

C1/C2 Blended Mobility of School Learners



Maths through Games

Data Management

GAME CONSTRUCTION PROCESS

Interactive Board for Data Management

Materials:

- wood board
- wood numbers (1, 2, 3, 4)
- one Touch Board started kit from Bare Conductive
- paperboard or k-line
- electrical wires
- adhesive tape

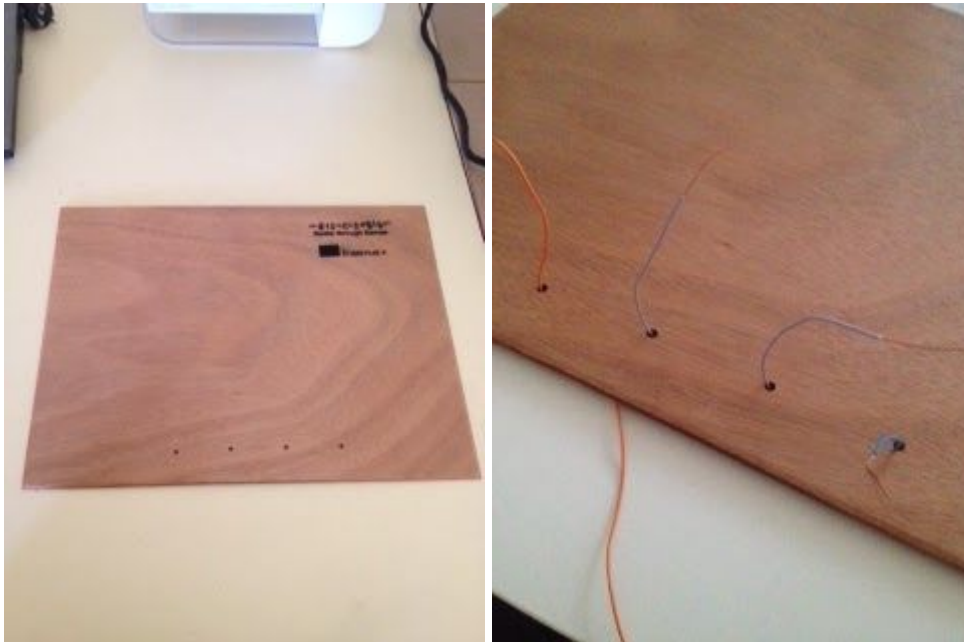
Construction Process:

1. use a wood board to inscribe your game name and description project;



