

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

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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 Digital Game Development 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 Digital Game Development 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 Digital Game Development 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 Digital Game Development 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, DGD is the Standards Reference Code for Digital Game Development. For Content Standard 2, Performance Standard 3 and Performance Indicator 4 the Standards Reference Code would be DGD.2.3.4.

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

- 1.1.1 Discuss the requirements of CTSO participation/involvement as described in Carl D. Perkins Law
- 1.1.2 Research nationally recognized CTSOs
- 1.1.3 Investigate the impact of federal and state government regarding the progression and operation of CTSOs (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: CONTEXT OF DIGITAL GAME DEVELOPMENT**PERFORMANCE STANDARD 2.1: UNDERSTAND HOW ADVANCES IN TECHNOLOGY IMPACT GAME DEVELOPMENT**

- 2.1.1 Explain the history of computing technologies that impact the game development industry
- 2.1.2 Explore non-digital games
- 2.1.3 Research the evolution of video games
- 2.1.4 Describe the different game genres
- 2.1.5 Evaluate contributions of individual game designers and developers

PERFORMANCE STANDARD 2.2: UNDERSTAND CAREERS IN GAME DESIGN AND DEVELOPMENT

- 2.2.1 Explore careers in designing and developing interactive experiences
- 2.2.2 Research careers in non-interactive media using real-time game engines, including Architectural, Engineering and Construction (AEC), virtual production, architectural visualization, simulation, product/industrial design, and advertising
- 2.2.3 Describe career pathways in software engineering, quality assurance, and testing
- 2.2.4 Review roles of the producer, designer, art director, tech artist, and programmer
- 2.2.5 Explain the career path of an independent developer
- 2.2.6 Research labor market information in related industries

CONTENT STANDARD 3.0: FOUNDATIONS OF GAME DESIGN AND DEVELOPMENT**PERFORMANCE STANDARD 3.1: EXPLAIN FUNDAMENTALS OF PRODUCTION**

- 3.1.1 Explain the interdependence of team members between artistic, technical, and production disciplines
- 3.1.2 Outline the process of developing a game from concept to delivery and support
- 3.1.3 Compare various types of collaboration tools, e.g., version control, shared storage, cloud services
- 3.1.4 Explain the value of version control
- 3.1.5 Explain the purpose of vertical slice
- 3.1.6 Discuss various optimization techniques
- 3.1.7 Describe good quality assurance practices

PERFORMANCE STANDARD 3.2: UNDERSTAND GAME STRUCTURE

- 3.2.1 Explore the components of game structure
- 3.2.2 Analyze the essentials of storytelling, including visual and environmental story telling
- 3.2.3 Explain the characteristics of a nonlinear story
- 3.2.4 Create rules for a game, e.g., levels and/or interactive flow
- 3.2.5 Compare conflict and outcomes
- 3.2.6 Develop objectives and outcomes for a game
- 3.2.7 Explain the importance of usability and how it impacts user experience
- 3.2.8 Explain in-game economies, motivators, and point systems

PERFORMANCE STANDARD 3.3: GAME DOCUMENTATION

- 3.3.1 Research various styles of game documentation
- 3.3.2 Develop a technical design document (TDD)
- 3.3.3 Develop components of a game design document (GDD)
- 3.3.4 Develop a list of required game assets
- 3.3.5 Produce a game design document
- 3.3.6 Produce a game pitch document
- 3.3.7 Present game documentation

PERFORMANCE STANDARD 3.4: INDUSTRY STANDARD GAME MECHANICS

- 3.4.1 Compare categories of game mechanics
- 3.4.2 Research victory condition mechanics of a game
- 3.4.3 Discuss relationships between game mechanics, game play, and interactivity
- 3.4.4 Investigate what makes a game engaging, “fun,” and playable to the user

CONTENT STANDARD 4.0: GAME DESIGN**PERFORMANCE STANDARD 4.1: UNDERSTAND FUNDAMENTALS OF DESIGN**

- 4.1.1 Evaluate the use of layout and composition
- 4.1.2 Explain color theory
- 4.1.3 Describe the principles of animation
- 4.1.4 Describe the role of perspective
- 4.1.5 Compare design considerations for environmental, assets, characters, and User Interface (UI) creation
- 4.1.6 Describe the characteristics and purposes of 2D, 2.5D, and 3D art
- 4.1.7 Evaluate the importance of artistic style and implement it with continuity

