

| Marking Period  | Unit Title | Recommended Instructional Days  |
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| 1   | OSHA 10    | 5   |
| <p style="text-align: center;">CTE<br/> <b>Disciplinary Concept:</b><br/> <b>Design/Pre-Construction</b><br/> <b>Maintenance/Operations</b><br/> <b>Food Product and Processing Systems</b><br/> <b>Construction</b><br/> <b>Arts, A/V Technology &amp; Communications</b><br/> <b>Education &amp; Training</b><br/> <b>Early Childhood Development &amp; Services</b><br/> <b>Restaurants &amp; Food/Beverage Services</b></p>   |            | <p><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><b>Design/Pre-Construction</b><br/>           9.3.12.AC-DES.2<br/>           Use effective communication skills and strategies (listening, speaking, reading, writing and graphic communications) to work with clients and colleagues.<br/>           9.3.12.AC-DES.4<br/>           Apply building codes, laws and rules in the project design.</p> <p><b>Maintenance/Operations</b><br/>           9.3.12.AC-MO.1<br/>           Recognize and employ universal construction signs and symbols to function safely in the workplace<br/>           9.3.12.AC-MO.5<br/>           Plan and practice preventative maintenance activities to service existing buildings.</p> <p><b>Food Product and Processing Systems</b><br/>           9.3.12.AG-FD.1<br/>           Develop and implement procedures to ensure safety, sanitation and quality in food product and processing facilities.</p> |            |   |

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| <p><b>Construction</b><br/>9.3.12.AC-CST.5<br/>Apply practices and procedures required to maintain jobsite safety</p> <p><b>Arts, A/V Technology &amp; Communications</b><br/>9.3.12.AR.2<br/>Analyze the importance of health, safety and environmental management systems, policies and procedures common in arts, audio/video technology and communications activities and facilities.</p> <p><b>Education &amp; Training</b><br/>9.3.12.ED.4<br/>Evaluate and manage risks to safety, health and the environment in education and training settings.</p> <p><b>Early Childhood Development &amp; Services</b><br/>9.3.HU-ED.5<br/>Evaluate safety and sanitation procedures associated with the early childhood education environment to assure compliance and prevent potential hazards.</p> <p><b>Restaurants &amp; Food/Beverage Services</b><br/>9.3.HT-RFB.2<br/>Demonstrate safety and sanitation procedures in food and beverage service facilities</p> |  |
| <p><b>Life Literacy &amp; Key Skills</b><br/><b>Disciplinary Concept:</b><br/><b>Creativity and Innovation</b><br/><b>Digital Citizenship</b><br/><b>Information and Media Literacy</b></p>  |  |
| <p><b><i>Core Ideas and Performance Expectation:</i></b></p> <p><b>Creativity and Innovation</b><br/><i>Innovative ideas or innovation can lead to career opportunities.</i></p>   | <p><b><u>Essential Question/s:</u></b><br/>Why is it important to practice safety?<br/>What do safe practices look like in my industry?<br/>How can I keep myself and others safe?</p> |

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| <p>9.4.12.CI.3: Investigate new challenges and opportunities for personal growth, advancement, and transition (e.g., 2.1.12.PGD.1).</p> <p><b>Digital Citizenship</b><br/><i>Laws govern many aspects of computing, such as privacy, data, property, information, and identity. These laws can have beneficial and harmful effects, such as expediting or delaying advancements in computing and protecting or infringing upon people's rights.</i></p> <p>9.4.12.DC.3: Evaluate the social and economic implications of privacy in the context of safety, law, or ethics (e.g., 6.3.12.HistoryCA.1).</p> <p><b>Information and Media Literacy</b><br/><i>Advanced search techniques can be used with digital and media resources to locate information and to check the credibility and the expertise of sources to answer questions, solve problems, and inform the decision-making.</i></p> <p>9.4.12.IML.2: Evaluate digital sources for timeliness, accuracy, perspective, credibility of the source, and relevance of information, in media, data, or other resources (e.g., NJSLSA.W8, Social Studies Practice: Gathering and Evaluating Sources).</p> | <p><b><u>Activity Description:</u></b></p> <p>Activity: Safety Consequences Brainstorm</p> <ul style="list-style-type: none"> <li>• Divide students into small groups</li> <li>• Each group brainstorms potential consequences of not following safety procedures in various workplace scenarios</li> <li>• Groups present their findings to the class</li> <li>• Discuss the physical, emotional, and financial impacts of workplace accidents</li> </ul> <p>Activity: Industry-Specific Safety Poster Creation</p> <ul style="list-style-type: none"> <li>• Assign different industries to student groups (construction, healthcare, manufacturing, etc.)</li> <li>• Students research OSHA standards for their assigned industry</li> <li>• Create informative posters highlighting key safety practices for that industry</li> <li>• Present posters to the class, explaining the rationale behind each safety practice</li> </ul> <p>Activity: Safety Hazard Identification Walk</p> <ul style="list-style-type: none"> <li>• Conduct a supervised walk through the school, or a simulated workplace</li> <li>• Students identify potential safety hazards and suggest mitigation strategies</li> <li>• Discuss the importance of speaking up about safety concerns</li> <li>• Practice using proper communication techniques for reporting hazards</li> </ul> <p>Activity: Guest Speaker Q&amp;A</p> <ul style="list-style-type: none"> <li>• Invite a local safety professional or someone who has experienced a workplace injury</li> <li>• Students prepare questions in advance about the importance of workplace safety</li> <li>• Conduct a Q&amp;A session, allowing students to understand real-world implications of safety practices</li> </ul> <p>Activity: Safety Equipment Demonstration</p> <ul style="list-style-type: none"> <li>• Bring in various pieces of personal protective equipment (PPE)</li> </ul> |
| <p><b>Career Awareness, Exploration, Preparation, &amp; Training</b><br/><b>Disciplinary Concept:</b><br/><b>Career Awareness and Planning</b></p>  |  |
| <p><b><i>Core Ideas and Performance Expectation:</i></b></p> <p><b>Career Awareness and Planning</b><br/><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 continuing education contributes to one's career and personal growth.</p> <p><i>Career planning requires purposeful planning based on research, self-knowledge, and informed choices.</i></p> <p>9.2.12.CAP.6: Identify transferable skills in career choices and design alternative career plans based on those skills.</p>  |  |

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| <p>9.2.12.CAP.7: Use online resources to examine licensing, certification, and credentialing requirements at the local, state, and national levels to maintain compliance with industry requirements in areas of career interest.<br/>9.2.12.CAP.8: Determine job entrance criteria (e.g., education credentials, math/writing/reading comprehension tests, drug tests) used by employers in various industry sectors.</p>  | <ul style="list-style-type: none"> <li>• Demonstrate proper use and maintenance of PPE</li> <li>• Students practice putting on and taking off PPE correctly</li> <li>• Discuss scenarios where each piece of equipment would be necessary</li> </ul> <p>Activity: Safety Scenario Role-Play</p>   |
| <p><b>Personal Financial Literacy</b><br/><b>Disciplinary Concept:</b></p>  | <ul style="list-style-type: none"> <li>• Create cards with different workplace safety scenarios</li> <li>• Students act out the scenarios, demonstrating both unsafe and safe behaviors</li> <li>• Class discusses the differences and potential outcomes of each approach</li> <li>• Emphasize the importance of looking out for coworkers' safety as well as one's own</li> </ul>   |
| <p><b>Social and Emotional Learning:</b><br/><b>Competencies and Sub-Competencies</b></p>   | <p>Activity: Safety Statistics Analysis</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> | <ul style="list-style-type: none"> <li>• Provide students with workplace injury and illness statistics from OSHA</li> <li>• In groups, students analyze the data and create visual representations (graphs, charts)</li> <li>• Present findings to the class, discussing trends and implications</li> <li>• Relate statistics to the importance of safety practices in reducing these numbers</li> </ul> <p><b>Interdisciplinary Connections:</b><br/>Math<br/>ELA</p> <p><b>Content:</b><br/>Walking working surfaces<br/>Emergency action plans<br/>Fire protection<br/>Electrocution hazards<br/>Personal protective equipment<br/>Hazard communication<br/>Materials handling, storage, use and disposal.</p> |

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| <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>CLKS:</b><br/> <i>Consider the environmental, social and economic impacts of decisions.</i><br/>                 Students understand the interrelated nature of their actions and regularly make decisions that positively impact and/or mitigate negative impact on other people, organization, and the environment. They are aware of and utilize new technologies, understandings, procedures, materials, and regulations affecting the nature of their work as it relates to the impact on the social condition, the environment and the profitability of the organization.</p> <p><i>Plan education and career paths aligned to personal goals.</i><br/>                 Students take personal ownership of their own education and career goals, and they regularly act on a plan to attain these goals. They understand their own career interests, preferences, goals, and requirements. They have perspective regarding the pathways available to them and the time, effort, experience and other requirements to pursue each, including a path of entrepreneurship. They recognize the value of each step in the education and experiential process, and they recognize that nearly all career paths require ongoing education and experience. They seek counselors, mentors, and other experts to assist in the planning and execution of career and personal goals.</p> |
| <p style="text-align: center;"><b>Assessments (Formative)</b><br/> <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><br/> <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> <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> </ul>   | <p><b>Benchmarks:</b></p> <ul style="list-style-type: none"> <li>Quiz</li> <li>Exam</li> </ul> <p><b>Summative Assessments:</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> </ul> <p>OSHA 10 Assessment and Certificate</p>  |

| <b>Differentiated Student Access to Content:<br/>Teaching and Learning Resources/Materials</b>  |   |   |  |
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| <b>Core Resources</b>   | <b>Alternate Core Resources<br/><i>IEP/504/At-Risk/ESL</i></b>  | <b>ELL Core Resources</b>   | <b>Gifted &amp; Talented Core Resources</b>  |
| <p>Tiered Content Materials:<br/>Textbooks at different reading levels (below, at, and above grade level)<br/>Simplified versions of texts with key concepts highlighted<br/>Advanced supplementary readings for accelerated learners<br/>Audio versions of texts for auditory learners or struggling readers</p> <p>Multimedia Resources:<br/>Educational videos and documentaries<br/>Interactive online modules and simulations<br/>Podcasts and audio recordings<br/>Infographics and visual aids</p> <p>Hands-On Materials:<br/>Physical manipulatives and models<br/>Lab equipment and supplies for experiments</p> | <p>Tiered Content Materials:<br/>Simplified versions of texts with key concepts highlighted<br/>Audio versions of texts for auditory learners or struggling readers<br/>Leveled or topical readers at different reading levels<br/>Books on tape<br/>Highlighted text</p> <p>Collaborative Learning Tools:<br/>Opportunity to work alone, in pairs, or small groups<br/>Structured group roles for small group work<br/>Peer tutoring and mentoring programs</p> <p>Individualized Options:<br/>Independent study options<br/>Compacting the curriculum for advanced learners<br/>Varied timelines or check-in points</p> | <p>Keep material concept-focused and principle-driven.<br/>Allow the use of digital translation or grouping students together.<br/>Provide multiple means of action and expression.</p> | <p>Advanced Technical Materials:<br/>Provide access to OSHA's full regulatory standards and technical manuals<br/>Offer industry white papers on emerging safety technologies and practices<br/>Share case studies of complex workplace safety incidents and their resolutions</p> <p>Project-Based Learning:<br/>Design challenges to create innovative safety solutions for real-world scenarios<br/>Independent research projects on topics like ergonomics or industrial hygiene<br/>Opportunities to develop new safety tools or technologies</p> |

