

NEW TEXTILES

no phone, laptop, tablet use in class

email list
weekly lab hours
class schedule
kits

$$V=IR$$

SENSORS

ELECTRONICS = SYNESTHESIA

sensors = input
(sound, light, touch, movement)



actuators = output
(sound, light, touch, movement)

electronic sensors detect changes in:

voltage

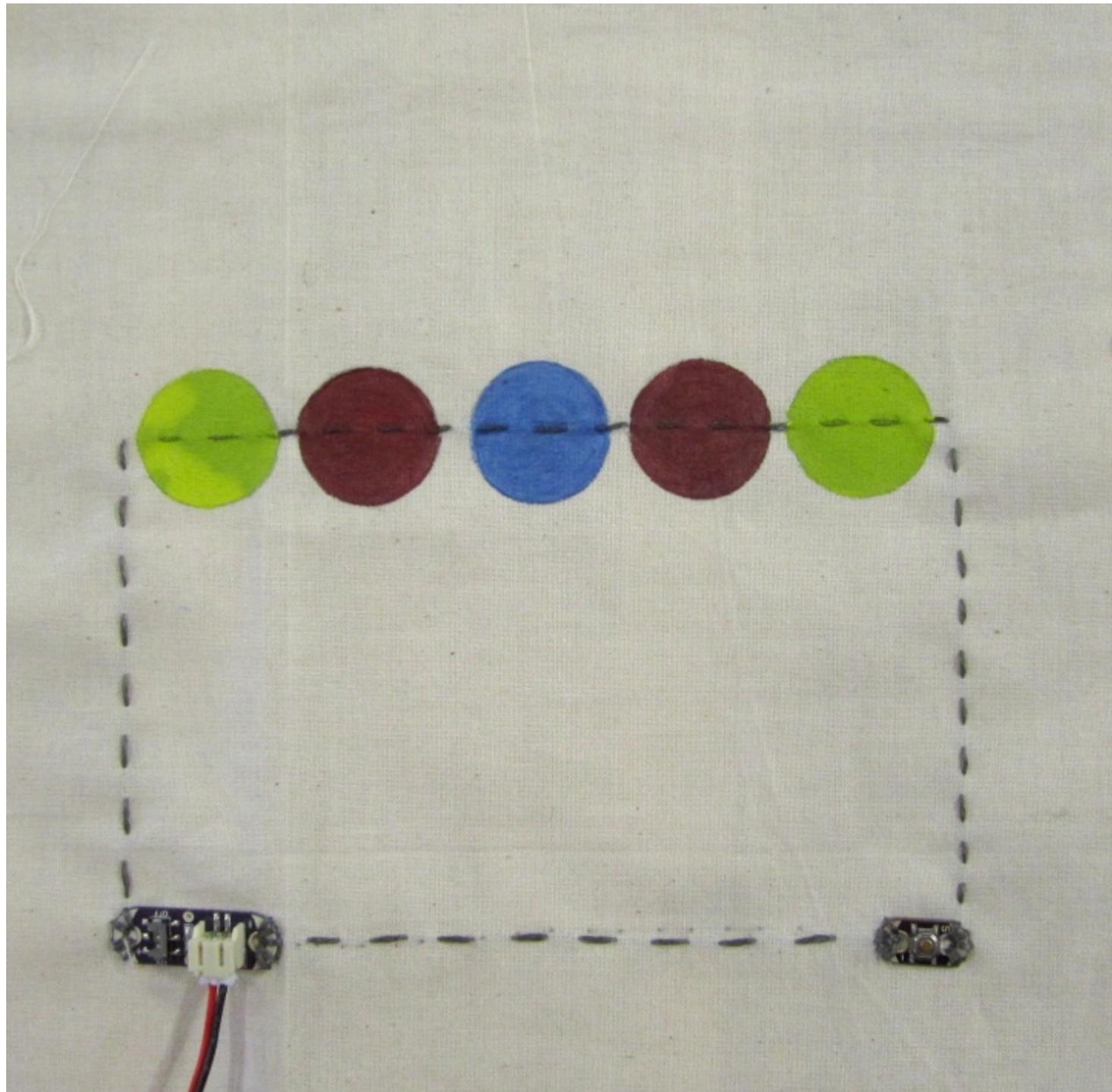
current

