

Unit	Topic	Lesson	Lesson Objectives
Game Design			
Course Overview			
		Introduction	<ul style="list-style-type: none"> Describe the goal of the course Describes some of the jobs found in the game design industry List tips for achieving academic success in the course
		Start the Course	<ul style="list-style-type: none"> Identify computer requirements Learn how to move through the course Switch between windows
		Set Up Your Computer	<ul style="list-style-type: none"> Find files and folders on a computer Set up a computer to show the List folder view and file name extensions Make a course folder
		Set Up a Browser and Install 7-Zip	<ul style="list-style-type: none"> Set up a Web browser Download and install a zip utility
		Download Resources and Zip Assignments	<ul style="list-style-type: none"> Get the course resources Zip and unzip files and folders
Ping			
		Set Up the Background	<ul style="list-style-type: none"> Identify types of games Create an MMF2 application Set up the MMF2 workspace Rename a frame and an application Save a project
		Make Game Objects	<ul style="list-style-type: none"> Identify the Frame Editor and the play area Change the background color Add Active objects to the frame Use the drawing tools in the Animation Editor to change an Active object

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		Add Paddles	<ul style="list-style-type: none"> Add an Active object and change its color and size Clone an object Rename and align objects
		Bounce the Ball	<ul style="list-style-type: none"> Define static object and Bouncing Ball movement Add movement to the ball and set its initial direction Define event, condition, and action Make a collision event in the Event Editor
		Move the Paddles	<ul style="list-style-type: none"> Add Eight Directions movement to an object Set objects to players Change keyboard controls
		Test and Select Positions	<ul style="list-style-type: none"> Make test position events that contain and reset the ball Define X and Y coordinates
		Keep Score	<ul style="list-style-type: none"> Define Score object Add Score objects and set them to players Format text Create events that track the score and end the game
		Add Text and Sound	<ul style="list-style-type: none"> Define String object Add a String object with two paragraphs Create events that display text Define WAV and MP3 Add sounds to a game
		Add a Title Screen	<ul style="list-style-type: none"> Define title screen, Storyboard Editor, and thumbnail image Add a Start frame Add text and a button Create an event that moves the game to another frame Build the game as an .exe file to share with others

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Ice Breakers			
		Add a Library	<ul style="list-style-type: none"> Add frames to a new application Define library and identify the Library Toolbar Add a library folder
		Add Backgrounds	<ul style="list-style-type: none"> Preview library objects Define Backdrop object Lock and unlock an object Add a start button
		Add Snowboards and a Snowball	<ul style="list-style-type: none"> Add game objects Add Bouncing Ball movement to the ball Create events that bounce the ball
		Add the Paddle	<ul style="list-style-type: none"> Define mouse controlled movement Add mouse controlled movement and set a movement zone Create a keyboard controlled event
		Add Ice Cubes and Sound	<ul style="list-style-type: none"> Duplicate objects in rows and columns Create events that destroy objects Create events that play sounds
		Add Lives	<ul style="list-style-type: none"> Define lives and Lives object Add a Lives object and create an event that subtracts lives Reset the ball End the game
		Keep Score	<ul style="list-style-type: none"> Add a Score object Add a Hi-Score object Format text Build the game as an .exe file to share with others

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	Cat Burglar		
		Set Up the Game	<ul style="list-style-type: none"> Define maze game and plot Open a new application and rename frames Change the background color Add a library folder and preview its objects
		Add the Cat and Maze	<ul style="list-style-type: none"> Add game objects Create a collision event with a stop action to contain the cat in the maze
		Add Keys and Treasure	<ul style="list-style-type: none"> Define collection items Add and destroy objects Create a pick or count condition
		Add Blades	<ul style="list-style-type: none"> Add and position obstacles to create challenge Add a Lives object and create an event that subtracts lives
		Move the Blades	<ul style="list-style-type: none"> Bounce and contain the blades in the maze Change the bounce properties of an object
		Spin the Blades	<ul style="list-style-type: none"> Define animation, frame, animated object, and looping animation Move an object's hot spot Rotate an object
		Change the Cat	<ul style="list-style-type: none"> Create a new animation inside an object Create an animation sequence action to play an animation
		Make Start, Win, and Lose Screens	<ul style="list-style-type: none"> Add, name, and move frames Change background colors Add text