PERFORMANCE STANDARD 4.2: DESIGN LEVELS

- 4.2.1 Identify components of a level and its environment
- 4.2.2 Compare processes of creating interior versus exterior environments
- 4.2.3 Compare level design of linear games to open world games
- 4.2.4 Research terrains for a specific environment
- 4.2.5 Discuss the concept of leveling up with increasing complexity
- 4.2.6 Describe the impact of story (explicit, implicit, and emergent) on level design
- 4.2.7 Explain the importance of flow, distance, timing, and choke points
- 4.2.8 Storyboard levels including flow and choke points

PERFORMANCE STANDARD 4.3: DESIGN ASSETS AND CHARACTERS

- 4.3.1 Investigate the twelve major character archetypes
- 4.3.2 Contrast archetypes versus stereotypes as they relate to diversity and inclusion
- 4.3.3 Describe basic character backstory, strengths, and weaknesses
- 4.3.4 Explain the visual design of characters in relation to the “game feel” and artistic style
- 4.3.5 Describe the connection between character arc and character progression
- 4.3.6 Conceptualize and illustrate original game characters and assets
- 4.3.7 Examine the roles, purpose, and design of non-player characters (NPC)
- 4.3.8 Explain the difference in design between static and dynamic game objects, e.g., props, decorations versus characters, morphing objects
- 4.3.9 Detail the difference between organic and hard surfaces

PERFORMANCE STANDARD 4.4: DESIGN CUSTOM MECHANICS

- 4.4.1 Create a victory condition
- 4.4.2 Assemble immersive elements into a game
- 4.4.3 Establish a reward system and in-game economics
- 4.4.4 Apply game mechanics to a game world
- 4.4.5 Balance and test game mechanics

CONTENT STANDARD 5.0: PROGRAMMING FOR DIGITAL GAME DEVELOPMENT**PERFORMANCE STANDARD 5.1: UNDERSTAND LOGIC IN GAME DEVELOPMENT**

- 5.1.1 Explain basic logic statements (e.g., if/then, cause/effect)
- 5.1.2 Explain the purpose and use of functions
- 5.1.3 Describe nested functions
- 5.1.4 Describe uses of Boolean operators and symbols associated with them
- 5.1.5 Demonstrate proper use of order of operations
- 5.1.6 Use logical thinking to create a diagram of code execution
- 5.1.7 Describe various types of loop structures used in programming
- 5.1.8 Describe the differences between compiled and interpreted code
- 5.1.9 Explain methods for producing artificial intelligence (AI) to control Non-Playable Characters (NPC)
- 5.1.10 Research design patterns in game programming (single, factory, and state)

PERFORMANCE STANDARD 5.2: EXPLAIN PROGRAMMING LANGUAGE CONCEPTS

- 5.2.1 Differentiate between syntax and semantics
- 5.2.2 Identify differences between compile and runtime errors
- 5.2.3 List primitive data types
- 5.2.4 Describe how arrays are used to store objects in a list
- 5.2.5 Demonstrate input from different sources
- 5.2.6 Identify expected input and output of methods/functions
- 5.2.7 Explain the connection between visual programming and coding/scripting
- 5.2.8 Compare the use of constants and variables
- 5.2.9 Describe the implications of access modifiers (private/public, local/global)
- 5.2.10 Explore engine/programming documentation to understand available methods/functions
- 5.2.11 Describe object-oriented programming (OOP)

PERFORMANCE STANDARD 5.3: UTILIZE PROGRAMMING IN GAME DEVELOPMENT

- 5.3.1 Utilize code to modify objects based on collision detection and player activation
- 5.3.2 Develop code or visual script that changes aspects of player movement (e.g., sprint, jump)
- 5.3.3 Develop code or visual script that responds to a graphic user interface (GUI) input (e.g., user interface design [UI] button press)
- 5.3.4 Develop code or visual script that responds to hardware input (e.g., keyboard key or mouse press)
- 5.3.5 Generate test cases and expected results
- 5.3.6 Format and display the value of a variable to a GUI
- 5.3.7 Implement a basic point system for a game using visual scripting or code
- 5.3.8 Verify game functionality through testing and debugging