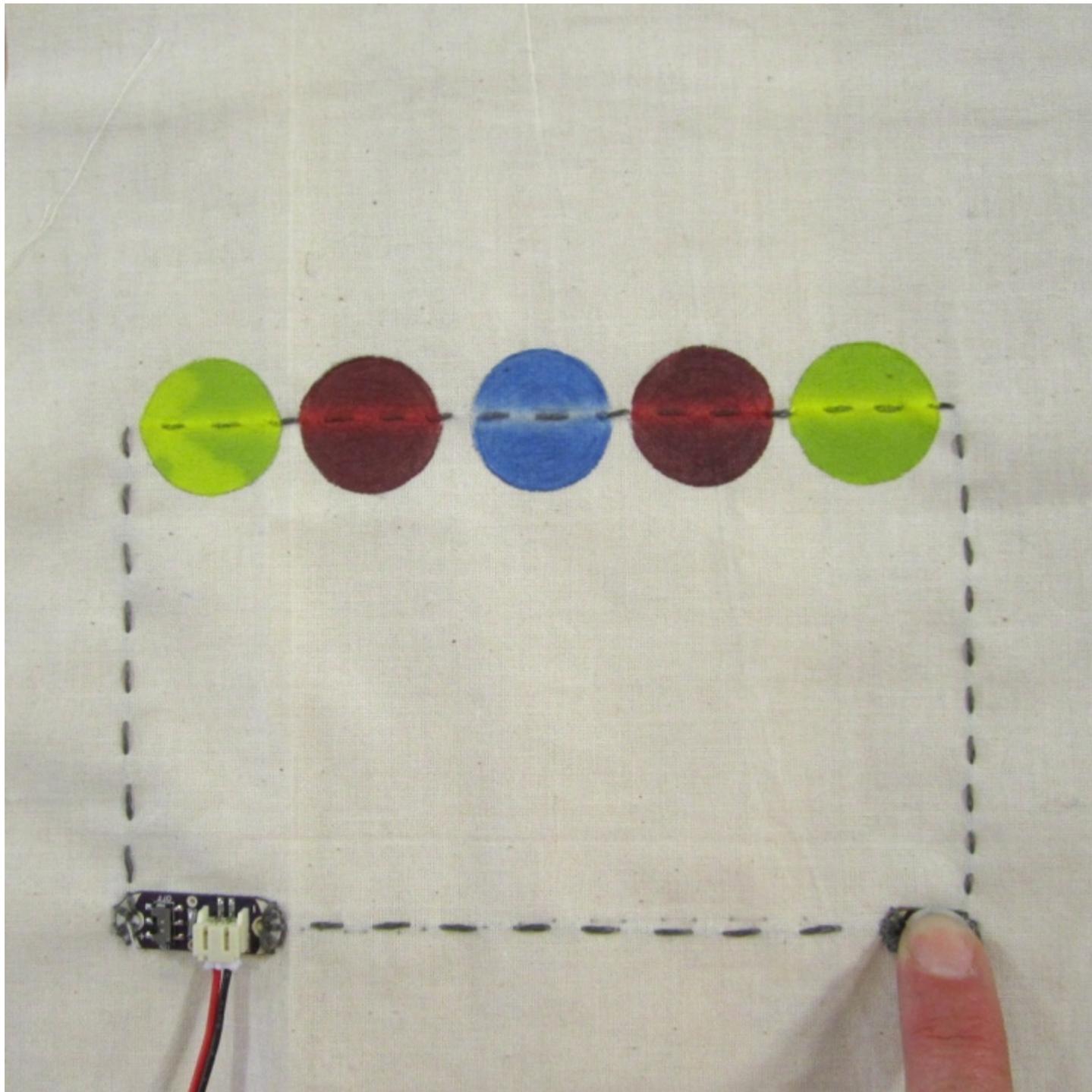
resistance

RESISTIVE SENSORS

sensing change in resistance

SWITCHES



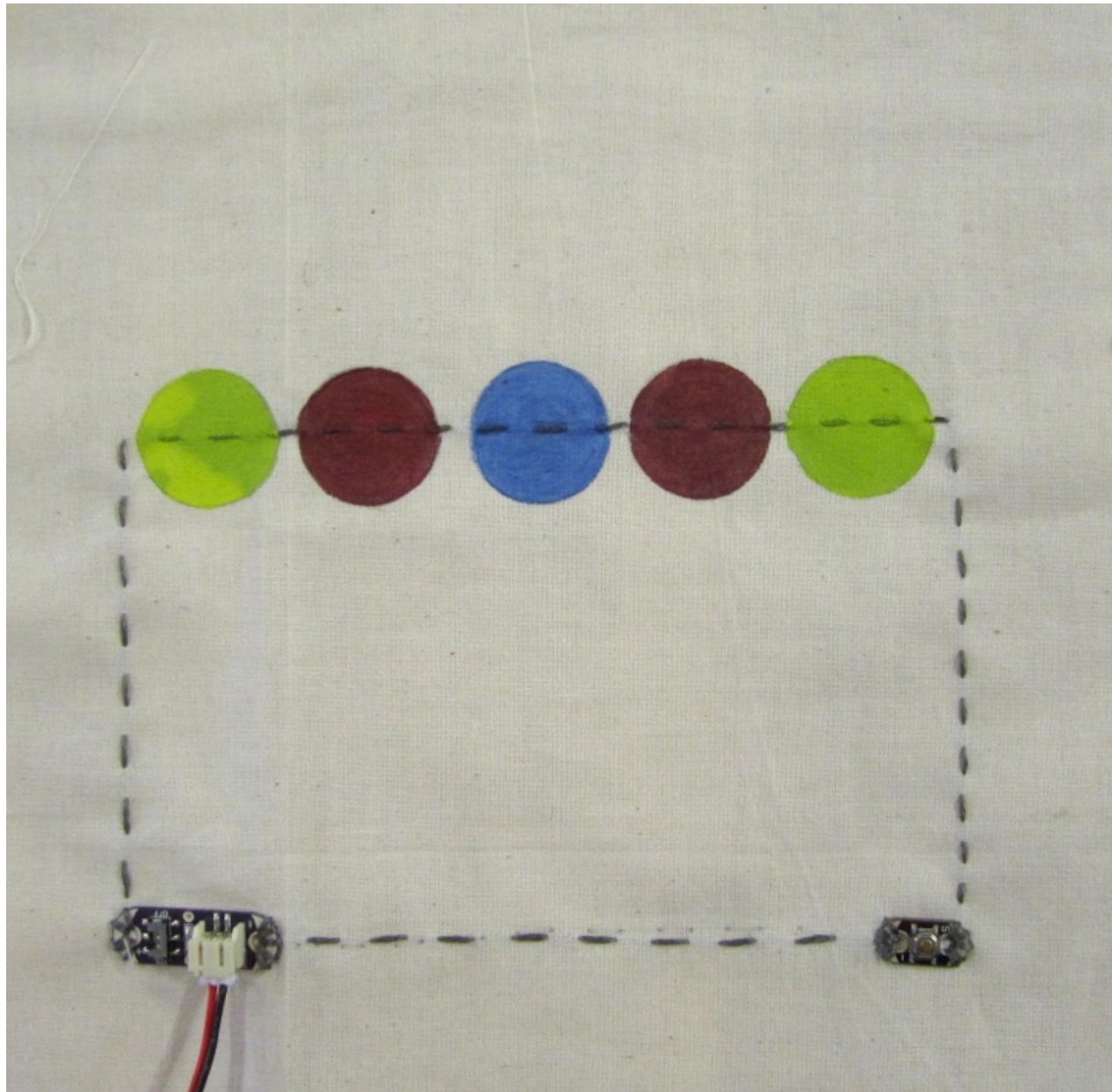


digital

off/on

$R=\infty/R=0$

