

# **SEWABLE CIRCUITS: MAKING A WEARABLE WEBTHING**

# ROADMAP

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Who Am I?  
Your Toolkit  
MicroBlocks  
Mozilla WebThings  
Sewing Time

**WHO  
AM I?**

# HI, I'M ELGIN-SKYE

MOZILLA HUBS

Community & Events Manager

SIMON FRASER UNIVERSITY

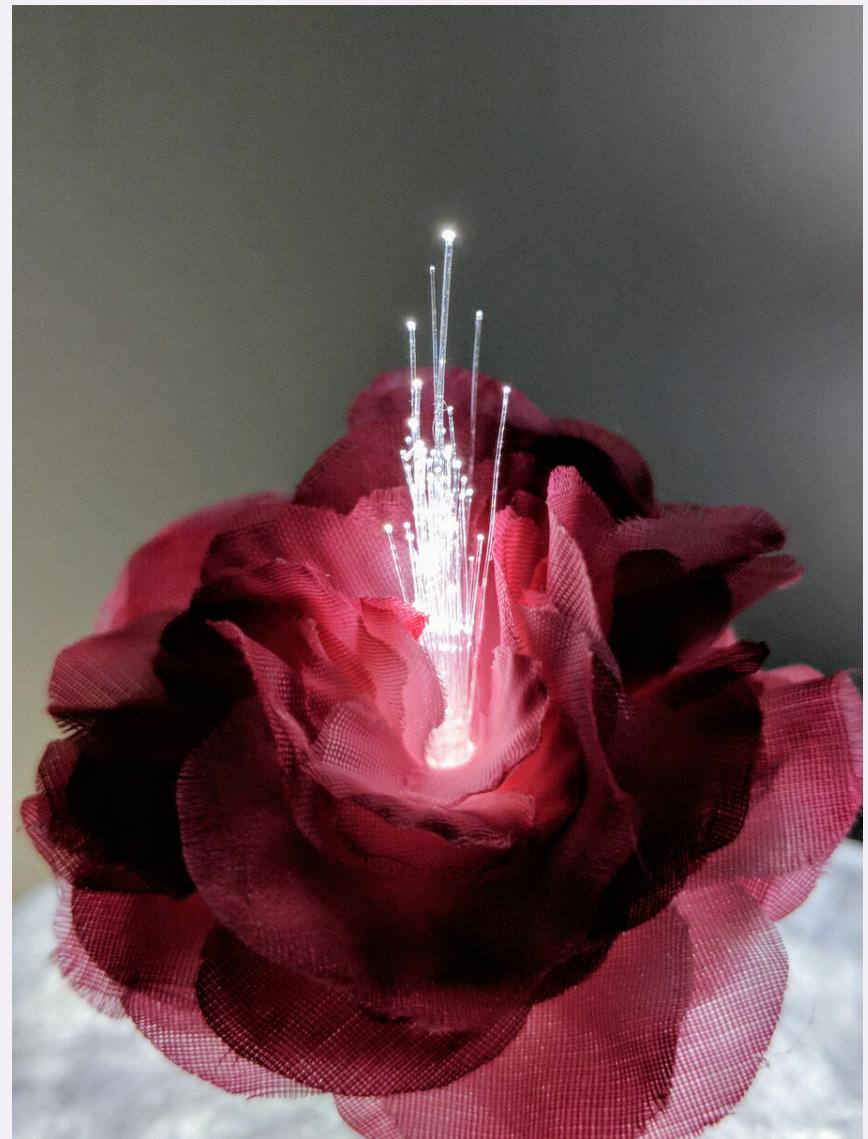
MSc Interactive Arts + Technology

MOZILLA TECH SPEAKER



# I LIKE TO MAKE STUFF

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# WEARABLE TECH

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Photo - Lumen Couture

