# EMERGENCY MEDICAL TECHNICIAN (EMT) STANDARDS



This document was prepared by:

Office of Career, Technical and Adult Education Nevada Department of Education 755 N. Roop Street, Suite 201 Carson City, NV 89701

Adopted by the State Board of Education / State Board for Career and Technical Education on October 5, 2012

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#### ACKNOWLEDGEMENTS

The development of the Nevada Career and Technical standards and assessments is a collaborative effort sponsored by the Office of Career, Technical and Adult Education 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 Emergency Medical Technician.

#### STANDARDS DEVELOPMENT MEMBERS

John W. Hodge, Education Manager Brandie Green, Instructor

REMSA/Care Flight, Reno College of Southern Nevada, Las Vegas

Patrick Irwin, Program Manager Shelly Kinnunen, Instructor

Nevada State EMS, Carson City Rancho Medical Magnet Academy, Las Vegas

Bobbie Sullivan, Education Coordinator Connie Davis, Instructor

Nevada State Health Division/EMS, Elko Academy of Arts, Careers and Technology, Reno

Kristy Yegge, Instructor Veterans Tribute Career and Technical Academy, Las Vegas

#### 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 EMT standards were validated through the active participation by business and industry on the development team. The State of Nevada EMS program and the Southern Nevada Health District use the National Registry Emergency Medical Technician (NREMT) tests for validation of training and understanding of national EMT curriculum.

#### PROJECT COORDINATOR

Randi Hunewill, Education Programs Supervisor Health Science/Public Safety Education Office of Career, Technical and Adult Education Nevada Department of Education

#### **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 emergency medical 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 English Language Arts and Mathematics: Common Core State Standards, and the Nevada State Science Standards. Where correlation with an academic standard exists, students in the Emergency Medical Technician program perform learning activities that support, either directly or indirectly, achievement of one or more Common Core State Standards.

All students are encouraged to participate in the career and technical student organization (CTSO) that relates to their program area. 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.

#### CONTENT STANDARD 1.0: RELATE ACADEMIC FOUNDATIONS TO ACHIEVE SKILL REQUIREMENT PERFORMANCE STANDARD 1.1: APPLY CONCEPTS OF LANGUAGE ARTS KNOWLEDGE 1.1.1 Model behaviors that demonstrate active listening 1.1.2 Organize oral and written information 1.1.3 Adapt language for audience, purpose and situation Evaluate oral and written information for accuracy, adequacy, clarity and validity 1.1.4 Predict potential outcomes and/or solutions 1.1.5 1.1.6 Present formal and informal speeches PERFORMANCE STANDARD 1.2: APPLY CONCEPTS OF MATHEMATICS KNOWLEDGE 1.2.1 Identify whole numbers, decimals and fractions 1.2.2 Demonstrate knowledge of arithmetic operations Formulate data and measurements to solve a problem 1.2.3 1.2.4 Analyze mathematical problem statements 1.2.5 Construct charts/tables/graphs from functions and data 1.2.6 Critique data when interpreting operational documents PERFORMANCE STANDARD 1.3: APPLY CONCEPTS OF SCIENCE KNOWLEDGE 1.3.1 Evaluate scientific constructs including conclusions, conflicting data, controls, sources of error and 1.3.2 Apply scientific method in qualitative and quantitative analysis Recognize elements and their various states of matter 1.3.3

| CONTE                                     | INT STANDARD 2.0: DEMONSTRATE THE USE OF COMMUNICATION  |
|---|---|
| PERFOR                                    | MANCE STANDARD 2.1: SELECT AND EMPLOY APPROPRIATE READING AND COMMUNICATION STRATEGIES  |
| 2.1.1<br>2.1.2<br>2.1.3<br>2.1.4<br>2.1.5 | Identify the use of content, technical concepts and vocabulary for analyzing information Assess the reading strategy needed to fully comprehend a written document Interpret information, data and observations for application Transcribe information, data and apply information Communicate information and apply to medical emergencies |
| PERFOR                                    | MANCE STANDARD 2.2: ENHANCE THE DIVERSITY TO ENHANCE SKILLS   |
| 2.2.1<br>2.2.2                            | Apply factors and strategies for communicating with diverse workforce Demonstrate ability to communicate and resolve conflicts  |
| PERFOR                                    | MANCE STANDARD 2.3: CREATE VERBAL AND NONVERBAL BEHAVIORS   |
| 2.3.1<br>2.3.2<br>2.3.3<br>2.3.4          | Interpret verbal behaviors when communicating with clients and coworkers Interpret nonverbal behaviors when communicating with clients and coworkers Respond with restatement and clarification techniques Exhibit public relations skills to increase internal and external satisfaction   |

| CONTE                                      | ENT STANDARD 3.0:                                    | DEMONSTRATE PROBLEM SOLVING AND CRITICAL THINKING   |  |
|--|--|---|--|
| PERFOR                                     | MANCE STANDARD 3.1:                                  | UTILIZE CRITICAL THINKING SKILLS INDEPENDENTLY AND AS A TEAM  |  |
| 3.1.1<br>3.1.2<br>3.1.3                    |  | at require problem solving oblem to develop solutions g a variety of skills                                     |  |
| PERFOR                                     | MANCE STANDARD 3.2:                                  | EMPLOY INTERPERSONAL SKILLS TO RESOLVE CONFLICTS  |  |
| 3.2.1<br>3.2.2<br>3.2.3<br>3.2.4<br>PERFOR | Implement stress manage<br>Demonstrate conflict reso | options   |  |
| 3.3.1<br>3.3.2<br>3.3.3                    | Synthesize goals and adju                            | ce goals, objectives and action plans ast and use appropriate rewards in the workplace                          |  |
| PERFOR                                     | PERFORMANCE STANDARD 3.4: CONDUCT TECHNICAL RESEARCH |   |  |
| 3.4.1<br>3.4.2<br>3.4.3                    | Gather technical informat                            | ed to meet the needs of the audience<br>ion using a variety of resources<br>data to determine value of research |  |

#### CONTENT STANDARD 4.0: **USE INFORMATION TECHNOLOGY TOOLS** Performance Standard 4.1: Differentiate Between Various Electronic Tasks 4.1.1 Use personal information management applications to increase workplace efficiency 4.1.2 Apply technological tools to expedite workflow Operate electronic mail application to communicate 4.1.3 Critique internet applications to perform workplace tasks 4.1.4 Differentiate writing and publishing applications to prepare department communications 4.1.5 PERFORMANCE STANDARD 4.2: ORGANIZE AND MANIPULATE TASKS 4.2.1 Operate computer based applications 4.2.2 Access support as needed to maintain operations 4.2.3 Manage and compress files for efficiency 4.2.4 Facilitate group work through management 4.2.5 Manage interrelated data elements 4.2.6 Perform calculations and analyses using spreadsheets