SENSORS



analog

$$R = \infty \rightarrow R = 0$$

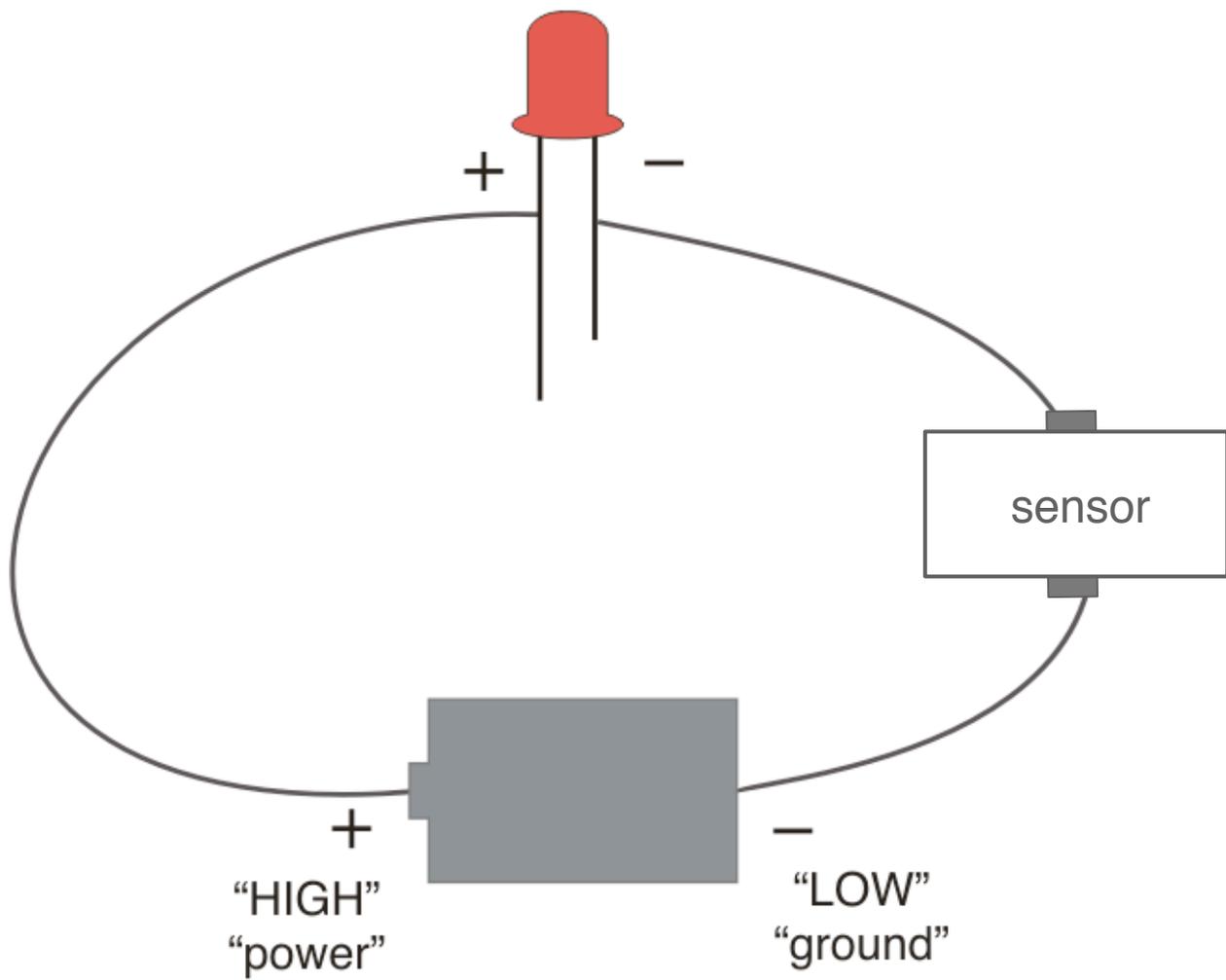
a physical example

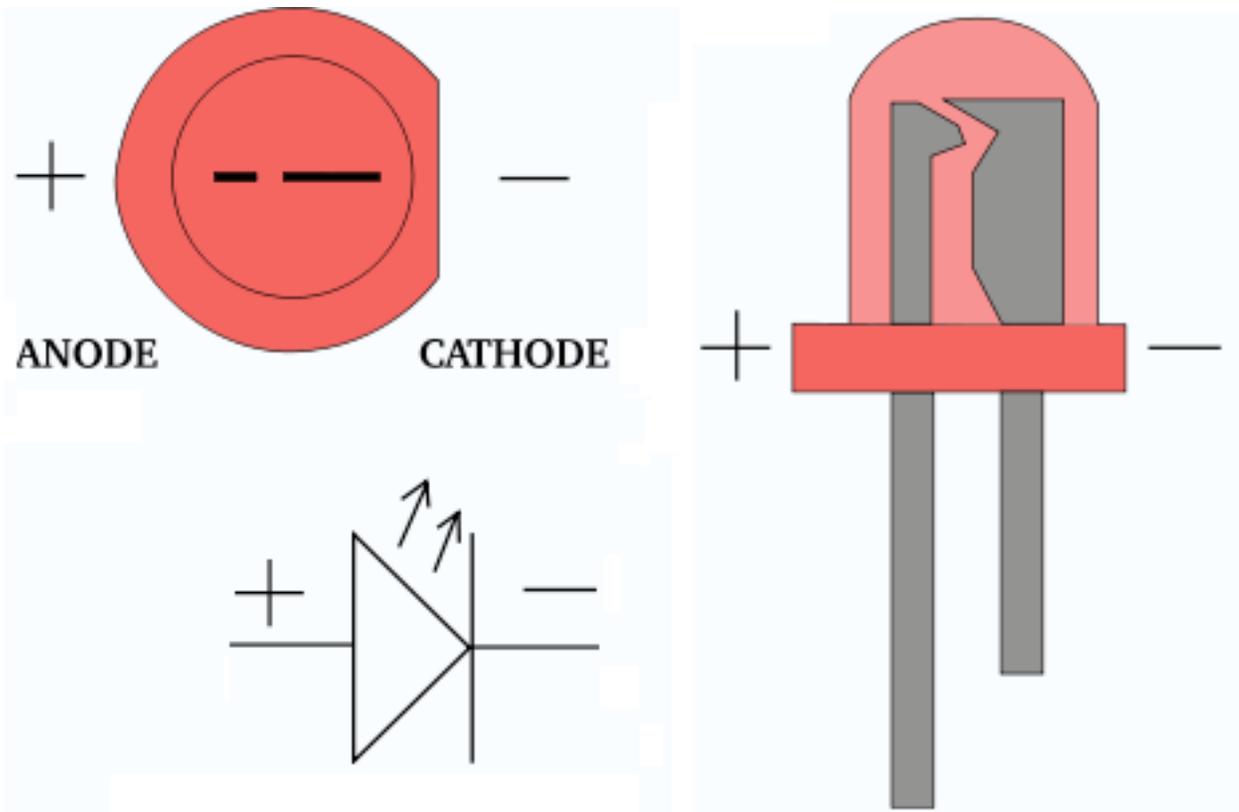
AN EXPLORATION

