

Marking Period	Unit Title	Recommended Instructional Days
1	General Shop Tool and Machine Safety	40
<p align="center"><b>9.1 Personal Financial Literacy</b> <b>Disciplinary Concept:</b></p>		<p align="center"><b>Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLs-CLKS within Unit</b></p>
<p><i>Core Ideas and Performance Expectation:</i></p>		
<p align="center"><b>9.2 Career Awareness, Exploration, Preparation, &amp; Training</b> <b>Disciplinary Concept:</b> <b>Career Awareness and Planning</b></p>		
<p><i>Core Ideas and Performance Expectation:</i></p> <p><b>Career Awareness and Planning</b> <i>There are strategies to improve one’s professional value and marketability.</i> 9.2.12.CAP.2: Develop college and career readiness skills by participating in opportunities such as structured learning experiences, apprenticeships, and dual enrollment programs. 9.2.12.CAP.3: Investigate how welding skills apply to different career pathways.</p> <p><i>Career planning requires purposeful planning based on research, self-knowledge, and informed choices.</i> 9.2.12.CAP.5: Develop a plan for obtaining welding certifications and technical training.</p>		<p><b>Essential Question/s:</b> What are the hazardous tools and chemicals that can be found in the shop? What proactive measures do we use to prevent injury from these hazards? How do you use the tools which help suppress “out of control” hazards?</p> <p><b>Activity Description:</b></p> <p><b>Shop Hazard Scavenger Hunt:</b> Students will walk through the shop in pairs and identify potentially hazardous tools and chemicals. Each pair will document their findings and discuss them as a class.</p> <p><b>Chemical Safety Data Sheet (SDS) Investigation:</b> Students will review SDS sheets for common automotive chemicals (e.g., brake cleaner, motor oil, coolant). They will present the hazards, proper handling, and emergency procedures.</p>
<p align="center"><b>9.3 CTE</b> <b>Disciplinary Concept:</b> <b>Architecture &amp; Construction</b> <b>Construction</b> <b>Manufacturing</b></p>		<p><b>Tool Safety Stations:</b> Set up stations with different power tools (grinders, impact wrenches, cutting tools). Students will rotate through each station, identifying potential hazards and discussing safety measures.</p>
<p><i>Core Ideas and Performance Expectation:</i></p> <p><b>Architecture &amp; Construction</b> 9.3.12.AC.2: Use architecture and construction skills to create and manage a project.</p>		<p><b>Personal Protective Equipment (PPE) Challenge:</b> Students will identify and correctly wear PPE (gloves, safety glasses, respirators, ear protection) based on different automotive tasks (e.g., cutting metal, handling chemicals).</p>

<p><b>Construction</b> 9.3.12.AC-CST.5: Apply practices and procedures required to maintain jobsite safety. 9.3.12.AC-CST.6: Manage relationships with internal and external parties to successfully complete construction projects.</p> <p><b>Manufacturing</b> 9.3.12.MN.3: Comply with federal, state and local regulations to ensure worker safety and health and environmental work practices.</p>	<p><b>Fire Safety Demonstration:</b> Instructor-led demonstration on using a fire extinguisher, followed by a student hands-on activity using a training extinguisher.</p> <p><b>Ergonomics &amp; Lifting Techniques Workshop:</b> Students will practice proper lifting techniques for tires, toolboxes, and engine components to prevent injury.</p> <p><b>Emergency Response Drill:</b> Students will simulate a chemical spill, practicing containment and cleanup using spill kits and absorbents. Incorporate historical examples of industrial accidents and how they led to improved safety protocols, referencing African American activists and Holocaust survivors who advocated for workplace safety.</p> <p><b>First Aid &amp; Eye Wash Station Training:</b> Students will role-play injury scenarios and practice using the eye wash station and first aid kits.</p>
<p><b>9.4 Life Literacy &amp; Key Skills</b> <b>Disciplinary Concept:</b> <b>Creativity &amp; Innovation</b> <b>Critical Thinking &amp; Problem Solving</b> <b>Information &amp; Media Literacy</b> <b>Technology Literacy</b></p>	<p><b>Fire Blanket &amp; Fire Extinguisher Relay:</b> Teams of students will practice deploying a fire blanket over a simulated small fire and using a fire extinguisher (training version) on a mock vehicle fire.</p> <p><b>Interdisciplinary Connections:</b> NJLSA.R7: Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.  RST.9-10.7: Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.  WHST.9-12.1: Write arguments focused on discipline-specific content.  HS-ETS1-3: Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.</p>
<p><b>Core Ideas and Performance Expectation:</b></p> <p><b>Creativity and Innovation</b> <i>With a growth mindset, failure is an important part of success.</i> 9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a).  <i>Innovative ideas or innovation can lead to career opportunities.</i> 9.4.12.CI.3: Investigate new challenges and opportunities for personal growth, advancement, and transition.</p> <p><b>Critical Thinking and Problem Solving</b> <i>Collaboration with individuals with diverse experiences can aid in the problem-solving process, particularly for global issues where diverse solutions are needed.</i> 9.4.12.CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1.3E.12profCR3.a).</p> <p><b>Information and Media Literacy</b></p>	

<p><i>Digital tools such as artificial intelligence, image enhancement and analysis, and sophisticated computer modeling and simulation create new types of information that may have profound effects on society. These new types of information must be evaluated carefully.</i></p> <p>9.4.12.IML.3: Analyze data using tools and models to make valid and reliable claims, or to determine optimal design solutions.</p> <p>9.4.12.IML.4: Assess and critique the appropriateness and impact of existing data visualizations for an intended audience.</p> <p><b>Technology Literacy</b> <i>Collaborative digital tools can be used to access, record and share different viewpoints and to collect and tabulate the views of groups of people.</i></p> <p>9.4.12.TL.4: Collaborate in online learning communities or social networks or virtual worlds to analyze and propose a resolution to a real-world problem.</p>	
<p><b>Career Ready Practices</b></p>	
<p>Act as a responsible and contributing community members and employee. Demonstrate creativity and innovation. Utilize critical thinking to make sense of problems and persevere in solving them. Model integrity, ethical leadership and effective management. Plan education and career paths aligned to personal goals. Use technology to enhance productivity increase collaboration and communicate effectively.</p>	
<p><b>Social and Emotional Learning:</b> <i>Competencies and Sub-Competencies</i></p>	
<p><b>Self-Awareness</b></p> <ul style="list-style-type: none"> <li>• Recognize one’s feelings and thoughts</li> <li>• Recognize the impact of one’s feelings and thoughts on one’s own behavior</li> <li>• Recognize one’s personal traits, strengths, and limitations</li> <li>• Recognize the importance of self-confidence in handling daily tasks and challenges</li> </ul> <p><b>Self-Management</b></p>	

<ul style="list-style-type: none"> <li>• Understand and practice strategies for managing one’s own emotions, thoughts, and behaviors</li> <li>• Recognize the skills needed to establish and achieve personal and educational goals</li> <li>• Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one’s goals</li> </ul> <p><b>Social Awareness</b></p> <ul style="list-style-type: none"> <li>• Recognize and identify the thoughts, feelings, and perspectives of others</li> <li>• Demonstrate an awareness of the differences among individuals, groups, and others’ cultural backgrounds</li> <li>• Demonstrate an understanding of the need for mutual respect when viewpoints differ</li> <li>• Demonstrate an awareness of the expectations for social interactions in a variety of settings.</li> </ul> <p><b>Responsible Decision-Making</b></p> <ul style="list-style-type: none"> <li>• Develop, implement, and model effective problem-solving and critical thinking skills</li> <li>• Identify the consequences associated with one’s actions in order to make constructive choices</li> <li>• Evaluate personal, ethical, safety, and civic impact of decisions</li> </ul> <p><b>Relationship Skills</b></p> <ul style="list-style-type: none"> <li>• Establish and maintain healthy relationships</li> <li>• Utilize positive communication and social skills to interact effectively with others</li> </ul>	
<p><b>Assessments (Formative)</b> <i>To show evidence of meeting the standard/s, students will successfully engage within:</i></p>	<p><b>Assessments (Summative)</b> <i>To show evidence of meeting the standard/s, students will successfully complete:</i></p>
<p><b>Formative Assessments:</b></p> <ul style="list-style-type: none"> <li>Teacher Observation</li> <li>Do Now</li> <li>Homework</li> </ul>	<p><b>Benchmarks:</b></p> <ul style="list-style-type: none"> <li>Quiz</li> <li>Exam</li> <li>Students will be able to safely use/operate tools and equipment</li> </ul>

<p>Class Participation Portfolio Discussions Quiz Journal writing Group Assessment Group Interaction/Discussion/Computer Research Self and Peer Evaluations Shop and classroom etiquette Housekeeping critique</p>	<p>With little to no instruction. Students will be able to verbally explain a process when asked. Students will be periodically add to their portfolios</p> <p><b><u>Summative Assessments:</u></b> Pre-Test Oral Presentations Projects Rubric Teacher observation Written Assessments Reflective Paper Group Presentations Teacher administered a general shop safety test on the topic discussed during that unit. Hands on Demonstration Completed project Performance test on equipment or tool.</p>
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**Differentiated Student Access to Content:  
Teaching and Learning Resources/Materials**

<p align="center"><b>Core Resources</b></p>	<p align="center"><b>Alternate Core Resources <i>IEP/504/At-Risk/ESL</i></b></p>	<p align="center"><b>ELL Core Resources</b></p>	<p align="center"><b>Gifted &amp; Talented Core Resources</b></p>
<p>Tiered Content Materials: Textbooks at different reading levels (below, at, and above grade level) Simplified versions of texts with key concepts highlighted Advanced supplementary readings for accelerated learners</p>	<p>Tiered Content Materials: Simplified versions of texts with key concepts highlighted Audio versions of texts for auditory learners or struggling readers Leveled or topical readers at different reading levels Books on tape</p>	<p>Keep material concept-focused and principle-driven.  Allow the use of digital translation or grouping students together.  Provide multiple means of action and expression.</p>	<p>Advanced Learning Resources:  ASE Certification Prep – Encourage study for industry-recognized certifications.  OEM Service Manuals – Provide access to detailed manufacturer repair guides.</p>

<p>Audio versions of texts for auditory learners or struggling readers</p> <p>Multimedia Resources: Educational videos and documentaries Interactive online modules and simulations Podcasts and audio recordings Infographics and visual aids</p> <p>Hands-On Materials: Physical manipulatives and models Lab equipment and supplies for experiments Art supplies for creative projects Building materials for engineering challenges</p>	<p>Highlighted text</p> <p>Collaborative Learning Tools: Opportunity to work alone, in pairs, or small groups Structured group roles for small group work Peer tutoring and mentoring programs</p> <p>Individualized Options: Independent study options Compacting the curriculum for advanced learners Varied timelines or check-in points Choice of review activities</p> <p>ESL-Specific Resources: Bilingual dictionaries or glossaries Sentence frames and language scaffolds Visual supports for key vocabulary</p>		<p>Automotive Engineering Textbooks – Explore advanced concepts like hybrid systems and aerodynamics.</p> <p>Online Training &amp; Webinars – Use resources from ASE, Snap-On, and major manufacturers.</p> <p>3D Modeling &amp; Diagnostic Simulations – Utilize software for digital learning.</p> <p>Hands-On Activities:</p> <p>Advanced Diagnostics &amp; Troubleshooting – Solve complex real-world car issues.</p> <p>Engine Teardown &amp; Rebuild – Fully disassemble and reassemble an engine.</p> <p>Performance Tuning &amp; Fabrication – Work with ECU tuning and custom modifications.</p> <p>Internship/Job Shadowing – Partner with local shops for real-world experience.</p> <p>Competitive Automotive Events – Participate in SkillsUSA or vehicle design competitions.</p> <p>Enrichment &amp; Leadership:</p>
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			<p>Student-Led Research &amp; Presentations – Explore future automotive trends.</p> <p>Technical Writing &amp; Blogging – Create repair guides or tutorial videos.</p> <p>Peer Mentorship &amp; Teaching – Lead small group lessons or assist classmates.</p> <p>Cross-Disciplinary Projects – Collaborate with engineering or robotics students.</p> <p>Self-Paced Online Learning – Use CDX Learning or Electude for independent study.</p>
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**Supplemental Resources**