#### CONTENT STANDARD 5.0: IDENTIFY KEY ORGANIZATIONAL SYSTEMS PERFORMANCE STANDARD 5.1: DESCRIBE THE SCOPE OF DEPARTMENTAL ORGANIZATIONS 5.1.1 Differentiate the types and functions of EMS departments 5.1.2 Explain the interactions of common departments Identify local, state and national organizational systems 5.1.3 5.1.4 Complete National Incident Management System (NIMS) and Incident Command System (ICS) 100, 200, 700. Identify career tracks within the EMS agencies 5.1.5 PERFORMANCE STANDARD 5.2: IMPLEMENT QUALITY CONTROL SYSTEMS AND PRACTICES Create quality control standards and practices 5.2.1 5.2.2 Use national and statewide standards to implement control practices

| VT STANDARD 6.0 :  | UNDERSTAND THE IMPORTANCE OF HEALTH, SAFETY AND THE ENVIRONMENT  |
|--|--|
| IANCE STANDARD 6.1:  | IMPLEMENT PERSONAL AND DEPARTMENTAL SAFETY REGULATIONS   |
| Identify and determine saf<br>Select appropriate persona<br>Employ safety hierarchy a  |  |
| IANCE STANDARD 6.2:  | EMPLOYEE RIGHTS AND RESPONSIBILITIES   |
| Provide rationale for laws,  | signed to promote safety and health<br>, regulations and rules<br>onsibilities for occupational exposures or injuries  |
| IANCE STANDARD 6.3:  | EMPLOY EMERGENCY PROCEDURES AND DISASTER RESPONSE PLANS  |
| Conduct training on First Acreate a training plan for Sessess emergency and/or Evaluate an emergency or Identify and contrast systems.   | safety equipment training<br>disaster situations<br>disaster plan  |
| IANCE STANDARD 6.4:  | DESCRIBE AND APPLY HEALTHY BEHAVIORS   |
| Evaluate information and<br>Develop a wellness plan the<br>Explain behaviors that pro-<br>Describe strategies for pre-<br>Recognize practices and li-<br>disease and injury<br>Identify safety practices re- | evention of diseases including health screenings and examinations ifestyle choices (diet and physical activity) that promote prevention of elated to high-risk behaviors alternative health practices of stress  |
|  | ANCE STANDARD 6.1:  Assess workplace condition in the interpretation of the interpretati |

#### UNDERSTAND IMPORTANCE OF ETHICS AND LEGAL **CONTENT STANDARD 7.0:** RESPONSIBILITIES PERFORMANCE STANDARD 7.1: APPLY ETHICAL REASONING TO WORKPLACE SITUATIONS 7.1.1 Evaluate alternative responses to legal responsibilities and employer policies Identify personal and long-term workplace consequences for unethical behaviors 7.1.2 Create a plan to deal with legal and ethical considerations 7.1.3 PERFORMANCE STANDARD 7.2: INTERPRET WRITTEN AGENCY POLICIES AND PROCEDURES 7.2.1 Critique departmental policies and procedures Discuss the effect of policies and procedures on a specific work situation 7.2.2 7.2.3 Create standard operating procedures for a department or agency

| CONTE  | NT STANDARD 8.0:   | USE LEADERSHIP AND TEAMWORK SKILLS   |  |
|--|--|--|--|
| PERFOR   | MANCE STANDARD 8.1:  | EMPLOY LEADERSHIP SKILLS TO ACCOMPLISH GOALS AND OBJECTIVES                        |  |
| 8.1.1<br>8.1.2                                     |  | leadership within organizations raits and flexibility when interacting with others |  |
| Perfor   | PERFORMANCE STANDARD 8.2: ESTABLISH AND MAINTAIN EFFECTIVE WORKING RELATIONSHIPS   |  |  |
| 8.2.1<br>8.2.2<br>8.2.3<br>8.2.4<br>8.2.5          | Demonstrate sensitivity to<br>Manage stress and contro<br>Recognize methods for bu |  |  |
| PERFOR   | MANCE STANDARD 8.3:  | USE TEAMWORK TO ACCOMPLISH GOALS AND OBJECTIVES                                    |  |
| 8.3.1<br>8.3.2<br>8.3.3<br>8.3.4<br>8.3.5<br>8.3.6 | Use project-management   | e goals and objectives   |  |

#### CONTENT STANDARD 9.0: DEMONSTRATE KNOWLEDGE AND TECHNICAL SKILLS Performance Standard 9.1: Identify Fundamentals of Emergency Medical Services 9.1.1 Define the roles and responsibilities of personnel in EMS systems 9.1.2 Recognize the role of evidence-based research in EMS development 9.1.3 Define quality assurance and continuous quality improvement Discuss workforce safety and wellness, distinguishing between positive and negative coping 9.1.4 methods 9.1.5 Understand principles of medical documentation and report writing 9.1.6 Incorporate dynamic team communication within EMS systems 9.1.7 Identify components of the EMS communication systems 9.1.8 Recognize principles of communicating with patients in a manner that achieves a positive relationship 9.1.9 Explain the importance, necessity and legality of patient confidentiality 9.1.10 Compare various statutory responsibilities regarding standard of care Identify mandated reporting situations 9.1.11 9.1.12 Recognize moral dilemmas in patient advocacy PERFORMANCE STANDARD 9.2: DESCRIBE THE STRUCTURE AND FUNCTION OF HUMAN BODY **Systems** 9.2.1 Use simple knowledge of upper airway, heart, vessels, blood, lungs, skin, muscles and bones as a foundation of emergency care 9.2.2 Apply fundamental knowledge of human systems to the practice of EMS Performance Standard 9.3: Use Medical Terminology Memorize contextual clues to understand medical and anatomical terms 9.3.1 Apply foundational, anatomical and medical terms and abbreviations in written and oral 9.3.2 communication Performance Standard 9.4: Incorporate Principles of Pathophysiology 9.4.1 Use concepts to solve situational shock and respiratory compromise to respond to life threats Apply fundamental knowledge of the pathophysiology of respiration and perfusion to patient 9.4.2 assessment and management

