



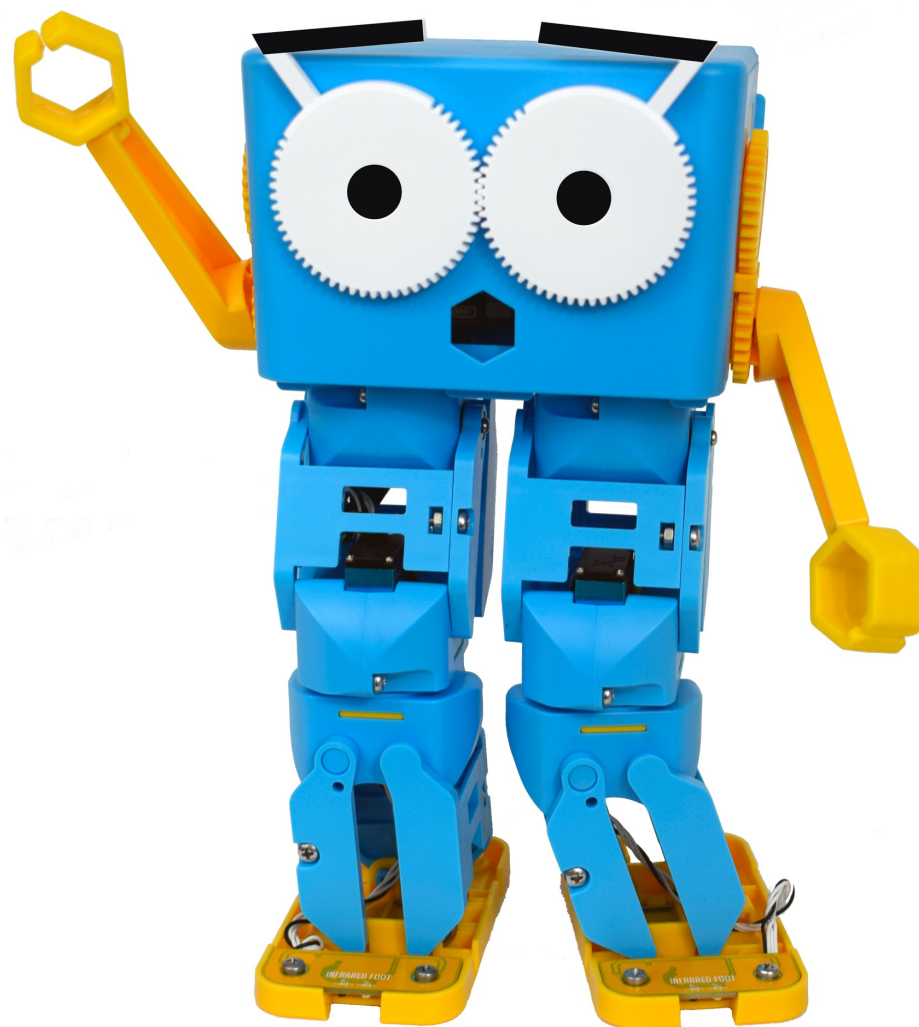
**ROBOTICAL**

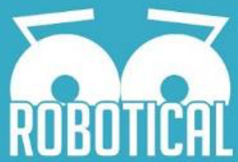
Where Learning Comes Alive



# FREE TWO-WEEK TRIAL FOR SCHOOLS IN THE UK

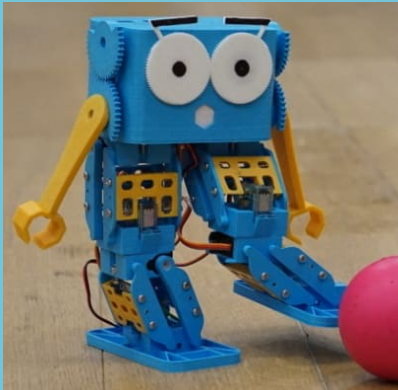
[robotical.io/free-trial/](https://robotical.io/free-trial/)





