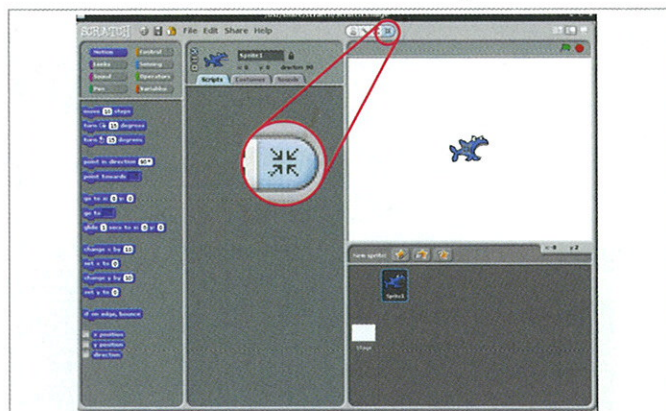
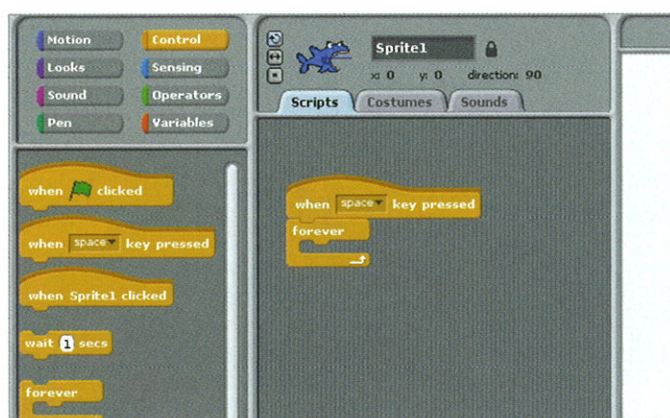




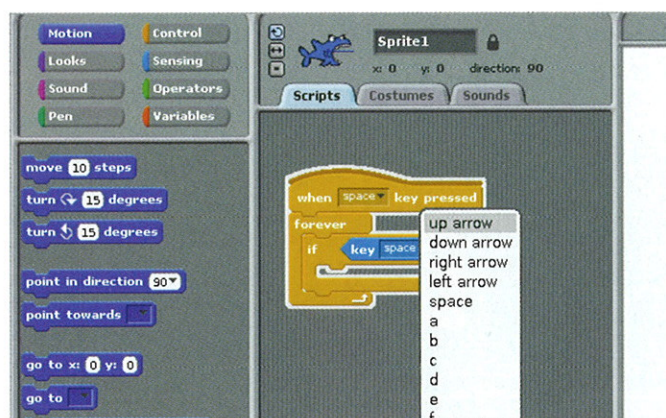
**1** First, start up Scratch. You can't have a cat starring in a game called Crustacean Storm, so right-click on the sprite and delete it. Go to the New Sprite bar above the bottom right-hand window, select the middle button, "Choose new sprite from file", go to the Costumes | Animals folder and select "shark 1-b".



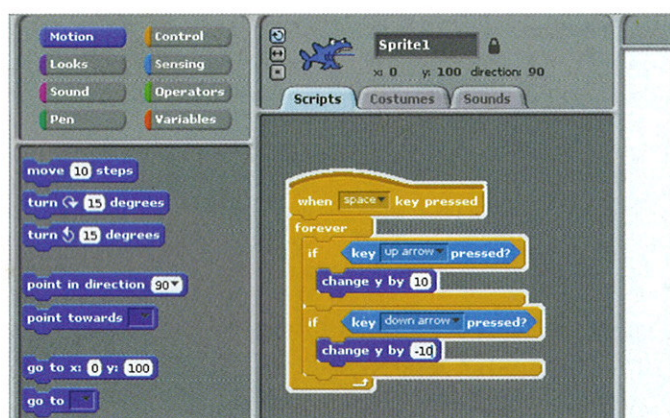
**2** As it is, the shark is too big. Let's shrink him. Select the Shrink tool from the toolbar (as shown above) and click about 30 times on the shark until he's roughly the size shown here. Now it's time to name the sprite. Go to the name bar above the central window and type to change its name from "Sprite1" to "Shark".