CONTENT STANDARD 6.0: BUILD A GAME**PERFORMANCE STANDARD 6.1: EXPLORE VARIOUS DEVELOPMENT ENVIRONMENTS AND BEST PRACTICES PER PIPELINE**

- 6.1.1 Explain the characteristics and major components of game engines (render, compiler, editor)
- 6.1.2 Research various game engines for a software platform, target hardware, game style, or genre
- 6.1.3 Research supplemental tools necessary to create a specific development pipeline
- 6.1.4 Describe a complete game pipeline including the use of primary and supplemental tools and how they are used
- 6.1.5 Compare world scales between software tools
- 6.1.6 Describe considerations for importing and exporting assets
- 6.1.7 Define a standard directory structure and file naming conventions

PERFORMANCE STANDARD 6.2: DEVELOP GAME LEVELS

- 6.2.1 Define the type, structure, and size of player environment
- 6.2.2 Place and define non-player characters (NPC) into the environment
- 6.2.3 Build boundaries, borders, and obstacles of levels within the game
- 6.2.4 Place triggers and develop scripted events
- 6.2.5 Create multiple levels for a game including start and closing screens and playable level(s)

PERFORMANCE STANDARD 6.3: UTILIZE GRAPHICAL USER INTERFACE (GUI)

- 6.3.1 Research examples of GUI in digital and real-world environments (e.g., Heads Up Display [HUD] and road signs)
- 6.3.2 Define and implement required elements for various GUIs
- 6.3.3 Create flowcharts that map the GUIs' functionality
- 6.3.4 Design GUIs that use standard text, 2-D, and 3-D elements (buttons, progress bars, icons, etc.)

PERFORMANCE STANDARD 6.4: USE ANIMATION IN GAME DEVELOPMENT

- 6.4.1 Create storyboards for planning animations
- 6.4.2 Change an object's state or position over time
- 6.4.3 Establish an object's relative speed (timing versus frame rate)
- 6.4.4 Describe the difference between global time and local time
- 6.4.5 Describe the difference between forward and inverse kinematics
- 6.4.6 Examine the process of particle creation and its application to game design
- 6.4.7 Explain how joints, sockets, bones, and skins are used
- 6.4.8 Create a parent/child hierarchy
- 6.4.9 Simulate rigid body dynamics (e.g., shattering wall, breaking glass)
- 6.4.10 Animate game objects using triggers
- 6.4.11 Describe the process of motion capture for animation
- 6.4.12 Practice the use of cinematics and camera movements in game engines

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PERFORMANCE STANDARD 6.5: INTEGRATE VARIOUS MEDIA TYPES

- 6.5.1 Integrate different types of audio (e.g., sound effects, ambient background, dialogue, user experience design (UX), and score)
- 6.5.2 Practice creating triggers for sound, mixes, and/or loops
- 6.5.3 Determine acceptable media formats and files for game development (e.g., sound, graphics, video)
- 6.5.4 Identify and import appropriate media into a game engine

PERFORMANCE STANDARD 6.6: CREATE GAME ART

- 6.6.1 Explain the application of low polygon and high polygon construction for real-time environments
- 6.6.2 Create game assets from references and game design documents (GDD)
- 6.6.3 Create hard surface and organic models using design principles (props or characters)
- 6.6.4 Apply texturing/surfacing/shading/grunging to models and normal mapping
- 6.6.5 Render or produce a high-resolution screenshot from within a game engine
- 6.6.6 Real-time render a video, animated sequence or cutscene in a game engine
- 6.6.7 Differentiate UVW mapping and world coordinate systems
- 6.6.8 Explain the importance of pre-baking lights and shadows for real-time interactive environments
- 6.6.9 Implement basic lighting for ambient and artificial light
- 6.6.10 Create an environment including terrain, foliage and/or static objects
- 6.6.11 Create custom materials/shaders
- 6.6.12 Describe the use of Level of Detail (LOD) substitution, MIP mapping textures, and culling objects

CONTENT STANDARD 7.0: LEGAL AND ETHICAL ISSUES IN GAME DESIGN AND DEVELOPMENT**PERFORMANCE STANDARD 7.1: UNDERSTAND LEGAL CONSIDERATIONS IN GAME DEVELOPMENT**