| Perfor                  | MANCE STANDARD 9.5: UNDERSTAND LIFE SPAN DEVELOPMENT   |
|-------------------------|--|
| 9.5.1<br>9.5.2          | Distinguish age-related differences to assess and care for patients Apply fundamental knowledge of life span development to patient assessment and management  |
| PERFOR                  | MANCE STANDARD 9.6: IDENTIFY EMS ROLE IN PUBLIC HEALTH   |
| 9.6.1                   | Develop awareness of local public health resources and the role EMS personnel play in public health emergencies  |
| 9.6.2                   | Distinguish the principles of illness and injury prevention in emergency care  |
| PERFOR                  | MANCE STANDARD 9.7: UNDERSTAND FUNDAMENTALS OF PHARMACOLOGY  |
| 9.7.1<br>9.7.2          | Develop awareness of emergency medications Use simple knowledge of the medications that the EMS personnel may self-administer or administer to a peer in an emergency  |
| 9.7.3<br>9.7.4          | Apply fundamental knowledge of the medications that the EMS personnel may assist/administer to a patient during an emergency Understand medication safety principles   |
| PERFOR                  | MANCE STANDARD 9.8: DESCRIBE TECHNIQUES OF AIRWAY MANAGEMENT   |
| 9.8.1                   | Use knowledge of general anatomy and physiology to assure a patient airway, adequate mechanical ventilation, and respiration   |
| 9.8.2                   | Apply knowledge of general anatomy and physiology to patient assessment and management in order to assure a patient airway, adequate mechanical ventilation, and respiration                                 |
| PERFOR                  | MANCE STANDARD 9.9: DISCUSS RATIONALE FOR SYSTEMATIC ASSESSMENT  |
| 9.9.1<br>9.9.2          | Discuss the components of scene size-up and management Describe stages of primary assessment and immediate life-saving interventions   |
| 9.9.3                   | Demonstrate components of medical history taking   |
| 9.9.4<br>9.9.5<br>9.9.6 | Demonstrate the skills involved in performing physical examination and assessment of vital signs<br>Interpret diagnostic information using monitoring devices<br>Exhibit ongoing assessment and reassessment |

| PERFOR | PERFORMANCE STANDARD 9.10: IDENTIFY MEDICAL EMERGENCIES  |  |  |  |
|--------|--|--|--|--|
|        |  |  |  |  |
| 9.10.1 | Identify patients exhibiting general medical complaints  |  |  |  |
| 9.10.2 | Assess and manage patients with respiratory complaints   |  |  |  |
| 9.10.3 | Recognize and manage patients with cardiac complaints  |  |  |  |
| 9.10.4 | Assess and manage patients with diabetic and altered mental status complaints  |  |  |  |
| 9.10.5 | Assess and manage patients with allergic reactions   |  |  |  |
| 9.10.6 | Assess and manage patients with poisoning and overdose emergencies   |  |  |  |
| 9.10.7 | Assess and manage patients having an environmental emergency   |  |  |  |
| 9.10.8 | Assess and manage patients with behavioral emergencies   |  |  |  |
| 9.10.9 | Assess and manage patients experiencing an obstetrical or gynecological emergency  |  |  |  |
| PERFOR | MANCE STANDARD 9.11: IDENTIFY SYMPTOMS AND TREATMENT OF SHOCK  |  |  |  |
| 9.11.1 | Use assessment information to recognize shock  |  |  |  |
| 9.11.1 | Apply fundamental knowledge of the causes, pathophysiology, and management of shock  |  |  |  |
| 9.11.2 | Apply fundamental knowledge of the causes, pathophysiology, and management of shock  |  |  |  |
| PERFOR | MANCE STANDARD 9.12: RECOGNIZE AND MANAGE TRAUMA EMERGENCIES   |  |  |  |
| 9.12.1 | Apply fundamental knowledge of trauma systems and associated care  |  |  |  |
| 9.12.2 |  |  |  |  |
| 9.12.3 |  |  |  |  |
| 9.12.4 |  |  |  |  |
| 9.12.5 | Assess and manage multi-system traumas   |  |  |  |
| PERFOR | MANCE STANDARD 9.13: UNDERSTAND SPECIAL PATIENT POPULATIONS  |  |  |  |
| 9.13.1 | Assess and manage emergencies involving obstetrics, neonates, pediatrics, geriatrics, and patients with special challenges |  |  |  |
| PERFOR | PERFORMANCE STANDARD 9.14: UNDERSTAND EMS OPERATIONS   |  |  |  |
| 9.14.1 | Identify safe operating procedures for a ground ambulance  |  |  |  |
| 9.14.2 | Recognize and work within incident command system and perform triage   |  |  |  |
| 9.14.3 | Assess and manage multiple casualty incidents  |  |  |  |
| 9.14.4 |  |  |  |  |
| 9.14.5 | Demonstrate extrication techniques   |  |  |  |
| 9.14.6 | •  |  |  |  |
| 9.14.7 | Recognize risks and responsibilities of operating on the scene of a natural or man-made disaster                           |  |  |  |
| 9.14.8 | Demonstrate lifting and moving techniques  |  |  |  |
|        |  |  |  |  |

#### CONTENT STANDARD 10.0: DEMONSTRATE EMPLOYABILITY SKILLS

### PERFORMANCE STANDARD 10.1: DEMONSTRATE JOB RETENTION AND LIFELONG LEARNING SKILLS

|        | SKILLS   |
|--------|--|
|        |  |
| 10.1.1 | Maintain an employment/career portfolio  |
| 10.1.2 | Create strategies for balancing work and family roles  |
| 10.1.3 | Demonstrate understanding of the need for lifelong learning in a rapidly changing job market |
| 10.1.4 | Identify strategies to maintain employment in the face of job reductions                     |
| 10.1.5 | Formulate strategies to achieve career goals   |
| 10.1.6 | Investigate various educational options needed for job advancement                           |
| 10.1.7 | Develop interpersonal skills needed for job retention  |
|        |  |
|        |  |

## CROSSWALK AND ALIGNMENTS OF EMERGENCY MEDICAL TECHNICIAN STANDARDS AND THE COMMON CORE STATE STANDARDS, THE NEVADA SCIENCE STANDARDS, AND THE COMMON CAREER TECHNICAL CORE STANDARDS

#### CROSSWALK (ACADEMIC STANDARDS)

The crosswalk of the Emergency Medical Technician Standards shows links to the Common Core State Standards and identifies the performance indicators in which the learning objectives in the Emergency Medical Technician program support academic learning. The performance indicators are grouped according to their content standard and are crosswalked to the English Language Arts and Mathematics Common Core State Standards and Nevada State Science Standards.

#### **ALIGNMENTS** (MATHEMATICAL PRACTICES)

In addition to correlation with the Common Core Mathematics Standards, many performance indicators support the Common Core Mathematical Practices. The following table illustrates the alignment of the Emergency Medical Technician Standards Performance Indicators and the Common Core Mathematical Practices. This alignment identifies the performance indicators in which the learning objectives in the Emergency Medical Technician program support academic learning.

#### CROSSWALK (COMMON CAREER TECHNICAL CORE)

The crosswalk of the Emergency Medical Technician Standards shows links to the Common Career Technical Core. The crosswalk identifies the performance indicators in which the learning objectives in the Emergency Medical 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 Emergency Medical Technician Standards are crosswalked to the Law, Public Safety, Corrections and Security Career Cluster<sup>TM</sup> and the Emergency and Fire Management Services Career Pathway.

