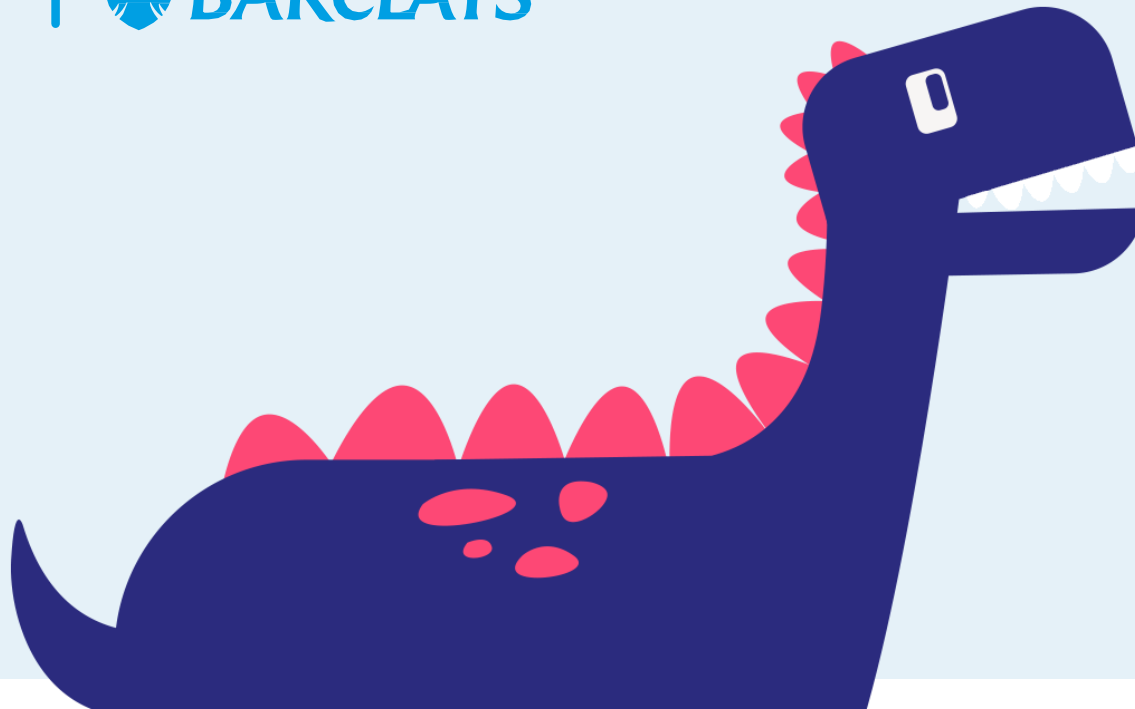
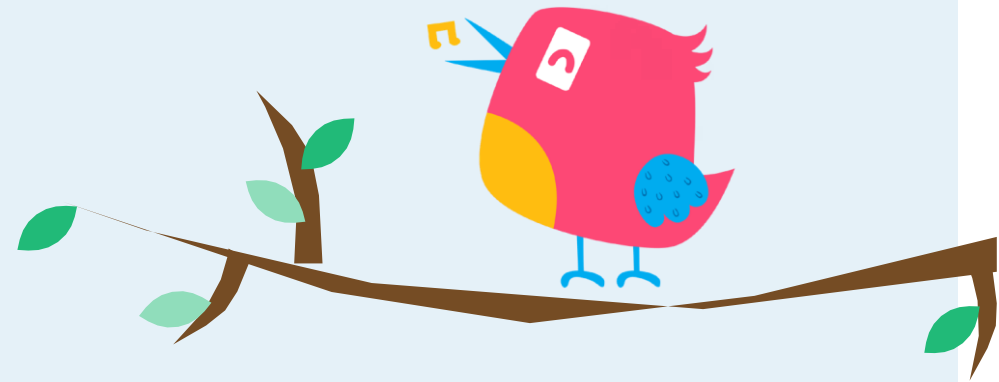


Student workbook

Coral reef cleanup with VEXcode VR

Code Playground



Coral reef cleanup with VEXcode VR

VEXcode VR project

In this session, we will use the skills that we've learned in the previous 4 sessions to complete the Coral Reef Cleanup challenge.

By completing this challenge you will learn to

- use sequence, selection and iteration
- print certificates of achievement

This project is designed for the VEXcode VR system, you can access it here - <https://vr.vex.com/>

For this session, you will need to select the Coral Reef Cleanup playground.

Hope you enjoy the project!

