



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

Educational Robotics with Micro:bit - Pill CreaSTEAM

2020-1-ES01-KA201-082601

**Co-thinking and Creation for STEAM diversity-gap reduction
(CreaSTEAM)**

<https://creasteam.eu/>

[https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/
2020-1-ES01-KA201-082601](https://ec.europa.eu/programmes/erasmus-plus/projects/eplus-project-details/#project/2020-1-ES01-KA201-082601)



Elena Jurado (URL), Roger Olivella (URL)

email: elena.jurado@salle.url.edu, roger.olivella@salle.url.edu



Agenda

20 min. Educational robotics

Exploring kits for each educational stage

30 min. Micro:bit challenges

Let's solve the proposed challenges

10 min. Doubts resolution

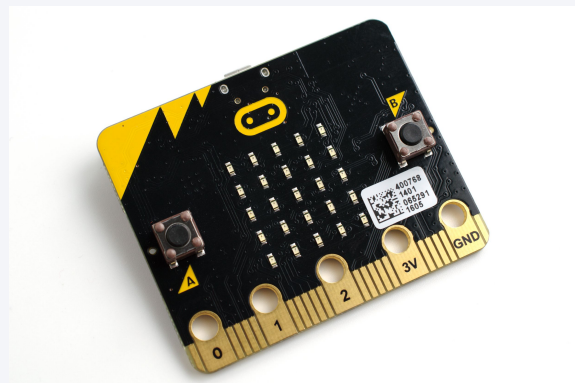
And sharing experiences





Say in the chat
**“Hello, my name is ...
I work in ... school
from”**

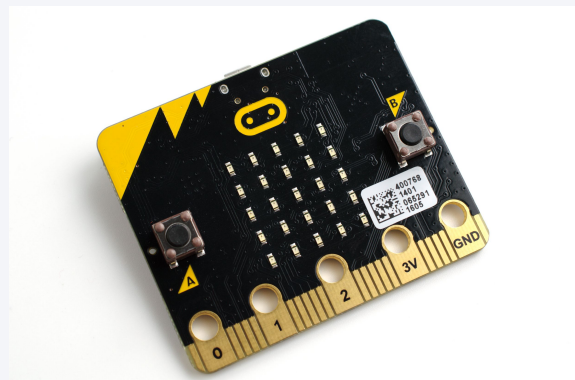




Answer by using the chat

Was it difficult for you to solve the proposed Micro:bit challenges?





Answer by using the chat
**Was it difficult for you to
solve the proposed
Micro:bit challenges?**

Write in the chat:

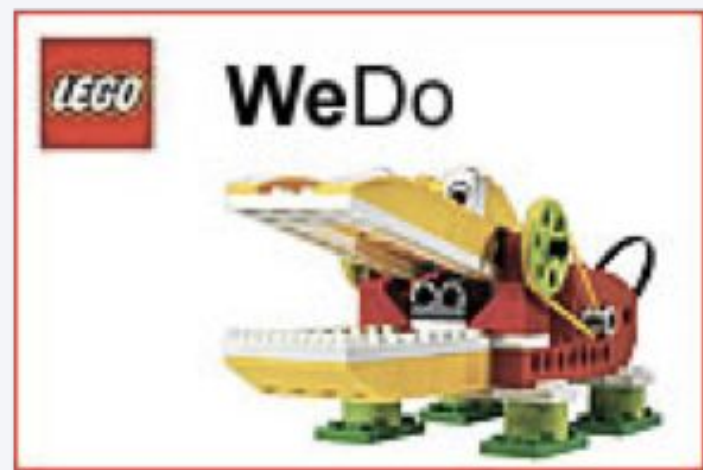
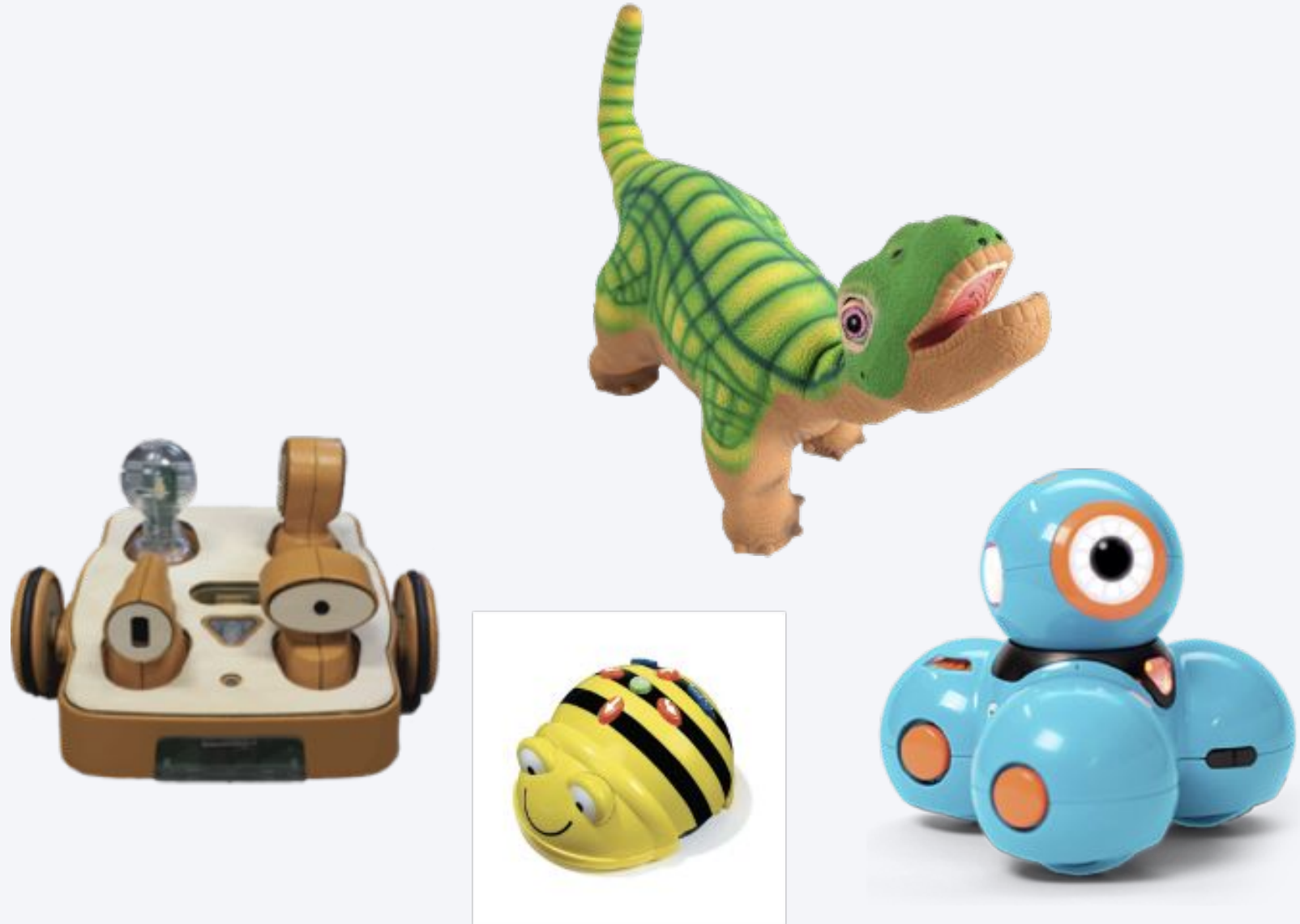
“Easy”

“Medium”

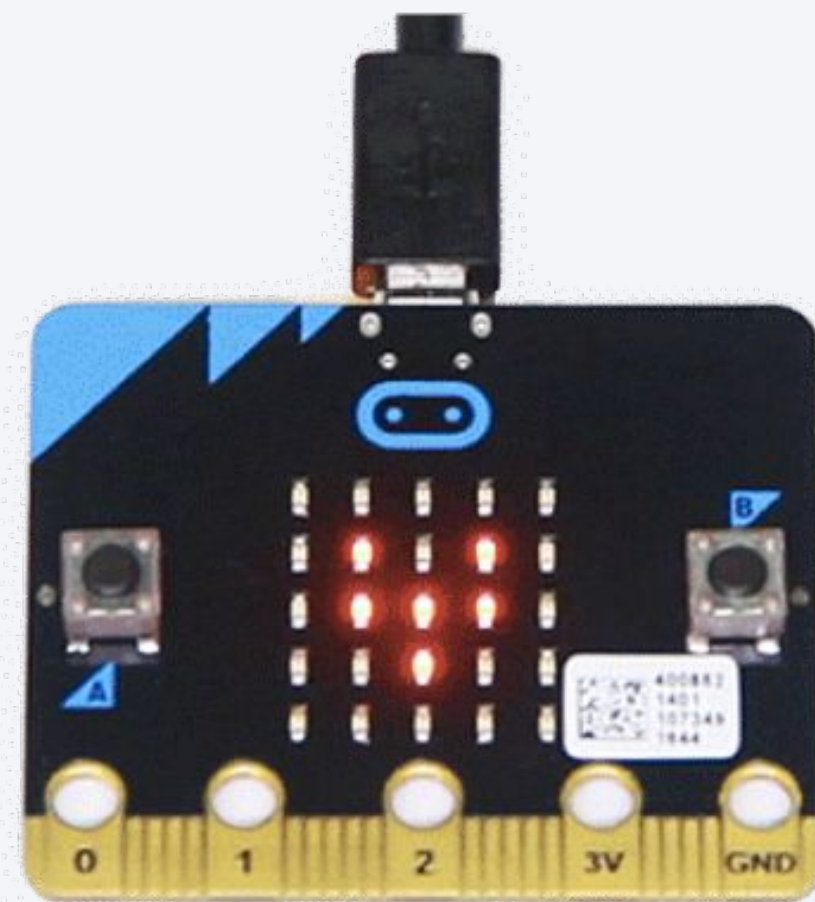
“Hard”