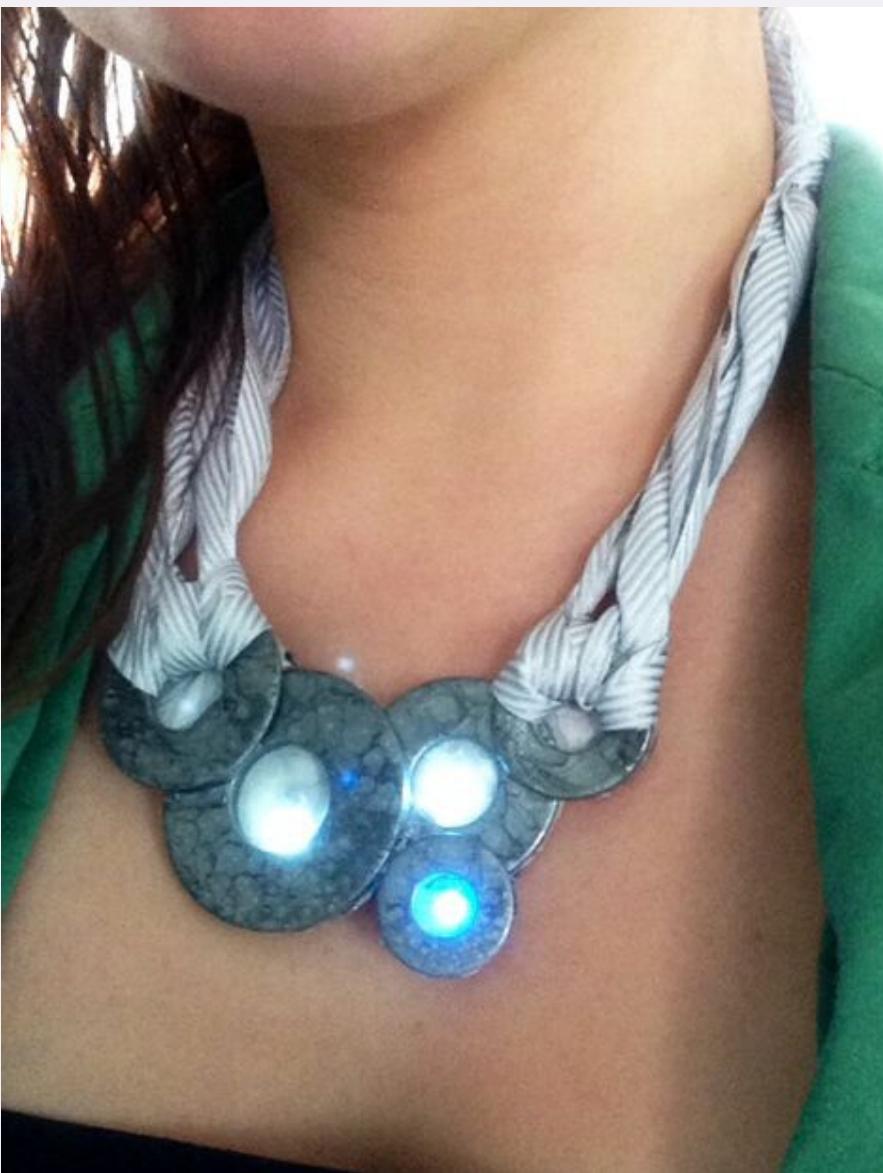


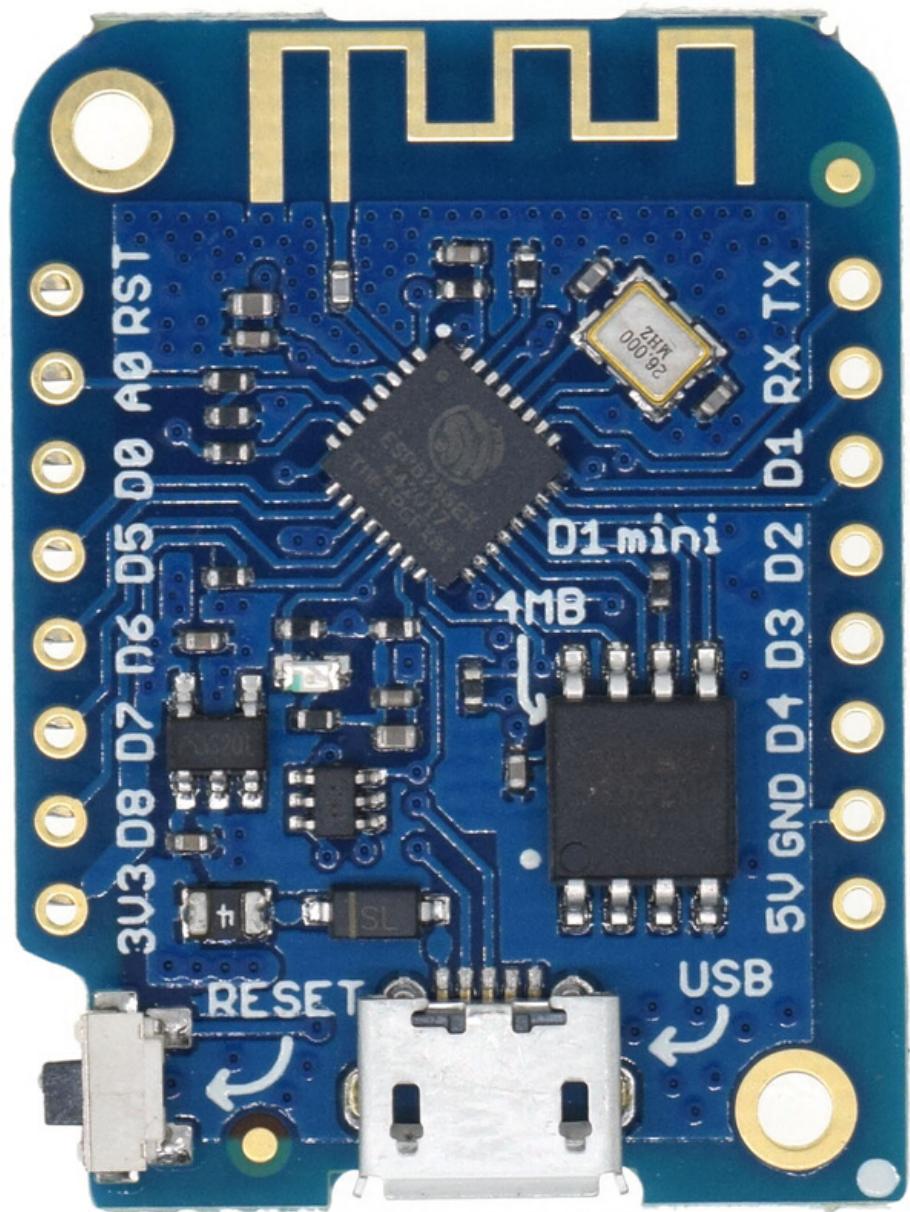
Photo - Instructables



Photo - Make Fashion

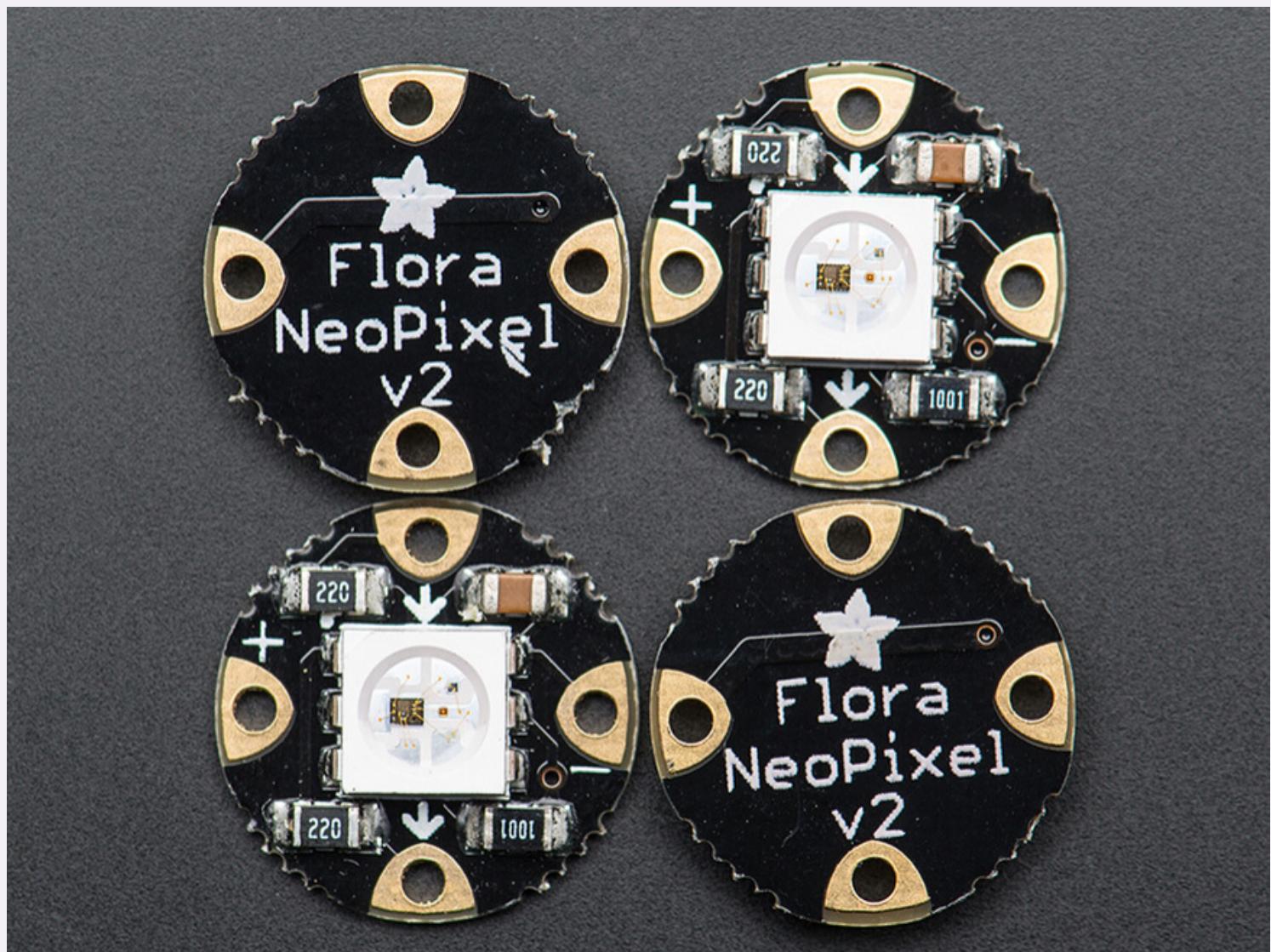
# YOUR TOOLKIT

# WEMOS



- ESP8266
- Wifi Enabled
- Tiny
- Cheap!

# NEOPIXEL



- RGB
- Sewable

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# FELT



# CONDUCTIVE THREAD



# BORING OLD THREAD



# BORING OLD THREAD



# NEEDLES



(Watch out!)



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# USB CABLE

Psst.... if you have your own,  
I'd love to use the extras for a  
future workshop!

