AVIATION MAINTENANCE TECHNICIAN STANDARDS

This document was prepared by:

Office of Career Readiness, Adult Learning & Education Options
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Approved by the Nevada State Board of Education
July 13, 2017

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All Nevadans ready for success in the 21st century

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To improve student achievement and educator effectiveness by ensuring opportunities, facilitating learning, and promoting excellence

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ACKNOWLEDGEMENTS

The development of Nevada career and technical standards and assessments is a collaborative effort sponsored by the Office of Career Readiness, Adult Learning & Education Options at the Department of Education and the Career and Technical Education Consortium of States. The Department of Education relies on teachers and industry representatives who have the technical expertise and teaching experience to develop standards and performance indicators that truly measure student skill attainment. Most important, however, is recognition of the time, expertise and great diligence provided by the writing team members in developing the career and technical standards for Aviation Maintenance Technician.

STANDARDS DEVELOPMENT MEMBERS

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BUSINESS AND INDUSTRY VALIDATION

All CTE standards developed through the Nevada Department of Education are validated by business and industry through one or more of the following processes: (1) the standards are developed by a team consisting of business and industry representatives; or (2) a separate review panel was coordinated with industry experts to ensure the standards include the proper content; or (3) the adoption of nationally-recognized standards endorsed by business and industry.

The Aviation Maintenance Technician standards were developed by a team consisting of business and industry representatives, a separate review panel was coordinated with the industry experts to ensure the standards include the proper content, and were validated through adoption of nationally-recognized standards endorsed by business and industry, specifically the Federal Aviation Administration (FAA).

PROJECT COORDINATOR

Alex Kyser, Education Programs Professional
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INTRODUCTION

The standards in this document are designed to clearly state what the student should know and be able to do upon completion of an advanced high school Aviation Maintenance Technician program. These standards are designed for a three-credit course sequence that prepares the student for a technical assessment directly aligned to the standards.

These exit-level standards are designed for the student to complete all standards through their completion of a program of study. These standards are intended to guide curriculum objectives for a program of study.

The standards are organized as follows:

Content Standards are general statements that identify major areas of knowledge, understanding, and the skills students are expected to learn in key subject and career areas by the end of the program.

Performance Standards follow each content standard. Performance standards identify the more specific components of each content standard and define the expected abilities of students within each content standard.

Performance Indicators are very specific criteria statements for determining whether a student meets the performance standard. Performance indicators may also be used as learning outcomes, which teachers can identify as they plan their program learning objectives.

The crosswalk and alignment section of the document shows where the performance indicators support the Nevada Academic Content Standards in Science (based on the Next Generation Science Standards) and the English Language Arts and Mathematics (based on the Common Core State Standards). Where correlation with an academic content standard exists, students in the Aviation Maintenance Technician program perform learning activities that support, either directly or indirectly, achievement of the academic content standards that are listed.

All students are encouraged to participate in the career and technical student organization (CTSO) that relates to their Aviation Maintenance Technician program. CTSOs are co-curricular national associations that directly enforce learning in the CTE classroom through curriculum resources, competitive events, and leadership development. CTSOs provide students the ability to apply academic and technical knowledge, develop communication and teamwork skills, and cultivate leadership skills to ensure college and career readiness.

The Employability Skills for Career Readiness identify the “soft skills” needed to be successful in all careers, and must be taught as an integrated component of all CTE course sequences. These standards are available in a separate document.

The **Standards Reference Code** is only used to identify or align performance indicators listed in the standards to daily lesson plans, curriculum documents, or national standards.

Program Names: Aviation Maintenance Technician Standards Reference Code: **AVIMT**

Example: AVIMT.2.3.4

Standards	Content Standard	Performance Standard	Performance Indicator
Aviation Maintenance Technician	2	3	4

CONTENT STANDARD 1.0 : IDENTIFY LAB ORGANIZATION AND SAFETY PROCEDURES

PERFORMANCE STANDARD 1.1 : DEMONSTRATE GENERAL LAB SAFETY RULES AND PROCEDURES

- 1.1.1 Describe general shop safety rules and procedures
- 1.1.2 Demonstrate knowledge of OSHA and its role in workplace safety
- 1.1.3 Comply with the required use of personal protective equipment (PPE) during lab/shop activities
- 1.1.4 Utilize safe procedures for handling of tools and equipment
- 1.1.5 Operate lab equipment according to safety guidelines
- 1.1.6 Identify and use proper lifting procedures and proper use of support equipment
- 1.1.7 Utilize proper ventilation procedures for working within the lab/shop area
- 1.1.8 Identify marked safety areas
- 1.1.9 Identify the location and the types of fire extinguishers and other fire safety equipment; demonstrate knowledge of the procedures for using fire extinguishers and other fire safety equipment
- 1.1.10 Identify the location and use of eye wash stations
- 1.1.11 Identify the location of the posted evacuation routes
- 1.1.12 Identify and wear appropriate clothing for lab/shop activities
- 1.1.13 Secure hair and jewelry for lab/shop activities
- 1.1.14 Demonstrate knowledge of the safety aspects of high voltage circuits
- 1.1.15 Locate and interpret safety data sheets (SDS)
- 1.1.16 Prepare time or job cards, reports or records
- 1.1.17 Perform housekeeping duties
- 1.1.18 Follow verbal instructions to complete work assignments
- 1.1.19 Follow written instructions to complete work assignments

