

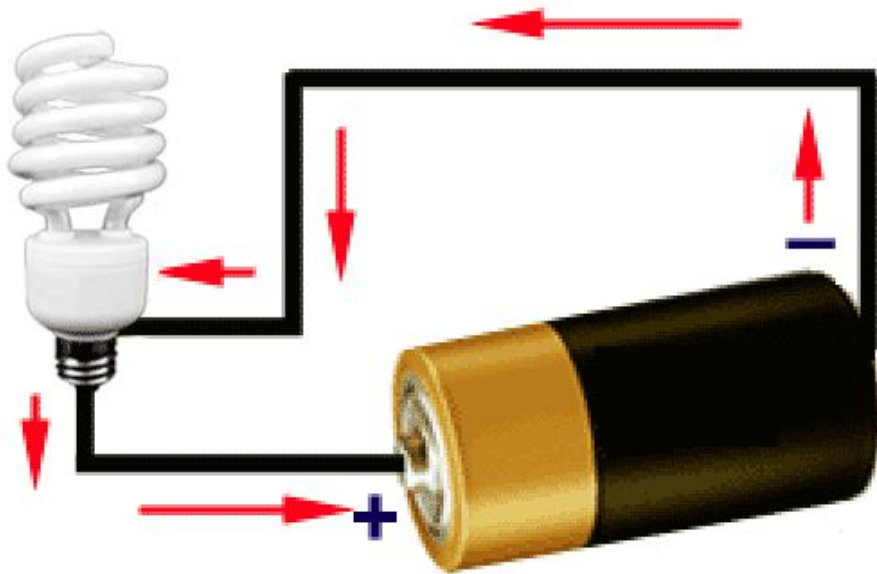
Playable Fashion: Fashion In Depth

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What is Playable Fashion & Introductions

- Name
- High School & Grade
- Sewing, electronics experience and/or coding level (all levels are welcome!)
- Games you have been playing

