

Shark game!!!

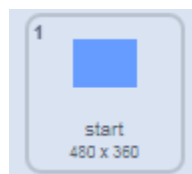
Can you feed the shark and dodge the plastic in the ocean? This is quite an advanced game.



Full instructions at <https://projects.raspberrypi.org/en/projects/save-the-shark> and link to completed game <https://scratch.mit.edu/projects/864959460/>.

Step 1: Setup

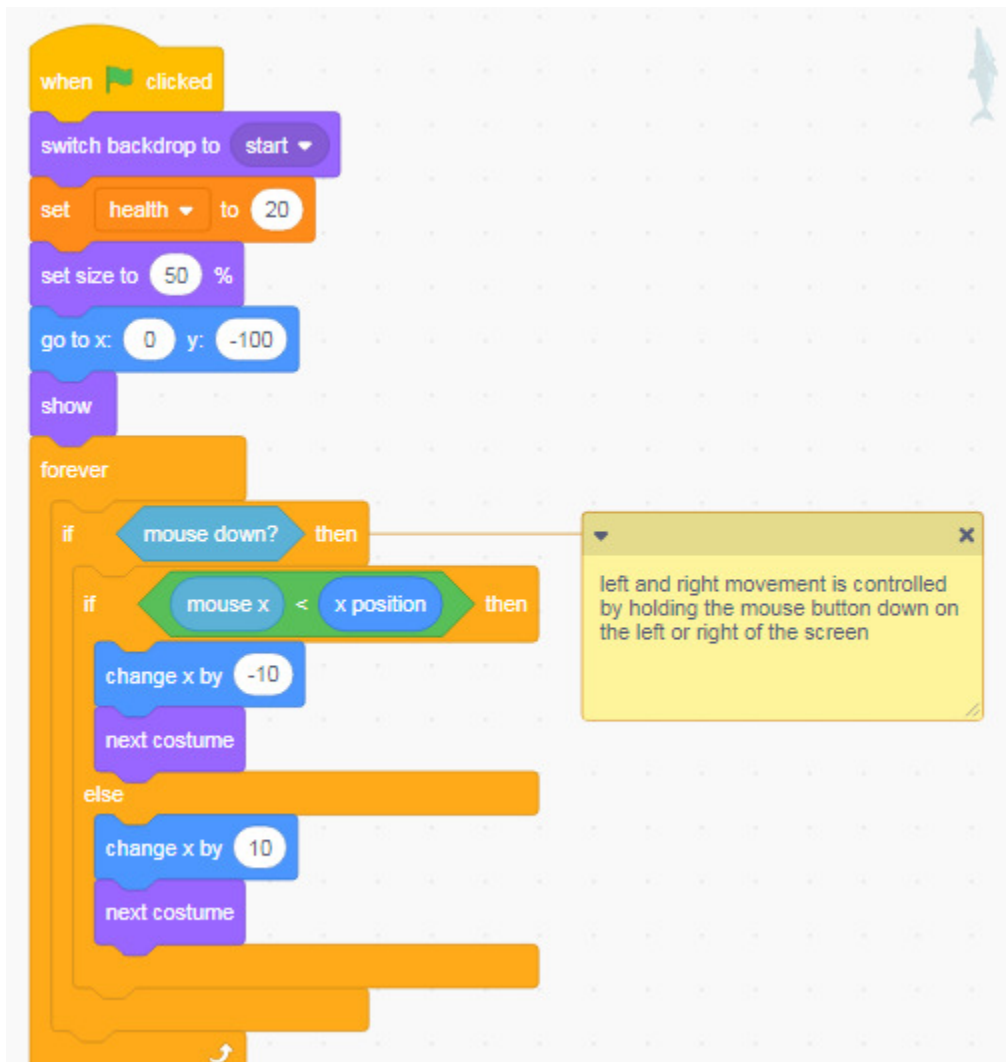
- You will need a shark sprite (see my folder)
- You will need a plastic sprite (see my folder)
- You will need the Scratch fish sprite (with several costumes)
- You will need to make a title sprite, with text that says Shark Game!!!
- You will need 3 variables: the first two are **health** and **timer**, these should be created 'For all sprites'. The third variable is for the plastic sprite, it is called **speed** and should be created 'For this sprite only'.
- You will need 2 backdrops, a plain blue one and a copy that says 'Game Over!':



Save your project

Step 2: Shark movement

- Add this code to set up your shark and control movement left and right.
- If your shark only has one costume, you can make another by copying it and flipping it left-right, or just leave out the 'next costume' blocks.



