

# Soft Robots

## Efterår 2018

*4 af 4*

# Plan

- Dag 1 – hack dine tøj!
  - nøgleord: soft robots, wearables, adafruit
  - "smart handske" / smart glove projektet
- Dag 2
  - Arbejde videre med "smart handske"
  - test af handskerne
- Dag 3
  - Afslut arbejde på handsker
  - Test med batterier
- Dag 4
  - sy et monster
  - test

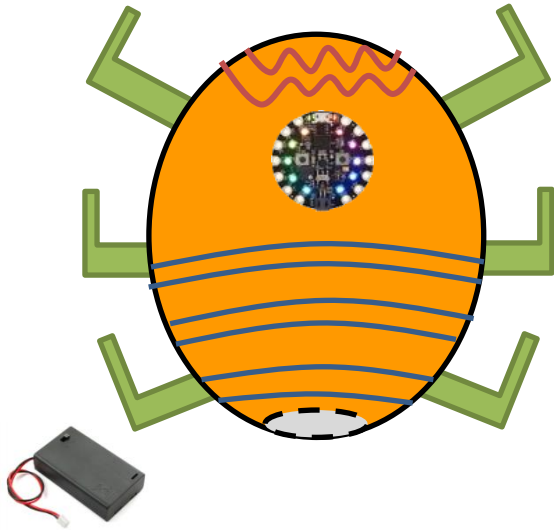
# Monster

- sy et monster + adafruit => *bringe det hjem*

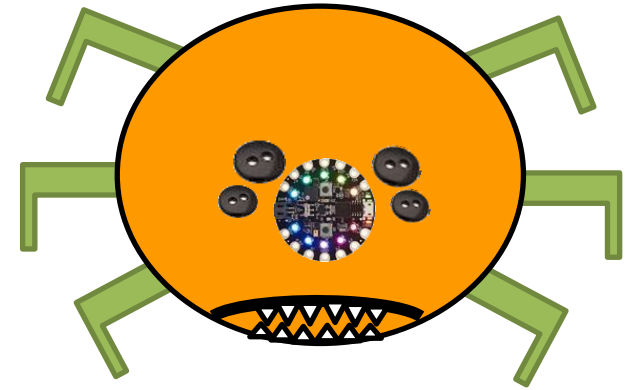


# Ideer

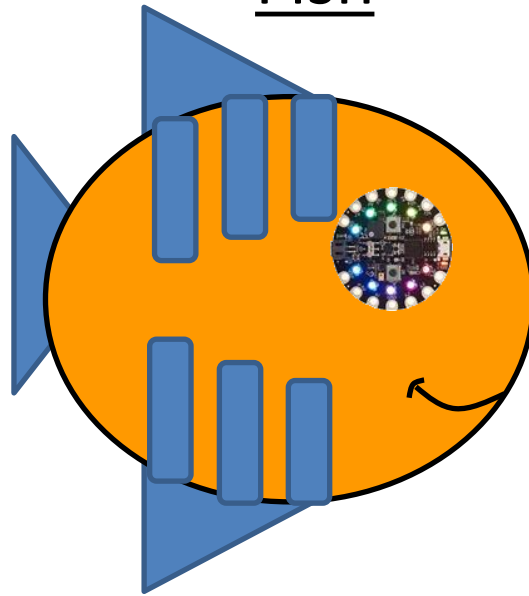
BUG



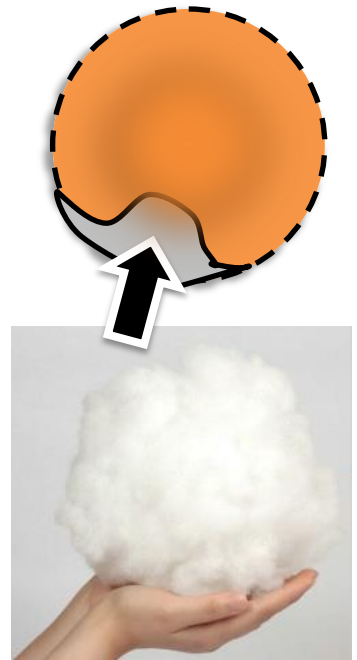
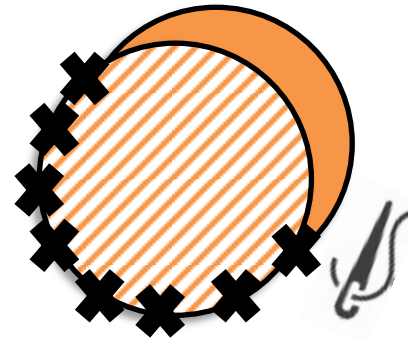
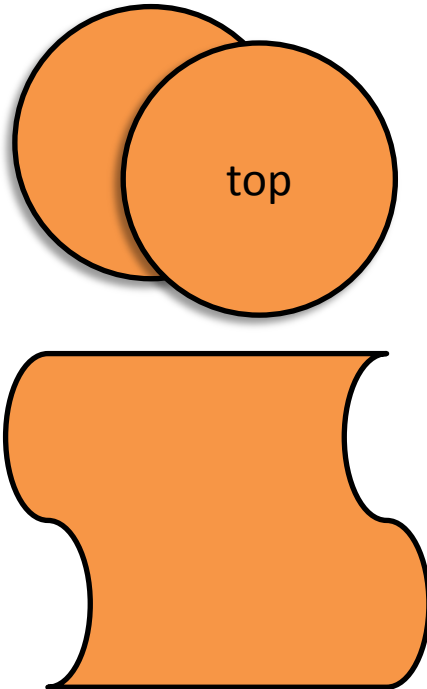
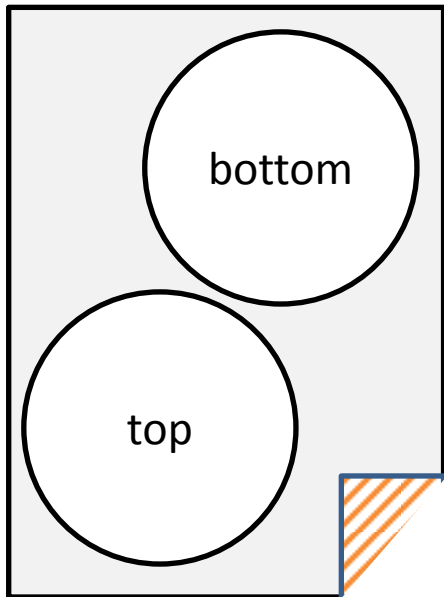
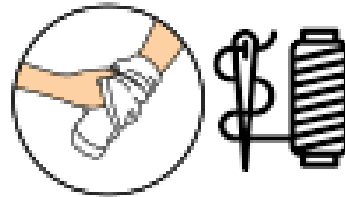
Spider



Fish



Print + Klip + <sup>vend om &</sup> Sy + <sup>vend om &</sup> Fyld



# Video tutorial

DIY Beanbag or Miniature Pillow (Beginner Sewing Techniques)

<https://www.youtube.com/watch?v=Pvdvy6AMfNw>

# Code

1- hjerteslag

2- poke indtil gal

[makecode.adafruit.com](https://makecode.adafruit.com)

# 1- hjerteslag

timer



MUSIC  
NETWORK  
LOOPS  
LOGIC  
VARIABLES  
MATH  
ADVANCED  
PINS  
FUNCTIONS  
ARRAYS  
TEXT  
CONSOLE  
CONTROL  
EXTENSIONS

wait for event from 0 with value 0  
device dal version  
timer 1 millis  
timer 1 seconds  
timer 1 reset  
timer 1 pause until (ms) 5  
reset  
assert false with value 0  
wait (µs) 4  
panic 5