# MICROBLOCKS



# MICROBLOCKS

<http://microblocks.fun/>

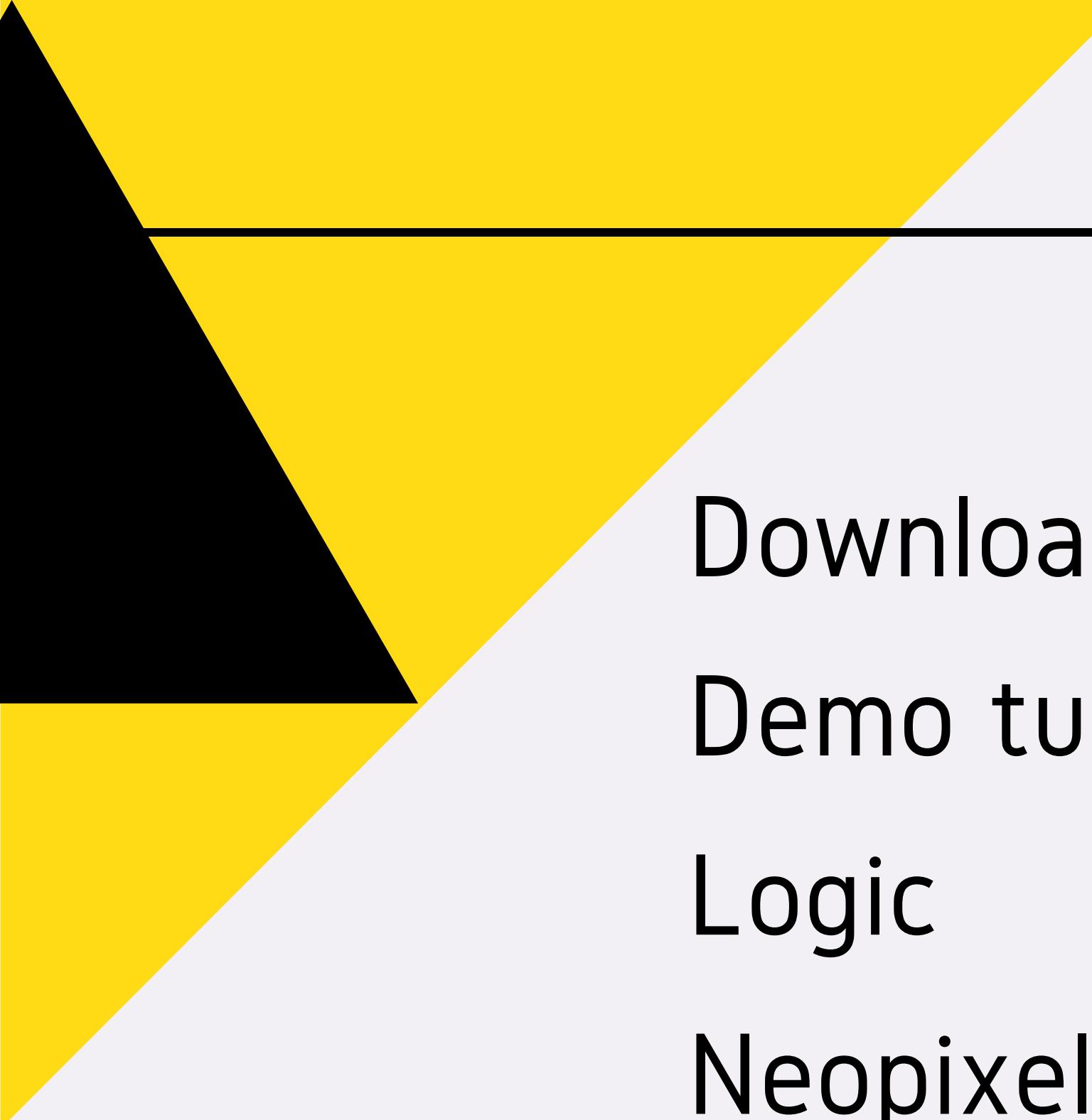


# MICROBLOCKS

Visual Programming Language

Easy to set up

Interfaces with WebThings Gateway



# MICROBLOCKS

Download

Demo turn on/off LED

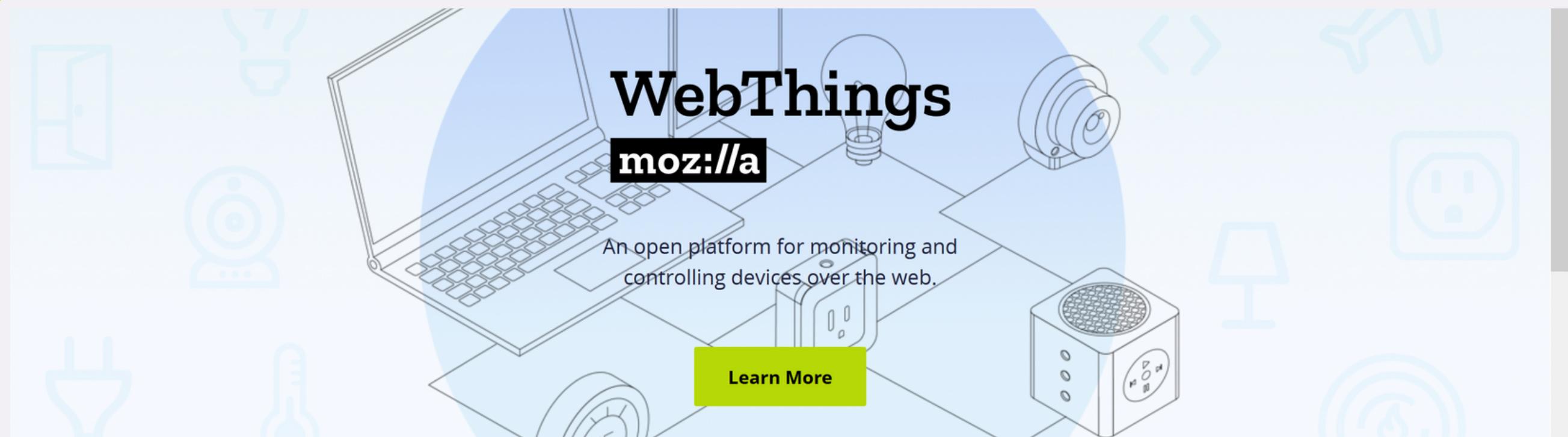
Logic

Neopixel Library

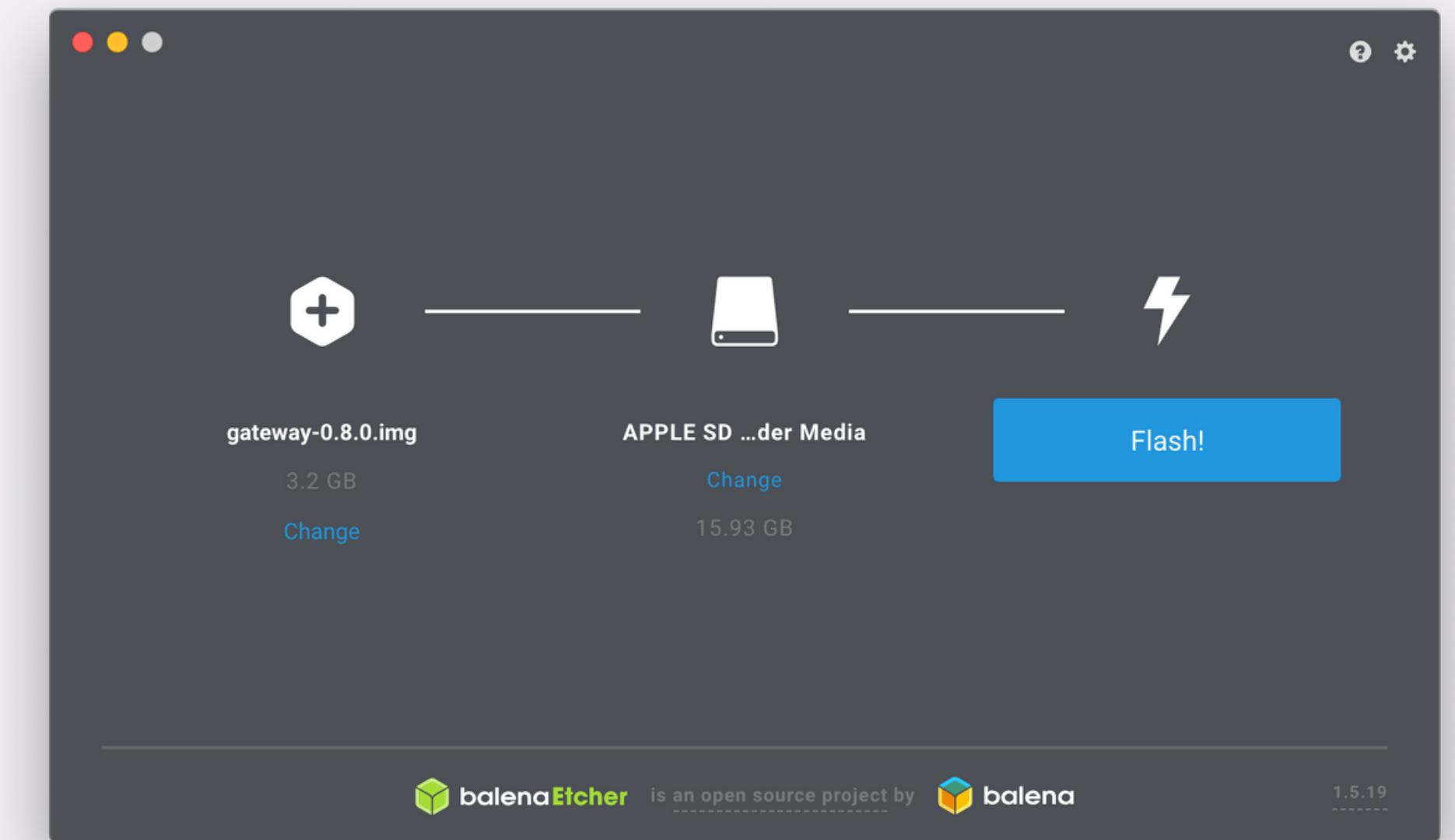
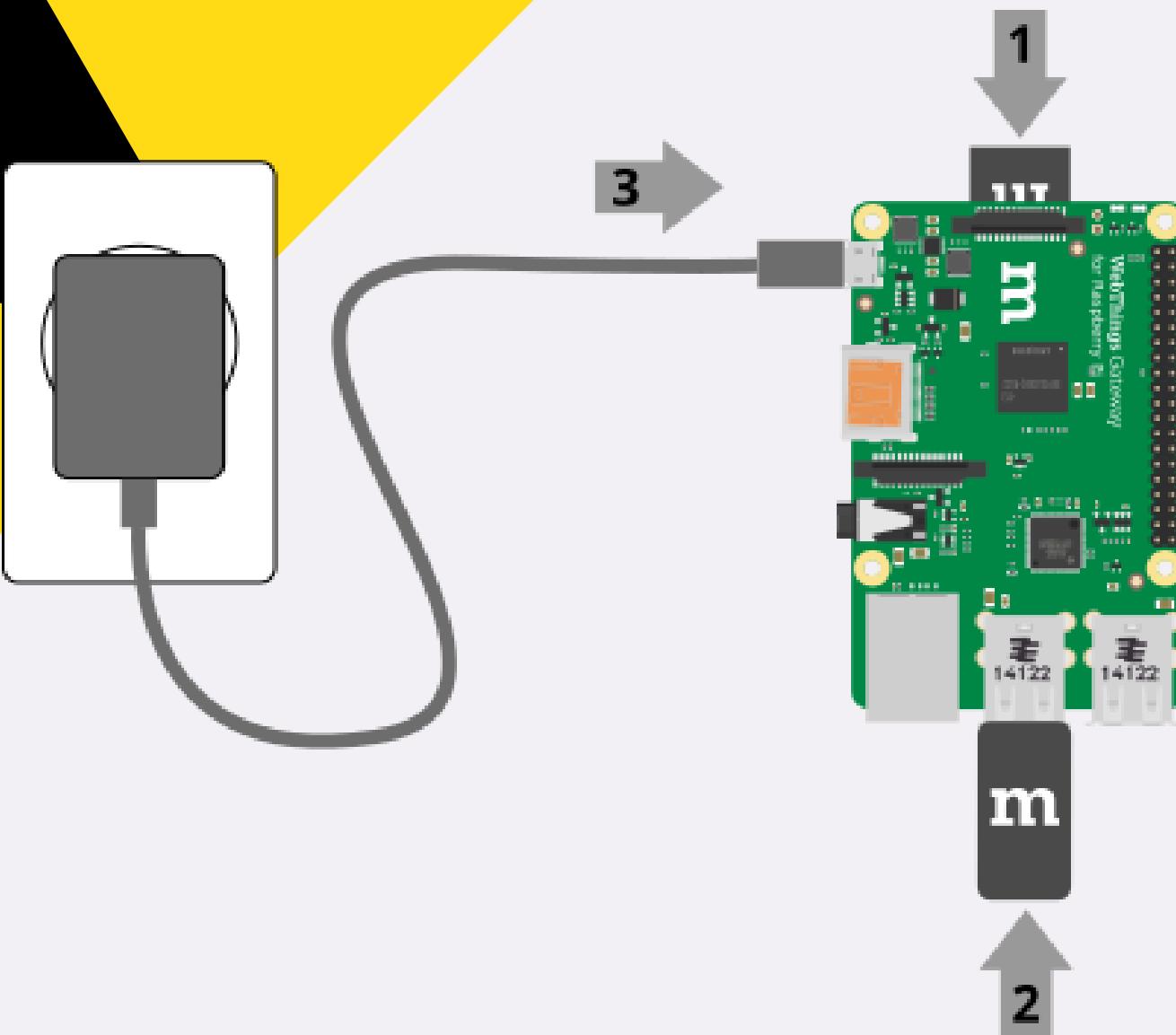
Webhings Library