- 7.1.1 Research laws that govern intellectual property in diverse forms
- 7.1.2 Evaluate Creative Commons and open-source licensure
- 7.1.3 Explain copyright, trademark, and other intellectual property protection
- 7.1.4 Identify key elements of non-disclosure agreements (NDA) and contracts
- 7.1.5 Adhere to intellectual property laws and regulations and cite proprietary content and derivative works
- 7.1.6 Explain Entertainment Software Rating Board (ESRB) and other rating systems for digital games

PERFORMANCE STANDARD 7.2: EXPLAIN SECURITY ISSUES IN RELATION TO GAME DEVELOPMENT AND DESIGN

- 7.2.1 Explain invasion of privacy in the use of technology
- 7.2.2 Explore the issues of piracy and digital rights management (DRM)
- 7.2.3 Model acceptable security practices

PERFORMANCE STANDARD 7.3: UNDERSTAND THE IMPORTANCE OF ETHICS, DIVERSITY, AND INCLUSION

- 7.3.1 Discuss diversity and inclusivity in games and the gaming industry
- 7.3.2 Discuss social responsibility and issues concerning video gaming

CONTENT STANDARD 8.0: ADVANCED TOPICS IN DIGITAL GAME DEVELOPMENT**PERFORMANCE STANDARD 8.1: UNDERSTAND SOCIAL ASPECTS OF GAMING**

- 8.1.1 Describe integration of social components in a game
- 8.1.2 Explain the role of social media in the gaming community
- 8.1.3 Describe professional events in digital gaming

PERFORMANCE STANDARD 8.2: UNDERSTAND THE ROLE OF NETWORKING

- 8.2.1 Summarize characteristics of cloud gaming
- 8.2.2 Evaluate the advances of multi-player gaming

PERFORMANCE STANDARD 8.3: EXPLORE ADVANCES IN DEVICES

- 8.3.1 Discuss trends in input devices
- 8.3.2 Examine current trends in output devices and displays
- 8.3.3 Explore advances in peripheral devices

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CROSSWALKS AND ALIGNMENTS

CROSSWALKS (ACADEMIC STANDARDS)

The crosswalk of the Digital Game Development Standards shows links to the Nevada Academic Content Standards. The crosswalk identifies the performance indicators in which the learning objectives in the Digital Game Development 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 Digital Game Development Standards Performance Indicators and the Mathematical Practices. This alignment identifies the performance indicators in which the learning objectives in the Digital Game Development 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 Digital Game Development Standards Performance Indicators and the Science and Engineering Practices. This alignment identifies the performance indicators in which the learning objectives in the Digital Game Development program support academic learning.

CROSSWALKS (COMMON CAREER TECHNICAL CORE)

The crosswalk of the Digital Game Development Standards shows links to the Common Career Technical Core. The crosswalk identifies the performance indicators in which the learning objectives in the Digital Game Development 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 Digital Game Development Standards are crosswalked to the Information Technology Cluster™ and the Programming and Software Development Career Pathway.

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**CROSSWALK OF DIGITAL GAME DEVELOPMENT 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>English Language Arts: Speaking and Listening Standards</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>English Language Arts: Speaking and Listening Standards</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>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</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>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</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>English Language Arts: Speaking and Listening Standards</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>English Language Arts: Speaking and Listening Standards</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>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</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>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</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>English Language Arts: Speaking and Listening Standards</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>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</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>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</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>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</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>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</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>English Language Arts: Language Standards 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>English Language Arts: Speaking and Listening Standards SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.</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>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>

CONTENT STANDARD 2.0: CONTEXT OF DIGITAL GAME DEVELOPMENT

Performance Indicators	Nevada Academic Content Standards
2.1.1	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>
2.1.2	<p>English Language Arts: Reading Standards for Informational Text 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>
2.1.3	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.</p>
2.1.4	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</p> <p>English Language Arts: Speaking and Listening Standards SL.11-12.2 Integrate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, orally) in order to make informed decisions and solve problems, evaluating the credibility and accuracy of each source and noting any discrepancies among the data.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>

Performance Indicators	Nevada Academic Content Standards
2.1.5	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>
2.2.1	<p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.</p>
2.2.2	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</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>Science: HS-Engineering Design HS-ETS1-1 Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.</p>
2.2.3	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</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
2.2.4	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</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>
2.2.5	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</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>
2.2.6	<p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>

