

# ***BIOMEDICAL STANDARDS***



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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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**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 Biomedical standards were validated through active participation of business and industry representatives on the development team.

**PROJECT COORDINATOR**

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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 Biomedical program. These standards are designed for a two-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. Where correlation with an academic content standard exists, students in the Biomedical 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 the Biomedical program. CTSOs are co-curricular national organizations that directly reinforce 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. The Standards Reference Code is an abbreviated name for the program, and the content standard, performance standard and performance indicator are referenced in the program standards. This abbreviated code for identifying standards uses each of these items. For example, BIOM is the Standards Reference Code for Biomedical. For Content Standard 2, Performance Standard 3 and Performance Indicator 4 the Standards Reference Code would be BIOM.2.3.4.

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**CONTENT STANDARD 1.0: INTEGRATE CAREER AND TECHNICAL STUDENT ORGANIZATIONS (CTSOs)\*****PERFORMANCE STANDARD 1.1: EXPLORE THE HISTORY AND ORGANIZATION OF CTOS**

- 1.1.1 Discuss the requirements of CTSO participation/involvement as described in Carl D. Perkins Law
- 1.1.2 Research nationally recognized CTOS
- 1.1.3 Investigate the impact of federal and state government regarding the progression and operation of CTOS (e.g., Federal Statutes and Regulations, Nevada Administrative Code [NAC], Nevada Revised Statutes [NRS])

**PERFORMANCE STANDARD 1.2: DEVELOP LEADERSHIP SKILLS**

- 1.2.1 Discuss the purpose of parliamentary procedure
- 1.2.2 Demonstrate the proper use of parliamentary procedure
- 1.2.3 Differentiate between an office and a committee
- 1.2.4 Discuss the importance of participation in local, regional, state, and national conferences, events, and competitions
- 1.2.5 Participate in local, regional, state, or national conferences, events, or competitions
- 1.2.6 Describe the importance of a constitution and bylaws to the operation of a CTSO chapter

**PERFORMANCE STANDARD 1.3: PARTICIPATE IN COMMUNITY SERVICE**

- 1.3.1 Explore opportunities in community service-related work-based learning (WBL)
- 1.3.2 Participate in a service learning (program related) and/or community service project or activity
- 1.3.3 Engage with business and industry partners for community service

**PERFORMANCE STANDARD 1.4: DEVELOP PROFESSIONAL AND CAREER SKILLS**

- 1.4.1 Demonstrate college and career readiness (e.g., applications, resumes, interview skills, presentation skills)
- 1.4.2 Describe the appropriate professional/workplace attire and its importance
- 1.4.3 Investigate industry-standard credentials/certifications available within this Career Cluster™
- 1.4.4 Participate in authentic contextualized instructional activities
- 1.4.5 Demonstrate technical skills in various student organization activities/events

**PERFORMANCE STANDARD 1.5: UNDERSTAND THE RELEVANCE OF CAREER AND TECHNICAL EDUCATION (CTE)**

- 1.5.1 Make a connection between program standards to career pathway(s)
- 1.5.2 Explain the importance of participation and completion of a program of study
- 1.5.3 Promote community awareness of local student organizations associated with CTE programs

\*Refer to the program of study Curriculum Framework for appropriate CTSO(s).

**CONTENT STANDARD 2.0: BIOMEDICAL SCIENCE AS INQUIRY****PERFORMANCE STANDARD 2.1: INVESTIGATION AND ANALYSIS OF BIOMEDICAL PROBLEMS**

- 2.1.1 Identify a biomedical problem
- 2.1.2 Discuss ethical research policies and practices
- 2.1.3 Design a controlled experiment
- 2.1.4 Identify the dependent and independent variables
- 2.1.5 Collect and document key information gathered during the experiment
- 2.1.6 Graph and analyze experimental data
- 2.1.7 Describe the structure and functions of deoxyribonucleic acid (DNA), genes, and chromosomes
- 2.1.8 Explain how DNA is manipulated and analyzed
- 2.1.9 Utilize appropriate medical terminology and abbreviations
- 2.1.10 Evaluate web resources to determine their level of credibility

**CONTENT STANDARD 3.0: EXPLORATION OF AUTOIMMUNE HUMAN DISEASES****PERFORMANCE STANDARD 3.1: RECOGNIZING AUTOIMMUNE DISEASES**

- 3.1.1 Define and describe autoimmune diseases and their characteristics
- 3.1.2 Interpret laboratory blood level data and explain results
- 3.1.3 Diagram and summarize positive and negative feedback loops
- 3.1.4 Investigate the variety of medical interventions available
- 3.1.5 Compare and contrast complications of autoimmune diseases
- 3.1.6 Discuss the impact of living with an autoimmune disease

**PERFORMANCE STANDARD 3.2: EFFECTS OF HUMAN NUTRITION**

- 3.2.1 Analyze the nutritional content of food
- 3.2.2 Utilize food labels and food content for nutritional choices
- 3.2.3 Relate the structure of macromolecules to their function in the human body
- 3.2.4 Describe the role of human nutrition in autoimmune diseases



**CONTENT STANDARD 4.0: EXPLORATION OF GENETIC DISEASES****PERFORMANCE STANDARD 4.1: RECOGNIZING GENETIC DISEASES**

- 4.1.1 Define and describe genetic diseases and their characteristics
- 4.1.2 Investigate the variety of medical interventions available
- 4.1.3 Compare and contrast complications of genetic diseases
- 4.1.4 Discuss the impact of living with a genetic disease

**PERFORMANCE STANDARD 4.2: UNDERSTANDING THE ROLE OF GENES, CHROMOSOMES, AND INHERITANCE**

- 4.2.1 Explain how the sequence of nucleotides in DNA determines the sequence of amino acids in a protein
- 4.2.2 Diagram the process of protein synthesis
- 4.2.3 Demonstrate transcription and translation to create a simulated protein
- 4.2.4 Analyze the effect that base pair mutations have on a simulated protein
- 4.2.5 Compare and contrast the processes of mitosis and meiosis
- 4.2.6 Model the patterns of inheritance
- 4.2.7 Explain how pedigrees can be used to determine the mode of inheritance of genetic diseases
- 4.2.8 Analyze pedigrees to calculate the probability of inheriting a trait or disease

