



Technology Education: 5-8 Intermediate Curriculum

NYS SMT Standard 5: Students will apply technological knowledge and skills to design, construct, use, and evaluate products and systems to satisfy human and environmental needs.

TECHNOLOGY EDUCATION

<p>Key Idea 5.1: (TE1) Engineering design is a repetitive process involving modeling and optimization, finding the best solution within given constraints which are used to develop technological solutions to problems within given constraints.</p> <p>TE 5.1a Performance Indicator: identify needs and opportunities for technical solutions from an investigation of situations of general or social interest</p>	
Grade 5	Grade 6
<ol style="list-style-type: none"> 1. Identify a technical problem or issue within the school relating to a safety concern. 2. Develop solutions through the Problem Solving Process to develop possible ways to fix this safety concern. 	<ol style="list-style-type: none"> 1. Identify the needs of the community's handicapped through roll playing while visiting several community centers. 2. Develop several solutions through brainstorming, discussion and modeling.
Grade 7	Grade 8
<ol style="list-style-type: none"> 1. Identify a technical problem or issue with a vehicles safety and restraint systems. 2. Develop solutions through the Problem Solving Process to develop possible ways to fix this safety concern. 	<ol style="list-style-type: none"> 1. Identify a technical problem or issue given a situation. 2. Develop possible solutions by sketching, modeling or writing/ describing the solution.
<p>Key Idea 5.1: (TE1) Engineering design is a repetitive process involving modeling and optimization, finding the best solution within given constraints which are used to develop technological solutions to problems within given constraints.</p> <p>TE 5.1b Performance Indicator: locate and utilize a range of printed, electronic, and human information resources to obtain ideas</p>	
Grade 5	Grade 6
<ol style="list-style-type: none"> 1. Students will utilize the internet to obtain information on the industrial revolution. 2. Students will use newspapers, periodicals, or other printed media to research possible solutions to technical problems. 3. Students will use newspapers, periodicals, or other printed media to develop one or more new solutions to a technical problem. 	<ol style="list-style-type: none"> 1. Students will utilize the internet to research information pertaining to a Web Quest 2. Students will use newspapers, periodicals, or other printed media to research possible solutions to technical problems. 3. Students will use newspapers, periodicals, or other printed media to develop one or more new solutions to a technical problem.
Grade 7	Grade 8
<ol style="list-style-type: none"> 1. Students will utilize the internet to research information pertaining to a Web Quest 2. Students will use newspapers, periodicals, or other printed media to research possible solutions to technical problems. 3. Students will use newspapers, periodicals, or other printed media to develop one or more new solutions to a technical problem. 	<ol style="list-style-type: none"> 1. Students will utilize the internet to research information pertaining to a Web Quest 2. Students will use newspapers, periodicals, or other printed media to research possible solutions to technical problems. 3. Students will use newspapers, periodicals, or other printed media to develop one or more new solutions to a technical problem.

Key Idea 5.1: (TE1) Engineering design is a repetitive process involving modeling and optimization, finding the best solution within given constraints which are used to develop technological solutions to problems within given constraints.

TE.5.1c Performance Indicators: Consider constraints and generate several ideas for alternative solutions, using group and individual ideation techniques (group discussion, brainstorming, forced connections, role play); defer judgment until a number of ideas have been generated; evaluate (critique) ideas; and explain why the chosen solution is optimal