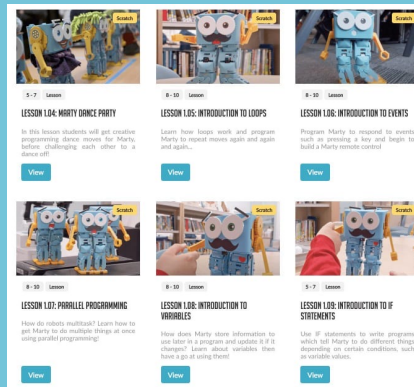
# MARTY THE ROBOT

## OVER 10,000 SOLD IN 65 COUNTRIES



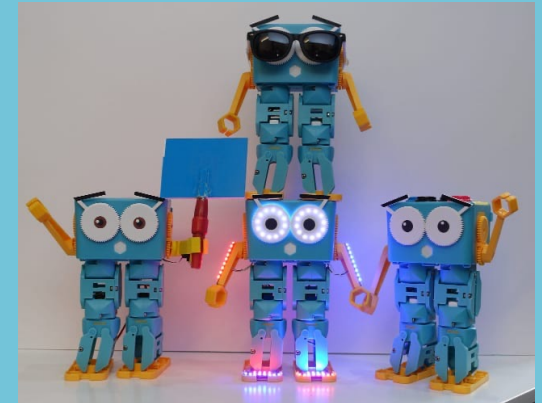
**2016**

Robotical founded in Scotland  
Marty V1 Indiegogo campaign



**2018**

Standards-aligned lessons

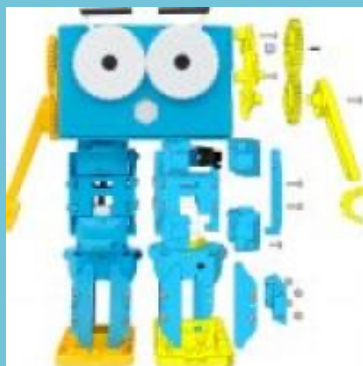


**2020**

Marty V2 robots ship

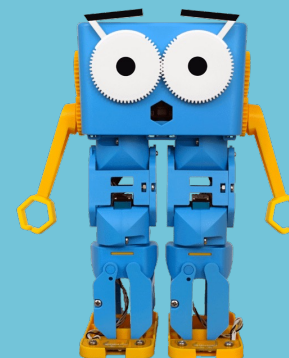
**2017**

Marty V1 kits ship



**2019**

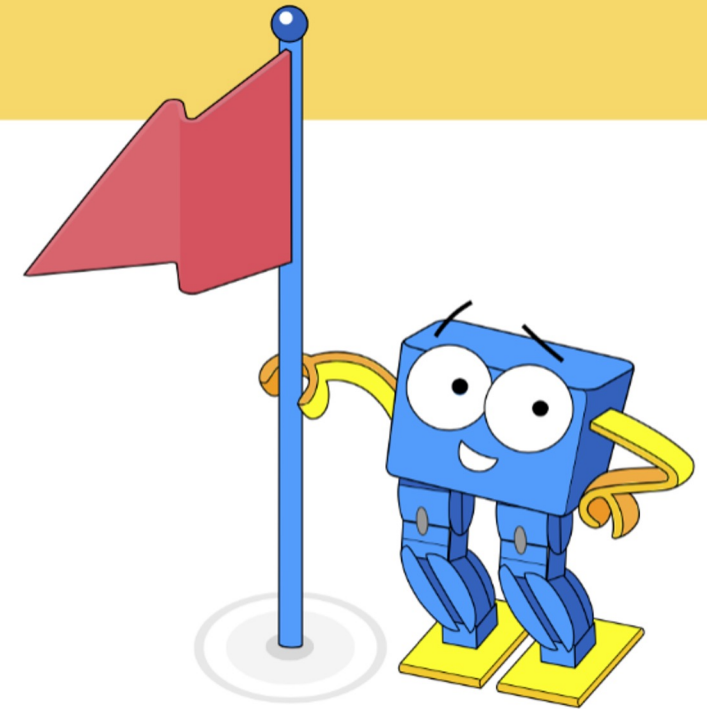
Marty V2 Kickstarter  
campaign





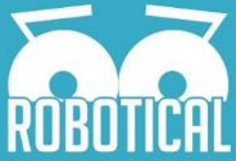


# ROBOTICAL'S MISSION



*To ignite a passion for learning by delivering hands-on experiences, preparing young learners for the real world in a fun and engaging way.*