**CONTENT STANDARD 5.0: EXPLORATION OF LIFESTYLE DISEASES****PERFORMANCE STANDARD 5.1: RECOGNIZE LIFESTYLE DISEASES**

- 5.1.1 Define and describe lifestyle diseases and their characteristics
- 5.1.2 Investigate the variety of medical interventions available
- 5.1.3 Compare and contrast complications of lifestyle diseases

**PERFORMANCE STANDARD 5.2: UNDERSTAND THE STRUCTURE AND FUNCTION OF THE CARDIOVASCULAR SYSTEM**

- 5.2.1 Identify the main structures of the heart and describe their functions
- 5.2.2 Diagram the flow of blood to, through, and from the heart
- 5.2.3 Understand the electrical activity in the heart
- 5.2.4 Compare the structure and function of arteries and veins
- 5.2.5 Define and measure heart rate and blood pressure

**PERFORMANCE STANDARD 5.3: UNDERSTANDING CARDIOVASCULAR DISEASES**

- 5.3.1 Define and describe cardiovascular diseases and their characteristics
- 5.3.2 Compare and contrast the role of high-density lipoprotein (HDL) and low-density lipoprotein (LDL) in the body and how each relates to health
- 5.3.3 Describe how cholesterol buildup can impact blood flow through arteries
- 5.3.4 Identify risk factors for cardiovascular diseases
- 5.3.5 Explain how lifestyle changes as well as medication or medical treatment may help decrease heart disease risk
- 5.3.6 Discuss diagnostic tools and surgical interventions

**CONTENT STANDARD 6.0: EXPLORATION OF INFECTIOUS DISEASES****PERFORMANCE STANDARD 6.1: INTRODUCTION TO MICROBIOLOGY**

- 6.1.1 Compare and contrast the biology and pathology of various infectious agents
- 6.1.2 Differentiate the mode of transmission and reproduction of various infectious agents
- 6.1.3 Describe the prevention of and treatment for various infectious agents
- 6.1.4 Utilize aseptic techniques
- 6.1.5 Implement techniques and procedures using lab equipment to study microorganisms

**CONTENT STANDARD 7.0: EXPLORATION OF THE BIOMEDICAL PROFESSION****PERFORMANCE STANDARD 7.1: INVESTIGATE THE ROLES AND RESPONSIBILITIES OF VARIOUS BIOMEDICAL PROFESSIONS**

- 7.1.1 Research a variety of career pathways
- 7.1.2 Compare and contrast educational requirements and programs
- 7.1.3 Interpret codes of conduct for a variety of career pathways
- 7.1.4 Explain the importance of confidentiality when dealing with patients and describe the major patient protections written into the Health Insurance Portability and Accountability Act (HIPAA)

**CONTENT STANDARD 8.0: EXPLORATION OF BODY SYSTEMS****PERFORMANCE STANDARD 8.1: INTRODUCTION TO HUMAN ANATOMY**

- 8.1.1 Identify the systems and structures involved in basic body processes
- 8.1.2 Explain the functions of different human body systems, and list the major organs within each system
- 8.1.3 Describe the interface between and among multiple body systems
- 8.1.4 Explain and demonstrate how directional terms and regional terms can be used to pinpoint location on the body

**PERFORMANCE STANDARD 8.2: PRINCIPLES OF HISTOLOGY**

- 8.2.1 Identify characteristics of the four categories of human tissue
- 8.2.2 Relate the structure of various human tissue types to function

**PERFORMANCE STANDARD 8.3: INTRODUCTION TO DNA BIOTECHNOLOGY**

- 8.3.1 Explain how restriction enzymes cut DNA
- 8.3.2 Describe how contemporary technologies visualize DNA fragments with different mass
- 8.3.3 Demonstrate the steps of current technology to analyze DNA fingerprints
- 8.3.4 Outline current biometrics technology

**CONTENT STANDARD 9.0: EXPLORATION OF HUMAN BODY COMMUNICATION SYSTEMS****PERFORMANCE STANDARD 9.1: UNDERSTAND THE CENTRAL NERVOUS SYSTEM**

- 9.1.1 Describe the structure and function of the central nervous system (CNS)
- 9.1.2 Differentiate major regions of the human brain and spinal cord
- 9.1.3 Demonstrate knowledge of the CNS structure and relationship to specific human actions, emotions, and/or dysfunctions

**PERFORMANCE STANDARD 9.2: UNDERSTAND PERIPHERAL NERVOUS SYSTEM**

- 9.2.1 Describe the structure and function of a neuron
- 9.2.2 Explain how neurons communicate
- 9.2.3 Differentiate between involuntary and voluntary responses
- 9.2.4 Investigate the sensory organs and receptors
- 9.2.5 Construct a pathway from a sensory stimulus to a motor response
- 9.2.6 Explore reaction time and reflexes in the human body

**PERFORMANCE STANDARD 9.3: UNDERSTAND CHEMICAL COMMUNICATION**

- 9.3.1 Describe the way in which hormones interact with target cells
- 9.3.2 Recognize that the human body uses feedback mechanisms to maintain proper hormone levels
- 9.3.3 Model a feedback loop that shows how the body maintains homeostasis

**CONTENT STANDARD 10.0: EXPLORATION OF METABOLISM****PERFORMANCE STANDARD 10.1: INTRODUCTION TO METABOLIC SYSTEMS**

- 10.1.1 List and describe the human body systems that create, process, and distribute food, water, and oxygen
- 10.1.2 Recognize that external and internal factors affect the body's ability to utilize biological resources and maintain homeostasis

**PERFORMANCE STANDARD 10.2: UNDERSTAND THE DIGESTIVE SYSTEM**

- 10.2.1 Describe the structure and function of the organs in the digestive system
- 10.2.2 Outline the fate of nutrients as they travel through the digestive system
- 10.2.3 Recognize that the structure of the enzyme's active site determines the substrate it acts upon
- 10.2.4 Explain the factors that affect the rate of an enzyme-catalyzed reaction
- 10.2.5 List specific enzymes that digest carbohydrates, fats, and proteins
- 10.2.6 Explain how digestion results in energy stored as adenosine triphosphate (ATP)

