



Scuola Primaria Collodi
Firenze-Italia

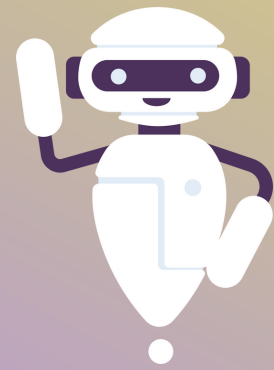


INTRODUCTION

The BBC Micro:Bit is a pocket-size computer with a 5x5 display of 25 LEDs, Bluetooth and sensors that can be programmed by anyone. The BBC Micro:Bit was made possible by many partners. The micro:bit provides an easy and fun introduction to programming and making – switch on, program it to do something fun – wear it, customize it. Just like Arduino, the micro:bit can be connected to and interact with sensors, displays, and other devices.



PROJECT OBJECTIVES



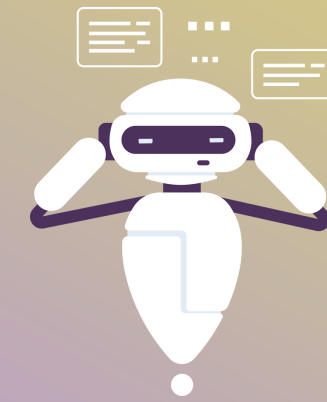
OBJECTIVE 01

Presentation of
Micro-Bit to the
classroom



OBJECTIVE 02

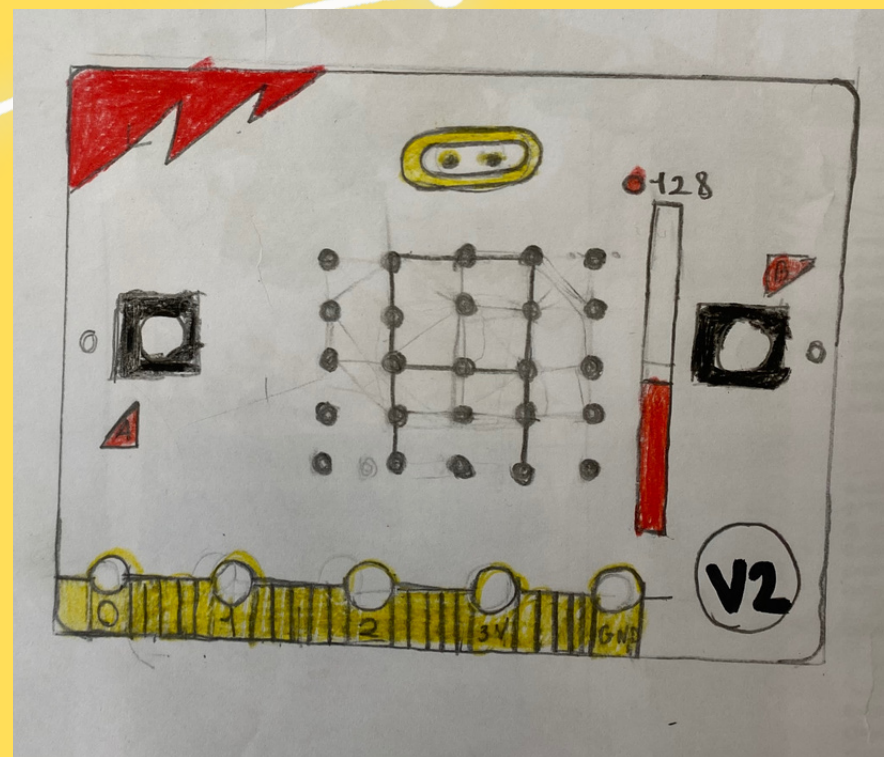
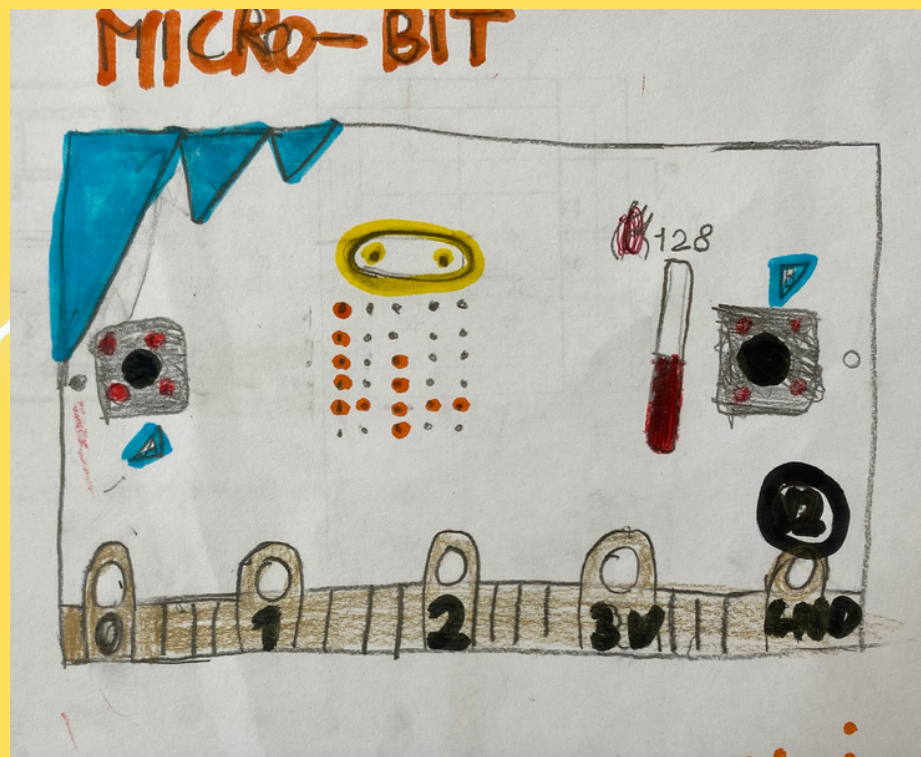
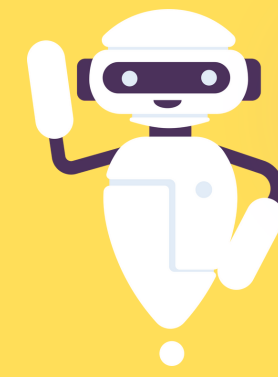
Practical tests in
classroom to
construct
sequences of
instruction
capable of
producing effects