PERFORMANCE STANDARD 1.2 : IDENTIFY AND UTILIZE HAND TOOLS

- 1.2.1 Identify hand tools and their appropriate usage
- 1.2.2 Identify standard and metric designation
- 1.2.3 Demonstrate the proper techniques when using hand tools
- 1.2.4 Demonstrate safe handling and use of appropriate tools
- 1.2.5 Demonstrate proper cleaning, storage, and maintenance of tools

PERFORMANCE STANDARD 1.3 : IDENTIFY AND UTILIZE POWER TOOLS AND EQUIPMENT

- 1.3.1 Identify power tools and their appropriate usage
- 1.3.2 Identify equipment and their appropriate usage
- 1.3.3 Demonstrate the proper techniques when using power tools and equipment
- 1.3.4 Demonstrate safe handling and use of appropriate power tools and equipment
- 1.3.5 Demonstrate proper cleaning, storage, and maintenance of power tools and equipment

CONTENT STANDARD 2.0 : ASSESS THE IMPACT OF AVIATION ON SOCIETY
PERFORMANCE STANDARD 2.1 : DESCRIBE HISTORY OF AVIATION
2.1.1 Define aviation 2.1.2 Identify aviation achievements throughout history 2.1.3 Research how historical period and regional style have influenced aviation design 2.1.4 Investigate the evolution of aviation
PERFORMANCE STANDARD 2.2 : INVESTIGATE RELATED CAREERS IN AVIATION
2.2.1 Investigate aviation careers, training, and associated opportunities 2.2.2 Describe the difference between aviation disciplines and job functions 2.2.3 Explore career opportunities and list the educational requirements for a given aviation field 2.2.4 Describe the importance of engineering teams
PERFORMANCE STANDARD 2.3 : ANALYZE ETHICS IN AVIATION
2.3.1 Analyze current professional aviation codes of ethics 2.3.2 Analyze ethical aviation issues 2.3.3 Analyze and explain ethical and technical issues contributing to an aviation disaster 2.3.4 Describe how ethics influences the aviation process
PERFORMANCE STANDARD 2.4 : INTERPRET THE AVIATION ENGINEERING DESIGN PROCESS
2.4.1 Identify the design process 2.4.2 Identify the activities that occur during each phase of the design process

CONTENT STANDARD 3.0 : ANALYZE THE AVIATION CERTIFICATION PROCESSES

PERFORMANCE STANDARD 3.1 : RESEARCH CERTIFICATION AND REGULATIONS

- 3.1.1 Identify pilot medical certificate types and durations
- 3.1.2 Describe pilot privileges and limitations
- 3.1.3 Explain the general eligibility requirements for airmen certifications
- 3.1.4 Compare and contrast requirements for the different airmen certifications
- 3.1.5 Identify the required documents that an airman must present for inspection upon reasonable, authorized requests
- 3.1.6 Analyze Federal Aviation Regulations (FAR) as related to airframe and powerplant, pilot, schools, flight training centers, aircraft, and aircraft owners
- 3.1.7 Explain the uses of the Pilot's Operating Handbook (POH)
- 3.1.8 Explain pilot in command

CONTENT STANDARD 4.0 : ANALYZE AVIATION MAINTENANCE PROCESSES

PERFORMANCE STANDARD 4.1 : EXPLORE GENERAL AVIATION PRACTICES

- 4.1.1 Utilize mathematics to solve general aviation maintenance problems
- 4.1.2 Interpret aircraft drawings and schematics
- 4.1.3 Identify physics calculations used in aviation maintenance
- 4.1.4 Calculate aircraft weight, balance, and center of gravity
- 4.1.5 Classify aircraft materials, processes, and hardware
- 4.1.6 Explain aircraft cleaning and corrosion control
- 4.1.7 Explore aviation materials and construction of fluid lines and fittings
- 4.1.8 Explain aircraft inspection fundamentals
- 4.1.9 Utilize specialty hand tools and measuring devices
- 4.1.10 Interpret basic aviation electricity principles
- 4.1.11 Demonstrate flight line safety, ground operations, and servicing procedures
- 4.1.12 Interpret and utilize aviation publications, forms, and records
- 4.1.13 Research the airframe and powerplant technician certificate requirements
- 4.1.14 Identify human factors that affect aircraft maintenance