*We want to change attitudes in STEM and make people see that **anyone can do it.***



# WHAT DO TEACHERS THINK ABOUT MARTY

[https://youtu.be/li\\_LZg15ieU](https://youtu.be/li_LZg15ieU)

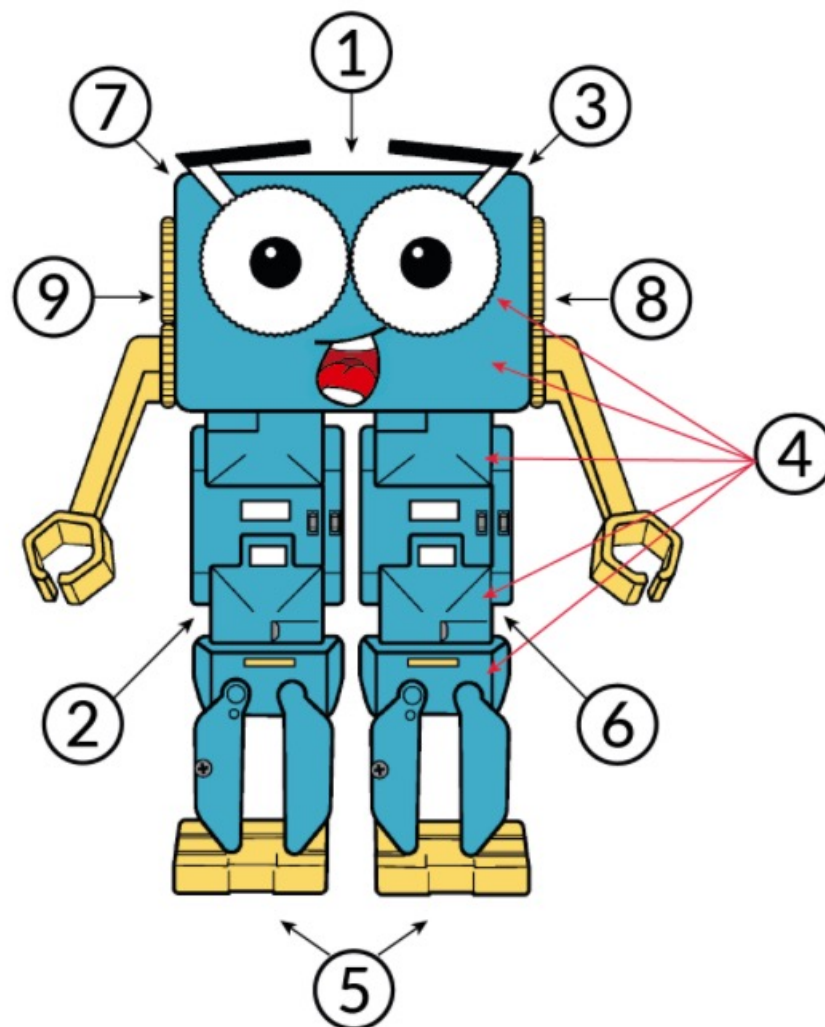




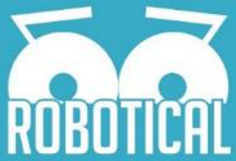
# MEET MARTY

*Pre-assembled*

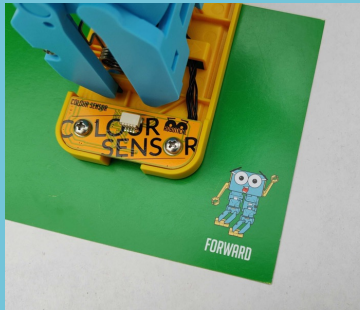
A real walking, dancing, programmable robot that's full of personality