**PERFORMANCE STANDARD 10.3: UNDERSTAND THE RESPIRATORY SYSTEM**

- 10.3.1 Describe the structure and function of the respiratory system
- 10.3.2 Diagram the basic mechanics of breathing
- 10.3.3 Research factors that affect internal and external respiration
- 10.3.4 Discuss techniques used to measure various types of respiratory capacity

**PERFORMANCE STANDARD 10.4: UNDERSTAND THE URINARY SYSTEM**

- 10.4.1 Describe the structure and function of the urinary system
- 10.4.2 Describe how the structure of the kidney relates to its function in the body
- 10.4.3 Explain the importance of the nephron
- 10.4.4 Explain the connections between urine and blood
- 10.4.5 Describe conditions that could be diagnosed through urinalysis

**CONTENT STANDARD 11.0: EXPLORATION OF EXERCISE PHYSIOLOGY****PERFORMANCE STANDARD 11.1: UNDERSTAND THE SKELETAL SYSTEM**

- 11.1.1 Describe the structure and function of the skeletal system
- 11.1.2 Identify and locate bones of the human skeletal system
- 11.1.3 Describe the structure and function of the different types of bone
- 11.1.4 Distinguish between skeletal injury and disease
- 11.1.5 Outline the stages of bone healing
- 11.1.6 Categorize the different types of joints and their function
- 11.1.7 Discuss osteokinematics and methods of measuring range of motion

**PERFORMANCE STANDARD 11.2: UNDERSTAND THE MUSCULAR SYSTEM**

- 11.2.1 Describe the structure and function of the muscular system
- 11.2.2 Describe how the three types of muscle tissue differ in structure and function
- 11.2.3 Explain the sliding filament mechanism of muscle contraction

**PERFORMANCE STANDARD 11.3: UNDERSTAND THE CARDIO-RESPIRATORY SYSTEM**

- 11.3.1 Describe the structure and function of the cardio-respiratory system
- 11.3.2 Explain the relationship between the heart and the lungs
- 11.3.3 Review blood flow in pulmonary and systemic circulation
- 11.3.4 Research diseases or lifestyle habits that affect the cardio-respiratory system
- 11.3.5 Discuss methods used to diagnose cardio-respiratory disease

**PERFORMANCE STANDARD 11.4: UNDERSTAND ENERGY AND MOTION**

- 11.4.1 Explain how the body uses high energy molecules to supply ATP to working muscles
- 11.4.2 Identify the factors that contribute to muscle fatigue
- 11.4.3 Describe ways to prepare for a physical event



**CONTENT STANDARD 12.0: EXPLORATION OF IMMUNOLOGY****PERFORMANCE STANDARD 12.1: UNDERSTAND THE INTEGUMENTARY SYSTEM**

- 12.1.1 Describe the structure and function of the integumentary system
- 12.1.2 Identify the accessory organs and sensory receptors
- 12.1.3 Research disease and injury of the integumentary system

**PERFORMANCE STANDARD 12.2: UNDERSTAND THE LYMPHATIC SYSTEM**

- 12.2.1 Describe the structure and function of the lymphatic system and immunity
- 12.2.2 Compare and contrast antibodies and antigens
- 12.2.3 Diagram an immune response to an infection
- 12.2.4 Research diseases of the lymphatic system

**CONTENT STANDARD 13.0: EXPLORATION OF HOMEOSTASIS****PERFORMANCE STANDARD 13.1: UNDERSTANDING HEALTH AND WELLNESS**

- 13.1.1 Describe how the body systems respond to environmental change
- 13.1.2 Explain how the systems work together to maintain homeostasis
- 13.1.3 Research how homeostasis can be manipulated
- 13.1.4 Illustrate how disease in the human body disrupts homeostasis

**CONTENT STANDARD 14.0: EXPLORATION OF PATHOGEN DEFENSE****PERFORMANCE STANDARD 14.1: INVESTIGATING COMMUNITY HEALTH**

- 14.1.1 Explore entities and aspects involved in community health
- 14.1.2 Identify current available medical interventions
- 14.1.3 Describe the use of bioinformatics
- 14.1.4 Research current diagnostic technologies
- 14.1.5 Compare and contrast qualitative and quantitative data
- 14.1.6 Illustrate the process involved in a disease outbreak
- 14.1.7 Analyze complications and outcomes of pathogenic disease
- 14.1.8 Research careers involved in the study and prevention of chronic and infectious diseases

**PERFORMANCE STANDARD 14.2: PREVENTING AND TREATING PATHOGENIC DISEASE**

- 14.2.1 Describe the pathways through which bacterial cells transfer genes
- 14.2.2 Explain the method of action for different classes of antibiotics
- 14.2.3 Outline antibiotic resistance
- 14.2.4 Describe how vaccines interact with the human immune system
- 14.2.5 Investigate the various laboratory methods that are used to manufacture vaccines
- 14.2.6 Research diseases that have been impacted by vaccination

**CONTENT STANDARD 15.0: EXPLORATION OF MOLECULAR BIOLOGY****PERFORMANCE STANDARD 15.1: RESEARCHING TECHNIQUES OF GENETIC TESTING AND SCREENING**

- 15.1.1 Research the process involved in DNA extraction
- 15.1.2 Describe the role of polymerase chain reaction (PCR) in genetic testing
- 15.1.3 Explain the relationship of DNA polymorphisms and genetic disorders or diseases
- 15.1.4 Describe current prenatal testing and therapy
- 15.1.5 Analyze genetic screening results and interpret patient outcomes

**PERFORMANCE STANDARD 15.2: UNDERSTANDING GENETIC FUTURE AND BIOETHICS**

- 15.2.1 Explain how gene therapy can treat a genetic disorder or disease
- 15.2.2 Research current methods for manipulating and modifying cells
- 15.2.3 Outline the process of reproductive cloning
- 15.2.4 Discuss genetic discrimination
- 15.2.5 Debate the safety and overall effectiveness of gene therapy
- 15.2.6 Defend an argument governing future gene therapy research

**CONTENT STANDARD 16.0: EXPLORATION OF ONCOLOGY****PERFORMANCE STANDARD 16.1: PREVENTING, DETECTING AND TREATING CANCER**