Grade 5	Grade 6
Given a situation, students in a group setting will process the situation, brainstorm possible solutions, form arguments on which solutions best fits the situations based on a cost benefit analysis.	Given a situation, students in a group setting will process the situation, brainstorm possible solutions, form arguments on which solutions best fits the situations based on a cost benefit analysis.
Grade 7	Grade 8
<ol style="list-style-type: none"> 1. Develop 3 possible solutions to an egg drop vehicle design based on knowledge gained through research and exploration activities. 2. Choose a specific design based on a cost benefit analysis. 3. Discuss all findings through short essays contained in students' portfolio and through presentation. 	<ol style="list-style-type: none"> 1. Develop 3 possible solutions to a truss type bridge design based on knowledge gained through research and exploration activities. 2. Choose a specific design based on a cost benefit analysis. 3. Discuss all findings through short essays contained in students' portfolio.
<p>Key Idea 5.1: (TE1) Engineering design is a repetitive process involving modeling and optimization, finding the best solution within given constraints which are used to develop technological solutions to problems within given constraints.</p> <p>TE.5.1d Performance Indicator: develop plans, including drawings with measurements and details of construction, and construct a model of the solution, exhibiting a degree of craftsmanship</p>	
Grade 5	Grade 6
<ol style="list-style-type: none"> 1. Develop solutions to technical problems using simple sketching techniques. 2. Model solutions using available materials such as craft sticks, cardboard, foam core, and/ or paper. 3. Build from dimensioned plans a simple board game. 	<ol style="list-style-type: none"> 1. Develop solutions to technical problems using simple sketching techniques. 2. Model solutions using available materials such as craft sticks, cardboard, foam core, and/ or paper.
Grade 7	Grade 8
<ol style="list-style-type: none"> 1. Develop an orthographic drawing of a 3-dimensional object with dimensions. 2. Develop an isometric drawing using an orthographic (2-dimensional) drawing with full dimensions. 3. Create a set of mechanically drawn plans of an egg drop vehicle, designed to set specification and are fully dimensioned. 	<ol style="list-style-type: none"> 1. Develop an orthographic drawing of a 3-dimensional object with dimensions. 2. Develop an isometric drawing using an orthographic (2-dimensional) drawing with full dimensions. 3. Create a set of mechanically drawn plans of a bridge design, designed to set specification and are fully dimensioned. 4. Construct a finished bridge, built using the student's designed, developed and drawn set of plans.

Key Idea 5.1: (TE1) Engineering design is a repetitive process involving modeling and optimization, finding the best solution within given constraints which are used to develop technological solutions to problems within given constraints.

TE.5.1e Performance Indicator: in a group setting, test their solution against design specifications, present and evaluate results, describe how the solution might have been modified for different or better results, and discuss tradeoffs that might have to be made

Grade 5	Grade 6
<ol style="list-style-type: none"> 1. Students will test their board game to determine, durability, accurateness of the several parts, assembly placement, and aesthetics. Students will inquire on possible tradeoffs and or changes in the game or process in the making of the game that could increase desired results. 2. Students will present their findings in a presentation. 	<ol style="list-style-type: none"> 1. Test their designed, developed and constructed model airplane design to determine the best design. This will be accomplished through flight testing and graphed results on the vehicles flight time, distance, deviation in yaw, pitch and roll. 2. Students will evaluate the results of their flight test to inquire about specific tradeoffs that could have been made and draw conclusions based on these inquiries. 3. Present their design, finished model airplane design and findings through in-class presentations.
Grade 7	Grade 8
<ol style="list-style-type: none"> 1. Test their designed, developed and constructed egg drop vehicle design to determine the best design. This will be accomplished through drop testing and graphed results. 2. Students will evaluate the results of their egg drop test to inquire about specific tradeoffs that could have been made and draw conclusions based on these inquiries. 3. Present their design, finished egg drop vehicle prototype and findings through in-class presentations. 	<ol style="list-style-type: none"> 1. Test their designed, developed and constructed bridge design to determine the best design. This will be accomplished through weight testing and graphed results. 2. Students will evaluate the results of their bridge test to inquire about specific tradeoffs that could have been made and draw conclusions based on these inquiries. 3. Present their design, finished bridge prototype and findings through in-class presentations.



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TECHNOLOGY EDUCATION

Key Idea 5.2: Technological tools, materials and other resources should be selected on the basis of safety, cost, availability, appropriateness and environmental impact; technological processes change energy, information and material resources into more useful forms.