- 1 - Humanoid Form**  
Marty has a personality and is full of character!
- 2 - Unique Walking Mechanism**  
Walk, turn, dance, sidestep, kick a ball, wiggle
- 3 - Range of Expressions**  
Marty's eyebrows move to express emotions
- 4 - Motors with Position Sensors**  
Nine metal-g geared smart servo motors (in legs, arms & eyes)
- 5 - Foot Sensors**  
Infrared (IR) Sensor & Color Sensor for screenless coding
- 6 - Quality Moulded Plastic Parts**  
Classroom-ready, robust and built to last
- 7 - Acceleration & Tilt Sensor**  
Found in the control board in Marty's head
- 8 - Rechargeable Battery**  
With run time of 2-3 hours when fully charged
- 9 - Speaker**  
Marty speaks and plays sounds



# HOW TO PROGRAM MARTY



Unplugged

No device needed

Uses color cards



Controller + Sequencer

Apple & Android app for tablets  
Browser for Chromebooks, Windows & Mac  
[app.robotical.io](http://app.robotical.io)

Connects via Bluetooth



MartyBlocks Jr



MartyBlocks

```
robotical@pop-os:~$ python3
Python 3.8.6 (default, Sep 16 2020, 12:58:26)
[GCC 10.2.0] on linux
Type "help", "copyright", "credits() or help()"
>>> import martypy
>>> martypy.__version__
'2.2.0'
>>>
```

Python

PIP install  
marty on  
local system

Connects via  
WiFi



# LEARNING PROGRESSION *with* MARTY THE ROBOT

CODING ENVIRONMENT	PRE-K/K	1ST GRADE	2ND GRADE	3RD GRADE	4TH GRADE	5TH GRADE	6TH-8TH GRADE
Unplugged	✓	✓					
Remote Control		✓	✓				
MartyBlocks Jr			✓	✓			
MartyBlocks					✓	✓	✓
Python							✓





# LEARNING PROGRESSION *with* MARTY THE ROBOT

LEARNING CONCEPT	PRE-K/K	1ST GRADE	2ND GRADE	3RD GRADE	4TH GRADE	5TH GRADE	6TH-8TH GRADE
Sequencing	✓	✓	✓	✓	✓	✓	✓
Computational Thinking	✓	✓	✓	✓	✓	✓	✓
Directional Language	✓	✓	✓	✓	✓	✓	✓
Debugging	✓	✓	✓	✓	✓	✓	✓
Events		✓	✓	✓	✓	✓	✓
Arguments				✓	✓	✓	✓
Conditionals				✓	✓	✓	✓
Loops					✓	✓	✓
Logic					✓	✓	✓
Sensors					✓	✓	✓
Variables						✓	✓
Parallel Programming						✓	✓
Compound Conditionals							✓
Nested Loops							✓
Integrating Components							✓
Functions							✓



# STANDARDS ALIGNMENT

Curriculum for Excellence and many other global and national ones





# LEARNING PORTAL

Our hands-on, comprehensive lesson plans span a range of levels. Browse our free STEM and coding learning resources.



[<- Go back to all Lesson Types](#)

Search Title

Your Location ?

USA

Marty Version

Resource Type

Lesson (73)

Lesson Pack (10)

Education Standards

Topics

Environments

Challenge

Marty Add-on

Education Standards

1 2 3 4 5 6



Lesson

0.01: WHO IS MARTY THE ROBOT?

View



Lesson

0.02: WHAT IS A PROGRAM?

View



Lesson

0.03 MARTY'S FIRST MOVES

View



Lesson

0.04 MARTY FINDS AND FIXES MISTAKES

View



Lesson

0.05 INTRODUCING THE MARTY CONTROLLER

View



Lesson

0.06 ESTIMATING THE STEPS

View

<https://learn.robotical.io/>



# EXAMPLE LESSON

[← Back to all lessons](#)

## CONTENT SECTIONS

- [— Learning Objectives](#)
- [— Warm-up](#)
- [— Get Learning](#)
- [— Time for Practice](#)
- [— Cool Down](#)
- [— Extensions & Challenges](#)
- [— Extend](#)
- [— Support](#)
- [— Additional Reading](#)



## 2.03: USING REPEAT BLOCKS TO IMPROVE CODE

60 Minutes

[Print Lesson](#)

### LESSON OVERVIEW

Learners will already have been introduced to loops and what they do. This lesson takes learning from other areas, the arguments from the previous lesson, and encourages the use of loops to make the code more efficient and easier to read. Students will understand that they can use loops to reduce the number of lines of code that they have to write, using a combination of computational thinking and the MartyBlocks editor.