- 16.1.1 Research and categorize the different types of cancer
- 16.1.2 Investigate potential risks and contributing factors in the development of cancer
- 16.1.3 Describe the current diagnostic methods available
- 16.1.4 Diagram the differences in the appearance of normal cells and cancer cells
- 16.1.5 Research current treatment in Western medicine and alternative therapies

**PERFORMANCE STANDARD 16.2: FUTURE OF CANCER TREATMENT**

- 16.2.1 Research a clinical trial
- 16.2.2 Develop and present a clinical trial proposal for a nanotechnology-based cancer treatment

**CONTENT STANDARD 17.0: EXPLORATION OF APPLIED BIOMEDICAL ENGINEERING****PERFORMANCE STANDARD 17.1: INTRODUCTION TO BIOTECHNOLOGY**

- 17.1.1 Explore the history of biotechnology
- 17.1.2 Describe xenotransplantation or tissue engineering work, as well as their potential risks, benefits, challenges, and ethical or moral concerns
- 17.1.3 Outline the steps required to produce a protein in the laboratory
- 17.1.4 Explain the use of chromatography and electrophoresis as protein separation techniques
- 17.1.5 Understand the process involved in transforming bacteria
- 17.1.6 Demonstrate how amino acids interact using a protein model

**PERFORMANCE STANDARD 17.2: CRITIQUING CURRENT STANDARDS OF CARE**

- 17.2.1 Research policy criteria for organ donor and recipients
- 17.2.2 Compare and contrast various types of transplants
- 17.2.3 Describe screening requirements to match an organ donor with a compatible recipient
- 17.2.4 Explore emerging surgical techniques
- 17.2.5 Compare and contrast non-invasive and invasive diagnostic procedures
- 17.2.6 Discuss prosthetic science
- 17.2.7 Debate xenotransplantation and tissue engineering

**CROSSWALKS AND ALIGNMENTS****CROSSWALKS (ACADEMIC STANDARDS)**

The crosswalk of the Biomedical Standards shows links to the Nevada Academic Content Standards. The crosswalk identifies the performance indicators in which the learning objectives in the Biomedical program support academic learning. The performance indicators are grouped according to their content standard and are crosswalked to the Nevada Academic Content Standards in English Language Arts, Mathematics, and Science.

**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 Biomedical Standards Performance Indicators and the Mathematical Practices. This alignment identifies the performance indicators in which the learning objectives in the Biomedical 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 Biomedical Standards Performance Indicators and the Science and Engineering Practices. This alignment identifies the performance indicators in which the learning objectives in the Biomedical program support academic learning.

**CROSSWALKS (COMMON CAREER TECHNICAL CORE)**

The crosswalk of the Biomedical Standards shows links to the Common Career Technical Core. The crosswalk identifies the performance indicators in which the learning objectives in the Biomedical 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 Biomedical Standards are crosswalked to the Health Science Career Cluster™ and the Research and Development Career Pathway.

**CROSSWALK OF BIOMEDICAL STANDARDS  
AND THE NEVADA ACADEMIC CONTENT STANDARDS**

**CONTENT STANDARD 1.0: INTEGRATE CAREER AND TECHNICAL STUDENT ORGANIZATIONS (CTSOs)**

Performance Indicators	Nevada Academic Content Standards
1.1.1	<p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p>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.</p> <p>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.</p>
1.1.2	<p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p>
1.1.3	<p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p>



Performance Indicators	Nevada Academic Content Standards
1.2.1	<p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p>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.</p> <p>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.</p>
1.2.4	<p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p>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.</p> <p>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.</p>
1.2.5	<p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>
1.4.1	<p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>

Performance Indicators	Nevada Academic Content Standards
1.4.2	<p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p>
1.4.3	<p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p>
1.4.4	<p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>WHST.11-12.5 Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.</p>
1.4.5	<p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p>

Performance Indicators	Nevada Academic Content Standards
1.5.2	<p><b>English Language Arts: Language Standards</b>  L.11-12.6 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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>  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.11-12.4 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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>  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.</p>

CONTENT STANDARD 2.0: BIOMEDICAL SCIENCE AS INQUIRY

Performance Indicators	Nevada Academic Content Standards
2.1.2	<p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p>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.</p>
2.1.7	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p> <p>HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b></p> <p>HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.</p> <p>HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p>

Performance Indicators	Nevada Academic Content Standards
2.1.7 (cont.)	<p><b>Science: HS-Biological Evolution: Unity and Diversity</b>            HS-LS4-1 Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p>
2.1.8	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>            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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>            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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>            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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>            HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p> <p>HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b>            HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.</p> <p>HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b>            HS-LS4-1 Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p>

Performance Indicators	Nevada Academic Content Standards
2.1.10	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p>

## CONTENT STANDARD 3.0: EXPLORATION OF AUTOIMMUNE HUMAN DISEASES

Performance Indicators	Nevada Academic Content Standards
3.1.1	<p><b>Science: HS-Hereditry: Inheritance and Variation of Traits</b>            HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p>
3.1.2	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>            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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>            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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>            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.</p> <p><b>Math: Algebra – Seeing Structure in Expressions</b>            ASSE.A.1a Interpret parts of an expression, such as terms, factors, and coefficients.</p>
3.1.3	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>            HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
3.1.4	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>            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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>            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.</p>

Performance Indicators	Nevada Academic Content Standards
<p>3.1.5</p>	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>                      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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b>                      HS-LS4-4 Construct an explanation based on evidence for how natural selection leads to adaptation of populations.</p>
<p>3.1.6</p>	<p><b>English Language Arts: Speaking and Listening Standards</b>                      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.</p>



Performance Indicators	Nevada Academic Content Standards
3.2.1	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Math: Statistics and Probability – Using Probability to Make Decisions</b></p> <p>SMD.B.7 (+) Analyze decisions and strategies using probability concepts (e.g., product testing, medical testing, pulling a hockey goalie at the end of a game).</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p>HS-LS1-7 Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.</p>
3.2.2	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p>HS-LS1-7 Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.</p>
3.2.3	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p>HS-LS1-7 Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.</p>

Performance Indicators	Nevada Academic Content Standards
3.2.4	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b></p> <p>HS-LS4-5 Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</p>