“Sorry, I didn’t have time”





variety of educational robotic kits



Educational Robotics Tools Recommendations

Based on these statements:

- Created or supported by educational and scientific institutions
- Robust
- Cross curricular
- Low cost
- Big community of educators and resources available online



Educational Robotics for “Multiple stages”

Computational Thinking Unplugged

Advantages: social learning, visual and kinesthetics

Material: paper and printable materials

Cost: No cost



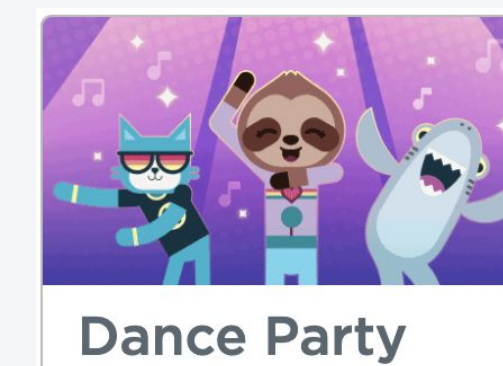
Code.org (3 to 18 years old)

Advantages: autonomous challenges, guided step by step,

multiple languages, teacher account

Material: computer (online)

Cost: No cost



Educational Robotics for “Kindergarten and pre-reader” (3 to 7 years)

Kibo

Advantages: manipulative coding pieces, intuitive sensors approach, assembly parts

Material: Kibo kit

Cost: 500 eur approx.

