Oct-2023

Información general - Ejemplos de robótica educativa (Educación secundaria)

Petra Vaňková and the FERTILE Group

Co-funded by the Erasmus+ Programme of the European Union

The European Commission's support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission or the Hellenic National Agency cannot be held responsible for any use which may be made of the information contained therein.

Lower secondary education

ROBOT	Lenguaje	Construcción	Sensores	video
Microbit	Textual y bloques	No necesario		video 1
Edison	Visual, textual y bloques	No necesario Construcciones especiales		
mBot	Bloques	Necesario construir la primera vez		video 2
Ozobot	Visual y bloques	No necesario		
Lego Education Spike	Bloques	Necesario		video 6

Micro:bit

- no es necesario construir un robot
- una pequeña computadora de código abierto con un procesador ARM programable
- varios kits robóticos diseñados para micro:bit, así como su uso independiente
- programación en JavaScript, MakeCode

Co-funded by the Erasmus+ Programme of the European Union

Edison

- no es necesario construir un robot
- robot de bajo costo expansible con bloques LEGO, se puede usar solo sin construcción
- cada nivel para programar en su propio entorno

MBot

- necessary to construct a robot
- robust robot with an Arduino processor, US and IR sensors
- Makeblock introduced as well: Mbot Neo, Neuron
- programming in text block-based language (makeblock)

Ozobot

- necesario construir un robot
- robot resistente con un procesador Arduino, sensores US e IR
- Makeblock también introdujo: Mbot Neo, Neuron
- programación en lenguaje de bloques de texto (makeblock)

Co-funded by the Erasmus+ Programme of the European Union

Lego Spike

- necesario construir un robot
- más versiones (Prime 10+, Esential 6+)
- programación en lenguaje de bloques de texto (alternativa en Scratch)

Co-funded by the Erasmus+ Programme of the European Union

ΙΔΡΥΜΑ ΚΡΑΤΙΚΩΝ ΥΠΟΤΡΟΦΙΩΝ ΙΚΥ

Upper secondary education

ROBOT	Language	Construction	video
Microbit	text, text-block	not necessary	video 1
Edison	visual, text-block, text	not necessary special constructions	
Vex robotics	text-block	necessary	
KeyBot	visual, text-block	first construction	
Lego Education Spike prime	text-block	necessary	video 6

Micro:bit

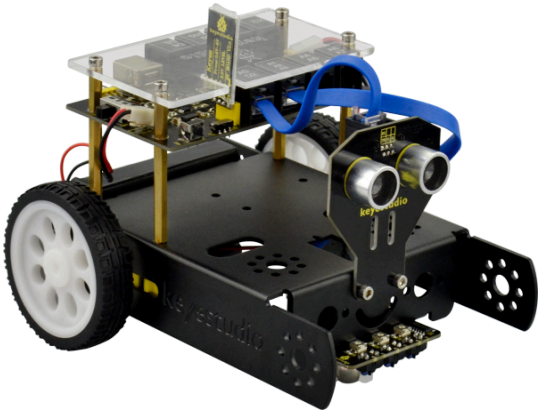
- not necessary to construct a robot
- small, open-source computer with a programmable ARM processor
- various robotic kits designed for micro:bit, as well used on it´s own
- programming in JavaScript, MakeCode

Co-funded by the Erasmus+ Programme of the European Union

Edison

- not necessary to construct a robot
- low-cost robot expandable by LEGO bricks, can be used alone without construction
- each level for programming in their own environment

Keybot



- nutnost prvotní konstrukce
-

Co-funded by the Erasmus+ Programme of the European Union

ΙΔΡΥΜΑ ΚΡΑΤΙΚΩΝ ΥΠΟΤΡΟΦΙΩΝ ΙΚΥ

Vex robotics

- necessity of construction
- different types of kits according to age and experience of pupils (123, GO, IQ, EXP, V5)
- custom software with support in the operating system (https://codeiq.vex.com/)

Lego Education Spike

- necessary to construct a robot
- more versions (Prime 10+, Esential 6+)
- programming in text block-based language (alternative in Scratch)

Co-funded by the Erasmus+ Programme of the European Union