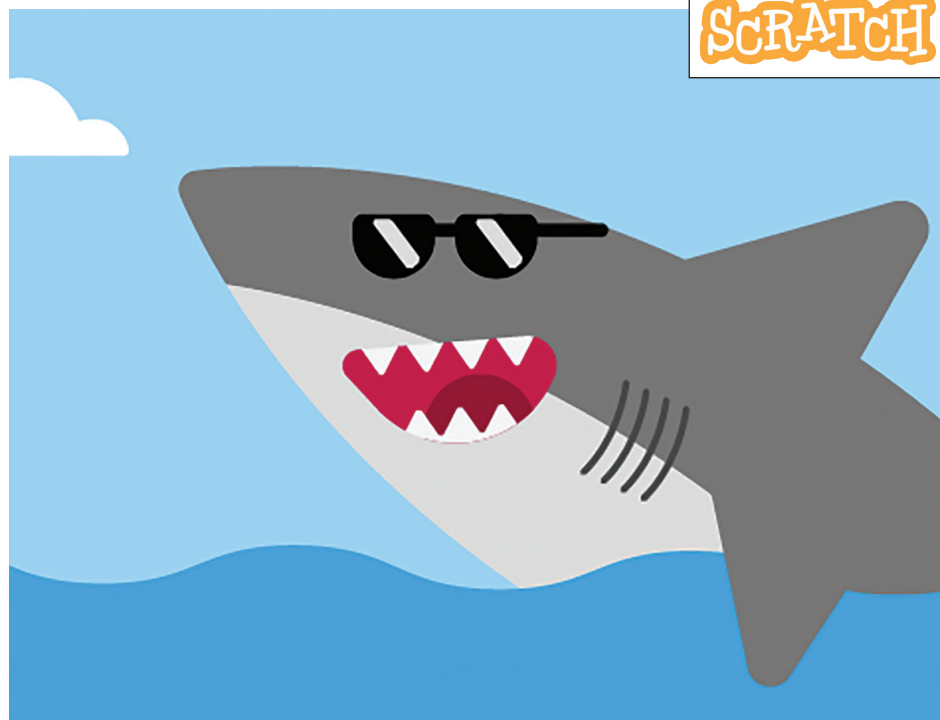


The coding club is your place to learn and develop coding skills. We've created these pages with the Raspberry Pi Foundation to provide loads of projects, from building games to designing animations.

This project uses the Scratch programming language.

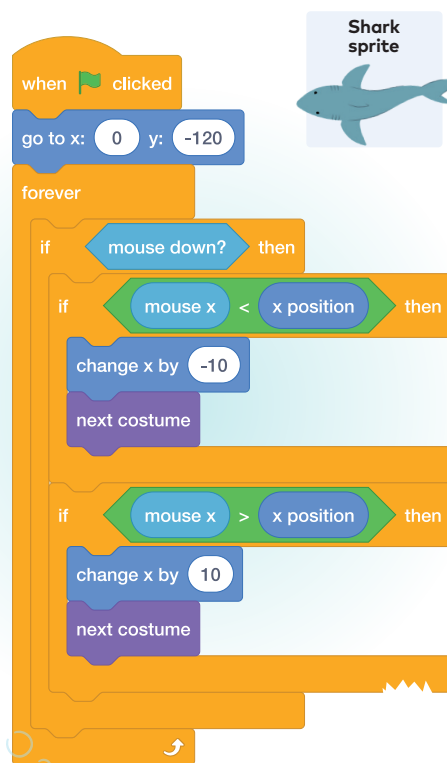


Save the shark

Bite off a chunk of coding and build a shark game to play with your friends.