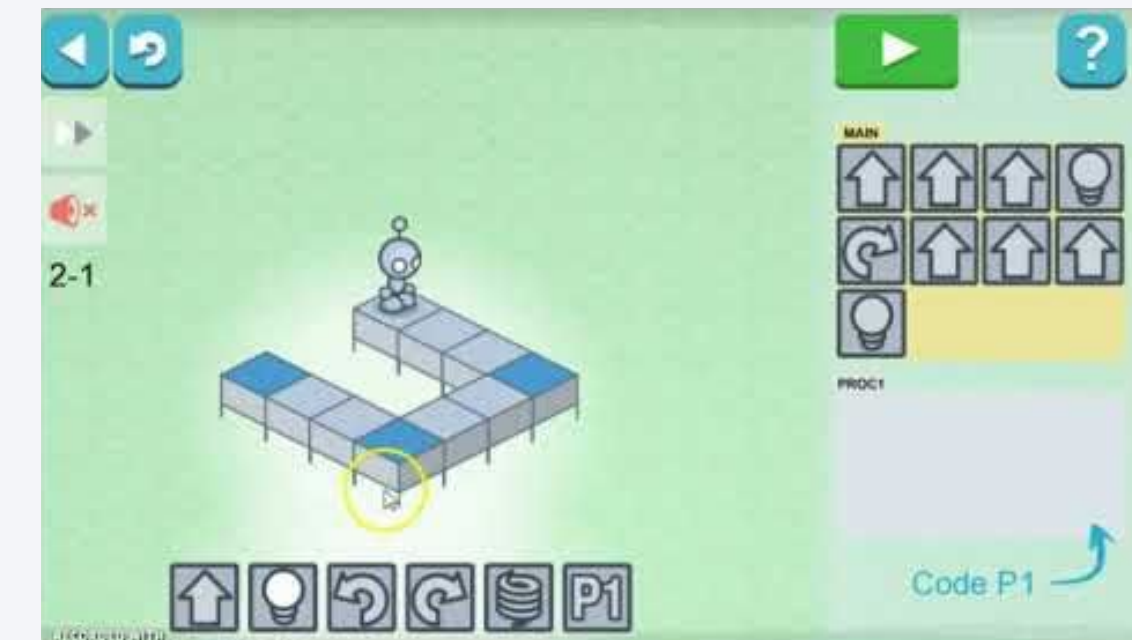


LightBot Hour/Jr

Advantages: based on levels of increasing difficulty, maze solving, 3D movements

Material: tablet

Cost: 3 eur



Scratch Jr

Advantages: creative programming, stories, animations, simple games, 2D design

Material: tablet or computer

(<https://jfo8000.github.io/ScratchJr-Desktop>)

Cost: No cost



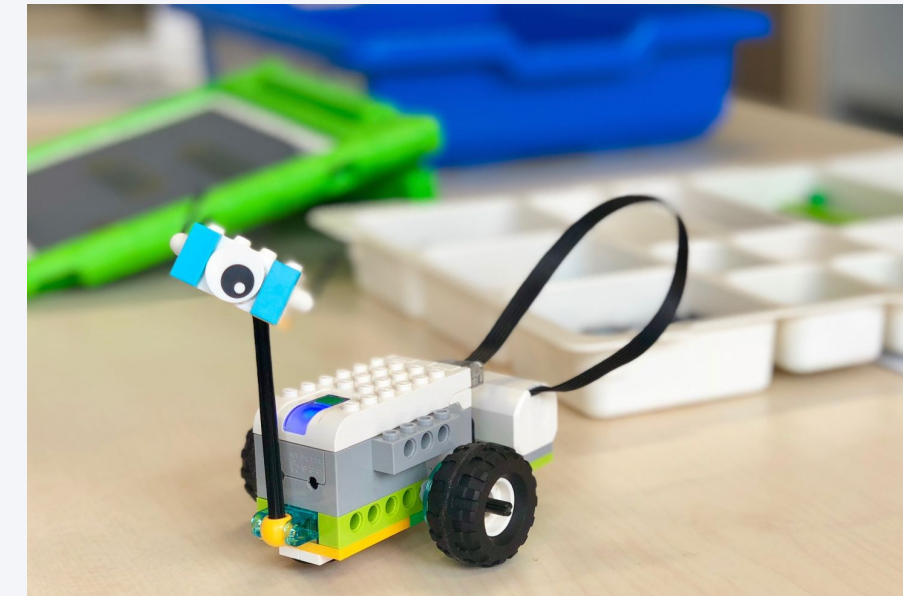
Educational Robotics for “Primary schools” (6 to 11 years)

Lego Wedo & Lego Spike Essentials

Advantages: build and code, sparks creativity, introduction to prototype design, social learning