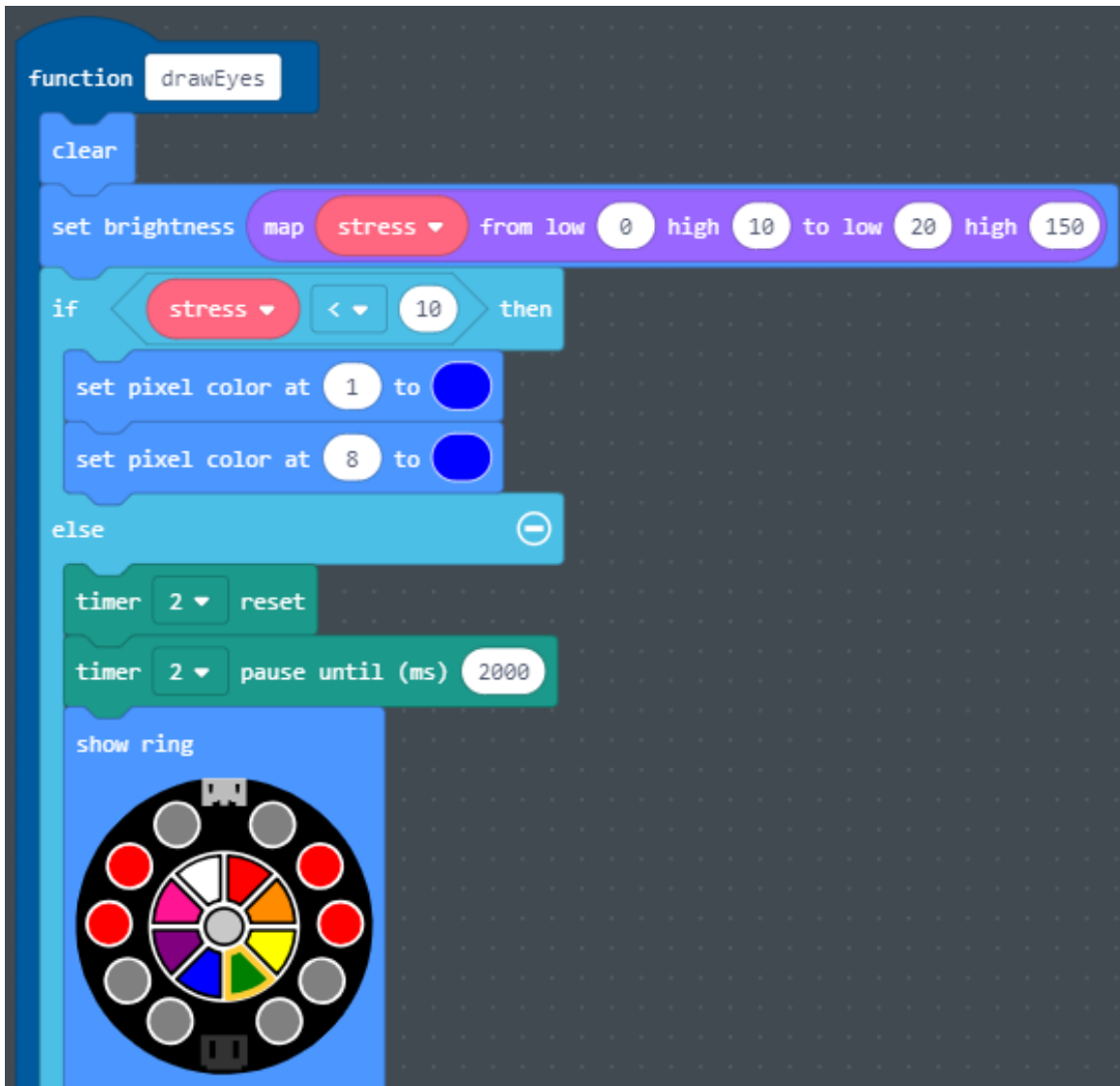
```
on start
  set i to 0
  timer 1 reset

forever
  if timer 1 millis >= 1200 then
    timer 1 reset
    if i = 0 then
      set i to 1
      set pixel color at 5 to red
      play tone at Low C for 1/8 beat
    else
      set i to 0
      set pixel color at 5 to grey
```

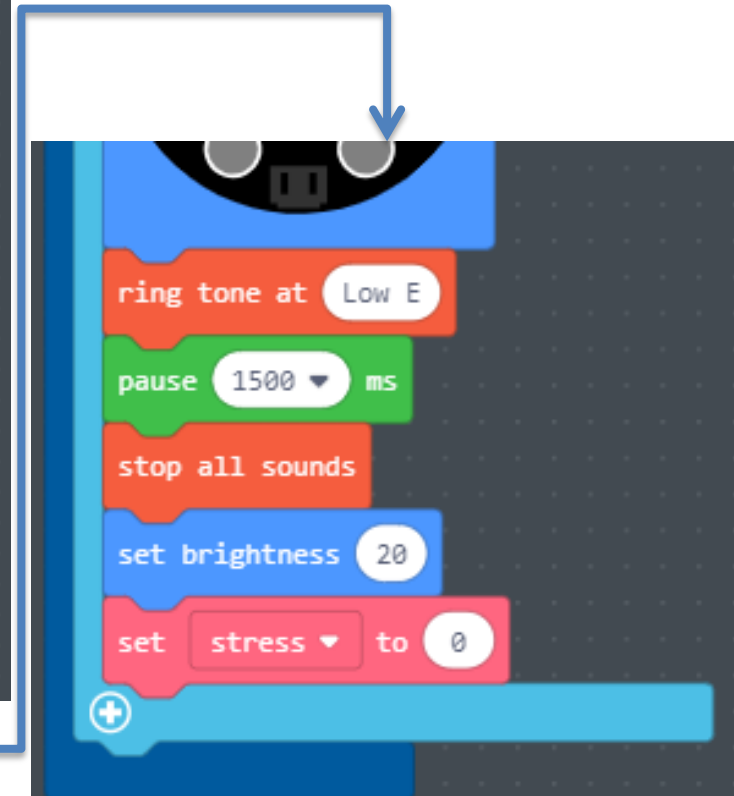


# 2- poke indtil gal (... 10 gange!)

```
function drawEyes
  clear
  set brightness map stress from low 0 high 10 to low 20 high 150
  if stress < 10 then
    set pixel color at 1 to blue
    set pixel color at 8 to blue
  else
    timer 2 reset
    timer 2 pause until (ms) 2000
    show ring
```