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| <p>Supplies for creative projects</p> <p>Building materials for engineering challenges</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> |  |  |
| <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> |   |  |  |
| <b>Differentiated Student Access to Content:<br/>Recommended <i>Strategies &amp; Techniques</i></b>   |   |  |  |
| <b>Core Resources</b>   | <b>Alternate Core Resources<br/><i>IEP/504/At-Risk/ESL</i></b>  | <b>ELL Core Resources</b>  | <b>Gifted &amp; Talented Core</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> |

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| <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><b>Process Differentiation:</b></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><b>Product Differentiation:</b></p> <p>Multiple options for demonstrating learning (reports, presentations, models, etc.)</p> <p>Varied assessment methods based on student learning preferences</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><b>Process Differentiation:</b></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><b>Product Differentiation:</b></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><b>Process Differentiation:</b></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><b>Product Differentiation:</b></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><b>Process Differentiation:</b></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><b>Product Differentiation:</b></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>Adjusting product expectations based on student readiness</p> <p><b>Learning Environment Differentiation:</b></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><b>Learning Environment Differentiation:</b></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><b>Specialized Supports</b></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><b>Ongoing Assessment</b></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>Use of portfolios to showcase progress over time</p> <p><b>Learning Environment Differentiation:</b></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><b>Specialized Supports:</b></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><b>Instructional Strategies:</b></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><b>Learning Environment Differentiation:</b></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><b>Specialized Supports:</b></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><b>Instructional Strategies:</b></p> <p>Inquiry-based and discovery learning approaches</p> |
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|  |  | <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><b>Ongoing Assessment:</b></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><b>Assessment Options:</b></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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New Jersey Legislative Statutes and Administrative Code  
(place an "X" before each law/statute if/when present within the curriculum map)

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| Amistad Law:<br><i>N.J.S.A. 18A 52:16A-88</i> | Holocaust Law:<br><i>N.J.S.A. 18A:35-28</i> | LGBT and Disabilities Law:<br><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:<br><i>Climate Change</i> | Erin's Law:<br><i>A-769/S-1130</i> |
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| Marking Period  | Unit Title       | Recommended Instructional Days  |
|---|------------------|---|
| 1   | Career Awareness | 10  |
| <p align="center"><b>CTE</b><br/><b>Disciplinary Concept:</b><br/><b>Architecture &amp; Construction</b></p>  |                  | <p align="center"><b>Recommended Activities, Investigations,<br/>Interdisciplinary Connections, and/or Student<br/>Experiences to Explore NJSLs-CLKS within Unit</b></p>  |
| <p><b><i>Core Ideas and Performance Expectation:</i></b></p> <p><b>Architecture &amp; Construction</b><br/>9.3.12.AC.4 Evaluate the nature and scope of the Architecture &amp; Construction Career Cluster and the role of architecture and construction in society and the economy.<br/>9.3.12.AC.5 Describe the roles, responsibilities, and relationships found in the architecture and construction trades and professions, including labor/management relationships.</p>   |                  |   |
| <p align="center"><b>Life Literacy &amp; Key Skills</b><br/><b>Disciplinary Concept:</b><br/><b>Creativity and Innovation</b><br/><b>Information and Media Literacy</b></p>   |                  |   |
| <p><b><i>Core Ideas and Performance Expectation:</i></b></p> <p><b>Creativity and Innovation</b><br/><i>With a growth mindset, failure is an important part of success.</i><br/>9.4.12.CI.1: Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a). Innovative ideas or innovation can lead to career opportunities.<br/>9.4.12.CI.2: Identify career pathways that highlight personal talents, skills, and abilities (e.g., 1.4.12prof.CR2b, 2.2.12.LF.8).<br/>9.4.12.CI.3: Investigate new challenges and opportunities for personal growth, advancement, and transition (e.g., 2.1.12.PGD.1).</p> <p><b>Information and Media Literacy</b><br/><i>Accurate information may help in making valuable and ethical choices.</i></p> |                  | <p><b><u>Essential Question/s:</u></b><br/>How does one prepare for a career?<br/>How does one improve marketability?<br/>Why is career planning important?<br/>What are the risks in starting a business?</p> <p><b><u>Activity Description:</u></b><br/><i>Industry Research Project:</i><br/>Objective: Help students understand how to prepare for a career by researching relevant industries.<br/>Activity: Assign students to research an industry of interest, focusing on required skills, job opportunities, and emerging trends. Provide resources such as industry reports and online databases. Have students present their findings in groups to foster collaboration and communication skills.</p> <p><i>Resume Building and Personal Branding Workshop:</i></p> |

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| <p>9.4.12.IML.7: Develop an argument to support a claim regarding a current workplace or societal/ethical issue such as climate change (e.g., NJSLSA.W1, 7.1.AL.PRSNT.4).</p>  | <p>Objective: Improve students' marketability by enhancing their resume writing and personal branding skills.<br/>Activity: Conduct a workshop where students create professional resumes using provided templates and guidelines. Discuss the importance of personal branding and have students identify their unique strengths and professional goals. Conclude with mock interviews to practice articulating their skills confidently</p>  |
| <p><b>Career Awareness, Exploration, Preparation, &amp; Training</b><br/><b>Disciplinary Concept:</b><br/><b>Career Awareness and Planning</b></p>   |   |
| <p><b><i>Core Ideas and Performance Expectation:</i></b></p> <p><b>There are strategies to improve one's professional value and marketability.</b><br/>9.2.12.CAP.1: Analyze unemployment rates for workers with different levels of education and how the economic, social, and political conditions of a time period are affected by a recession.<br/>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.<br/>9.2.12.CAP.3: Investigate how continuing education contributes to one's career and personal growth.</p> <p><b>Career planning requires purposeful planning based on research, self-knowledge, and informed choices.</b><br/>9.2.12.CAP.4: Evaluate different careers and develop various plans (e.g., costs of public, private, training schools) and timetables for achieving them, including educational/training requirements, costs, loans, and debt repayment.<br/>9.2.12.CAP.5: Assess and modify a personal plan to support current interests and postsecondary plans.<br/>9.2.12.CAP.6: Identify transferable skills in career choices and design alternative career plans based on those skills.<br/>9.2.12.CAP.7: Use online resources to examine licensing, certification, and credentialing requirements at the local, state, and national levels to maintain compliance with industry requirements in areas of career interest.<br/>9.2.12.CAP.8: Determine job entrance criteria (e.g., education credentials, math/writing/reading comprehension tests, drug tests) used by employers in various industry sectors.<br/>9.2.12.CAP.9: Locate information on working papers, what is required to obtain them, and who must sign them.</p> | <p><b><i>Career Planning Exercise:</i></b><br/>Objective: Highlight the importance of career planning through structured reflection.<br/>Activity: Use a "Career Wanderings Map" exercise where students reflect on past experiences to identify themes and patterns that can guide their career paths. This activity encourages self-exploration and goal setting, helping students map out potential career trajectories</p> <p><b><i>Entrepreneurship Risk Analysis:</i></b><br/>Objective: Educate students about the risks involved in starting a business.<br/>Activity: Organize a case study analysis where students examine real-world examples of successful and failed startups. Discuss factors that contributed to each outcome and have students identify potential risks and mitigation strategies for starting a business.</p> <p><b><i>Career Scenario Cards:</i></b><br/>Objective: Engage students in exploring various career paths and decision-making processes.<br/>Activity: Use career scenario cards to simulate different career-related situations. Students work in groups to discuss how they would handle each scenario, encouraging critical thinking and problem-solving skills<sup>5</sup>.</p> <p><b><i>Guest Speaker Session:</i></b><br/>Objective: Provide real-world insights into career planning and entrepreneurship.<br/>Activity: Invite professionals from various industries to speak about their career journeys, the importance of planning, and the challenges of entrepreneurship. Encourage students to ask questions and network with the speaker.</p> <p><b>Interdisciplinary Connections:</b></p> |

9.2.12.CAP.10: Identify strategies for reducing overall costs of postsecondary education (e.g., tuition assistance, loans, grants, scholarships, and student loans).  
9.2.12.CAP.11: Demonstrate an understanding of Free Application for Federal Student Aid (FAFSA) requirements to apply for postsecondary education.

*An individual's income and benefit needs and financial plan can change over time.*

9.2.12.CAP.12: Explain how compulsory government programs (e.g., Social Security, Medicare) provide insurance against some loss of income and benefits to eligible recipients.

9.2.12.CAP.13: Analyze how the economic, social, and political conditions of a time period can affect the labor market.

*Securing an income involve an understanding of the costs and time in preparing for a career field, interview and negotiation skills, job searches, resume development, prior experience, and vesting and retirement plans.*

9.2.12.CAP.14: Analyze and critique various sources of income and available resources (e.g., financial assets, property, and transfer payments) and how they may substitute for earned income.

*Understanding income involves an analysis of payroll taxes, deductions and earned benefits.*

9.2.12.CAP.15: Demonstrate how exemptions, deductions, and deferred income (e.g., retirement or medical) can reduce taxable income.

9.2.12.CAP.16: Explain why taxes are withheld from income and the relationship of federal, state, and local taxes (e.g., property, income, excise, and sales) and how the money collected is used by local, county, state, and federal governments.

9.2.12.CAP.17: Analyze the impact of the collective bargaining process on benefits, income, and fair labor practice.

9.2.12.CAP.18: Differentiate between taxable and nontaxable income from various forms of employment (e.g., cash business, tips, tax filing and withholding).

9.2.12.CAP.19: Explain the purpose of payroll deductions and why fees for various benefits (e.g., medical benefits) are taken out of pay, including the cost of employee benefits to employers and self-employment income.

9.2.12.CAP.20: Analyze a Federal and State Income Tax Return.

Math  
ELA  
SS

**Content:**

There are strategies to improve one's professional value and marketability. Career planning requires purposeful planning based on research, self-knowledge, and informed choices.

An individual's income and benefit needs and financial plan can change over time.