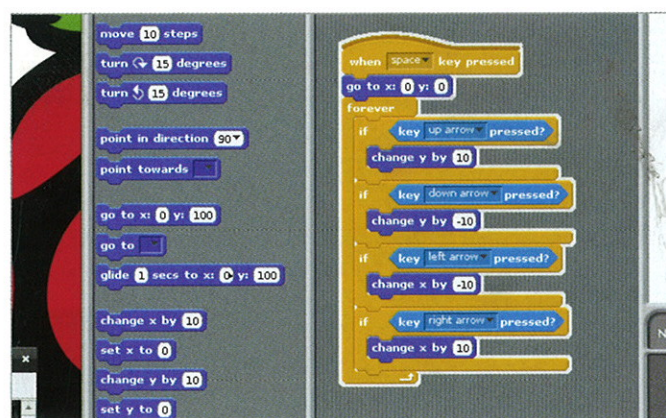
**3** It's time to put the player in control. First, select the Control category from the top left of the screen, then drag the blocks "when 'space' key pressed" and "forever" into the shark's script window, as shown here. We'll use the spacebar as the start key for our game.



**4** Now drag the "if" block from the Control category into the "forever" block, then go to the Sensing category and drag the "key 'space' pressed" block to the control point on the "if". Use the dropdown menu to change "space" to "up arrow".

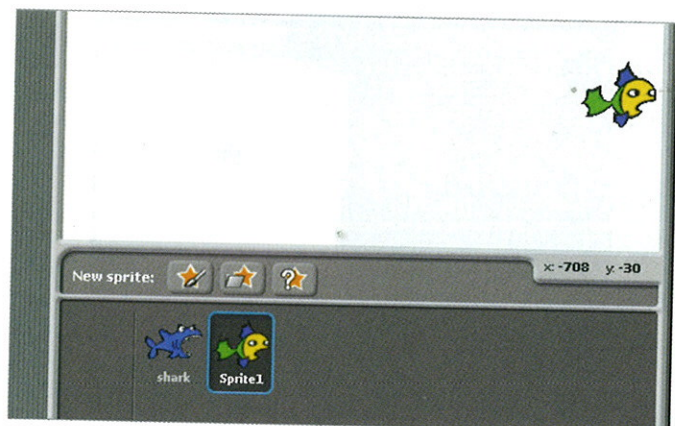


**5** That tells Scratch to look out for the Up key, but now we need to assign the response. Go to the Motion category and drag the "change y by 10" block into the "if" block. If the spacebar then Up arrow is pressed, our shark now moves. You can now repeat this for the Down arrow, replacing the "change y by" value to -10.

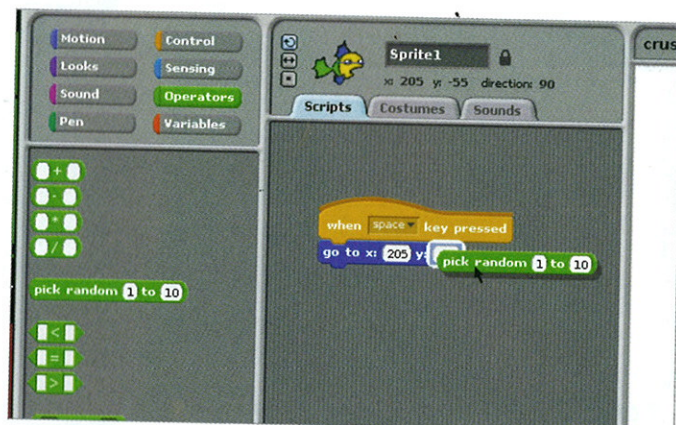


**6** To make the left and right arrows work, repeat steps 4 and 5, but replace the "change y by" block with the "change x by" block and set the values -10 and 10 respectively. Finally, our star needs a start position. Grab the "go to x: 0 y: 100" block from Motion and drag it into the place shown. Change both values to 0.

