

Aunt Lee Dot Com

FANTASTIC VOYAGE - INSIDE A GAME PROGRAM

Design Levels – Platform Game.

	<p>A game tells a story - we're going to look at how programmers use Game Maker software's:</p> <ul style="list-style-type: none"> Sprites Objects Events Actions Start moving in a direction <p>To tell a story in a game.</p>
	<p>We're going to design our own levels in a platform game and learn the secrets of game programming...</p>
	<p>First, open the original game and play it to get a feel for the original level...</p>
	<p>It's called platform_6 and it's on the CD in a folder called platform.</p>



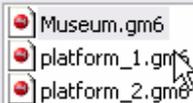
You can look at the instructions for the game at the Game Information icon - later, you may want to personalize this info.



...And play the game

Notice that you get points for collecting mushrooms, that you lose a life when you collide with a monster, and that when lives are gone, the high score chart displays and the game restarts.

Notice how the monsters move back and forth, as if something is blocking their way - we'll learn about this later...



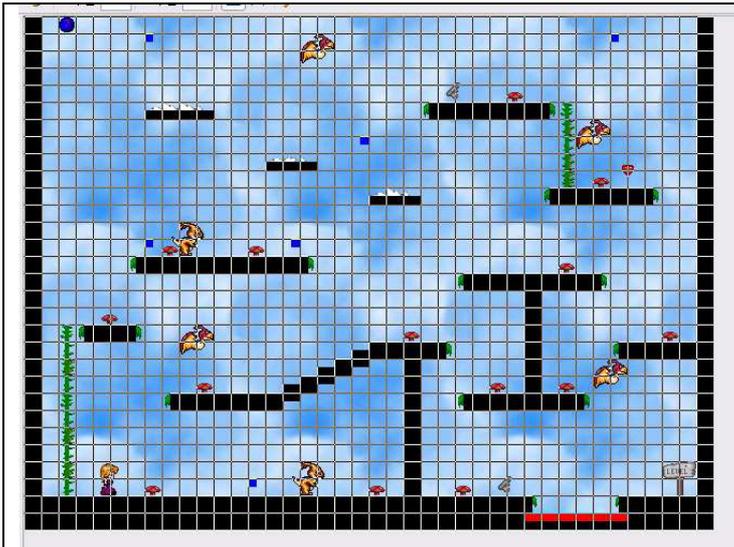
Now, let's open the Museum.gm6 example and get started...



MAKE SURE THAT ADVANCED MODE IS CHECKED!!!!

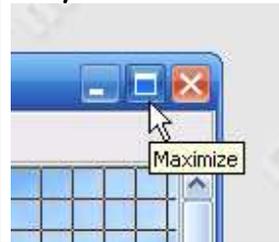
Click File - there'll be a check mark next to Advanced Mode if it's enabled!



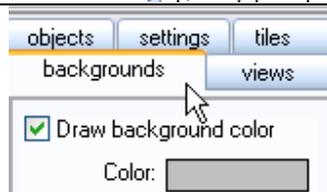


Open the Rooms folder and go to **Rooms**
 myroom
 room0
 Game Information
 room0 first, and look around - it's easy to switch back and forth.

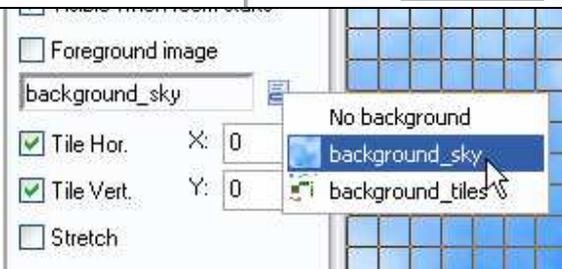
Be sure to **MAXIMIZE** the room so you can see everything



Now go to myroom - the first one in the list.



Go to the backgrounds tab...



Choose the background_sky image for now...



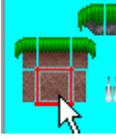
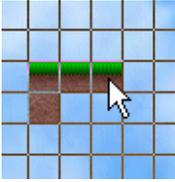
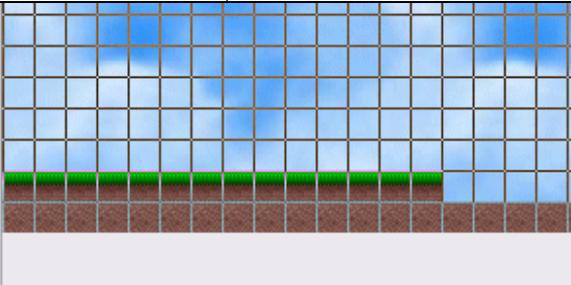
Now, click on tiles tab...