Securing an income involve an understanding of the costs and time in preparing for a career field, interview and negotiation skills, job searches, resume development, prior experience, and vesting and retirement plans  
Understanding income involves an analysis of payroll taxes, deductions and earned benefits.

There are ways to assess a business's feasibility and risk and to align it with an individual's financial goals.

**CLKS:**

*Act as a responsible and contributing community members and employee.*

Students understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.

*Plan education and career paths aligned to personal goals. Students take personal ownership of their own education and career goals, and they regularly act on a plan to attain these goals.*

They understand their own career interests, preferences, goals, and requirements. They have perspective regarding the pathways available to them and the time, effort, experience and other requirements to pursue each,

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| <p><i>There are ways to assess a business's feasibility and risk and to align it with an individual's financial goals.</i></p> <p>9.2.12.CAP.21: Explain low-cost and low-risk ways to start a business.</p> <p>9.2.12.CAP.22: Compare risk and reward potential and use the comparison to decide whether starting a business is feasible.</p> <p>9.2.12.CAP.23: Identify different ways to obtain capital for starting a business</p>  | <p>including a path of entrepreneurship. They recognize the value of each step in the education and experiential process, and they recognize that nearly all career paths require ongoing education and experience. They seek counselors, mentors, and other experts to assist in the planning and execution of career and personal goals.</p> |
| <p><b>Personal Financial Literacy</b><br/><b>Disciplinary Concept:</b><br/><b>Civic Financial Responsibility</b></p>  |  |
| <p><b><i>Core Ideas and Performance Expectation:</i></b></p> <p><b>Civic Financial Responsibility</b><br/><i>The potential for building and using personal wealth includes responsibility to the broader community and an understanding of the legal rights and responsibilities of being a good citizen.</i></p> <p>9.1.12.CFR.3: Research companies with corporate governance policies supporting the common good and human rights.</p> <p>9.1.12.CFR.6: Identify and explain the consequences of breaking federal and/or state employment or financial laws.</p>   |  |
| <p><b>Social and Emotional Learning:</b><br/><b><i>Competencies and Sub-Competencies</i></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> |  |

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| <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><br/><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><br/><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> <li>Portfolio</li> <li>Discussions</li> <li>Quiz</li> <li>Journal writing</li> <li>Group Assessment</li> <li>Group Interaction/Discussion/Computer Research</li> </ul>  | <p><b>Benchmarks:</b></p> <ul style="list-style-type: none"> <li>Quiz</li> <li>Exam</li> </ul> <p><b>Summative Assessments:</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> </ul> |

| Self and Peer Evaluations  |   | Reflective Paper<br>Group Presentations   |   |
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| <b>Differentiated Student Access to Content:<br/>Teaching and Learning Resources/Materials</b>   |   |   |   |
| Core Resources   | Alternate Core Resources<br><i>IEP/504/At-Risk/ESL</i>  | ELL Core Resources  | Gifted & Talented Core Resources  |
| <p>Tiered Content Materials:<br/>Textbooks at different reading levels (below, at, and above grade level)<br/>Simplified versions of texts with key concepts highlighted<br/>Advanced supplementary readings for accelerated learners<br/>Audio versions of texts for auditory learners or struggling readers</p> <p>Multimedia Resources:<br/>Educational videos and documentaries<br/>Interactive online modules and simulations<br/>Podcasts and audio recordings<br/>Infographics and visual aids</p> <p>Hands-On Materials:<br/>Physical manipulatives and models</p> | <p>Tiered Content Materials:<br/>Simplified versions of texts with key concepts highlighted<br/>Audio versions of texts for auditory learners or struggling readers<br/>Leveled or topical readers at different reading levels<br/>Books on tape<br/>Highlighted text</p> <p>Collaborative Learning Tools:<br/>Opportunity to work alone, in pairs, or small groups<br/>Structured group roles for small group work<br/>Peer tutoring and mentoring programs</p> <p>Individualized Options:<br/>Independent study options<br/>Compacting the curriculum for</p> | <p>Keep material concept-focused and principle-driven.<br/>Allow the use of digital translation or grouping students together.<br/>Provide multiple means of action and expression.</p> | <p>Advanced Project Design:<br/>Encourage students to design complex, multi-functional furniture pieces<br/>Introduce CAD software for detailed project planning and 3D modeling</p> <p>Historical Carpentry Techniques:<br/>Study and practice traditional joinery methods<br/>Explore the evolution of woodworking tools and techniques</p> <p>Sustainable Woodworking:<br/>Research and implement eco-friendly materials and practices<br/>Design projects focused on upcycling and repurposing wood</p> <p>Interdisciplinary Projects:<br/>Collaborate with art or engineering classes for cross-curricular projects<br/>Incorporate math and physics principles in advanced structural designs</p> <p>Mentorship Programs:</p> |

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| <p>Lab equipment and supplies for experiments</p> <p>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>Partner gifted students with local master carpenters or furniture makers</p> <p>Encourage participation in apprenticeship programs or internships</p> <p>Advanced Machinery Training:<br/>Provide in-depth training on CNC routers and laser cutters</p> <p>Teach programming skills for automated woodworking machinery</p> <p>Entrepreneurship in Carpentry:<br/>Develop business plans for custom furniture or woodworking services</p> <p>Learn about marketing, pricing, and client relations in the carpentry industry</p> <p>Architectural Woodworking:<br/>Study advanced architectural elements like staircases and built-in cabinetry</p> <p>Collaborate on school improvement projects to apply skills in real-world settings</p> |
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**Supplemental Resources**

**Technology:**

- Laptop
- Chromebook
- SmartBoard
- Internet Access
- Projector

**Other:**

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| <b>Differentiated Student Access to Content:<br/>Recommended <i>Strategies &amp; Techniques</i></b>  |  |   |  |
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| <b>Core Resources</b>  | <b>Alternate Core Resources<br/><i>IEP/504/At-Risk/ESL</i></b>   | <b>ELL Core Resources</b>   | <b>Gifted &amp; Talented Core</b>  |
| <p><b>Content Differentiation:</b></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><b>Process Differentiation:</b></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><b>Content Differentiation:</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 readers at different reading levels</p> <p>Bilingual materials for ESL students</p> <p>Visual aids, infographics, and multimedia resources</p> <p><b>Process Differentiation:</b></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><b>Content Differentiation:</b></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><b>Process Differentiation:</b></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><b>Content Differentiation:</b></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><b>Process Differentiation:</b></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> |

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| <p>Scaffolded support like graphic organizers and writing frames</p> <p>Technology-enabled instruction (synchronous or asynchronous options)</p> <p><b>Product Differentiation:</b></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><b>Learning Environment Differentiation:</b></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>Use of assistive technology (text-to-speech, speech-to-text tools)</p> <p><b>Product Differentiation:</b></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><b>Learning Environment Differentiation:</b></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><b>Specialized Supports</b></p> <p>Implementation of IEP accommodations and modifications</p> <p>ESL supports like sentence frames and vocabulary guides</p> | <p>Incorporation of students' native language or culture when possible</p> <p><b>Product Differentiation:</b></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><b>Learning Environment Differentiation:</b></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><b>Specialized Supports:</b></p> <p>ESL supports like sentence frames and vocabulary guides</p> <p>Use of students' native language for clarification when needed</p> | <p><b>Product Differentiation:</b></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> <p><b>Learning Environment Differentiation:</b></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><b>Specialized Supports:</b></p> <p>Critical and creative thinking skill development</p> |
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|  | <p>Interventions for at-risk students (e.g. reading interventions)</p> <p>Social-emotional learning supports</p> <p><b>Ongoing Assessment</b></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><b>Instructional Strategies:</b></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><b>Ongoing Assessment:</b></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>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><b>Instructional Strategies:</b></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><b>Assessment Options:</b></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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Content Area: Career Readiness, Life Literacies, and Key Skills (NJSLS-CLKS 9.2, 9.3, 9.4) Grades K - 12  
 Grade: 9

Dev. Date:

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|  |  |  | Above-grade level standardized testing<br>Credit by examination options |
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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)

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|  | Amistad Law:<br><i>N.J.S.A. 18A<br/>                 52:16A-88</i> |  | Holocaust<br>Law:<br><i>N.J.S.A.<br/>                 18A:35-28</i> |  | LGBT and<br>Disabilities Law:<br><i>N.J.S.A. 18A:35-4.35</i> |  | Diversity &<br>Inclusion: <i>N.J.S.A.<br/>                 18A:35-4.36a</i> |  | Standards in Action:<br><i>Climate Change</i> |  | Erin's Law:<br><i>A-769/S-1130</i> |
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| Marking Period   | Unit Title                         | Recommended Instructional Days  |
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| 1  | Design Basics and CAD Fundamentals | 15  |
| <p style="text-align: center;"><b>CTE</b><br/><b>Disciplinary Concept:</b><br/><b>Design/Pre-Construction</b><br/><b>Science, Technology, Engineering &amp; Mathematics</b><br/><b>Engineering &amp; Technology Career Pathway</b><br/><b>Science &amp; Mathematics Career Pathway</b></p>   |                                    | <p><b>Recommended Activities, Investigations,<br/>Interdisciplinary Connections, and/or Student<br/>Experiences to Explore NJSLS-CLKS within Unit</b></p> |
| <p><i>Core Ideas and Performance Expectation:</i></p> <p><b>Design/Pre-Construction</b><br/>9.3.12.AC-DES.1 Justify design solutions through the use of research documentation and analysis of data.<br/>9.3.12.AC-DES.2 Use effective communication skills and strategies (listening, speaking, reading, writing and graphic communications) to work with clients and colleagues<br/>9.3.12.AC-DES.6 Apply the techniques and skills of modern drafting, design, engineering and construction to projects.</p> <p><b>Science, Technology, Engineering &amp; Mathematics</b><br/>9.3.ST.2 Use technology to acquire, manipulate, analyze and report data.<br/>9.3.ST.6 Demonstrate technical skills needed in a chosen STEM field.</p> <p><b>Engineering &amp; Technology Career Pathway</b><br/>9.3.ST-ET.1 Use STEM concepts and processes to solve problems involving design and/or production.<br/>9.3.ST-ET.3 Apply processes and concepts for the use of technological tools in STEM.<br/>9.3.ST-ET.4 Apply the elements of the design process.<br/>9.3.ST-ET.5 Apply the knowledge learned in STEM to solve problems.<br/>9.3.ST-ET.6 Apply the knowledge learned in the study of STEM to provide solutions to human and societal problems in an ethical and legal manner.</p> <p><b>Science &amp; Mathematics Career Pathway</b></p> |                                    |   |