<p><b>Technology:</b></p> <ul style="list-style-type: none"> <li>● Laptop</li> <li>● Chromebook</li> <li>● SmartBoard</li> <li>● Internet Access</li> <li>● Projector</li> </ul> <p><b>Other</b></p>	
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<p><b><u>Technical Skill Assessments:</u></b>  <i>License/Certification/CTE Assessment/ Industry Valued Credential / Stackable Credential</i></p>	<p><b><u>Name of Assessment(s):</u></b></p> <p><b><u>Type of Assessment(s):</u></b></p>
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<b>Differentiated Student Access to Content: Recommended <i>Strategies &amp; Techniques</i></b>			
<b>Core Resources</b>	<b>Alternate Core Resources <i>IEP/504/At-Risk/ESL</i></b>	<b>ELL Core Resources</b>	<b>Gifted &amp; Talented Core Resources</b>
<p>Content Differentiation:</p> <ul style="list-style-type: none"> <li>Tiered content at different complexity levels</li> <li>Variety of textbooks at different reading levels</li> <li>Supplemental materials like videos, podcasts, and interactive modules</li> <li>Compacting curriculum for advanced learners</li> <li>Choice boards allowing students to select learning activities</li> <li>Varied resources/texts on the same topic</li> </ul> <p>Process Differentiation:</p> <ul style="list-style-type: none"> <li>Flexible grouping (whole group, small group, individual)</li> <li>Learning contracts tailored to student needs</li> <li>Interest centers focused on different aspects of a topic</li> </ul>	<p>Content Differentiation:</p> <ul style="list-style-type: none"> <li>Simplified versions of texts with key concepts highlighted</li> <li>Audio versions of texts for auditory learners or struggling readers</li> <li>Leveled readers at different reading levels</li> <li>Bilingual materials for ESL students</li> <li>Visual aids, infographics, and multimedia resources</li> </ul> <p>Process Differentiation:</p> <ul style="list-style-type: none"> <li>Flexible grouping based on readiness levels</li> <li>Scaffolded support like graphic organizers and writing frames</li> <li>Extended time for task completion</li> <li>One-on-one or small group instruction</li> </ul>	<p>Content Differentiation:</p> <ul style="list-style-type: none"> <li>Simplified versions of texts with key concepts highlighted</li> <li>Audio versions of texts for auditory learners</li> <li>Leveled readers at different reading levels</li> <li>Bilingual materials and resources<sup>1</sup></li> <li>Visual aids, infographics, and multimedia resources</li> <li>Modified texts with rewording, reduced extraneous information, and added visuals</li> </ul> <p>Process Differentiation:</p> <ul style="list-style-type: none"> <li>Flexible grouping based on language proficiency levels</li> <li>Scaffolded support like graphic organizers and writing frames</li> <li>Extended time for task completion</li> <li>One-on-one or small group instruction</li> </ul>	<p>Content Differentiation:</p> <ul style="list-style-type: none"> <li>Advanced, above-grade level textbooks and materials</li> <li>Supplementary resources on complex or specialized topics</li> <li>Interdisciplinary curriculum connecting multiple subject areas</li> <li>Primary source documents and advanced readings</li> <li>Access to college-level coursework or materials</li> </ul> <p>Process Differentiation:</p> <ul style="list-style-type: none"> <li>Accelerated pacing of instruction</li> <li>Independent study options on topics of interest</li> <li>Problem-based and project-based learning opportunities</li> <li>Socratic seminars and philosophical discussions</li> </ul>

<p>Varied instructional strategies (visual, auditory, kinesthetic)</p> <p>Scaffolded support like graphic organizers and writing frames</p> <p>Technology-enabled instruction (synchronous or asynchronous options)</p> <p>Product Differentiation: Multiple options for demonstrating learning (reports, presentations, models, etc.)</p> <p>Varied assessment methods based on student learning preferences</p> <p>Adjusting product expectations based on student readiness</p> <p>Learning Environment Differentiation: Flexible seating arrangements</p> <p>Options for individual, paired, or group work</p> <p>Varied time allocations for task completion</p> <p>Use of technology to support different learning needs</p>	<p>Use of assistive technology (text-to-speech, speech-to-text tools)</p> <p>Product Differentiation: Multiple options for demonstrating learning (oral presentations, projects, etc.)</p> <p>Adjusted expectations based on IEP/504 goals</p> <p>Alternative assessments aligned with student abilities</p> <p>Use of portfolios to showcase progress over time</p> <p>Learning Environment Differentiation: Flexible seating arrangements</p> <p>Quiet spaces for individual work</p> <p>Sensory tools or fidgets as needed</p> <p>Visual schedules and routines</p> <p>Specialized Supports Implementation of IEP accommodations and modifications</p> <p>ESL supports like sentence frames and vocabulary guides</p> <p>Interventions for at-risk students (e.g. reading interventions)</p>	<p>Use of gestures and total physical response to support verbal instruction</p> <p>Incorporation of students' native language or culture when possible</p> <p>Product Differentiation: Multiple options for demonstrating learning (oral presentations, projects, etc.)</p> <p>Adjusted expectations based on English proficiency levels</p> <p>Alternative assessments aligned with student abilities</p> <p>Use of portfolios to showcase progress over time</p> <p>Learning Environment Differentiation: Flexible seating arrangements</p> <p>Use of learning centers or stations focused on different aspects of a topic</p> <p>Visual schedules and routines</p> <p>Incorporation of culturally relevant materials and examples</p> <p>Specialized Supports: ESL supports like sentence frames and vocabulary guides</p> <p>Use of students' native language for clarification when needed</p>	<p>Mentorship programs with experts in fields of interest</p> <p>Product Differentiation: Open-ended, creative project options</p> <p>Real-world application of learning through authentic tasks</p> <p>Opportunities for original research and experimentation</p> <p>Multimedia presentations and publications</p> <p>Portfolio development to showcase depth of learning</p> <p>Learning Environment Differentiation: Flexible grouping with intellectual peers</p> <p>Access to advanced technology and lab equipment</p> <p>Field trips and off-campus learning experiences</p> <p>Online courses and virtual learning options</p> <p>Competitions and academic challenges</p> <p>Specialized Supports:</p>
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	<p>Social-emotional learning supports</p> <p>Ongoing Assessment</p> <p>Frequent formative assessments to monitor progress</p> <p>Data-driven adjustments to instruction</p> <p>Progress monitoring aligned with IEP goals</p>	<p>Frequent opportunities for speaking and listening practice</p> <p>Integration of all four language skills (listening, speaking, reading, writing)</p> <p>Instructional Strategies:</p> <p>Slowing down speech and using clear enunciation</p> <p>Rephrasing and clarifying instructions</p> <p>Using visuals to support verbal instruction</p> <p>Providing content in multiple formats (visual, auditory, kinesthetic)</p> <p>Connecting content to students' interests and cultural backgrounds</p> <p>Utilizing music, melodies, or songs to enhance learning</p> <p>Ongoing Assessment:</p> <p>Frequent formative assessments to monitor progress</p> <p>Data-driven adjustments to instruction</p> <p>Accommodated assessments (e.g., simplified language, added visuals)</p>	<p>Critical and creative thinking skill development</p> <p>Training in research methods and academic writing</p> <p>Guidance on social-emotional needs of gifted learners</p> <p>College and career planning tailored to advanced learners</p> <p>Opportunities to explore passions and develop talents</p> <p>Instructional Strategies:</p> <p>Inquiry-based and discovery learning approaches</p> <p>Higher-order questioning techniques</p> <p>Abstract and complex problem-solving tasks</p> <p>Emphasis on depth and complexity of content</p> <p>Integration of multiple disciplines and perspectives</p> <p>Assessment Options:</p> <p>Pre-assessments to determine readiness levels</p> <p>Performance-based and authentic assessments</p> <p>Self-assessment and reflection opportunities</p>
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			Above-grade level standardized testing Credit by examination options
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**Work-Based Learning Experiences (WBL)- \*Previously called Structured Learning Experience (SLE)**  
*Each course within a CTE program is now required to include at least one WBL each year.*

**Work-Based Learning: Sustained, meaningful interactions with industry or community professionals that foster in-depth, firsthand engagement with the tasks required in a given career field. Experiences may be delivered in workplaces, in the community, at educational institutions, and/or virtually. WBL is aligned with national, state, and/or local standards. WBL develops and reinforces relevant technical, academic, and employability knowledge and skills.**

<b>WBL Integration/Activity:</b>	<b>Duration:</b>	<b>Brief description of activities:</b>
Career Fair	1-3 day Event	<ul style="list-style-type: none"> <li>Annual School wide Career Fairs with various presentation in the Architecture and Constructions fields</li> </ul>
Guest Speakers	1-2 hour a couple times throughout the year	<ul style="list-style-type: none"> <li>Guest Speakers</li> </ul>
Career Related Competitions	Marking Period long	<ul style="list-style-type: none"> <li>Service Learning &amp; Career Related Competitions such as SkillsUSA</li> </ul>
Internships (Paid or non-paid)	Summer Internships	<ul style="list-style-type: none"> <li>Internship Opportunities</li> </ul>
Informational Interviews /Guest Speakers	1-3 day Event	<ul style="list-style-type: none"> <li>Annual STEAM Day</li> </ul>
Pre- Apprenticeship	Summer long	<ul style="list-style-type: none"> <li>Apprenticeship programs</li> </ul>
Career Related Competitions	1-3 day Event	<ul style="list-style-type: none"> <li>SkillsUSA Competitions</li> </ul>

Interactive/Hands-on Demonstrations with industry Professionals (online, in-person)	30-1hr per student throughout the year or one day	<ul style="list-style-type: none"> <li>(Online or in-person) Portfolio Critiques, Project Critiques with Industry professionals</li> </ul>
Simulated Workbased Experience	Afterschool year long	Simulated Workbased Experience
<b>WBL Partners:</b>		
<b>Career and Technical Student Organization- *Every CTE program must incorporate a Career and Technical Student Organization (CTSO).</b>		
<b>CTSO:</b>	<b>CTSO Advisor:</b>	

<p><b>Freshman Level: Approximately 10 hours</b> Career Awareness- brief exposure to a variety of work settings needs.</p>	<p><b>Sophomore Level: Approximately 20 hours</b> Career Exploration- understand the nature of work through first-hand exposure to the workplace.</p>	<p><b>Junior Level: Approximately 50 hours</b> Career Preparation - builds basic workplace competence</p>	<p><b>Senior Level: Approximately 75 hours</b> Work-Related Training - a period of work experience for the purpose of training job skills and job-related skills. work experience Students may or may not be paid.</p>
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Career fair Guest Speakers Online Career Navigation, Assessments, Videos Informational Interviews Workplace Tours/Field Trips	Informational interviews Job shadowing Workplace tours/worksites visits Simulated Workplace Experience Mock Interviews	Service-learning Interactive/Hands-on demonstrations with industry prof. (online, in person, simulated) Career Cluster Employer Panel Presentations Structured Assignments after a workplace tour, presentation, shadowing Career Related Competitions School-based enterprises Simulated Workplace Experience Non-Paid Work Experience Service Learning/Volunteering	Internships (Paid or Non-Paid) Service Learning Student-led Enterprises Volunteering Work Experience (Paid or Non-Paid) Pre-Apprenticeships Apprenticeship
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New Jersey Legislative Statutes and Administrative Code  
(place an "X" before each law/statute if/when present within the curriculum map)

X	Amistad Law: <i>N.J.S.A. 18A 52:16A-88</i>	X	Holocaust Law: <i>N.J.S.A. 18A:35-28</i>		LGBT and Disabilities Law: <i>N.J.S.A. 18A:35-4.35</i>		Diversity & Inclusion: <i>N.J.S.A. 18A:35-4.36a</i>		Standards in Action: <i>Climate Change</i>		Erin's Law: <i>A-769/S-1130</i>
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Marking Period	Unit Title	Recommended Instructional Days
2	Lubricating System	45
<p align="center"><b>9.1 Personal Financial Literacy</b></p>		<p align="center"><b>Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-CLKS within Unit</b></p>
<p><i>Core Ideas and Performance Expectation:</i></p>		
<p align="center"><b>9.2 Career Awareness, Exploration, Preparation, &amp; Training</b> <b>Disciplinary Concept:</b> <b>Career Awareness and Planning</b></p>		
<p><i>Core Ideas and Performance Expectation:</i></p> <p><b>Career Awareness and Planning</b> <i>There are strategies to improve one's professional value and marketability.</i> 9.2.12.CAP.2: Develop college and career readiness skills by participating in opportunities such as structured learning experiences, apprenticeships, and dual enrollment programs. 9.2.12.CAP.3: Investigate how welding skills apply to different career pathways.</p> <p><i>Career planning requires purposeful planning based on research, self-knowledge, and informed choices.</i> 9.2.12.CAP.5: Develop a plan for obtaining welding certifications and technical training.</p>		<p><b>Essential Question/s:</b> How does one evaluate the effectiveness of petroleum vs synthetic motor oil? How can one determine the condition of an engine? Why is it necessary to service the lubrication system?</p> <p><b>Activity Description:</b></p> <ul style="list-style-type: none"> <li>• <b>Oil Research &amp; Comparison Lab</b> – Students will research petroleum and synthetic oils, comparing their viscosity, longevity, cost, and environmental impact.</li> <li>• <b>Viscosity Test Experiment</b> – Using different oil samples, students will conduct a cold-flow test to see how each oil reacts at different temperatures.</li> <li>• <b>Oil Wear Analysis</b> – Using manufacturer data and sample reports, students will analyze how oil degrades over time and under extreme conditions.</li> <li>• <b>Debate: Petroleum vs. Synthetic Oil</b> – Students will be divided into teams to debate which type of oil is superior based on their research and test results.</li> <li>• <b>Guest Speaker or Virtual Tour</b> – Students will engage with a local mechanic or oil manufacturer to discuss real-world oil performance and industry preferences. Invite speakers from diverse backgrounds, including LGBTQ+ and individuals with disabilities (N.J.S.A. 18A:35-4.35).</li> </ul>
<p align="center"><b>9.3 CTE</b> <b>Disciplinary Concept:</b> <b>Architecture &amp; Construction</b> <b>Construction</b> <b>Manufacturing</b> <b>Manufacturing Production Process Development</b></p>		
<p><i>Core Ideas and Performance Expectation:</i></p> <p><b>Architecture &amp; Construction</b> 9.3.12.AC.2: Use architecture and construction skills to create and manage a project.</p> <p><b>Construction</b></p>		