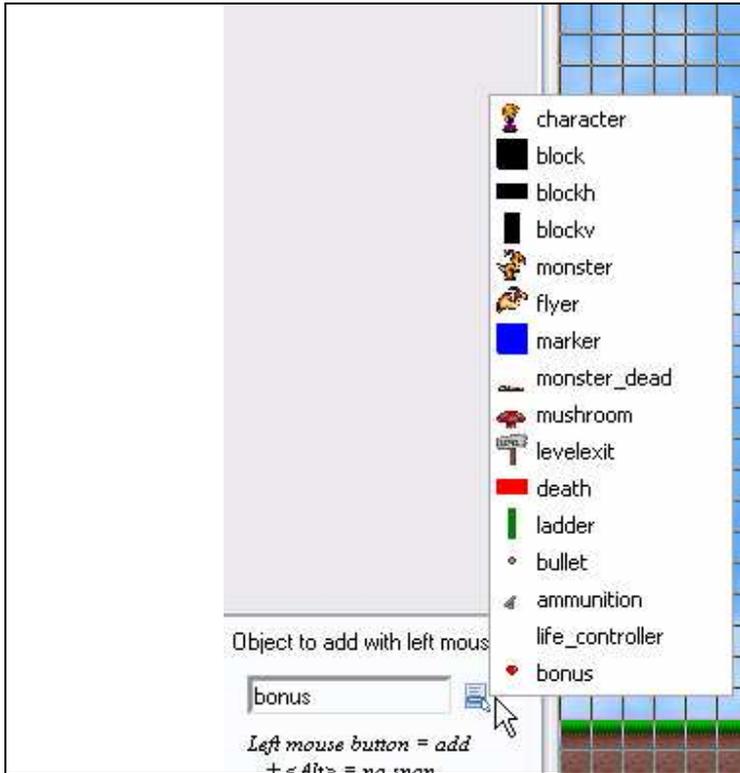
LEARNING ABOUT TILES...



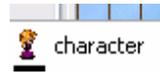
Tiles are a standard technique used by game programmers.

They are parts of the background images - they are small and load fast.

	<p>They are not objects - they don't have any programming attached to them.</p>
	<p>When you click on a piece, it shows what you're getting with a red border...</p>
	<p>And you click to put the tiles in the room the same way you're used to clicking to put objects in the room... and you still right-click to delete...</p>
	<p>We'll need to have a surface for our character to walk on, so start there...</p>
	<p>It's a good idea to make the surface at least two boxes deep, because we'll probably want to add a <i>pit of death</i> later...</p>
	<p>When you've got a surface started, we can put our main character in and start testing...</p>
	<p>Go to the objects tab...</p>



Click on the loading icon - we'll select the character, but first take a look at all the objects that will be available for us to use...



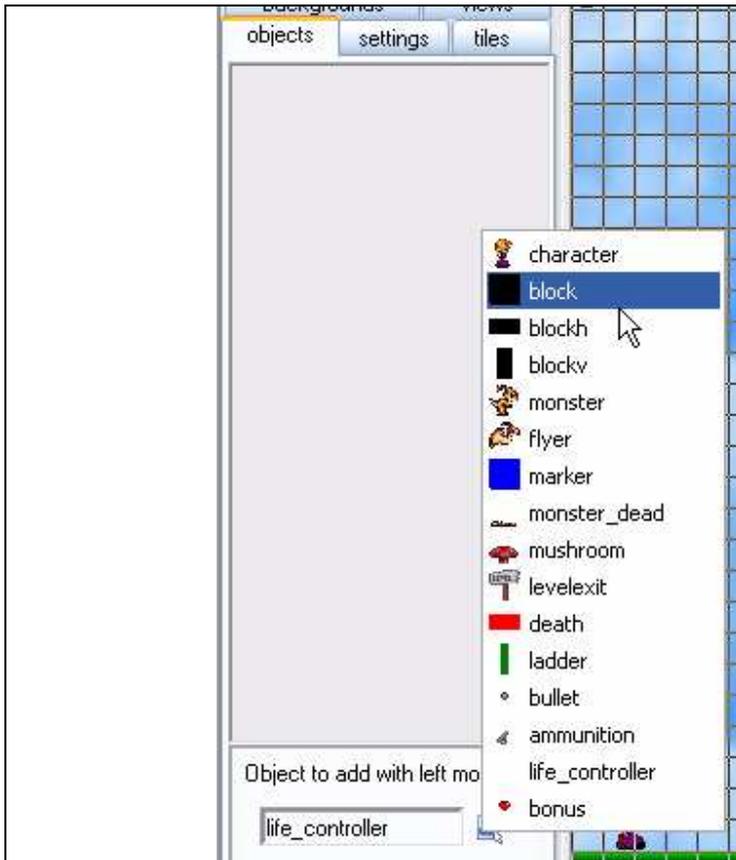
Place the character on the ground, and run the game to test it...



Oops! All you get is the "ow!" as the character falls and dies!

Why? Because all we put in were the pretty **tiles**, not the **block objects** that are programmed to be solid and that collide with the character.