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## CROSSWALK OF EMERGENCY MEDICAL TECHNICIAN STANDARDS AND THE COMMON CORE STATE STANDARDS

#### CONTENT STANDARD 1.0: RELATE ACADEMIC FOUNDATIONS TO ACHIEVE SKILL REQUIREMENT

| Performance<br>Indicators                  |  | Common Core State Standards and Nevada Science Standards  |  |
|--|--|---|--|
| 1.1.3                                      | Math: Functions – Interpreting Functions |   |  |
|  | F-IF.7e                                  | Graph exponential and logarithmic functions, showing intercepts and end behavior, and trigonometric functions, showing period, midline, and amplitude   |  |
|  | English Langu                            | uage Arts: Speaking and Listening Standards   |  |
|  | SL.11-12.6                               | Adapt speech to a variety of contexts and tasks, demonstrating a command of formal English when indicated or appropriate. (See grades 11–12 Language standards 1 and 3 on page 54 for specific expectations.)   |  |
| 1.1.4                                      | English Lang                             | uage Arts: Speaking and Listening Standards   |  |
|  | 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.11-12.3                               | Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used.   |  |
| 1.1.5                                      | Math: Statisti                           | ics and Probability – Making Inferences and Justifying Conclusions  |  |
|  | S-IC.1                                   | Understand statistics as a process for making inferences about population parameters based on a random sample from that population  |  |
|  | S-IC.4                                   | Use data from a sample survey to estimate a population mean or proportion; develop a margin of error through the use of simulation models for random sampling   |  |
| 1.1.6                                      |  | uage Arts: Speaking and Listening Standards   |  |
|  | 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. |  |
| 1.2.1 Math: Number & Quantity – Quantities |  | er & Quantity – Quantities  |  |
|  | N-Q.1                                    | Use units as a way to understand problems and to guide the solution of multi-step problems; choose and interpret units consistently in formulas; choose and interpret the scale and the origin in graphs and data displays.   |  |
|  | N-Q.2                                    | Define appropriate quantities for the purpose of descriptive modeling.  |  |
|  | N-Q.3                                    | Choose a level of accuracy appropriate to limitations on measurement when reporting quantities.   |  |
|  | Math: Number                             | er & Quantity – The Real Number System  |  |
|  | N-RN.1                                   | Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents   |  |
|  | N-RN.3                                   | Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.   |  |

| Math: Number of N-RN.1     | & Quantity – The Real Number System  Explain how the definition of the meaning of rational exponents follows from extending the properties of integer exponents to those values, allowing for a notation for radicals in terms of rational exponents   |
|----------------------------|--|
| N-RN.3                     | Explain why the sum or product of two rational numbers is rational; that the sum of a rational number and an irrational number is irrational; and that the product of a nonzero rational number and an irrational number is irrational.  |
|                            | - Creating Equations   |
|                            | Create equations and inequalities in one variable and use them to solve problems.  |
| A-CED.2                    | Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.  |
| A-CED.3                    | Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context.   |
| A-CED.4                    | Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.  |
|                            | - Seeing Structure in Expressions  Interpret expressions that represent a quantity in terms of its contact   |
|                            | Interpret expressions that represent a quantity in terms of its context.   |
|                            | Interpret parts of an expression, such as terms, factors, and coefficients.  |
| A-SSE.10                   | Interpret complicated expressions by viewing one or more of their parts as a single entity.  |
| Math: Algebra -            | - Creating Equations   |
| A-CED.4                    | Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.  |
| Math: Algebra -            | - Reasoning with Equations and Inequalities  |
| A-REI.1                    | Explain each step in solving a simple equation as following from the equality of numbers asserted at the previous step, starting from the assumption that the original equation has a solution. Construct a viable argument to justify a solution method.  |
| A-REI.2                    | Solve simple rational and radical equations in one variable, and give examples showing how extraneous solutions may arise.   |
| A-REI.3                    | Solve linear equations and inequalities in one variable, including equations with coefficients represented by letters.   |
| A-REI.4                    | Solve quadratic equations in one variable.   |
|                            | s – Linear, Quadratic, and Exponential Models  |
| F-LE.1                     | Distinguish between situations that can be modeled with linear functions and with exponential functions.   |
| Math: Algebra -            | - Creating Equations   |
| A-CED.2                    | Create equations in two or more variables to represent relationships between quantities;   |
| Math. Statistics           | graph equations on coordinate axes with labels and scales.  and Probability – Interpreting Categorical and Quantitative Data   |
| S-ID.1                     | Represent data with plots on the real number line (dot plots, histograms, and box plots).  |
| Math: Statistics<br>S-ID.4 | and Probability – Interpreting Categorical and Quantitative Data  Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve. |
| Math: Statistics           | and Probability – Making Inferences and Justifying Conclusions   |
| S-IC.1                     | Understand statistics as a process for making inferences about population parameters based on a random sample from that population.  |
|                            | N-RN.3  Math: Algebra - A-CED.1 A-CED.2 A-CED.3  A-CED.4  Math: Algebra - A-SSE.1a A-SSE.1a A-SSE.1b  Math: Algebra - A-CED.4  Math: Algebra - A-CED.4  Math: Algebra - A-CED.1  A-REI.1  A-REI.2  A-REI.3  A-REI.4  Math: Functions F-LE.1  Math: Statistics S-ID.1  Math: Statistics S-ID.1  |

| 1.3.1 | Science: Nature of Science |   |
|-------|----------------------------|---|
|       | N.12.A.1                   | Students know tables, charts, illustrations and graphs can be used in making arguments and claims in oral and written presentations.            |
|       | N.12.A.2                   | Students know scientists maintain a permanent record of procedures, data, analyses, decisions, and understandings of scientific investigations. |
|       | N.12.A.4                   | Students know how to safely conduct an original scientific investigation using the appropriate tools and technology.                            |
|       | N.12.A.5                   | Students know models and modeling can be used to identify and predict cause-effect relationships.   |
|       | Science: Nat               | ure of Science  |
|       | N.12.B.4                   | Students know scientific knowledge builds on previous information.  |
| 1.3.2 | Science: Phy               | sical Science   |
|       | P.12.B.1                   | Students know laws of motion can be used to determine the effects of forces on the motion of objects.   |
|       | P.12.B.4                   | Students know the strength of the gravitational force between two objects increases with mass and decreases rapidly with distance.              |
|       | Science: Nat               | ure of Science  |
|       | N.12.A.2                   | Students know scientists maintain a permanent record of procedures, data, analyses, decisions, and understandings of scientific investigations. |
|       | N.12.A.4                   | Students know how to safely conduct an original scientific investigation using the appropriate tools and technology.                            |
| 1.3.3 |                            |   |
|       | P.12.A.1                   | Students know different molecular arrangements and motions account for the different physical properties of solids, liquids, and gases.         |
|       | P.12.A.7                   | Students know that, in chemical reactions, elements combine in predictable ratios, and the numbers of atoms of each element do not change.      |