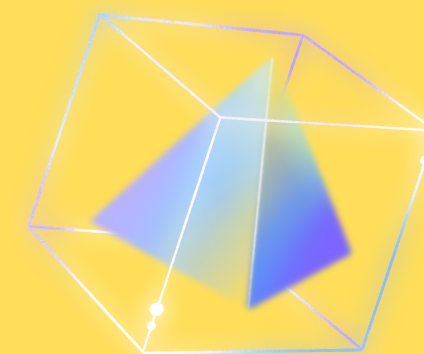
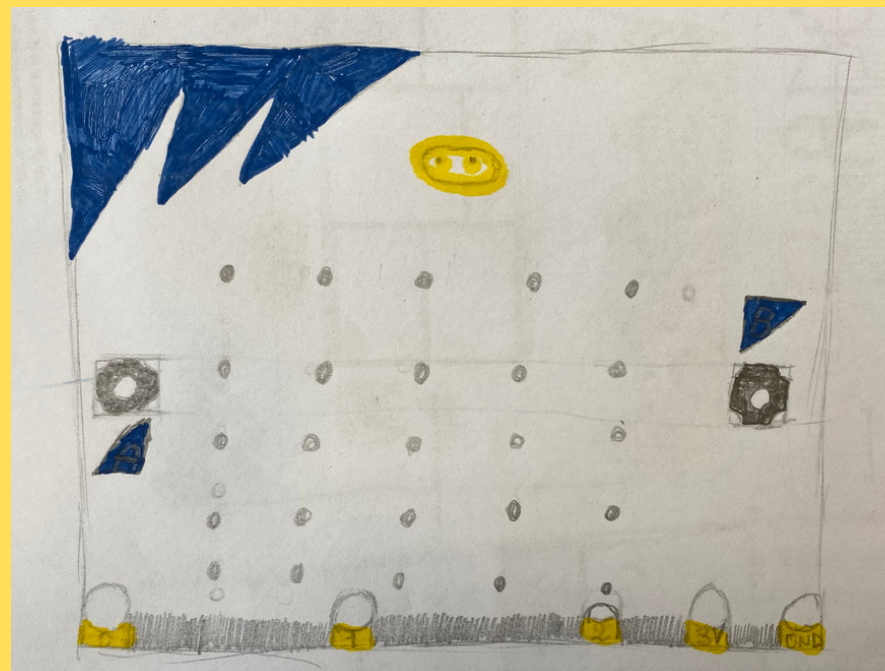
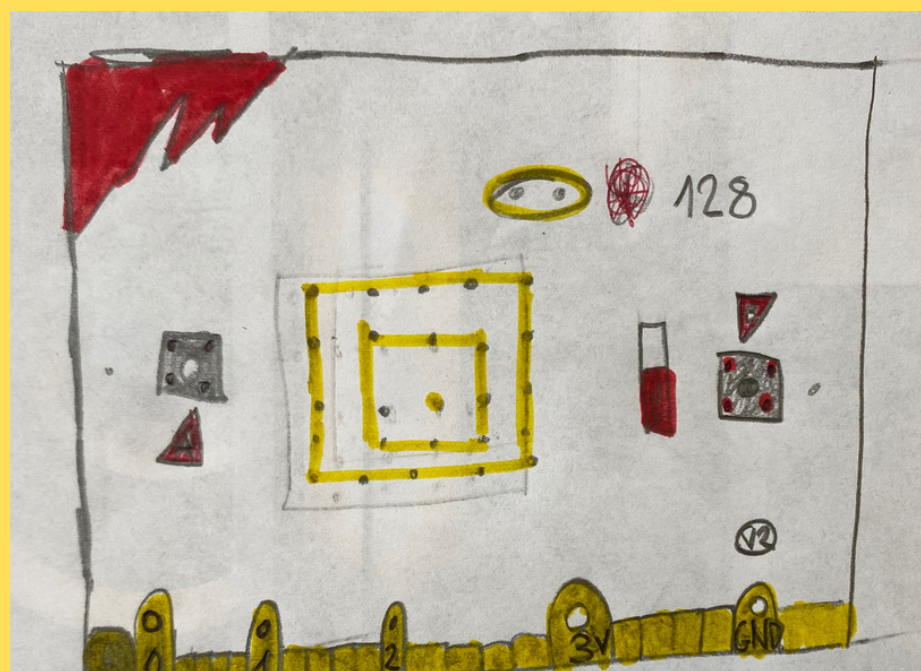
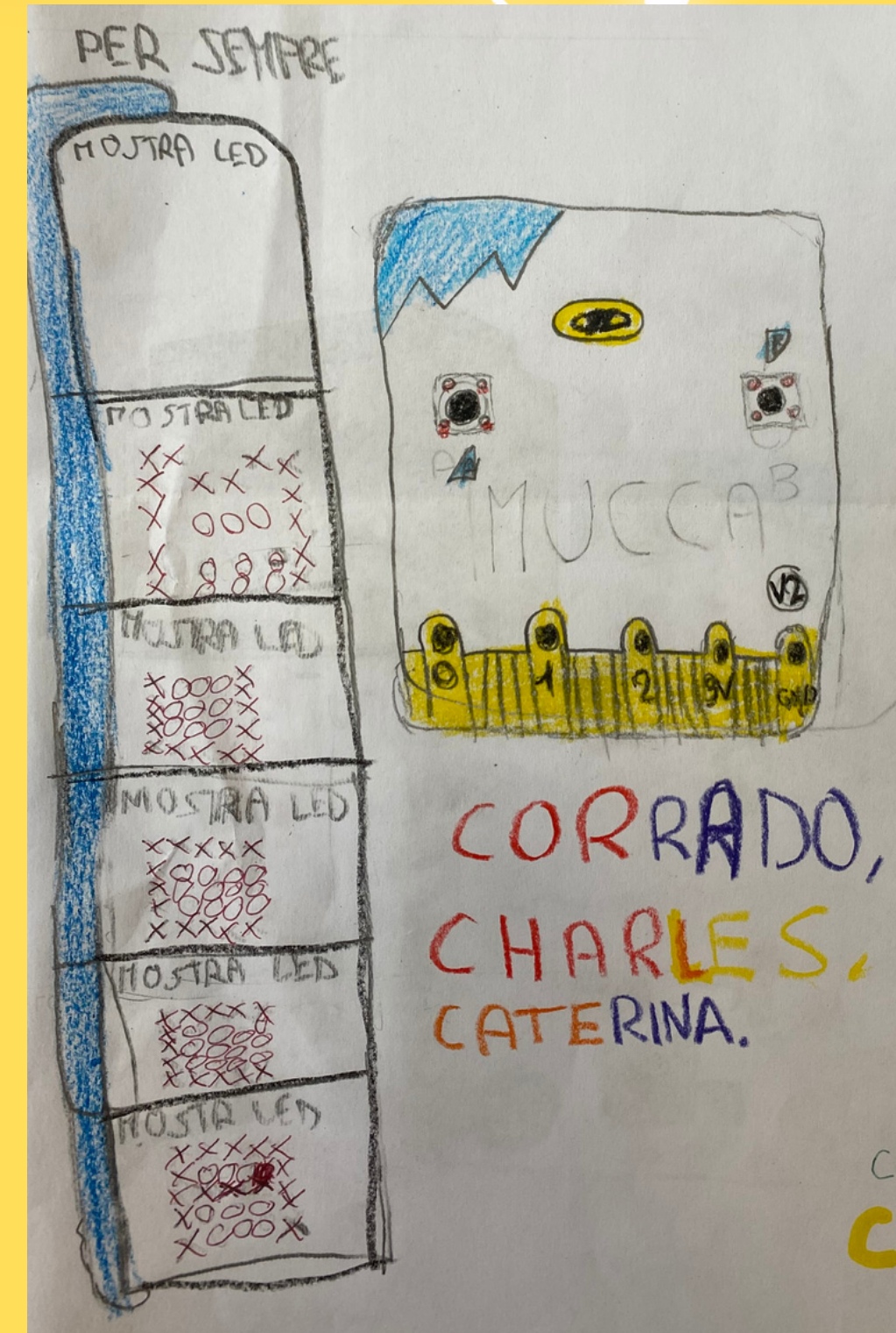
OBJECTIVE 03