So go back now and put in solid block objects...

When you're on the objects tab, Click the load icon and select a block.

Note there are several sizes to use - helpful for smaller platforms...

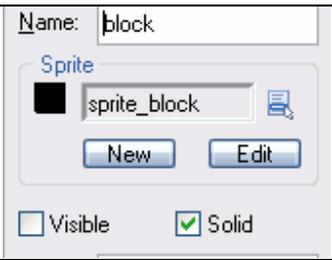
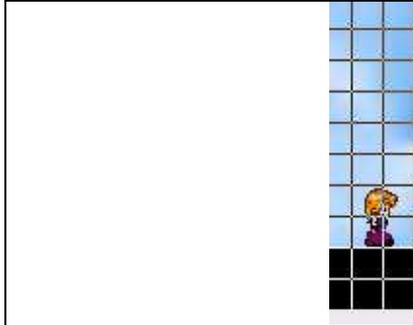


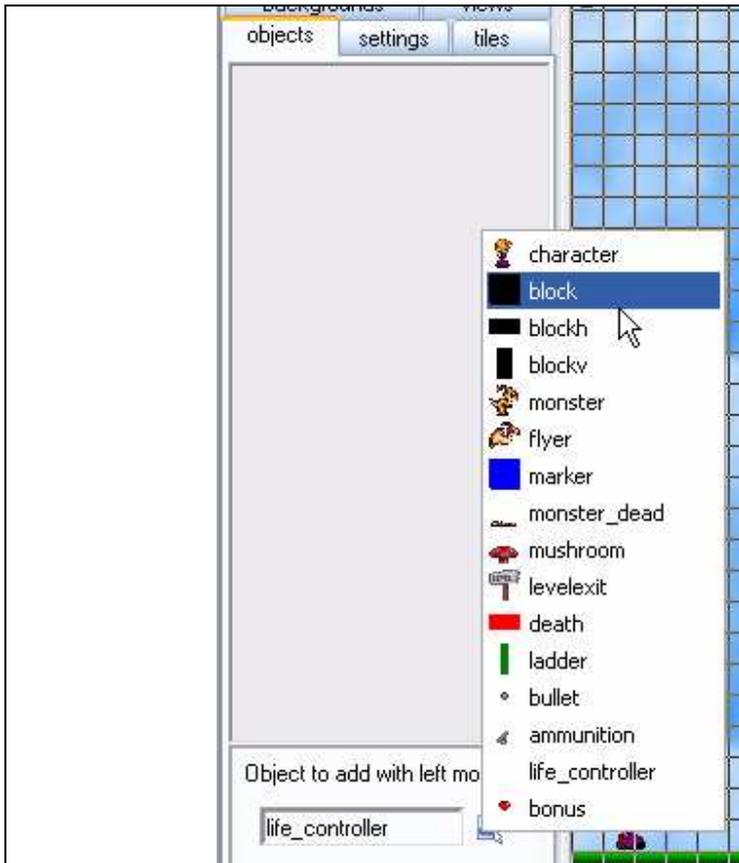
See how the blocks cover up the pretty tiles, but test the game, and you'll see that all the player sees are the pretty tiles...



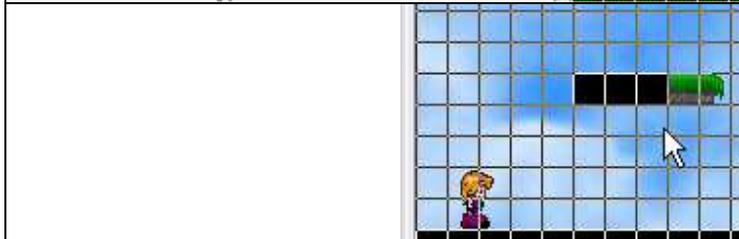
Now it works!

Now we'll remember to always put in a solid **block object** for our character to walk on.....

		<p>If you're curious, look at the block object -note that the visible box isn't checked - so the block is invisible to the player, but the solid box is checked.</p>
		<p>So let's go back to the tiles tab and keep creating our level...</p>
<p style="text-align: center;">IMPORTANT NOTE</p>		<p>You must be on the objects tab to add or delete an object, and you must be on the tiles tab to add or delete a tile!</p>
		<p>You can use these tiles...</p>
		<p>To create a platform for the character to jump onto...</p>
		<p>Just be sure to go back to the objects tab...</p>



...and select a solid block object...



And put a solid block object wherever you've got a tile platform...

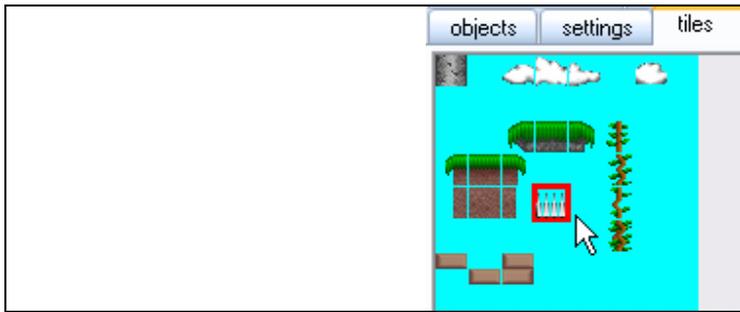


Test your level often!!!