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		Connect the Frames	<ul style="list-style-type: none"> Add a start button Add events that connect the frames Build the game as an .exe file to share with others
	Alien Attack		
		Set Up the Game	<ul style="list-style-type: none"> Define shooter game Open a new application and rename frames Add a library folder and preview its objects Change the background color and add an object
		Add Spaceships	<ul style="list-style-type: none"> Add spaceships and give them Path movement Draw a path for the spaceships Reverse and loop movement
		Add Aliens	<ul style="list-style-type: none"> Add aliens Combine a timer condition and pick or count condition to make aliens appear
		Create the Shield	<ul style="list-style-type: none"> Add Bouncing Ball movement to the aliens and set their direction and speed Add the shield and destroy aliens when they hit the shield View the Appearing and Disappearing animations for the alien
		Shoot the Aliens	<ul style="list-style-type: none"> Define cursor and crosshair Create a start of frame condition and a set cursor shape action Add and format a Score object
		Add a Particle System	<ul style="list-style-type: none"> Define particle and particle system Create an on loop condition with a shoot an object action Create a start loop action Reorder actions in the Event List Editor

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		Add a Health Meter	<ul style="list-style-type: none"> Add a Counter object and make it look like a horizontal bar Add a gradient to the Counter object Define initial value, minimum value, and maximum value for a Counter object Subtract from the Counter object
		Add Challenge	<ul style="list-style-type: none"> Define calculation and math symbols in MMF2 Create an event that increases the speed of the aliens every 10 points Destroy the shield when the health runs out End the game
		Make Start and End Frames	<ul style="list-style-type: none"> Add, name, and move frames Add backgrounds and text Connect the frames Add a Hi-Score object Build the game as an .exe file to share with others
Pest Busters			
		Set Up the Game	<ul style="list-style-type: none"> Define horizontal and vertical scrolling Define side-scrolling game Open a new application and rename frames Add a library folder and preview its objects
		Add Objects on Layers	<ul style="list-style-type: none"> Define parallax perspective, layers, and Layers Toolbar Add and arrange layers Put objects on layers Hide and lock layers
		Scroll the Layers	<ul style="list-style-type: none"> Define pixel, coordinate, visible play area, and virtual width Change the virtual width Create a scrolling event Wrap layers Use layer coefficients to change scrolling speed

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		Control the Ships	<ul style="list-style-type: none"> Add Eight Directions movement to an object Contain objects in the visible play area Change player controls Add bullets and a shoot an object action
		Add Pest Enemies	<ul style="list-style-type: none"> Add pests, poison, and pest bases Make the bases invisible Shoot pests from the bases toward the players Shoot poison from the pests
		Track Points and Lives	<ul style="list-style-type: none"> Add collision events that destroy objects Add and format a shared Score object Add two separate Lives objects Subtract lives and destroy players
		Add Bonuses	<ul style="list-style-type: none"> Define bonus Add a bonus object and shoot it from the bases toward the player Create an event that restores lives Create an End frame with a Hi-Score object
		Create a One-Player Version	<ul style="list-style-type: none"> Clone a frame Remove objects and events from a frame Create the Start frame and set up separate start buttons Use the Picture Editor to change objects Build the game as an .exe file to share with others
Amazon Adventure			
		Set Up the Game	<ul style="list-style-type: none"> Define platform and platform game Open a new application and rename frames Add a library folder and preview its objects

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			<p>Add the Backdrop and Scientist</p> <ul style="list-style-type: none"> Define virtual size and change the virtual size of a frame Zoom out Identify the Local Library and add an object from it <p>Move the Scientist</p> <ul style="list-style-type: none"> View the object's animations Define Platform movement and add it to an object Scroll layers relative to an object Change scrolling speed <p>Add Ladders and Platforms</p> <ul style="list-style-type: none"> Add a ladder and platform Change the gravity and strength jump settings of an object Change Backdrop object settings Create a collision event with Backdrop objects Clone the ladder and platform and arrange them <p>Add Collection Objects</p> <ul style="list-style-type: none"> Add objects to platforms Add a non-scrolling layer Define collection area and add collection area objects Make objects invisible at start and set them to appear later Create visibility conditions that let the player move to the next level <p>Add Obstacles</p> <ul style="list-style-type: none"> Add a warp object, an alligator, and a bird Set the warp to move the player back to the starting position Draw a motion path for the bird <p>Drop Pineapples</p> <ul style="list-style-type: none"> Create a timer condition that makes pineapples appear near the bird Add Pinball movement to the pineapples Destroy pineapples when they hit objects or the ground

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Start and End the Game

Add a Lives object and create events that subtract lives

Restart the game

Add a Start frame and a transition

Create a Level 2 frame

Build the game as an .exe file to share with others