Programming of
Micro-Bit
to detect the
temperature
external tests
Shared design using
Micro-Bit

OBJECTIVE 01



After the presentation, the children in groups made drawings on the structure, how the Micro:Bit works and the activities they would like to do with it.

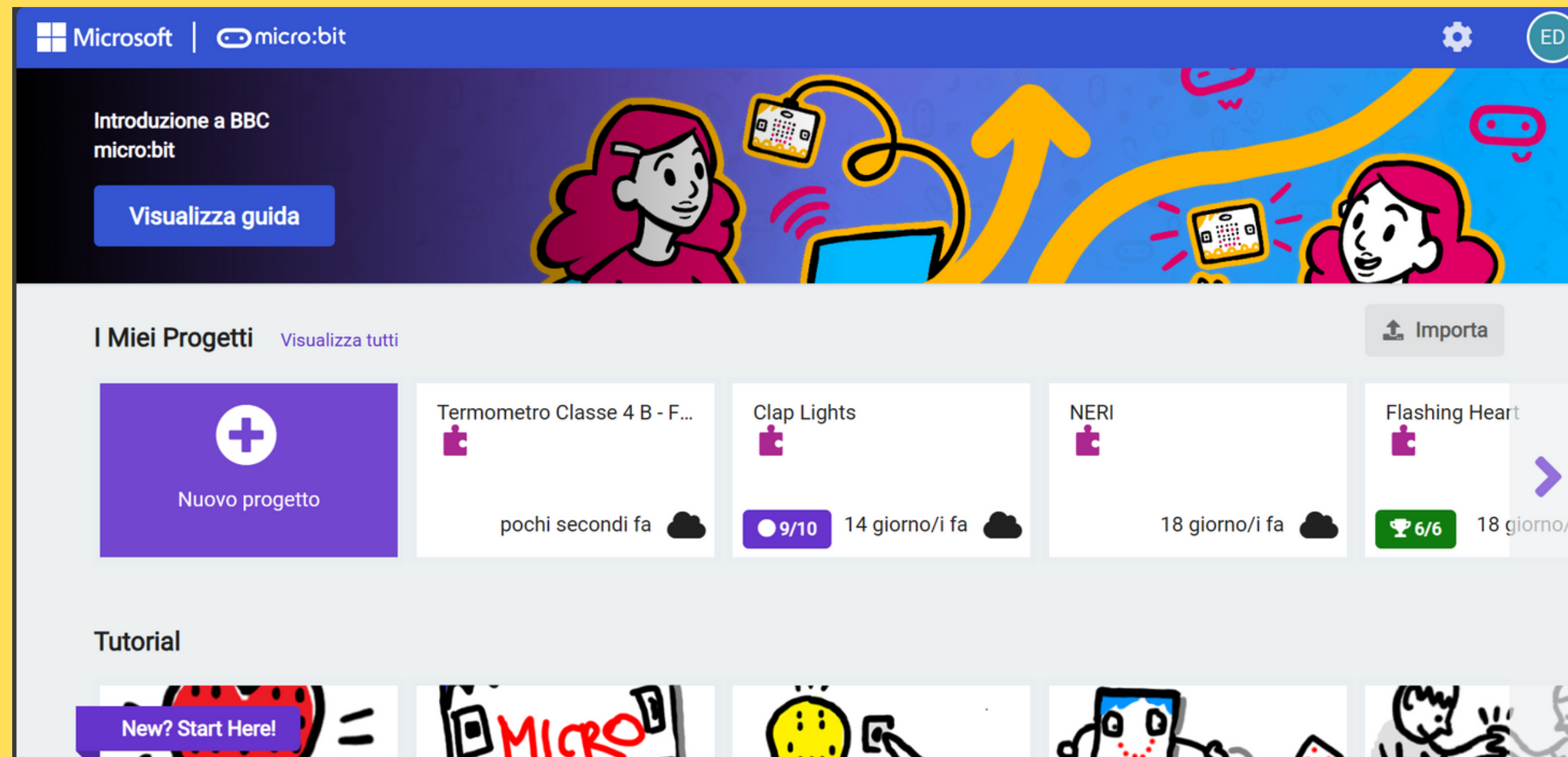


How to Program Micro-Bit?

There are more than one tools available to program Micro-Bit.

