

Construindo Matemática guia para interface lúdico

um jogo de Pedro Nunes, Tomás Oliveira Vasco Gonçalves

um projeto Universidade Lusófona — ECATI (licenciatura em Videojogos)
& Casa Pia de Lisboa – CED Jacob Rodrigues Pereira
disponível em <<http://educacaoacessivel.ulusofona.pt>>

Construindo Matemática é um videojogo que pode ser jogado com um normal teclado
ou com um interface original concebido pelos autores do jogo.
Este documento contém as indicações fundamentais para a sua reprodução.



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COMPONENTES

1 x Arduino Micro

ptrobotics.com/plataformaarduino-e-modelos-alternativos-equivalentes/1776-arduino-micro.html

11x Tactile Switch

ptrobotics.com/tactile-switch/3267-tactile-button-12mm-flat.html

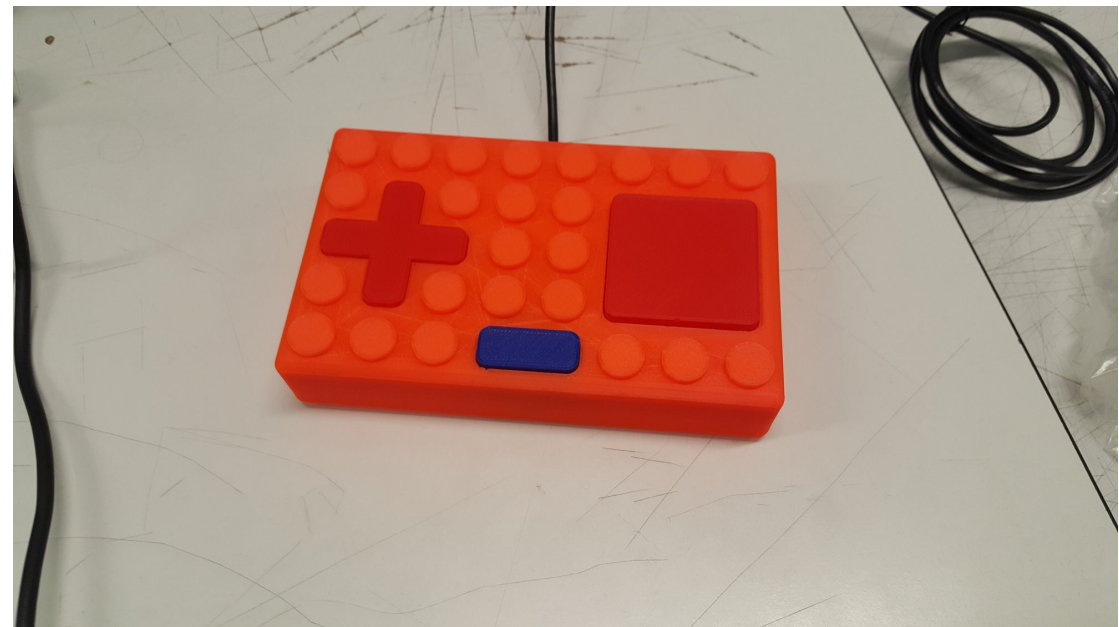
REAL PLA 1.75mm - Blue - Spool 1kg

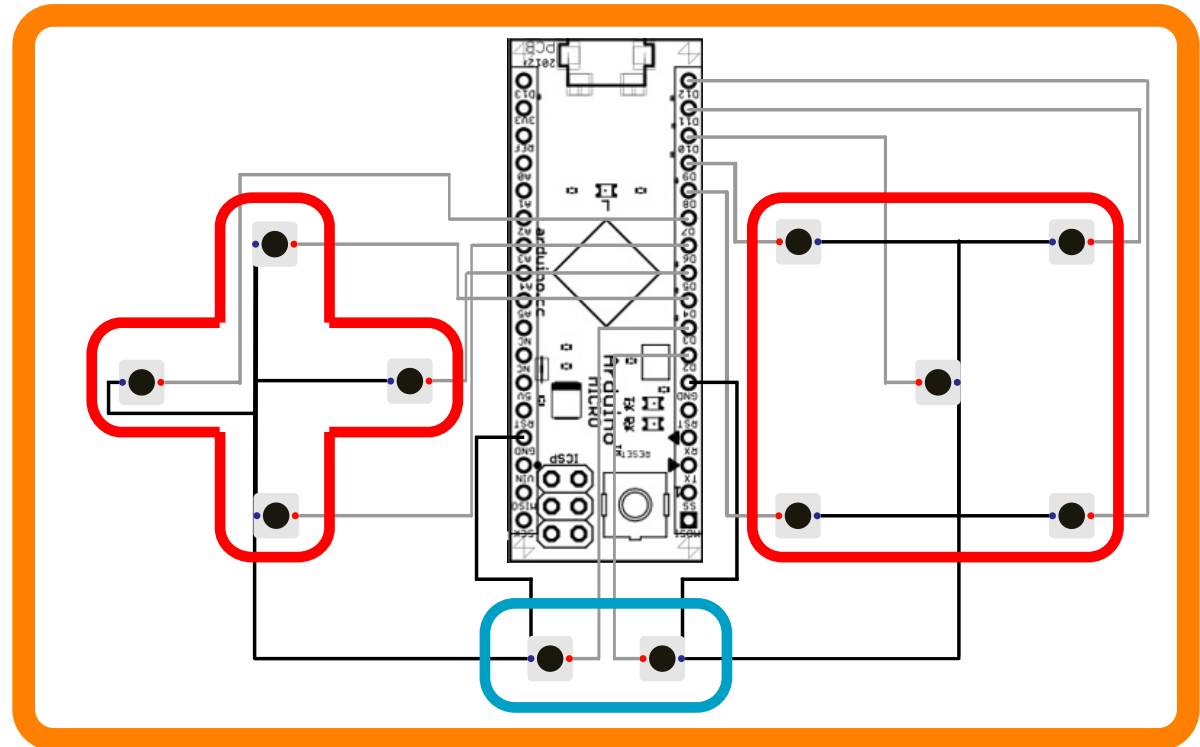
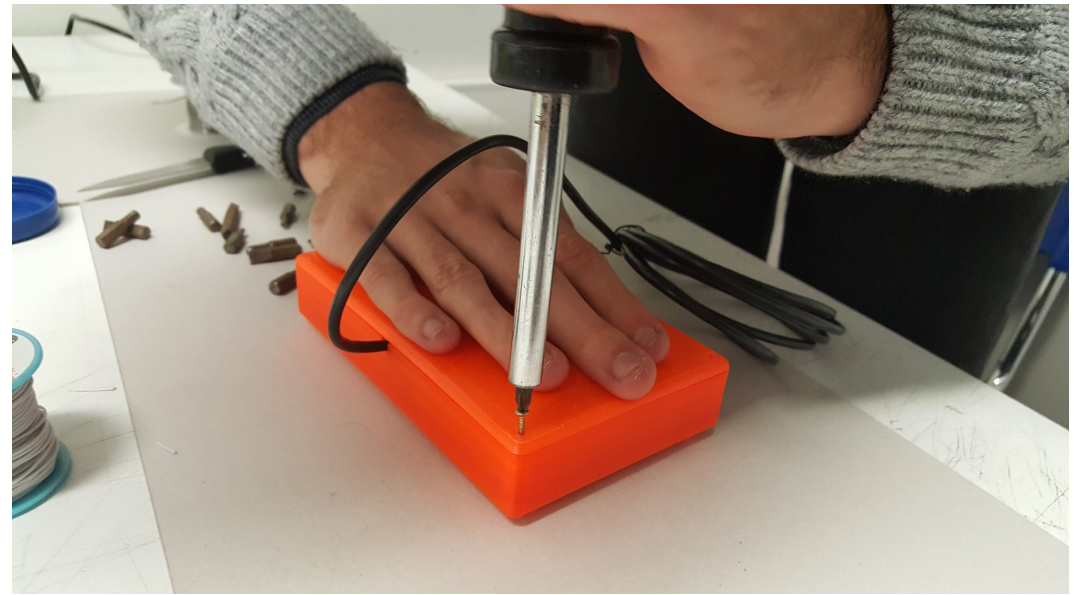
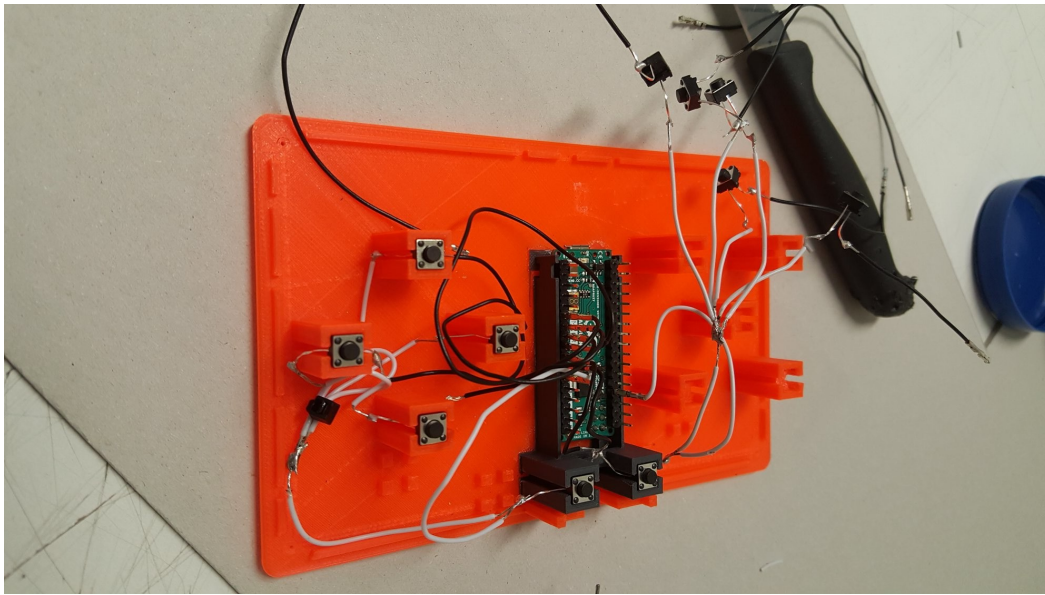
ledsandchips.com/3d-printer/filament-pla/real-pla-175mm-blue-spool-1kg