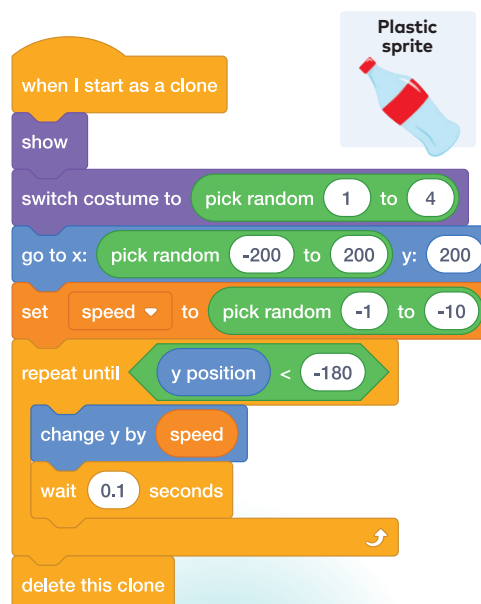
Move the shark

- 1 First, go to rpf.io/save-the-shark-on to open the starter project in Scratch.
- 2 Select the shark sprite. Build the script (right) by selecting the correct colour-coded blocks from the menu on the left-hand side of the screen. A script is a stack of coding blocks that makes a list of instructions.
- 3 Now test your game by clicking the green flag. When you click the mouse and move it across the screen, your shark should follow the pointer from side to side.



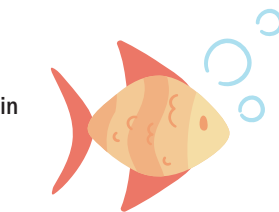
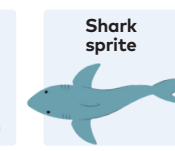
Add plastic waste

- 1 Select the plastic sprite then build the scripts (right and below). Create a new variable by clicking the Make a Variable button. Type in "speed" and select For this sprite only.
- 2 Click the green flag. Plastic waste should begin to drift down from the top of your stage.



How healthy is your shark?

- 1 Next, you're going to add a "health" variable. Your shark will lose health points if it "eats" plastic waste.
- 2 Click the Make a Variable button and name the new variable "health". Select For all sprites.
- 3 Add the two highlighted sets of coding blocks to the scripts on the shark sprite. Check that all of the numbers are correct.
- 4 Now, select the plastic sprite and build the script (below right) in the coding area.
- 5 Test your game by clicking the green flag. Check that your shark's health decreases by 5 every time it bumps into plastic.

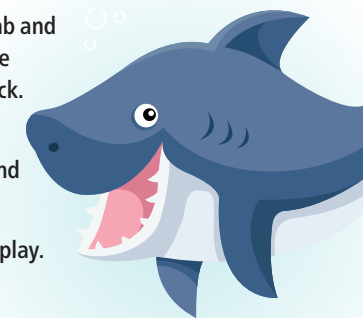
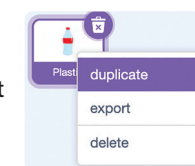


SHARK ATTACK



Feed your shark

- 1 You're going to add some tasty fish for your shark to chomp on. The code is almost exactly the same as the plastic sprite so all you need to do is right click on your plastic sprite and click duplicate.
- 2 Go to the Costumes tab in the top left corner and click Choose a Costume. Find a nice fish and select. Delete all of the plastic costumes and rename your sprite "Fish".
- 3 Go back to the Code tab and change the value in the health variable coding block.
- 4 Check that the size of your fish is set to 40 and the direction to 180.
- 5 Your game is ready to play. Click the green flag.



Take it further

You can make your project more awesome by adding some new elements. For example, you could add a new sprite that appears rarely, but takes away or adds lots of health. You could add cool sounds to your game, such as munching when the shark eats a fish. You could also add different costumes to your fish sprite, to give your shark lots of different types of fish to eat. Most importantly, send us your finished project so we can have a play too, at hello@science-nature.co.uk

The Raspberry Pi Foundation is a UK-based charity with the mission to enable young people to realise their full potential through the power of computing and digital technologies. Discover more step-by-step coding projects at rpf.io/scienceandnature