CONTENT STANDARD 3.0: FOUNDATIONS OF GAME DESIGN AND DEVELOPMENT

Performance Indicators	Nevada Academic Content Standards
3.1.1	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</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>
3.1.2	<p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</p> <p>Science: HS-Engineering Design HS-ETS1-2 Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.</p>
3.1.3	<p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>
3.1.4	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>

Performance Indicators	Nevada Academic Content Standards
3.1.5	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>
3.2.1	<p>English Language Arts: Reading Standards for Informational Text 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>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Speaking and Listening Standards SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.</p>
3.2.2	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.8 Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.</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>English Language Arts: Writing Standards W.11-12.3 Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.</p>
3.2.3	<p>English Language Arts: Writing Standards</p> <p>W.11-12.3a Engage and orient the reader by setting out a problem, situation, or observation and its significance, establishing one or multiple point(s) of view, and introducing a narrator and/or characters; create a smooth progression of experiences or events.</p> <p>W.11-12.3b Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters.</p> <p>W.11-12.3c Use a variety of techniques to sequence events so that they build on one another to create a coherent whole and build toward a particular tone and outcome (e.g., a sense of mystery, suspense, growth, or resolution).</p>
3.2.4	<p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</p>

Performance Indicators	Nevada Academic Content Standards
3.2.5	<p>English Language Arts: Writing Standards</p> <p>W.11-12.3c Use a variety of techniques to sequence events so that they build on one another to create a coherent whole and build toward a particular tone and outcome (e.g., a sense of mystery, suspense, growth, or resolution).</p> <p>W.11-12.3e Provide a conclusion that follows from and reflects on what is experienced, observed, or resolved over the course of the narrative.</p>
3.2.6	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</p> <p>RST.11-12.5 Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</p> <p>WHST.11-12.1e Provide a concluding statement or section that follows from or supports the argument presented.</p>
3.2.7	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</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>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</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>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>
3.2.8	<p>English Language Arts: Speaking and Listening Standards</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>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</p> <p>WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</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>Math: Statistics and Probability – Making Inferences and Justifying Conclusions</p> <p>SIC.A.2 Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation.</p> <p>SIC.B.3 Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each.</p>

Performance Indicators	Nevada Academic Content Standards
3.3.1	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>
3.3.2	<p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</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>Math: Algebra – Creating Equations ACED.A.1 Create equations and inequalities in one variable and use them to solve problems.</p> <p>ACED.A.2 Create equations in two or more variables to represent relationships between quantities; graph equations on coordinate axes with labels and scales.</p> <p>ACED.A.3 Represent constraints by equations or inequalities, and by systems of equations and/or inequalities, and interpret solutions as viable or nonviable options in a modeling context.</p> <p>ACED.A.4 Rearrange formulas to highlight a quantity of interest, using the same reasoning as in solving equations.</p>
3.3.3	<p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</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>
3.3.4	<p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</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>Science: HS-Engineering Design HS-ETS1-2 Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.</p>

Performance Indicators	Nevada Academic Content Standards
3.3.5	<p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</p> <p>WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</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>Science: HS-Engineering Design</p> <p>HS-ETS1-2 Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.</p>
3.3.6	<p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</p> <p>WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</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>
3.3.7	<p>English Language Arts: Speaking and Listening Standards</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>
3.4.1	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</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>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</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>
3.4.2	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</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>Science: HS-Engineering Design</p> <p>HS-ETS1-1 Analyze a major global challenge to specify qualitative and quantitative criteria and constraints for solutions that account for societal needs and wants.</p> <p>HS-ETS1-3 Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.</p>

Performance Indicators	Nevada Academic Content Standards
3.4.3	<p>English Language Arts: Speaking and Listening Standards</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>

CONTENT STANDARD 4.0: GAME DESIGN

Performance Indicators	Nevada Academic Content Standards
4.1.1	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.8 Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>
4.1.2	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>
4.1.3	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</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>Science: HS-Motion and Stability: Forces and Interactions HS-PS2-3 Apply scientific and engineering ideas to design, evaluate, and refine a device that minimizes the force on a macroscopic object during a collision.</p>

Performance Indicators	Nevada Academic Content Standards
4.1.4	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</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>
4.1.6	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>
4.2.1	<p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.</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>Science: HS-Engineering Design HS-ETS1-2 Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.</p>