1.75MM EasyFil PLA - Red

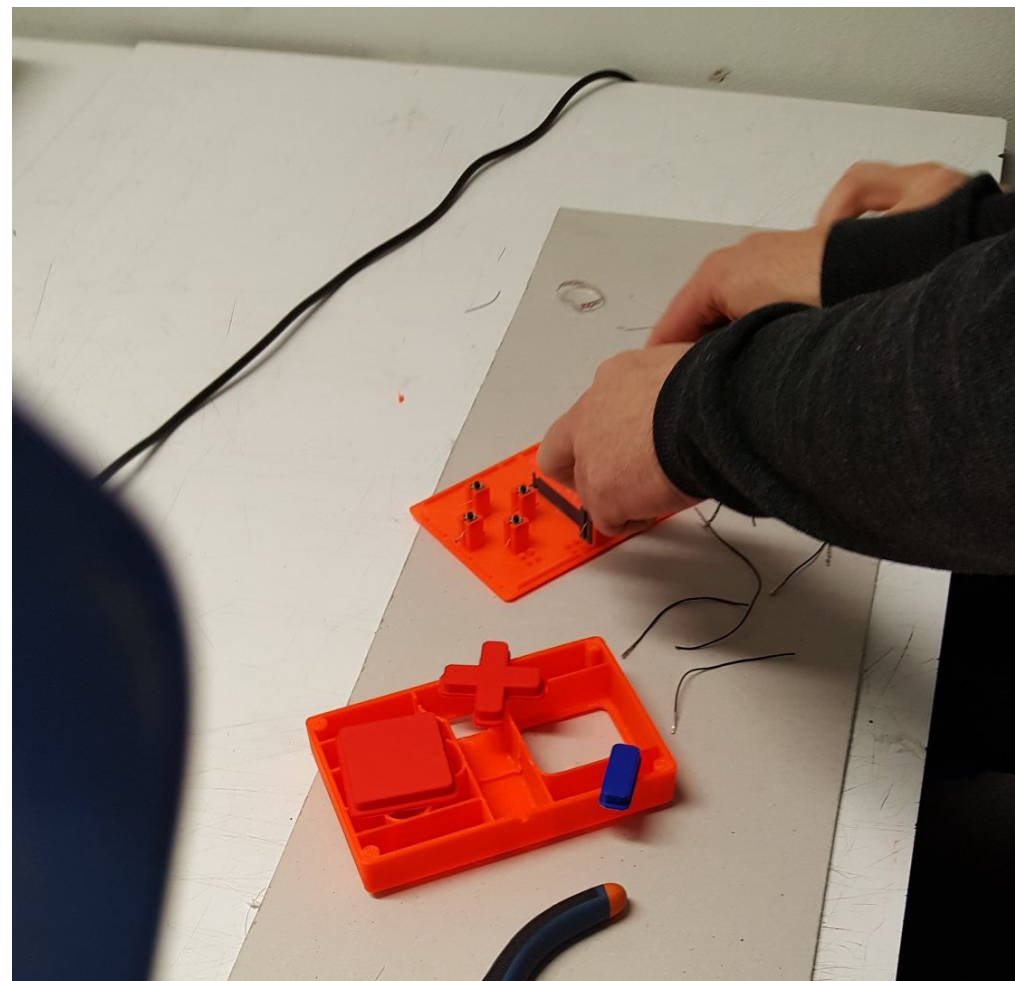
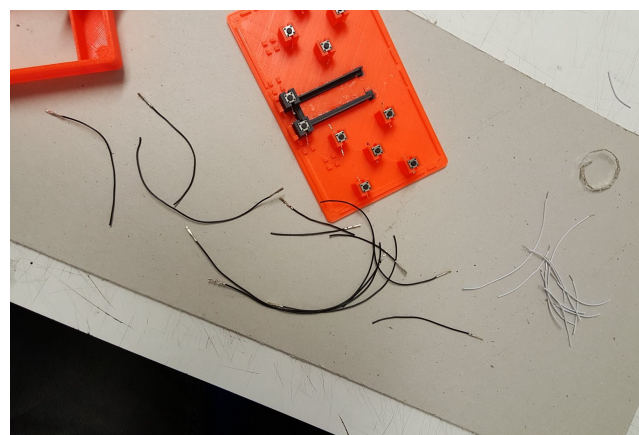
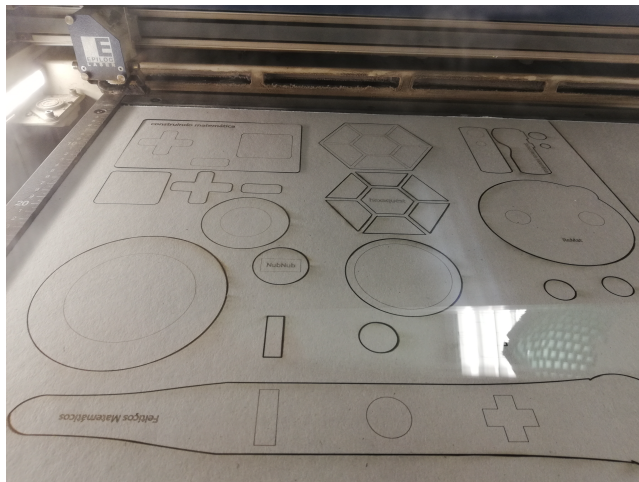
ledsandchips.com/3d-printer/175mm-easyfil-pla-red

> nota: docs. illustrator CS6, 123d Design e PDF + código arduino em ficheiros anexos.