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| <p>9.3.ST-SM.1 Apply science and mathematics to provide results, answers and algorithms for engineering and technological activities.<br/>9.3.ST-SM.2 Apply science and mathematics concepts to the development of plans, processes and projects that address real world problems.<br/>9.3.ST-SM.4 Apply critical thinking skills to review information, explain statistical analysis, and to translate, interpret and summarize research and statistical data.</p>  |  |
| <p><b>Life Literacy &amp; Key Skills</b><br/><b>Disciplinary Concept:</b><br/><b>Creativity and Innovation</b><br/><b>Critical Thinking and Problem-Solving</b></p>  |  |
| <p><b><i>Core Ideas and Performance Expectation:</i></b></p> <p><b>Creativity and Innovation</b><br/><i>With a growth mindset, failure is an important part of success.</i><br/>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><br/>9.4.12.CI.2: Identify career pathways that highlight personal talents, skills, and abilities (e.g., 1.4.12prof.CR2b, 2.2.12.LF.8).<br/>9.4.12.CI.3: Investigate new challenges and opportunities for personal growth, advancement, and transition (e.g., 2.1.12.PGD.1).</p> <p><b>Critical Thinking and Problem-Solving</b><br/><i>Collaboration with individuals with diverse experiences can aid in the problem-solving process, particularly for global issues where diverse solutions are needed.</i><br/>9.4.12.CT.1: Identify problem-solving strategies used in the development of an innovative product or practice (e.g., 1.1.12acc.C1b, 2.2.12.PF.3).<br/>9.4.12.CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1.3E.12profCR3.a).<br/>9.4.12.CT.3: Enlist input from a variety of stakeholders (e.g., community members, experts in the field) to design a service learning activity that addresses a local or global issue (e.g., environmental justice).</p> | <p><b><u>Essential Question/s:</u></b><br/>When solving an engineering problem, how can we be reasonably sure that we have created the best solution possible?<br/>What is the evidence?<br/>What is the most effective way to generate potential solutions to a problem?<br/>How many alternate solutions are necessary to ensure a good final solution?</p> <p><b><u>Activity Description:</u></b></p> <ol style="list-style-type: none"> <li>1. Fling Machine Project             <ol style="list-style-type: none"> <li>a. Design Process</li> <li>b. Documentation</li> <li>c. Concept Sketching</li> <li>d. Collaboration</li> <li>e. Data Collection and Analysis</li> <li>f. Iteration</li> <li>g. Google Spreadsheet and formulas</li> <li>h. Design a Game</li> </ol> </li> <li>2. Discover Engineering             <ol style="list-style-type: none"> <li>a. Investigate the four major disciplines of engineering</li> <li>b. Research the impact of these careers on you and the world</li> </ol> </li> <li>3. Charmed I'm Sure Project             <ol style="list-style-type: none"> <li>a. Isometric Sketching</li> <li>b. Multiview Drawings</li> </ol> </li> </ol> |

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| <p>9.4.12.CT.4: Participate in online strategy and planning sessions for course-based, school-based, or other project and determine the strategies that contribute to effective outcomes.</p>   | <p>c. Dimensioning Fundamentals<br/>d. 3D Solid Modeling (Autodesk Fusion 360)<br/>4. Docu-series: Abstract: The Art of Design<br/>a. Focuses on Ian Spalter, Head of Design for Instagram (Amsted Law)</p>   |
| <p><b>Career Awareness, Exploration, Preparation, &amp; Training</b><br/><b>Disciplinary Concept:</b><br/><b>Career Awareness and Planning</b></p>  |   |
| <p><b><i>Core Ideas and Performance Expectation:</i></b></p> <p><b>Career Awareness and Planning</b><br/><i>Career planning requires purposeful planning based on research, self-knowledge, and informed choices.</i></p> <p>9.2.12.CAP.8: Determine job entrance criteria (e.g., education credentials, math/writing/reading comprehension tests, drug tests) used by employers in various industry sectors.</p> | <p><b>Interdisciplinary Connections:</b><br/>Math<br/>ELA</p> <p><b>CLKS:</b><br/>Act as a responsible and contributing community member and employee.</p>  |
| <p><b>Personal Financial Literacy</b><br/><b>Disciplinary Concept:</b><br/><b>Financial Institutions</b></p>  | <p>Attend to financial well-being.</p>  |
| <p><b><i>Core Ideas and Performance Expectation:</i></b></p> <p><b>Financial Institutions</b><br/><i>There are factors you can use to select financial institutions and professionals that are best suited for your needs.</i></p> <p>9.1.12.FI.3: Develop a plan that uses the services of various financial institutions to prepare for long term personal and family goals (e.g., college, retirement).</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><b>Social and Emotional Learning:</b><br/><b><i>Competencies and Sub-Competencies</i></b></p>  | <p>Use technology to enhance productivity, increase collaboration, and communicate effectively.</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>Work productively in teams while using cultural/global competence.</p>   |

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| <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><br/><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><br/><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> <li>Portfolio</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> <li>Improve a Design through Iteration</li> </ul> |

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| <p>Discussions<br/>Quiz<br/>Journal writing<br/>Group Assessment<br/>Group Interaction/Discussion/Computer Research<br/>Self and Peer Evaluations</p> | <p>Develop Skills in Graphically Representing Ideas</p> <p><b>Summative Assessments:</b><br/>Pre-Test<br/>Oral Presentations<br/>Projects<br/>Rubric<br/>Teacher observation<br/>Written Assessments<br/>Reflective Paper<br/>Group Presentations<br/>Maintain Anecdotal Records/Notetaking</p> |
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**Differentiated Student Access to Content:  
Teaching and Learning Resources/Materials**

| Core Resources  | Alternate Core Resources<br><i>IEP/504/At-Risk/ESL</i>  | ELL Core Resources  | Gifted & Talented Core Resources  |
|---|---|---|---|
| <p>Tiered Content Materials:<br/>Textbooks at different reading levels (below, at, and above grade level)<br/>Simplified versions of texts with key concepts highlighted<br/>Advanced supplementary readings for accelerated learners<br/>Audio versions of texts for auditory learners or struggling readers</p> <p>Multimedia Resources:<br/>Educational videos and</p> | <p>Tiered Content Materials:<br/>Simplified versions of texts with key concepts highlighted<br/>Audio versions of texts for auditory learners or struggling readers<br/>Leveled or topical readers at different reading levels<br/>Books on tape<br/>Highlighted text</p> <p>Collaborative Learning Tools:<br/>Opportunity to work alone, in pairs,</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 Project Design:<br/>Encourage students to design complex, multi-functional furniture pieces<br/>Introduce CAD software for detailed project planning and 3D modeling</p> <p>Historical Carpentry Techniques:<br/>Study and practice traditional joinery methods<br/>Explore the evolution of woodworking tools and techniques</p> <p>Sustainable Woodworking:<br/>Research and implement eco-friendly materials and practices</p> |

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| <p>documentaries</p> <p>Interactive online modules and simulations</p> <p>Podcasts and audio recordings</p> <p>Infographics and visual aids</p> <p>Hands-On Materials:</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>or small groups</p> <p>Structured group roles for small group work</p> <p>Peer tutoring and mentoring programs</p> <p>Individualized Options:</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>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>Design projects focused on upcycling and repurposing wood</p> <p>Interdisciplinary Projects:<br/>Collaborate with art or engineering classes for cross-curricular projects<br/>Incorporate math and physics principles in advanced structural designs</p> <p>Mentorship Programs:<br/>Partner gifted students with local master carpenters or furniture makers<br/>Encourage participation in apprenticeship programs or internships</p> <p>Advanced Machinery Training:<br/>Provide in-depth training on CNC routers and laser cutters<br/>Teach programming skills for automated woodworking machinery</p> <p>Entrepreneurship in Carpentry:<br/>Develop business plans for custom furniture or woodworking services<br/>Learn about marketing, pricing, and client relations in the carpentry industry</p> <p>Architectural Woodworking:<br/>Study advanced architectural elements like staircases and built-in cabinetry<br/>Collaborate on school improvement projects to apply skills in real-world settings</p> |
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|  |  |  | <p><b>Problem-Solving Challenges:</b></p> <p>Complex troubleshooting scenarios using real-world plumbing issues</p> <p>Advanced math problems related to pipe sizing and water pressure calculations</p> <p><b>Technology Integration:</b></p> <p>Virtual reality programs for exploring complex plumbing installations</p> <p>CAD software for designing advanced plumbing systems</p> |
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**Supplemental Resources**

**Technology:**

- Laptop
- Chromebook
- SmartBoard
- Internet Access
- Projector
- 3D printer
- 1 to 1 desktops
- Chromebooks
- SMART Board
- Fusion 360
- Autodesk Inventor.

**Other:**

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

| Core Resources  | Alternate Core Resources<br><i>IEP/504/At-Risk/ESL</i>   | ELL Core Resources   | Gifted & Talented Core  |
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| <p><b>Content Differentiation:</b></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><b>Process Differentiation:</b></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> <li>Varied instructional strategies (visual, auditory, kinesthetic)</li> <li>Scaffolded support like graphic organizers and writing frames</li> </ul> | <p><b>Content Differentiation:</b></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><b>Process Differentiation:</b></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> <li>Use of assistive technology (text-to-speech, speech-to-text tools)</li> </ul> | <p><b>Content Differentiation:</b></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><b>Process Differentiation:</b></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> <li>Use of gestures and total physical response to support verbal instruction</li> <li>Incorporation of students' native language or culture when possible</li> </ul> | <p><b>Content Differentiation:</b></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><b>Process Differentiation:</b></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> <li>Mentorship programs with experts in fields of interest</li> </ul> <p><b>Product Differentiation:</b></p> |