C1/C2 Blended Mobility of School Learners

2. Add 4 holes in the board to pass the 4 electrical wires.

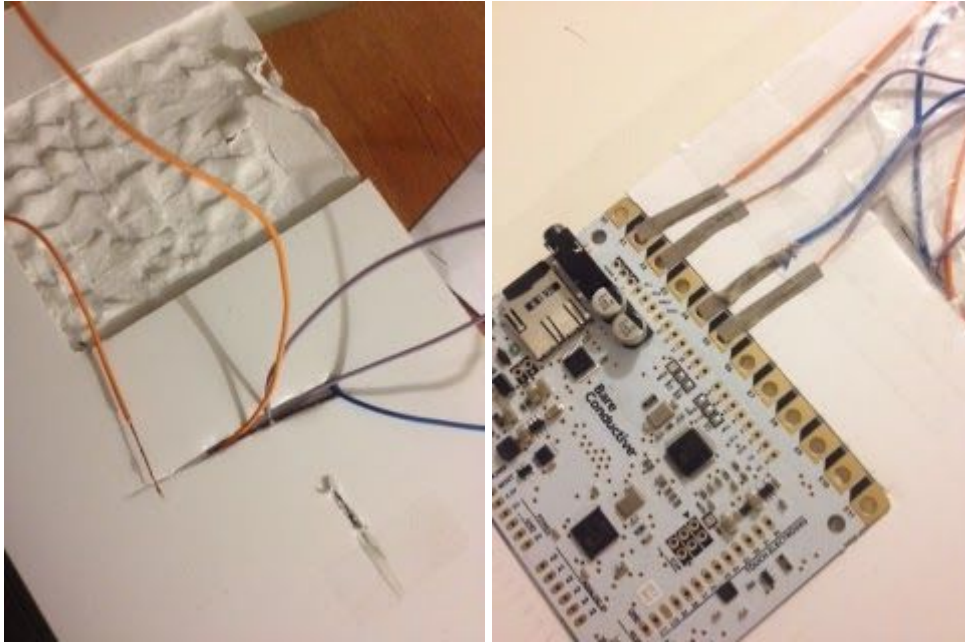


3. Paint the wood numbers with electric paint from the started kit Bare Conductive.



C1/C2 Blended Mobility of School Learners

4. Use a paperboard or other material (K-line board) to connect the electrical cables to the TouchBoard, glue the paperboard in the back of the wood board.



5. Connect the electric cables in the wood numbers with adhesive tape, and then glue the numbers in the wood board.



C1/C2 Blended Mobility of School Learners

6. Setting up your Touch Board with arduino: visit the link:
<https://www.bareconductive.com/make/setting-up-arduino-with-your-touch-board/>