PERFORMANCE STANDARD 4.2 : INVESTIGATE AIRFRAME MAINTENANCE

- 4.2.1 Categorize aircraft structures
- 4.2.2 Describe aerodynamics, aircraft assembly, and rigging
- 4.2.3 Discuss aircraft fabric covering
- 4.2.4 Perform aircraft metal structural repair
- 4.2.5 Perform aircraft welding techniques
- 4.2.6 Discuss aircraft wood and structural repair
- 4.2.7 Identify advanced composite materials
- 4.2.8 Research aircraft painting and finishing procedures
- 4.2.9 Troubleshoot aircraft electrical system malfunctions
- 4.2.10 Identify aircraft instrument systems
- 4.2.11 Inspect, remove, and install communication and navigation instruments
- 4.2.12 Illustrate hydraulic and pneumatic power system operation
- 4.2.13 Demonstrate aircraft landing gear system operation
- 4.2.14 Outline aircraft fuel systems
- 4.2.15 Explain ice and rain protection procedures
- 4.2.16 Discuss cabin environmental control systems
- 4.2.17 Summarize aircraft fire protection systems

PERFORMANCE STANDARD 4.3 : INVESTIGATE POWER PLANT/ENGINES	
4.3.1	Compare and contrast aircraft engines
4.3.2	Describe engine fuel and fuel metering systems
4.3.3	List induction and exhaust systems components
4.3.4	Explore engine ignition and electrical systems
4.3.5	Inspect, remove, and install engine starting systems
4.3.6	Interpret lubrication and cooling systems
4.3.7	Research propellers
4.3.8	Perform engine removal and replacement
4.3.9	Summarize engine fire protection systems
4.3.10	Discuss engine maintenance and operation
4.3.11	Research light-sport aircraft engines

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CROSSWALKS AND ALIGNMENTS

CROSSWALKS (ACADEMIC STANDARDS)

The crosswalk of the Aviation Maintenance Technician Standards shows links to the Nevada Academic Content Standards in Science (based on the Next Generation Science Standards – Disciplinary Core Ideas Arrangement) and the English Language Arts and Mathematics (based on the Common Core State Standards). The crosswalk identifies the performance indicators in which the learning objectives in the Aviation Maintenance Technician program support academic learning. The performance indicators are grouped according to their content standard and are crosswalked to the Nevada Academic Content Standards in Science, English Language Arts, and Mathematics.

ALIGNMENTS (MATHEMATICAL PRACTICES)

In addition to correlation with the Nevada Academic Content Standards for Mathematics, many performance indicators support the Mathematical Practices. The following table illustrates the alignment of the Aviation Maintenance Technician Standards Performance Indicators and the Mathematical Practices. This alignment identifies the performance indicators in which the learning objectives in the Aviation Maintenance Technician program support academic learning.

ALIGNMENTS (SCIENCE AND ENGINEERING PRACTICES)

In addition to correlation with the Nevada Academic Content Standards for Science, many performance indicators support the Science and Engineering Practices. The following table illustrates the alignment of the Aviation Maintenance Technician Standards Performance Indicators and the Science and Engineering Practices. This alignment identifies the performance indicators in which the learning objectives in the Aviation Maintenance Technician program support academic learning.

CROSSWALKS (COMMON CAREER TECHNICAL CORE)

The crosswalk of the [Aviation Maintenance Technician] Standards shows links to the Common Career Technical Core. The crosswalk identifies the performance indicators in which the learning objectives in the Aviation Maintenance Technician program support the Common Career Technical Core. The Common Career Technical Core defines what students should know and be able to do after completing instruction in a program of study. The Aviation Maintenance Technician Standards are crosswalked to the Transportation, Distribution & Logistics Career Cluster™ and the Facility & Mobile Equipment Maintenance Career Pathway.

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CROSSWALK OF AVIATION MAINTENANCE TECHNICIAN STANDARDS AND THE NEVADA ACADEMIC CONTENT STANDARDS

CONTENT STANDARD 1.0: IDENTIFY LAB ORGANIZATION AND SAFETY PROCEDURES

Performance Indicators	Nevada Academic Content Standards
1.1.1	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
1.1.2	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. **English Language Arts: Speaking and Listening Standards** SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well reasoned exchange of ideas.
1.1.9	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

Performance Indicators	Nevada Academic Content Standards
1.1.15	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.2 Determine the central ideas or conclusions of a text; summarize complex concepts, processes, or information presented in a text by paraphrasing them in simpler but still accurate terms. RST.11-12.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics. RST.11-12.5 Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. WHST.11-12.9 Draw evidence from informational texts to support analysis, reflection, and research.
1.1.16	**English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
1.1.18	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text. **English Language Arts: Speaking and Listening Standards** SL.11-12.1d Respond thoughtfully to diverse perspectives; synthesize comments, claims, and evidence made on all sides of an issue; resolve contradictions when possible; and determine what additional information or research is required to deepen the investigation or complete the task.
1.1.19	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.