<p>9.3.12.AC-CST.5: Apply practices and procedures required to maintain jobsite safety.</p> <p>9.3.12.AC-CST.6: Manage relationships with internal and external parties to successfully complete construction projects.</p> <p><b>Manufacturing</b></p> <p>9.3.12.MN.3: Comply with federal, state and local regulations to ensure worker safety and health and environmental work practices.</p> <p><b>Manufacturing Production Process Development</b></p> <p>9.3.12.MN-PPD.2: Research, design and implement alternative manufacturing processes to manage production of new and/or improved products.</p>	<ul style="list-style-type: none"> <li>● <b>Hands-On Engine Oil Inspection</b> – Students will inspect used engine oil for signs of contamination (metal particles, fuel dilution, coolant leaks) and discuss what these indicate about engine health.</li> <li>● <b>Compression &amp; Leak-Down Testing</b> – Students will use diagnostic tools to check cylinder compression and determine if an engine has worn rings, valves, or head gasket leaks. Discuss adaptations for individuals with disabilities to perform these tasks (N.J.S.A. 18A:35-4.35).</li> <li>● <b>Oil Pressure Testing</b> – Students will measure oil pressure in a running engine to assess the condition of the oil pump and internal components.</li> <li>● <b>Engine Sound &amp; Vibration Diagnosis</b> – Students will listen to running engines and use stethoscopes or vibration sensors to identify abnormal noises indicating potential wear or damage.</li> <li>● <b>Lab Report: Engine Health Analysis</b> – After completing diagnostic tests, students will write a report summarizing their findings and recommending repairs or maintenance.</li> <li>● <b>Step-by-Step Oil Change</b> – Students will complete a full oil change on a vehicle, including oil filter replacement, proper disposal of old oil, and correct refilling procedures.</li> <li>● <b>Lubrication System Diagram &amp; Function Review</b> – Students will label and explain the purpose of key lubrication system components, such as the oil pump, filter, and pressure relief valve.</li> <li>● <b>Case Study: Effects of Poor Lubrication</b> – Students will analyze real-world engine failures due to poor oil maintenance, including oil sludge buildup and bearing failure.</li> <li>● <b>Service Interval Planning Exercise</b> – Using manufacturer recommendations, students will create a maintenance schedule for different vehicle types based on driving conditions and oil type.</li> <li>● <b>DIY vs. Professional Service Cost Analysis</b> – Students will compare the cost of doing an oil change themselves vs. taking it to a shop and discuss the pros and cons of each approach.</li> </ul> <p><b>Interdisciplinary Connections:</b> NJSLSA.R7: Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.</p>
<p><b>9.4 Life Literacy &amp; Key Skills</b> <b>Disciplinary Concept:</b> <b>Creativity &amp; Innovation</b> <b>Critical Thinking &amp; Problem Solving</b> <b>Information &amp; Media Literacy</b> <b>Technology Literacy</b></p>	
<p><b>Core Ideas and Performance Expectation:</b></p> <p><b>Creativity and Innovation</b> <i>With a growth mindset, failure is an important part of success.</i> 9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a).</p> <p><i>Innovative ideas or innovation can lead to career opportunities.</i> 9.4.12.CI.3: Investigate new challenges and opportunities for personal growth, advancement, and transition.</p> <p><b>Critical Thinking and Problem Solving</b> <i>Collaboration with individuals with diverse experiences can aid in the problem-solving process, particularly for global issues where diverse solutions are needed.</i> 9.4.12.CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1.3E.12profCR3.a).</p>	

<p><b>Information and Media Literacy</b> <i>Digital tools such as artificial intelligence, image enhancement and analysis, and sophisticated computer modeling and simulation create new types of information that may have profound effects on society. These new types of information must be evaluated carefully.</i></p> <p>9.4.12.IML.3: Analyze data using tools and models to make valid and reliable claims, or to determine optimal design solutions.</p> <p>9.4.12.IML.4: Assess and critique the appropriateness and impact of existing data visualizations for an intended audience.</p> <p><b>Technology Literacy</b> <i>Collaborative digital tools can be used to access, record and share different viewpoints and to collect and tabulate the views of groups of people.</i></p> <p>9.4.12.TL.4: Collaborate in online learning communities or social networks or virtual worlds to analyze and propose a resolution to a real-world problem.</p>	<p>RST.9-10.7: Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.</p> <p>WHST.9-12.1: Write arguments focused on discipline-specific content.</p> <p>HS-ETS1-3: Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.</p>
<p style="text-align: center;"><b>Career Ready Practices</b></p>	
<p>Act as a responsible and contributing community members and employee. Demonstrate creativity and innovation. Utilize critical thinking to make sense of problems and persevere in solving them. Model integrity, ethical leadership and effective management. Plan education and career paths aligned to personal goals. Use technology to enhance productivity increase collaboration and communicate effectively.</p>	
<p style="text-align: center;"><b>Social and Emotional Learning: Competencies and Sub-Competencies</b></p>	
<p><b>Self-Awareness</b></p> <ul style="list-style-type: none"> <li>• Recognize one’s feelings and thoughts</li> <li>• Recognize the impact of one’s feelings and thoughts on one’s own behavior</li> <li>• Recognize one’s personal traits, strengths, and limitations</li> <li>• Recognize the importance of self-confidence in handling daily tasks and challenges</li> </ul>	

<p><b>Self-Management</b></p> <ul style="list-style-type: none"> <li>• Understand and practice strategies for managing one’s own emotions, thoughts, and behaviors</li> <li>• Recognize the skills needed to establish and achieve personal and educational goals</li> <li>• Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one’s goals</li> </ul> <p><b>Social Awareness</b></p> <ul style="list-style-type: none"> <li>• Recognize and identify the thoughts, feelings, and perspectives of others</li> <li>• Demonstrate an awareness of the differences among individuals, groups, and others’ cultural backgrounds</li> <li>• Demonstrate an understanding of the need for mutual respect when viewpoints differ</li> <li>• Demonstrate an awareness of the expectations for social interactions in a variety of settings.</li> </ul> <p><b>Responsible Decision-Making</b></p> <ul style="list-style-type: none"> <li>• Develop, implement, and model effective problem-solving and critical thinking skills</li> <li>• Identify the consequences associated with one’s actions in order to make constructive choices</li> <li>• Evaluate personal, ethical, safety, and civic impact of decisions</li> </ul> <p><b>Relationship Skills</b></p> <ul style="list-style-type: none"> <li>• Establish and maintain healthy relationships</li> <li>• Utilize positive communication and social skills to interact effectively with others</li> </ul>	
<p style="text-align: center;"><b>Assessments (Formative)</b> <i>To show evidence of meeting the standard/s, students will successfully engage within:</i></p>	<p style="text-align: center;"><b>Assessments (Summative)</b> <i>To show evidence of meeting the standard/s, students will successfully complete:</i></p>
<p><b>Formative Assessments:</b></p> <ul style="list-style-type: none"> <li>Teacher Observation</li> <li>Do Now</li> <li>Homework</li> <li>Class Participation</li> </ul>	<p><b>Benchmarks:</b></p> <ul style="list-style-type: none"> <li>Quiz</li> <li>Exam</li> <li>Apply an Engineering Design Process</li> <li>Develop and Test a Solution</li> </ul>

<p>Portfolio Discussions Quiz Journal writing Group Assessment Group Interaction/Discussion/Computer Research Self and Peer Evaluations Shop and classroom etiquette Housekeeping critique Completion of safety assignments Examine handouts in notebook for completeness and accuracy of information Project critique and evaluation at completion Observe proper care and use of tools, equipment, and materials Hands on Demonstrations</p>	<p>Improve a Design through Iteration Develop Skills in Graphically Representing Ideas</p> <p><b>Summative Assessments:</b> Pre-Test Oral Presentations Projects Rubric Teacher observation Written Assessments Reflective Paper Group Presentations Maintain Anecdotal Records/Notetaking Teacher administered a general shop safety test on the topic discussed during that unit. Completed project Performance test on equipment or tool.</p>
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**Differentiated Student Access to Content:  
Teaching and Learning Resources/Materials**

<b>Core Resources</b>	<b>Alternate Core Resources <i>IEP/504/At-Risk/ESL</i></b>	<b>ELL Core Resources</b>	<b>Gifted &amp; Talented Core Resources</b>
<p>Tiered Content Materials: Textbooks at different reading levels (below, at, and above grade level) Simplified versions of texts with key concepts highlighted Advanced supplementary readings for accelerated learners</p>	<p>Tiered Content Materials: Simplified versions of texts with key concepts highlighted Audio versions of texts for auditory learners or struggling readers Leveled or topical readers at different reading levels Books on tape</p>	<p>Keep material concept-focused and principle-driven. Allow the use of digital translation or grouping students together. Provide multiple means of action and expression.</p>	<p>Advanced Learning Resources: ASE Certification Prep – Encourage study for industry-recognized certifications. OEM Service Manuals – Provide access to detailed manufacturer repair guides.</p>

<p>Audio versions of texts for auditory learners or struggling readers</p> <p>Multimedia Resources: Educational videos and documentaries Interactive online modules and simulations Podcasts and audio recordings Infographics and visual aids</p> <p>Hands-On Materials: Physical manipulatives and models Lab equipment and supplies for experiments Supplies for creative projects Building materials for engineering challenges</p>	<p>Highlighted text</p> <p>Collaborative Learning Tools: Opportunity to work alone, in pairs, or small groups Structured group roles for small group work Peer tutoring and mentoring programs</p> <p>Individualized Options: Independent study options Compacting the curriculum for advanced learners Varied timelines or check-in points Choice of review activities</p> <p>ESL-Specific Resources: Bilingual dictionaries or glossaries Sentence frames and language scaffolds Visual supports for key vocabulary</p>		<p>Automotive Engineering Textbooks – Explore advanced concepts like hybrid systems and aerodynamics.</p> <p>Online Training &amp; Webinars – Use resources from ASE, Snap-On, and major manufacturers.</p> <p>3D Modeling &amp; Diagnostic Simulations – Utilize software for digital learning.</p> <p>Hands-On Activities: Advanced Diagnostics &amp; Troubleshooting – Solve complex real-world car issues.</p> <p>Engine Teardown &amp; Rebuild – Fully disassemble and reassemble an engine.</p> <p>Performance Tuning &amp; Fabrication – Work with ECU tuning and custom modifications.</p> <p>Internship/Job Shadowing – Partner with local shops for real-world experience.</p> <p>Competitive Automotive Events – Participate in SkillsUSA or vehicle design competitions.</p> <p>Enrichment &amp; Leadership:</p>
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			<p>Student-Led Research &amp; Presentations – Explore future automotive trends.</p> <p>Technical Writing &amp; Blogging – Create repair guides or tutorial videos.</p> <p>Peer Mentorship &amp; Teaching – Lead small group lessons or assist classmates.</p> <p>Cross-Disciplinary Projects – Collaborate with engineering or robotics students.</p> <p>Self-Paced Online Learning – Use CDX Learning or Electude for independent study.</p>
<b>Supplemental Resources</b>			
<p><b>Technology:</b></p> <ul style="list-style-type: none"> <li>● Laptop</li> <li>● Chromebook</li> <li>● SmartBoard</li> <li>● Internet Access</li> <li>● Projector</li> </ul> <p><b>Other:</b></p> <ul style="list-style-type: none"> <li>●</li> </ul>			
<b>Differentiated Student Access to Content: Recommended <i>Strategies &amp; Techniques</i></b>			
<b>Core Resources</b>	<b>Alternate Core Resources <i>IEP/504/At-Risk/ESL</i></b>	<b>ELL Core Resources</b>	<b>Gifted &amp; Talented Core</b>