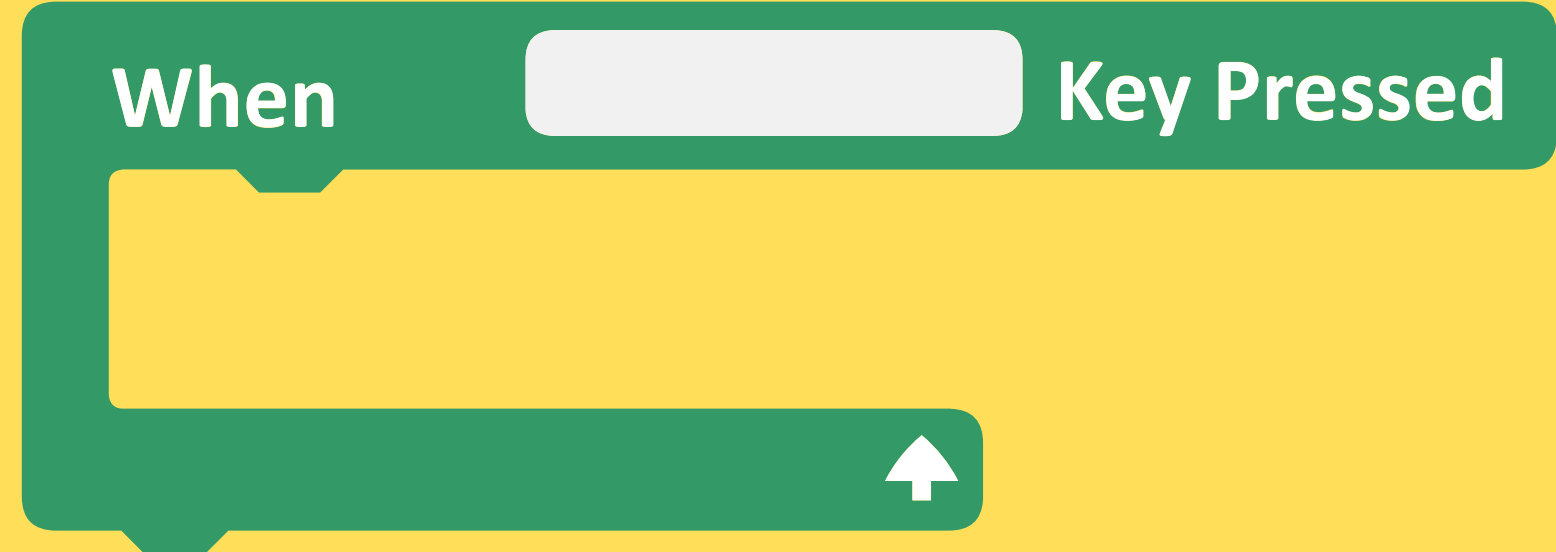
The most widely used programming environment is certainly Microsoft MakeCode, an easy-to-learn visual tool with a convenient online simulator.

Another tool available for programming is Scratch
It is also programmable in JavaScript.

