

Game Programming 1 Unit 3: Creating Animated Games

ESTABLISHED GOALS:		
<u>Competencies:</u> - Students will demonstrate the ability to create a coding solution in order to solve a problem. - Students will demonstrate the ability to deconstruct a problem to utilize data structures and recognize patterns in order to develop a solution. - Students will demonstrate the ability to compare and discuss the effects of computing on society in order to improve current technology practices. - Students will demonstrate the ability to design or improve software in order to respond to events. - Students will demonstrate the ability to analyze and summarize text as well as integrate knowledge to make meaning of discipline-specific materials. - Students will demonstrate the ability to produce coherent and supported writing in order to communicate effectively for a range of discipline-specific tasks, purposes, and audiences. - Students will demonstrate the ability to speak purposefully and effectively by strategically making decisions about content, language use, and discourse style. <u>Content Standards:</u> CSTA - Computer Science Teacher Association <u>CSTA 3A-I-7-25:</u> Describe how computation shares features with art and music by translating human intention into an artifact. <u>CSTA 3A-I-1-27:</u> Demonstrate how computing enables new forms of experience, expression, communication, and collaborating. <u>CSTA 3A-A-4-8:</u> Deconstruct a complex problem into simpler parts using predefined constructs (e.g., functions and parameters and/or classes.) <u>CSTA 3A-C-5-14:</u> Create, extend, or modify existing programs to add new features and behaviors using different forms of inputs and outputs (e.g. inputs such as sensors, mouse clicks, data sets; outputs such as text, graphics, sounds.	Transfer	
	<i>Students will be able to independently use their learning to create simple interactive games.</i>	
	Meaning	
	ENDURING UNDERSTANDINGS <i>Students will understand that...</i> - creating games for a computer platform can be easy to do. - creating interactive games uses skills such as math, science, art and music.	ESSENTIAL QUESTIONS - What makes a good game? - What makes some games better than others?
Acquisition		
<i>Students will know....</i> - that encapsulating data and behaviors creates solutions to problems. - that smoothness and coherency of animation produces an appealing game. - that designing attractive and appealing graphical components produces a more financially successful game. - that the interface of the game must be designed and implemented to be easy to use. It should feel simple, natural, and intuitive. - that project graphics effectively communicate the message of the application to enhance the financial success of the game. - that testing produces more reliable and robust code. - that evaluating gameplay produces better games. <u>Vocabulary:</u> 2-D animation, 3-D animation, behaviors, event, flow of control, game framework, sound, user interface		<i>Students will be skilled at...</i> - creating animated games. - creating interactive games. - explaining the connections between math computation, art, and music. - computing in order to show a new experience, expression, communication, and/or collaboration. - breaking down complex problems using a specific approach. - creating new programs. - making changes to existing programs to improve functionality.

Content Area Literacy Standards	21st Century Skills
RST.11-12.3 Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text RST.11-12.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to <i>grades 11-12 texts and topics</i>. WHST.9-10.4 Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience. WHST.11-12.2 Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.	● <i>Solve Problems</i> ● <i>Manage Goals and Time</i> ● <i>Be Self-directed Learners</i>

Evaluative Criteria	Assessment Evidence
	PERFORMANCE TASK(S):
	OTHER EVIDENCE:

Summary of Key Learning Events and Instruction			
Language Arts Integration	Mathematics Integration		
● 1.OA.1 Use	● 1.OA.1 Use		
Technology Integration	District Materials		
● 1.OA.1 Use			

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