

## Curriculum at a Glance

### Introduction to Video Game Design

#### Grade 9-12

**SUMMARY:** In this course students will analyze game theory and game mechanics from a game maker's perspective. After students understand the fundamental concepts of creating various linear and non-linear board games they will be introduced to two-dimensional gaming software. This course will serve as a foundation to the learning process of game design while completing projects that lead to the ultimate delivery of a casual game video game.

Unit Description	Content and/or Skills
Unit 1: The Design Team	<ul style="list-style-type: none"><li>• Define the roles and responsibilities of team members on a video game design team.</li><li>• Describe the effects of group dynamics and the importance of team building on a video game design team.</li><li>• Explain the relationship between the development schedule and budget constraints in video game design.</li><li>• Discuss interpersonal skills required to effectively communicate with co-workers, supervisors and customers.</li><li>• Define terminology appropriate for the video game development industry.</li><li>• Engage in constructive criticism.</li><li>• Describe job requirements for a variety of occupations within the video game design industry.</li></ul>
Unit 2: Evolution of the Game	<ul style="list-style-type: none"><li>• Discuss how violence in video games affect human behavior</li><li>• Discuss how video game content is regulated</li><li>• Explain player immersion</li><li>• Describe what factors result in player immersion</li></ul>

	<ul style="list-style-type: none"> <li>• Explain how play has been important in the development of societies and cultures</li> </ul>
Unit 3: Cultural Trends and Human Behaviors	<ul style="list-style-type: none"> <li>• Discuss how violence in video games affect human behavior</li> <li>• Discuss how video game content is regulated</li> <li>• Explain player immersion</li> <li>• Describe what factors result in player immersion</li> <li>• Explain how play has been important in the development of societies and cultures</li> </ul>
Unit 4: Video Game Genres and Themes	<ul style="list-style-type: none"> <li>• Describe different gaming genres</li> <li>• Define video game terms related to various gaming genres</li> <li>• Classify different computerized entertainment media</li> <li>• Classify different games into appropriate genres and themes</li> <li>• Discuss the use and importance of genre classification in game marketing</li> <li>• Identify the unique selling points of various games</li> </ul>
Unit 5: Two-Dimensional Gaming Vocabulary and Terminology	<ul style="list-style-type: none"> <li>• Students will define common game design vocabulary and terms</li> <li>• Students will list computer languages used in game design</li> <li>• Students will compare and contrast various game design software</li> </ul>
Unit 6: Game Maker Basics	<ul style="list-style-type: none"> <li>• Students will identify commands, buttons and interface elements of Game Maker software</li> <li>• Students will describe the resource tree and identify elements within the tree</li> </ul>

	<ul style="list-style-type: none"> <li>• Students will use hot keys to start a command</li> </ul>
Unit 7: Creating a Basic Action Game	<ul style="list-style-type: none"> <li>• Students will apply game-design tools to construct a simple game</li> <li>• Students will set background colors and apply sprites to enhance a room (scene)</li> <li>• Students will program objects to react to game rules and conditions</li> <li>• Students will use absolute and relative referencing when plotting points on a game frame</li> <li>• Students will identify X and Y axis positions and directions on a game frame</li> </ul>
Unit 8: Creating a Scrolling Action Game	<ul style="list-style-type: none"> <li>• Students will explain path movements and nodes</li> <li>• Students will properly place objects in specified locations on a game frame</li> <li>• Students will use algebraic thinking skills to solve for relative locations</li> <li>• Students will describe how object movement is achieved in a game</li> <li>• Students will be able to create animated sprites and moving targets</li> <li>• Students will be able to program an object to launch and destroy an enemy object</li> </ul>