2ⁿᵈ Primary School
December 2018
Inclusion through cross curricular activity including
music, ICT, robotics, science, art and English

Physical computing with Makey Makey: a human piano

In the beginning, the students of D1 class of 2ⁿᵈ Primary School of Serres design a piano on an A4 blank leaf. In every key of the piano they write the note that the key represents and a symbol: up arrow –C , right arrow-D, down arrow –E, left arrow-F, Space –G, Click –A.
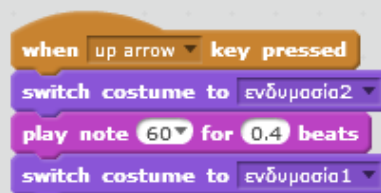

Then, the students switch to the computer program called "Scratch" and design the piano key to key as objects. Each key has 2 costumes: one white and one green. Next, the students program each object-key to perform the following instructions whenever a specific key is pressed.
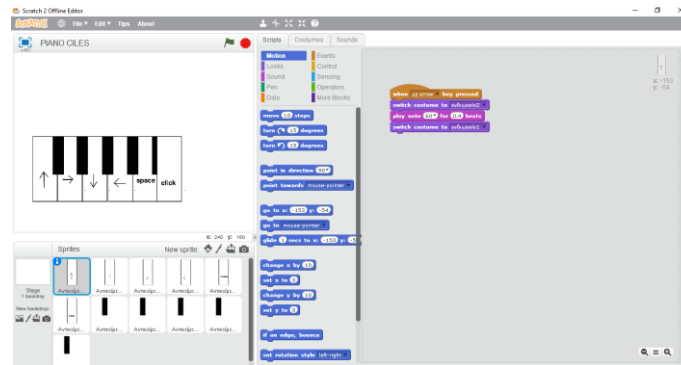
When the key **down arrow** is pressed

-to switch to costume with green colour

-to play the sound of C note

-to switch costume to white colour

When they finish programming the object-keys on Scratch, students experiment on the program and when they press the key on the keyboard they practice all the above functions.

Later on we make the piano drawn onto paper to make sounds!

We connect the Makey Makey onto the computer and on Scratch. We put a paper clip on each key to make it conductive and then we connect the piano on paper to makey makey through connectors called "Alligators". **Students hold the alligators and in this way they create a closed electrical circuit with the ground and they are able to play the piano on the paper.**
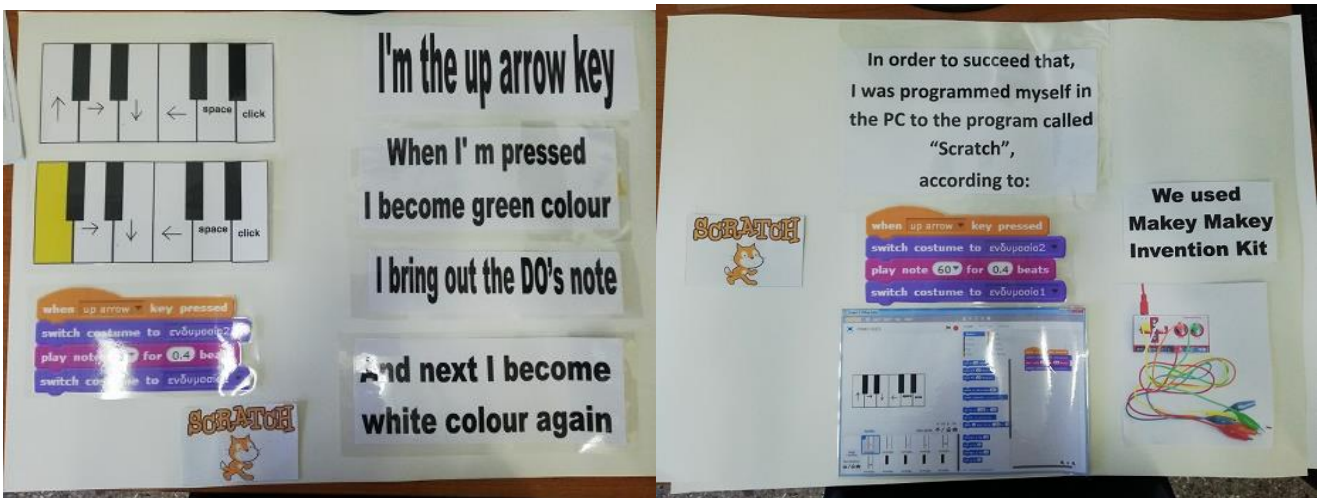

After that we experiment more turning ourselves into students-keys which- when pressed- can make a sound note from the computer.

Each student creates his/her banner in order to explain to others what is his/her role concerning that piano and what they have to do at the moment they are being touched by Ermioni, the pianist, on their skin(hand palm).

To present the change of the colour from green to white whenever the key is pressed and turn into white soon after, we use white masks, which we have painted half green. In that point, the teacher of D1 class Christos Kottis has helped us very much.

In order to sing Jingle Bells we connected the notes to the symbols of our piano (up-down-right-left-arrow, Space and click)

We presented the project to partner schools from Cyprus, Germany and Finland in Erasmus+ teleconference on 12th December 2018
the Christmas celebration school show to all the students
and to the head of the Primary Education Office in Serres on 21st December.

For more details you can visit my site:
http://www.goutouloudi.gr/2018/12/makey-makey-πιάνο-με-πλήκτρα-μαθητές-στο-2ο-δ-σ-σε/

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