Performance Indicators	Nevada Academic Content Standards
4.2.2	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p> <p>Science: HS-Earth and Human Activity HS-ESS3-6 Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.</p>
4.2.4	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</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>Science: HS-Earth and Human Activity HS-ESS3-6 Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.</p>
4.2.5	<p>English Language Arts: Speaking and Listening Standards SL.11-12.4 Present information, findings, and supporting evidence, conveying a clear and distinct perspective, such that listeners can follow the line of reasoning, alternative or opposing perspectives are addressed, and the organization, development, substance, and style are appropriate to purpose, audience, and a range of formal and informal tasks.</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>Science: HS-Engineering Design HS-ETS1-2 Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.</p>

Performance Indicators	Nevada Academic Content Standards
4.2.7	<p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</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>Science: HS-Engineering Design HS-ETS1-4 Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.</p>
4.2.8	<p>English Language Arts: Writing Standards W.11-12.3b Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.2a Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.</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> <p>WHST.11-12.10 Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.</p>
4.3.1	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>
4.3.2	<p>English Language Arts: Writing Standards W.11-12.3b Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters.</p>
4.3.3	<p>English Language Arts: Writing Standards W.11-12.3b Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters.</p>
4.3.5	<p>English Language Arts: Writing Standards W.11-12.3b Use narrative techniques, such as dialogue, pacing, description, reflection, and multiple plot lines, to develop experiences, events, and/or characters.</p>

Performance Indicators	Nevada Academic Content Standards
4.3.7	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.2a Introduce a topic and organize complex ideas, concepts, and information so that each new element builds on that which precedes it to create a unified whole; include formatting (e.g., headings), graphics (e.g., figures, tables), and multimedia when useful to aiding comprehension.</p>
4.3.8	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.</p> <p>Science: HS-Energy HS-PS3-3 Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.</p>
4.3.9	<p>Science: HS-Energy HS-PS3-3 Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.</p>
4.4.1	<p>Science: HS-Engineering Design HS-ETS1-3 Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.</p>
4.4.3	<p>Math: Statistics and Probability – Making Inferences and Justifying Conclusions SIC.A.2 Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation.</p> <p>Science: HS-Engineering Design HS-ETS1-3 Evaluate a solution to a complex real-world problem based on prioritized criteria and trade-offs that account for a range of constraints, including cost, safety, reliability, and aesthetics, as well as possible social, cultural, and environmental impacts.</p>
4.4.4	<p>Math: Statistics and Probability – Making Inferences and Justifying Conclusions SIC.A.2 Decide if a specified model is consistent with results from a given data-generating process, e.g., using simulation.</p> <p>Science: HS-Engineering Design HS-ETS1-4 Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.</p>

Performance Indicators	Nevada Academic Content Standards
4.4.5	<p>Math: Statistics and Probability – Making Inferences and Justifying Conclusions SIC.B.5 Use data from a randomized experiment to compare two treatments; use simulations to decide if differences between parameters are significant.</p> <p>Science: HS-Engineering Design HS-ETS1-4 Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.</p>

CONTENT STANDARD 5.0: PROGRAMMING FOR DIGITAL GAME DEVELOPMENT

Performance Indicators	Nevada Academic Content Standards
5.1.1	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>
5.1.4	<p>English Language Arts: Speaking and Listening Standards SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>
5.2.8	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Speaking and Listening Standards SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>
5.3.1	<p>Science: HS-Engineering Design HS-ETS1-4 Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.</p> <p>Science: HS-Energy HS-PS3-2 Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motions of particles (objects) and energy associated with the relative position of particles (objects).</p>

Performance Indicators	Nevada Academic Content Standards
5.3.2	<p>Science: HS-Engineering Design HS-ETS1-4 Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.</p> <p>Science: HS-Energy HS-PS3-2 Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motions of particles (objects) and energy associated with the relative position of particles (objects).</p>
5.3.3	<p>Science: HS-Engineering Design HS-ETS1-2 Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.</p> <p>HS-ETS1-4 Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.</p>
5.3.8	<p>Science: HS-Engineering Design HS-ETS1-2 Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.</p> <p>HS-ETS1-4 Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.</p>