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| <p>Technology-enabled instruction (synchronous or asynchronous options)</p> <p><b>Product Differentiation:</b></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><b>Learning Environment Differentiation:</b></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><b>Product Differentiation:</b></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><b>Learning Environment Differentiation:</b></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><b>Specialized Supports</b></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><b>Product Differentiation:</b></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><b>Learning Environment Differentiation:</b></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><b>Specialized Supports:</b></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>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><b>Learning Environment Differentiation:</b></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><b>Specialized Supports:</b></p> <p>Critical and creative thinking skill development</p> <p>Training in research methods and academic writing</p> |
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|  | <p><b>Ongoing Assessment</b></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>Integration of all four language skills (listening, speaking, reading, writing)</p> <p><b>Instructional Strategies:</b></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><b>Ongoing Assessment:</b></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>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><b>Instructional Strategies:</b></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><b>Assessment Options:</b></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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| <p><b>Work-Based Learning Experiences (WBL)- *Previously called Structured Learning Experience (SLE)</b><br/> <i>Each course within a CTE program is now required to include at least one WBL each year.</i></p> <p><b>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></p> |                      |   |
| <b>WBL Integration/Activity:</b>  | <b>Duration:</b>     | <b>Brief description of activities:</b>           |
|   | year                 | Career Fair, guest speaker, and project feedback. |
| <b>WBL Partners:</b>  |                      |   |
| <p><b>Career and Technical Student Organization- *Every CTE program must incorporate a Career and Technical Student Organization (CTSO).</b></p>  |                      |   |
| <b>CTSO:</b>  | <b>CTSO Advisor:</b> |   |
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| <p><b>Freshman Level: Approximately 10 hours</b><br/>                 Career Awareness- brief exposure to a variety of work settings needs.</p> | <p><b>Sophomore Level: Approximately 20 hours</b><br/>                 Career Exploration- understand the nature of work through first-hand exposure to the workplace.</p> | <p><b>Junior Level: Approximately 50 hours</b><br/>                 Career Preparation - builds basic workplace competence</p> | <p><b>Senior Level: Approximately 75 hours</b><br/>                 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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| <p>Career fair<br/>Guest Speakers<br/>Online Career Navigation, Assessments, Videos<br/>Informational Interviews<br/>Workplace Tours/Field Trips</p> | <p>Informational interviews<br/>Job shadowing<br/>Workplace tours/worksites visits<br/>Simulated Workplace Experience<br/>Mock Interviews</p> | <p>Service-learning<br/>Interactive/Hands-on demonstrations with industry prof. (online, in person, simulated)<br/>Career Cluster Employer Panel Presentations<br/>Structured Assignments after a workplace tour, presentation, shadowing<br/>Career Related Competitions<br/>School-based enterprises<br/>Simulated Workplace Experience<br/>Non-Paid Work Experience Service Learning/Volunteering</p> | <p>Internships (Paid or Non-Paid)<br/>Service Learning<br/>Student-led Enterprises<br/>Volunteering<br/>Work Experience (Paid or Non-Paid)<br/>Pre-Apprenticeships<br/>Apprenticeship</p> |
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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)

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| X | Amistad Law:<br><i>N.J.S.A. 18A 52:16A-88</i> | Holocaust Law:<br><i>N.J.S.A. 18A:35-28</i> | LGBT and Disabilities Law:<br><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:<br><i>Climate Change</i> | Erin's Law:<br><i>A-769/S-1130</i> |
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| Marking Period   | Unit Title                     | Recommended Instructional Days  |
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| 2  | Mathmatics and Assembly Design | 45  |
| <p style="text-align: center;"><b>CTE</b><br/><b>Disciplinary Concept:</b><br/><b>Design/Pre-Construction</b><br/><b>Science, Technology, Engineering &amp; Mathematics</b><br/><b>Engineering &amp; Technology</b><br/><b>Science &amp; Mathematics</b></p>   |                                | <p><b>Recommended Activities, Investigations,<br/>Interdisciplinary Connections, and/or Student<br/>Experiences to Explore NJSLS-CLKS within Unit</b></p> |
| <p><i>Core Ideas and Performance Expectation:</i></p> <p><b>Design/Pre-Construction</b><br/>9.3.12.AC-DES.1 Justify design solutions through the use of research documentation and analysis of data.<br/>9.3.12.AC-DES.2 Use effective communication skills and strategies (listening, speaking, reading, writing and graphic communications) to work with clients and colleagues<br/>9.3.12.AC-DES.6 Apply the techniques and skills of modern drafting, design, engineering and construction to projects.</p> <p><b>Science, Technology, Engineering &amp; Mathematics</b><br/>9.3.ST.2 Use technology to acquire, manipulate, analyze and report data.<br/>9.3.ST.6 Demonstrate technical skills needed in a chosen STEM field.</p> <p><b>Engineering &amp; Technology</b><br/>9.3.ST-ET.1 Use STEM concepts and processes to solve problems involving design and/or production.<br/>9.3.ST-ET.3 Apply processes and concepts for the use of technological tools in STEM.<br/>9.3.ST-ET.4 Apply the elements of the design process.<br/>9.3.ST-ET.5 Apply the knowledge learned in STEM to solve problems.<br/>9.3.ST-ET.6 Apply the knowledge learned in the study of STEM to provide solutions to human and societal problems in an ethical and legal manner.</p> <p><b>Science &amp; Mathematics</b></p> |                                |   |

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| <p>9.3.ST-SM.1 Apply science and mathematics to provide results, answers and algorithms for engineering and technological activities.<br/>9.3.ST-SM.2 Apply science and mathematics concepts to the development of plans, processes and projects that address real world problems.<br/>9.3.ST-SM.4 Apply critical thinking skills to review information, explain statistical analysis, and to translate, interpret and summarize research and statistical data.</p>   |  |
| <p><b>Life Literacy &amp; Key Skills</b><br/><b>Disciplinary Concept:</b><br/><b>Creativity and Innovation</b><br/><b>Critical Thinking and Problem Solving</b><br/><b>Technology Literacy</b></p>  |  |
| <p><b><i>Core Ideas and Performance Expectation:</i></b></p> <p><b>Creativity and Innovation</b><br/>With a growth mindset, failure is an important part of success.<br/>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><b>Critical Thinking and Problem Solving</b><br/><i>Collaboration with individuals with diverse experiences can aid in the problem-solving process, particularly for global issues where diverse solutions are needed.</i><br/>9.4.12.CT.3: Enlist input from a variety of stakeholders (e.g., community members, experts in the field) to design a service learning activity that addresses a local or global issue (e.g., environmental justice).</p> <p><b>Technology Literacy</b><br/><i>Digital tools differ in features, capacities, and styles. Knowledge of different digital tools is helpful in selecting the best tool for a given task.</i><br/>9.4.12.TL.1: Assess digital tools based on features such as accessibility options, capacities, and utility for accomplishing a specific task (e.g., W.11-12.6.).<br/>9.4.12.TL.2: Generate data using formula-based calculations in a spreadsheet and draw conclusions about the data.</p> | <p><b><u>Essential Question/s:</u></b><br/>What would happen if engineers did not follow accepted dimensioning standards and guidelines but, instead, used their own individual dimensioning methods?<br/>Why do engineers use models?<br/>How reliable is a model?<br/>Why is error unavoidable when making a measurement?<br/>What strategy would you use to teach another student how to use units and quantitative reasoning to solve a problem involving quantities?</p> <p><b><u>Activity Description:</u></b></p> <ol style="list-style-type: none"> <li>1. Reading a Ruler             <ol style="list-style-type: none"> <li>a. US Customary Units (1/36")</li> <li>b. Metric System (cm and mm)</li> </ol> </li> <li>2. Unit Conversions             <ol style="list-style-type: none"> <li>a. Convert within US Customary Units</li> <li>b. Convert within Metric System</li> <li>c. Convert between US Customary Unit and Metric System</li> </ol> </li> <li>3. Design a Protective Case Project             <ol style="list-style-type: none"> <li>a. Making Holes</li> <li>b. Constraining a Sketch</li> <li>c. Modeling Skills                     <ol style="list-style-type: none"> <li>i. Midplane Extrusions</li> </ol> </li> </ol> </li> </ol> |

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| <p><b>Career Awareness, Exploration, Preparation, &amp; Training</b><br/><b>Disciplinary Concept:</b><br/><b>Career Awareness and Planning</b></p>   |   |
| <p><b>Core Ideas and Performance Expectation:</b></p> <p><b>Career Awareness and Planning</b><br/><i>Career planning requires purposeful planning based on research, self-knowledge, and informed choices.</i><br/>9.2.12.CAP.4: Evaluate different careers and develop various plans (e.g., costs of public, private, training schools) and timetables for achieving them, including educational/training requirements, costs, loans, and debt repayment.</p>   |   |
| <p><b>Personal Financial Literacy</b><br/><b>Disciplinary Concept:</b></p>   |   |
| <p><b>Social and Emotional Learning:</b><br/><b>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> </ul> | <ul style="list-style-type: none"> <li>ii. Intersect Extrusions</li> <li>iii. Tapered Extrusions</li> <li>iv. Holes</li> <li>v. Loft</li> <li>vi. Circular Pattern</li> <li>vii. Rectangular Patterns</li> <li>viii. Shell</li> <li>ix. Rib</li> <li>x. Sweep</li> <li>xi. Coil</li> <li>xii. Thread</li> <li>xiii. Fillet</li> <li>xiv. Chamfer</li> <li>xv. Mirror</li> <li>xvi. Emboss</li> <li>xvii. Decal</li> </ul> <p>d. Documenting a Design</p> <ul style="list-style-type: none"> <li>i. Drawing Sheet</li> <li>ii. Dimensioning</li> </ul> <p>e. Collaboration</p> <p>4. Docu-series: Abstract: The Art of Design (Holocaust Law)</p> <ul style="list-style-type: none"> <li>a. Neri Oxman, American-Israeli designer and Professor at the MIT Media Lab. She is known for combining architecture with biology, computing and materials engineering.</li> </ul> <p><b>Interdisciplinary Connections:</b></p> <p>ETS1.A: Defining and Delimiting Engineering Problems Criteria and constraints also include satisfying any requirements set by society, such as taking issues of risk mitigation into account, and they should be quantified to the extent possible and stated in such a way that one can tell if a given design meets them. (secondary to HS-PS2-3)</p> <p>ETS1.B: Developing Possible Solutions When evaluating solutions, it is important to take into account a range of constraints, including cost, safety,</p> |

- Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
- Demonstrate an understanding of the need for mutual respect when viewpoints differ
- Demonstrate an awareness of the expectations for social interactions in a variety of settings.

**Responsible Decision-Making**

- Develop, implement, and model effective problem-solving and critical thinking skills
- Identify the consequences associated with one's actions in order to make constructive choices
- Evaluate personal, ethical, safety, and civic impact of decisions

**Relationship Skills**

- Establish and maintain healthy relationships
- Utilize positive communication and social skills to interact effectively with others

reliability, and aesthetics, and to consider social, cultural, and environmental impacts. (secondary to HS-ESS3- 2), (secondary HS-ESS3-4)

CCSS.MATH.CONTENT.HSN.Q.A.1 Use units as a way to understand problems and to guide the solution of multistep problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.

CCSS.MATH.CONTENT.HSN.Q.A.3 Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.

**CLKS**

Act as a responsible and contributing community member and employee.

Attend to financial well-being.

Consider the environmental, social and economic impacts of decisions.

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.