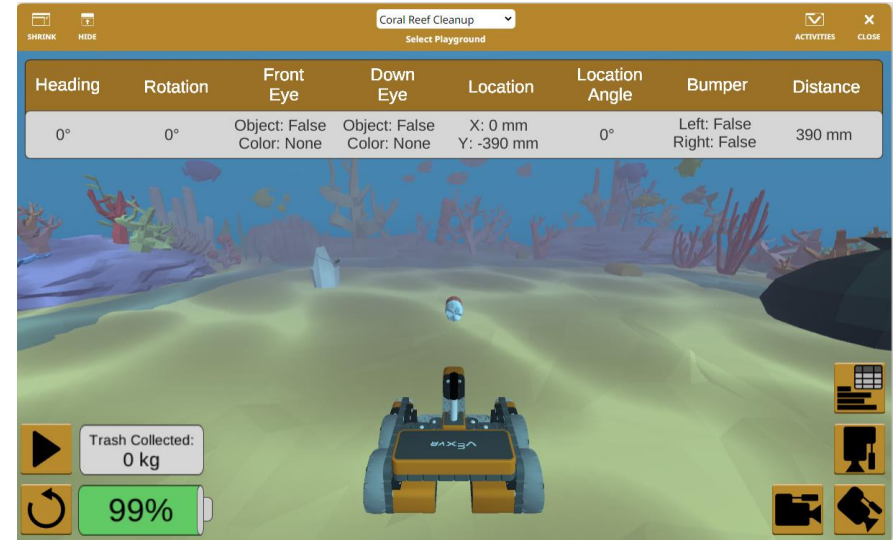


Coral reef cleanup with VEXcode VR

VEXcode VR project

Step 1

Using the skills that we learned in the previous sessions, you will need to code your robot to collect as much rubbish from the sea bed as possible before the batteries run out.



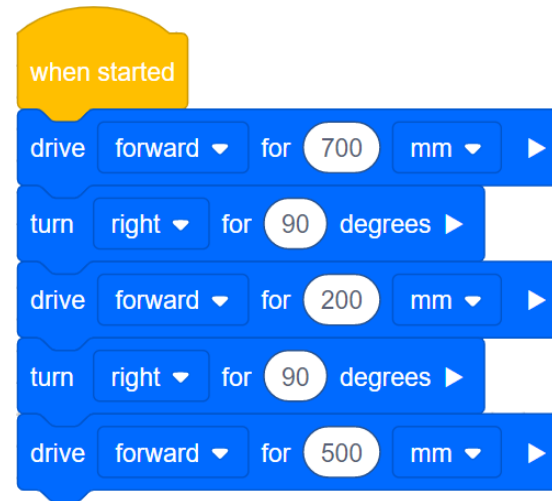
Coral reef cleanup with VEXcode VR

VEXcode VR project

Step 2

Let's recap some of the coding techniques that you might like to use in the challenge.

Sequence – this is the order in which the robot will perform the commands we give it. For example, we could plan a route around the sea bed



Coral reef cleanup with VEXcode VR

VEXcode VR project

Step 3

Iteration – when you repeat the same piece of code, this is called iteration. You can use the repeat loop to use the same sequence a set number of times, or the forever loop to keep repeating the same code forever.

The image displays three VEXcode VR code blocks. The first block is a 'when started' block containing two 'repeat' loops, each set to repeat 4 times. The first 'repeat' loop contains a 'drive forward' block for 700 mm followed by a 'turn right' block for 90 degrees. The second 'repeat' loop contains a 'drive forward' block for 700 mm followed by a 'turn left' block for 90 degrees. The third block is another 'when started' block containing a 'forever' loop with a 'drive forward' block for 700 mm followed by a 'turn right' block for 90 degrees.

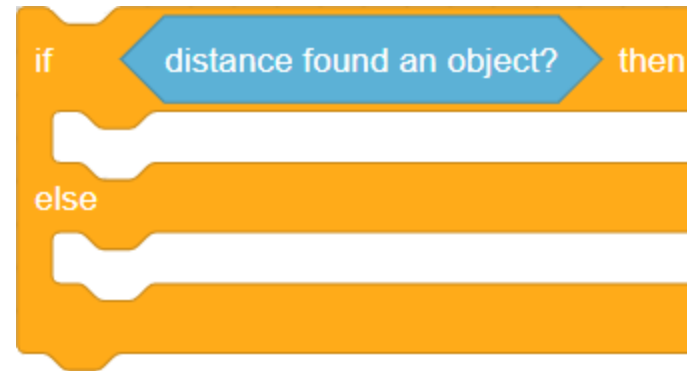
```
when started
repeat 4
  drive forward for 700 mm
  turn right for 90 degrees
repeat 4
  drive forward for 700 mm
  turn left for 90 degrees
when started
forever
  drive forward for 700 mm
  turn right for 90 degrees
```

Coral reef cleanup with VEXcode VR

VEXcode VR project

Step 4

Selection – make decisions based on inputs from sensors or other data using if then else selection.



Coral reef cleanup with VEXcode VR

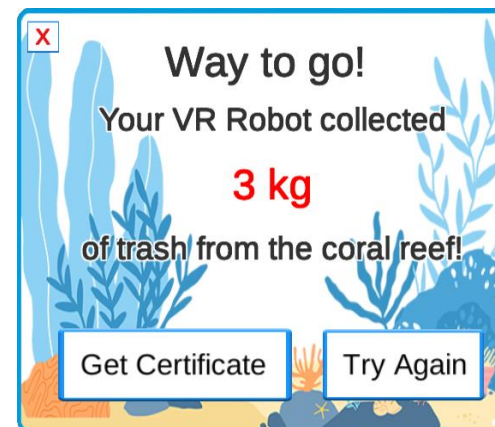
VEXcode VR project

Final challenge

How much trash can you collect from the sea bed before your battery runs out? Make sure you don't crash into the coral reef as that will end your mission.



**Top tip – You can print a certificate to show your best achievements, just click Get Certificate.



Notes

Code Playground

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