CONTENT STANDARD 6.0: BUILD A GAME

Performance Indicators	Nevada Academic Content Standards
6.1.2	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</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.11-12.8 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>
6.1.3	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</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.11-12.8 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>
6.1.5	<p>Math: Geometry – Modeling with Geometry</p> <p>GMG.A.3 Apply geometric methods to solve design problems (e.g., designing an object or structure to satisfy physical constraints or minimize cost; working with typographic grid systems based on ratios).</p>
6.2.2	<p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</p> <p>WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</p>
6.2.3	<p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</p> <p>WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</p>
6.2.5	<p>Science: HS-Engineering Design</p> <p>HS-ETS1-2 Design a solution to a complex real-world problem by breaking it down into smaller, more manageable problems that can be solved through engineering.</p>
6.3.1	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</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>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</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.11-12.9 Draw evidence from informational texts to support analysis, reflection, and research.</p>
6.3.4	<p>Science: HS-Engineering Design</p> <p>HS-ETS1-4 Use a computer simulation to model the impact of proposed solutions to a complex real-world problem with numerous criteria and constraints on interactions within and between systems relevant to the problem.</p>

Performance Indicators	Nevada Academic Content Standards
6.4.1	<p>English Language Arts: Writing Standards W.11-12.3c Use a variety of techniques to sequence events so that they build on one another to create a coherent whole and build toward a particular tone and outcome (e.g., a sense of mystery, suspense, growth, or resolution).</p>
6.4.3	<p>Science: HS-Motion and Stability: Forces and Interactions HS-PS2-1 Analyze data to support the claim that Newton’s second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration.</p> <p>Science: HS-Energy HS-PS3-2 Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motions of particles (objects) and energy associated with the relative position of particles (objects).</p>
6.4.4	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>
6.4.6	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</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>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.</p> <p>Science: HS-Energy HS-PS3-2 Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motions of particles (objects) and energy associated with the relative position of particles (objects).</p>

Performance Indicators	Nevada Academic Content Standards
6.4.7	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>
6.4.9	<p>Science: HS-Motion and Stability: Forces and Interactions HS-PS2-1 Analyze data to support the claim that Newton’s second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration.</p> <p>Science: HS-Energy HS-PS3-2 Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motions of particles (objects) and energy associated with the relative position of particles (objects).</p>
6.4.12	<p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>
6.5.4	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p>
6.6.1	<p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p> <p>Math: Geometry – Modeling with Geometry GMG.A.1 Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).</p>
6.6.8	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>

Performance Indicators	Nevada Academic Content Standards
6.6.10	Science: HS-Earth and Human Activity HS-ESS3-6 Use a computational representation to illustrate the relationships among Earth systems and how those relationships are being modified due to human activity.

CONTENT STANDARD 7.0: LEGAL AND ETHICAL ISSUES IN GAME DESIGN AND DEVELOPMENT

Performance Indicators	Nevada Academic Content Standards
7.1.1	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.7 Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>
7.1.2	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.8 Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.</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>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.</p>
7.1.4	<p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.7 Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.</p>
7.1.5	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</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
7.2.1	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>
7.2.2	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>
7.3.1	<p>English Language Arts: Speaking and Listening Standards SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.</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>
7.3.2	<p>English Language Arts: Speaking and Listening Standards SL.11-12.1a Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well-reasoned exchange of ideas.</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 8.0: ADVANCED TOPICS IN DIGITAL GAME DEVELOPMENT

Performance Indicators	Nevada Academic Content Standards
8.1.1	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.8 Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.</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>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>
8.1.2	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.9 Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible.</p> <p>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>
8.1.3	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects RST.11-12.8 Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information.</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>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects WHST.11-12.8 Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the strengths and limitations of each source in terms of the specific task, purpose, and audience; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and overreliance on any one source and following a standard format for citation.</p>

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

Performance Indicators	Nevada Academic Content Standards
8.3.2	<p>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</p> <p>RST.11-12.5 Analyze how the text structures information or ideas into categories or hierarchies, demonstrating understanding of the information or ideas.</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>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</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>
8.3.3	<p>English Language Arts: Reading Standards for Informational Text</p> <p>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>English Language Arts: Reading Standards for Literacy in Science and Technical Subjects</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>English Language Arts: Writing Standards for Literacy in Science and Technical Subjects</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>