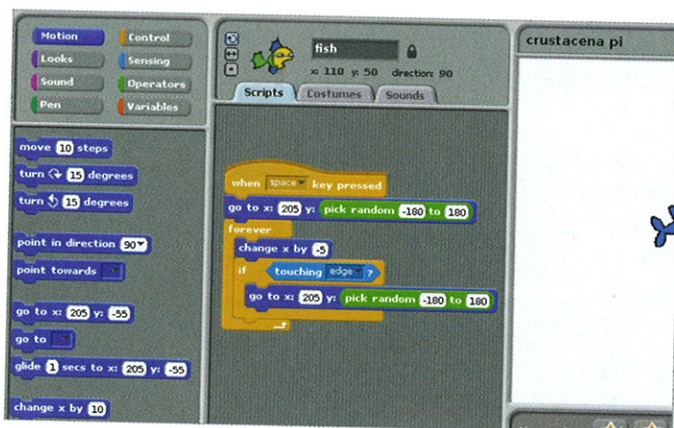




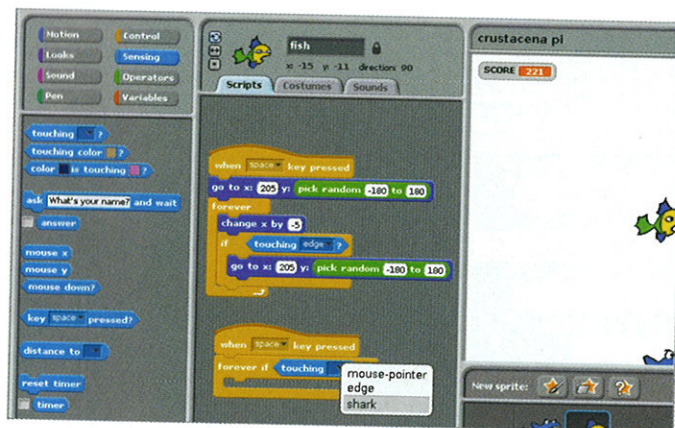
**7** Now click again to "Choose new sprite from file" and select a fish, before shrinking it as we did in step 2 and renaming it "Fish". Ensure that it's selected, as shown, and drag "when 'space' key pressed" into the central scripts window. Go to Motion and drag the "go to x:0 y:0" block into place below.



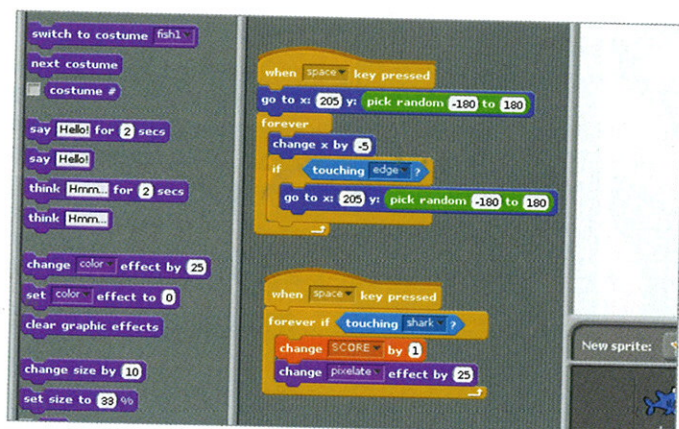
**8** Set "x" to 205. To stop the fish always appearing in the same place, go to Operators and drag the "pick random 1 to 10" block into the "y" value. Set values to -180 and 180. Next, go to Control and drag in "forever" to snap in below "go to", then go to Motion and pull the "change x by" block inside it. Change x to -5.



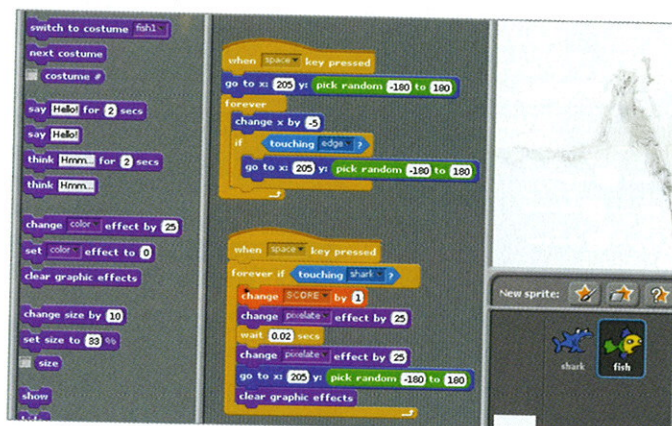
**9** We want our fish to reappear if it hits the side of the screen. Drag an "if" block from Control inside the "forever" block, then go to the Sensing category and drag the "touching" block on to the "if". Select "Edge" from the "touching" dropdown. Drag in a "go to x & y" block from Motion and configure it as in step 8.