## CONTENT STANDARD 4.0: EXPLORATION OF GENETIC DISEASES

Performance Indicators	Nevada Academic Content Standards
4.1.1	<p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b></p> <p>HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.</p> <p>HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b></p> <p>HS-LS4-1 Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p> <p>HS-LS4-2 Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p> <p>HS-LS4-3 Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p>
4.1.2	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b></p> <p>HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.</p> <p>HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p>

Performance Indicators	Nevada Academic Content Standards
4.1.3	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>                      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.11-12.4 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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b>                      HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.                      HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.                      HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b>                      HS-LS4-2 Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.                      HS-LS4-3 Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p>
4.1.4	<p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b>                      HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.                      HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.                      HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p>

Performance Indicators	Nevada Academic Content Standards
4.2.1	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>  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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>  HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p> <p>HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b>  HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p>
4.2.2	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>  HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b>  HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p>

Performance Indicators	Nevada Academic Content Standards
4.2.3	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b></p> <p>HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.</p>
4.2.4	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b></p> <p>HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.</p>

Performance Indicators	Nevada Academic Content Standards
4.2.5	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>  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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>  HS-LS1-4 Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.</p>
4.2.6	<p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b>  HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.</p> <p>HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b>  HS-LS4-1 Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p> <p>HS-LS4-2 Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p> <p>HS-LS4-3 Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p> <p>HS-LS4-4 Construct an explanation based on evidence for how natural selection leads to adaptation of populations.</p>

Performance Indicators	Nevada Academic Content Standards
4.2.7	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>                      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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b>                      HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b>                      HS-LS4-1 Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p> <p>HS-LS4-3 Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p>



Performance Indicators	Nevada Academic Content Standards
4.2.8	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b></p> <p>HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.</p> <p>HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b></p> <p>HS-LS4-3 Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p>

CONTENT STANDARD 5.0: EXPLORATION OF LIFESTYLE DISEASES

Performance Indicators	Nevada Academic Content Standards
5.1.2	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p>
5.1.3	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>                      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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p>
5.2.1	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
5.2.2	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p>

Performance Indicators	Nevada Academic Content Standards
5.2.3	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
5.2.4	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
5.2.5	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
5.3.1	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>

Performance Indicators	Nevada Academic Content Standards
5.3.2	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>                      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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>

Performance Indicators	Nevada Academic Content Standards
5.3.3	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
5.3.4	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
5.3.5	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>

Performance Indicators	Nevada Academic Content Standards
5.3.6	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>                      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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>

## CONTENT STANDARD 6.0: EXPLORATION OF INFECTIOUS DISEASES

Performance Indicators	Nevada Academic Content Standards
6.1.1	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>  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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>  HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-4 Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.</p> <p>HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b>  HS-LS2-6 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.</p> <p>HS-LS2-8 Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.</p>

Performance Indicators	Nevada Academic Content Standards
<p>6.1.1 (cont.)</p>	<p><b>Science: HS-Biological Evolution: Unity and Diversity</b></p> <p>HS-LS4-1 Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p> <p>HS-LS4-2 Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p> <p>HS-LS4-3 Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p> <p>HS-LS4-4 Construct an explanation based on evidence for how natural selection leads to adaptation of populations.</p> <p>HS-LS4-5 Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</p> <p>HS-LS4-6 Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.</p>
<p>6.1.2</p>	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p>



Performance Indicators	Nevada Academic Content Standards
6.1.2 (cont.)	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-4 Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.</p> <p>HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b></p> <p>HS-LS2-6 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.</p> <p>HS-LS2-8 Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b></p> <p>HS-LS4-1 Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p> <p>HS-LS4-2 Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p> <p>HS-LS4-3 Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p> <p>HS-LS4-4 Construct an explanation based on evidence for how natural selection leads to adaptation of populations.</p> <p>HS-LS4-5 Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</p> <p>HS-LS4-6 Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.</p>

Performance Indicators	Nevada Academic Content Standards
6.1.3	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-4 Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.</p> <p>HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b></p> <p>HS-LS2-6 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions but changing conditions may result in a new ecosystem.</p> <p>HS-LS2-8 Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.</p>

Performance Indicators	Nevada Academic Content Standards
6.1.3 (cont.)	<p><b>Science: HS-Biological Evolution: Unity and Diversity</b></p> <p>HS-LS4-1 Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p> <p>HS-LS4-2 Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p> <p>HS-LS4-3 Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p> <p>HS-LS4-4 Construct an explanation based on evidence for how natural selection leads to adaptation of populations.</p> <p>HS-LS4-5 Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</p> <p>HS-LS4-6 Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.</p>
6.1.4	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-4 Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.</p> <p>HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b></p> <p>HS-LS2-6 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions but changing conditions may result in a new ecosystem.</p> <p>HS-LS2-8 Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.</p>

Performance Indicators	Nevada Academic Content Standards
<p>6.1.4 (cont.)</p>	<p><b>Science: HS-Biological Evolution: Unity and Diversity</b></p> <p>HS-LS4-1      Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p> <p>HS-LS4-2      Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p> <p>HS-LS4-3      Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p> <p>HS-LS4-4      Construct an explanation based on evidence for how natural selection leads to adaptation of populations.</p> <p>HS-LS4-5      Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</p> <p>HS-LS4-6      Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.</p>
<p>6.1.5</p>	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-1      Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p> <p>HS-LS1-2      Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-4      Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.</p> <p>HS-LS1-6      Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b></p> <p>HS-LS2-6      Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions but changing conditions may result in a new ecosystem.</p> <p>HS-LS2-8      Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.</p>

Performance Indicators	Nevada Academic Content Standards
6.1.5 (cont.)	<p><b>Science: HS-Biological Evolution: Unity and Diversity</b></p> <p>HS-LS4-1      Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p> <p>HS-LS4-2      Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p> <p>HS-LS4-3      Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p> <p>HS-LS4-4      Construct an explanation based on evidence for how natural selection leads to adaptation of populations.</p> <p>HS-LS4-5      Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</p> <p>HS-LS4-6      Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.</p>

**CONTENT STANDARD 7.0: EXPLORATION OF THE BIOMEDICAL PROFESSION**

Performance Indicators	Nevada Academic Content Standards
7.1.1	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p>

Performance Indicators	Nevada Academic Content Standards
7.1.2	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>  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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>  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.</p>

Performance Indicators	Nevada Academic Content Standards
7.1.3	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p>



Performance Indicators	Nevada Academic Content Standards
7.1.4	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>  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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>  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.</p>