<p>Content Differentiation: Tiered content at different complexity levels Variety of textbooks at different reading levels Supplemental materials like videos, podcasts, and interactive modules Compacting curriculum for advanced learners Choice boards allowing students to select learning activities Varied resources/texts on the same topic</p> <p>Process Differentiation: Flexible grouping (whole group, small group, individual) Learning contracts tailored to student needs Interest centers focused on different aspects of a topic Varied instructional strategies (visual, auditory, kinesthetic) Scaffolded support like graphic organizers and writing frames Technology-enabled instruction (synchronous or asynchronous options)</p> <p>Product Differentiation:</p>	<p>Content Differentiation: Simplified versions of texts with key concepts highlighted Audio versions of texts for auditory learners or struggling readers Leveled readers at different reading levels Bilingual materials for ESL students Visual aids, infographics, and multimedia resources</p> <p>Process Differentiation: Flexible grouping based on readiness levels Scaffolded support like graphic organizers and writing frames Extended time for task completion One-on-one or small group instruction Use of assistive technology (text-to-speech, speech-to-text tools)</p> <p>Product Differentiation: Multiple options for demonstrating learning (oral presentations, projects, etc.)</p>	<p>Content Differentiation: Simplified versions of texts with key concepts highlighted Audio versions of texts for auditory learners Leveled readers at different reading levels Bilingual materials and resources Visual aids, infographics, and multimedia resources Modified texts with rewording, reduced extraneous information, and added visuals</p> <p>Process Differentiation: Flexible grouping based on language proficiency levels Scaffolded support like graphic organizers and writing frames Extended time for task completion One-on-one or small group instruction Use of gestures and total physical response to support verbal instruction Incorporation of students' native language or culture when possible</p> <p>Product Differentiation:</p>	<p>Content Differentiation: Advanced, above-grade level textbooks and materials Supplementary resources on complex or specialized topics Interdisciplinary curriculum connecting multiple subject areas Primary source documents and advanced readings Access to college-level coursework or materials</p> <p>Process Differentiation: Accelerated pacing of instruction Independent study options on topics of interest Problem-based and project-based learning opportunities Socratic seminars and philosophical discussions Mentorship programs with experts in fields of interest</p> <p>Product Differentiation: Open-ended, creative project options Real-world application of learning through authentic tasks</p>
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<p>Multiple options for demonstrating learning (reports, presentations, models, etc.)</p> <p>Varied assessment methods based on student learning preferences</p> <p>Adjusting product expectations based on student readiness</p> <p>Learning Environment Differentiation:</p> <p>Flexible seating arrangements</p> <p>Options for individual, paired, or group work</p> <p>Varied time allocations for task completion</p> <p>Use of technology to support different learning needs</p>	<p>Adjusted expectations based on IEP/504 goals</p> <p>Alternative assessments aligned with student abilities</p> <p>Use of portfolios to showcase progress over time</p> <p>Learning Environment Differentiation:</p> <p>Flexible seating arrangements</p> <p>Quiet spaces for individual work</p> <p>Sensory tools or fidgets as needed</p> <p>Visual schedules and routines</p> <p>Specialized Supports</p> <p>Implementation of IEP accommodations and modifications</p> <p>ESL supports like sentence frames and vocabulary guides</p> <p>Interventions for at-risk students (e.g. reading interventions)</p> <p>Social-emotional learning supports</p> <p>Ongoing Assessment</p> <p>Frequent formative assessments to monitor progress</p> <p>Data-driven adjustments to instruction</p>	<p>Multiple options for demonstrating learning (oral presentations, projects, etc.)</p> <p>Adjusted expectations based on English proficiency levels</p> <p>Alternative assessments aligned with student abilities</p> <p>Use of portfolios to showcase progress over time</p> <p>Learning Environment Differentiation:</p> <p>Flexible seating arrangements</p> <p>Use of learning centers or stations focused on different aspects of a topic</p> <p>Visual schedules and routines</p> <p>Incorporation of culturally relevant materials and examples</p> <p>Specialized Supports:</p> <p>ESL supports like sentence frames and vocabulary guides</p> <p>Use of students' native language for clarification when needed</p> <p>Frequent opportunities for speaking and listening practice</p> <p>Integration of all four language skills (listening, speaking, reading, writing)</p> <p>Instructional Strategies:</p>	<p>Opportunities for original research and experimentation</p> <p>Multimedia presentations and publications</p> <p>Portfolio development to showcase depth of learning</p> <p>Learning Environment Differentiation:</p> <p>Flexible grouping with intellectual peers</p> <p>Access to advanced technology and lab equipment</p> <p>Field trips and off-campus learning experiences</p> <p>Online courses and virtual learning options</p> <p>Competitions and academic challenges</p> <p>Specialized Supports:</p> <p>Critical and creative thinking skill development</p> <p>Training in research methods and academic writing</p> <p>Guidance on social-emotional needs of gifted learners</p> <p>College and career planning tailored to advanced learners</p>
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	<p>Progress monitoring aligned with IEP goals</p>	<p>Slowing down speech and using clear enunciation</p> <p>Rephrasing and clarifying instructions</p> <p>Using visuals to support verbal instruction</p> <p>Providing content in multiple formats (visual, auditory, kinesthetic)</p> <p>Connecting content to students' interests and cultural backgrounds</p> <p>Utilizing music, melodies, or songs to enhance learning</p> <p>Ongoing Assessment:</p> <p>Frequent formative assessments to monitor progress</p> <p>Data-driven adjustments to instruction</p> <p>Accommodated assessments (e.g., simplified language, added visuals)</p>	<p>Opportunities to explore passions and develop talents</p> <p>Instructional Strategies:</p> <p>Inquiry-based and discovery learning approaches</p> <p>Higher-order questioning techniques</p> <p>Abstract and complex problem-solving tasks</p> <p>Emphasis on depth and complexity of content</p> <p>Integration of multiple disciplines and perspectives</p> <p>Assessment Options:</p> <p>Pre-assessments to determine readiness levels</p> <p>Performance-based and authentic assessments</p> <p>Self-assessment and reflection opportunities</p> <p>Above-grade level standardized testing</p> <p>Credit by examination options</p>
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**Work-Based Learning Experiences (WBL)- \*Previously called Structured Learning Experience (SLE)**

*Each course within a CTE program is now required to include at least one WBL each year.*

**Work-Based Learning: Sustained, meaningful interactions with industry or community professionals that foster in-depth, firsthand engagement with the tasks required in a given career field. Experiences may be delivered in workplaces, in the community, at educational institutions, and/or virtually. WBL is aligned with national, state, and/or local standards. WBL develops and reinforces relevant technical, academic, and employability knowledge and skills.**

WBL Integration/Activity:	Duration:	Brief description of activities:
Career Fair	1-3 day Event	<ul style="list-style-type: none"> <li>• Annual School wide Career Fairs</li> </ul>
Guest Speakers	1-2 hour a couple times throughout the year	<ul style="list-style-type: none"> <li>• Guest Speakers</li> </ul>
Career Related Competitions	Throughout the marking period	<ul style="list-style-type: none"> <li>• Service Learning &amp; Career Related Competitions such as SkillsUSA</li> </ul>
Internships (Paid or non-paid)	Summer Internships	<ul style="list-style-type: none"> <li>• Internship Opportunities</li> </ul>
Informational Interviews /Guest Speakers	1-3 day Event	<ul style="list-style-type: none"> <li>• Annual STEAM Day</li> </ul>
Pre- Apprenticeship	Summer long	<ul style="list-style-type: none"> <li>• Apprenticeship programs</li> </ul>
Career Related Competitions	1-3 day Event	<ul style="list-style-type: none"> <li>• SkillsUSA Competitions</li> </ul>
Interactive/Hands-on Demonstrations with industry Professionals (online, in-person)	30-1hr per student throughout the year or one day	<ul style="list-style-type: none"> <li>• (Online or in-person) Portfolio Critiques, Project Critiques with Industry professionals</li> </ul>
Simulated Workbased Experience	Afterschool year long	<ul style="list-style-type: none"> <li>• Simulated Workbased Experience</li> </ul>
<b>WBL Partners:</b>		

<b>Career and Technical Student Organization- *Every CTE program must incorporate a Career and Technical Student Organization (CTSO).</b>		
<b>CTSO:</b>	<b>CTSO Advisor:</b>	

<b>Freshman Level: Approximately 10 hours</b> Career Awareness- brief exposure to a variety of work settings needs.	<b>Sophomore Level: Approximately 20 hours</b> Career Exploration- understand the nature of work through first-hand exposure to the workplace.	<b>Junior Level: Approximately 50 hours</b> Career Preparation - builds basic workplace competence	<b>Senior Level: Approximately 75 hours</b> Work-Related Training - a period of work experience for the purpose of training job skills and job-related skills. work experience Students may or may not be paid.
Career fair Guest Speakers Online Career Navigation, Assessments, Videos Informational Interviews Workplace Tours/Field Trips	Informational interviews Job shadowing Workplace tours/worksites visits Simulated Workplace Experience Mock Interviews	Service-learning Interactive/Hands-on demonstrations with industry prof. (online, in person, simulated) Career Cluster Employer Panel Presentations Structured Assignments after a workplace tour, presentation, shadowing Career Related Competitions School-based enterprises Simulated Workplace Experience Non-Paid Work Experience Service Learning/Volunteering	Internships (Paid or Non-Paid) Service Learning Student-led Enterprises Volunteering Work Experience (Paid or Non-Paid) Pre-Apprenticeships Apprenticeship

New Jersey Legislative Statutes and Administrative Code  
 (place an "X" before each law/statute if/when present within the curriculum map)

	Amistad Law: <i>N.J.S.A. 18A 52:16A-88</i>		Holocaust Law: <i>N.J.S.A. 18A:35-28</i>	X	LGBT and Disabilities Law: <i>N.J.S.A. 18A:35-4.35</i>	X	Diversity & Inclusion: <i>N.J.S.A. 18A:35-4.36a</i>		Standards in Action: <i>Climate Change</i>		Erin's Law: <i>A-769/S-1130</i>
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Marking Period	Unit Title	Recommended Instructional Days
3	Cooling System	40
<b>9.1 Personal Financial Literacy</b> <b>Disciplinary Concept:</b>		<p style="text-align: center;"><b>Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-CLKS within Unit</b></p>
<i>Core Ideas and Performance Expectation:</i>		
<b>9.2 Career Awareness, Exploration, Preparation, &amp; Training</b> <b>Disciplinary Concept:</b> <b>Career Awareness and Planning</b>		
<i>Core Ideas and Performance Expectation:</i>  <b>Career Awareness and Planning</b> <i>There are strategies to improve one's professional value and marketability.</i> 9.2.12.CAP.2: Develop college and career readiness skills by participating in opportunities such as structured learning experiences, apprenticeships, and dual enrollment programs. 9.2.12.CAP.3: Investigate how welding skills apply to different career pathways.  <i>Career planning requires purposeful planning based on research, self-knowledge, and informed choices.</i> 9.2.12.CAP.5: Develop a plan for obtaining welding certifications and technical training.		
<b>9.3 CTE</b> <b>Disciplinary Concept:</b> <b>Architecture &amp; Construction</b> <b>Construction</b> <b>Manufacturing</b> <b>Manufacturing Production Process Development</b>		<p><b>Essential Question/s:</b> Why is knowing the correct procedures for cooling maintenance important?</p> <p><b>Activity Description:</b></p> <p><b>Activity 1: Cooling System Parts Identification Lab</b></p> <p><b>Objective:</b> Students will identify and label key components of a vehicle's cooling system.</p> <p><b>Materials Needed:</b></p> <ul style="list-style-type: none"> <li>● Engine cooling system diagrams</li> <li>● Physical cooling system components (radiator, hoses, thermostat, water pump, etc.)</li> <li>● Worksheets with component descriptions</li> </ul> <p><b>Procedure:</b></p> <ol style="list-style-type: none"> <li>1. Instructor provides an overview of the cooling system and its role in engine temperature regulation, discussing how efficient cooling systems contribute to reduced emissions and improved fuel economy, which aligns with climate change mitigation efforts</li> </ol>
<i>Core Ideas and Performance Expectation:</i>		
<b>Architecture &amp; Construction</b>		