Work productively in teams while using cultural/global competence.

| Assessments (Formative)<br><i>To show evidence of meeting the standard/s, students will successfully engage within:</i>   |   | Assessments (Summative)<br><i>To show evidence of meeting the standard/s, students will successfully complete:</i>  |  |
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| <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> <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>Design a Protective Case documentation</li> <li>Unit Conversion Test</li> <li>Modeling Skills (Fusion)</li> </ul> |   | <p><b>Benchmarks:</b></p> <ul style="list-style-type: none"> <li>Quiz</li> <li>Exam</li> </ul> <p><b>Summative Assessments:</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> </ul> |  |
| <p><b>Technical Skill Assessments:</b><br/>License/Certification/CTE Assessment/ Industry Valued Credential/ Stackable Credential</p>   |   | <p><b>Name of Assessment(s):</b></p> <p><b>Type of Assessment(s):</b></p>   |  |
| Differentiated Student Access to Content:<br>Teaching and Learning Resources/Materials  |   |   |  |
| Core Resources  | Alternate Core Resources<br><i>IEP/504/At-Risk/ESL</i>  | ELL Core Resources  | Gifted & Talented Core Resources   |
| <p>Tiered Content Materials:<br/>Textbooks at different reading levels (below, at, and above grade level)<br/>Simplified versions of texts with</p>   | <p>Tiered Content Materials:<br/>Simplified versions of texts with key concepts highlighted<br/>Audio versions of texts for auditory learners or struggling readers</p> | <p>Keep material concept-focused and principle-driven.<br/><br/>Allow the use of digital translation or grouping students together.</p>   | <p>Advanced Project Design:<br/>Encourage students to design complex, multi-functional furniture pieces<br/>Introduce CAD software for detailed project planning and 3D modeling</p> |

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| <p>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>Multimedia Resources:</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>Hands-On Materials:</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>Leveled or topical readers at different reading levels</p> <p>Books on tape</p> <p>Highlighted text</p> <p>Collaborative Learning Tools:</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>Individualized Options:</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>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>Provide multiple means of action and expression.</p> | <p>Historical Carpentry Techniques:<br/>Study and practice traditional joinery methods<br/>Explore the evolution of woodworking tools and techniques</p> <p>Sustainable Woodworking:<br/>Research and implement eco-friendly materials and practices<br/>Design projects focused on upcycling and repurposing wood</p> <p>Interdisciplinary Projects:<br/>Collaborate with art or engineering classes for cross-curricular projects<br/>Incorporate math and physics principles in advanced structural designs</p> <p>Mentorship Programs:<br/>Partner gifted students with local master carpenters or furniture makers<br/>Encourage participation in apprenticeship programs or internships</p> <p>Advanced Machinery Training:<br/>Provide in-depth training on CNC routers and laser cutters<br/>Teach programming skills for automated woodworking machinery</p> <p>Entrepreneurship in Carpentry:<br/>Develop business plans for custom furniture or woodworking services<br/>Learn about marketing, pricing, and client relations in the carpentry industry</p> |
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|  |  |  | Architectural Woodworking:<br>Study advanced architectural elements like staircases and built-in cabinetry<br>Collaborate on school improvement projects to apply skills in real-world settings |
| <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> <li>● 3D printer</li> <li>● 1 to 1 desktops</li> <li>● Fusion 360</li> <li>● Autodesk Inventor.</li> </ul> <p><b>Other:</b></p> <ul style="list-style-type: none"> <li>●</li> </ul> |  |  |   |
| <b>Differentiated Student Access to Content:<br/>Recommended <i>Strategies &amp; Techniques</i></b>  |  |  |   |
| <b>Core Resources</b>  | <b>Alternate Core Resources<br/><i>IEP/504/At-Risk/ESL</i></b>   | <b>ELL Core Resources</b>  | <b>Gifted &amp; Talented Core</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>                                      |

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| <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><b>Process Differentiation:</b></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><b>Product Differentiation:</b></p> <p>Multiple options for demonstrating learning (reports, presentations, models, etc.)</p> <p>Varied assessment methods based on student learning preferences</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><b>Process Differentiation:</b></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><b>Product Differentiation:</b></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><b>Process Differentiation:</b></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><b>Product Differentiation:</b></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><b>Process Differentiation:</b></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><b>Product Differentiation:</b></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>Adjusting product expectations based on student readiness</p> <p><b>Learning Environment Differentiation:</b></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><b>Learning Environment Differentiation:</b></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><b>Specialized Supports</b></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><b>Ongoing Assessment</b></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>Use of portfolios to showcase progress over time</p> <p><b>Learning Environment Differentiation:</b></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><b>Specialized Supports:</b></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><b>Instructional Strategies:</b></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><b>Learning Environment Differentiation:</b></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><b>Specialized Supports:</b></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><b>Instructional Strategies:</b></p> <p>Inquiry-based and discovery learning approaches</p> |
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|  |  | <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><b>Ongoing Assessment:</b></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><b>Assessment Options:</b></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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New Jersey Legislative Statutes and Administrative Code  
(place an "X" before each law/statute if/when present within the curriculum map)

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| Amistad Law:<br><i>N.J.S.A. 18A 52:16A-88</i> | X | Holocaust Law:<br><i>N.J.S.A. 18A:35-28</i> | LGBT and Disabilities Law:<br><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:<br><i>Climate Change</i> | Erin's Law:<br><i>A-769/S-1130</i> |
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Content Area: Career Readiness, Life Literacies, and Key Skills (NJSLS-CLKS 9.2, 9.3, 9.4) Grades K - 12  
Grade: 9

Dev. Date:

| Marking Period   | Unit Title      | Recommended Instructional Days  |
|--|-----------------|---|
| 3  | Assembly Design | 45  |
| <p style="text-align: center;"><b>CTE</b><br/><b>Disciplinary Concept:</b><br/><b>Design/Pre-Construction</b><br/><b>Science, Technology, Engineering &amp; Mathematics</b><br/><b>Engineering &amp; Technology</b><br/><b>Science &amp; Mathematics</b></p>   |                 | <p><b>Recommended Activities, Investigations,<br/>Interdisciplinary Connections, and/or Student<br/>Experiences to Explore NJSLS-CLKS within Unit</b></p> |
| <p><i>Core Ideas and Performance Expectation:</i></p> <p><b>Design/Pre-Construction</b><br/>9.3.12.AC-DES.1 Justify design solutions through the use of research documentation and analysis of data.<br/>9.3.12.AC-DES.2 Use effective communication skills and strategies (listening, speaking, reading, writing and graphic communications) to work with clients and colleagues<br/>9.3.12.AC-DES.6 Apply the techniques and skills of modern drafting, design, engineering and construction to projects.</p> <p><b>Science, Technology, Engineering &amp; Mathematics</b><br/>9.3.ST.2 Use technology to acquire, manipulate, analyze and report data.<br/>9.3.ST.6 Demonstrate technical skills needed in a chosen STEM field.</p> <p><b>Engineering &amp; Technology</b><br/>9.3.ST-ET.1 Use STEM concepts and processes to solve problems involving design and/or production.<br/>9.3.ST-ET.3 Apply processes and concepts for the use of technological tools in STEM.<br/>9.3.ST-ET.4 Apply the elements of the design process.<br/>9.3.ST-ET.5 Apply the knowledge learned in STEM to solve problems.<br/>9.3.ST-ET.6 Apply the knowledge learned in the study of STEM to provide solutions to human and societal problems in an ethical and legal manner.</p> <p><b>Science &amp; Mathematics</b></p> |                 |   |

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| <p>9.3.ST-SM.1 Apply science and mathematics to provide results, answers and algorithms for engineering and technological activities.<br/>9.3.ST-SM.2 Apply science and mathematics concepts to the development of plans, processes and projects that address real world problems.<br/>9.3.ST-SM.4 Apply critical thinking skills to review information, explain statistical analysis, and to translate, interpret and summarize research and statistical data.</p>  |  |
| <p><b>Life Literacy &amp; Key Skills</b><br/><b>Disciplinary Concept:</b><br/><b>Creativity and Innovation</b><br/><b>Critical Thinking and Problem Solving</b><br/><b>Technology Literacy</b></p>   |  |
| <p><b><i>Core Ideas and Performance Expectation:</i></b></p> <p><b>Creativity and Innovation</b><br/><i>With a growth mindset, failure is an important part of success.</i><br/>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><b>Critical Thinking and Problem Solving</b><br/><i>Collaboration with individuals with diverse experiences can aid in the problem-solving process, particularly for global issues where diverse solutions are needed.</i><br/>9.4.12.CT.3: Enlist input from a variety of stakeholders (e.g., community members, experts in the field) to design a service learning activity that addresses a local or global issue (e.g., environmental justice).</p> <p><b>Technology Literacy</b><br/><i>Digital tools differ in features, capacities, and styles. Knowledge of different digital tools is helpful in selecting the best tool for a given task.</i><br/>9.4.12.TL.1: Assess digital tools based on features such as accessibility options, capacities, and utility for accomplishing a specific task (e.g., W.11-12.6.).<br/>9.4.12.TL.2: Generate data using formula-based calculations in a spreadsheet and draw conclusions about the data.</p> | <p><b><u>Essential Question/s:</u></b><br/>How do different material properties influence the design and functionality of products?<br/>In what ways can CAD software enhance our understanding and application of materials in product design?<br/>How does reverse engineering contribute to innovation and improvement in product development?<br/>What role does visual analysis play in the process of reverse engineering and product enhancement?<br/>How do diverse backgrounds and experiences, like those of Tinker Hatfield, impact creative problem-solving in design?</p> <p><b><u>Activity Description:</u></b><br/><i>Material Properties and Evaluating Materials</i><br/>Investigate variety of materials<br/><br/><i>CAD Material and Appearance Analysis</i><br/>Learn to assign specific materials to CAD models<br/><br/><i>Reverse Engineering Project</i></p> |

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| <p><b>Career Awareness, Exploration, Preparation, &amp; Training</b><br/><b>Disciplinary Concept:</b><br/><b>Career Awareness and Planning</b></p>   | <p>Challenged to iterate an earlier design<br/>Visual Analysis<br/>Reverse engineer and improve consumer product<br/>Functional and Structural Analysis</p>  |
| <p><i><b>Core Ideas and Performance Expectation:</b></i></p> <p><b>Career Awareness and Planning</b><br/><i>There are strategies to improve one's professional value and marketability.</i><br/>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.<br/>9.2.12.CAP.3: Investigate how continuing education contributes to one's career and personal growth</p>   | <p><i>Docu-series: Abstract: The Art of Design (Diversity and Inclusion)</i><br/>Tinker Hatfield, background architecture and athletics is a shoe designer for Nike. Worked with Michael Jordan to design the Air Jordan series.</p> |
| <p><b>Personal Financial Literacy</b><br/><b>Disciplinary Concept:</b></p>   | <p><b>Interdisciplinary Connections:</b><br/>Math<br/>ELA</p>  |
| <p><b>Social and Emotional Learning:</b><br/><i>Competencies and Sub-Competencies</i></p>  | <p><b>CLKS</b><br/>Act as a responsible and contributing community member and employee.</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> | <p>Attend to financial well-being.</p> <p>Consider the environmental, social and economic impacts of decisions.</p> <p>Demonstrate creativity and innovation.</p>  |