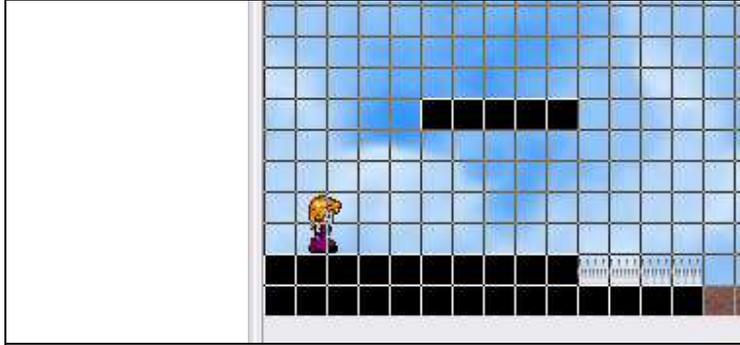
PIT OF DEATH!!!

Let's Add a pit for the character to fall into...

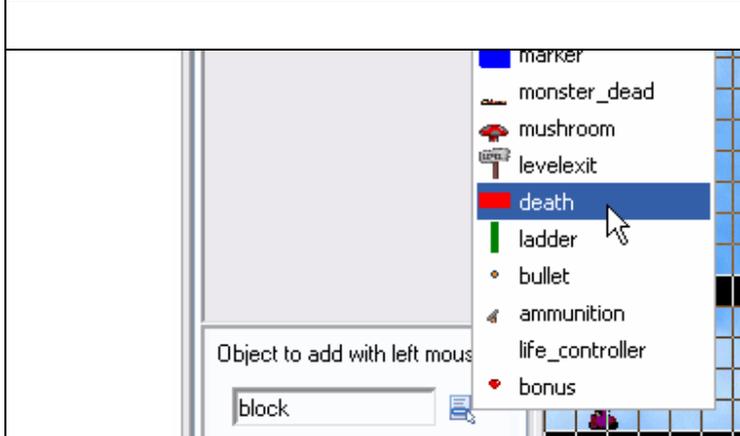
Remember, we'll need both the tile and the death object



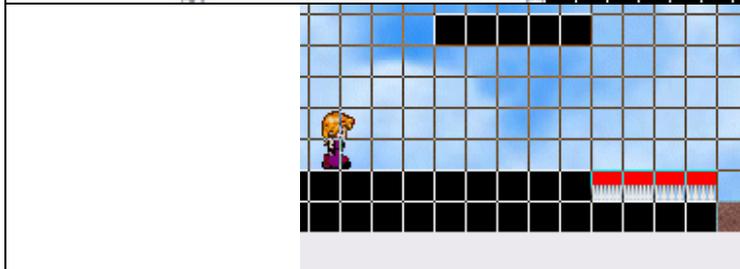
On the tile tab, select the toothy tile...



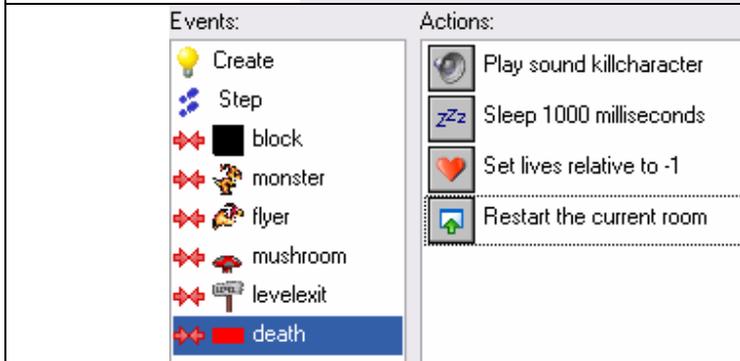
We can make the game very hard by putting the pit of death directly under a platform (so if she falls off, she falls directly into the pit)



Now go back to the objects tab...
Select death...



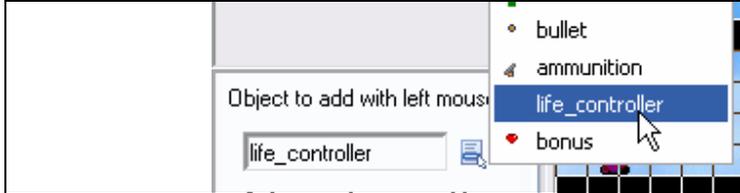
Click to put the death object into the pit - and test...