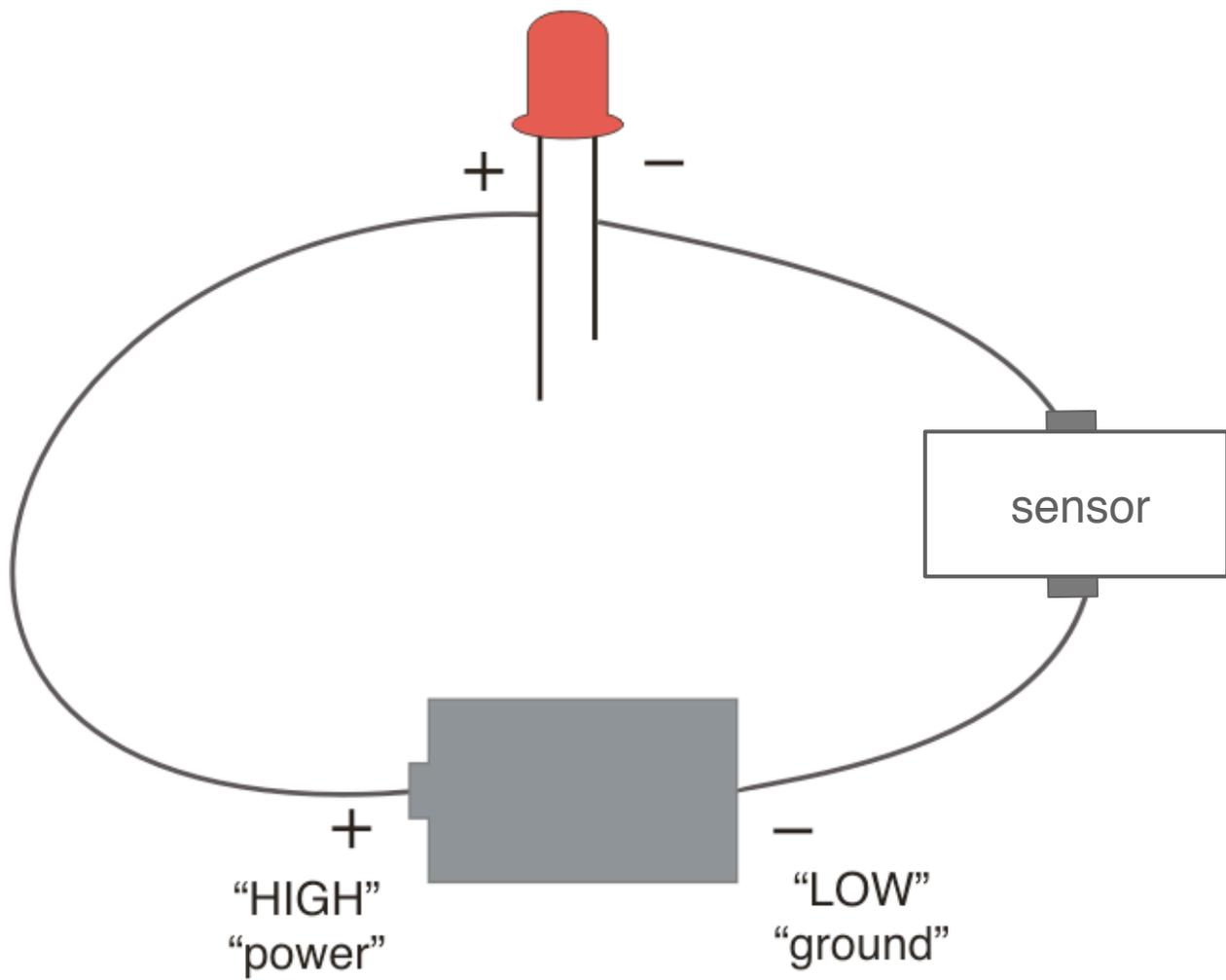
build a pressure sensor

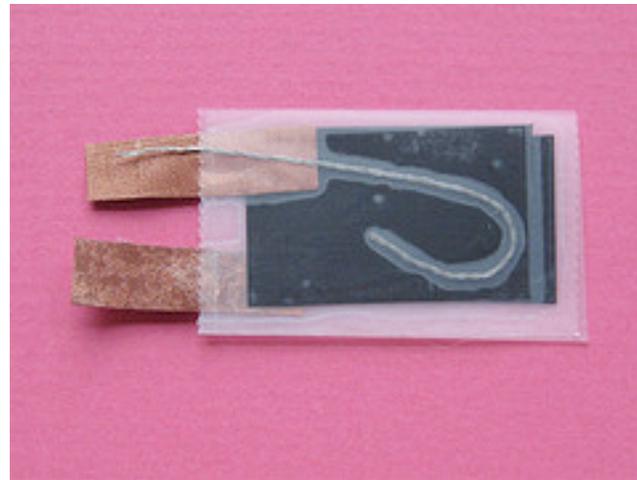
velostat: changes resistance with pressure
conductive thread
conductive fabric
tape

