



# VIDEO GAME DESIGN I

## Year at a Glance (YAG)



FIRST SEMESTER		SECOND SEMESTER	
First Nine Weeks		Third Nine Weeks	
<p><b>TEKS</b> 11A, 11B, 11C, 11D, 11E, 11F</p>	<p><b>History and Current Trends in Video Game Design</b> In this unit, students will research the history and evolution of video game design and use the information discovered to explain its history. Students will also compare current technologies with historical technologies and describe how those changes are affecting the industry. Additionally, students will examine video game design through the lens of various cultures and compare the many styles of game design. The knowledge gained in this unit will assist the student in the understanding and mastery of the required skills throughout the remainder of the course.</p>	<p><b>TEKS</b> 1A, 1B, 1C, 1D</p>	<p><b>Employability and Career Development</b> Students will learn, understand, and demonstrate the positive work behaviors and personal qualities needed to secure employment and to stay employed. Additionally, students will seek out and participate in training and education that leads to certification and/or employment. Students will also have the opportunity to create a career portfolio that includes the completed job applications, resumes, and cover/application letters. The culminating activity for this unit will be the completion and presentation of their career portfolio that includes work experience, licenses held, certifications obtained, and samples of student work to the other students and/or the teacher.</p>
<p>2A, 2B</p>	<p><b>Application of ELA and Math in Video Game Design</b> Students will build upon their ELA and Math skills to create and design interesting and exciting video games. Skills learned will be applied as projects, presentations, and games are created and shared. The culminating activity for the unit will span the entirety of the course as skills learned will be applied in the various projects required for course completion.</p>	<p>6A, 6B</p>	<p><b>Leadership</b> This unit enables the student to identify, develop, and employ the characteristics of leadership. Additionally, students will demonstrate the leadership skills learned individually and in groups. The skills and knowledge gained through this unit will serve as background information for all subsequent units and will inform all aspects of video game design.</p>
<p>7A, 7B, 7C, 7D, 7E</p>	<p><b>Ethical Decision Making</b> Mastery of the skills in this unit will allow the students to analyze the impact of video game design on society. Such analysis will include discussion on acceptable use, copyright laws, and respecting intellectual property. Students will also model ethical conduct with regard to others and the confidentiality required by the design process. Student learning will be assessed through the creation of group projects that demonstrates understanding of and compliance with applicable laws and regulations.</p>	<p>16A, 16B 18</p>	<p><b>Programming and Coding</b> A deep understanding or programming and coding is essential to design, create and deploy effective video games. In this unit students will discuss and demonstrate their knowledge of programming languages and terminology. Additionally, students will have the opportunity to correctly and efficiently use coding to develop expressions and user-defined functions. The culminating activity for this unit will a student-created project that features user-defined functions (e.g., proper operator precedence, sequential, conditional, repetitive control structures) and specific programming terminology and concepts.</p>
Second Nine Weeks		Fourth Nine Weeks	
<p><b>TEKS</b> 21A, 21B 4A, 4B 17, 8</p>	<p><b>Technology Applications, Problem Solving, and Efficiency</b> In this unit, students will utilize technology applications and problem-solving skills, both individually and in groups, to efficiently write technology specifications and debug specific</p>	<p><b>TEKS</b> 10A, 10B, 10C, 10D, 10E, 10F 15</p>	<p><b>Design Process and Video Game Design</b> In this unit, students will create a video game using an appropriate design process that includes a combination of graphics, images, and sound, and also requires technical documentation of the techniques used. The student will further</p>

<p>3A, 3B, 3C, 3D, 3E</p> <p>5</p> <p>20A, 20B, 20C</p>	<p>issues. Students will carefully plan their work and ensure timely completion of all tasks assigned. The skills and knowledge gained through this unit will serve as background information for all subsequent units and will inform all aspects of video game design.</p> <p><b>Professional Communications</b> Students will learn and understand sound communications techniques and utilize those skills to communicate clearly—both orally and in writing. Students will appropriately adapt the language used to deliver formal and informal presentations. Additionally, students will practice and apply active listening skills and have the opportunity to work with individuals from diverse backgrounds. The culminating activity for this unit will span the entirety of the course as skills learned will be applied in the various projects required for course completion</p> <p><b>Cyber Safety</b> Cyber safety is becoming more important as the world becomes increasingly dependent on technology. As video game design is heavily dependent on technology, ensuring the safety of students and student work is critical. Students will have the opportunity to implement personal and professional safety rules and regulations as they go about the creation of their video games. The culminating activity for this 10-period unit will span the entirety of the course as skills learned will be applied in the various projects required for course completion.</p> <p><b>Creating New Knowledge</b> One of the exciting aspects of video game design is its ability to participate in gaming and on-line learning activities that reach far beyond the brick and mortar of the school house walls. In this unit, students will utilize the Internet to participate in electronic communities as a learner, initiator, contributor and teacher/mentor. The culminating activity for this unit will be a student-created project that documents the student forays and activities in which the student participated while in the electronic communities.</p>	<p>12A, 12B, 12C, 12D</p> <p>22A, 22B, 22C, 22D, 22E, 22F, 22G, 22H, 22I, 22J, 22K, 22L, 22M, 22N, 22O</p> <p>14a, 14B, 14C, 14D, 14E, 13, 19</p>	<p>demonstrate their knowledge of video game design by including a variety of computer hardware, software, and operating systems, and crafting the game so that it has cross-platform compatibility and can be shared via a variety of file sharing formats. The culminating activity for this unit will be the creation of the aforementioned video game and the sharing of that game with others. The game sharing will also include the opportunity for the evaluation of visual effects using the principles of the design process.</p> <p><b>Video Game Principles</b> Students will understand and apply video game design principles, elements, and techniques in their video game productions. This includes, but is not limited to, production processes such as titles and credits as well as script writing, character design, and storyboarding. As these are the building blocks of game design, the culminating activity for this unit will span the entirety of the course as skills learned will be applied in the various projects required for course completion.</p> <p><b>Technology Concepts, Systems, and Operations</b> To design an effective video game, students must understand technology concepts, systems, and operations such as the identification of basic game components, the generation of random numbers, the creation of a program implementing conditional statements, and the development of an appropriate data model. Additionally, students must be able to develop an understanding of and be able to demonstrate the myriad of gaming essentials required to make the game design intriguing and captivating to potential users. The skills in this unit, much like those in the video game principles unit are the foundation of game design and, as such, the culminating activity will span the entirety of the course as skills learned will be applied in the various projects required for course completion.</p> <p><b>Evaluation and Constructive Criticism</b> When the video game has been designed and tested, it must be evaluated (both orally and in writing) to determine if expectations were met. Such an evaluation will require the use of critical-thinking skills and criticisms should be constructive in nature. Products will be evaluated using rubrics and established criteria and the evaluation should be conducted by peers and professionals. The culminating activity for this unit will be the effective use of evaluations on all video game projects delivered during the term of the course.</p>
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