TE 5.2a Performance Indicator: choose and use resources for a particular purpose based upon an analysis and understanding of their properties, costs, availability, and environmental impact

Grade 5	Grade 6
No indicators for this grade level for <u>THIS</u> Performance Indicator.	1. Understand the properties of several materials and their use in a Heavier Than Air (HTA) Aircraft. 2. Use these materials in the construction of a HTA aircraft.
Grade 7	Grade 8
1. Test a range of materials for specific properties to fit a situation. 2. Choose materials based on texture, size, availability, durability, impact resistance.	1. Test the structural members used in the students' bridge model for flexibility (Compression and Tension).

Key Idea 5.2: Technological tools, materials and other resources should be selected on the basis of safety, cost, availability, appropriateness and environmental impact; technological processes change energy, information and material resources into more useful forms.

TE 5.2b Performance Indicator: use a variety of hand tools and machines to change materials into new forms through forming, separating, and combining processes, and processes which cause internal change to occur

Grade 5	Grade 6
1. Use several varieties of hand saws and power saws to cut wood, plastics and other materials into specific sizes. 2. Use drills to bore holes in wood and plastic. 3. Use disk and belt sanders to grind/ sand wood and plastics. 4. Burnish the face of a block of wood to produce a hard shiny surface without a finish. 5. Use hand tools to nail/ screw fasteners into a variety of materials. 6. Use adhesives combine materials together	1. Use hand tools to cut wood, paper, and other materials into specific sizes and shapes. 2. Use drills to bore holes in wood and plastic. 3. Use disk and belt sanders to grind/ sand wood and plastics. 4. Use hand tools to nail/ screw fasteners into a variety of materials. 5. Use adhesives combine materials together
Grade 7	Grade 8
1. Use several varieties of hand saws and power saws to cut wood, plastics and other materials into specific sizes. 2. Use drills to bore holes in wood and plastic. 3. Use disk and belt sanders to grind/ sand wood and plastics. 4. Use hand tools to nail/ screw fasteners into a variety of materials. 5. Use adhesives combine materials together	1. Use several varieties of hand saws and power saws to cut wood, plastics and other materials into specific sizes. 2. Use drills to bore holes in wood and plastic. 3. Use disk and belt sanders to grind/ sand wood and plastics. 4. Use hand tools to nail/ screw fasteners into a variety of materials. 5. Use adhesives combine materials together

Key Idea 5.2: Technological tools, materials and other resources should be selected on the basis of safety, cost, availability, appropriateness and environmental impact; technological processes change energy, information and material resources into more useful forms.

TE 5.2c Performance Indicator: combine manufacturing processes with other technological processes to produce, market, and distribute a product

Grade 5	Grade 6
1. Use manufacturing equipment and mass production processes to plan, layout, machine, assemble, sand and finish a product. 2. Discuss packaging choices for the product. 3. Design a marketing scheme for a product.	No indicators for this grade level for <u>THIS</u> Performance Indicator.
Grade 7	Grade 8
1. Use manufacturing equipment and mass production processes to plan, layout, machine, assemble, sand and finish a product. 2. Discuss packaging choices for the product. 3. Design a marketing scheme for a product.	No indicators for this grade level for <u>THIS</u> Performance Indicator.

Key Idea 5.2: Technological tools, materials and other resources should be selected on the basis of safety, cost, availability, appropriateness and environmental impact; technological processes change energy, information and material resources into more useful forms.

TE 5.2d Performance Indicator: process energy into other forms and information into more meaningful information

Grade 5	Grade 6
1. Discuss and model potential and kinetic energy. 2. Discuss and model the different forms of mechanical, electrical, chemical and thermal energy. 3. Be able to use energy in one form and convert it into another. Be able to recognize when converting energy from one form to another, their will be waste in the form of other energy.	1. Discuss and model potential and kinetic energy. 2. Discuss and model the different forms of mechanical, electrical, chemical and thermal energy. 3. Be able to use energy in one form and convert it into another. Be able to recognize when converting energy from one form to another, their will be waste in the form of other energy.
Grade 7	Grade 8
1. Discuss and model potential and kinetic energy. 2. Discuss and model the different forms of mechanical, electrical, chemical and thermal energy. 3. Be able to use energy in one form and convert it into another. Be able to recognize when converting energy from one form to another, their will be waste in the form of other energy.	1. Discuss and model potential and kinetic energy. 2. Discuss and model the different forms of mechanical, electrical, chemical and thermal energy. 3. Be able to use energy in one form and convert it into another. Be able to recognize when converting energy from one form to another, their will be waste in the form of other energy.