#### CONTENT STANDARD 2.0: DEMONSTRATE THE USE OF COMMUNICATION

| Performance<br>Indicators |                 | Common Core State Standards and Nevada Science Standards                                   |
|---------------------------|-----------------|--|
| 2.1.1                     | Math: Algebra   | - Seeing Structure in Expressions  |
|                           | A-SSE. 1        | Interpret expressions that represent a quantity in terms of its context.                   |
|                           | Math: Function  | s – Interpreting Functions   |
|                           | F-IF.4          | For a function that models a relationship between two quantities, interpret key features   |
|                           |                 | of graphs and tables in terms of the quantities, and sketch graphs showing key features    |
|                           |                 | given a verbal description of the relationship.  |
| 2.1.2                     |                 | ge 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    |
| 2.1.2                     | G • N. 4        | accurate terms.  |
| 2.1.3                     | Science: Nature |  |
|                           | N.12.A.1        | Students know tables, charts, illustrations and graphs can be used in making arguments     |
|                           |                 | and claims in oral and written presentations.  |
|                           | N.12.A.2        | Students know scientists maintain a permanent record of procedures, data, analyses,        |
|                           |                 | decisions, and understandings of scientific investigations.                                |
| 2.1.4                     |                 | ge Arts: Writing Standards   |
|                           | W.11-12.1a      | Introduce precise, knowledgeable claim(s), establish the significance of the claim(s),     |
|                           |                 | distinguish the claim(s) from alternate or opposing claims, and create an organization     |
|                           |                 | that logically sequences claim(s), counterclaims, reasons, and evidence.                   |
|                           | W.11-12.4       | Produce clear and coherent writing in which the development, organization, and style       |
|                           |                 | are appropriate to task, purpose, and audience. (Grade-specific expectations for writing   |
|                           |                 | types are defined in standards 1–3 above.)   |
|                           | Science: Nature | of Science   |
|                           | N.12.A.1        | Students know tables, charts, illustrations and graphs can be used in making arguments     |
|                           |                 | and claims in oral and written presentations.  |
|                           | N.12.A.2        | Students know scientists maintain a permanent record of procedures, data, analyses,        |
|                           |                 | decisions, and understandings of scientific investigations.                                |
|                           | English Langua  | ge 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.   |
| 2.2.1                     |                 | ge 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.  |
|                           | SL.11-12.3      | Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric,           |
|                           |                 | assessing the stance, premises, links among ideas, word choice, points of emphasis, and    |
|                           |                 | tone used.   |
|                           | SL.11-12.6      | Adapt speech to a variety of contexts and tasks, demonstrating a command of formal         |
|                           | SL.11-12.0      | English when indicated or appropriate. (See grades 11–12 Language standards 1 and 3        |
|                           |                 | on page 54 for specific expectations.)   |
| 2.2.2                     | English Langua  | ge 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.  |
|                           |                 |  |

| 2.3.1 | English Langu | age Arts: Speaking and Listening Standards   |  |  |
|-------|---------------|--|--|--|
|       | SL.11-12.1c   | Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.          |  |  |
|       | SL.11-12.3    | Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used.  |  |  |
| 2.3.3 | English Langu | 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. |  |  |

#### CONTENT STANDARD 3.0: DEMONSTRATE PROBLEM SOLVING AND CRITICAL THINKING

| Performance<br>Indicators |                                      | Common Core State Standards and Nevada Science Standards   |
|---------------------------|--------------------------------------|--|
| 3.1.2                     | SL.11-12.1  Math: Algebra - A-SSE.1a | ge Arts: Speaking and Listening Standards  Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.  – Seeing Structure in Expressions  Interpret parts of an expression, such as terms, factors, and coefficients. |
| 3.1.3                     | English Langua<br>SL.11-12.1b        | ge Arts: Speaking and Listening Standards  Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.  |
|                           | 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.  |
| 3.2.1                     | English Langua<br>SL.11-12.1c        | ge Arts: Speaking and Listening Standards  Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.   |
|                           | SL.11-12.3                           | Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, and tone used.  |
|                           |                                      | ge Arts: Writing Standards for Literacy in Science and Technical Subjects Write arguments focused on discipline-specific content.  |
|                           |                                      | Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence.   |
| 3.2.2                     | English Langua<br>SL.11-12.1b        | ge Arts: Speaking and Listening Standards  Work with peers to promote civil, democratic discussions and decision-making, set clear goals and deadlines, and establish individual roles as needed.  |
|                           | SL.11-12.1c                          | Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.  |
|                           | 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.   |
|                           | English Langua<br>WHST.11-12.9       | ge Arts: Writing Standards for Literacy in Science and Technical Subjects  Draw evidence from informational texts to support analysis, reflection, and research.   |

| 3.3.1 | English Langua<br>L.11-12.2b   | ge Arts: Language Standards Spell correctly   |
|-------|--------------------------------|---|
|       | L.11-12.3                      | Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.   |
|       |                                | ge Arts: Writing Standards for Literacy in Science and Technical Subjects  Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.   |
|       | Science: Nature                |   |
|       | N.12.A.6                       | Students know organizational schema can be used to represent and describe relationships of sets.  |
| 3.3.2 |                                | ge Arts: Writing Standards  |
|       | W.11-12.3d                     | Use precise words and phrases, telling details, and sensory language to convey a vivid picture of the experiences, events, setting, and/or characters.  |
| 3.3.3 | Math: Statistics<br>S-IC.1     | s and Probability – Making Inferences and Justifying Conclusions Understand statistics as a process for making inferences about population parameters based on a random sample from that population.  |
|       | S-IC.2                         | Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation.  |
|       | Science: Nature<br>N.12.A.4    | e of Science Students know how to safely conduct an original scientific investigation using the appropriate tools and technology.   |
|       | N.12.A.5                       | Students know models and modeling can be used to identify and predict cause-effect relationships.   |
| 3.4.1 | English Langua<br>L.11-12.6    | <b>Ige Arts: Language Standards</b> Acquire and use accurately general academic and domain-specific words and phrases, sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.   |
|       | English Langua<br>WHST.11-12.7 | ge Arts: Writing Standards for Literacy in Science and Technical Subjects 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.  |
|       | 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. |
| 3.4.2 | WHST.11-12.9                   | ge Arts: Writing Standards for Literacy in Science and Technical Subjects   |

| 3.4.3 | English Langua | ge Arts: Writing Standards for Literacy in Science and Technical Subjects   |
|-------|----------------|---|
|       | WHST.11-12.2   | Write informative/explanatory texts, including the narration of historical events,  |
|       |                | scientific procedures/ experiments, or technical processes.   |
|       | English Langua | ge Arts: Reading Standards for Literacy in Science and Technical Subjects   |
|       | RST.11-12.1    | Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.                  |
|       | 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. |