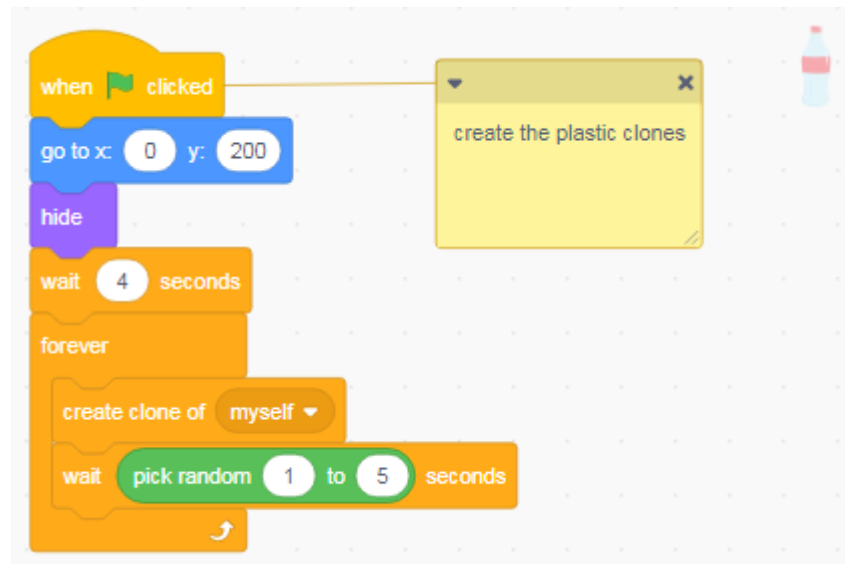
- Test your code – does the shark move how you expect?
- This is an advanced project, so it is a good idea to keep testing as you go, and fix any bugs as you find them.

Save your project

Step 3: Plastic pollution

Next we will add code to the plastic sprite – we want lots of plastic items so we will use clones.

- First of all, add this code to make the plastic clones:



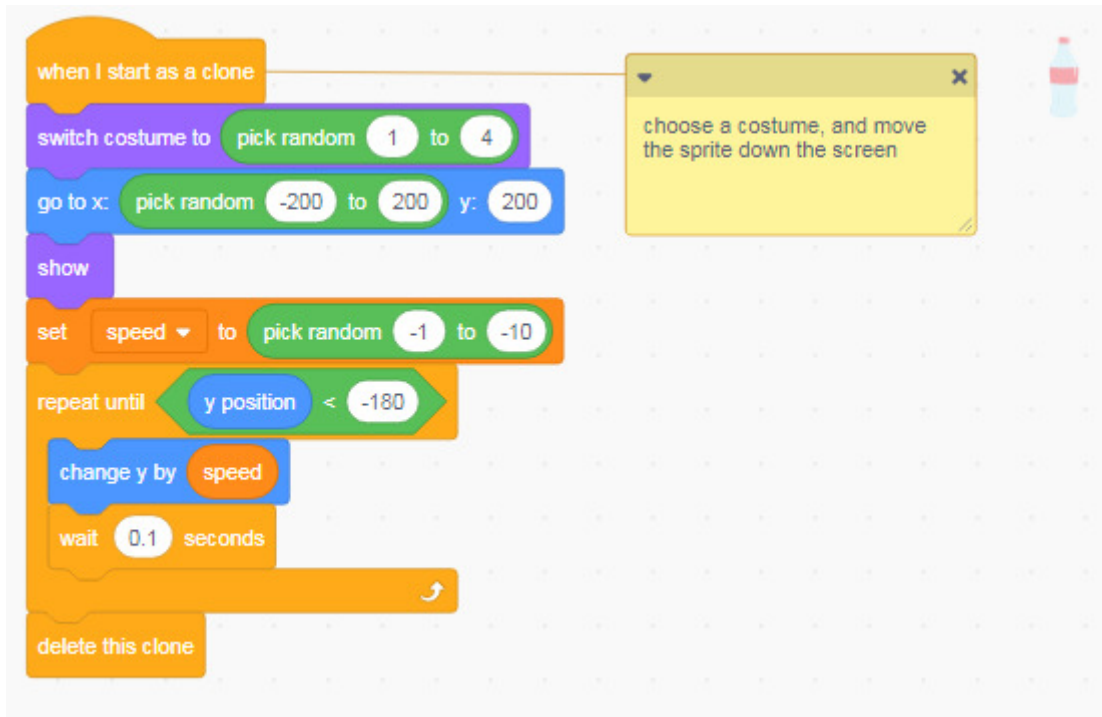
- When you run this code, it looks like nothing is happening – but it is! There is some test code you can run if you are not sure:



You can skip this step!

- If you didn't create the **speed** variable earlier, you need to do it now, but make sure you choose 'For This Sprite Only'. This makes it possible for the clones to move at different speeds.

- Next, add this code to make the plastic move down the screen:

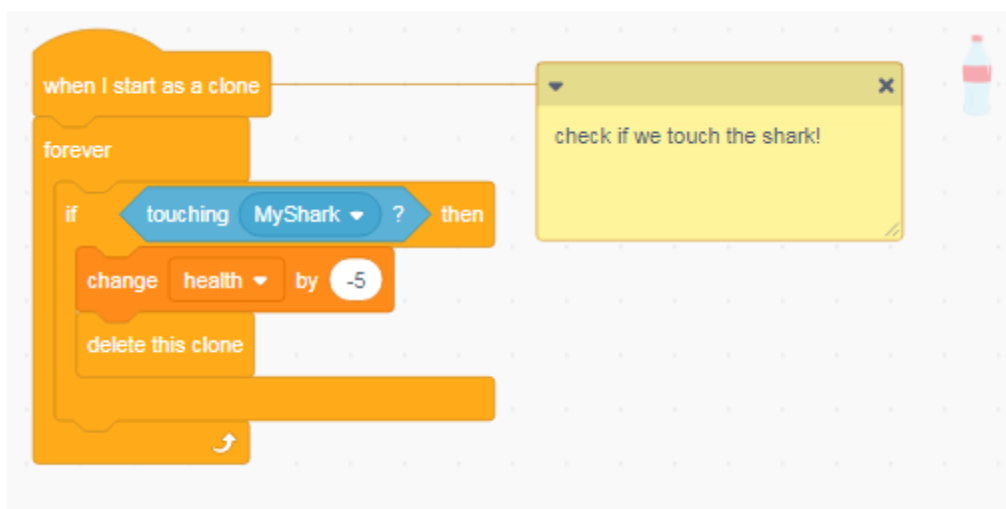


- Test your code – does the plastic move as expected? What can you try if it doesn't quite work?

Save your project

Step 4: Shark health

- On the plastic sprite, add this code to decrease the shark's health every time it gets tangled in plastic:



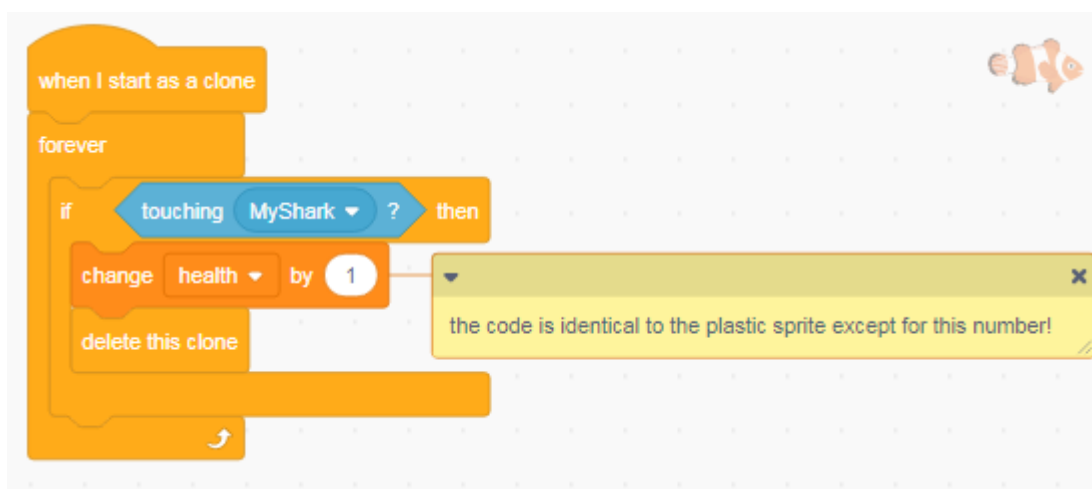
- And then on the shark sprite, add the code below inside the forever loop, right at the end, to show the 'Game Over' backdrop:



Save your project

Step 5: Add the fish!

- We are going to copy your code for the plastic sprite to the fish sprite, so stop and check that everything is working before you do this. You could ask the person next to you to play your game, as an extra test.
- The plastic reduces the shark's health, but eating the fish lets it recover some strength.
- There should be three blocks of code on the plastic sprite. Copy them all to the fish sprite, then change the number in the code below, to 1 (instead of -5). This is the only difference!



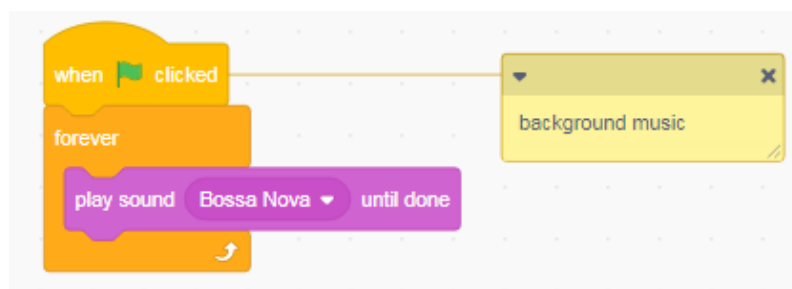
Save your project

Step 6: Timer, background music and title sprite

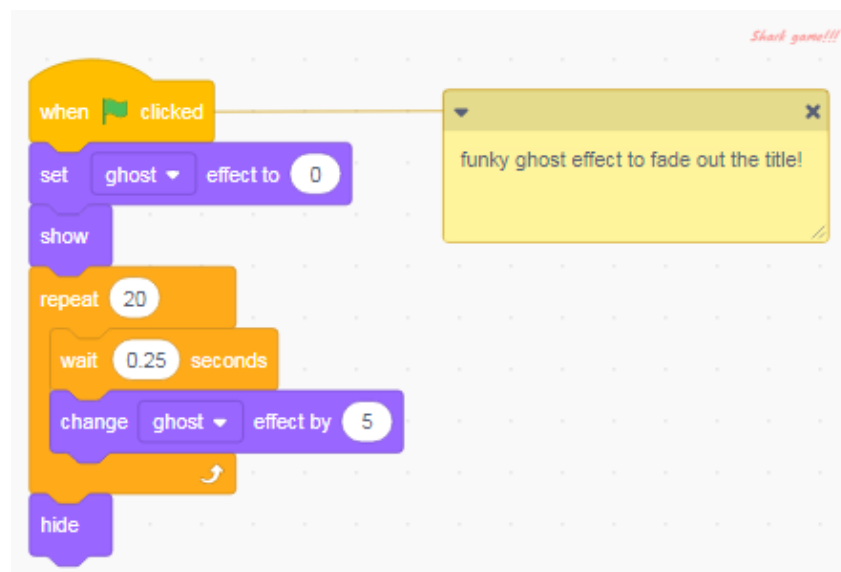
- The code for the timer goes on the backdrop.
- As the comment says, the timer counts up in this game instead of down, because you are seeing how long you can survive!



- The background music also goes on the backdrop. You can choose any sound you like, but the ones in the Loops category will probably work best. Or you can import your own choice of music.



- Here's the code for the title sprite:



Save your project