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TECHNOLOGY EDUCATION (see Information Technology Curriculum)

Key Idea 5.3: Computers, as tools for design, modeling, information processing, communication, and system control, have greatly increased human productivity and knowledge.

TE 5.3a Performance Indicator: assemble a computer system including keyboard, central processing unit and disc drives, mouse, modem, printer, and monitor

Grade 5	Grade 6
1. Understand the function of each component of a computer system. 2. Be able to assemble a working computer system <ul style="list-style-type: none"> - Monitor - CPU - Printer - Mouse - Keyboard - Speakers - Optional (scanner, camera, microphone) 	No indicators for this grade level for <u>THIS</u> Performance Indicator.
Grade 7	Grade 8
1. Understand the function of each component of a computer system. 2. Be able to assemble a working computer system <ul style="list-style-type: none"> - Monitor - CPU - Printer - Mouse - Keyboard - Speakers - Optional (scanner, camera, microphone) 	No indicators for this grade level for <u>THIS</u> Performance Indicator.
<p>Key Idea 5.3: Computers, as tools for design, modeling, information processing, communication, and system control, have greatly increased human productivity and knowledge.</p> <p>TE 5.3b Performance Indicator: use a computer system to connect to and access needed information from various Internet sites</p>	
Grade 5	Grade 6
Use internet search engines to search for information on a given topic.	Use internet search engines to search for information on a given topic.
Grade 7	Grade 8
Use internet search engines to search for information on a given topic.	Use internet search engines to search for information on a given topic.

Key Idea 5.3: Computers, as tools for design, modeling, information processing, communication, and system control, have greatly increased human productivity and knowledge.

TE 5.3c Performance Indicator: use computer hardware and software to draw and dimension prototypical designs

Grade 5	Grade 6
No indicators for this grade level for <u>THIS</u> Performance Indicator.	No indicators for this grade level for <u>THIS</u> Performance Indicator.
Grade 7	Grade 8
No indicators for this grade level for <u>THIS</u> Performance Indicator.	Design and dimension a structure using computer software (i.e. WestPoint Bridge Builder, Home Designer)

Key Idea 5.3: Computers, as tools for design, modeling, information processing, communication, and system control, have greatly increased human productivity and knowledge.

TE 5.3d Performance Indicator: use a computer as a modeling tool

Grade 5	Grade 6
No indicators for this grade level for <u>THIS</u> Performance Indicator.	No indicators for this grade level for <u>THIS</u> Performance Indicator.
Grade 7	Grade 8
No indicators for this grade level for <u>THIS</u> Performance Indicator.	Simulate the durability of a structure using computer software (i.e. WestPoint Bridge Builder, Home Designer)

Key Idea 5.3: Computers, as tools for design, modeling, information processing, communication, and system control, have greatly increased human productivity and knowledge.

TE 5.3e Performance Indicator: use a computer system to monitor and control external events and/or systems

Grade 5	Grade 6
Use the computer to monitor, change and adjust printer functions.	No indicators for this grade level for <u>THIS</u> Performance Indicator.
Grade 7	Grade 8
No indicators for this grade level for <u>THIS</u> Performance Indicator.	<ol style="list-style-type: none"> 1. Use computer system to monitor a student designed webpage on a server. 2. Use computer system to File Transfer Protocol information to a remote server.



