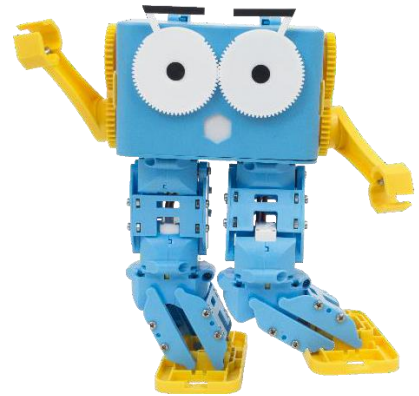
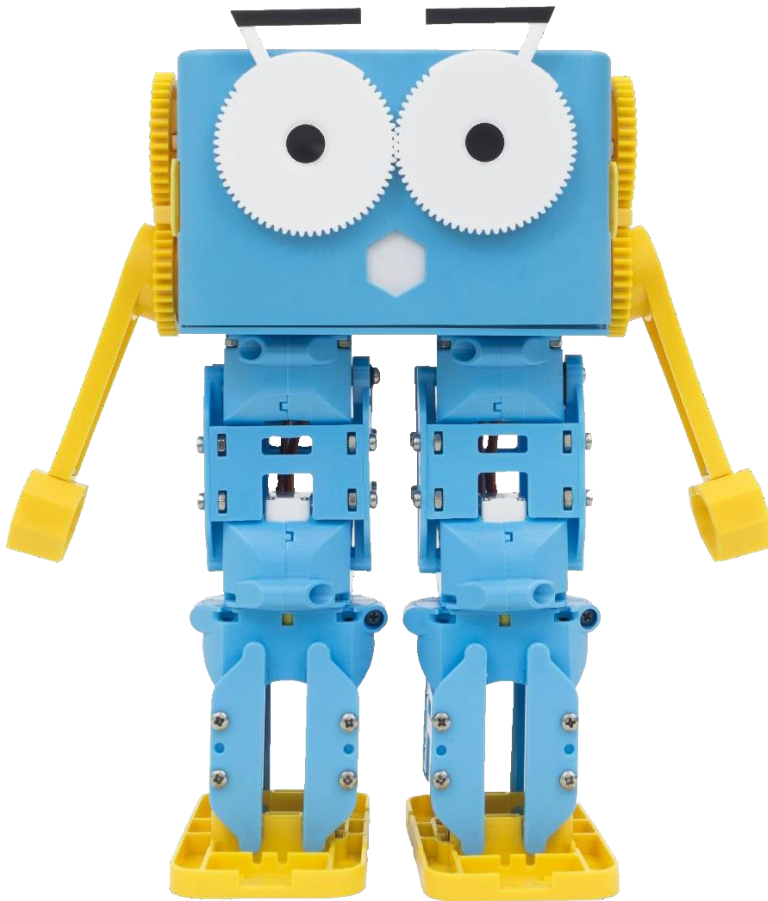


Bring STEM to Life with Marty the Robot

PowerUp **EDU**



The mini walking robot that costs little but does a lot!

<p>Programming Languages & Software</p>	<ul style="list-style-type: none"> • Scratch (NC Key stage 1). • Python (NC Key stage 2). • JavaScript (NC Key stage 2 -3). • Raspberry Pi (NC Key stage 2-3). • ROS (Robotic Operating System) / C++ (Higher Education). • Extensible roll-your-own integration with open documentation.
<p>Customizability</p>	<ul style="list-style-type: none"> • Extra sensors/motors/etc can easily be added. Robot can be customized with add-on packs, or even with custom 3D printed parts. • All parts are 3D printable, and the CAD designs are available as a base. • Extend and enable autonomy Marty with a powerful onboard computer e.g. a Raspberry Pi, Micro:bit or Arduino. • Easy integration with space for Raspberry Pi and camera inside Marty's head, with power direct from Marty. • Fun sticker sheet for personalisation.
<p>Expandability</p>	<ul style="list-style-type: none"> • Supports and holds an optional Raspberry Pi – Zero, 2 or 3. • 8 Expansion ports for sensors/motors/flashy lights/etc. • I2c + Serial connectivity for other connections. • ROS (Robot Operating System) for real world robotics experience. • Various add-ons and upgrades available.

Plastic components	<ul style="list-style-type: none"> Fully compliant and rugged injection-moulded nylon plastic parts, or customize and 3D print your own.
Sensors	<ul style="list-style-type: none"> 3 Axis accelerometer – including Tilt Sensing. Motor current sensing – can tell how hard the joints are working, and detect interactions like you touching his arm. Bump sensors – supplied with two, more can be added. Can detect floor contact, feet hitting obstacles, or be used as inputs. 2 bump switches - detect ground contact and/or object collision. Fall detection. 8 GPIO ports for digital input/output. Optional infrared distance sensor (1cm-1m range). PiCamera for applications such as ball, face and computer vision (e.g. AprilTag detection). Microphone for e.g. GoogleAssistant. Optional sensors: <ul style="list-style-type: none"> - Light sensors - Temperature - Etc...
Connectivity	<ul style="list-style-type: none"> WiFi. Serial. I2c.
Assembly	<ul style="list-style-type: none"> Takes 2-3 hours. Requires a screwdriver (included) and no further tools or complicated tasks like soldering. Using metal nuts rather than screws into plastic, Marty is designed to be taken apart and reassembled many times.
Multiple robots?	<ul style="list-style-type: none"> Get as many Martys as you want on the same WiFi network. Good for classes, football, and synchronised Dances.
Battery Life	<ul style="list-style-type: none"> 1.5-2 hours on a full charge. On board battery recharging from special supplied USB cable.
Compatibility	<ul style="list-style-type: none"> Raspberry Pi. Arduino. BBC MicroBit.
Compliance	<ul style="list-style-type: none"> Toy safety. RoHS. FCC ID: 2AC7Z-ESP8266EX. CE.
Support	<ul style="list-style-type: none"> Extensive support from dedicated team and through the Martyverse community. Online resources for fun, learning and support at all stages, including video guides, tutorials, coding materials and extensive documentation).

Marty makes learning about programming, electronics, and mechanical engineering a fun, challenging and engaging process. Acting as a gateway into computer science and design technology, Marty empowers students through inventive learning, engaging the child's creativity and promoting their STEM skills. Loads of Free lesson plans are also available.

Learn More. Contact PowerUpEDU Today.
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