LED
battery
alligator clips

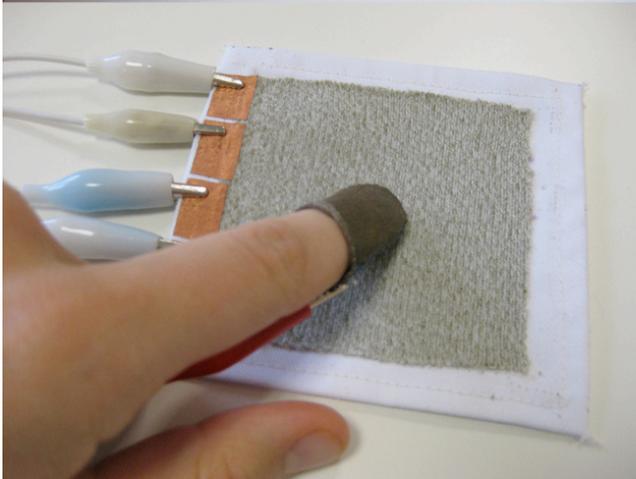
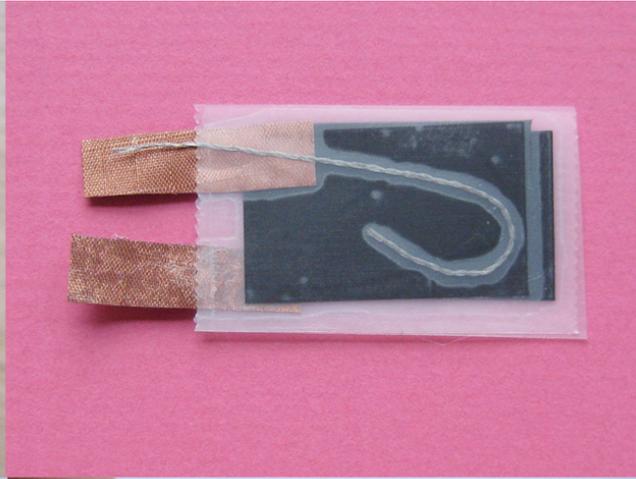
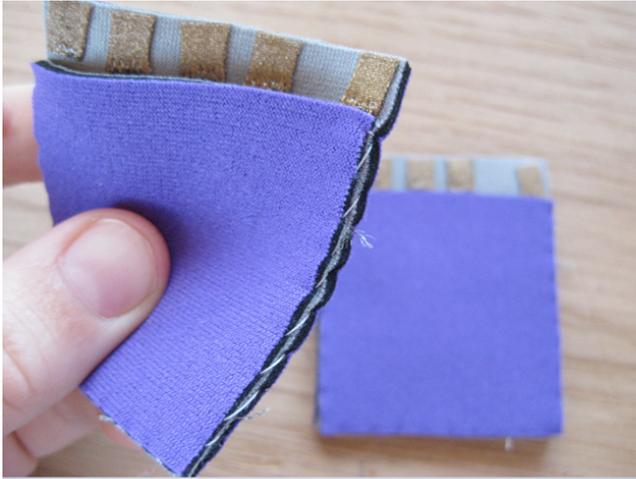