**CONTENT STANDARD 8.0: EXPLORATION OF BODY SYSTEMS**

Performance Indicators	Nevada Academic Content Standards
8.1.1	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
8.1.2	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>

Performance Indicators	Nevada Academic Content Standards
8.1.3	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>  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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>  HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
8.1.4	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>  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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>  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.</p>
8.2.1	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>  HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p>

Performance Indicators	Nevada Academic Content Standards
8.2.2	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
8.3.1	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p>

Performance Indicators	Nevada Academic Content Standards
8.3.2	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p>
8.3.3	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b></p> <p>HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p>

CONTENT STANDARD 9.0: EXPLORATION OF HUMAN BODY COMMUNICATION SYSTEMS

Performance Indicators	Nevada Academic Content Standards
9.1.1	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>                      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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
9.1.2	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>                      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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p>

Performance Indicators	Nevada Academic Content Standards
9.1.3	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>  HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
9.2.1	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>  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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>  HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p>

Performance Indicators	Nevada Academic Content Standards
9.2.2	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>                      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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
9.2.3	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>                      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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>



Performance Indicators	Nevada Academic Content Standards
9.2.4	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b> 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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b> 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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b> HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
9.2.5	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b> HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
9.2.6	<p><b>English Language Arts: Reading Standards for Informational Text</b> RI.11-12.3 Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.</p> <p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b> 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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b> HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>

Performance Indicators	Nevada Academic Content Standards
<p>9.3.1</p>	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>                      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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
<p>9.3.2</p>	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
<p>9.3.3</p>	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>

## CONTENT STANDARD 10.0: EXPLORATION OF METABOLISM

Performance Indicators	Nevada Academic Content Standards
10.1.1	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p> <p>HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p>HS-LS1-7 Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.</p> <p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b></p> <p>HS-LS2-3 Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.</p>
10.1.2	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p> <p>HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p>HS-LS1-7 Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.</p> <p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b></p> <p>HS-LS2-3 Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.</p>

Performance Indicators	Nevada Academic Content Standards
<p>10.2.1</p>	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>                      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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
<p>10.2.2</p>	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p>HS-LS1-7 Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.</p>
<p>10.2.3</p>	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b>                      HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p>

Performance Indicators	Nevada Academic Content Standards
10.2.4	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b> 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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b> WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b> HS-LS1-7 Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.</p> <p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b> HS-LS2-3 Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.</p>
10.2.5	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b> HS-LS1-7 Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.</p> <p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b> HS-LS2-3 Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.</p>
10.2.6	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b> 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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b> WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b> HS-LS1-7 Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.</p> <p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b> HS-LS2-3 Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.</p>

Performance Indicators	Nevada Academic Content Standards
10.3.1	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b></p> <p>HS-LS2-3 Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.</p>
10.3.2	<p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b></p> <p>HS-LS2-3 Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.</p>

Performance Indicators	Nevada Academic Content Standards
10.3.3	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
10.3.4	<p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p>

Performance Indicators	Nevada Academic Content Standards
<p>10.4.1</p>	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>                      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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
<p>10.4.2</p>	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>                      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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>



Performance Indicators	Nevada Academic Content Standards
10.4.3	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b> 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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b> WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b> HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
10.4.4	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b> 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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b> WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b> HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
10.4.5	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b> 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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b> 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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b> 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.</p>

CONTENT STANDARD 11.0: EXPLORATION OF EXERCISE PHYSIOLOGY

Performance Indicators	Nevada Academic Content Standards
11.1.1	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
11.1.2	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p>

Performance Indicators	Nevada Academic Content Standards
11.1.3	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>  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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>  HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
11.1.4	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>  HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p>
11.1.5	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>  HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
11.1.6	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>  HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p>

Performance Indicators	Nevada Academic Content Standards
11.1.7	<p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p>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.</p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p>
11.2.1	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
11.2.2	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>

Performance Indicators	Nevada Academic Content Standards
11.2.3	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b> 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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b> WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b> HS-LS2-3 Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.</p>
11.3.1	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b> 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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b> 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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b> 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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b> HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
11.3.2	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b> 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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b> WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b> HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>

Performance Indicators	Nevada Academic Content Standards
11.3.3	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-2      Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p>
11.3.4	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-3      Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
11.3.5	<p><b>English Language Arts: Speaking and Listening Standards</b>                      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.</p> <p>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.</p> <p>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.</p>

Performance Indicators	Nevada Academic Content Standards
11.4.1	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>  WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>  HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p>HS-LS1-7 Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.</p> <p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b>  HS-LS2-3 Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.</p>
11.4.2	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>  HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p>HS-LS1-7 Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.</p> <p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b>  HS-LS2-3 Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.</p>
11.4.3	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>  HS-LS1-7 Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.</p> <p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b>  HS-LS2-3 Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions.</p>

CONTENT STANDARD 12.0: EXPLORATION OF IMMUNOLOGY

Performance Indicators	Nevada Academic Content Standards
12.1.1	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
12.1.2	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p>
12.1.3	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
12.2.1	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>



Performance Indicators	Nevada Academic Content Standards
12.2.2	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>  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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>  HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p>
12.2.3	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>  HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>

CONTENT STANDARD 13.0: EXPLORATION OF HOMEOSTASIS

Performance Indicators	Nevada Academic Content Standards
13.1.1	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b></p> <p>HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.</p> <p>HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p>

Performance Indicators	Nevada Academic Content Standards
13.1.2	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>  HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
13.1.3	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>  HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
13.1.4	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>  HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>

**CONTENT STANDARD 14.0: EXPLORATION OF PATHOGEN DEFENSE**

Performance Indicators	Nevada Academic Content Standards
14.1.1	<p><b>English Language Arts: Reading Standards for Informational Text</b>                      RI.11-12.3 Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.</p> <p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-Hereditry: Inheritance and Variation of Traits</b>                      HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.</p>
14.1.2	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>

Performance Indicators	Nevada Academic Content Standards
14.1.3	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
14.1.4	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p>

Performance Indicators	Nevada Academic Content Standards
14.1.5	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>                      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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
14.1.7	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b>                      HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b>                      HS-LS4-2 Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p> <p>HS-LS4-5 Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</p>