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TECHNOLOGY EDUCATION

<p>Key Idea 5.4: Technological systems are designed to achieve specific results and produce outputs, such as products, structures, services, energy, or other systems.</p> <p>TE 5.4a Performance Indicator: select appropriate technological systems on the basis of safety, function, cost, ease of operation, and quality of post-purchase support</p>	
Grade 5	Grade 6
<p>1. Plan to retool technology lab based on a mass production assembly line.</p> <p>2. Select the placement of tools based on function in a mass production line.</p>	<p>No indicators for this grade level for <u>THIS</u> Performance Indicator.</p>
Grade 7	Grade 8
<p>Discuss the tool buying process:</p> <ul style="list-style-type: none"> - name brand - quality - warranty - attachments 	<p>No indicators for this grade level for <u>THIS</u> Performance Indicator.</p>
<p>Key Idea 5.4: Technological systems are designed to achieve specific results and produce outputs, such as products, structures, services, energy, or other systems.</p> <p>TE 5.4b Performance Indicator: assemble, operate, and explain the operation of simple open- and closed-loop electrical, electronic, mechanical, and pneumatic systems</p>	
Grade 5	Grade 6
<p>1. Discuss open closed loop systems.</p> <p>2. Draw a picture of a simple open loop system and label the inputs, processes and outputs of the system.</p> <p>3. In a group create an open loop system that utilizes inputs, processes, outputs.</p>	<p>1. Draw a picture of a closed loop system and be able to label the inputs, processes, outputs and feedback loop.</p> <p>2. In a group create an open and closed loop system that utilizes inputs, processes, outputs and if required a control/ feedback loop.</p>
Grade 7	Grade 8
<p>No indicators for this grade level for <u>THIS</u> Performance Indicator.</p>	<p>Assemble a closed loop system that utilizes a thermostat as a control in the system to control and adjust the temperature in the systems environment.</p>

Key Idea 5.4: Technological systems are designed to achieve specific results and produce outputs, such as products, structures, services, energy, or other systems.

TE 5.4c Performance Indicator: describe how subsystems and system elements (inputs, processes, outputs) interact within systems

Grade 5	Grade 6
<p>Discuss the idea, purpose and the elements contained in a simple production line. (board game)</p> <ul style="list-style-type: none"> - 7 Resources of Technology (Inputs) - Processes in different types of systems. - Finished products of a system - Feedback (control and adjust loop) 	<p>Discuss the idea, purpose and the elements contained in a (automotive) production line.</p> <ul style="list-style-type: none"> - 7 Resources of Technology (Inputs) - Processes in different types of systems. - Finished products of a system - Feedback (control and adjust loop)
Grade 7	Grade 8
<p>Discuss the idea, purpose and the elements contained in a motor vehicle safety system</p> <ul style="list-style-type: none"> - 7 Resources of Technology (Inputs) - Processes in different types of systems. - End result of the systems - Feedback (control and adjust loop) <ul style="list-style-type: none"> - Sensors, redundant systems. 	<ol style="list-style-type: none"> 1. Identify the several systems needed for the construction, operation and maintenance of a bridge. 2. Discuss the elements of each system and how each work together to produce a desired result.

Key Idea 5.4: Technological systems are designed to achieve specific results and produce outputs, such as products, structures, services, energy, or other systems.

TE 5.4d Performance Indicator: describe how system control requires sensing information, processing it, and making changes

Grade 5	Grade 6
<p>Identify the control within a home heating/cooling system. Determine how the control senses temperature and its ability to control the functions the heating/ cooling system to adjust the homes' temperature.</p>	<p>Discuss how control systems contained within automatic door systems, sense/detect either weight or motion to open and close the door to allow people or material through it.</p>
Grade 7	Grade 8
<p>Discuss how control systems with in an automotive antilock braking system, sense wheel lockups and activate the ABS system to allow steering.</p>	<p>Discuss how sensors placed in bridges allow engineers to monitor stresses within the bridge to alert for dangerous situations and a need for maintenance.</p>