Material: Lego kit, tablet or computer

Cost: 180-300 eur

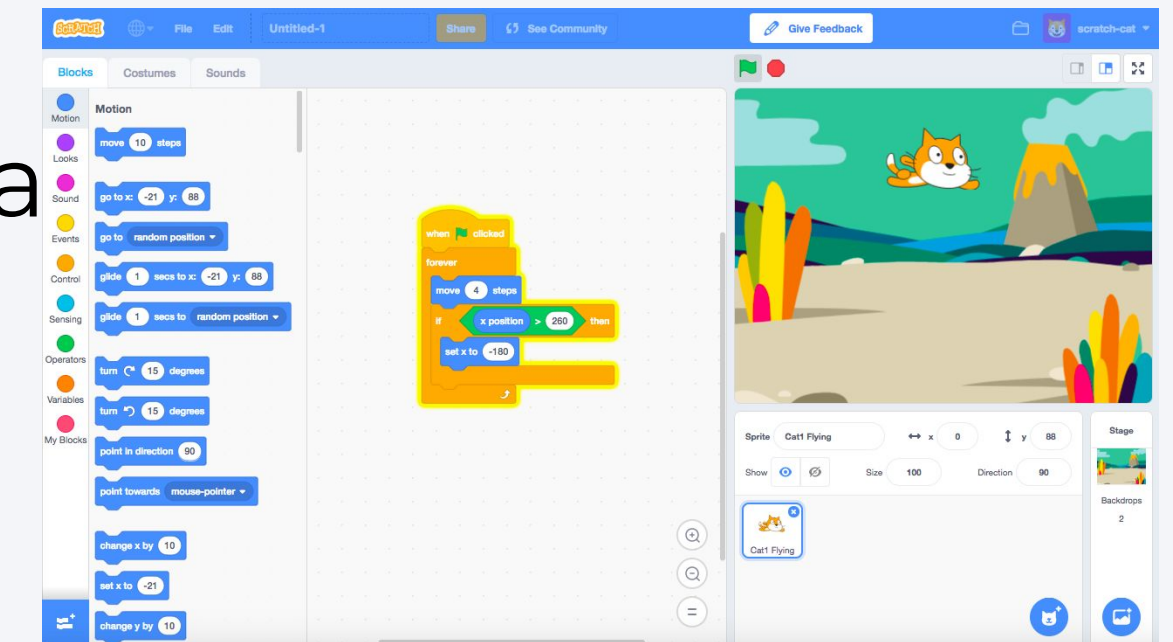


Scratch (8 to 16 years old)

Advantages: creative coding, social community, create video games, animations, simulations...

Material: computer (online or offline)

Cost: No cost



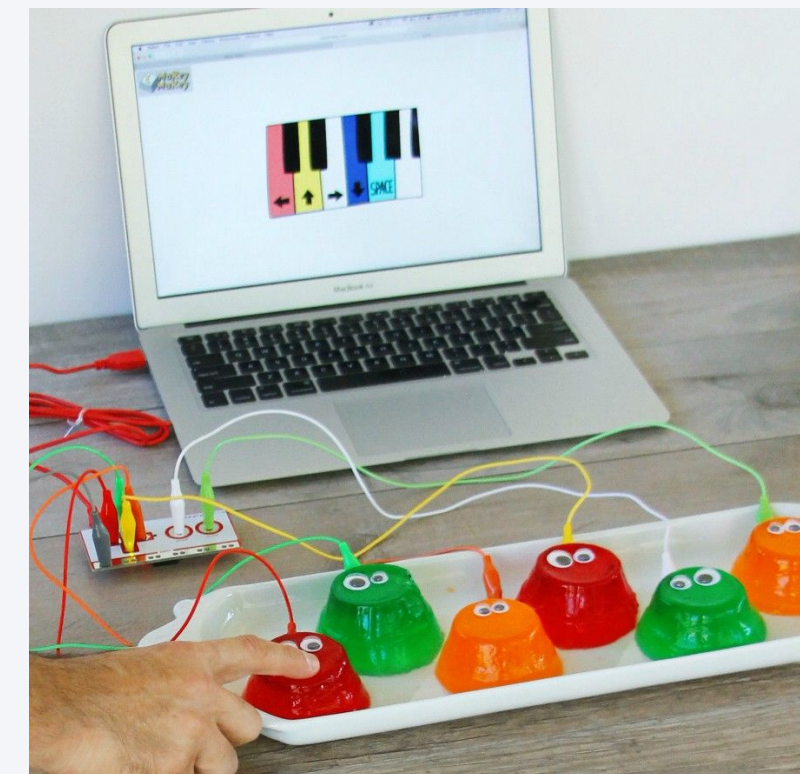
Makey Makey

Advantages: introduction to conductive circuits, creative input to your games or programs