**ALIGNMENT OF DIGITAL GAME DEVELOPMENT STANDARDS
AND THE MATHEMATICAL PRACTICES**

Mathematical Practices	Digital Game Development Performance Indicators
1. Make sense of problems and persevere in solving them.	3.4.2 4.4.1, 4.4.3, 4.4.5 5.3.1-5.3.8 6.4.12
2. Reason abstractly and quantitatively.	3.2.5, 3.2.6, 3.2.8; 3.4.4 5.1.1-5.1.10
3. Construct viable arguments and critique the reasoning of others.	3.4.3, 3.4.4 4.1.1, 4.1.5, 4.1.7 6.4.11
4. Model with mathematics.	4.5.10 6.5.2; 6.6.1-6.6.4
5. Use appropriate tools strategically.	3.1.3 5.2.1-5.2.11 6.5.1-6.5.4
6. Attend to precision.	5.2.1, 5.2.3 6.4.1-6.4.10
7. Look for and make use of structure.	3.1.2; 3.2.4 6.6.2-6.6.5
8. Look for and express regularity in repeated reasoning.	3.2.4 4.2.8 5.1.1-5.1.10 6.6.9-6.6.11

**ALIGNMENT OF DIGITAL GAME DEVELOPMENT STANDARDS
AND THE SCIENCE AND ENGINEERING PRACTICES**

Science and Engineering Practices	Digital Game Development Performance Indicators
1. Asking questions (for science) and defining problems (for engineering).	4.1.4, 4.2.5, 4.2.7, 4.3.9
2. Developing and using models.	4.4.1–4.4.5, 5.3.1–5.3.8, 6.2.3–6.2.5, 6.6.2–6.6.4 6.6.9–6.6.11
3. Planning and carrying out investigations.	3.4.4, 6.3.3
4. Analyzing and interpreting data.	5.3.5, 5.3.8, 6.4.6
5. Using mathematics and computational thinking.	4.2.7, 5.1.1–5.1.10, 6.6.1
6. Constructing explanations (for science) and designing solutions (for engineering).	3.4.3, 6.4.2–6.4.3
7. Engaging in argument from evidence.	3.2.5
8. Obtaining, evaluating, and communicating information.	3.3.7, 4.4.3, 6.4.4–6.4.5

**CROSSWALKS OF DIGITAL GAME DEVELOPMENT STANDARDS
AND THE COMMON CAREER TECHNICAL CORE**

Information Technology Career Cluster™	Performance Indicators
1. Demonstrate effective professional communication skills and practices that enable positive customer relationships.	3.4.3; 4.2.5
2. Use product or service design processes and guidelines to produce a quality information technology (IT) product or service.	3.3.2, 3.3.5-3.3.7
3. Demonstrate the use of cross-functional teams in achieving IT project goals.	2.2.1-2.2.6; 3.1.1
4. Demonstrate positive cyber citizenry by applying industry accepted ethical practices and behaviors.	7.2.1-7.2.3
5. Explain the implications of IT on business development.	2.2.5, 2.2.6
6. Describe trends in emerging and evolving computer technologies and their influence on IT practices.	8.1.1-8.1.3; 8.2.1-8.2.2 8.3.1-8.3.3
7. Perform standard computer backup and restore procedures to protect IT information.	
8. Recognize and analyze potential IT security threats to develop and maintain security requirements.	7.2.3
9. Describe quality assurance practices and methods employed in producing and providing quality IT products and services.	
10. Describe the use of computer forensics to prevent and solve information technology crimes and security breaches.	7.2.1, 7.2.2
11. Demonstrate knowledge of the hardware components associated with information systems.	
12. Compare key functions and applications of software and determine maintenance strategies for computer systems.	

**CROSSWALKS OF DIGITAL GAME DEVELOPMENT STANDARDS
AND THE COMMON CAREER TECHNICAL CORE**

Programming and Software Development Career Pathway	Performance Indicators
1. Analyze customer software needs and requirements.	6.6.11
2. Demonstrate the use of industry standard strategies and project planning to meet customer specifications.	3.4.4; 4.1.5; 4.3.7
3. Analyze system and software requirements to ensure maximum operating efficiency.	6.1.5; 6.2.1-6.2.5
4. Demonstrate the effective use of software development tools to develop software applications.	6.1.6, 6.1.7
5. Apply an appropriate software development process to design a software application.	
6. Program a computer application using the appropriate programming language.	5.1.1-5.1.10; 5.2.1-5.2.1 5.3.1-5.3.8; 6.3.3, 6.3.4
7. Demonstrate software testing procedures to ensure quality products.	4.4.5
8. Perform quality assurance tasks as part of the software development cycle.	5.3.8
9. Perform software maintenance and customer support functions.	
10. Design, create and maintain a database.	