



# Learn to Code – Plastic in the Ocean Lesson Plan

## Aim

To teach young people digital skills by coding a game that simulates a machine collecting plastic from the ocean. Using this real-life problem, they will then learn more about jobs connected to it.

## Mapping

CES 'I Can' Statements	CMS Themes
<ul style="list-style-type: none"> <li>★ I can discuss the relevance of skills to the wider world and make connections between skills and the world of work</li> <li>★ I can demonstrate and apply the skills I have learnt across the curriculum in relation to the world of work</li> </ul>	<ul style="list-style-type: none"> <li>★ Horizons</li> </ul>

## Learning Outcomes

Young people will:

- ★ Understand how big a problem plastic in the ocean is
- ★ Learn to code by creating a game to collect the plastic
- ★ Learn about careers in science and technology

Activity on next page...



## Instructions

### Before you start

- ★ Pull up the Learn to Code - Plastics in the Ocean worksheet. You can view this on a screen or print it off
- ★ To do this activity you will need a laptop or a tablet
- ★ You will also need access to this website to complete the coding activity <https://www.microsoft.com/en-us/makecode> (1)

## Follow-up

The activity looks at roles in science and technology. There are lots of related job profiles on My World of Work that the young person could find out more about:

[Games Developer](#) (2), [Software Developer](#) (3), [Marine Biologist](#) (4), [Oceanographer](#) (5)

They can find about related apprenticeships on [Apprenticeships.scot](#) (6)

Foundation Apprenticeships - [Software Development](#) (7),  
Hardware and System Support (8)

Modern Apprenticeships – [Information Security](#) (9), [IT and Telecommunications](#) (10),  
Scientific Technologies (11)

Graduate Apprenticeships – [IT: Software Development Design and Manufacture](#) (12),  
[Data Science, Engineering, Design and Manufacture](#) (13)

**Activity on next page...**

## Website references

1. MakeCode [www.microsoft.com/en-us/makecode](http://www.microsoft.com/en-us/makecode)
2. Games Developer <https://bit.ly/2XfvZBj>
3. Software Developer <https://bit.ly/3et5yO1>
4. Marine Biologist <https://bit.ly/3errgCf>
5. Oceanographer <https://bit.ly/2MblQiK>
6. Apprenticeships.scot [www.apprenticeships.scot](http://www.apprenticeships.scot)
7. Software Development Foundation Apprenticeship <https://bit.ly/3gAw6ib>
8. Hardware and System Support Foundation Apprenticeship <https://bit.ly/3gBwf51>
9. Information Security Modern Apprenticeship <https://bit.ly/2ZJHG4R>
10. IT and Telecommunications Modern Apprenticeship <https://bit.ly/3gB9Kgu>
11. Scientific Technologies Modern Apprenticeship <https://bit.ly/3bUcbHO>
12. IT: Software Development Design and Manufacture Graduate Apprenticeship <https://bit.ly/3e41ync>
13. Data Science Graduate Apprenticeship <https://bit.ly/3cPOZeK>
14. Engineering, Design and Manufacture Graduate Apprenticeship <https://bit.ly/2ToxBq3>