# MOZILLA WEBTHINGS

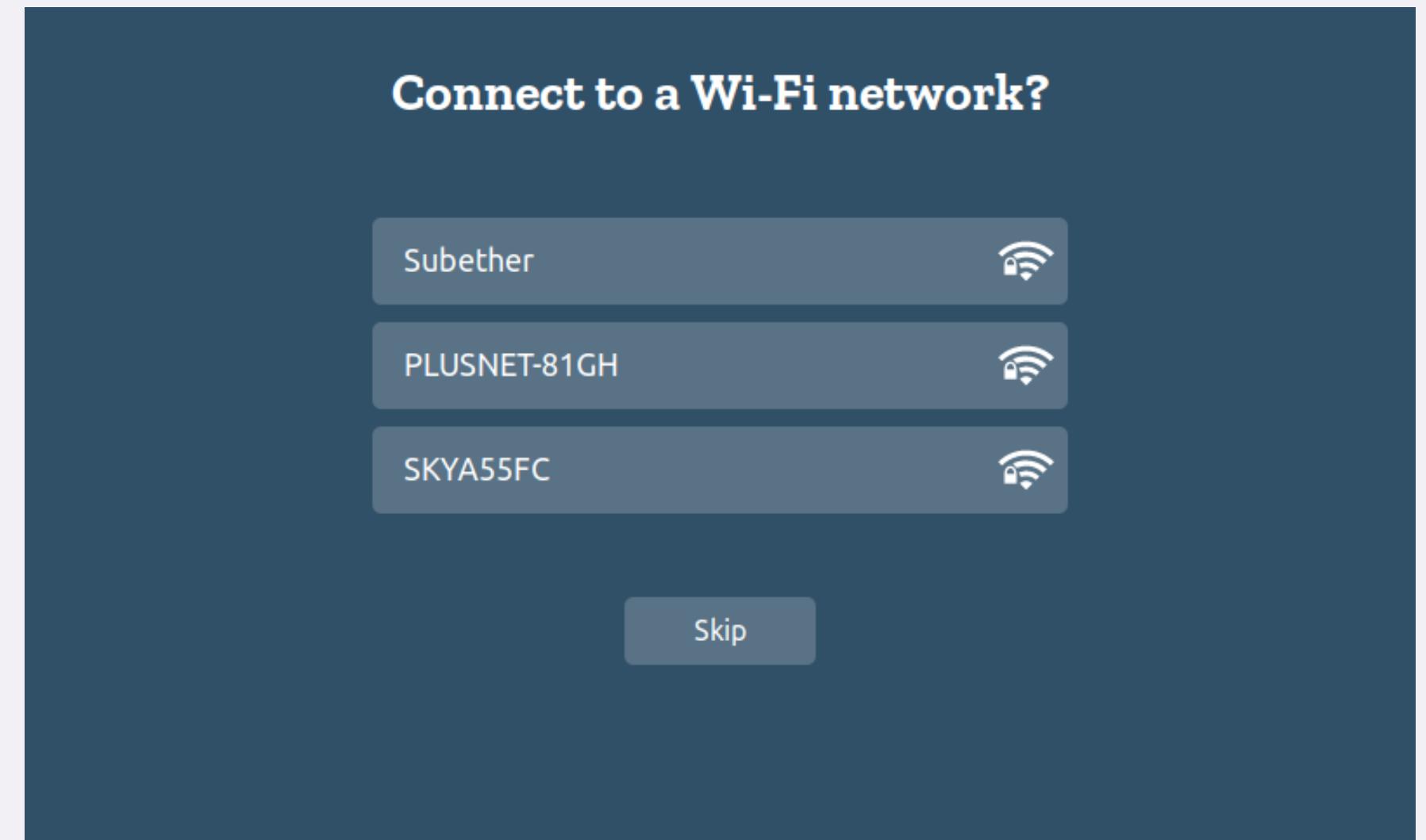
# WEBTHINGS



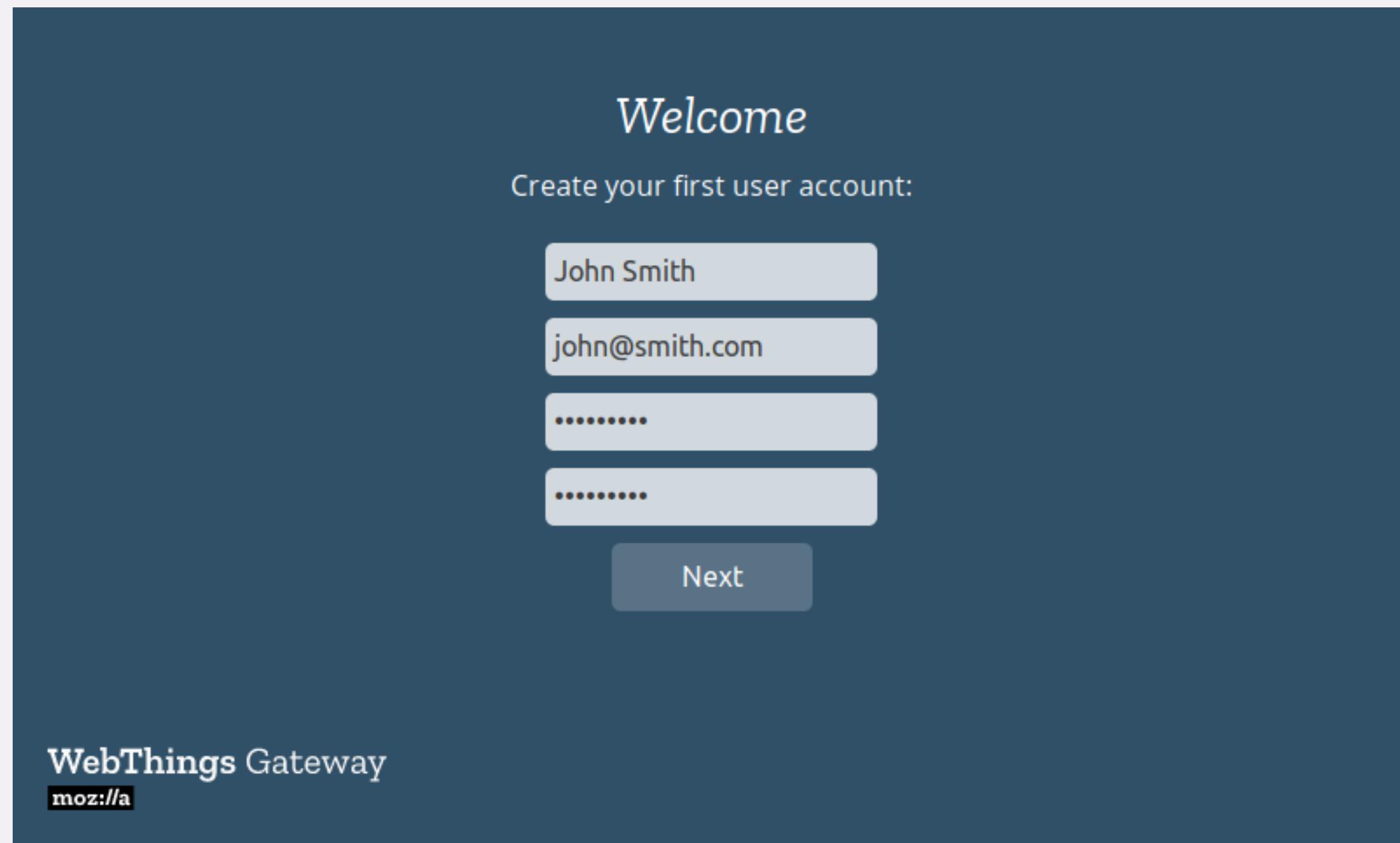
# WEBTHINGS



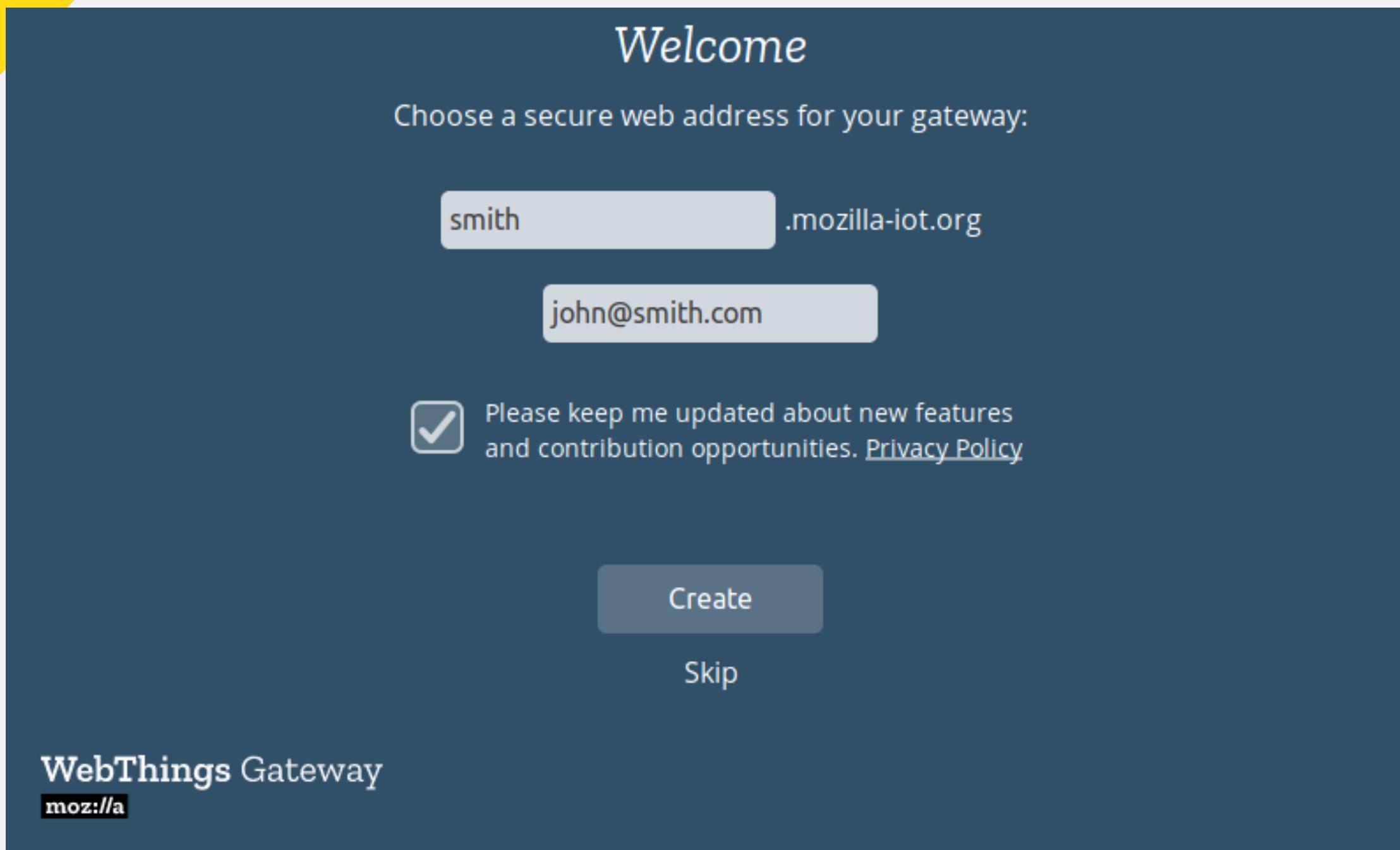