Material: MakeyMakey board, computer

Cost: from 15 eur

MakeyMakey intro:
<https://www.youtube.com/watch?v=rfQqh7iCcOU>

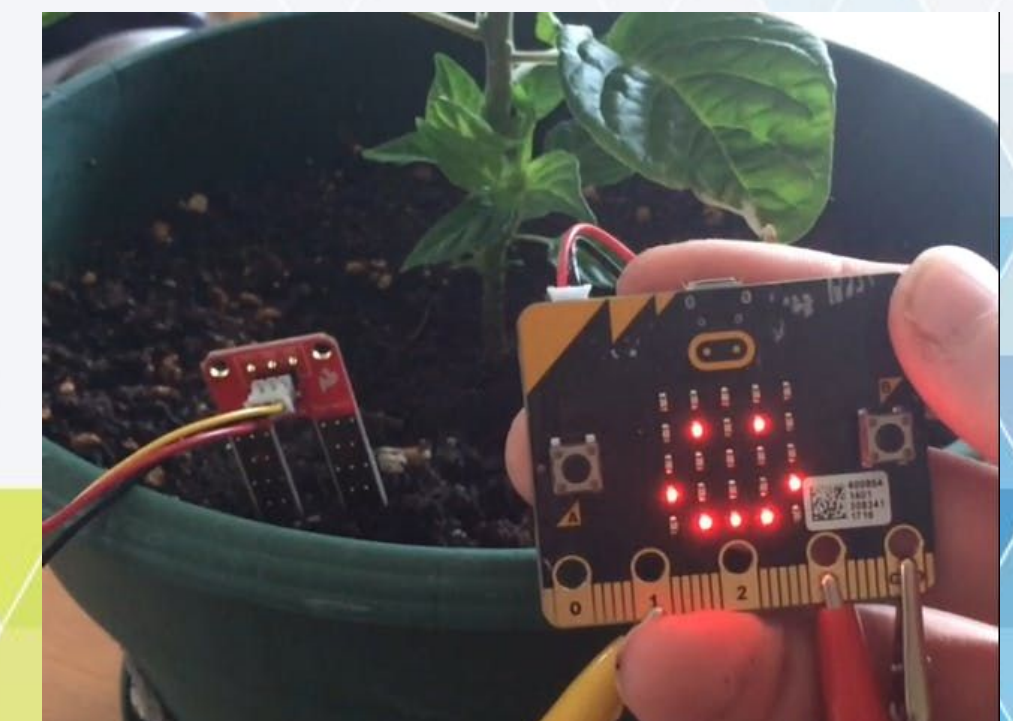


Micro:bit (9 to 15 years old)

Advantages: electronics and programming introductory board, online simulator, integrated sensors, expandable

Material: computer (online or offline)

Cost: from 22 eur



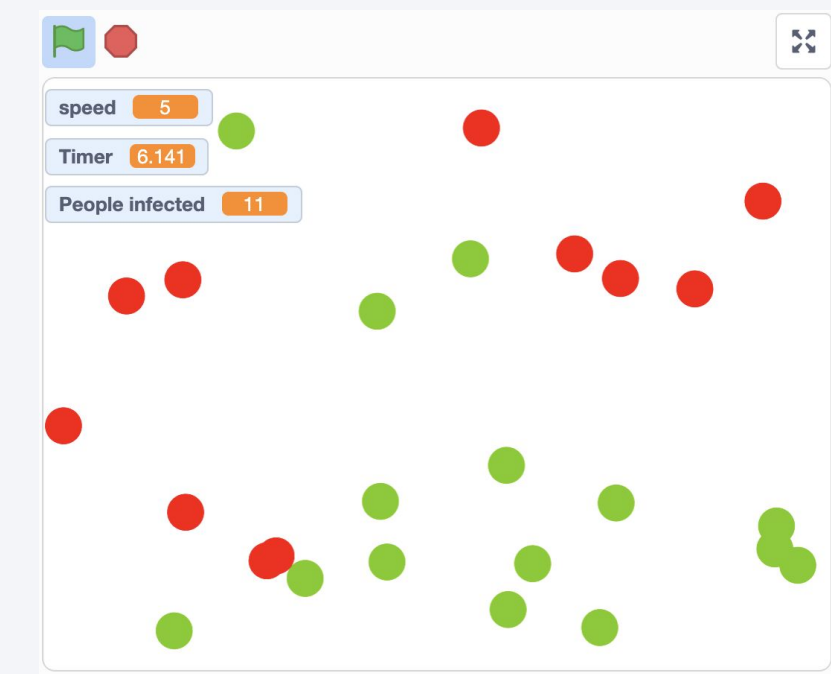
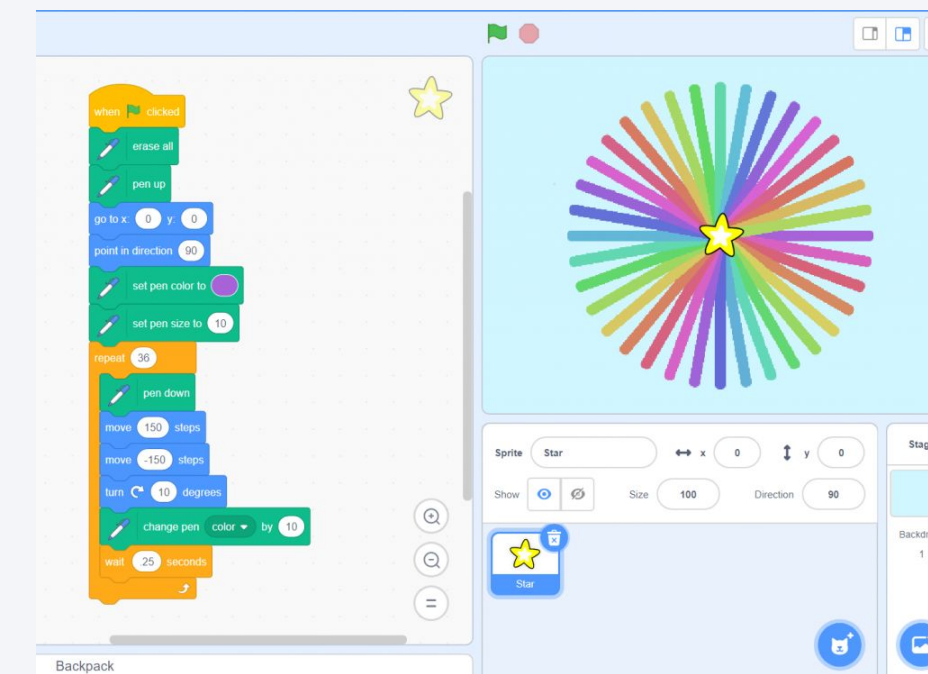
Educational Robotics for “Secondary schools” (12 to 16 years)