Performance Indicators	Nevada Academic Content Standards
14.2.1	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-4 Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.</p> <p>HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b></p> <p>HS-LS2-6 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.</p> <p>HS-LS2-8 Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.</p>

Performance Indicators	Nevada Academic Content Standards
<p>14.2.1 (cont.)</p>	<p><b>Science: HS-Biological Evolution: Unity and Diversity</b></p> <p>HS-LS4-1 Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p> <p>HS-LS4-2 Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p> <p>HS-LS4-3 Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p> <p>HS-LS4-4 Construct an explanation based on evidence for how natural selection leads to adaptation of populations.</p> <p>HS-LS4-5 Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</p> <p>HS-LS4-6 Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.</p>
<p>14.2.2</p>	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-4 Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.</p> <p>HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b></p> <p>HS-LS2-6 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions but changing conditions may result in a new ecosystem.</p> <p>HS-LS2-8 Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.</p>



Performance Indicators	Nevada Academic Content Standards
14.2.2 (cont.)	<p><b>Science: HS-Biological Evolution: Unity and Diversity</b></p> <p>HS-LS4-1 Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p> <p>HS-LS4-2 Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p> <p>HS-LS4-3 Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p> <p>HS-LS4-4 Construct an explanation based on evidence for how natural selection leads to adaptation of populations.</p> <p>HS-LS4-5 Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</p> <p>HS-LS4-6 Create or revise a simulation to test a solution to mitigate adverse impacts of human activity on biodiversity.</p>
14.2.3	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-4 Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.</p> <p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b></p> <p>HS-LS2-6 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions but changing conditions may result in a new ecosystem.</p> <p>HS-LS2-8 Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b></p> <p>HS-LS4-2 Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p> <p>HS-LS4-3 Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p> <p>HS-LS4-4 Construct an explanation based on evidence for how natural selection leads to adaptation of populations.</p> <p>HS-LS4-5 Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</p>

Performance Indicators	Nevada Academic Content Standards
14.2.4	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-4 Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.</p> <p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b></p> <p>HS-LS2-6 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions but changing conditions may result in a new ecosystem.</p> <p>HS-LS2-8 Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b></p> <p>HS-LS4-2 Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p> <p>HS-LS4-3 Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p> <p>HS-LS4-4 Construct an explanation based on evidence for how natural selection leads to adaptation of populations.</p> <p>HS-LS4-5 Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</p>
14.2.5	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p>

Performance Indicators	Nevada Academic Content Standards
14.2.6	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2      Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-4      Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.</p> <p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b></p> <p>HS-LS2-6      Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions but changing conditions may result in a new ecosystem.</p> <p>HS-LS2-8      Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b></p> <p>HS-LS4-2      Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p> <p>HS-LS4-3      Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p> <p>HS-LS4-4      Construct an explanation based on evidence for how natural selection leads to adaptation of populations.</p> <p>HS-LS4-5      Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</p>

CONTENT STANDARD 15.0: EXPLORATION OF MOLECULAR BIOLOGY

Performance Indicators	Nevada Academic Content Standards
15.1.1	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p> <p>HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b></p> <p>HS-LS4-1 Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p>

Performance Indicators	Nevada Academic Content Standards
15.1.2	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b></p> <p>HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.</p> <p>HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b></p> <p>HS-LS4-1 Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p> <p>HS-LS4-2 Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p> <p>HS-LS4-3 Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p> <p>HS-LS4-4 Construct an explanation based on evidence for how natural selection leads to adaptation of populations.</p>

Performance Indicators	Nevada Academic Content Standards
15.1.3	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b>                      HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.</p> <p>HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b>                      HS-LS4-1 Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p> <p>HS-LS4-2 Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p> <p>HS-LS4-3 Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p> <p>HS-LS4-4 Construct an explanation based on evidence for how natural selection leads to adaptation of populations.</p>

Performance Indicators	Nevada Academic Content Standards
15.1.5	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>  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.</p> <p><b>Science: HS-Hereditry: Inheritance and Variation of Traits</b>  HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.  HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.  HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b>  HS-LS4-1 Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.  HS-LS4-2 Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.  HS-LS4-3 Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.  HS-LS4-4 Construct an explanation based on evidence for how natural selection leads to adaptation of populations.  HS-LS4-5 Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</p>

Performance Indicators	Nevada Academic Content Standards
15.2.1	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-4 Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b></p> <p>HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.</p> <p>HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b></p> <p>HS-LS4-2 Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p> <p>HS-LS4-3 Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p>
15.2.2	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b></p> <p>HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.</p> <p>HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b></p> <p>HS-LS4-5 Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</p>



Performance Indicators	Nevada Academic Content Standards
15.2.3	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-4 Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b></p> <p>HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.</p> <p>HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b></p> <p>HS-LS4-2 Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p> <p>HS-LS4-3 Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p>
15.2.4	<p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p>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.</p> <p>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.</p>

Performance Indicators	Nevada Academic Content Standards
15.2.5	<p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p>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.</p> <p>SL.11-12.5 Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
15.2.6	<p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p>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.</p> <p>SL.11-12.5 Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.</p>

## CONTENT STANDARD 16.0: EXPLORATION OF ONCOLOGY

Performance Indicators	Nevada Academic Content Standards
16.1.1	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b></p> <p>HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.</p> <p>HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p>

Performance Indicators	Nevada Academic Content Standards
<p>16.1.2</p>	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b>                      HS-LS4-1 Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p> <p>HS-LS4-5 Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</p>
<p>16.1.3</p>	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>                      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.</p> <p><b>Science: HS-Waves and Their Applications in Technologies for Information Transfer</b>                      HS-PS4-5 Communicate technical information about how some technological devices use the principles of wave behavior and wave interactions with matter to transmit and capture information and energy.</p>

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16.1.4	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p> <p>HS-LS1-4 Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b></p> <p>HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b></p> <p>HS-LS4-2 Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p>
16.2.2	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p>

CONTENT STANDARD 17.0: EXPLORATION OF APPLIED BIOMEDICAL ENGINEERING

Performance Indicators	Nevada Academic Content Standards
17.1.1	<p><b>English Language Arts: Reading Standards for Informational Text</b>                      RI.11-12.3 Analyze a complex set of ideas or sequence of events and explain how specific individuals, ideas, or events interact and develop over the course of the text.</p> <p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>                      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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b>                      HS-LS3-1 Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-2 Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.</p> <p>HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b>                      HS-LS4-5 Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</p>

