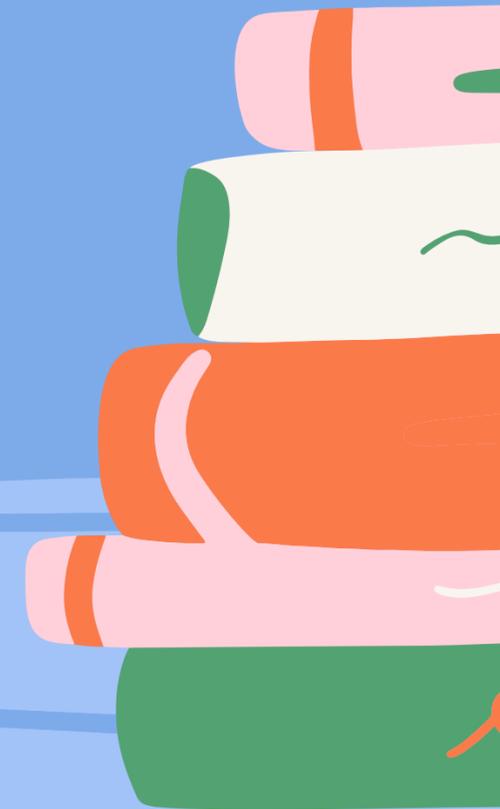


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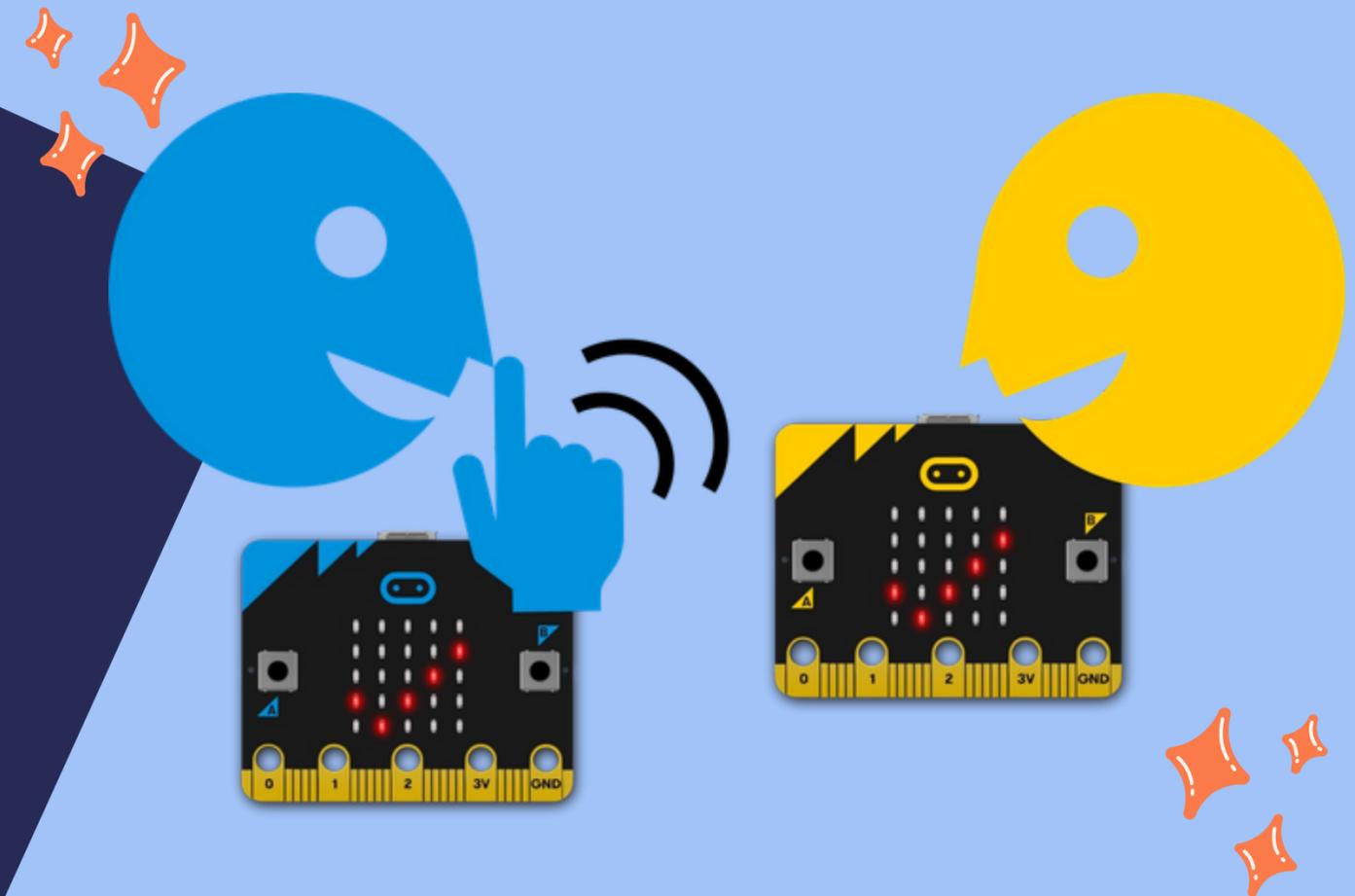
**Social Necklace
Project: A student-
made gadget to help
people during the
COVID19 pandemic.**

Rodrigo Lemonica Rosa



OVERVIEW

This paper presents the Y9 (9th-grade level) project from Beacon School, São Paulo - Brazil, entitled Social Necklace. The main scope was to bring for students' maker learning, programming literacy, and computational thinking. Through hands-on activities, all students could think, experiment, create, and learn. Fundamental premises to transform them into producers instead of simple technology consumers. During classes, the STEAM and PBL (Project Based Learning) approaches were the basis, which allowed students to choose the theme COVID-19, the driving question: Can technology contribute to helping in the control and prevention of pandemics? And coding and setting a gadget using the BBC Micro:bit, as an answer to the question. The work carried out with the students enabled many dialogues between the different fields of knowledge. Through maker education, it was possible to engage students in learning activities very distinct from traditional education.



PROJECT STEPS



Learning a Programming Language and building circuits



Finding a theme, a driving question and starts prototyping



Building the solution

3

Building the solution - Prototyping Cycle

I. Empathize - Research the needs of users. (i.e., Keep social distance).

II. Define - Inform the need and the problem. (i.e., How to measure the distance?)

III. Idealize - Imagining assumptions and creating new ideas in the virtual environment - Corrections, updates, and reprogramming of the prototype.

IV. Prototyping - Hands-on: Building solutions in the actual world.

V. Test - Experiment and applying solutions in the field.

As a last result, the students could assemble and program the gadgets with Micro:bit and even wrote about the project for the entire school community.





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