7th Grade - Unit 6 - Technology - Inventions									■	
{} Examine a system, consider how each part relates to other parts, and discuss a part to redesign to improve the system.										
7th Grade - Unit 3 - Technology, Engineering Design Process					■					
{TECH.8.2.8.B} Knowledge and understanding of human, cultural and society values are fundamental when designing technology systems and products in the global society.										

7th Grade - Unit 6 - Technology - Inventions									
{TECH.8.2.8.B.5} Identify new technologies resulting from the demands, values, and interests of individuals, businesses, industries and societies.									
7th Grade - Unit 6 - Technology - Inventions									
{TECH.8.2.8.B.1} Evaluate the history and impact of sustainability on the development of a designed product or system over time and present results to peers.									
7th Grade - Unit 6 - Technology - Inventions									
{TECH.8.2.8.B.CS2} The effects of technology on the environment.									
7th Grade - Unit 6 - Technology - Inventions									
{TECH.8.2.8.B.6} Compare and contrast the different types of intellectual property including copyrights, patents and trademarks.									
6th grade, Unit #5, Technology, Child Labor									
7th Grade - Unit 6 - Technology - Inventions									
{TECH.8.2.8.B.2} Identify the desired and undesired consequences from the use of a product or system.									
7th Grade - Unit 6 - Technology - Inventions									
{TECH.8.2.8.B.CS4} The influence of technology on history.									
7th Grade - Unit 6 - Technology - Inventions									
{TECH.8.2.8.B.3} Research and analyze the ethical issues of a product or system on the environment and report findings for review by peers and /or experts.									
7th Grade - Unit 6 - Technology - Inventions									
{TECH.8.2.8.B.CS3} The role of society in the development and use of technology.									
7th Grade - Unit 6 - Technology - Inventions									
{TECH.8.2.8.B.4} Research examples of how humans can devise technologies to reduce the negative consequences of other technologies and present your findings.									
7th Grade - Unit 6 - Technology - Inventions									
{TECH.8.2.8.B.7} Analyze the historical impact of waste and demonstrate how a product is up cycled, reused or remanufactured into a new product.									
7th Grade - Unit 6 - Technology - Inventions									
{TECH.8.2.8.B.CS1} The cultural, social, economic and political effects of technology.									
7th Grade - Unit 6 - Technology - Inventions									
{TECH.8.2.8.C} The design process is a systematic approach to solving problems.									
{TECH.8.2.8.C.4} Identify the steps in the design process that would be used to solve a designated problem.									
6th grade, Unit #3, Technology, Rube Goldberg									
7th Grade - Unit 3 - Technology, Engineering Design Process									
{TECH.8.2.8.C.2} Explain the need for optimization in a design process.									
6th grade, Unit #3, Technology, Rube Goldberg									
{TECH.8.2.8.C.5b} Create a technical sketch of a product with materials and measurements labeled.									
6th grade, Unit #3, Technology, Rube Goldberg									
7th Grade - Unit 3 - Technology, Engineering Design Process									
{TECH.8.2.8.C.1} Explain how different teams/groups can contribute to the overall design of a product.									
8th Grade - Unit #3 - Technology, Game Design									
{TECH.8.2.8.C.CS2} The application of engineering design.									
6th grade, Unit #3, Technology, Rube Goldberg									
7th Grade - Unit 3 - Technology, Engineering Design Process									
{TECH.8.2.8.C.8} Develop a proposal for a chosen solution that include models (physical, graphical or mathematical) to communicate the solution to peers.									
6th grade, Unit #3, Technology, Rube Goldberg									
{TECH.8.2.8.C.5a} Explain the interdependence of a subsystem that operates as part of a system.									
6th grade, Unit #3, Technology, Rube Goldberg									
7th Grade - Unit 3 - Technology, Engineering Design Process									
{TECH.8.2.8.C.CS3} The role of troubleshooting, research and development, invention and innovation and experimentation in problem solving.									