<p>9.3.12.AC.2: Use architecture and construction skills to create and manage a project.</p> <p><b>Construction</b> 9.3.12.AC-CST.5: Apply practices and procedures required to maintain jobsite safety. 9.3.12.AC-CST.6: Manage relationships with internal and external parties to successfully complete construction projects.</p> <p><b>Manufacturing</b> 9.3.12.MN.3: Comply with federal, state and local regulations to ensure worker safety and health and environmental work practices.</p> <p><b>Manufacturing Production Process Development</b> 9.3.12.MN-PPD.2: Research, design and implement alternative manufacturing processes to manage production of new and/or improved products.</p>	<ol style="list-style-type: none"> <li>2. Students work in small groups to examine cooling system components and match them to a labeled diagram. They also discuss how each component's efficiency impacts overall vehicle emissions</li> <li>3. Each group presents a short explanation of one component's function and its potential environmental impact, considering how improvements in cooling technology could reduce a vehicle's carbon footprint</li> <li>4. Students complete a worksheet identifying components and their purposes, including a section on how the cooling system's efficiency relates to climate change and ways to make cooling systems more environmentally friendly</li> </ol> <p><b>Activity 2: Cooling System Inspection &amp; Maintenance Workshop</b></p> <p><b>Objective:</b> Students will perform a complete cooling system inspection and preventive maintenance.</p> <p><b>Materials Needed:</b></p> <ul style="list-style-type: none"> <li>• Vehicles or engine models</li> <li>• Flashlights, pressure testers, coolant testers, and basic tools</li> <li>• Maintenance checklists</li> </ul> <p><b>Procedure:</b></p> <ol style="list-style-type: none"> <li>1. Instructor demonstrates a step-by-step cooling system inspection, including checking for leaks, pressure testing, and assessing coolant condition.</li> <li>2. Students work in pairs to inspect a vehicle's cooling system using a checklist.</li> <li>3. Each pair records their findings and discusses potential maintenance needs.</li> <li>4. Class debrief on common cooling system issues and preventive maintenance best practices.</li> </ol>
<p><b>9.4 Life Literacy &amp; Key Skills</b> <b>Disciplinary Concept:</b> <b>Creativity &amp; Innovation</b> <b>Critical Thinking &amp; Problem Solving</b> <b>Informations and Media Literacy</b> <b>Technology Literacy</b></p>	
<p><b>Core Ideas and Performance Expectation:</b></p> <p><b>Creativity and Innovation</b> <i>With a growth mindset, failure is an important part of success.</i> 9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a).</p> <p><i>Innovative ideas or innovation can lead to career opportunities.</i> 9.4.12.CI.3: Investigate new challenges and opportunities for personal growth, advancement, and transition.</p> <p><b>Critical Thinking and Problem Solving</b></p>	<p><b>Activity 3: Cooling System Malfunction Diagnostics Challenge</b></p>

<p><i>Collaboration with individuals with diverse experiences can aid in the problem-solving process, particularly for global issues where diverse solutions are needed.</i></p> <p>9.4.12.CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1.3E.12profCR3.a).</p> <p><b>Information and Media Literacy</b> <i>Digital tools such as artificial intelligence, image enhancement and analysis, and sophisticated computer modeling and simulation create new types of information that may have profound effects on society. These new types of information must be evaluated carefully.</i></p> <p>9.4.12.IML.3: Analyze data using tools and models to make valid and reliable claims, or to determine optimal design solutions.</p> <p>9.4.12.IML.4: Assess and critique the appropriateness and impact of existing data visualizations for an intended audience.</p> <p><b>Technology Literacy</b> <i>Collaborative digital tools can be used to access, record and share different viewpoints and to collect and tabulate the views of groups of people.</i></p> <p>9.4.12.TL.4: Collaborate in online learning communities or social networks or virtual worlds to analyze and propose a resolution to a real-world problem.</p>	<p><b>Objective:</b> Students will diagnose cooling system malfunctions using troubleshooting techniques.</p> <p><b>Materials Needed:</b></p> <ul style="list-style-type: none"> <li>● Vehicles with simulated cooling system issues (low coolant, stuck thermostat, leaking hoses, etc.)</li> <li>● OBD-II scanners, infrared thermometers, and pressure testers</li> <li>● Cooling system diagnostic worksheets</li> </ul> <p><b>Procedure:</b></p> <ol style="list-style-type: none"> <li>1. Instructor presents common cooling system issues and diagnostic steps.</li> <li>2. Students rotate through different vehicles or stations, identifying and diagnosing cooling system faults.</li> <li>3. Each group documents their findings and proposes a repair solution.</li> <li>4. Groups present their diagnoses and solutions to the class.</li> </ol> <p><b>Activity 4: Cooling System Repair Lab</b></p> <p><b>Objective:</b> Students will repair or replace faulty cooling system components.</p>
<p><b>Career Ready Practices</b></p>	<p><b>Materials Needed:</b></p> <ul style="list-style-type: none"> <li>● Vehicles with faulty cooling system components</li> <li>● Replacement parts (hoses, thermostats, radiator caps, coolant, etc.)</li> <li>● Tools (wrenches, screwdrivers, coolant flush kits, etc.)</li> </ul> <p><b>Procedure:</b></p> <ol style="list-style-type: none"> <li>1. Instructor demonstrates proper techniques for repairing or replacing common cooling system components.</li> <li>2. Students work in small groups to complete assigned repairs under instructor supervision.</li> <li>3. Each group tests their repair by running the vehicle and checking for leaks or other issues.</li> </ol>
<p>Act as a responsible and contributing community member and employee.</p> <p>Attend to financial well-being.</p> <p>Consider the environmental, social and economic impacts of decisions.</p> <p>Demonstrate creativity and innovation.</p> <p>Utilize critical thinking to make sense of problems and persevere in solving them.</p>	

<p>Model integrity, ethical leadership and effective management.</p> <p>Plan education and career paths aligned to personal goals.</p> <p>Use technology to enhance productivity, increase collaboration, and communicate effectively.</p> <p>Work productively in teams while using cultural/global competence.</p>	<p>4. Students reflect on the repair process and document steps in a service report.</p>
<p><b>Social and Emotional Learning:</b> <i>Competencies and Sub-Competencies</i></p>	<p><b>Interdisciplinary Connections:</b> NJSLSA.R7: Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.</p> <p>RST.9-10.7: Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.</p>
<p><b>Self-Awareness</b></p> <ul style="list-style-type: none"> <li>• Recognize one’s feelings and thoughts</li> <li>• Recognize the impact of one’s feelings and thoughts on one’s own behavior</li> <li>• Recognize one’s personal traits, strengths, and limitations</li> <li>• Recognize the importance of self-confidence in handling daily tasks and challenges</li> </ul> <p><b>Self-Management</b></p> <ul style="list-style-type: none"> <li>• Understand and practice strategies for managing one’s own emotions, thoughts, and behaviors</li> <li>• Recognize the skills needed to establish and achieve personal and educational goals</li> <li>• Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one’s goals</li> </ul> <p><b>Social Awareness</b></p> <ul style="list-style-type: none"> <li>• Recognize and identify the thoughts, feelings, and perspectives of others</li> <li>• Demonstrate an awareness of the differences among individuals, groups, and others’ cultural backgrounds</li> <li>• Demonstrate an understanding of the need for mutual respect when viewpoints differ</li> <li>• Demonstrate an awareness of the expectations for social interactions in a variety of settings.</li> </ul>	<p>WHST.9-12.1: Write arguments focused on discipline-specific content.</p> <p>HS-ETS1-3: Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.</p>

<p><b>Responsible Decision-Making</b></p> <ul style="list-style-type: none"> <li>• Develop, implement, and model effective problem-solving and critical thinking skills</li> <li>• Identify the consequences associated with one’s actions in order to make constructive choices</li> <li>• Evaluate personal, ethical, safety, and civic impact of decisions</li> </ul> <p><b>Relationship Skills</b></p> <ul style="list-style-type: none"> <li>• Establish and maintain healthy relationships</li> <li>• Utilize positive communication and social skills to interact effectively with others</li> </ul>	
<p style="text-align: center;"><b>Assessments (Formative)</b> <i>To show evidence of meeting the standard/s, students will successfully engage within:</i></p>	<p style="text-align: center;"><b>Assessments (Summative)</b> <i>To show evidence of meeting the standard/s, students will successfully complete:</i></p>
<p><b><u>Formative Assessments:</u></b></p> <ul style="list-style-type: none"> <li>Teacher Observation</li> <li>Do Now</li> <li>Homework</li> <li>Class Participation</li> <li>Portfolio</li> <li>Discussions</li> <li>Quiz</li> <li>Journal writing</li> <li>Group Assessment</li> <li>Group Interaction/Discussion/Computer Research</li> <li>Self and Peer Evaluations</li> <li>Examine handouts in notebook for completeness and accuracy of information</li> <li>Project critique and evaluation at completion</li> <li>Observe proper care and use of tools, equipment, and materials</li> </ul>	<p><b><u>Benchmarks:</u></b></p> <ul style="list-style-type: none"> <li>Quiz</li> <li>Exam</li> </ul> <p><b><u>Summative Assessments:</u></b></p> <ul style="list-style-type: none"> <li>Pre-Test</li> <li>Oral Presentations</li> <li>Projects</li> <li>Rubric</li> <li>Teacher observation</li> <li>Written Assessments</li> <li>Reflective Paper</li> <li>Group Presentations</li> <li>Teacher administered a general shop safety test on the topic discussed during that unit.</li> <li>Completed project</li> <li>Performance test on equipment or tool.</li> </ul>
<p><b><u>Technical Skill Assessments:</u></b> License/Certification/CTE Assessment/ Industry Valued Credential/ Stackable Credential</p>	<p><b><u>Name of Assessment(s):</u></b></p>

		<u>Type of Assessment(s):</u>	
<b>Differentiated Student Access to Content: Teaching and Learning Resources/Materials</b>			
<b>Core Resources</b>	<b>Alternate Core Resources <i>IEP/504/At-Risk/ESL</i></b>	<b>ELL Core Resources</b>	<b>Gifted &amp; Talented Core Resources</b>
<p>Tiered Content Materials: Textbooks at different reading levels (below, at, and above grade level) Simplified versions of texts with key concepts highlighted Advanced supplementary readings for accelerated learners Audio versions of texts for auditory learners or struggling readers</p> <p>Multimedia Resources: Educational videos and documentaries Interactive online modules and simulations Podcasts and audio recordings Infographics and visual aids</p> <p>Hands-On Materials: Physical manipulatives and models Lab equipment and supplies for</p>	<p>Tiered Content Materials: Simplified versions of texts with key concepts highlighted Audio versions of texts for auditory learners or struggling readers Leveled or topical readers at different reading levels Books on tape Highlighted text</p> <p>Collaborative Learning Tools: Opportunity to work alone, in pairs, or small groups Structured group roles for small group work Peer tutoring and mentoring programs</p> <p>Individualized Options: Independent study options Compacting the curriculum for</p>	<p>Keep material concept-focused and principle-driven.</p> <p>Allow the use of digital translation or grouping students together.</p> <p>Provide multiple means of action and expression.</p>	<p>Advanced Learning Resources: ASE Certification Prep – Encourage study for industry-recognized certifications. OEM Service Manuals – Provide access to detailed manufacturer repair guides. Automotive Engineering Textbooks – Explore advanced concepts like hybrid systems and aerodynamics. Online Training &amp; Webinars – Use resources from ASE, Snap-On, and major manufacturers. 3D Modeling &amp; Diagnostic Simulations – Utilize software for digital learning. Hands-On Activities: Advanced Diagnostics &amp; Troubleshooting – Solve complex real-world car issues.</p>

<p>experiments</p> <p>Art supplies for creative projects</p> <p>Building materials for engineering challenges</p>	<p>advanced learners</p> <p>Varied timelines or check-in points</p> <p>Choice of review activities</p> <p>ESL-Specific Resources:</p> <p>Bilingual dictionaries or glossaries</p> <p>Sentence frames and language scaffolds</p> <p>Visual supports for key vocabulary</p>		<p>Engine Teardown &amp; Rebuild – Fully disassemble and reassemble an engine.</p> <p>Performance Tuning &amp; Fabrication – Work with ECU tuning and custom modifications.</p> <p>Internship/Job Shadowing – Partner with local shops for real-world experience.</p> <p>Competitive Automotive Events – Participate in SkillsUSA or vehicle design competitions.</p> <p>Enrichment &amp; Leadership:</p> <p>Student-Led Research &amp; Presentations – Explore future automotive trends.</p> <p>Technical Writing &amp; Blogging – Create repair guides or tutorial videos.</p> <p>Peer Mentorship &amp; Teaching – Lead small group lessons or assist classmates.</p> <p>Cross-Disciplinary Projects – Collaborate with engineering or robotics students.</p> <p>Self-Paced Online Learning – Use CDX Learning or Electude for independent study.</p>
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**Supplemental Resources**