# WEBTHINGS



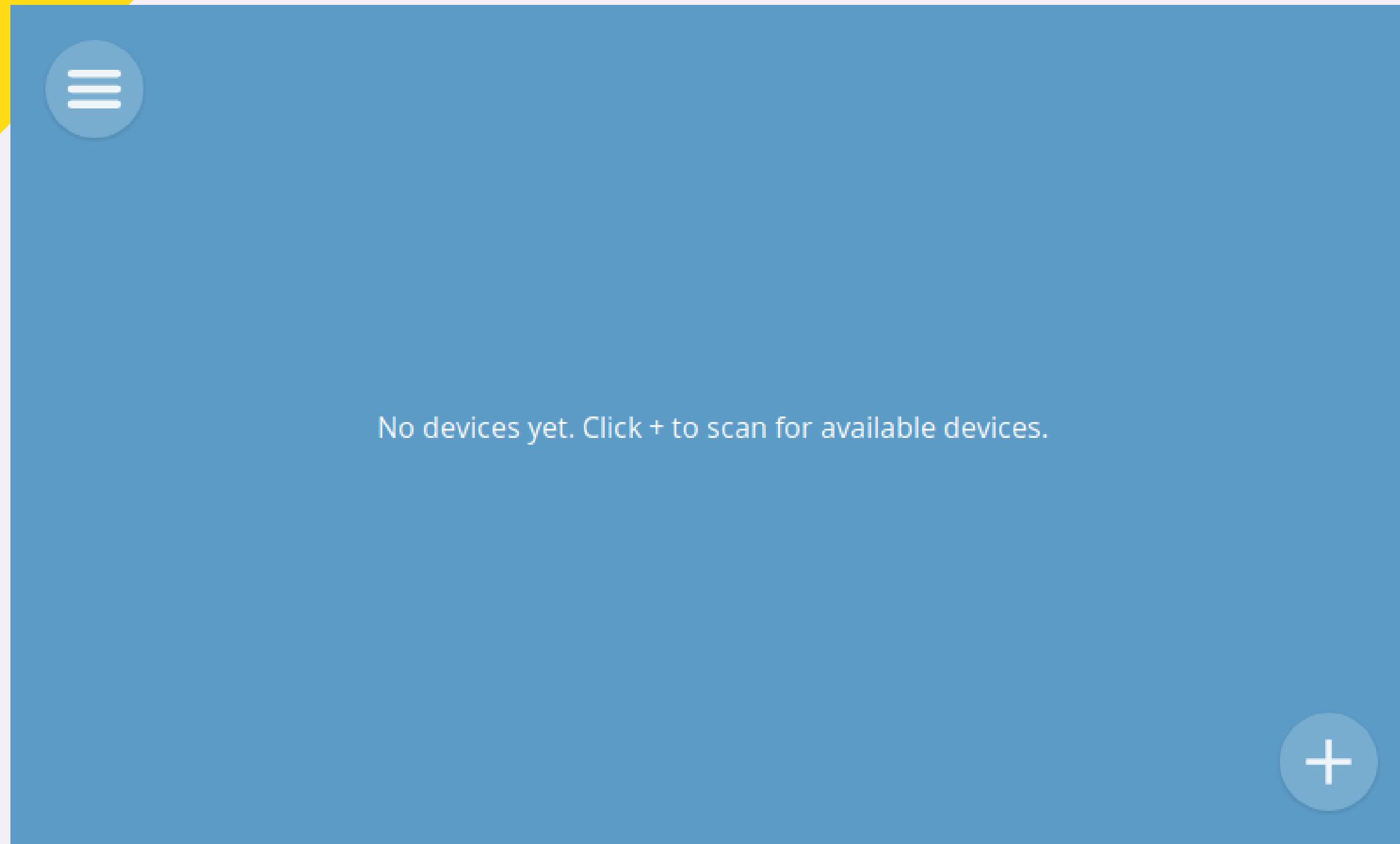
# WEBTHINGS



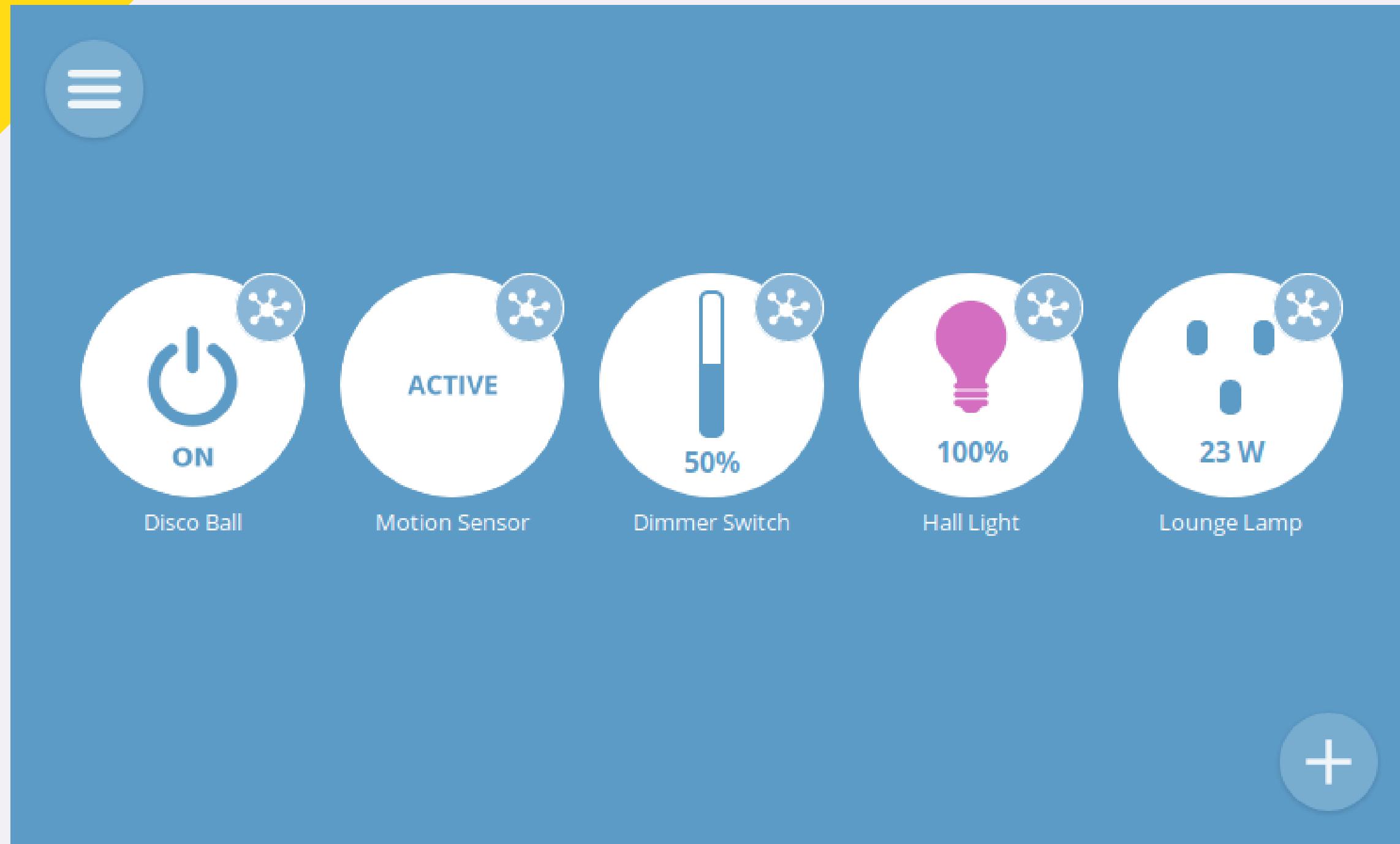
# WEBTHINGS



# WEBTHINGS

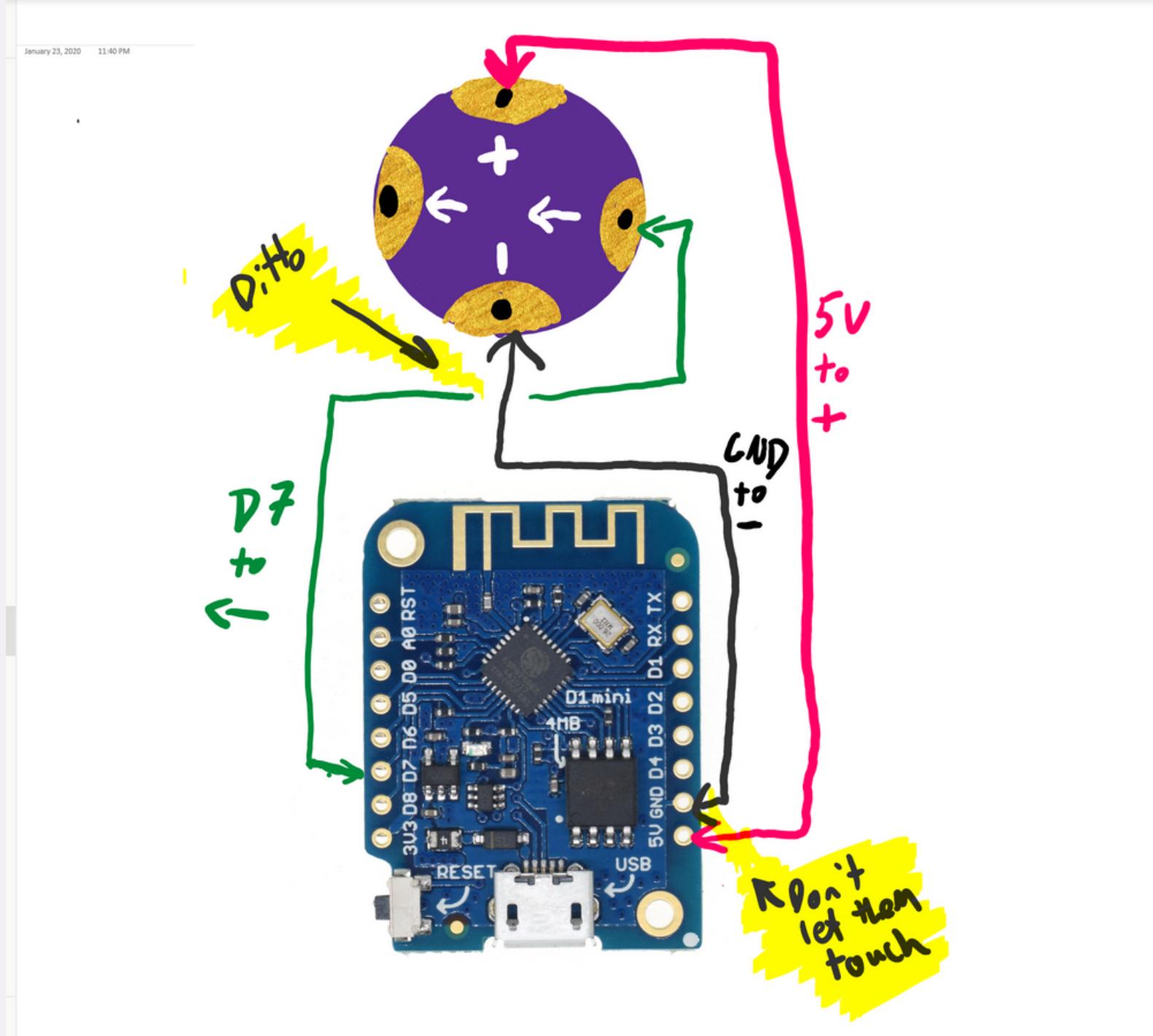