6th grade, Unit #3, Technology, Rube Goldberg									
{TECH.8.2.8.C.7} Collaborate with peers and experts in the field to research and develop a product using the design process, data analysis and trends, and maintain a design log with annotated sketches to record the developmental cycle.									
7th Grade - Unit 3 - Technology, Engineering Design Process									
{TECH.8.2.8.C.6} Collaborate to examine a malfunctioning system and identify the step-by-step process used to troubleshoot, evaluate and test options to repair the product, presenting the better solution.									
6th grade, Unit #3, Technology, Rube Goldberg									
{TECH.8.2.8.C.CS1} The attributes of design.									
8th Grade - Unit #3 - Technology, Game Design									
{TECH.8.2.8.C.3} Evaluate the function, value, and aesthetics of a technological product or system, from the perspective of the user and the producer.									
7th Grade - Unit 6 - Technology - Inventions									
{TECH.8.2.8.D} The designed world is the product of a design process that provides the means to convert resources into products and systems.									

{TECH.8.2.8.D.2} Identify the design constraints and trade-offs involved in designing a prototype (e.g., how the prototype might fail and how it might be improved) by completing a design problem and reporting results in a multimedia presentation, design portfolio or engineering notebook.										
6th grade, Unit #3, Technology, Rube Goldberg			■							
7th Grade - Unit 3 - Technology, Engineering Design Process					■					
{TECH.8.2.8.D.3} Build a prototype that meets a STEM- based design challenge using science, engineering, and math principles that validate a solution.										
6th grade, Unit #3, Technology, Rube Goldberg			■							
{TECH.8.2.8.D.5} Explain the impact of resource selection and the production process in the development of a common or technological product or system.										
7th Grade - Unit 5 - Technology, Programming								■		
{TECH.8.2.8.D.CS2} Use and maintain technological products and systems.										
6th grade, Unit #3, Technology, Rube Goldberg			■							
7th Grade - Unit 5 - Technology, Programming								■		
{TECH.8.2.8.D.4} Research and publish the steps for using and maintaining a product or system and incorporate diagrams or images throughout to enhance user comprehension.										
8th Grade - Unit #3 - Technology, Game Design						■				
{TECH.8.2.8.D.CS1} Apply the design process.										
7th Grade - Unit 5 - Technology, Programming								■		
{TECH.8.2.8.D.1} Design and create a product that addresses a real world problem using a design process under specific constraints.										
6th grade, Unit #3, Technology, Rube Goldberg			■							
7th Grade - Unit 3 - Technology, Engineering Design Process					■					
7th Grade - Unit 5 - Technology, Programming								■		
{TECH.8.2.8.D.CS3} Assess the impact of products and systems.										
7th Grade - Unit 6 - Technology - Inventions									■	
{TECH.8.2.8.D.6} Identify and explain how the resources and processes used in the production of a current technological product can be modified to have a more positive impact on the environment.										
7th Grade - Unit 5 - Technology, Programming								■		
{TECH.8.2.8.E} Computational thinking builds and enhances problem solving, allowing students to move beyond using knowledge to creating knowledge.										
7th Grade - Unit 5 - Technology, Programming								■		
{TECH.8.2.8.E.2} Demonstrate an understanding of the relationship between hardware and software.										
6th grade, Unit #4, Technology, Word Processing				■						
8th Grade - Unit #3 - Technology, Game Design						■				
{TECH.8.2.8.E.3} Develop an algorithm to solve an assigned problem using a specified set of commands and use peer review to critique the solution.										
8th Grade - Unit #3 - Technology, Game Design						■				
{TECH.8.2.8.E.1} Identify ways computers are used that have had an impact across the range of human activity and within different careers where they are used.										
6th Grade, Unit #7, Technology, Understanding Our World									■	
{TECH.8.2.8.E.CS1} Computational thinking and computer programming as tools used in design and engineering.										
7th Grade - Unit 5 - Technology, Programming								■		
{TECH.8.2.8.E.4} Use appropriate terms in conversation (e.g., programming, language, data, RAM, R OM, Boolean logic terms).										
8th Grade - Unit #3 - Technology, Game Design						■				