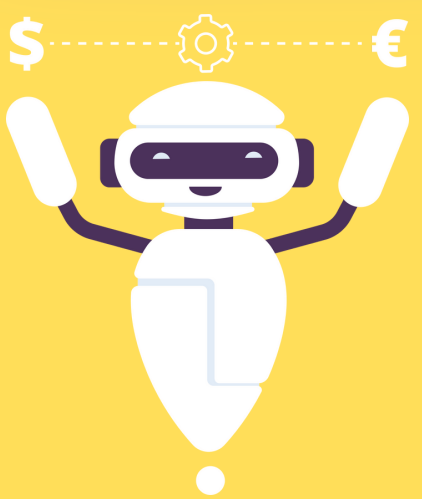




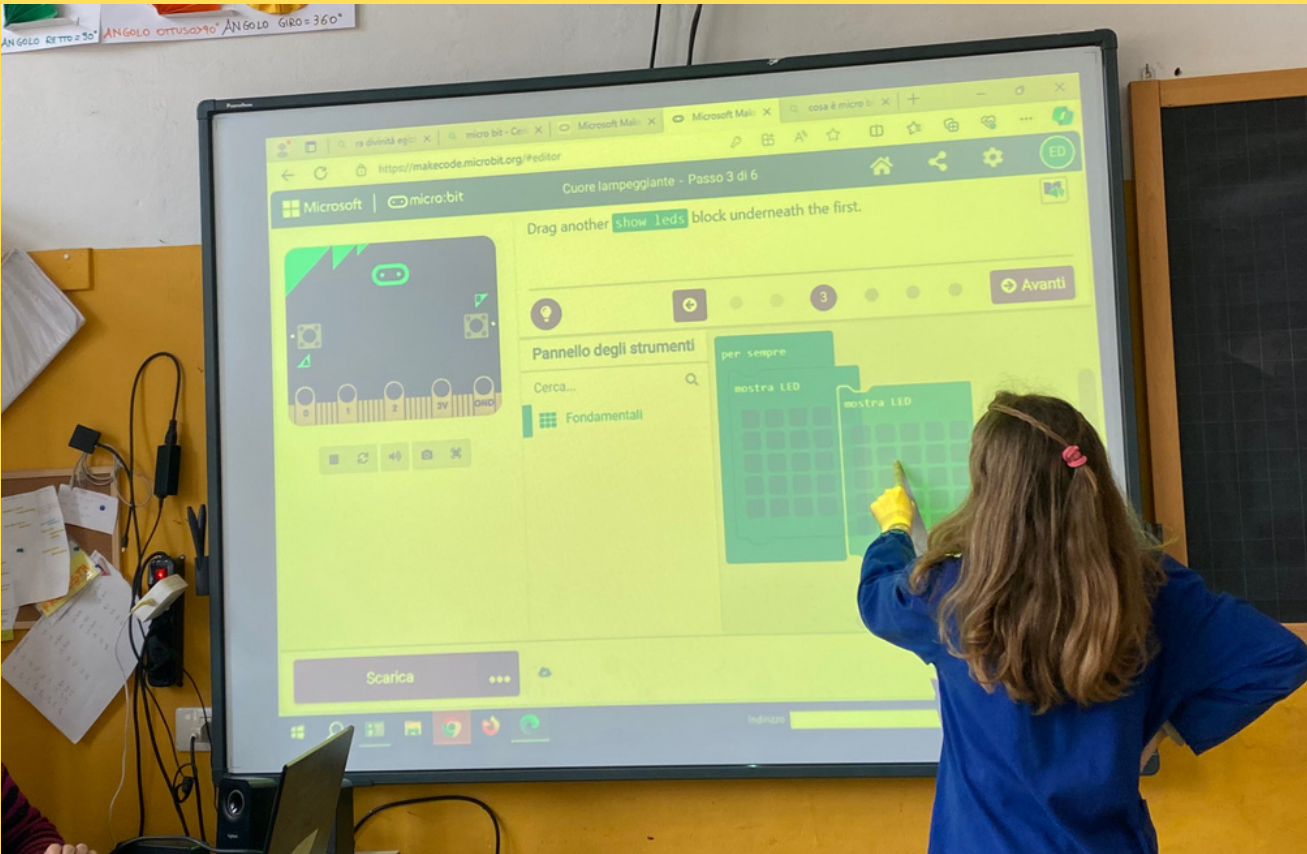
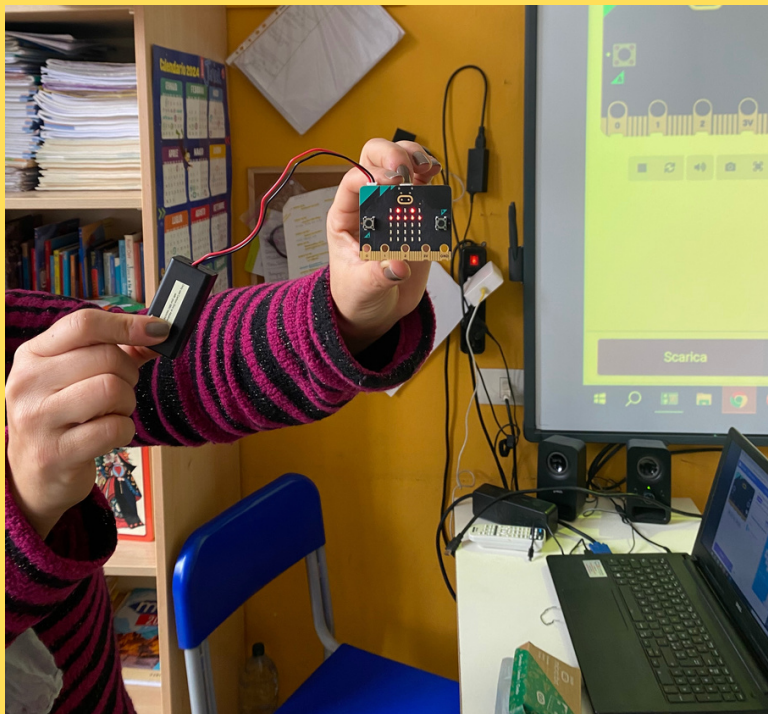
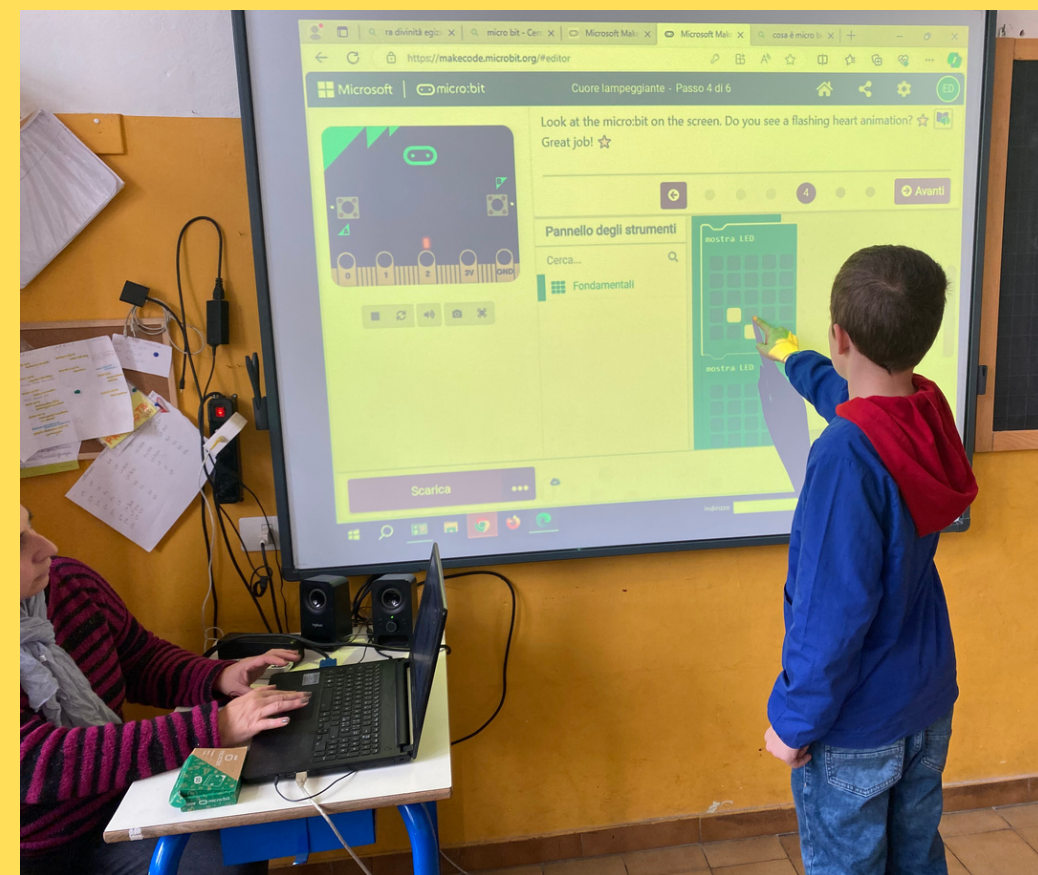
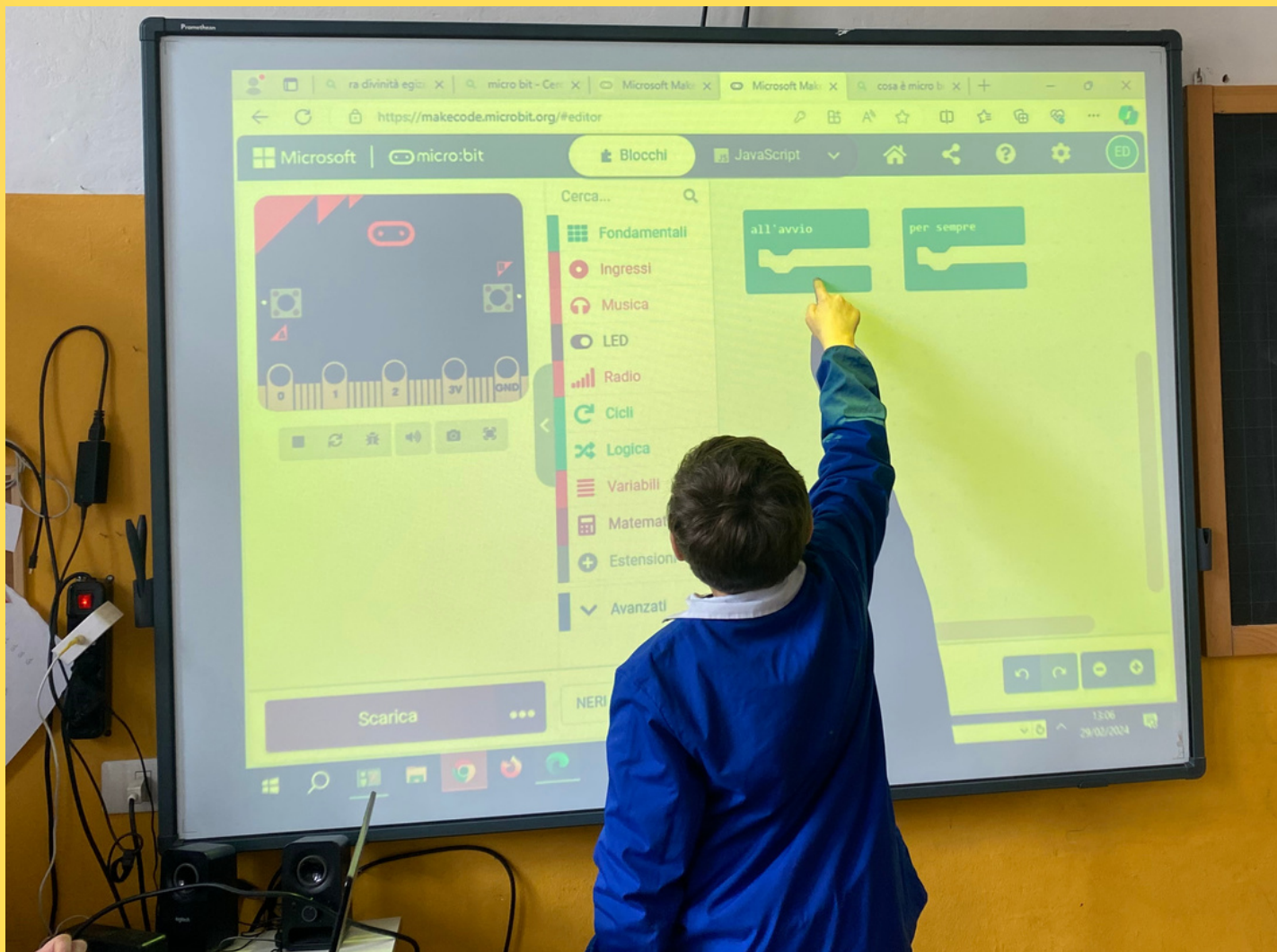
To program, simply drag blocks of code on to the canvas and snap them together. All this will be facilitated by a similar approach to constructions: function blocks that are compatible with each other will show complementary interlocking points.
(Very similar to Scratch)