Performance Indicators	Nevada Academic Content Standards
17.1.2	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p> <p>HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
17.1.3	<p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p> <p>HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p>

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17.1.4	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>                      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.11-12.4 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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.                      HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p>
17.1.5	<p><b>Science: HS-Ecosystems: Interactions, Energy, and Dynamics</b>                      HS-LS2-1 Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.                      HS-LS2-2 Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.                      HS-LS2-4 Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.                      HS-LS2-6 Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b>                      HS-LS4-3 Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p>



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17.1.6	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b></p> <p>HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p> <p>HS-LS1-6 Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p>
17.2.1	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b></p> <p>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.</p> <p>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.</p>

Performance Indicators	Nevada Academic Content Standards
17.2.2	<p><b>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>English Language Arts: Speaking and Listening Standards</b>                      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.</p> <p>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.</p> <p><b>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</b>                      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.</p> <p><b>Science: HS-From Molecules to Organisms: Structures and Processes</b>                      HS-LS1-3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis.</p>
17.2.3	<p><b>Science: HS-Heredity: Inheritance and Variation of Traits</b>                      HS-LS3-3 Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p> <p><b>Science: HS-Biological Evolution: Unity and Diversity</b>                      HS-LS4-1 Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p>
17.2.6	<p><b>English Language Arts: Speaking and Listening Standards</b>                      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.</p> <p>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.</p> <p>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.</p>

Performance Indicators	Nevada Academic Content Standards
17.2.7	<p><b>English Language Arts: Speaking and Listening Standards</b></p> <p>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.</p> <p>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.</p> <p>SL.11-12.5 Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.</p>

**ALIGNMENT OF BIOMEDICAL STANDARDS  
AND THE MATHEMATICAL PRACTICES**

Mathematical Practices	Biomedical Performance Indicators
1. Make sense of problems and persevere in solving them.	2.1.6 3.1.2 14.1.5
2. Reason abstractly and quantitatively.	2.1.4; 14.1.5
3. Construct viable arguments and critique the reasoning of others.	15.2.5, 15.2.6
4. Model with mathematics.	14.1.5
5. Use appropriate tools strategically.	5.3.6 6.1.5 8.3.3 17.2.4
6. Attend to precision.	8.3.3; 16.2.2
7. Look for and make use of structure.	5.2.1, 5.2.4 9.1.1, 9.2.1 10.2.2, 10.3.1, 10.4.1, 10.4.2 11.1.1, 11.2.1, 11.3.1 12.1.1, 12.2.1
8. Look for and express regularity in repeated reasoning.	16.2.1

**ALIGNMENT OF BIOMEDICAL STANDARDS  
AND THE SCIENCE AND ENGINEERING PRACTICES**

Science and Engineering Practices	Biomedical Performance Indicators
1. Asking questions (for science) and defining problems (for engineering).	3.1.1 5.1.1
2. Developing and using models.	4.2.1-4.2.7 5.1.3; 5.2.1, 5.2.4; 5.3.1-5.3.3
3. Planning and carrying out investigations.	5.1.1 9.3.3 16.1.5 17.2.2
4. Analyzing and interpreting data.	2.1.1-2.1.6; 3.1.2, 3.2.1; 4.2.4, 4.2.8; 15.1.5
5. Using mathematics and computational thinking.	2.1.4 3.1.2 14.1.5
6. Constructing explanations (for science) and designing solutions (for engineering).	2.1.3 4.2.8 5.1.2 8.3.3 9.1.3
7. Engaging in argument from evidence.	2.1.1 5.3.5 15.2.5, 15.2.6
8. Obtaining, evaluating, and communicating information.	3.2.4 4.1.4; 4.2.7 5.3.5 6.1.3 8.1.3; 8.3.2 14.1.3; 14.2.1 16.2.2

**CROSSWALKS OF BIOMEDICAL STANDARDS  
AND THE COMMON CAREER TECHNICAL CORE**

Health Science Career Cluster	Performance Indicators
1. Determine academic subject matter, in addition to high school graduation requirements, necessary for pursuing a health science career.	7.1.1-7.1.3; 8.1.1-8.1.2 9.1.1-9.1.3 10.1.1, 10.2.1, 10.4.1
2. Explain the healthcare worker’s role within their department, their organization, and the overall healthcare system.	3.1.4; 6.1.1, 6.1.4 7.1.4; 8.1.4; 11.1.7
3. Identify existing and potential hazards to clients, coworkers, visitors, and self in the healthcare workplace.	5.1.1, 5.3.4-5.3.5 6.1.1
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.	3.1.4 14.1.1, 14.1.8
5. Analyze the legal and ethical responsibilities, limitations, and implications of actions within the healthcare workplace.	2.1.2; 5.1.2
6. Evaluate accepted ethical practices with respect to cultural, social, and ethnic differences within the healthcare workplace.	2.1.2; 5.1.2; 7.1.4

Biotechnology Research and Development Career Pathway	Performance Indicators
1. Summarize the goals of biotechnology research and development within legal and ethical protocols.	6.1.5; 7.1.4; 8.3.4 15.2.5; 17.1.4, 17.2.1
2. Apply the fundamentals of biochemistry, cell biology, genetics, mathematical concepts, microbiology, molecular biology, organic chemistry, and statistics to conduct effective biotechnology research and development of products.	2.1.8; 4.1.3; 6.1.5 8.1.4, 8.3.2, 8.3.4
3. Demonstrate basic knowledge of recombinant DNA, genetic engineering, bioprocessing, monoclonal antibody production, nanotechnology, bioinformatics, genomics, proteomics, and transcriptomics to conduct biotechnology research and development.	2.1.8; 2.1.3 8.3.2-8.3.4 11.2.3
4. Demonstrate the principles of solution preparation, sterile techniques, contamination control, and measurement and calibration of instruments used in biotechnology research.	5.3.6; 6.1.4 14.2.5; 15.1.5
5. Determine processes for product design and production and how that work contributes to an understanding of the biotechnology product development process.	5.3.6; 8.3.4; 16.2.2
6. Summarize and explain the larger ethical, moral, and legal issues related to biotechnology research, product development and use in society.	2.1.8; 7.1.4 15.1.4, 15.2.5-15.2.6