**Key vocabulary:** *code blocks, loops, repetition, shapes, angles,*

**Prerequisite Knowledge:** Awareness of arguments; knowledge of block names, knowledge of loops

**Device Compatibility:** Tablet with Bluetooth 4.2+

**Necessary resources & equipment:** Marty the Robot v2, Tablets, Access to the MartyBlocks editor, Completed workbooks from arguments and parameters lesson

### LEARNING OBJECTIVES

- Simplify your code with a loop block.
- Change a loop block's argument in order to complete a challenge.

### EDUCATOR RESOURCES —

[— Teacher Guide](#)

[Presentation for Using Repeat Blocks to Improve Code](#)

### LEARNER RESOURCES —

[Workbook for Using Repeat Blocks to Improve Code](#)

[Collection of shapes](#)

# LESSONS & RESOURCES



## Lesson Plans

Learning plans with measurable objectives



## Teacher Guides

Support to enhance learning activities



## Curriculum Links

Alignment to various curricula, including CSTA



## Additional Content

All resources and solutions included



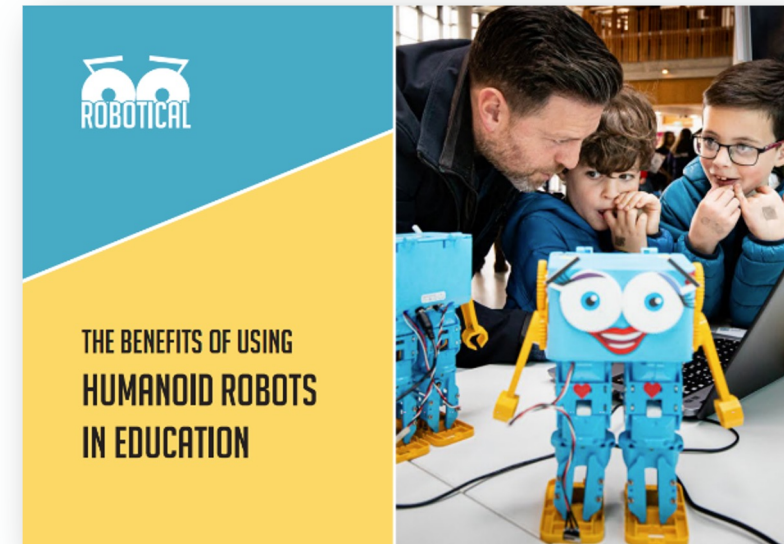
## Presentation Slides

Content for learners and notes to support



# WHY HUMANOID? RESEARCH PAPER

- Humanoid robots are characterised by their human form and behaviour
- In education, they have been shown to help **develop computational thinking** in young learners
- **Foster greater engagement** from pupils across a wide array of subjects in the curriculum
- They are a wonderful education **aid in teaching children on the autistic spectrum**
- Having a human form has been proven to **invoke a stronger connection and sense of ownership**







# FUNDING & GRANTS

Online resources for finding and applying for sources of funding and grant writing



<https://robotical.io/about/educators/funding-and-grants/>



# CLASSROOM PACKS OF 5, 10 OR 15

<https://www.robotlab.com/store/marty-robot-classroom-pack>

## 5x Marty the Robot V2

Each robot:

- Colour sensor
- IR sensors
- Set of paper colour cards
- Ping pong ball
- Stickers
- Zipper storage case with handle

10x rechargeable batteries

1x battery charger (5 slots)

1x set of premium colour cards

1x distance sensor

2 year warranty

Starting at £1,995





# FREE TWO-WEEK TRIAL FOR SCHOOLS IN THE UK

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