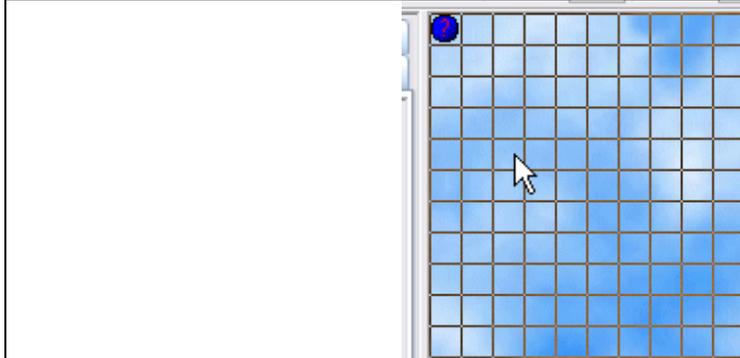
If you're interested, you can look at the programming for the collision event with the character and the death object.

Note that you lose a life when you fall into the pit of death... Let's show the lives on the game itself...

LIFE CONTROLLER



Go to to the objects tab and select life_controller



Click to add it to the top left of the room - test it by falling into the pit of death a couple of times...



Note that this also shows the score - let's add some mushrooms so that the character can get some points...

ADD MUSHROOMS FOR POINTS!

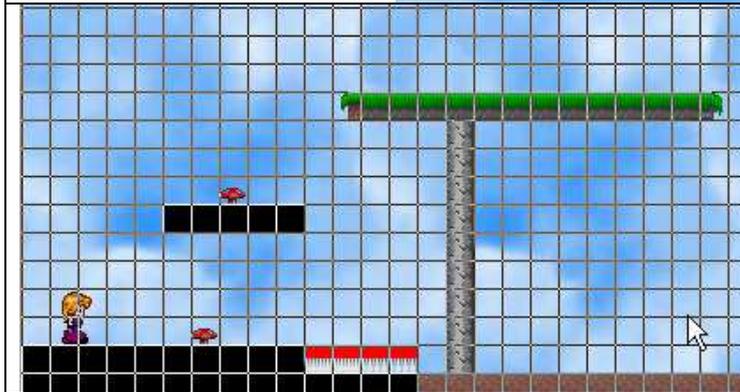


On the objects tab, select the mushroom and put some in.

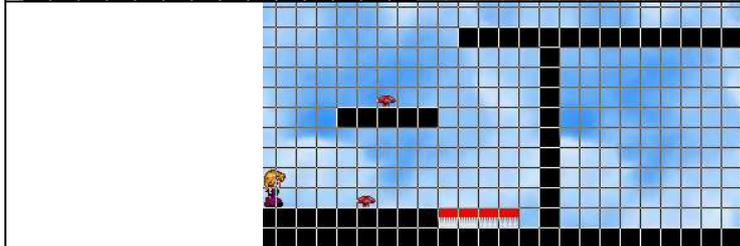




Now test, and you'll see some scores add up.



Keep building - use this pole tile to create a tall pole with a platform on top



Just be sure to switch back to the objects tab and put in the solid blocks

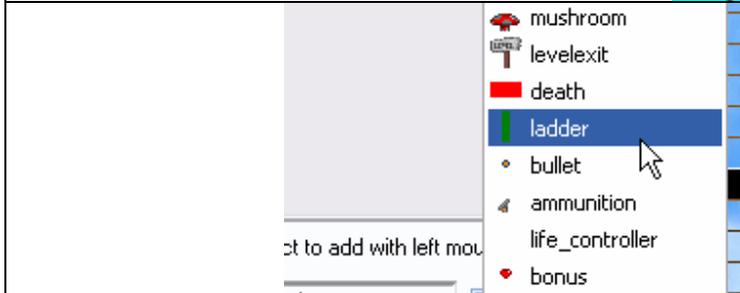


Build floating cloud platforms...

Build a ladder...



Use the ladder tile....