**Technology:**

- Laptop
- Chromebook
- SmartBoard
- Internet Access
- Projector
- 3D printer

**Other:**

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**Differentiated Student Access to Content:  
Recommended *Strategies & Techniques***

Core Resources	Alternate Core Resources <i>IEP/504/At-Risk/ESL</i>	ELL Core Resources	Gifted & Talented Core
<p>Content Differentiation:</p> <p>Tiered content at different complexity levels</p> <p>Variety of textbooks at different reading levels</p> <p>Supplemental materials like videos, podcasts, and interactive modules</p> <p>Compacting curriculum for advanced learners</p> <p>Choice boards allowing students to select learning activities</p> <p>Varied resources/texts on the same topic</p> <p>Process Differentiation:</p>	<p>Content Differentiation:</p> <p>Simplified versions of texts with key concepts highlighted</p> <p>Audio versions of texts for auditory learners or struggling readers</p> <p>Leveled readers at different reading levels</p> <p>Bilingual materials for ESL students</p> <p>Visual aids, infographics, and multimedia resources</p> <p>Process Differentiation:</p>	<p>Content Differentiation:</p> <p>Simplified versions of texts with key concepts highlighted</p> <p>Audio versions of texts for auditory learners</p> <p>Leveled readers at different reading levels</p> <p>Bilingual materials and resources<sup>1</sup></p> <p>Visual aids, infographics, and multimedia resources</p> <p>Modified texts with rewording, reduced extraneous information, and added visuals</p>	<p>Content Differentiation:</p> <p>Advanced, above-grade level textbooks and materials</p> <p>Supplementary resources on complex or specialized topics</p> <p>Interdisciplinary curriculum connecting multiple subject areas</p> <p>Primary source documents and advanced readings</p> <p>Access to college-level coursework or materials</p> <p>Process Differentiation:</p> <p>Accelerated pacing of instruction</p>

<p>Flexible grouping (whole group, small group, individual)</p> <p>Learning contracts tailored to student needs</p> <p>Interest centers focused on different aspects of a topic</p> <p>Varied instructional strategies (visual, auditory, kinesthetic)</p> <p>Scaffolded support like graphic organizers and writing frames</p> <p>Technology-enabled instruction (synchronous or asynchronous options)</p> <p>Product Differentiation: Multiple options for demonstrating learning (reports, presentations, models, etc.)</p> <p>Varied assessment methods based on student learning preferences</p> <p>Adjusting product expectations based on student readiness</p> <p>Learning Environment Differentiation: Flexible seating arrangements</p> <p>Options for individual, paired, or group work</p> <p>Varied time allocations for task completion</p> <p>Use of technology to support different learning needs</p>	<p>Flexible grouping based on readiness levels</p> <p>Scaffolded support like graphic organizers and writing frames</p> <p>Extended time for task completion</p> <p>One-on-one or small group instruction</p> <p>Use of assistive technology (text-to-speech, speech-to-text tools)</p> <p>Product Differentiation: Multiple options for demonstrating learning (oral presentations, projects, etc.)</p> <p>Adjusted expectations based on IEP/504 goals</p> <p>Alternative assessments aligned with student abilities</p> <p>Use of portfolios to showcase progress over time</p> <p>Learning Environment Differentiation: Flexible seating arrangements</p> <p>Quiet spaces for individual work</p> <p>Sensory tools or fidgets as needed</p> <p>Visual schedules and routines</p>	<p>Process Differentiation: Flexible grouping based on language proficiency levels</p> <p>Scaffolded support like graphic organizers and writing frames</p> <p>Extended time for task completion</p> <p>One-on-one or small group instruction</p> <p>Use of gestures and total physical response to support verbal instruction</p> <p>Incorporation of students' native language or culture when possible</p> <p>Product Differentiation: Multiple options for demonstrating learning (oral presentations, projects, etc.)</p> <p>Adjusted expectations based on English proficiency levels</p> <p>Alternative assessments aligned with student abilities</p> <p>Use of portfolios to showcase progress over time</p> <p>Learning Environment Differentiation: Flexible seating arrangements</p> <p>Use of learning centers or stations focused on different aspects of a topic</p> <p>Visual schedules and routines</p>	<p>Independent study options on topics of interest</p> <p>Problem-based and project-based learning opportunities</p> <p>Socratic seminars and philosophical discussions</p> <p>Mentorship programs with experts in fields of interest</p> <p>Product Differentiation: Open-ended, creative project options</p> <p>Real-world application of learning through authentic tasks</p> <p>Opportunities for original research and experimentation</p> <p>Multimedia presentations and publications</p> <p>Portfolio development to showcase depth of learning</p> <p>Learning Environment Differentiation: Flexible grouping with intellectual peers</p> <p>Access to advanced technology and lab equipment</p> <p>Field trips and off-campus learning experiences</p>
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	<p>Specialized Supports</p> <p>Implementation of IEP accommodations and modifications</p> <p>ESL supports like sentence frames and vocabulary guides</p> <p>Interventions for at-risk students (e.g. reading interventions)</p> <p>Social-emotional learning supports</p> <p>Ongoing Assessment</p> <p>Frequent formative assessments to monitor progress</p> <p>Data-driven adjustments to instruction</p> <p>Progress monitoring aligned with IEP goals</p>	<p>Incorporation of culturally relevant materials and examples</p> <p>Specialized Supports:</p> <p>ESL supports like sentence frames and vocabulary guides</p> <p>Use of students' native language for clarification when needed</p> <p>Frequent opportunities for speaking and listening practice</p> <p>Integration of all four language skills (listening, speaking, reading, writing)</p> <p>Instructional Strategies:</p> <p>Slowing down speech and using clear enunciation</p> <p>Rephrasing and clarifying instructions</p> <p>Using visuals to support verbal instruction</p> <p>Providing content in multiple formats (visual, auditory, kinesthetic)</p> <p>Connecting content to students' interests and cultural backgrounds</p> <p>Utilizing music, melodies, or songs to enhance learning</p> <p>Ongoing Assessment:</p> <p>Frequent formative assessments to monitor progress</p>	<p>Online courses and virtual learning options</p> <p>Competitions and academic challenges</p> <p>Specialized Supports:</p> <p>Critical and creative thinking skill development</p> <p>Training in research methods and academic writing</p> <p>Guidance on social-emotional needs of gifted learners</p> <p>College and career planning tailored to advanced learners</p> <p>Opportunities to explore passions and develop talents</p> <p>Instructional Strategies:</p> <p>Inquiry-based and discovery learning approaches</p> <p>Higher-order questioning techniques</p> <p>Abstract and complex problem-solving tasks</p> <p>Emphasis on depth and complexity of content</p> <p>Integration of multiple disciplines and perspectives</p> <p>Assessment Options:</p>
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		Data-driven adjustments to instruction Accommodated assessments (e.g., simplified language, added visuals)	Pre-assessments to determine readiness levels Performance-based and authentic assessments Self-assessment and reflection opportunities Above-grade level standardized testing Credit by examination options
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**Work-Based Learning Experiences (WBL)- \*Previously called Structured Learning Experience (SLE)**

*Each course within a CTE program is now required to include at least one WBL each year.*

**Work-Based Learning: Sustained, meaningful interactions with industry or community professionals that foster in-depth, firsthand engagement with the tasks required in a given career field. Experiences may be delivered in workplaces, in the community, at educational institutions, and/or virtually. WBL is aligned with national, state, and/or local standards. WBL develops and reinforces relevant technical, academic, and employability knowledge and skills.**

<b>WBL Integration/Activity:</b>	<b>Duration:</b>	<b>Brief description of activities:</b>
Career Fair	1-3 day Event	<ul style="list-style-type: none"> <li>Annual School wide Career Fairs with various presentation in the Architecture and Constructions fields</li> </ul>
Guest Speakers	1-2 hour a couple times throughout the year	<ul style="list-style-type: none"> <li>Guest Speakers</li> </ul>
Career Related Competitions	Throughout the Marking Period	<ul style="list-style-type: none"> <li>Service Learning &amp; Career Related Competitions such as SkillUSA</li> </ul>

Internships (Paid or non-paid)	Summer Internships	<ul style="list-style-type: none"> <li>• Internship Opportunities</li> </ul>
Informational Interviews /Guest Speakers	1-3 day Event	<ul style="list-style-type: none"> <li>• Annual STEAM Day</li> </ul>
Pre- Apprenticeship	Summer long	<ul style="list-style-type: none"> <li>• Apprenticeship programs</li> </ul>
Career Related Competitions	1-3 day Event	<ul style="list-style-type: none"> <li>• SkillsUSA Competitions</li> </ul>
Interactive/Hands-on Demonstrations with industry Professionals (online, in-person)	30-1hr per student throughout the year or one day	<ul style="list-style-type: none"> <li>• (Online or in-person) Portfolio Critiques, Project Critiques with Industry professionals</li> </ul>
Simulated Workbased Experience	Afterschool year long	<ul style="list-style-type: none"> <li>• Simulated Workbased Experience</li> </ul>
<b>WBL Partners:</b>		
<b>Career and Technical Student Organization- *Every CTE program must incorporate a Career and Technical Student Organization (CTSO).</b>		
<b>CTSO:</b>	<b>CTSO Advisor:</b>	
ACE Mentorship Program		ACE Mentor Program is an after-school program whose mission is to engage, excite and enlighten high school students to pursue careers in Architecture, Construction, and Engineering through mentoring and to support their continued advancement in the industry.

<b>Freshman Level: Approximately 10 hours</b> Career Awareness- brief exposure to a variety of work settings needs.	<b>Sophomore Level: Approximately 20 hours</b> Career Exploration- understand the nature of work through first-hand exposure to the workplace.	<b>Junior Level: Approximately 50 hours</b> Career Preparation - builds basic workplace competence	<b>Senior Level: Approximately 75 hours</b> Work-Related Training - a period of work experience for the purpose of training job skills and job-related skills. work experience Students may or may not be paid.
Career fair Guest Speakers Online Career Navigation, Assessments, Videos Informational Interviews Workplace Tours/Field Trips	Informational interviews Job shadowing Workplace tours/worksites visits Simulated Workplace Experience Mock Interviews	Service-learning Interactive/Hands-on demonstrations with industry prof. (online, in person, simulated) Career Cluster Employer Panel Presentations Structured Assignments after a workplace tour, presentation, shadowing Career Related Competitions School-based enterprises Simulated Workplace Experience Non-Paid Work Experience Service Learning/Volunteering	Internships (Paid or Non-Paid) Service Learning Student-led Enterprises Volunteering Work Experience (Paid or Non-Paid) Pre-Apprenticeships Apprenticeship

New Jersey Legislative Statutes and Administrative Code  
(place an "X" before each law/statute if/when present within the curriculum map)

Amistad Law: <i>N.J.S.A. 18A 52:16A-88</i>	Holocaust Law: <i>N.J.S.A. 18A:35-28</i>	LGBT and Disabilities Law: <i>N.J.S.A. 18A:35-4.35</i>	Diversity & Inclusion: <i>N.J.S.A. 18A:35-4.36a</i>	X	Standards in Action: <i>Climate Change</i>	Erin's Law: <i>A-769/S-1130</i>
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Marking Period	Unit Title	Recommended Instructional Days
4	Basic Engine Tune-Up	45
<p align="center"><b>9.1 Personal Financial Literacy</b> <b>Disciplinary Concept:</b></p>		<p align="center"><b>Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-CLKS within Unit</b></p>
<p><i>Core Ideas and Performance Expectation:</i></p>		
<p align="center"><b>9.2 Career Awareness, Exploration, Preparation, &amp; Training</b> <b>Disciplinary Concept:</b> <b>Career Awareness and Planning</b></p>		
<p><i>Core Ideas and Performance Expectation:</i></p> <p><b>Career Awareness and Planning</b> <i>There are strategies to improve one's professional value and marketability.</i></p> <p>9.2.12.CAP.2: Develop college and career readiness skills by participating in opportunities such as structured learning experiences, apprenticeships, and dual enrollment programs.</p> <p>9.2.12.CAP.3: Investigate how welding skills apply to different career pathways.</p> <p><i>Career planning requires purposeful planning based on research, self-knowledge, and informed choices.</i></p> <p>9.2.12.CAP.5: Develop a plan for obtaining welding certifications and technical training.</p>		<p><b>Essential Question/s:</b> How is preventative maintenance important to the performance and economy of running a vehicle?</p> <p><b>Activity Description:</b></p> <p><b>Activity 1: Understanding Preventative Maintenance (Class Discussion &amp; Research)</b></p> <p><b>Objective:</b> Students will explore why preventative maintenance is critical for vehicle longevity, fuel efficiency, and performance.</p> <p><b>Activity Steps:</b></p> <ol style="list-style-type: none"> <li><b>Class Discussion:</b> Instructor leads a discussion on the role of preventative maintenance in reducing breakdowns, improving fuel economy, and ensuring vehicle safety.</li> <li><b>Case Study Analysis:</b> Students research and present real-world examples of how neglected maintenance led to costly repairs.</li> <li><b>Preventative Maintenance Checklist:</b> Students create a checklist for a routine maintenance inspection.</li> <li>Discuss <b>Erin's Law</b> and how it applies to automotive workplaces (e.g., recognizing inappropriate behavior, ensuring a safe and respectful learning environment).</li> </ol>
<p align="center"><b>9.3 CTE</b> <b>Disciplinary Concept:</b> <b>Architecture &amp; Construction</b> <b>Construction</b> <b>Manufacturing</b> <b>Manufacturing Production Process Development</b></p>		
<p><i>Core Ideas and Performance Expectation:</i></p> <p><b>Architecture &amp; Construction</b></p>		