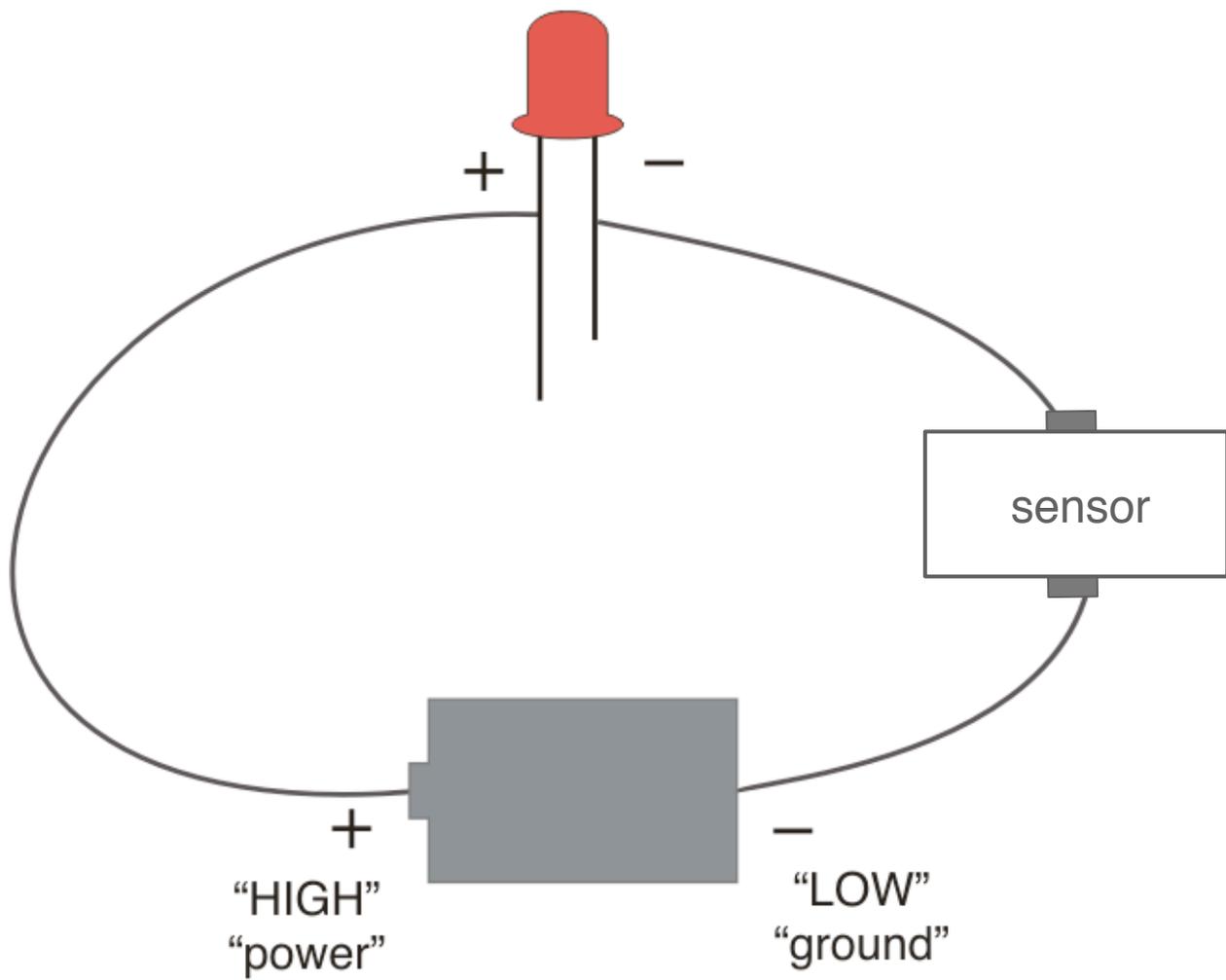


MATERIALS & INTERACTIONS



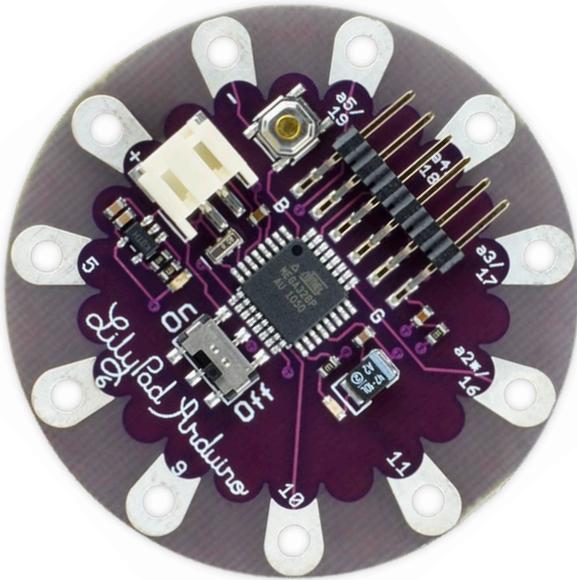
Hannah Perner-Wilson

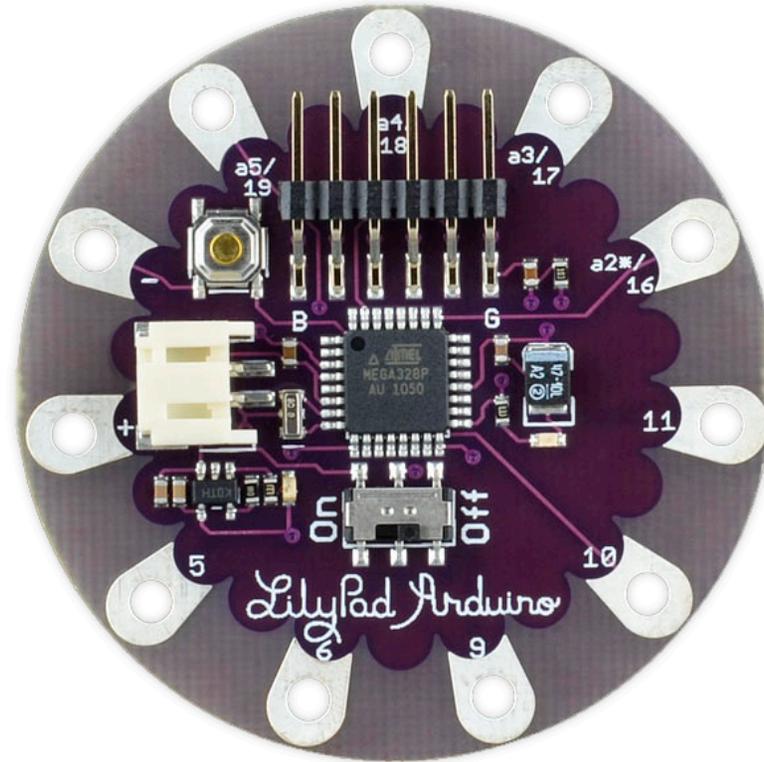