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TECHNOLOGY EDUCATION

<p>Key Idea 5.5: Technology has been the driving force in the evolution of society from an agricultural to an industrial to an information base.</p>	
<p>TE 5.5a Performance Indicator: describe how the evolution of technology led to the shift in society from an agricultural base to an industrial base to an information base</p>	
Grade 5	Grade 6
<p>1. Discuss the concept of the pace of technological change. 2. Students will create a timeline of technological change.</p>	<p>Discuss the Industrial Revolution and how society demanded the need for technological change.</p>
Grade 7	Grade 8
<p>Students will create a timeline on the evolution of the computer to show the growth of a computer from the abacus to the E.N.I.A.C. to the present day home computer.</p>	<p>No indicators for this grade level for <u>THIS</u> Performance Indicator.</p>
<p>Key Idea 5.5: Technology has been the driving force in the evolution of society from an agricultural to an industrial to an information base.</p>	
<p>TE 5.5b Performance Indicator: understand the contributions of people of different genders, races, and ethnic groups to technological development</p>	
Grade 5	Grade 6
<p>No indicators for this grade level for <u>THIS</u> Performance Indicator.</p>	<p>Research, prepare and write a one page paper on the lives of the Wright Brothers and how their contributions have led to modern day commercial flight.</p>
Grade 7	Grade 8
<p>Create a newspaper on an important inventor/ scientist/ or developer that contributed to the growth of technological change.</p>	<p>No indicators for this grade level for <u>THIS</u> Performance Indicator.</p>

Key Idea 5.5: Technology has been the driving force in the evolution of society from an agricultural to an industrial to an information base.

TE 5.5c Performance Indicator: describe how new technologies have evolved as a result of combining existing technologies (e.g., photography combined optics and chemistry; the airplane combined kite and glider technology with a light-weight gasoline engine)

Grade 5	Grade 6
Discuss how technology constantly evolves on itself. I.e. The cellular phone has evolved from Alexander Bell’s version and combined with a radio transmitter and receiver has become the phone of today.	Discuss and research the steps the Wright Brother took in order to eventually build and test the Wright 1903 Flyer. Gather information on how a glider coupled with control surface and a light weight engine became the first powered airplane.
Grade 7	Grade 8
Research the evolution of the motor car. Discuss technologies that were available during the late 1900’s and compare them to Technologies of the 21 st century. Compare and Contrast these different technologies to prepare a short presentation on the evolution of technology.	<ol style="list-style-type: none"> 1. Discuss and present new composite materials. (i.e. Wood Fibers and Plastic resin make OSB board) 2. Discuss new composite materials and the need for the continued development of these materials as it is important for the conservation of materials.



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TECHNOLOGY EDUCATION

<p>Key Idea 5.6: Technology can have positive and negative impacts on individuals, society, and the environment and humans have the capability and responsibility to constrain or promote technological development.</p> <p>TE 5.6a Performance Indicators: describe how outputs of a technological system can be desired, undesired, expected, or unexpected.</p>	
Grade 5	Grade 6
Discuss the concept of evaluating technology before the technology is produced and while it is in use.	Evaluate a technological product. List its intended (desired) use and list possible negative (undesired) attributes of the product during production, use and or post use.
Grade 7	Grade 8
Test a student designed and built technological product. Track possible waste produced during production, hypothesize other possible uses for the product and if any of them are positive, negative, expected and or unexpected.	Discuss the Tacoma Narrows Bridge disaster. List the projects desired effects, discuss the bridge collapse and infer to the reason for the collapse. Pose the question of why did the bridge collapse?
<p>Key Idea 5.6: Technology can have positive and negative impacts on individuals, society, and the environment and humans have the capability and responsibility to constrain or promote technological development.</p> <p>TE 5.6a Performance Indicators: describe through examples how modern technology reduces manufacturing and construction costs and produces more uniform products</p>	
Grade 5	Grade 6
Discuss the Eli Whitney the inventor of the concept of interchangeable parts and its effect on the gun making industry.	Discuss jig design in the construction and manufacturing industry. Build a product using an assembly line that uses jigs to produce uniform parts.
Grade 7	Grade 8
No indicators for this grade level for <u>THIS</u> Performance Indicator.	<ol style="list-style-type: none"> 1. Students will produce a product that requires them to produce several identical parts used in the construction of the product. 3. Students will compare the amount of time it takes to produce the parts using a jig against a student who lays out each piece one at a time.