The image shows a Scratch code editor with a function named 'drawEyes'. The code starts with a 'clear' block, followed by a 'set brightness' block using a 'map' block with 'stress' as the variable and a range from 0 to 150. An 'if' block checks if 'stress' is less than 10. If true, it sets pixel colors at positions 1 and 8 to blue. If false, it resets a timer, pauses for 2000ms, and shows a ring. The ring visualizer is a circular dial with 12 segments in various colors (red, yellow, green, blue, purple, pink, white, grey) and two grey eyes at the top and bottom.

Fortsætter på anden side ...

The image shows a continuation of the Scratch code. It features a 'ring tone at' block set to 'Low E', followed by a 'pause' block for 1500ms, a 'stop all sounds' block, a 'set brightness' block set to 20, and a 'set stress' block set to 0. A blue arrow points from the top of the code block to the ring visualizer in the previous image, indicating a connection between the two parts of the code.

```
ring tone at Low E
pause 1500 ms
stop all sounds
set brightness 20
set stress to 0
```

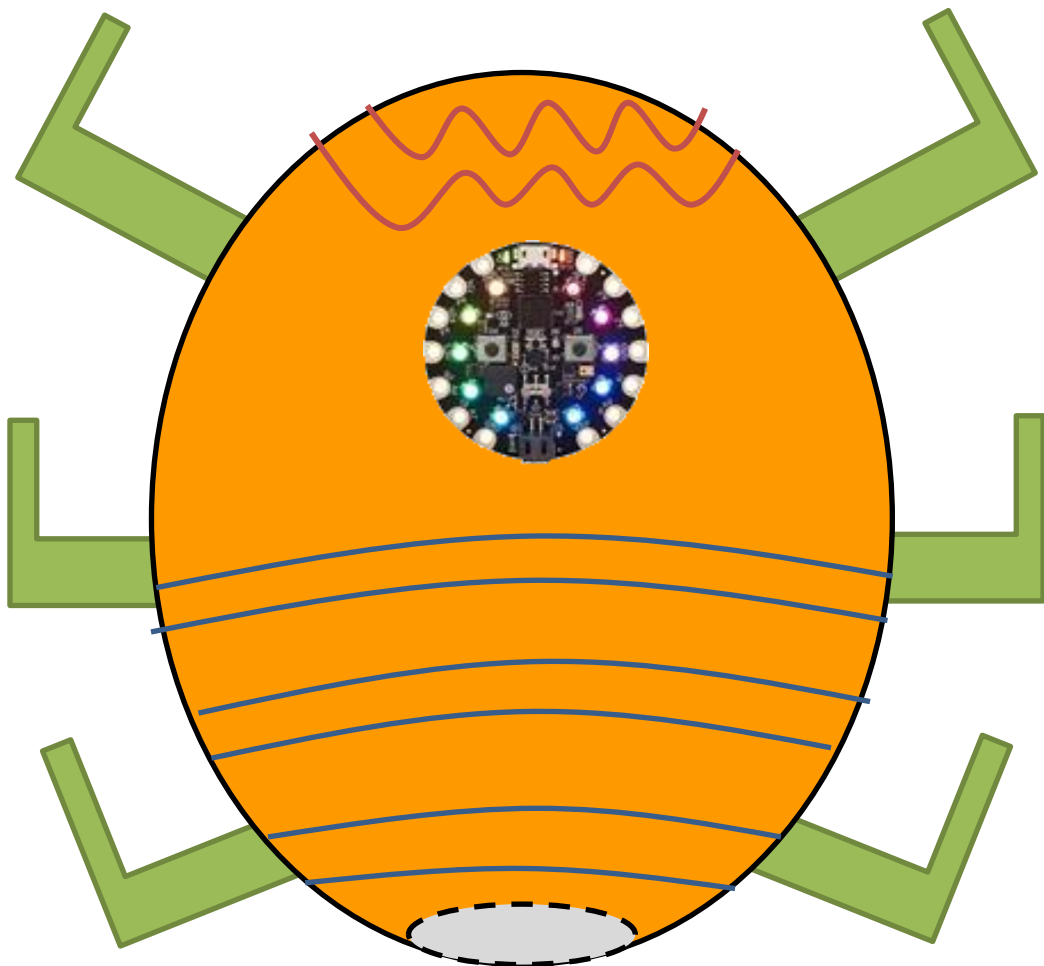
```
on start
  set brightness 20
  set stress to 0
  call function drawEyes
  timer 2 reset

on button A click
  change stress by 1
```