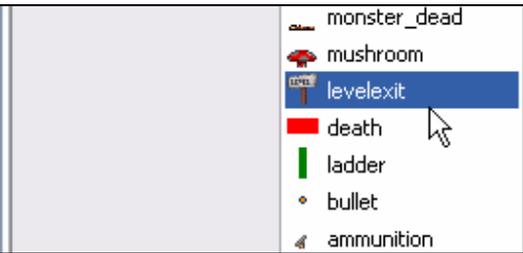
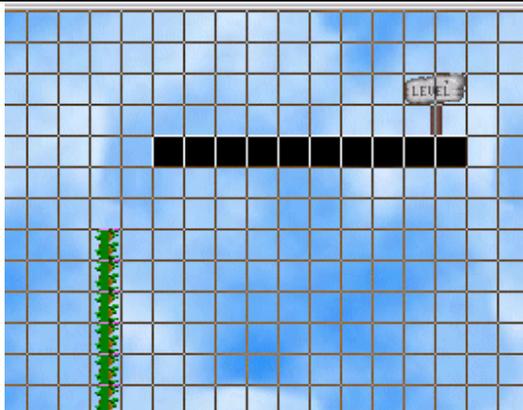
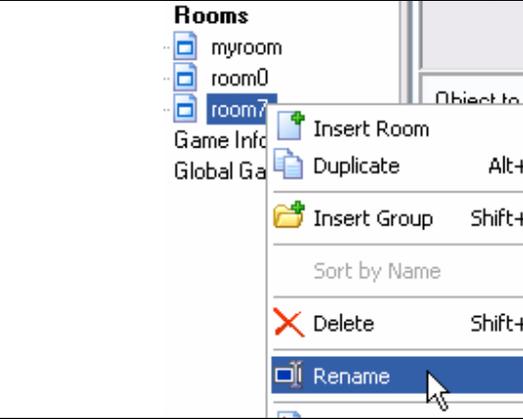
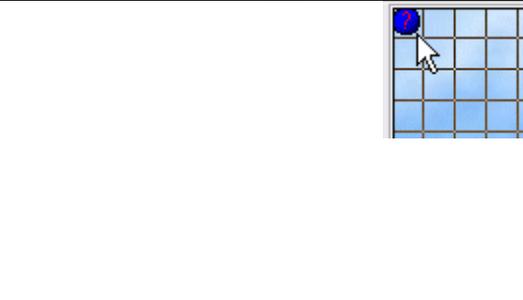


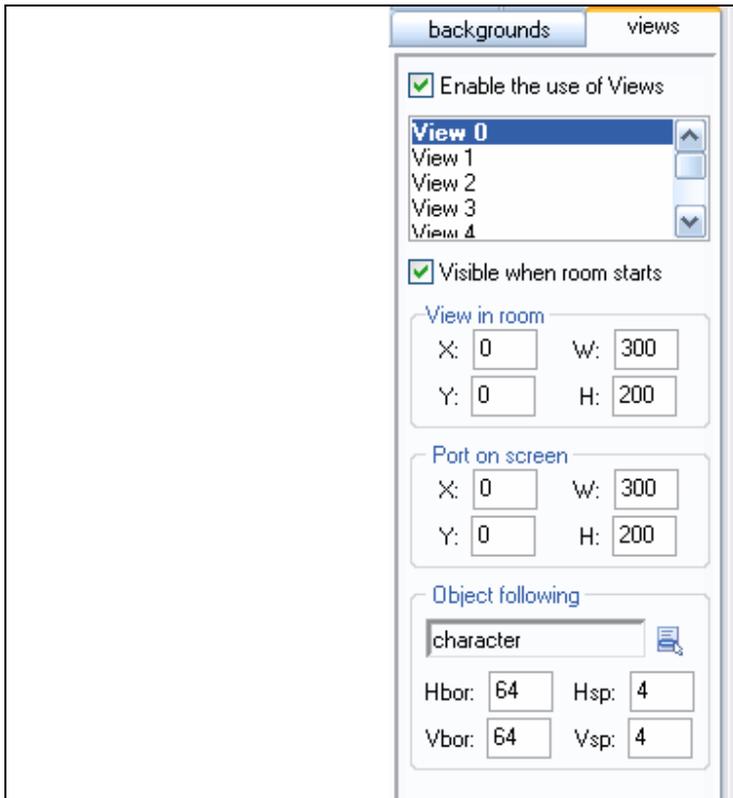
Then put a ladder object over the tile...

...And test!

CREATE A NEW ROOM FOR MONSTERS!

Every room should get harder - let's make a new room with

	<p>monsters - but how do we get there?</p>
	<p>On the objects tab, select the levelexit object!</p>
	<p>Place it toward the end of your room...</p> <p>And test!</p>
	<p>Let's add another room - right-click and choose duplicate...</p>
	<p>You may want to right-click and rename it...</p> <p>Then click and drag it so that it's the second in the list, if needed...</p>
	<p>In the new room, delete the life_controller object, or you'll get error messages.</p> <p>Put in a new life_controller in the new room - this seems to work.</p>



Or, you can create a new room



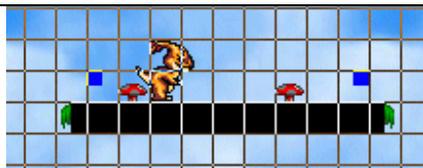
with the icon, to get a completely blank room - but to get the same effects, you'll need to set up the view menu like so...

LET'S ADD MONSTERS!

Remember how the monsters moved back and forth, back and forth?



It's because the game programmer put in marker objects (that are invisible to the game player) that the monster bounces off of...



So when you put in a monster, also put in two markers to keep the monster moving back and forth...