<p>9.3.12.AC.2: Use architecture and construction skills to create and manage a project.</p> <p><b>Construction</b> 9.3.12.AC-CST.5: Apply practices and procedures required to maintain jobsite safety. 9.3.12.AC-CST.6: Manage relationships with internal and external parties to successfully complete construction projects.</p> <p><b>Manufacturing</b> 9.3.12.MN.3: Comply with federal, state and local regulations to ensure worker safety and health and environmental work practices.</p> <p><b>Manufacturing Production Process Development</b> 9.3.12.MN-PPD.2: Research, design and implement alternative manufacturing processes to manage production of new and/or improved products.</p>	<p>5. Role-play scenarios on workplace respect and safety concerns in an auto shop.</p> <p>6.</p> <hr/> <p><b>Activity 2: Spark Plug Inspection &amp; Replacement (Hands-On Lab)</b></p> <p><b>Objective:</b> Students will inspect, gap, and replace spark plugs to ensure efficient engine operation.</p> <p><b>Activity Steps:</b></p> <ol style="list-style-type: none"> <li><b>Demonstration:</b> Instructor shows proper spark plug removal, gapping, and installation techniques.</li> <li><b>Hands-On Practice:</b> Students work in pairs to: <ul style="list-style-type: none"> <li>Remove old spark plugs.</li> <li>Inspect for carbon buildup, wear, and fouling.</li> <li>Check and adjust the spark plug gap using a feeler gauge.</li> <li>Install new spark plugs and torque to manufacturer specifications.</li> </ul> </li> <li><b>Reflection &amp; Discussion:</b> Students document their observations and discuss how spark plug condition affects performance and fuel economy.</li> </ol>
<p><b>9.4 Life Literacy &amp; Key Skills</b> <b>Disciplinary Concept:</b> <b>Creativity &amp; Innovation</b> <b>Critical Thinking &amp; Problem Solving</b> <b>Informations and Media Literacy</b> <b>Technology Literacy</b></p>	
<p><i>Core Ideas and Performance Expectation:</i></p> <p><b>Creativity and Innovation</b> <i>With a growth mindset, failure is an important part of success.</i> 9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a).</p> <p><i>Innovative ideas or innovation can lead to career opportunities.</i> 9.4.12.CI.3: Investigate new challenges and opportunities for personal growth, advancement, and transition.</p> <p><b>Critical Thinking and Problem Solving</b></p>	<p><b>Activity 3: Spark Plug Wire Inspection &amp; Replacement (Hands-On Lab)</b></p> <p><b>Objective:</b> Students will inspect and replace spark plug wires to ensure proper ignition performance.</p> <p><b>Activity Steps:</b></p> <ol style="list-style-type: none"> <li><b>Demonstration:</b> Instructor explains how spark plug wires degrade over time and how to replace them correctly.</li> <li><b>Hands-On Practice:</b> Students: <ul style="list-style-type: none"> <li>Inspect wires for cracks, burns, and corrosion.</li> <li>Test for resistance using a multimeter.</li> <li>Replace wires one at a time to avoid misrouting.</li> </ul> </li> </ol>

<p><i>Collaboration with individuals with diverse experiences can aid in the problem-solving process, particularly for global issues where diverse solutions are needed.</i></p> <p>9.4.12.CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1.3E.12profCR3.a).</p> <p><b>Information and Media Literacy</b> <i>Digital tools such as artificial intelligence, image enhancement and analysis, and sophisticated computer modeling and simulation create new types of information that may have profound effects on society. These new types of information must be evaluated carefully.</i></p> <p>9.4.12.IML.3: Analyze data using tools and models to make valid and reliable claims, or to determine optimal design solutions.</p> <p>9.4.12.IML.4: Assess and critique the appropriateness and impact of existing data visualizations for an intended audience.</p> <p><b>Technology Literacy</b> <i>Collaborative digital tools can be used to access, record and share different viewpoints and to collect and tabulate the views of groups of people.</i></p> <p>9.4.12.TL.4: Collaborate in online learning communities or social networks or virtual worlds to analyze and propose a resolution to a real-world problem.</p>	<p>3. <b>Troubleshooting Exercise:</b> Instructor provides faulty wires for students to diagnose.</p> <p><b>Activity 4: PCV System Inspection &amp; Valve Replacement (Hands-On Lab)</b></p> <p><b>Objective:</b> Students will inspect and replace the PCV (Positive Crankcase Ventilation) valve for proper engine ventilation.</p> <p><b>Activity Steps:</b></p> <ol style="list-style-type: none"> <li>1. <b>Demonstration:</b> Instructor explains PCV system operation and symptoms of a failing valve (rough idle, oil contamination, increased emissions).</li> <li>2. <b>Hands-On Practice:</b> Students: <ul style="list-style-type: none"> <li>o Locate the PCV valve and inspect for clogs or leaks.</li> <li>o Shake the valve to check for proper function.</li> <li>o Replace the PCV valve if necessary.</li> </ul> </li> <li>3. <b>Reflection:</b> Students document their findings and discuss how a faulty PCV system affects engine efficiency.</li> </ol>
<p style="text-align: center;"><b>Career Ready Practices</b></p>	<p><b>Activity 5: Air Filter Inspection &amp; Replacement (Hands-On Lab)</b></p> <p><b>Objective:</b> Students will inspect and replace an air filter to improve engine efficiency.</p> <p><b>Activity Steps:</b></p>
<p>Act as a Responsible and contributing Citizen and Employee Apply Appropriate Academic and Technical Skills Attend to Personal Health and Financial Well-Being Communicate Clearly, Effectively and with Reason Consider the Environmental, Social and Economic Impacts of Decisions Demonstrate creativity and innovation Employ valid and reliable research strategies Utilize critical Thinking to make sense of problems and persevere in solving them Model Integrity, ethical leadership and effective management Plan education and career path aligned to personal goals Use technology to enhance productivity Work productively in teams while using cultural/ global competence</p>	<ol style="list-style-type: none"> <li>1. <b>Demonstration:</b> Instructor shows how to access and inspect an air filter.</li> <li>2. <b>Hands-On Practice:</b> Students: <ul style="list-style-type: none"> <li>o Remove the air filter and check for dirt, debris, and damage.</li> <li>o Compare a clean vs. dirty air filter.</li> <li>o Install a new air filter and reassemble the housing.</li> </ul> </li> <li>3. <b>Group Discussion:</b> Students discuss how a clogged air filter impacts fuel economy and engine performance.</li> </ol>

<b>Social and Emotional Learning: <i>Competencies and Sub-Competencies</i></b>	<b>Activity 6: Throttle Body Inspection &amp; Cleaning (Hands-On Lab)</b>
<p><b>Self-Awareness</b></p> <ul style="list-style-type: none"><li>• Recognize one’s feelings and thoughts</li><li>• Recognize the impact of one’s feelings and thoughts on one’s own behavior</li><li>• Recognize one’s personal traits, strengths, and limitations</li><li>• Recognize the importance of self-confidence in handling daily tasks and challenges</li></ul> <p><b>Self-Management</b></p> <ul style="list-style-type: none"><li>• Understand and practice strategies for managing one’s own emotions, thoughts, and behaviors</li><li>• Recognize the skills needed to establish and achieve personal and educational goals</li><li>• Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one’s goals</li></ul> <p><b>Social Awareness</b></p> <ul style="list-style-type: none"><li>• Recognize and identify the thoughts, feelings, and perspectives of others</li><li>• Demonstrate an awareness of the differences among individuals, groups, and others’ cultural backgrounds</li><li>• Demonstrate an understanding of the need for mutual respect when viewpoints differ</li><li>• Demonstrate an awareness of the expectations for social interactions in a variety of settings</li></ul> <p><b>Responsible Decision-Making</b></p> <ul style="list-style-type: none"><li>• Develop, implement, and model effective problem-solving and critical thinking skills</li><li>• Identify the consequences associated with one’s actions in order to make constructive choices</li><li>• Evaluate personal, ethical, safety, and civic impact of decisions</li></ul> <p><b>Relationship Skills</b></p> <ul style="list-style-type: none"><li>• Establish and maintain healthy relationships</li></ul>	<p><b>Objective:</b> Students will inspect and clean a throttle body to ensure smooth airflow and prevent engine hesitation.</p> <p><b>Activity Steps:</b></p> <ol style="list-style-type: none"><li>1. <b>Demonstration:</b> Instructor explains how carbon buildup in the throttle body affects acceleration and fuel efficiency.</li><li>2. <b>Hands-On Practice:</b> Students:<ul style="list-style-type: none"><li>○ Locate the throttle body and inspect for carbon deposits.</li><li>○ Use throttle body cleaner and a microfiber cloth to remove buildup.</li><li>○ Reinstall components and test for smooth throttle response.</li></ul></li><li>3. <b>Troubleshooting Discussion:</b> Instructor presents real-world cases of throttle body issues and how cleaning prevents costly repairs.</li></ol> <p><b>Interdisciplinary Connections:</b></p> <p>NJSLA.R7: Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.</p> <p>RST.9-10.7: Translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words.</p> <p>WHST.9-12.1: Write arguments focused on discipline-specific content.</p> <p>HS-ETS1-3: Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.</p>

<ul style="list-style-type: none"> <li>Utilize positive communication and social skills to interact effectively with others</li> </ul>			
<b>Assessments (Formative)</b> <i>To show evidence of meeting the standard/s, students will successfully engage within:</i>		<b>Assessments (Summative)</b> <i>To show evidence of meeting the standard/s, students will successfully complete:</i>	
<b>Formative Assessments:</b> Teacher Observation Do Now Homework Class Participation Portfolio Discussions Quiz Journal writing Group Assessment Group Interaction/Discussion/Computer Research Self and Peer Evaluations Reverse Engineering Documentation Examine handouts in notebook for completeness and accuracy of information Project critique and evaluation at completion Observe proper care and use of tools, equipment, and materials		<b>Benchmarks:</b> Quiz Exam  <b>Summative Assessments:</b> Pre-Test Oral Presentations Projects Rubric Teacher observation Written Assessments Reflective Paper Group Presentations Teacher administered a general shop safety test on the topic discussed during that unit. Completed project Performance test on equipment or tool.	
<b>Technical Skill Assessments:</b> <i>License/Certification/CTE Assessment/ Industry Valued Credential / Stackable Credential</i>		<b>Name of Assessment(s):</b>  <b>Type of Assessment(s):</b>	
<b>Differentiated Student Access to Content: Teaching and Learning Resources/Materials</b>			
<b>Core Resources</b>	<b>Alternate Core Resources IEP/504/At-Risk/ESL</b>	<b>ELL Core Resources</b>	<b>Gifted &amp; Talented Core Resources</b>