**10** Click on Variables and then the "Make a Variable" button. Call it "Score". The score will now appear in the top-left corner of the game screen. Add a new "when 'space' key pressed" block from Control, clip on a "forever if" block; now go to Sensing and drag in a "touching" block. Choose "shark" from the dropdown.

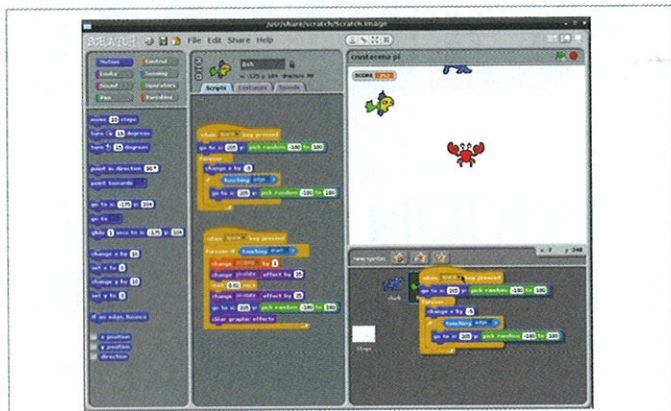


**11** What happens when the fish meets the shark? Our piscine friend gets eaten and the score creeps up. Go to Variables and drag in the "change score by 1" block, then go to Looks and drag in the "change 'color' by 25" block. Change the "color" option to "pixelate".

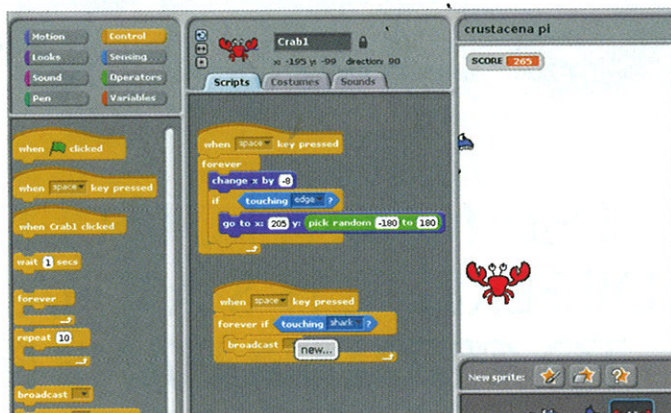


**12** It's a nice effect, but over far too soon. Drag in a "wait 1.00 secs" block from Control and change the wait duration to 0.02. Then drag in another "change 'color' by 25" block and change the "color" to "pixelate". Add the "go to x" block with a random "y" position (as in step 8), and a "clear graphic effects" block from Looks.