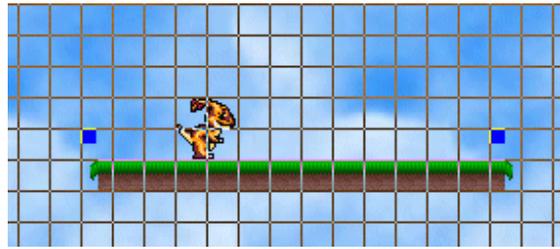
Select the monster...



Put him on the platform...

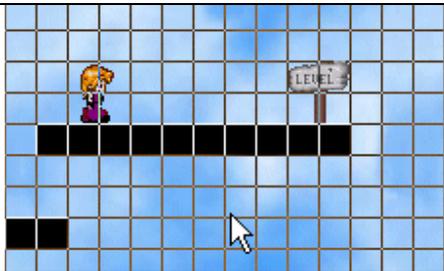


Select marker...



Put him on the platform... test!

Remember that the character can squash the monster if she jumps on him.



NOTE: To make it easier to test the second room, you can put the character close to the end of the first room, then put her back later...

Events:

- Create
- End Step
- block
- marker

Actions:

- Start moving in a direction

Start moving in a direction

Applies to:

- Self
- Other
- Object:

Directions:

Speed: 4

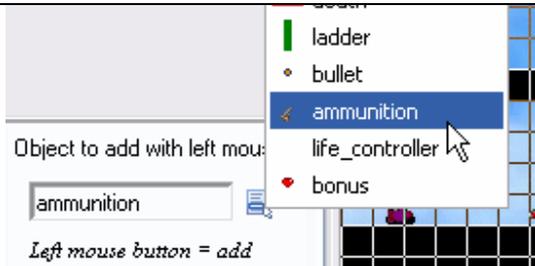
If you want to make the monster move faster or slower, you can go to the monster object, to the creation event, the start moving in a direction action, and change the speed.



You can add a flying monster the same way - but the flying monster doesn't need to be on a solid surface - he can fly...

AMMUNITION...

You can arm your character against the monsters with ammunition...



In objects tab, select ammunition, and place it somewhere in the room where the character can get it...



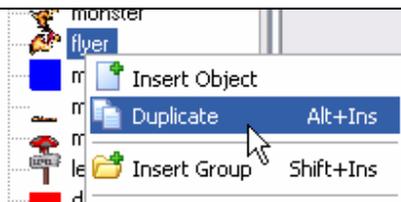
Now she can shoot monsters with the spacebar...



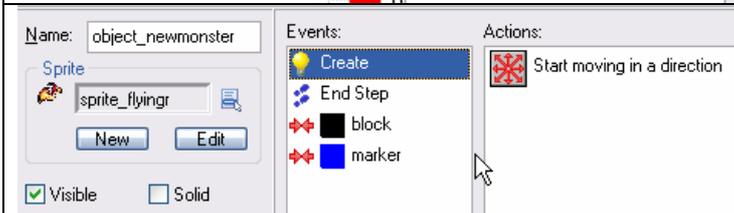
And the ammo will show up on the scoreboard...

CREATE A NEW MONSTER SHORTCUT

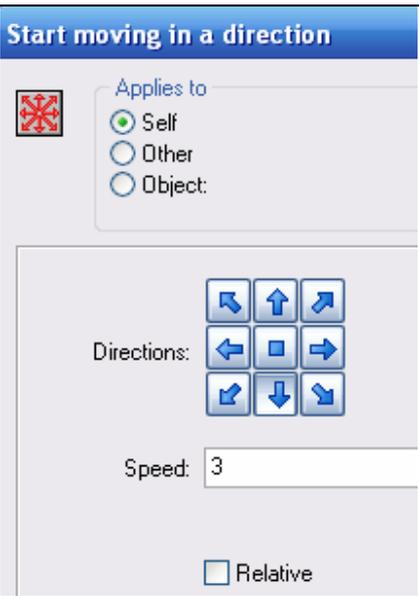
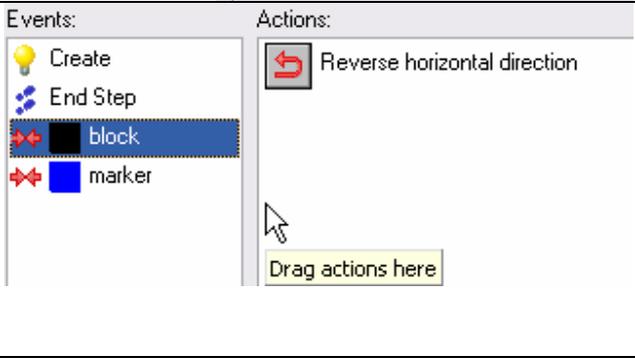
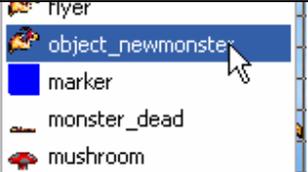
Let's make a new monster who moves up and down...