#### CONTENT STANDARD 4.0: USE INFORMATION TECHNOLOGY TOOLS

| Performance<br>Indicators | Common Core State Standards and Nevada Science Standards   |
|---------------------------|--|
| 4.1.4                     | English Language Arts: Writing Standards for Literacy in Science and Technical Subjects            |
|                           | WHST.11-12.6 Use technology, including the Internet, to produce, publish, and update individual or |
|                           | shared writing products in response to ongoing feedback, including new arguments or                |
|                           | information.   |

#### CONTENT STANDARD 5.0: IDENTIFY KEY ORGANIZATIONAL SYSTEMS

| Performance<br>Indicators | Common Core State Standards and Nevada Science Standards   |                             |
|---------------------------|--|-----------------------------|
| 5.1.1                     | English Language Arts: Writing Standards for Literacy in Science and Technical S WHST.11-12.1 Write arguments focused on discipline-specific content.  | ubjects                     |
|                           | WHST.11-12.6 Use technology, including the Internet, to produce, publish, and update shared writing products in response to ongoing feedback, including ne information.  |                             |
|                           | WHST.11-12.9 Draw evidence from informational texts to support analysis, reflection English Language Arts: Reading Standards for Literacy in Science and Technical Standards for Literacy in Science and Literacy in Science a |                             |
|                           | RST.11-12.4 Determine the meaning of symbols, key terms, and other domain-spec phrases as they are used in a specific scientific or technical context releases as they are used in a specific scientific or technical context releases as they are used in a specific scientific or technical context releases as they are used in a specific scientific or technical context releases as they are used in a specific scientific or technical context releases as they are used in a specific scientific or technical context releases as they are used in a specific scientific or technical context releases as they are used in a specific scientific or technical context releases as they are used in a specific scientific or technical context releases as they are used in a specific scientific or technical context releases as they are used in a specific scientific or technical context releases as they are used in a specific scientific or technical context releases as they are used in a specific scientific or technical context releases as the specific scientific or technical context releas | ific words and              |
| 5.1.2                     | English Language Arts: Writing Standards for Literacy in Science and Technical S   | ubjects                     |
|                           | WHST.11-12.4 Produce clear and coherent writing in which the development, organiz are appropriate to task, purpose, and audience.  | ation, and style            |
|                           | WHST.11-12.8 Gather relevant information from multiple authoritative print and digit advanced searches effectively; assess the strengths and limitations of e terms of the specific task, purpose, and audience; integrate information selectively to maintain the flow of ideas, avoiding plagiarism and over one source and following a standard format for citation.  | ach source in into the text |
| 5.2.1                     | English Language Arts: Writing Standards for Literacy in Science and Technical S   |                             |
|                           | WHST.11-12.2 Write informative/explanatory texts, including the narration of historic scientific procedures/ experiments, or technical processes.  | al events,                  |

## CONTENT STANDARD 6.0: UNDERSTAND THE IMPORTANCE OF HEALTH, SAFETY AND THE ENVIRONMENT

| Performance<br>Indicators |                                 | Common Core State Standards and Nevada Science Standards  |
|---------------------------|---------------------------------|---|
| 6.2.2                     |                                 | ge Arts: Writing Standards for Literacy in Science and Technical Subjects Write arguments focused on discipline-specific content.   |
|                           | WHST.11-12.1a                   | Introduce precise, knowledgeable claim(s), establish the significance of the claim(s), distinguish the claim(s) from alternate or opposing claims, and create an organization that logically sequences the claim(s), counterclaims, reasons, and evidence.  |
|                           | WHST.11-12.1b                   | Develop claim(s) and counterclaims fairly and thoroughly, supplying the most relevant data and evidence for each while pointing out the strengths and limitations of both claim(s) and counterclaims in a discipline-appropriate form that anticipates the audience's knowledge level, concerns, values, and possible biases. |
|                           | WHST.11-12.1c                   | Use words, phrases, and clauses as well as varied syntax to link the major sections of the text, create cohesion, and clarify the relationships between claim(s) and reasons, between reasons and evidence, and between claim(s) and counterclaims.   |
|                           |                                 | Establish and maintain a formal style and objective tone while attending to the norms and conventions of the discipline in which they are writing.  |
|                           | English Langua<br>RST.11-12.1   | ge Arts: Reading Standards for Literacy in Science and Technical Subjects  Cite specific textual evidence to support analysis of science and technical texts, attending to important distinctions the author makes and to any gaps or inconsistencies in the account.   |
|                           | 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.   |
| 6.3.2                     | English Langua;<br>WHST.11-12.2 | ge Arts: Writing Standards for Literacy in Science and Technical Subjects Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.  |
|                           | WHST.11-12.4                    | Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.  |
|                           | WHST.11-12.6                    | Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.  |
| 6.3.3                     |                                 | ge Arts: Writing Standards for Literacy in Science and Technical Subjects  Draw evidence from informational texts to support analysis, reflection, and research.  |
| 6.3.4                     | English Langua;<br>WHST.11-12.2 | ge Arts: Writing Standards for Literacy in Science and Technical Subjects Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.  |
|                           | WHST.11-12.4                    | Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.  |
|                           | WHST.11-12.6                    | Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.  |

#### CONTENT STANDARD 7.0: UNDERSTAND IMPORTANCE OF ETHICS AND LEGAL RESPONSIBILITIES

| Performance<br>Indicators |                                | Common Core State Standards and Nevada Science Standards   |
|---------------------------|--------------------------------|--|
| 7.1.3                     | English Langua<br>WHST.11-12.2 | ge Arts: Writing Standards for Literacy in Science and Technical Subjects Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.   |
|                           | WHST.11-12.2b                  | Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic.   |
|                           | WHST.11-12.4                   | Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.   |
|                           | WHST.11-12.6                   | Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.   |
| 7.2.1                     | English Languag<br>RST.11-12.8 | ge Arts: Reading Standards for Literacy in Science and Technical Subjects  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.                           |
| 7.2.2                     | English Langua;<br>SL.11-12.1  | ge Arts: Speaking and Listening Standards  Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively. |
|                           | 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.11-12.1c                    | Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.  |