7. Connect the interactive board to your computer.

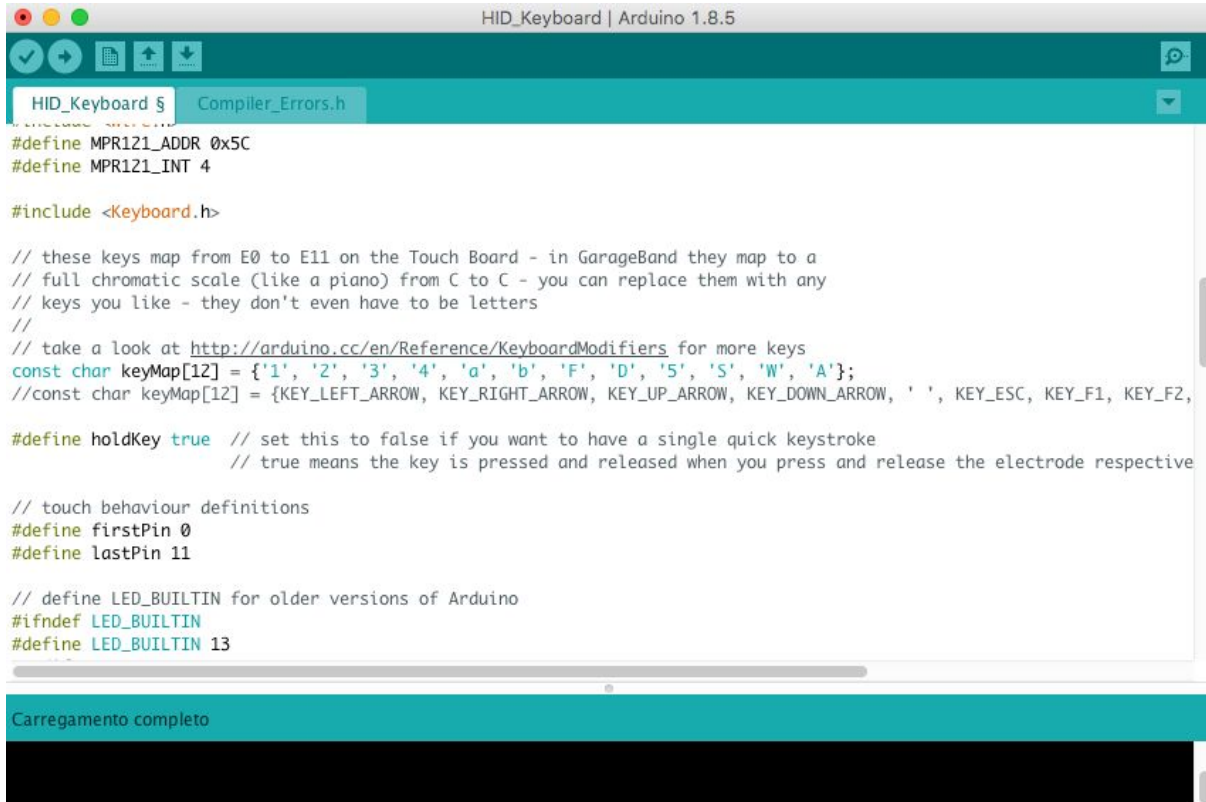


8. Run Arduino (Now that everything has been installed, and you have restarted your computer (if necessary) you can open the Arduino IDE again. Once it has loaded, select: File→Sketchbook→Touch Board Examples→HID_KEYBOARD)

C1/C2 Blended Mobility of School Learners

9. Add to the sensores E0, E1, E2, E3 the keyboards 1, 2, 3 and 4. in the line as follow:

```
const char keyMap[12] = {'1', '2', '3', '4', 'a', 'b', 'F', 'D', '5', 'S', 'W', 'A'};
```



```
HID_Keyboard | Arduino 1.8.5
HID_Keyboard 5 Compiler_Errors.h
#define MPRI21_ADDR 0x5C
#define MPRI21_INT 4
#include <Keyboard.h>
// these keys map from E0 to E11 on the Touch Board - in GarageBand they map to a
// full chromatic scale (like a piano) from C to C - you can replace them with any
// keys you like - they don't even have to be letters
//
// take a look at http://arduino.cc/en/Reference/KeyboardModifiers for more keys
const char keyMap[12] = {'1', '2', '3', '4', 'a', 'b', 'F', 'D', '5', 'S', 'W', 'A'};
//const char keyMap[12] = {KEY_LEFT_ARROW, KEY_RIGHT_ARROW, KEY_UP_ARROW, KEY_DOWN_ARROW, ' ', KEY_ESC, KEY_F1, KEY_F2,
#define holdKey true // set this to false if you want to have a single quick keystroke
// true means the key is pressed and released when you press and release the electrode respective
// touch behaviour definitions
#define firstPin 0
#define lastPin 11
// define LED_BUILTIN for older versions of Arduino
#ifndef LED_BUILTIN
#define LED_BUILTIN 13
Carregamento completo
```

10. Continue to follow the step 7 as shown in the link:

<https://www.bareconductive.com/make/setting-up-arduino-with-your-touch-board/>

11. Then open the program made in Scratch by the Agrupamento de Escolas Dr. Carlos Pinto Ferreira, using the link:

<https://scratch.mit.edu/projects/214740234/>

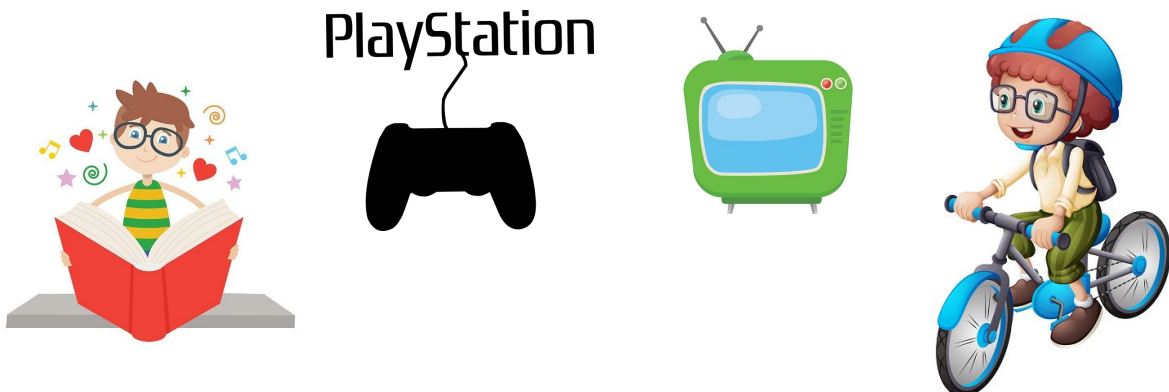
C1/C2 Blended Mobility of School Learners