# WEBTHINGS



# SEWING TIME

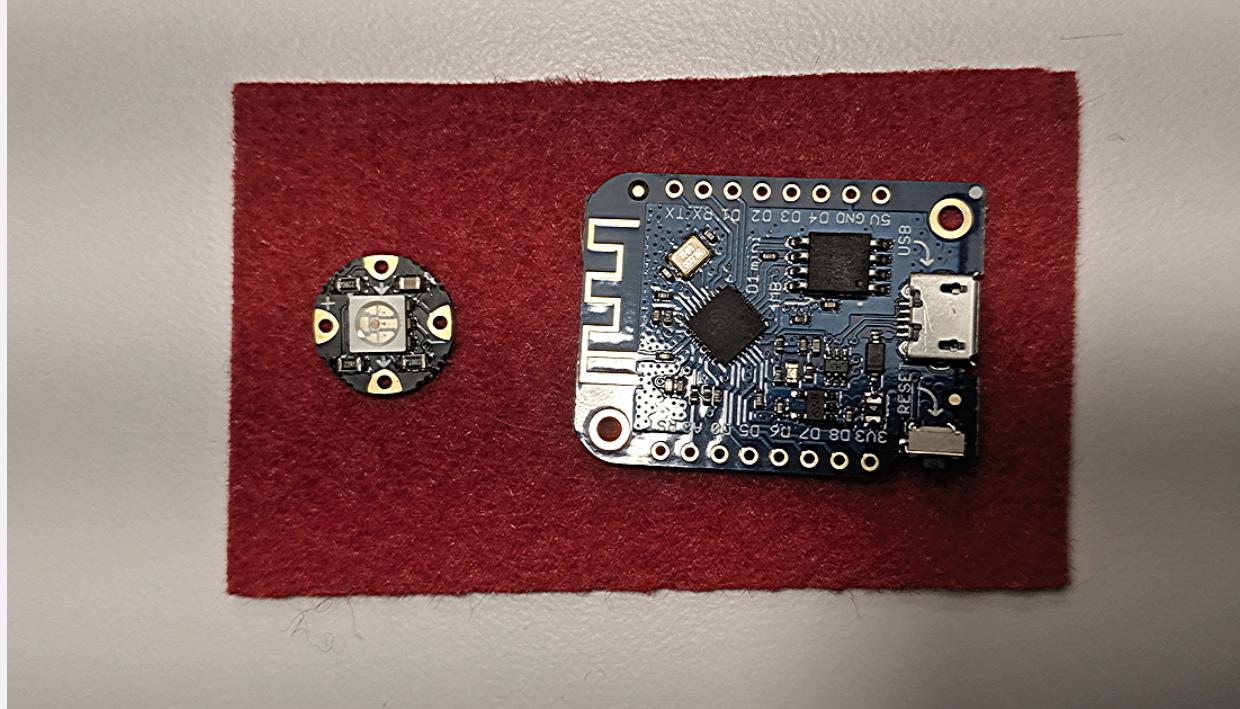
# SEWING



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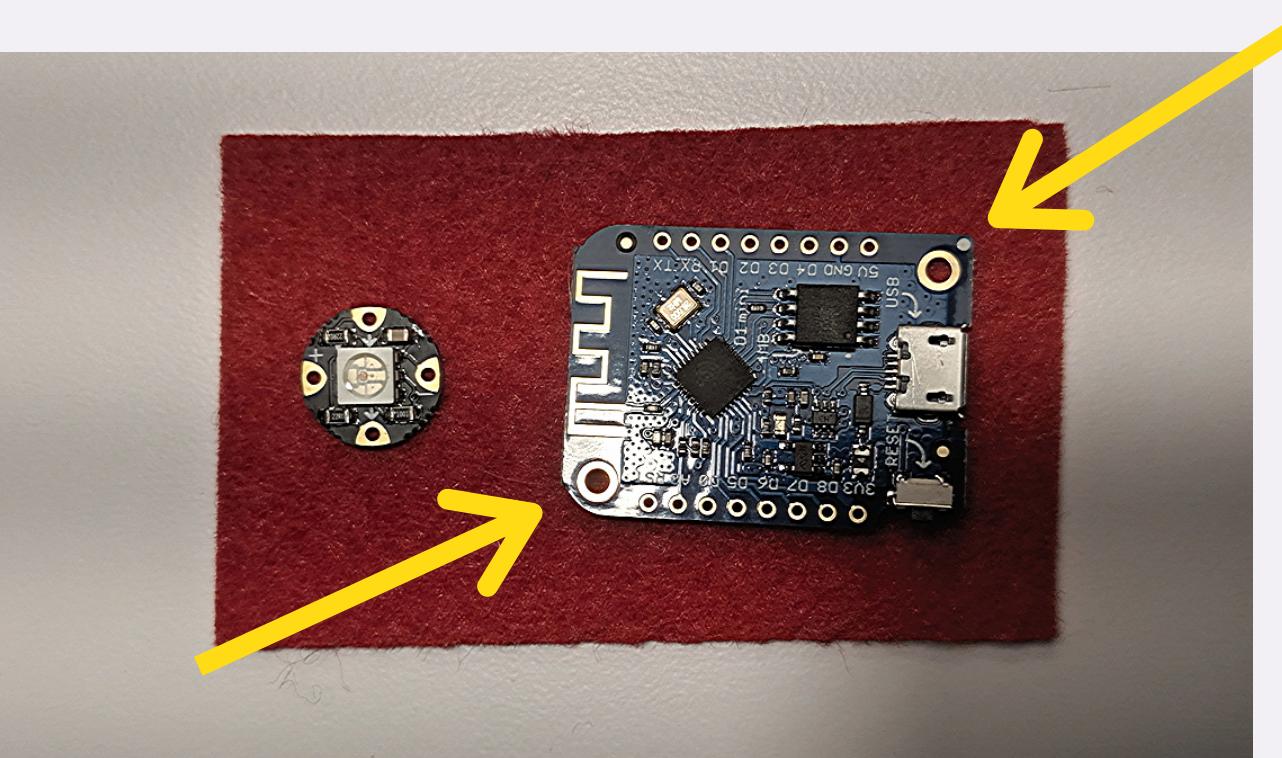
# SEWING