#### CONTENT STANDARD 9.0: DEMONSTRATE KNOWLEDGE AND TECHNICAL SKILLS

| Performance<br>Indicators |                             | Common Core State Standards and Nevada Science Standards   |
|---------------------------|-----------------------------|--|
| 9.1.2                     | Science: Natur              | re of Science  |
| 7.1.2                     | N.12.B.4                    | Students know scientific knowledge builds on previous information.   |
| 9.1.4                     |                             | age Arts: Speaking and Listening Standards   |
|                           | SL.11-12.1                  | Initiate and participate effectively in a range of collaborative discussions (one-on-one,  |
|                           |                             | in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and   |
|                           |                             | issues, building on others' ideas and expressing their own clearly and persuasively.   |
| 9.1.6                     | 0                           | age Arts: Speaking and Listening Standards   |
|                           | 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  |
| 9.18                      | English I angu              | appropriate to purpose, audience, and a range of formal and informal tasks.  age Arts: Speaking and Listening Standards                |
| 9.10                      | SL.11-12.4                  | Present information, findings, and supporting evidence, conveying a clear and distinct   |
|                           | SE.11 12.4                  | 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.  |
| 9.2.1                     | Science: Natur              | re of Science  |
|                           | N.12.B.2                    | Students know consumption patterns, conservation efforts, and cultural or social   |
|                           |                             | practices in countries have varying environmental impacts.   |
|                           | N.12.B.3                    | Students know the influence of ethics on scientific enterprise.  |
|                           | Science: Natur              | re of Science  |
| 9.2.2                     | N.12.B.2                    | Students know consumption patterns, conservation efforts, and cultural or social   |
|                           |                             | practices in countries have varying environmental impacts.   |
|                           | N.12.B.3                    | Students know the influence of ethics on scientific enterprise.  |
|                           | Science: Life S             | cience   |
|                           | L.12.A.3                    | Students know all body cells in an organism develop from a single cell and contain   |
| 0.2.2                     | G . T.0 G                   | essentially identical genetic instructions.  |
| 9.3.2                     | Science: Life S<br>L.12.B.1 | Students know cell structures and their functions.   |
|                           | L.12.D.1                    |  |
|                           | L.12.B.2                    | Students know the human body has a specialized anatomy and physiology composed of  |
|                           |                             | an hierarchical arrangement of differentiated cells.   |
|                           | L.12.B.3                    | Students know disease disrupts the equilibrium that exists in a healthy organism.  |
| 9.4.1                     | Science: Life S             | cience   |
|                           | L.12.B.1                    | Students know cell structures and their functions.   |
|                           | L.12.B.2                    | Students know the human body has a specialized anatomy and physiology composed of  |
|                           |                             | an hierarchical arrangement of differentiated cells.   |
|                           | L.12.B.3                    | Students know disease disrupts the equilibrium that exists in a healthy organism.  |
| 9.4.2                     | Science: Life S             |  |
| 77                        | L.12.B.1                    | Students know cell structures and their functions.   |
|                           | L.12.B.2                    | Students know the human body has a specialized anatomy and physiology composed of  |
|                           | L.12.D.2                    | an hierarchical arrangement of differentiated cells.   |
|                           | V 40 D 0                    |  |
| 0.5.1                     | L.12.B.3                    | Students know disease disrupts the equilibrium that exists in a healthy organism.  |
| 9.5.1                     | Science: Life S<br>L.12.B.2 |  |
|                           | L.12.D.2                    | Students know the human body has a specialized anatomy and physiology composed of an hierarchical arrangement of differentiated cells. |
|                           |                             | -  |
|                           | L.12.B.3                    | Students know disease disrupts the equilibrium that exists in a healthy organism.  |

| 9.5.2 | Science: Life S | Science  |
|-------|-----------------|--|
|       | L.12.B.2        | Students know the human body has a specialized anatomy and physiology composed of  |
|       |                 | an hierarchical arrangement of differentiated cells.   |
|       | L.12.B.3        | Students know disease disrupts the equilibrium that exists in a healthy organism.  |
| 9.6.2 | Science: Life S | Science  |
|       | L.12.B.2        | Students know the human body has a specialized anatomy and physiology composed of  |
|       |                 | an hierarchical arrangement of differentiated cells.   |
| 9.7.2 | Science: Physi  |  |
|       | P.12.A.7        | Students know that, in chemical reactions, elements combine in predictable ratios, and the numbers of atoms of each element do not change. |
|       | Science: Natur  |  |
|       | N.12.A.5        | Students know models and modeling can be used to identify and predict cause-effect relationships.  |
|       | Science: Life S | Science  |
|       | L.12.B.1        | Students know cell structures and their functions.   |
|       | L.12.B.3        | Students know disease disrupts the equilibrium that exists in a healthy organism.  |
|       | Science: Life S |  |
|       | L.12.C.1        | Students know relationships of organisms and their physical environment.   |
| 9.7.3 | Science: Physi  |  |
|       | P.12.A.7        | Students know that, in chemical reactions, elements combine in predictable ratios, and the numbers of atoms of each element do not change. |
|       | Science: Natur  |  |
|       | N.12.A.5        | Students know models and modeling can be used to identify and predict cause-effect   |
|       |                 | relationships.   |
|       | Science: Life S |  |
|       | L.12.B.1        | Students know cell structures and their functions.   |
|       | L.12.B.3        | Students know disease disrupts the equilibrium that exists in a healthy organism.  |
|       | Science: Life S |  |
| 0.01  | L.12.C.1        | Students know relationships of organisms and their physical environment.   |
| 9.8.1 | Science: Life S |  |
|       | L.12.B.2        | Students know the human body has a specialized anatomy and physiology composed of an hierarchical arrangement of differentiated cells.     |
|       |                 | <u> </u>   |
|       | L.12.B.3        | Students know disease disrupts the equilibrium that exists in a healthy organism.  |
| 9.8.2 | Science: Life S |  |
|       | L.12.B.2        | Students know the human body has a specialized anatomy and physiology composed of  |
|       |                 | an hierarchical arrangement of differentiated cells.   |
|       | L.12.B.3        | Students know disease disrupts the equilibrium that exists in a healthy organism.  |
| 9.9.1 |                 | age Arts: Speaking and Listening Standards   |
|       | SL.11-12.1      | Initiate and participate effectively in a range of collaborative discussions (one-on-one,  |
|       |                 | in groups, and teacher-led) with diverse partners on grades 11–12 topics, texts, and   |
|       |                 | issues, building on others' ideas and expressing their own clearly and persuasively.   |