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TECHNOLOGY EDUCATION

Key Idea 5.7: Project management is essential to ensuring that technological endeavors are profitable and that products and systems are of high quality and built safely, on schedule, and within budget.

TE 5.7a Performance Indicator: manage time and financial resources in a technological project

Grade 5	Grade 6
Students will work on a wood working project using a set amount of time to complete each step of the project.	Students will work on a wood working project using a set amount of time to complete each step of the project. Materials will be monitored using a payment system for each material purchased for the project.
Grade 7	Grade 8
Students will work on a wood working project using a set amount of time to complete each step of the project. Materials will be monitored using a payment system for each material purchased for the project. Students will conserve materials by laying out patterns in a “nesting” fashion.	Students will work on a wood working project using a set amount of time to complete each step of the project. Materials will be monitored using a payment system for each material purchased for the project. Students will conserve materials by laying out patterns in a “nesting” fashion.
<p>Key Idea 5.7: Project management is essential to ensuring that technological endeavors are profitable and that products and systems are of high quality and built safely, on schedule, and within budget.</p> <p>TE 5.7b Performance Indicator: provide examples of products that are well (and poorly) designed and made, describe their positive and negative attributes, and suggest measures that can be implemented to monitor quality during production</p>	
Grade 5	Grade 6
<p>1. Students will be shown examples of like products, they will assess the positive and negative characteristics based on price, products constructed materials, degree of finishing of the product and the users ability to use the product.</p> <p>2. Students will make suggestions on the improvement of the design, choice of material the product should be constructed of and price. Suggestions will also be made to how tools can be used to monitor and adjust the finish product in an assembly line.</p>	<p>1. Students will be shown examples of like products, they will assess the positive and negative characteristics based on price, products constructed materials, degree of finishing of the product and the users ability to use the product.</p> <p>2. Students will make suggestions on the improvement of the design, choice of material the product should be constructed of and price. Suggestions will also be made to how tools can be used to monitor and adjust the finish product in an assembly line.</p>
Grade 7	Grade 8
No indicators for this grade level for <u>THIS</u> Performance Indicator.	Students will be shown examples of similar structural materials manufactured by different companies. Students will compare the similarities/ differences of the product. They will make suggestions on how the material can be monitored and adjusted during the manufacturing process.

Key Idea 5.7: Project management is essential to ensuring that technological endeavors are profitable and that products and systems are of high quality and built safely, on schedule, and within budget.

TE 5.7c Performance Indicator: assume leadership responsibilities within a structured group activity

Grade 5	Grade 6
<ol style="list-style-type: none"> 1. Assume a leadership role during cooperative grouping activities. Students will be responsible as either a foreman of the group, recorder, time keeper and presenter for the group. 2. Students will be responsible for the maintenance an area of the classroom during each day of instruction. 	<ol style="list-style-type: none"> 1. Assume a leadership role during cooperative grouping activities. Students will be responsible as either a foreman of the group, recorder, time keeper and presenter for the group. 2. Students will be responsible for the maintenance an area of the classroom during each day of instruction.
Grade 7	Grade 8
<ol style="list-style-type: none"> 1. Assume a leadership role during cooperative grouping activities. Students will be responsible as either a foreman of the group, recorder, time keeper and presenter for the group. 2. Students will be responsible for the maintenance an area of the classroom during each day of instruction. 	<ol style="list-style-type: none"> 1. Assume a leadership role during cooperative grouping activities. Students will be responsible as either a foreman of the group, recorder, time keeper and presenter for the group. 2. Students will be responsible for the maintenance an area of the classroom during each day of instruction.