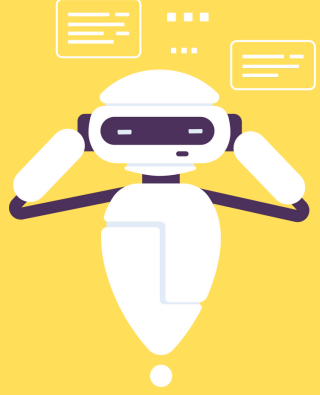


OBJECTIVE 02



After presenting the Micro:Bit to the class, a practical test was done. The students had fun giving sequences of instructions to the micro:bit which caused effects such as a flashing heart or moving names.



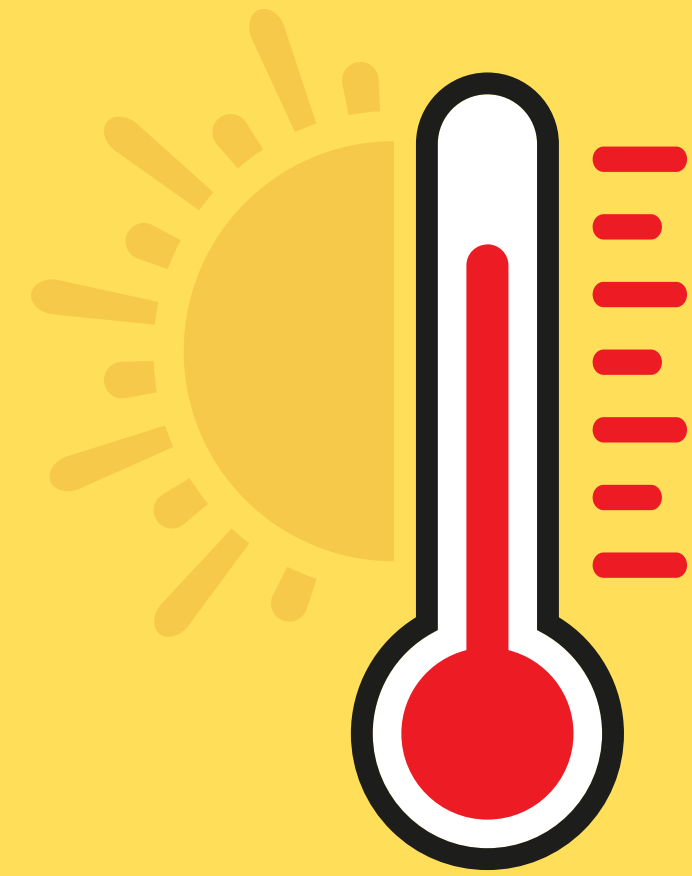


OBJECTIVE 03

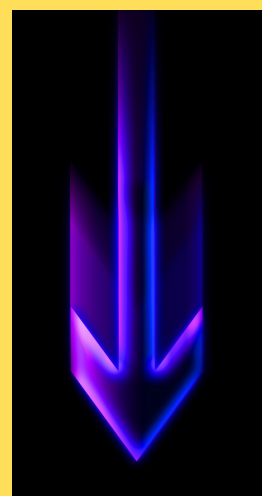
We program Micro-Bit to be used as a thermometer

In the Micro-Bit processor we have a sensor that measures the temperature very precisely