| 9.9.3  | Science: Life Science L.12.B.2 Students know the human body has a specialized anatomy and physiology composed of |  |  |  |
|--------|--|--|--|--|
|        |  | an hierarchical arrangement of differentiated cells.   |  |  |
|        | L.12.B.3<br>English Langu  | Students know disease disrupts the equilibrium that exists in a healthy organism.  uage Arts: Writing Standards for Literacy in Science and Technical Subjects   |  |  |
|        | WHST.11-12.2   | Develop the topic thoroughly by selecting the most significant and relevant facts, extended definitions, concrete details, quotations, or other information and examples appropriate to the audience's knowledge of the topic. |  |  |
|        |  | uage Arts: Speaking and Listening Standards  |  |  |
|        | SL.11-12.3   | Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric, assessing the stance, premises, links among ideas, word choice, points of emphasis, a tone used.  |  |  |
| 9.9.5  | Science: Life S  | Science  |  |  |
|        | L.12.B.2   | Students know the human body has a specialized anatomy and physiology composed an hierarchical arrangement of differentiated cells.  |  |  |
|        | L.12.B.3   | Students know disease disrupts the equilibrium that exists in a healthy organism.  |  |  |
|        |  | uage 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 at media (e.g., quantitative data, video, multimedia) in order to address a question or sola problem.                                      |  |  |
| 9.10.3 | Science: Life S  |  |  |  |
|        | L.12.B.1   | Students know cell structures and their functions.   |  |  |
|        | L.12.B.2   | Students know the human body has a specialized anatomy and physiology composed an hierarchical arrangement of differentiated cells.  |  |  |
|        | L.12.B.3   | Students know disease disrupts the equilibrium that exists in a healthy organism.  |  |  |
| 9.11.1 | Science: Life Science  |  |  |  |
|        | L.12.B.2   | Students know the human body has a specialized anatomy and physiology composed an hierarchical arrangement of differentiated cells.  |  |  |
|        | L.12.B.3   | Students know disease disrupts the equilibrium that exists in a healthy organism.  |  |  |
| 9.11.2 | Science: Life Science  |  |  |  |
|        | L.12.B.1   | Students know cell structures and their functions.   |  |  |
|        | L.12.B.2   | Students know the human body has a specialized anatomy and physiology composed an hierarchical arrangement of differentiated cells.  |  |  |
|        | L.12.B.3   | Students know disease disrupts the equilibrium that exists in a healthy organism.  |  |  |
| 9.13.1 | Science: Life Science  |  |  |  |
|        | L.12.B.1   | Students know cell structures and their functions.   |  |  |
|        | L.12.B.2   | Students know the human body has a specialized anatomy and physiology composed an hierarchical arrangement of differentiated cells.  |  |  |
|        | L.12.B.3   | Students know disease disrupts the equilibrium that exists in a healthy organism.  |  |  |
| 9.14.1 |  | uage Arts: Reading Standards for Literacy in Science and Technical Subjects  |  |  |
|        | 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   |  |  |

#### CONTENT STANDARD 10.0: DEMONSTRATE EMPLOYABILITY SKILLS

| Performance<br>Indicators | Common Core State Standards and Nevada Science Standards   |  |
|---------------------------|--|--|
| 10.1.1                    | English Language Arts: Writing Standards for Literacy in Science and Technical Subjects                |  |
|                           | WHST.11-12.10 Write routinely over extended time frames (time for reflection and revision) and shorter |  |
|                           | time frames (a single sitting or a day or two) for a range of discipline-specific tasks,               |  |
|                           | purposes, and audiences.   |  |

## ALIGNMENT OF EMERGENCY MEDICAL TECHNICIAN STANDARDS AND THE COMMON CORE MATHEMATICAL PRACTICES

| Common Core<br>Mathematical Practices |  | Emergency Medical Technician Performance Indicators   |  |
|---------------------------------------|--|---|--|
|                                       | Make sense of problems and persevere in solving them.            | 1.2.4, 1.2.6; 1.3.1; 3.4.3  |  |
| 2.                                    | Reason abstractly and quantitatively.                            | 1.2.1, 1.2.4, 1.2.6; 1.3.2; 3.4.3   |  |
|                                       | Construct viable arguments and critique the reasoning of others. | 1.2.3, 1.3.1  |  |
| 4.                                    | Model with mathematics.  | 1.2.2; 1.2.5  |  |
| 5.                                    | Use appropriate tools strategically.                             | 1.2.2, 1.2.3, 1.2.5, 1.2.6, 1.3.2<br>4.1.2, 4.2.5; 4.2.6<br>8.3.4<br>9.7.2, 9.7.3; 9.9.3, 9.9.4, 9.9.5; 9.10.2-9.10.9; 9.12.1, 9.12.2<br>9.12.4, 9.12.5; 9.13.1; 9.14.2, 19.14.3, 19.14.5, 9.14.6, 9.14.8 |  |
| 6.                                    | Attend to precision.   | 1.2.2, 1.2.3, 1.2.5,1.2.6; 1.3.2<br>4.1.2; 4.2.5, 4.2.6<br>8.3.4<br>9.7.2, 9.7.3, 9.9.3, 9.9.4, 9.9.5; 9.10.2-9.10.9; 9.12.1, 9.12.2<br>9.12.4, 9.12.5; 9.13.1; 9.14.2, 9.14.3, 9.14.5, 9.14.6; 9.14.8    |  |
| 7.                                    | Look for and make use of structure.                              | 1.2.3, 1.2.4  |  |
|                                       | Look for and express regularity in repeated reasoning.           |   |  |

## CROSSWALKS OF EMERGENCY MEDICAL TECHNICIAN STANDARDS AND THE COMMON CAREER TECHNICAL CORE

|    | Health Science Career Cluster <sup>TM</sup> (HL)  | Performance Indicators      |
|----|---|-----------------------------|
| 1. | Determine academic subject matter, in addition to high school graduation requirements, necessary for pursuing a health science career.                                | 1.1.2; 5.1.5; 9.3.1; 10.1.5 |
| 2. | Explain the healthcare worker's role within their department, their organization, and the   | 5.1.1, 5.1.3                |
|    | overall healthcare system.  | 8.3.1; 10.1.6               |
|    | Identify existing and potential hazards to clients, coworkers, visitors, and self in the healthcare workplace.  | 6.1.1, 6.1.2; 6.2.1, 6.2.3  |
|    |   | 9.1.4; 9.14.1               |
| 4. | Evaluate the roles and responsibilities of individual members as part of the healthcare team and explain their role in promoting the delivery of quality health care. | 5.1.2; 7.2.1; 8.3.2; 9.1.1  |
| 5. | Analyze the legal and ethical responsibilities, limitations and implications of actions within the healthcare workplace.  | 5.2.2                       |
|    |   | 7.1.1, 7.1.2, 7.1.3         |
| 6. | Evaluate accepted ethical practices with respect to cultural, social and ethnic differences within the healthcare workplace.  | 6.4.8; 7.1.1; 8.2.2         |
|    | Therapeutic Services Career Pathway (HL-THR)  | Performance Indicators      |
| 1. | Utilize communication strategies to answer patient/client questions and concerns on planned procedures and goals.   | 1.1.1; 2.2.1                |
|    |   | 9.1.6; 9.3.2                |
| 2. | Communicate patient/client information among healthcare team members to facilitate a team approach to patient care.   | 1.1.1; 2.3.1; 9.1.8         |
| 3. | Utilize processes for assessing, monitoring and reporting patient's/clients' health status  | 1.1.2, 1.1.5; 4.1.2         |
|    | to the treatment team within protocol and scope of practice.  | 5.2.1; 7.2.3; 9.1.10        |
| 4. | Evaluate patient/client needs, strengths and problems in order to determine if treatment goals are being met.   | 6.2.2; 7.2.1; 9.1.3         |