12. Print the Cards Images, and place them in to the interactive board.



Cards Images

HOBBIES

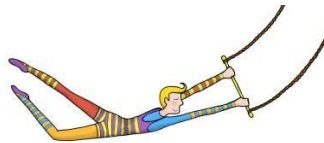


C1/C2 Blended Mobility of School Learners

SPORTS



JOBS







C1/C2 Blended Mobility of School Learners

13. Distribute one Point Sheet for each group of students

Points Game Sheet - Sample

One sheet for each group

HOBBIES

| | | | |
|--|---|--|--|
|  | PlayStation  |  |  |
| 1 | 2 | 3 | 4 |

| Questions | Answer | Points (25 for each correct answer) |
|-----------|--------|--|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| | | Total Points: |

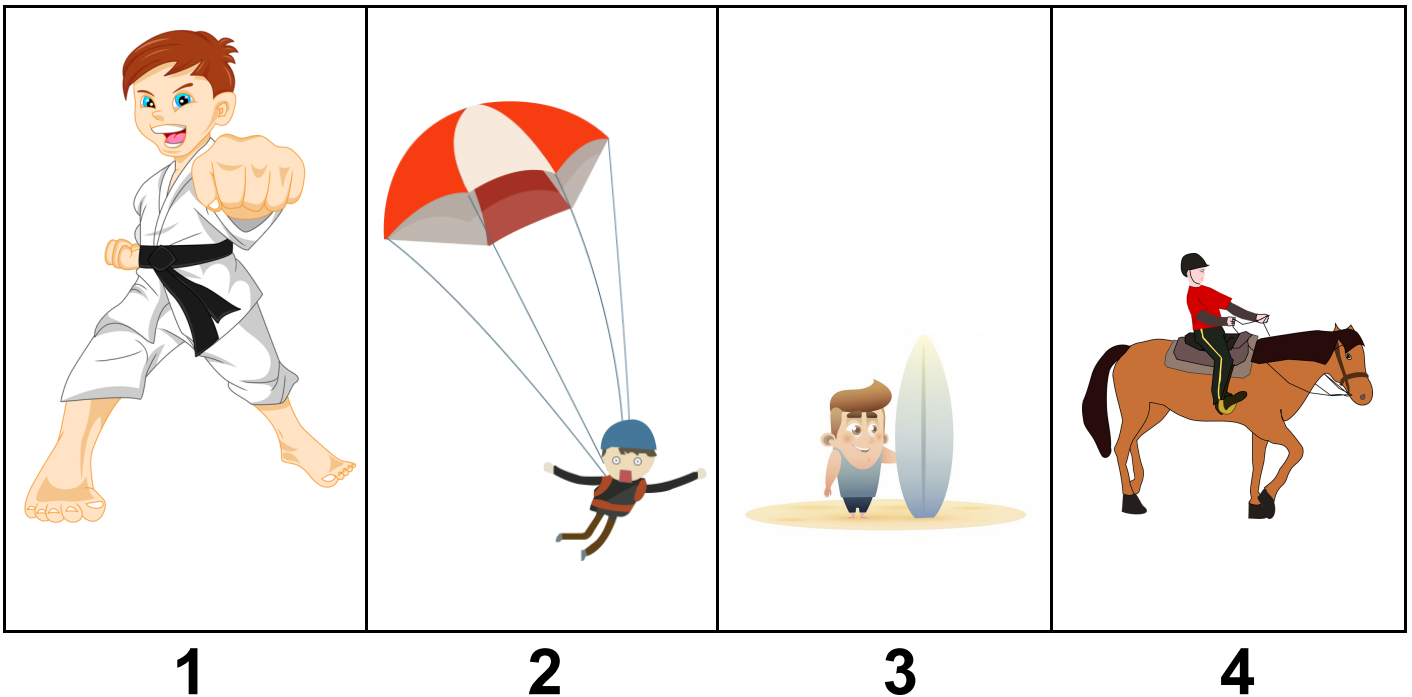
C1/C2 Blended Mobility of School Learners