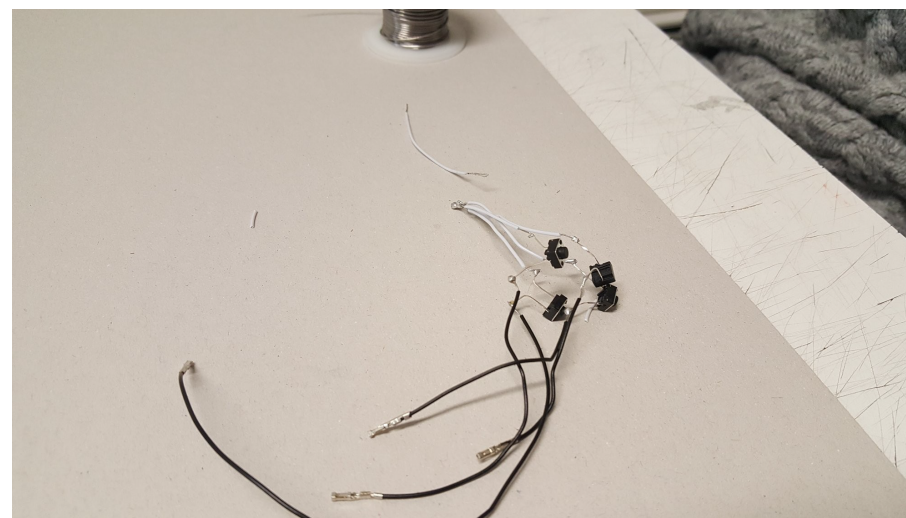
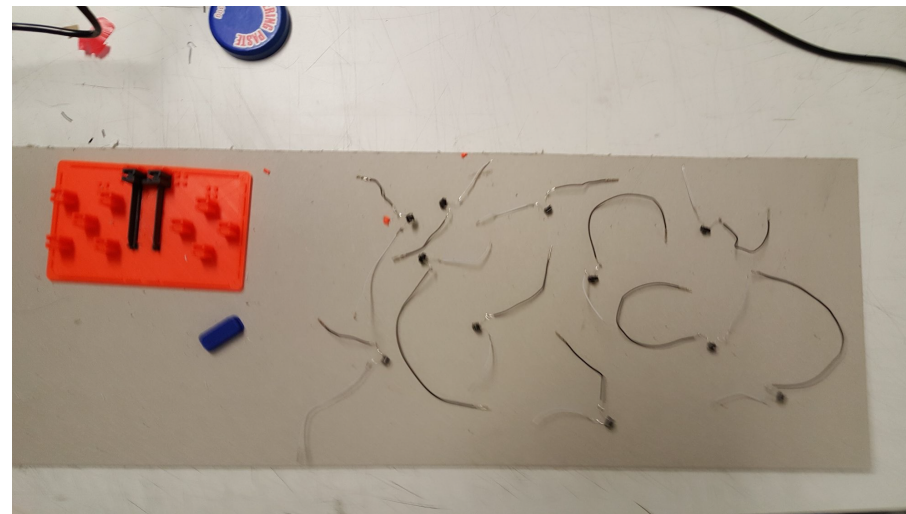




COMPONENTES



COMPONENTES



sketch_Keyboard

```
#include <Keyboard.h>

//pausa

int BUTONESCAPE1 = 2;
int BUTONESCAPE2 = 3;

// direções
int BUTTONUP = 4;
int BUTTONRIGHT = 5;
int BUTTONDOWN = 6;
int BUTTONLEFT = 7;

//apanha
int BUTTONBIG1 = 8;
int BUTTONBIG2 = 9;
int BUTTONBIG3 = 10;
int BUTTONBIG4 = 11;
int BUTTONBIG5 = 12;
```

sketch_Keyboard

```
void setup() {
    // put your setup code here, to run once:

    Serial.begin(9600);

    pinMode(BUTTONUP, INPUT_PULLUP);
    pinMode(BUTTONRIGHT, INPUT_PULLUP);
    pinMode(BUTTONDOWN, INPUT_PULLUP);
    pinMode(BUTTONLEFT, INPUT_PULLUP);

    pinMode(BUTTONBIG1, INPUT_PULLUP);
    pinMode(BUTTONBIG2, INPUT_PULLUP);
    pinMode(BUTTONBIG3, INPUT_PULLUP);
    pinMode(BUTTONBIG4, INPUT_PULLUP);
    pinMode(BUTTONBIG5, INPUT_PULLUP);

    pinMode(BUTONESCAPE1, INPUT_PULLUP);
    pinMode(BUTONESCAPE2, INPUT_PULLUP);

}
```

```
void loop() {
  // put your main code here, to run repeatedly:

  Keyboard.begin();

  if(digitalRead(BUTTONUP) == 0)
  {
    Keyboard.press('w');
    delay(200);
  }
  else
  {
    Keyboard.release('w');
  }

  if(digitalRead(BUTTONRIGHT) == 0)
  {
    Keyboard.press('d');
    delay(200);
  }
  else
  {
    Keyboard.release('d');
  }
}
```