MICROCONTROLLERS

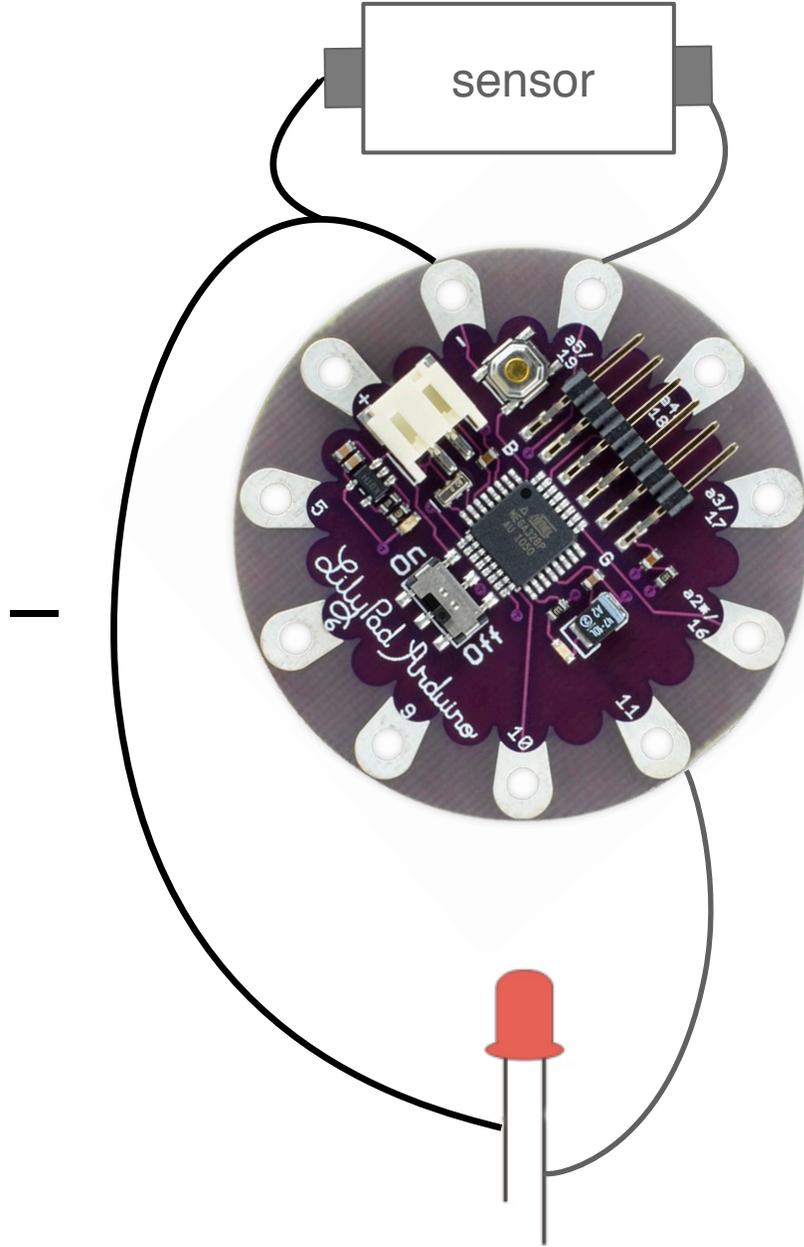


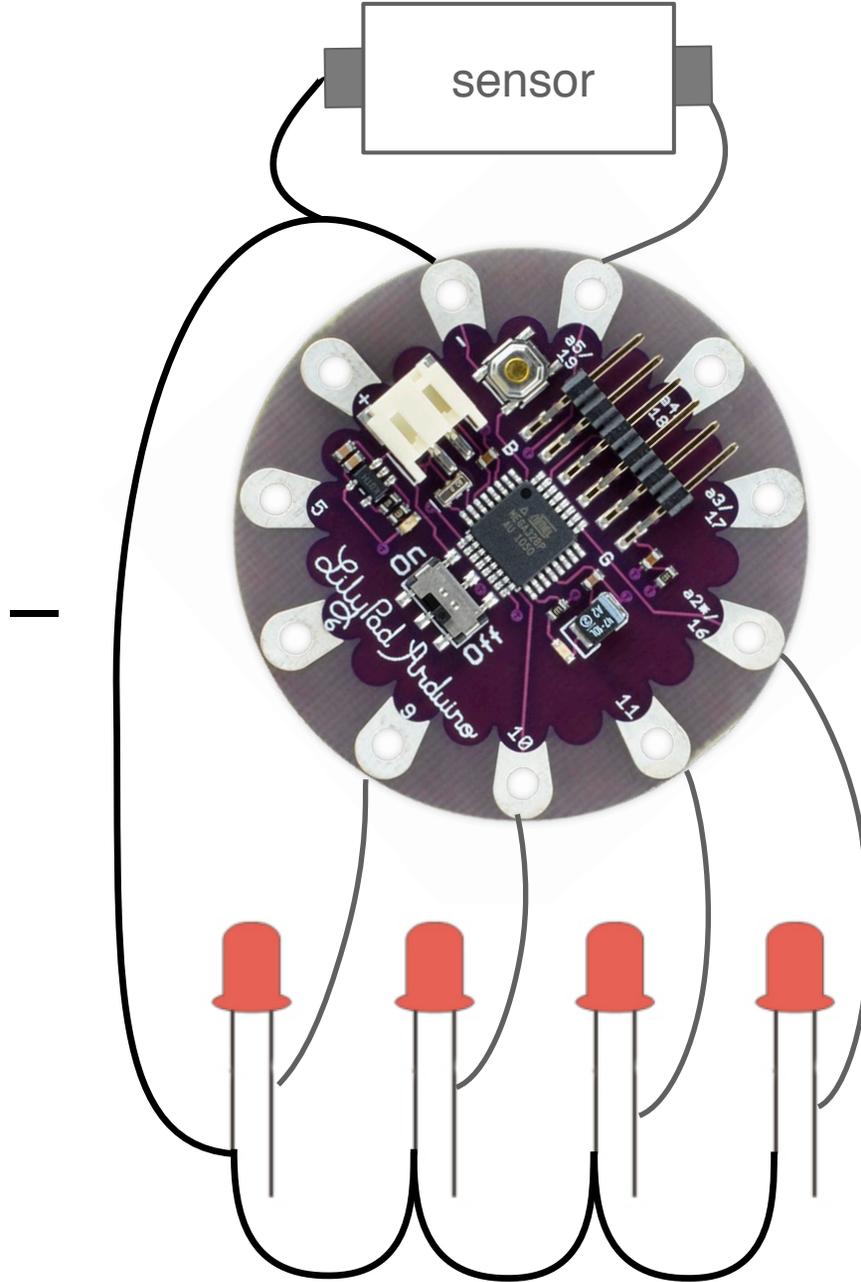


sensor









ASSIGNMENT

resistive sensors + Arduino