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| <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><br/><i>To show evidence of meeting the standard/s, students will successfully engage within:</i></p>  | <p><b>Assessments (Summative)</b><br/><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> <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>Reverse Engineering Documentation</li> </ul>  | <p><b>Benchmarks:</b></p> <ul style="list-style-type: none"> <li>Quiz</li> <li>Exam</li> </ul> <p><b>Summative Assessments:</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> </ul> |

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| <p><b><u>Technical Skill Assessments:</u></b><br/> <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>   |   |
| <p align="center"><b>Differentiated Student Access to Content:<br/>Teaching and Learning Resources/Materials</b></p>  |  |   |   |
| <p align="center"><b>Core Resources</b></p>   | <p align="center"><b>Alternate Core Resources<br/>IEP/504/At-Risk/ESL</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:<br/>Textbooks at different reading levels (below, at, and above grade level)<br/>Simplified versions of texts with key concepts highlighted<br/>Advanced supplementary readings for accelerated learners<br/>Audio versions of texts for auditory learners or struggling readers</p> <p>Multimedia Resources:<br/>Educational videos and documentaries<br/>Interactive online modules and simulations<br/>Podcasts and audio recordings<br/>Infographics and visual aids</p> | <p>Tiered Content Materials:<br/>Simplified versions of texts with key concepts highlighted<br/>Audio versions of texts for auditory learners or struggling readers<br/>Leveled or topical readers at different reading levels<br/>Books on tape<br/>Highlighted text</p> <p>Collaborative Learning Tools:<br/>Opportunity to work alone, in pairs, or small groups<br/>Structured group roles for small group work<br/>Peer tutoring and mentoring programs</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 Project Design:<br/>Encourage students to design complex, multi-functional furniture pieces<br/>Introduce CAD software for detailed project planning and 3D modeling</p> <p>Historical Carpentry Techniques:<br/>Study and practice traditional joinery methods<br/>Explore the evolution of woodworking tools and techniques</p> <p>Sustainable Woodworking:<br/>Research and implement eco-friendly materials and practices<br/>Design projects focused on upcycling and repurposing wood</p> <p>Interdisciplinary Projects:<br/>Collaborate with art or engineering classes for cross-curricular projects<br/>Incorporate math and physics principles in advanced structural designs</p> |

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| <p><b>Hands-On Materials:</b><br/>Physical manipulatives and models<br/>Lab equipment and supplies for experiments<br/>Art supplies for creative projects<br/>Building materials for engineering challenges</p>  | <p><b>Individualized Options:</b><br/>Independent study options<br/>Compacting the curriculum for advanced learners<br/>Varied timelines or check-in points<br/>Choice of review activities</p> <p><b>ESL-Specific Resources:</b><br/>Bilingual dictionaries or glossaries<br/>Sentence frames and language scaffolds<br/>Visual supports for key vocabulary</p> |  | <p><b>Mentorship Programs:</b><br/>Partner gifted students with local master carpenters or furniture makers<br/>Encourage participation in apprenticeship programs or internships</p> <p><b>Advanced Machinery Training:</b><br/>Provide in-depth training on CNC routers and laser cutters<br/>Teach programming skills for automated woodworking machinery</p> <p><b>Entrepreneurship in Carpentry:</b><br/>Develop business plans for custom furniture or woodworking services<br/>Learn about marketing, pricing, and client relations in the carpentry industry</p> <p><b>Architectural Woodworking:</b><br/>Study advanced architectural elements like staircases and built-in cabinetry<br/>Collaborate on school improvement projects to apply skills in real-world settings</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> <li>● 3D printer</li> <li>● 1 to 1 desktops</li> <li>● Fusion 360</li> <li>● Autodesk Inventor</li> </ul> |  |  |  |

| <b>Differentiated Student Access to Content:<br/>Recommended <i>Strategies &amp; Techniques</i></b>  |  |   |  |
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| <b>Core Resources</b>  | <b>Alternate Core Resources<br/><i>IEP/504/At-Risk/ESL</i></b>   | <b>ELL Core Resources</b>   | <b>Gifted &amp; Talented Core</b>  |
| <p><b>Content Differentiation:</b></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><b>Process Differentiation:</b></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><b>Content Differentiation:</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 readers at different reading levels</p> <p>Bilingual materials for ESL students</p> <p>Visual aids, infographics, and multimedia resources</p> <p><b>Process Differentiation:</b></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><b>Content Differentiation:</b></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><b>Process Differentiation:</b></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><b>Content Differentiation:</b></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><b>Process Differentiation:</b></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> |

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| <p>Scaffolded support like graphic organizers and writing frames</p> <p>Technology-enabled instruction (synchronous or asynchronous options)</p> <p><b>Product Differentiation:</b></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><b>Learning Environment Differentiation:</b></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>Use of assistive technology (text-to-speech, speech-to-text tools)</p> <p><b>Product Differentiation:</b></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><b>Learning Environment Differentiation:</b></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><b>Specialized Supports</b></p> <p>Implementation of IEP accommodations and modifications</p> <p>ESL supports like sentence frames and vocabulary guides</p> | <p>Incorporation of students' native language or culture when possible</p> <p><b>Product Differentiation:</b></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><b>Learning Environment Differentiation:</b></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><b>Specialized Supports:</b></p> <p>ESL supports like sentence frames and vocabulary guides</p> <p>Use of students' native language for clarification when needed</p> | <p><b>Product Differentiation:</b></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> <p><b>Learning Environment Differentiation:</b></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><b>Specialized Supports:</b></p> <p>Critical and creative thinking skill development</p> |
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|  | <p>Interventions for at-risk students (e.g. reading interventions)</p> <p>Social-emotional learning supports</p> <p><b>Ongoing Assessment</b></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><b>Instructional Strategies:</b></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><b>Ongoing Assessment:</b></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>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><b>Instructional Strategies:</b></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><b>Assessment Options:</b></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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Content Area: Career Readiness, Life Literacies, and Key Skills (NJSLS-CLKS 9.2, 9.3, 9.4) Grades K - 12  
 Grade: 9

Dev. Date:

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|  |  |  | Above-grade level standardized testing<br>Credit by examination options |
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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)

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|  | Amistad Law:<br><i>N.J.S.A. 18A<br/>52:16A-88</i> |  | Holocaust<br>Law:<br><i>N.J.S.A.<br/>18A:35-28</i> |  | LGBT and<br>Disabilities Law:<br><i>N.J.S.A. 18A:35-4.35</i> | X | Diversity &<br>Inclusion: <i>N.J.S.A.<br/>18A:35-4.36a</i> |  | Standards in Action:<br><i>Climate Change</i> |  | Erin's Law:<br><i>A-769/S-1130</i> |
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| Marking Period  | Unit Title         | Recommended Instructional Days  |
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| 4   | Making Things Move | 45  |
| <p style="text-align: center;"><b>CTE</b><br/> <b>Disciplinary Concept:</b><br/> <b>Science, Technology, Engineering &amp; Mathematics</b><br/> <b>Engineering &amp; Technology Career Pathway</b><br/> <b>Science &amp; Mathematics</b><br/> <b>Design/Pre-Construction</b></p>  |                    | <p><b>Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-CLKS within Unit</b></p> |
| <p><b><i>Core Ideas and Performance Expectation:</i></b></p> <p><b>Science, Technology, Engineering &amp; Mathematics</b><br/>                     9.3.ST.2 Use technology to acquire, manipulate, analyze and report data.<br/>                     9.3.ST.6 Demonstrate technical skills needed in a chosen STEM field.</p> <p><b>Engineering &amp; Technology Career Pathway</b><br/>                     9.3.ST-ET.1 Use STEM concepts and processes to solve problems involving design and/or production.<br/>                     9.3.ST-ET.3 Apply processes and concepts for the use of technological tools in STEM.<br/>                     9.3.ST-ET.4 Apply the elements of the design process.<br/>                     9.3.ST-ET.5 Apply the knowledge learned in STEM to solve problems.</p> <p><b>Science &amp; Mathematics</b><br/>                     9.3.ST-SM.1 Apply science and mathematics to provide results, answers and algorithms for engineering and technological activities.<br/>                     9.3.ST-SM.2 Apply science and mathematics concepts to the development of plans, processes and projects that address real world problems.<br/>                     9.3.ST-SM.4 Apply critical thinking skills to review information, explain statistical analysis, and to translate, interpret and summarize research and statistical data.</p> <p><b>Design/Pre-Construction</b><br/>                     9.3.12.AC-DES.1 Justify design solutions through the use of research documentation and analysis of data.</p> |                    |   |

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| <p>9.3.12.AC-DES.2 Use effective communication skills and strategies (listening, speaking, reading, writing and graphic communications) to work with clients and colleagues.</p> <p>9.3.12.AC-DES.6 Apply the techniques and skills of modern drafting, design, engineering and construction to projects.</p>   |  |
| <p><b>Life Literacy &amp; Key Skills</b><br/><b>Disciplinary Concept:</b><br/><b>Critical Thinking and Problem Solving</b></p>  |  |
| <p><b><i>Core Ideas and Performance Expectation:</i></b></p> <p><b>Critical Thinking and Problem Solving</b><br/><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.3: Enlist input from a variety of stakeholders (e.g., community members, experts in the field) to design a service learning activity that addresses a local or global issue (e.g., environmental justice).</p> <p><b>Creativity &amp; Innovation</b><br/><i>With a growth mindset, failure is an important part of success.</i></p> <p>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><b>Technology Literacy</b><br/><i>Digital tools differ in features, capacities, and styles. Knowledge of different digital tools is helpful in selecting the best tool for a given task.</i></p> <p>9.4.12.TL.1: Assess digital tools based on features such as accessibility options, capacities, and utility for accomplishing a specific task (e.g., W.11-12.6).</p> <p>9.4.12.TL.2: Generate data using formula-based calculations in a spreadsheet and draw conclusions about the data.</p> | <p><b><u>Essential Question/s:</u></b></p> <p>Are there relationships between the motion transfer and the characteristics of the parts of the mechanisms that you analyzed?</p> <p>What factors do you need to consider when designing and building a physical mechanical system?</p> <p>What factors will affect a physical model that do not affect the CAD model?</p> <p>Describe (in words and with a graph) why the motion of a follower acted on by a cam is periodic motion.</p> <p>How can you use the animation of an assembly model to inform your final automaton design?</p> <p>Describe the limitations of the assembly model in representing the physical automaton.</p> <p>How can the principles of safety, consent, and responsible operation in creating moving parts in carpentry be applied to personal boundaries and safety in our daily lives?</p> <p><b><u>Activity Description:</u></b></p> <p>Cams Make the World Go Round</p> <ol style="list-style-type: none"> <li>a. Simple Machines</li> <li>b. Parametric Modeling</li> <li>c. Cam dimension drawings</li> </ol> <p>2. Mechanisms of Motion</p> <ol style="list-style-type: none"> <li>a. Force</li> <li>b. Kinematics</li> <li>c. Mechanism Analysis</li> </ol> <p>3. Modeling Mechanical Motion</p> <ol style="list-style-type: none"> <li>a. Spur Gear Mechanism</li> </ol> |
| <p><b>Career Awareness, Exploration, Preparation, &amp; Training</b><br/><b>Disciplinary Concept:</b></p>   |  |