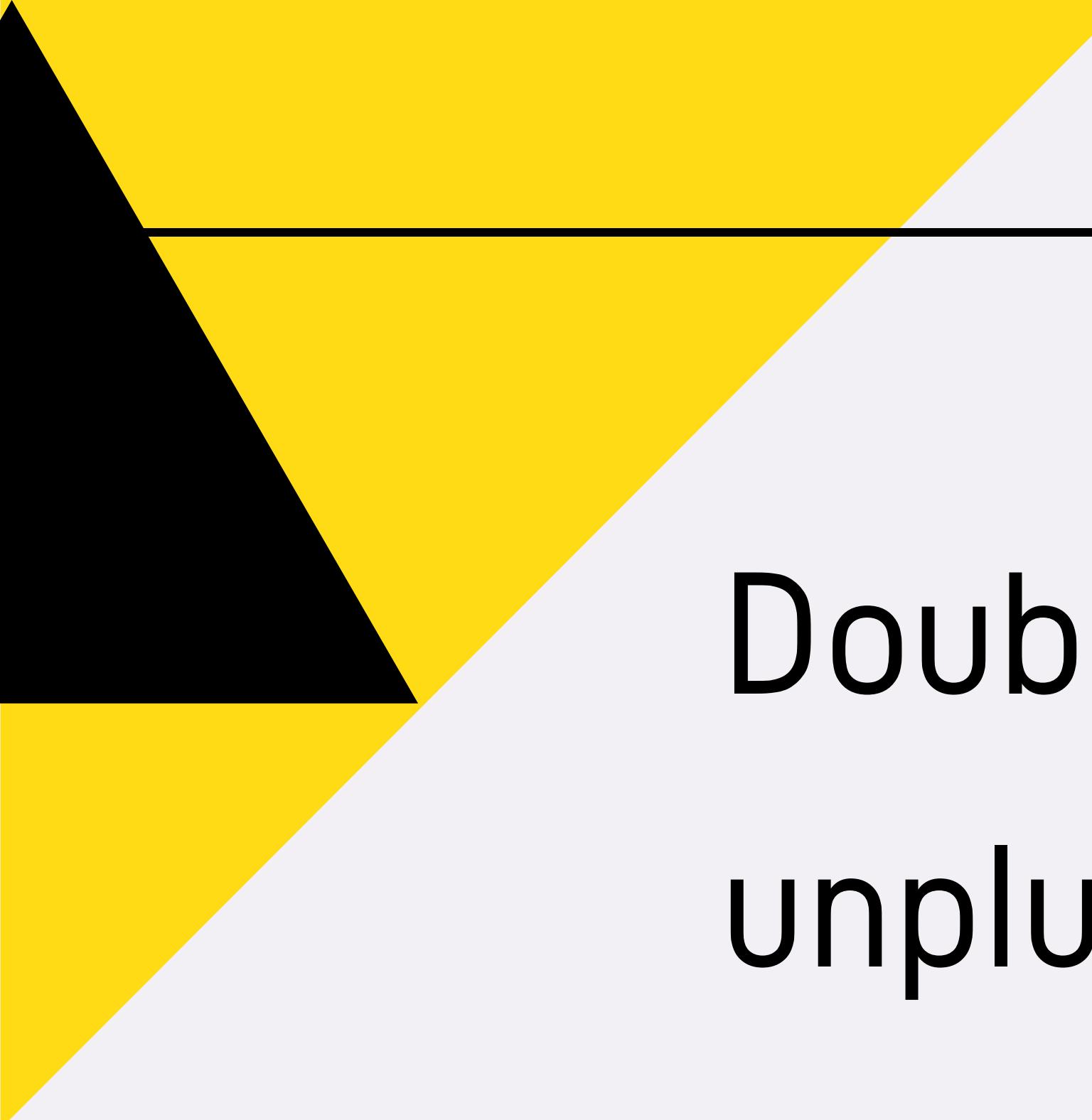
# Start by cutting out Felt



# SEWING

Next, secure with boring  
old thread in the corners





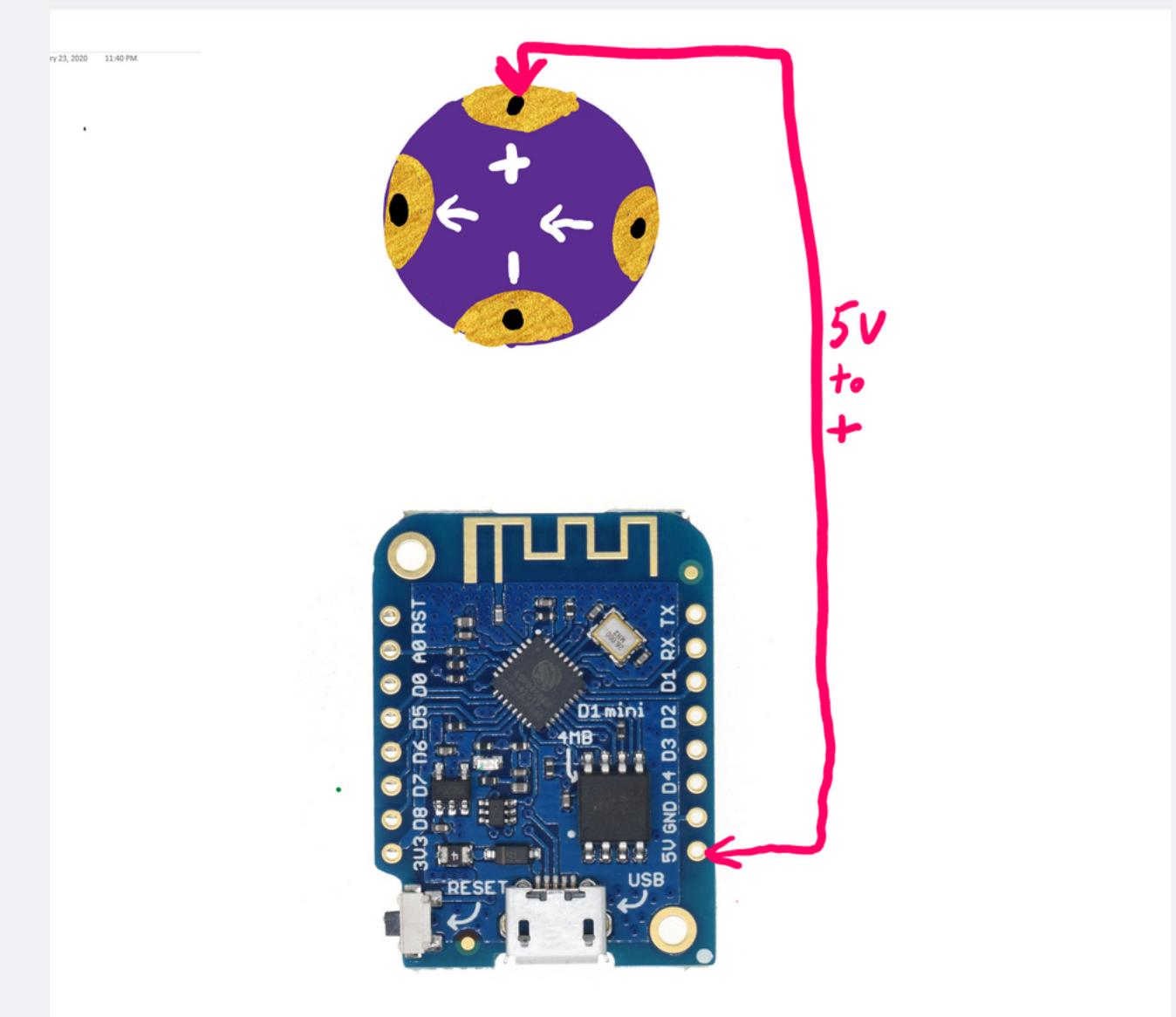
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# **SEWING**

Double check - are you  
unplugged?