<p><b>Tiered Content Materials:</b></p> <p>Textbooks at different reading levels (below, at, and above grade level)</p> <p>Simplified versions of texts with key concepts highlighted</p> <p>Advanced supplementary readings for accelerated learners</p> <p>Audio versions of texts for auditory learners or struggling readers</p> <p><b>Multimedia Resources:</b></p> <p>Educational videos and documentaries</p> <p>Interactive online modules and simulations</p> <p>Podcasts and audio recordings</p> <p>Infographics and visual aids</p> <p><b>Hands-On Materials:</b></p> <p>Physical manipulatives and models</p> <p>Lab equipment and supplies for experiments</p> <p>Art supplies for creative projects</p> <p>Building materials for engineering challenges</p>	<p><b>Tiered Content Materials:</b></p> <p>Simplified versions of texts with key concepts highlighted</p> <p>Audio versions of texts for auditory learners or struggling readers</p> <p>Leveled or topical readers at different reading levels</p> <p>Books on tape</p> <p>Highlighted text</p> <p><b>Collaborative Learning Tools:</b></p> <p>Opportunity to work alone, in pairs, or small groups</p> <p>Structured group roles for small group work</p> <p>Peer tutoring and mentoring programs</p> <p><b>Individualized Options:</b></p> <p>Independent study options</p> <p>Compacting the curriculum for advanced learners</p> <p>Varied timelines or check-in points</p> <p>Choice of review activities</p> <p><b>ESL-Specific Resources:</b></p> <p>Bilingual dictionaries or glossaries</p>	<p>Keep material concept-focused and principle-driven.</p> <p>Allow the use of digital translation or grouping students together.</p> <p>Provide multiple means of action and expression.</p>	<p><b>Advanced Learning Resources:</b></p> <p>ASE Certification Prep – Encourage study for industry-recognized certifications.</p> <p>OEM Service Manuals – Provide access to detailed manufacturer repair guides.</p> <p>Automotive Engineering Textbooks – Explore advanced concepts like hybrid systems and aerodynamics.</p> <p>Online Training &amp; Webinars – Use resources from ASE, Snap-On, and major manufacturers.</p> <p>3D Modeling &amp; Diagnostic Simulations – Utilize software for digital learning.</p> <p><b>Hands-On Activities:</b></p> <p>Advanced Diagnostics &amp; Troubleshooting – Solve complex real-world car issues.</p> <p>Engine Teardown &amp; Rebuild – Fully disassemble and reassemble an engine.</p> <p>Performance Tuning &amp; Fabrication – Work with ECU tuning and custom modifications.</p>
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	<p>Sentence frames and language scaffolds</p> <p>Visual supports for key vocabulary</p>		<p>Internship/Job Shadowing – Partner with local shops for real-world experience.</p> <p>Competitive Automotive Events – Participate in SkillsUSA or vehicle design competitions.</p> <p>Enrichment &amp; Leadership:</p> <p>Student-Led Research &amp; Presentations – Explore future automotive trends.</p>
<b>Supplemental Resources</b>			
<p><b>Technology:</b></p> <ul style="list-style-type: none"> <li>● Laptop</li> <li>● Chromebook</li> <li>● SmartBoard</li> <li>● Internet Access</li> <li>● Projector</li> </ul>			
<b>Differentiated Student Access to Content: Recommended <i>Strategies &amp; Techniques</i></b>			
<b>Core Resources</b>	<b>Alternate Core Resources <i>IEP/504/At-Risk/ESL</i></b>	<b>ELL Core Resources</b>	<b>Gifted &amp; Talented Core Resources</b>
<p>Content Differentiation:</p> <p>Tiered content at different complexity levels</p> <p>Variety of textbooks at different reading levels</p>	<p>Content Differentiation:</p> <p>Simplified versions of texts with key concepts highlighted</p> <p>Audio versions of texts for auditory learners or struggling readers</p>	<p>Content Differentiation:</p> <p>Simplified versions of texts with key concepts highlighted</p> <p>Audio versions of texts for auditory learners</p>	<p>Content Differentiation:</p> <p>Advanced, above-grade level textbooks and materials</p> <p>Supplementary resources on complex or specialized topics</p>

<p>Supplemental materials like videos, podcasts, and interactive modules</p> <p>Compacting curriculum for advanced learners</p> <p>Choice boards allowing students to select learning activities</p> <p>Varied resources/texts on the same topic</p> <p>Process Differentiation:</p> <p>Flexible grouping (whole group, small group, individual)</p> <p>Learning contracts tailored to student needs</p> <p>Interest centers focused on different aspects of a topic</p> <p>Varied instructional strategies (visual, auditory, kinesthetic)</p> <p>Scaffolded support like graphic organizers and writing frames</p> <p>Technology-enabled instruction (synchronous or asynchronous options)</p> <p>Product Differentiation:</p> <p>Multiple options for demonstrating learning (reports, presentations, models, etc.)</p> <p>Varied assessment methods based on student learning preferences</p> <p>Adjusting product expectations based on student readiness</p>	<p>Leveled readers at different reading levels</p> <p>Bilingual materials for ESL students</p> <p>Visual aids, infographics, and multimedia resources</p> <p>Process Differentiation:</p> <p>Flexible grouping based on readiness levels</p> <p>Scaffolded support like graphic organizers and writing frames</p> <p>Extended time for task completion</p> <p>One-on-one or small group instruction</p> <p>Use of assistive technology (text-to-speech, speech-to-text tools)</p> <p>Product Differentiation:</p> <p>Multiple options for demonstrating learning (oral presentations, projects, etc.)</p> <p>Adjusted expectations based on IEP/504 goals</p> <p>Alternative assessments aligned with student abilities</p> <p>Use of portfolios to showcase progress over time</p>	<p>Leveled readers at different reading levels</p> <p>Bilingual materials and resources<sup>1</sup></p> <p>Visual aids, infographics, and multimedia resources</p> <p>Modified texts with rewording, reduced extraneous information, and added visuals</p> <p>Process Differentiation:</p> <p>Flexible grouping based on language proficiency levels</p> <p>Scaffolded support like graphic organizers and writing frames</p> <p>Extended time for task completion</p> <p>One-on-one or small group instruction</p> <p>Use of gestures and total physical response to support verbal instruction</p> <p>Incorporation of students' native language or culture when possible</p> <p>Product Differentiation:</p> <p>Multiple options for demonstrating learning (oral presentations, projects, etc.)</p> <p>Adjusted expectations based on English proficiency levels</p> <p>Alternative assessments aligned with student abilities</p>	<p>Interdisciplinary curriculum connecting multiple subject areas</p> <p>Primary source documents and advanced readings</p> <p>Access to college-level coursework or materials</p> <p>Process Differentiation:</p> <p>Accelerated pacing of instruction</p> <p>Independent study options on topics of interest</p> <p>Problem-based and project-based learning opportunities</p> <p>Socratic seminars and philosophical discussions</p> <p>Mentorship programs with experts in fields of interest</p> <p>Product Differentiation:</p> <p>Open-ended, creative project options</p> <p>Real-world application of learning through authentic tasks</p> <p>Opportunities for original research and experimentation</p> <p>Multimedia presentations and publications</p> <p>Portfolio development to showcase depth of learning</p>
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<p>Learning Environment Differentiation: Flexible seating arrangements Options for individual, paired, or group work Varied time allocations for task completion Use of technology to support different learning needs</p>	<p>Learning Environment Differentiation: Flexible seating arrangements Quiet spaces for individual work Sensory tools or fidgets as needed Visual schedules and routines  Specialized Supports Implementation of IEP accommodations and modifications ESL supports like sentence frames and vocabulary guides Interventions for at-risk students (e.g. reading interventions) Social-emotional learning supports  Ongoing Assessment Frequent formative assessments to monitor progress Data-driven adjustments to instruction Progress monitoring aligned with IEP goals</p>	<p>Use of portfolios to showcase progress over time  Learning Environment Differentiation: Flexible seating arrangements Use of learning centers or stations focused on different aspects of a topic Visual schedules and routines Incorporation of culturally relevant materials and examples  Specialized Supports: ESL supports like sentence frames and vocabulary guides Use of students' native language for clarification when needed Frequent opportunities for speaking and listening practice Integration of all four language skills (listening, speaking, reading, writing)  Instructional Strategies: Slowing down speech and using clear enunciation Rephrasing and clarifying instructions Using visuals to support verbal instruction Providing content in multiple formats (visual, auditory, kinesthetic)</p>	<p>Learning Environment Differentiation: Flexible grouping with intellectual peers Access to advanced technology and lab equipment Field trips and off-campus learning experiences Online courses and virtual learning options Competitions and academic challenges  Specialized Supports: Critical and creative thinking skill development Training in research methods and academic writing Guidance on social-emotional needs of gifted learners College and career planning tailored to advanced learners Opportunities to explore passions and develop talents  Instructional Strategies: Inquiry-based and discovery learning approaches</p>
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		<p>Connecting content to students' interests and cultural backgrounds</p> <p>Utilizing music, melodies, or songs to enhance learning</p> <p>Ongoing Assessment:</p> <p>Frequent formative assessments to monitor progress</p> <p>Data-driven adjustments to instruction</p> <p>Accommodated assessments (e.g., simplified language, added visuals)</p>	<p>Higher-order questioning techniques</p> <p>Abstract and complex problem-solving tasks</p> <p>Emphasis on depth and complexity of content</p> <p>Integration of multiple disciplines and perspectives</p> <p>Assessment Options:</p> <p>Pre-assessments to determine readiness levels</p> <p>Performance-based and authentic assessments</p> <p>Self-assessment and reflection opportunities</p> <p>Above-grade level standardized testing</p> <p>Credit by examination options</p>
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**Work-Based Learning Experiences (WBL)- \*Previously called Structured Learning Experience (SLE)**

*Each course within a CTE program is now required to include at least one WBL each year.*

**Work-Based Learning:** Sustained, meaningful interactions with industry or community professionals that foster in-depth, firsthand engagement with the tasks required in a given career field. Experiences may be delivered in workplaces, in the community, at educational institutions, and/or virtually. WBL is aligned with national, state, and/or local standards. WBL develops and reinforces relevant technical, academic, and employability knowledge and skills.

WBL Integration/Activity:	Duration:	Brief description of activities:
Career Fair	1-3 day Event	<ul style="list-style-type: none"> <li>Annual School wide Career Fairs with various presentation in the Architecture and Constructions fields</li> </ul>
Guest Speakers	1-2 hour a couple times throughout the year	<ul style="list-style-type: none"> <li>Guest Speakers</li> </ul>
Career Related Competitions	Throughout the Marking Period	<ul style="list-style-type: none"> <li>Service Learning &amp; Career Related Competitions such as SkillsUSA</li> </ul>
Internships (Paid or non-paid)	Summer Internships	<ul style="list-style-type: none"> <li>Internship Opportunities</li> </ul>
Informational Interviews /Guest Speakers	1-3 day Event	<ul style="list-style-type: none"> <li>Annual STEAM Day</li> </ul>
Pre- Apprenticeship	Summer long	<ul style="list-style-type: none"> <li>Apprenticeship programs</li> </ul>
Career Related Competitions	1-3 day Event	<ul style="list-style-type: none"> <li>SkillsUSA Competitions</li> </ul>
Interactive/Hands-on Demonstrations with industry Professionals (online, in-person)	30-1hr per student throughout the year or one day	<ul style="list-style-type: none"> <li>(Online or in-person) Portfolio Critiques, Project Critiques with Industry professionals</li> </ul>
Simulated Workbased Experience	Afterschool year long	<ul style="list-style-type: none"> <li>Simulated Workbased Experience</li> </ul>
<b>WBL Partners:</b>		
<b>Career and Technical Student Organization- *Every CTE program must incorporate a Career and Technical Student Organization (CTSO).</b>		

CTSO:	CTSO Advisor:	
ACE Mentorship Program		ACE Mentor Program is an after-school program whose mission is to engage, excite and enlighten high school students to pursue careers in Architecture, Construction, and Engineering through mentoring and to support their continued advancement in the industry.

<b>Freshman Level: Approximately 10 hours</b> Career Awareness- brief exposure to a variety of work settings needs.	<b>Sophomore Level: Approximately 20 hours</b> Career Exploration- understand the nature of work through first-hand exposure to the workplace.	<b>Junior Level: Approximately 50 hours</b> Career Preparation - builds basic workplace competence	<b>Senior Level: Approximately 75 hours</b> Work-Related Training - a period of work experience for the purpose of training job skills and job-related skills. work experience Students may or may not be paid.
Career fair Guest Speakers Online Career Navigation, Assessments, Videos Informational Interviews Workplace Tours/Field Trips	Informational interviews Job shadowing Workplace tours/worksites visits Simulated Workplace Experience Mock Interviews	Service-learning Interactive/Hands-on demonstrations with industry prof. (online, in person, simulated) Career Cluster Employer Panel Presentations Structured Assignments after a workplace tour, presentation, shadowing Career Related Competitions School-based enterprises Simulated Workplace Experience Non-Paid Work Experience Service Learning/Volunteering	Internships (Paid or Non-Paid) Service Learning Student-led Enterprises Volunteering Work Experience (Paid or Non-Paid) Pre-Apprenticeships Apprenticeship

Content Area: Career Readiness, Life Literacies, and Key Skills (NJSLS-CLKS 9.2, 9.3, 9.4) Grades K - 12  
Grade: 10

Dev. Date:

	Amistad Law: <i>N.J.S.A. 18A 52:16A-88</i>		Holocaust Law: <i>N.J.S.A. 18A:35-28</i>		LGBT and Disabilities Law: <i>N.J.S.A. 18A:35-4.35</i>		Diversity & Inclusion: <i>N.J.S.A. 18A:35-4.36a</i>		Standards in Action: <i>Climate Change</i>	X	Erin's Law: <i>A-769/S-1130</i>
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