Scratch (8 to 16 years old)

Advantages: creative coding, social community, create video games, animations, simulations...

Material: computer (online or offline)

Cost: No cost

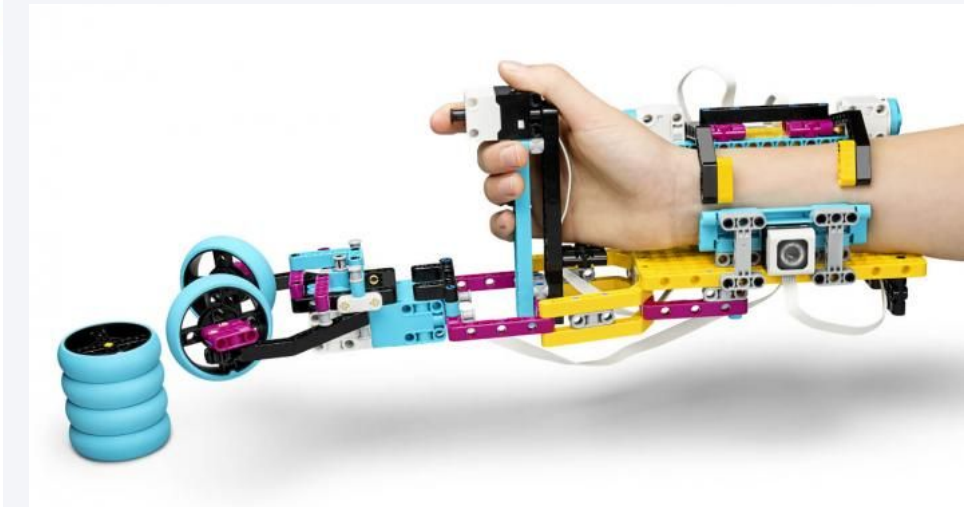
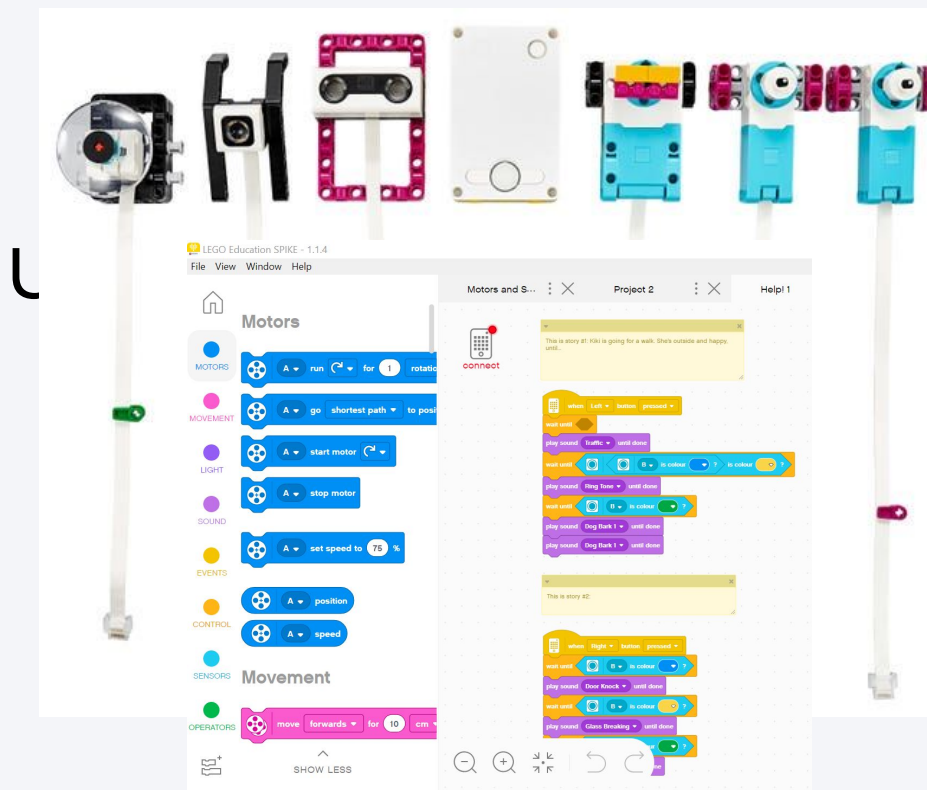