CONTENT STANDARD 2.0: ASSESS THE IMPACT OF AVIATION ON SOCIETY

Performance Indicators	Nevada Academic Content Standards
2.1.3	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
2.1.4	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
2.2.1	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.

Performance Indicators	Nevada Academic Content Standards
2.2.2	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.8 Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
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2.3.4	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.8 Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
2.4.3	**Science: HS-Engineering Design** HS-ETS1-2 Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.

CONTENT STANDARD 3.0: ANALYZE THE AVIATION CERTIFICATION PROCESSES

Performance Indicators	Nevada Academic Content Standards
3.1.2	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.
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3.1.9	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. **English Language Arts: Speaking and Listening Standards** SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well reasoned exchange of ideas.

CONTENT STANDARD 4.0: ANALYZE AVIATION MAINTENANCE PROCESSES

Performance Indicators	Nevada Academic Content Standards
4.1.2	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
4.1.6	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation. **English Language Arts: Speaking and Listening Standards** SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well reasoned exchange of ideas.
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Performance Indicators	Nevada Academic Content Standards
4.2.2	**English Language Arts: Reading Standards for Literacy in Science and Technical Subjects** RST.11-12.8 Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. **English Language Arts: Writing Standards for Literacy in Science and Technical Subjects** WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.
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4.2.6	**English Language Arts: Speaking and Listening Standards** SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well reasoned exchange of ideas. SL.11-12.2 Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data. SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.

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ALIGNMENT OF AVIATION MAINTENANCE TECHNICIAN STANDARDS AND THE MATHEMATICAL PRACTICES

Mathematical Practices	Aviation Maintenance Technician Performance Indicators
1. Make sense of problems and persevere in solving them.	4.1.1, 4.1.3
2. Reason abstractly and quantitatively.	4.1.3
3. Construct viable arguments and critique the reasoning of others.	
4. Model with mathematics.	
5. Use appropriate tools strategically.	4.1.1, 4.1.3, 4.1.4
6. Attend to precision.	4.1.1, 4.1.3, 4.1.4
7. Look for and make use of structure.	4.1.2
8. Look for and express regularity in repeated reasoning.	

ALIGNMENT OF AVIATION MAINTENANCE TECHNICIAN STANDARDS AND THE SCIENCE AND ENGINEERING PRACTICES

Science and Engineering Practices	Aviation Maintenance Technician Performance Indicators
1. Asking questions (for science) and defining problems (for engineering).	
2. Developing and using models.	2.4.1 – 2.4.3
3. Planning and carrying out investigations.	
4. Analyzing and interpreting data.	4.1.2, 4.1.12
5. Using mathematics and computational thinking.	4.1.1, 4.1.3, 4.1.4
6. Constructing explanations (for science) and designing solutions (for engineering).	2.4.1 – 2.4.3
7. Engaging in argument from evidence.	2.4.3
8. Obtaining, evaluating, and communicating information.	2.4.3

CROSSWALKS OF AVIATION MAINTENANCE TECHNICIAN STANDARDS AND THE COMMON CAREER TECHNICAL CORE

Transportation, Distribution & Logistics Career Cluster™ (TD)	Performance Indicators
1. Describe the nature and scope of the Transportation, Distribution & Logistics Career Cluster™ and the role of transportation, distribution and logistics in society and the economy.	2.1.1-2.1.4 2.3.1-2.3.4
2. Describe the application and use of new and emerging advanced techniques to provide solutions for transportation, distribution and logistics problems.	2.1.3, 2.1.4
3. Describe the key operational activities required of successful transportation, distribution and logistics facilities.	3.1.3, 3.1.6
4. Identify governmental policies and procedures for transportation, distribution and logistics facilities.	3.1.5-3.1.9
5. Describe transportation, distribution and logistics employee rights and responsibilities and employers' obligations concerning occupational safety and health.	3.1.1-3.1.5
6. Describe career opportunities and means to achieve those opportunities in each of the Transportation, Distribution & Logistics Career Pathways.	2.2.1-2.2.4

Facility & Mobile Equipment Maintenance Career Pathway (TD-MTN)	Performance Indicators
1. Develop preventative maintenance plans and systems to keep facility and mobile equipment inventory in operation.	4.1.8, 4.1.11
2. Design ways to improve facility and equipment system performance.	