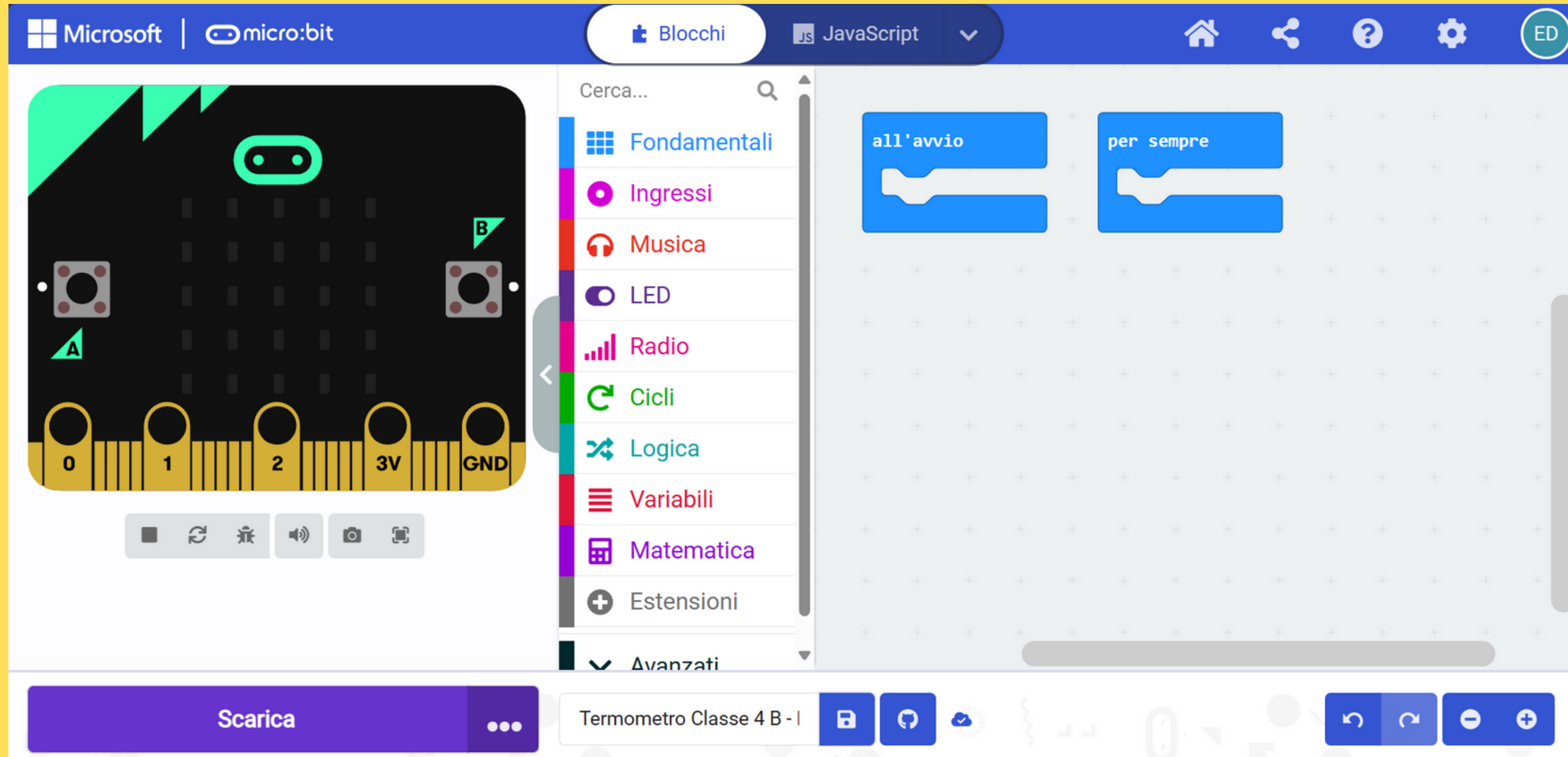
The temperature will appear on the matrix LEDs

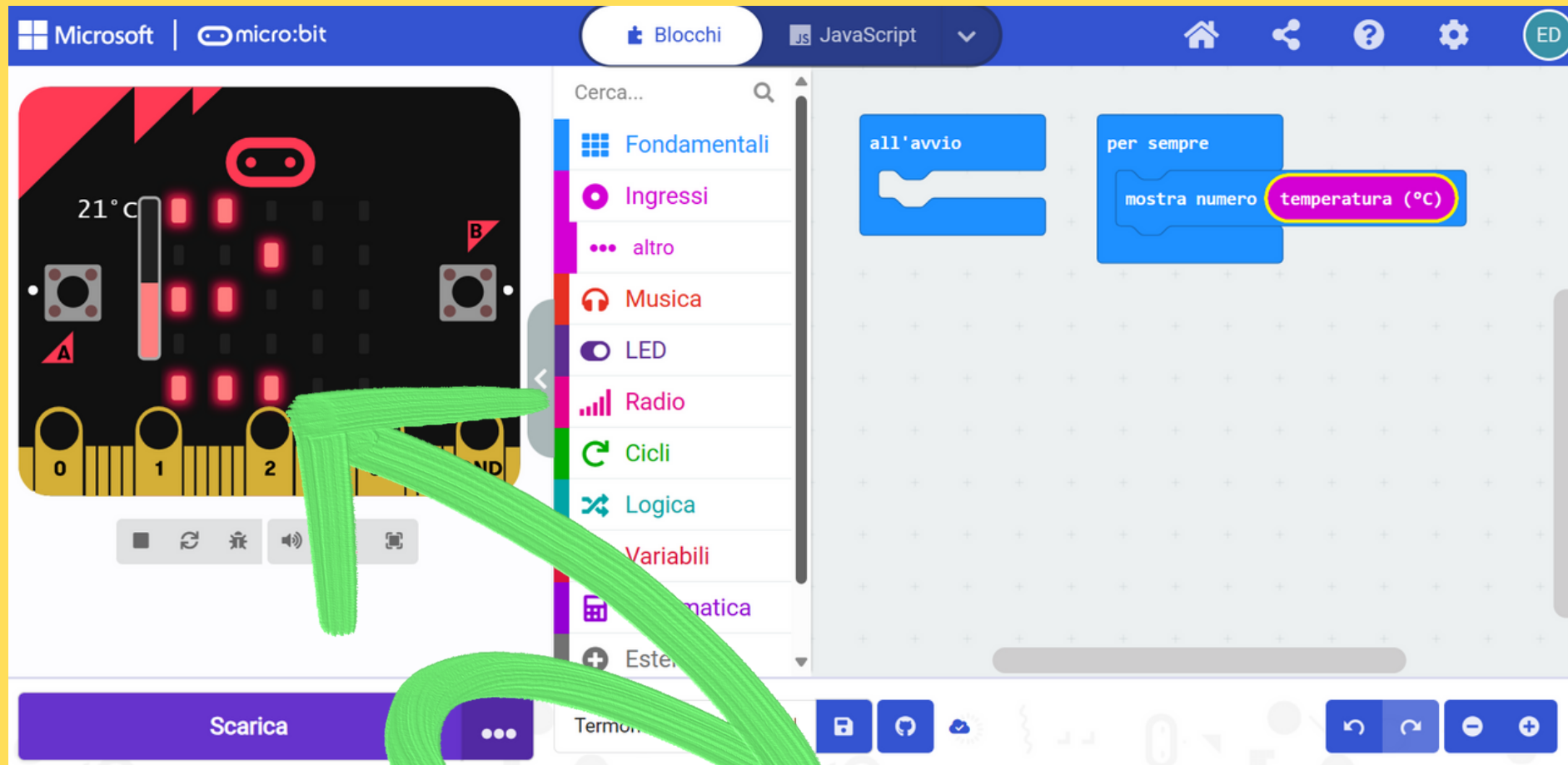


Come on, let's get started!