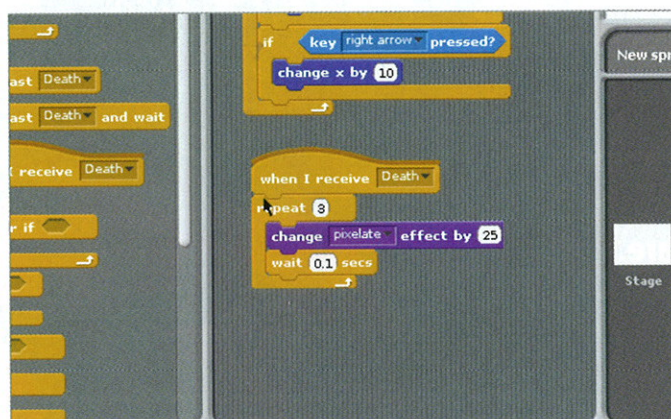




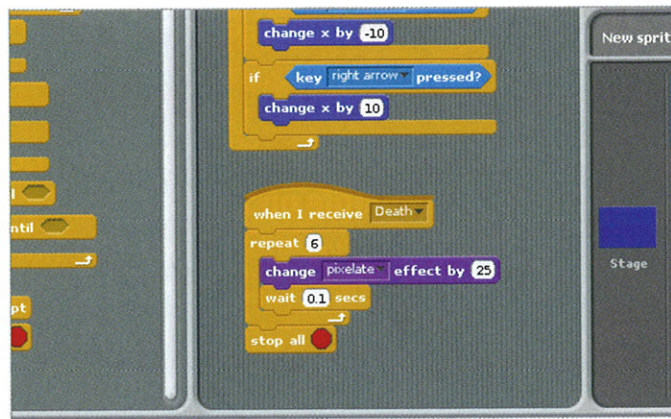
**13** It's crab time! Add a new sprite - crab 1-a - and shrink him. We can make the crab move by duplicating the fish script. Click on the Fish sprite, then click the Duplicate icon on the top toolbar, click on the first script for this fish, and drag it over to the crab. Go to the crab's script and amend "change x by" value so it reads -8.



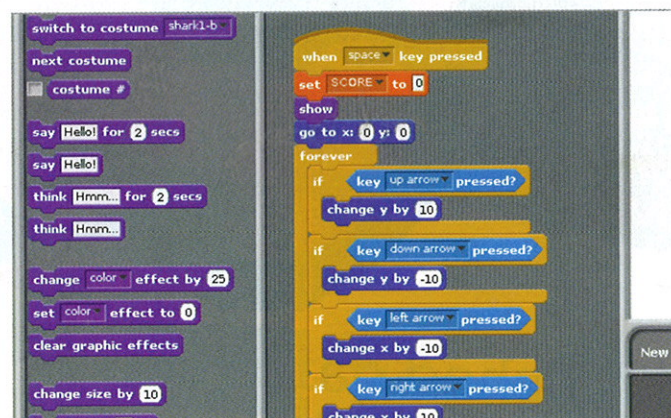
**14** The crab moves, but we want him to be deadly. Drag in a new "when 'space' key pressed" block, then add a "forever if" block. Go to Sensing and add a "touching" block; use the dropdown to select the Shark sprite. Go to Control and drag in a "broadcast" block. Select New from the dropdown and call it "Death".



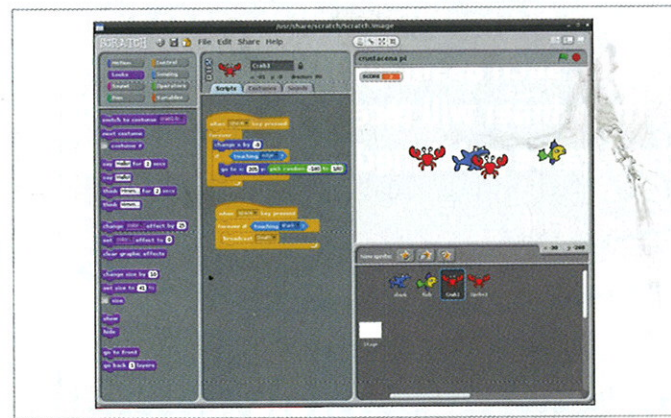
**15** Death equals Game Over. Select the Shark sprite, then go to the Control category and add the "when I receive" block. Select "Death" from the dropdown. Now add a "repeat" block from Control, go to Looks and add the same "pixelate" block as in step 12, and then a "wait" block.



**16** Let's stretch the shark's demise out a bit. Set the "wait" value to 0.1 seconds, and set the value in the "repeat" block to 6. Add a "stop all" from Control to the end of this script. That will end the game when the shark is hit.



**17** We need the score to reset every time the game is started, so drag a "set score to 0" block from Variables and a "show" block from Looks to the first shark script, placing them just below the initial "when 'space' key pressed" block.



**18** We have one killer crustacean, but what about a swarm? In Scratch you can easily duplicate crabs. Click the Duplicate tool, then the crab, and make another crab or two. When you're done, click the button in the top right to enter the full-screen presentation mode, press the green flag, then space - and start playing.