Lego Mindstorms & Lego Spike Prime

Advantages: build and code, sparks creativity, introduction to prototype design, social learning

Material: Lego kits, computer

Cost: 400-500 eur

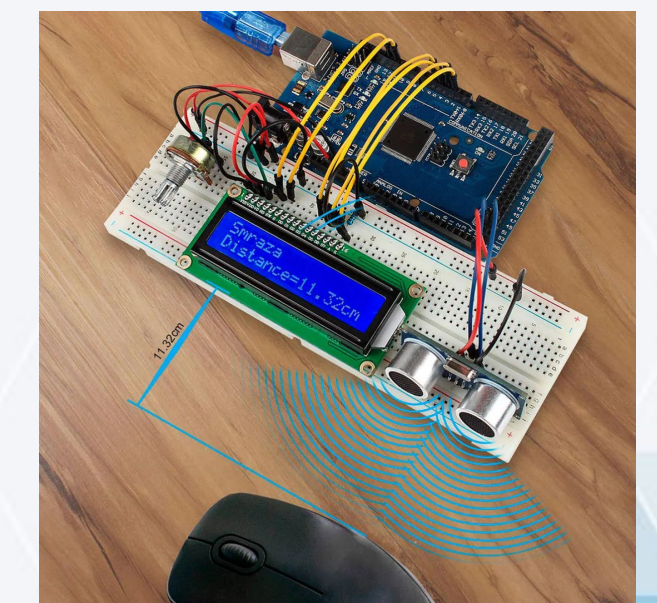


Arduino

Advantages: electronics and programming open source board, expandable, lots of projects

Material: Arduino kit, computer

Cost: from 20 eur

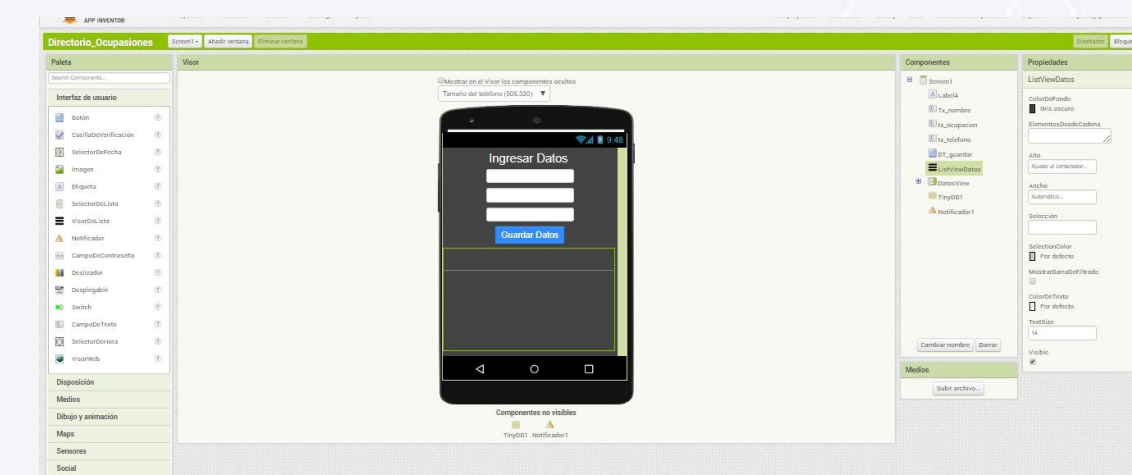


App Inventor

Advantages: introductory App design and programming

Material: Android smartphone, computer (online)

Cost: No cost





Micro:bit

Let's solve the challenges





Educational Robotics & Micro:bit

**Let's answer questions
and
share experiences**





Thank you!
See you soon



Let's keep in contact
elena.jurado@salle.url.edu, roger.olivella@salle.url.edu