Maths through Games

Data Management

SPORTS



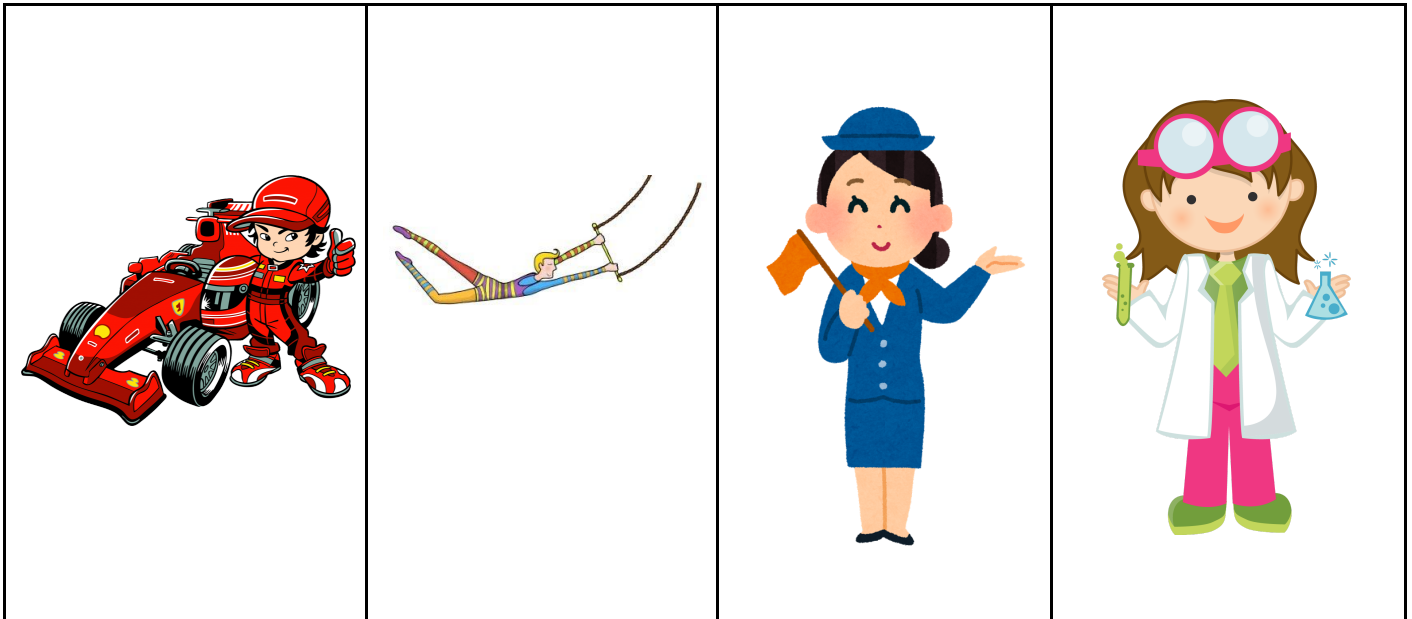
| Questions | Answer | Points (25 for each correct answer) |
|-----------|--------|--|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| | | Total Points: |

C1/C2 Blended Mobility of School Learners



Maths through Games

JOBS



1

2

3

4

| Questions | Answer | Points (25 for each correct answer) |
|-----------|--------|--|
| 1 | | |
| 2 | | |
| 3 | | |
| 4 | | |
| | | Total Points: |

C1/C2 Blended Mobility of School Learners



Maths through Games

Games developer by the team of the project Erasmus+ “Maths through Games” of the Agrupamento de Escolas Dr. Carlos Pinto Ferreira. 2017/2018

Erasmus+ Coordinator and ICT teacher: Tania Costa
Primary teacher: Berta Cardoso