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| <b>Career Awareness and Planning</b>   |   |
| <p><b>Core Ideas and Performance Expectation:</b></p> <p><b>Career Awareness and Planning</b><br/><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 continuing education contributes to one's career and personal growth</p>  | <p>b. Worm Gear Mechanism</p> <p>4. Cams in Motion</p> <p>a. Linear Motion Graphs</p> <p>b. Interpreting Motion Graphs</p> <p>c. Speed, time, distance</p> <p>d. Creating Linear Motion Graph</p> <p>e. Analyze a Cam's motion</p> <p>f. 2D Model of motion</p> <p>g. Plotting Graph with Google Sheet</p> <p>5. Design a Cam</p> <p>a. On Fusion 360</p> <p>6. Simulating CAM motion</p> <p>a. Simulate</p> <p>b. Rotation</p> <p>7. Automata Project (Animation on Fusion 360)</p> <p>a. Construction of box</p> <p>b. Standard Parts (for 3D printing)</p> <p>c. 2 object to be in motion</p> <p>d. Drawing Sheet</p> <p>e. Assembly</p> <p>8. Automata Project (Physically Build Models)</p> <p>9. Docu-series: Explained: The World's Water Crisis</p> <p>10. Draw parallels between getting permission to operate machinery and the importance of consent in personal interactions.</p> |
| <b>Personal Financial Literacy</b><br><b>Disciplinary Concept:</b>   |   |
| <b>Social and Emotional Learning:</b><br><b>Competencies and Sub-Competencies</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> </ul> | <p><b>Interdisciplinary Connections:</b></p> <p>Math</p> <p>ELA</p> <p><b>CLKS</b></p> <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>  |

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| <ul style="list-style-type: none"> <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>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 style="text-align: center;"><b>Assessments (Formative)</b><br/><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><br/><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> <li>Portfolio</li> </ul>   | <p><b>Benchmarks:</b></p> <ul style="list-style-type: none"> <li>Quiz</li> <li>Exam</li> </ul> <p><b>Summative Assessments:</b></p> <ul style="list-style-type: none"> <li>Pre-Test</li> </ul>   |

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| <p>Discussions<br/>Quiz<br/>Journal writing<br/>Group Assessment<br/>Group Interaction/Discussion/Computer Research<br/>Self and Peer Evaluations<br/>Automata Documentation<br/>Physical Build of Automata<br/>Exploded View (Automata)<br/>Drawing Sheets</p>   | <p>Oral Presentations<br/>Projects<br/>Rubric<br/>Teacher observation<br/>Written Assessments<br/>Reflective Paper<br/>Group Presentations</p>  |   |   |
| <p><b><u>Technical Skill Assessments:</u></b><br/><i>License/Certification/CTE Assessment/ Industry Valued Credential / Stackable Credential</i></p>  |   | <p><b><u>Name of Assessment(s):</u></b><br/><br/><b><u>Type of Assessment(s):</u></b></p>   |   |
| <p><b>Differentiated Student Access to Content:<br/>Teaching and Learning Resources/Materials</b></p>   |   |   |   |
| <p><b>Core Resources</b></p>  | <p><b>Alternate Core Resources<br/>IEP/504/At-Risk/ESL</b></p>  | <p><b>ELL Core Resources</b></p>  | <p><b>Gifted &amp; Talented Core Resources</b></p>  |
| <p>Tiered Content Materials:<br/>Textbooks at different reading levels (below, at, and above grade level)<br/>Simplified versions of texts with key concepts highlighted<br/>Advanced supplementary readings for accelerated learners<br/>Audio versions of texts for auditory learners or struggling readers</p> | <p>Tiered Content Materials:<br/>Simplified versions of texts with key concepts highlighted<br/>Audio versions of texts for auditory learners or struggling readers<br/>Leveled or topical readers at different reading levels<br/>Books on tape<br/>Highlighted text</p> | <p>Keep material concept-focused and principle-driven.<br/><br/>Allow the use of digital translation or grouping students together.<br/><br/>Provide multiple means of action and expression.</p> | <p>Advanced Project Design:<br/>Encourage students to design complex, multi-functional furniture pieces<br/>Introduce CAD software for detailed project planning and 3D modeling<br/><br/>Historical Carpentry Techniques:<br/>Study and practice traditional joinery methods<br/>Explore the evolution of woodworking tools and techniques<br/><br/>Sustainable Woodworking:</p> |

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| <p>Multimedia Resources:<br/>Educational videos and documentaries<br/>Interactive online modules and simulations<br/>Podcasts and audio recordings<br/>Infographics and visual aids</p> <p>Hands-On Materials:<br/>Physical manipulatives and models<br/>Lab equipment and supplies for experiments<br/>Art supplies for creative projects<br/>Building materials for engineering challenges</p> | <p>Collaborative Learning Tools:<br/>Opportunity to work alone, in pairs, or small groups<br/>Structured group roles for small group work<br/>Peer tutoring and mentoring programs</p> <p>Individualized Options:<br/>Independent study options<br/>Compacting the curriculum for advanced learners<br/>Varied timelines or check-in points<br/>Choice of review activities</p> <p>ESL-Specific Resources:<br/>Bilingual dictionaries or glossaries<br/>Sentence frames and language scaffolds<br/>Visual supports for key vocabulary</p> |  | <p>Research and implement eco-friendly materials and practices<br/>Design projects focused on upcycling and repurposing wood</p> <p>Interdisciplinary Projects:<br/>Collaborate with art or engineering classes for cross-curricular projects<br/>Incorporate math and physics principles in advanced structural designs</p> <p>Mentorship Programs:<br/>Partner gifted students with local master carpenters or furniture makers<br/>Encourage participation in apprenticeship programs or internships</p> <p>Advanced Machinery Training:<br/>Provide in-depth training on CNC routers and laser cutters<br/>Teach programming skills for automated woodworking machinery</p> <p>Entrepreneurship in Carpentry:<br/>Develop business plans for custom furniture or woodworking services<br/>Learn about marketing, pricing, and client relations in the carpentry industry</p> <p>Architectural Woodworking:<br/>Study advanced architectural elements like staircases and built-in cabinetry<br/>Collaborate on school improvement projects to apply skills in real-world settings</p> |
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| <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:<br/>Recommended <i>Strategies &amp; Techniques</i></b>  |   |  |  |
| <b>Core Resources</b>  | <b>Alternate Core Resources<br/><i>IEP/504/At-Risk/ESL</i></b>  | <b>ELL Core Resources</b>  | <b>Gifted &amp; Talented Core</b>  |
| <p><b>Content Differentiation:</b></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><b>Content Differentiation:</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 readers at different reading levels</p> <p>Bilingual materials for ESL students</p> <p>Visual aids, infographics, and multimedia resources</p> | <p><b>Content Differentiation:</b></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><b>Content Differentiation:</b></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> |

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| <p><b>Process Differentiation:</b></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><b>Product Differentiation:</b></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><b>Learning Environment Differentiation:</b></p> <p>Flexible seating arrangements</p> <p>Options for individual, paired, or group work</p> | <p><b>Process Differentiation:</b></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><b>Product Differentiation:</b></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><b>Learning Environment Differentiation:</b></p> <p>Flexible seating arrangements</p> <p>Quiet spaces for individual work</p> <p>Sensory tools or fidgets as needed</p> | <p>Modified texts with rewording, reduced extraneous information, and added visuals</p> <p><b>Process Differentiation:</b></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><b>Product Differentiation:</b></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><b>Learning Environment Differentiation:</b></p> | <p><b>Process Differentiation:</b></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><b>Product Differentiation:</b></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> <p><b>Learning Environment Differentiation:</b></p> <p>Flexible grouping with intellectual peers</p> |
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| <p>Varied time allocations for task completion</p> <p>Use of technology to support different learning needs</p> | <p>Visual schedules and routines</p> <p><b>Specialized Supports</b></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><b>Ongoing Assessment</b></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>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><b>Specialized Supports:</b></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><b>Instructional Strategies:</b></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>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><b>Specialized Supports:</b></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><b>Instructional Strategies:</b></p> <p>Inquiry-based and discovery learning approaches</p> <p>Higher-order questioning techniques</p> <p>Abstract and complex problem-solving tasks</p> |
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|  |  | <p><b>Ongoing Assessment:</b></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>Emphasis on depth and complexity of content</p> <p>Integration of multiple disciplines and perspectives</p> <p><b>Assessment Options:</b></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.

| <b>WBL Integration/Activity:</b> | <b>Duration:</b> | <b>Brief description of activities:</b>           |
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|                                  | year             | Career Fair, guest speaker, and project feedback. |

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| <b>WBL Partners:</b>  |                      |  |
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| <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> |  |
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| <b>Freshman Level: Approximately 10 hours</b><br>Career Awareness- brief exposure to a variety of work settings needs. | <b>Sophomore Level: Approximately 20 hours</b><br>Career Exploration- understand the nature of work through first-hand exposure to the workplace. | <b>Junior Level: Approximately 50 hours</b><br>Career Preparation - builds basic workplace competence | <b>Senior Level: Approximately 75 hours</b><br>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. |
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| Career fair<br>Guest Speakers<br>Online Career Navigation, Assessments, Videos<br>Informational Interviews<br>Workplace Tours/Field Trips | Informational interviews<br>Job shadowing<br>Workplace tours/worksites visits<br>Simulated Workplace Experience<br>Mock Interviews | Service-learning<br>Interactive/Hands-on demonstrations with industry prof. (online, in person, simulated)<br>Career Cluster Employer Panel<br>Presentations<br>Structured Assignments after a workplace tour, presentation, shadowing<br>Career Related Competitions<br>School-based enterprises<br>Simulated Workplace Experience<br>Non-Paid Work Experience Service<br>Learning/Volunteering | Internships (Paid or Non-Paid)<br>Service Learning<br>Student-led Enterprises<br>Volunteering<br>Work Experience (Paid or Non-Paid)<br>Pre-Apprenticeships<br>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)

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