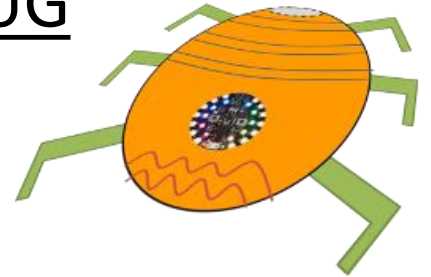
```
forever
  call function drawEyes
  if timer 2 millis ≥ 800 then
    timer 2 reset
    if stress ≥ 0 then
      change stress by -1
```

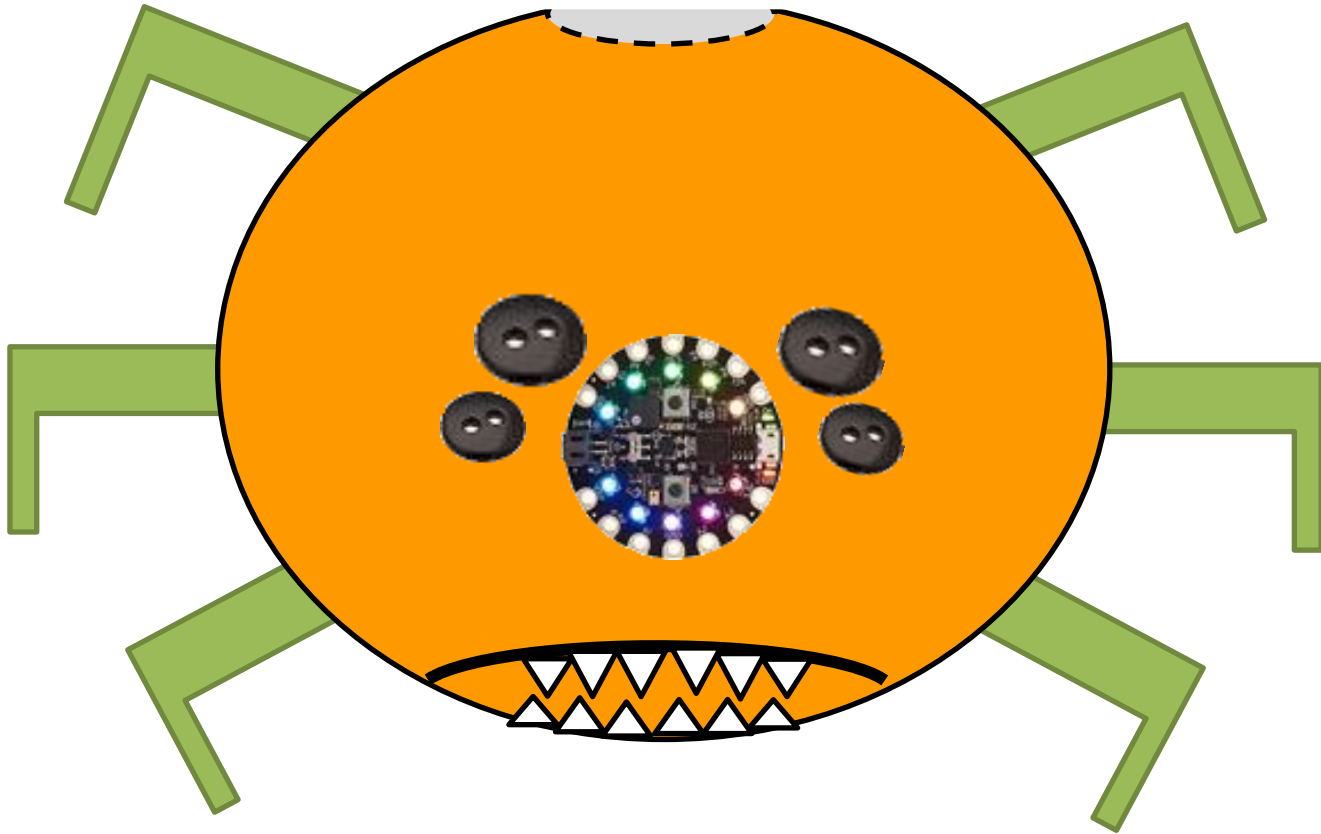
TAK!





BUG





Spider

Fish