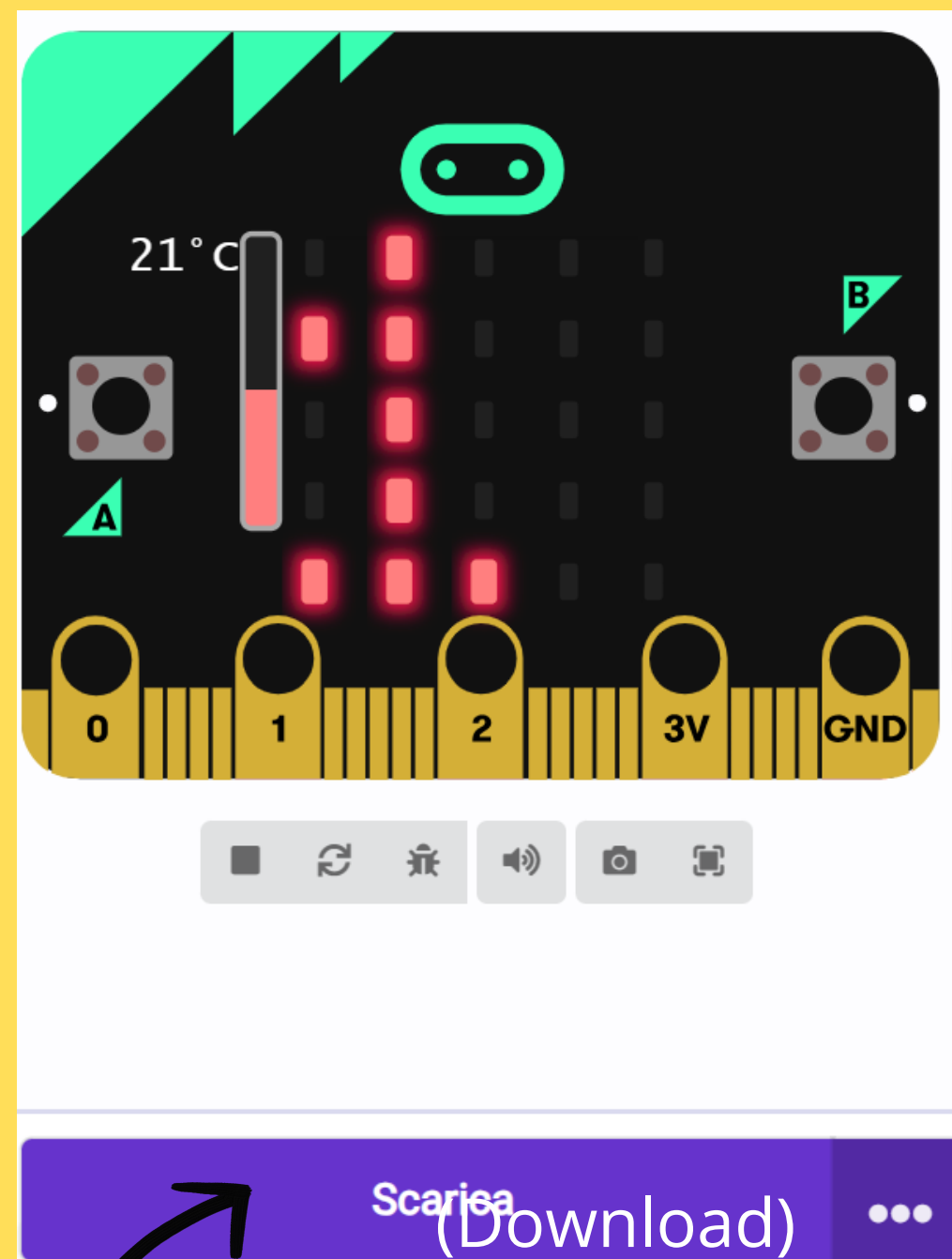
Students work in groups on the computer using Microsoft MakeCode





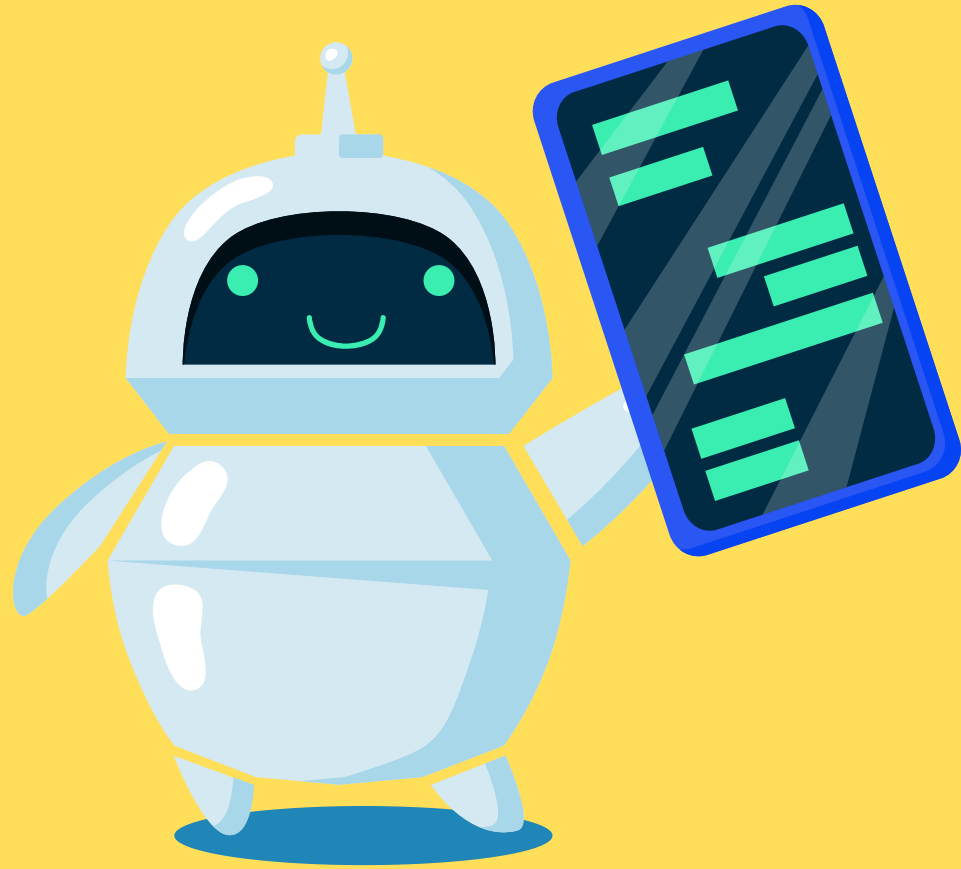
We choose the building blocks
FOREVER and
SHOW NUMBER
Among the INPUTS blocks, we
choose
TEMPERATURE in degrees
Celsius

We can see that the number representing
the temperature begins to flow in the matrix



The blocks with the instructions are downloaded to Micro Bit so that it can be tried by the kids as a thermometer

Micro Bit is ready. Students check their temperature indoor in the classroom and outdoor .



Micro Bit is a simple tool for Primary School to develop computational thinking while gaining experience in coding, robotics, making and tinkering!

Micro Bits can also be a STEM solution for our students who are ready to program a new experience

FEBRUARY 2024

CLASSE 4 B

TEACHERS:

GRAZIELLA LO VETRO

ELISABETTA DONDOLI