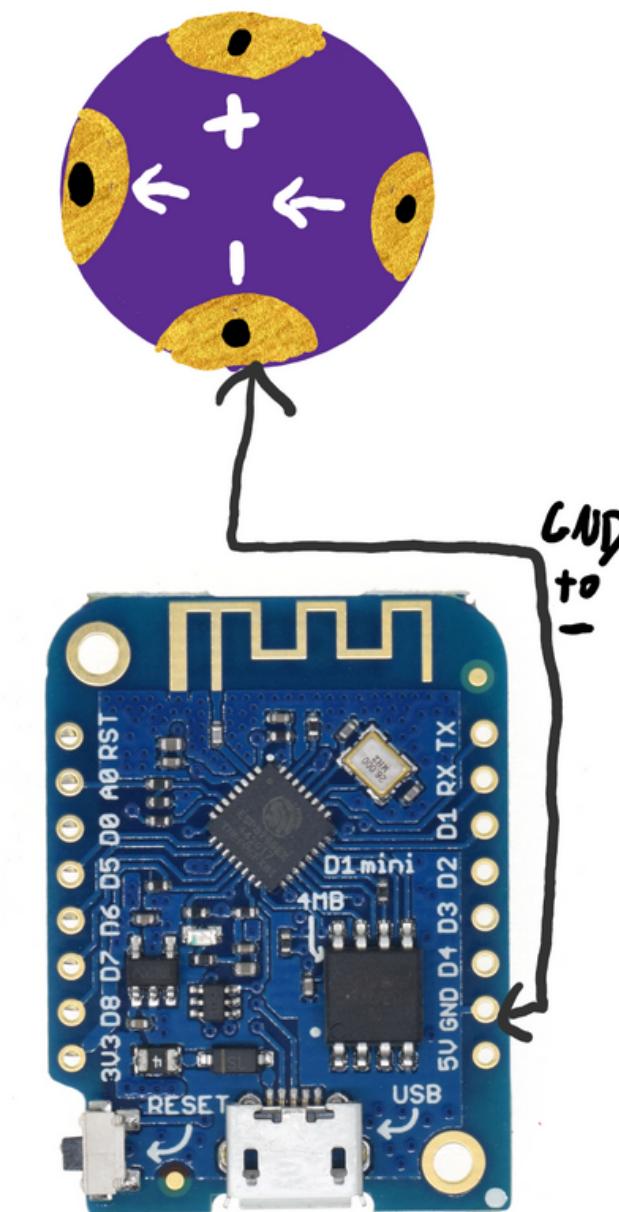
# SEWING

Connect where it  
says 5V to the +  
sign on the  
NeoPixel



# SEWING

Connect where it  
says GND to the  
- sign on the  
NeoPixel





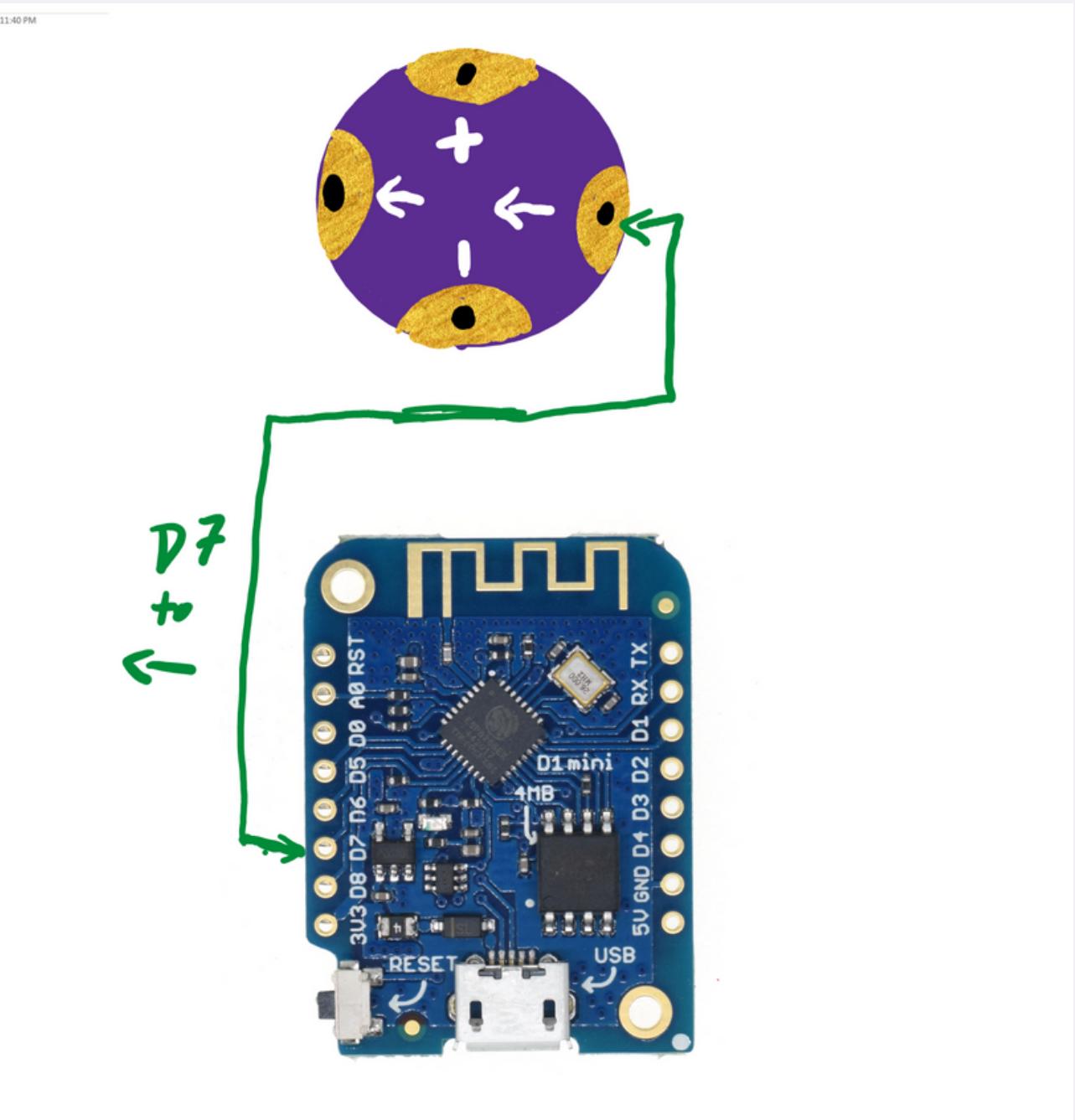
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# **SEWING**

Do not let these touch

# SEWING

Connect pin 13  
(AKA D7) to the  
arrow pointing  
towards the LED



A large yellow triangle is positioned in the top-left corner of the slide, extending from the top edge down to about two-thirds of the way down the page.

# SEWING

Use hot glue to secure the  
ends

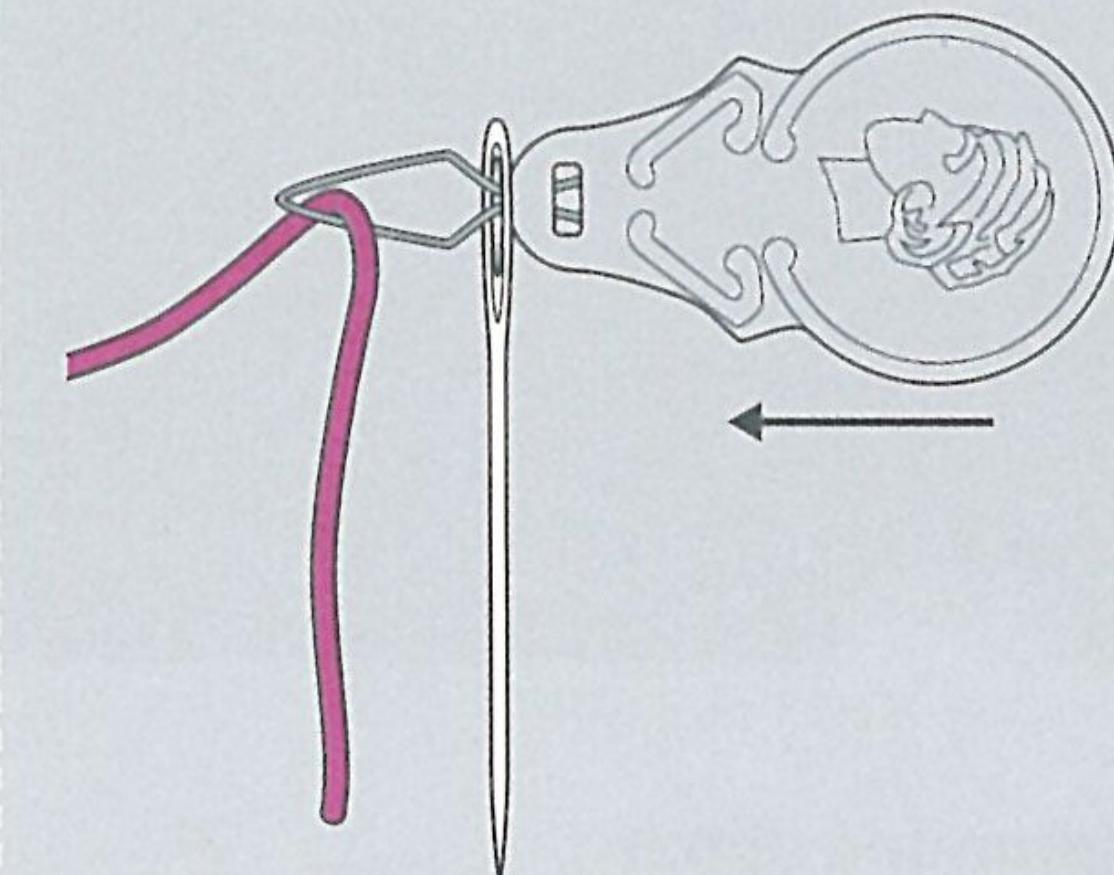
# SEWING

Add another  
layer of felt,  
and add a  
backing

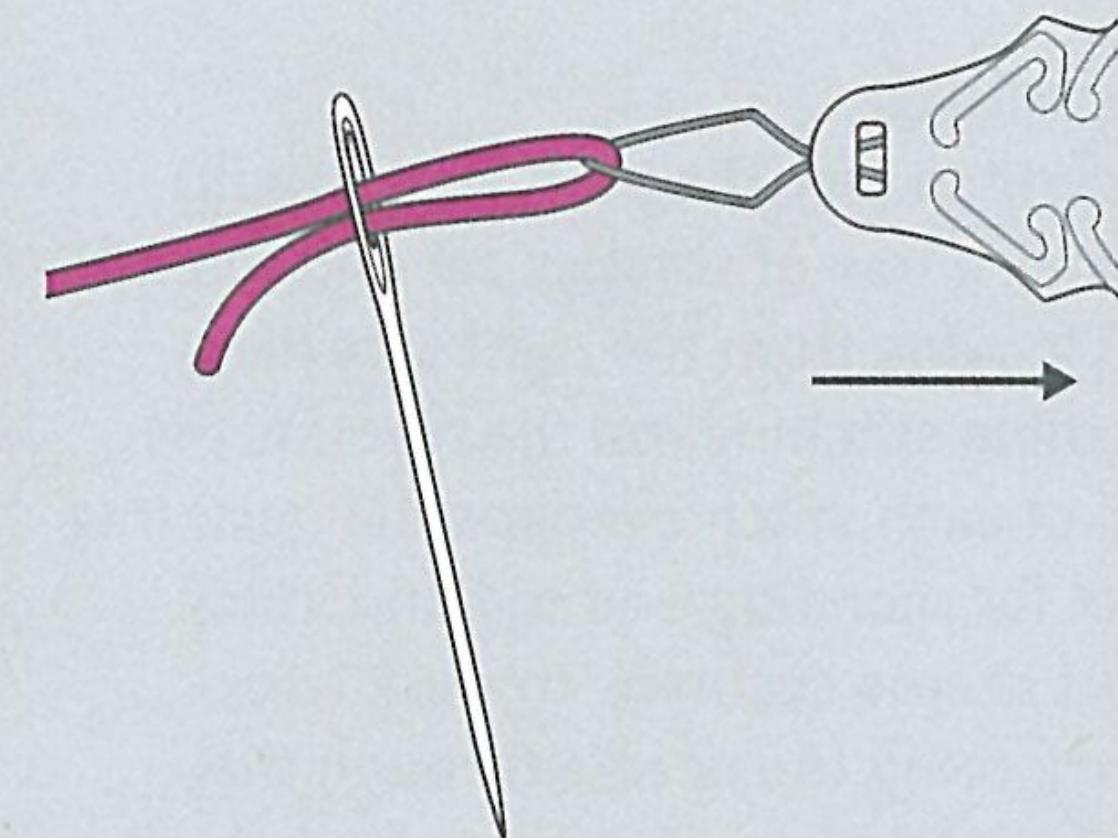


# SEWING

## USING A NEEDLE THREADER



Push the wire through the eye of the needle; then insert the thread through the wire.



Pull the wire back out of the needle, drawing the thread through the eye.



# SEWING

<https://www.youtube.com/watch?v=PowkA9Bojlo>

# THANK YOU!

STAY IN TOUCH

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[@elginskye](https://twitter.com/elginskye)