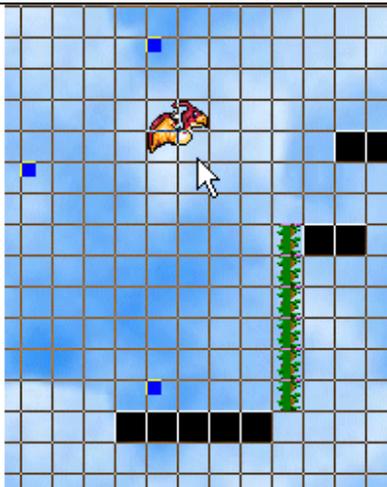


Right-click the flyer monster and choose Duplicate



Go to the creation event and click the Start moving in a direction icon.

	<p>Un-check the right arrow direction</p> <p>Click the down arrow direction</p> <p>Change speed if you like...</p>
	<p>On both the collision-block and collision-marker events,</p> <ul style="list-style-type: none"> • Delete the reverse horizontal direction • Drag reverse vertical direction...
	<p>So it looks like this...</p>
	<p>Now, when you select the new object in a room...</p>

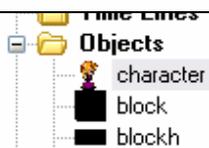


Place him somewhere where he might collide with the character, with markers above and below, because he'll be moving up and down...

CHANGE SOUNDS?

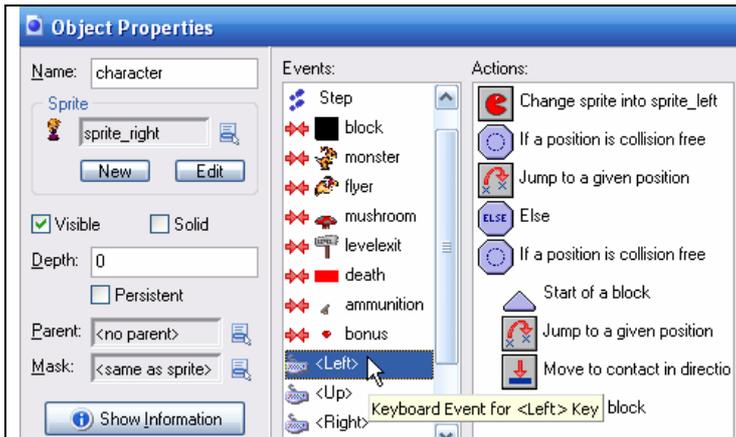
To change the sound in a collision, go to the character object, select the collision event you're interested in, find the play sound actions, and change them.

Go to Add a Sound first, if you want a new sound...

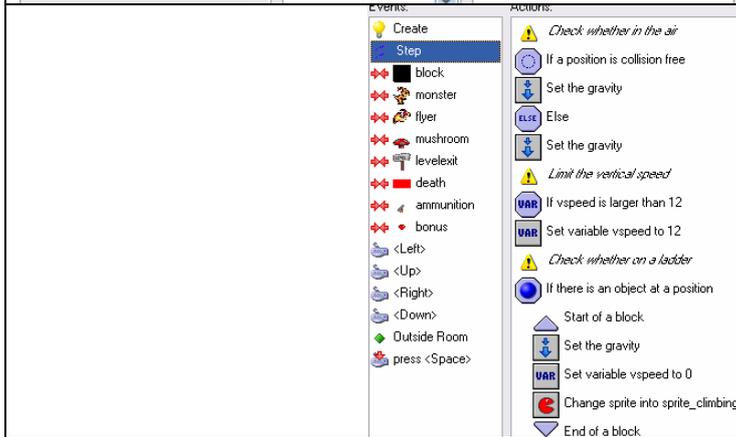


Okay - I know you guys - whatever I say, what you'll want to do first is change the main character - but there's a problem. Open the character object...

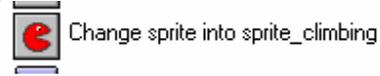




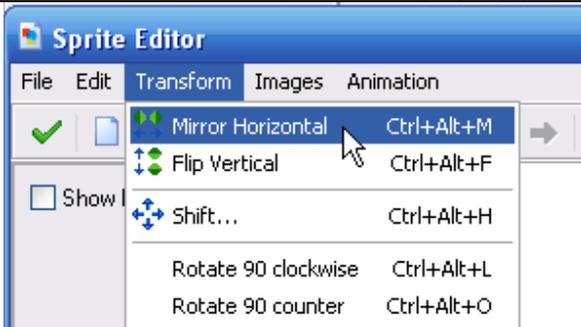
Click on the Keyboard event for the LEFT key, and you'll see that when the left key is pressed, there's a Change sprite action - if you want to change the character sprite, be sure to change it here as well - preferably with a left-facing sprite.



AND, when the character climbs, the sprite changes to a climbing sprite,



So you would need three sprites.



Then add the same sprite again,

go to



And click Mirror Horizontal...

And save with new name...