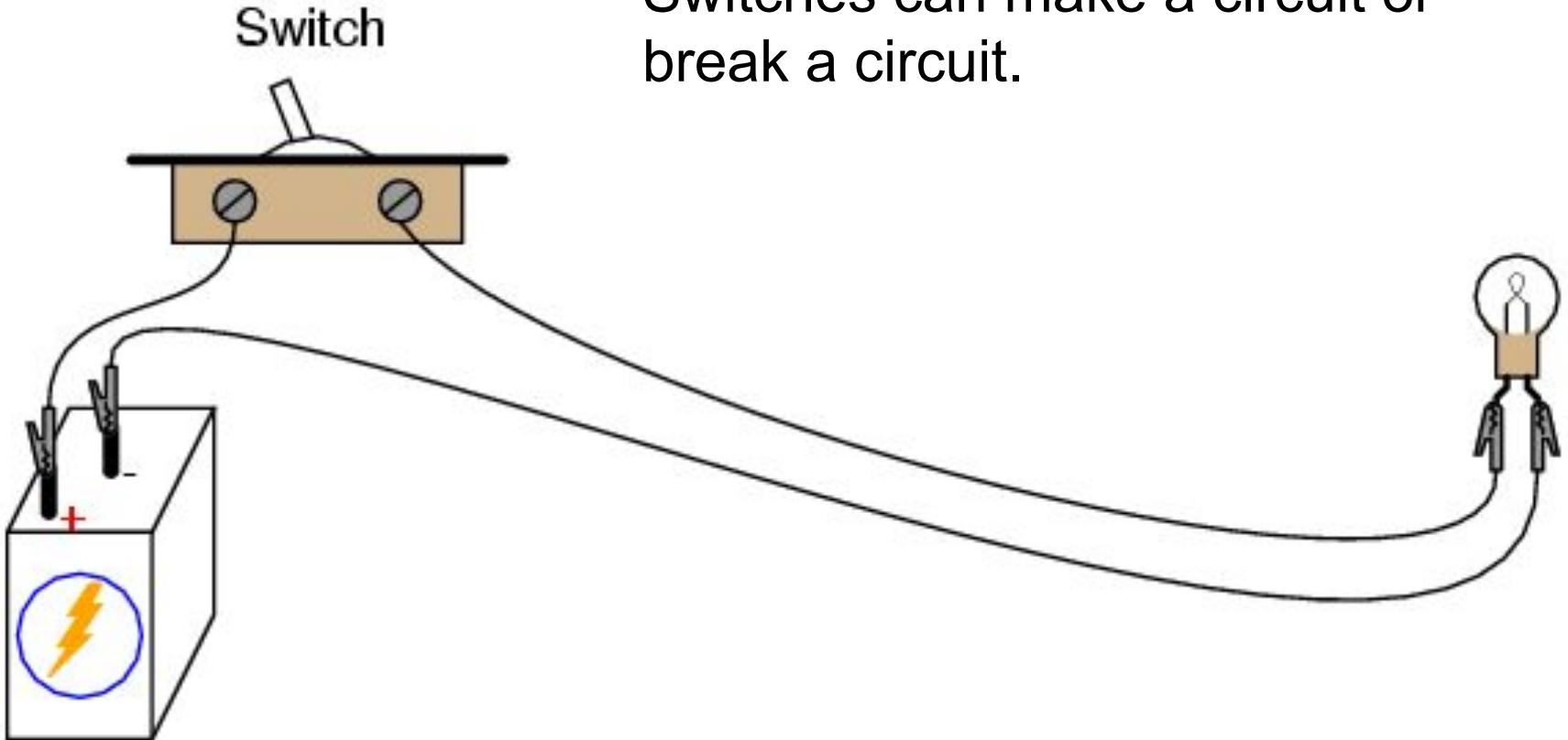
Electronic Circuit



Simple circuit with light

Switches

Switches can make a circuit or break a circuit.



Some examples of switches:



**A keyboard and mouse
is a bunch of switches!**



Arcade Joystick



Switch

- digital
- binary state

on/off

high/low

1/0

3.3V/0V



Soft Circuits

Circuits using soft electrically conductive materials

<https://www.youtube.com/watch?v=qr3Ke57s3gU>



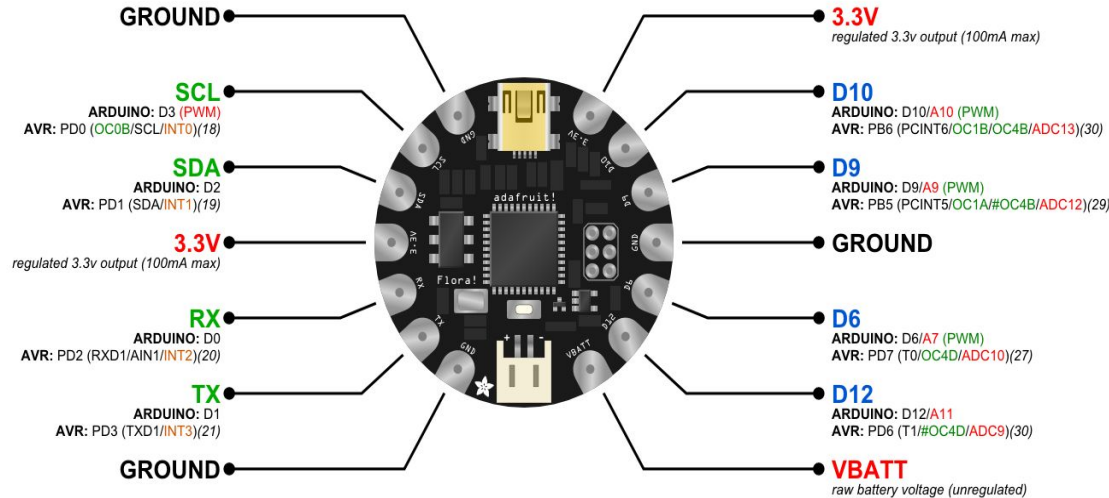
Wearable Game Controllers



Worksheet

- Putting fabric sample on embroidery hoop. Make as taut as possible!
- Let's go over Materials and Tools.
- Sewing intro.
- Start working on the worksheets!

FLORA



FLORA Wearable Electronics Platform
adafruit.com/products/659

drawing 2012 by J. M. DeCristofaro -- CC-BY-SA 3.0

- Input & Output
- Power
- For Wearables

IDE Settings:

- Board>>Adafruit FLORA
- Port>> USB FLORA

The Code

- Debouncing: A method used to check twice if circuit is being made.
- Keyboard: Flora can be a keyboard!

VARIABLES

```
// constants won't change. They're used here to  
// set pin numbers:  
const int buttonPin = 9;    // the number of the pushbutton pin  
const int ledPin = 7;       // the number of the LED pin
```

SET UP
HAPPENS
JUST ONCE

```
// variables will change:  
int buttonState = 0;        // variable for reading the pushbutton status  
//int lastButtonState = 0;  //FOR DEBOUNCING
```

```
void setup() {  
  // initialize the LED pin as an output:  
  pinMode(ledPin, OUTPUT);  
  // initialize the pushbutton pin as an input:  
  pinMode(buttonPin, INPUT_PULLUP);  
  // Keyboard.begin(); // FOR KEYBOARD STROKE  
}
```

LOOP
HAPPENS OVER
AND OVER AGAIN
UNTIL PROGRAM
IS STOPPED

```
void loop(){  
  // read the state of the pushbutton value:  
  buttonState = digitalRead(buttonPin);  
  
  // check if the pushbutton is pressed.  
  // if it is, the buttonState is LOW:  
  if (buttonState == LOW) {  
    //if (buttonState == LOW && lastButtonState == LOW) { //FOR DEBOUNCING  
    // turn LED on:  
    // Keyboard.press(' '); //FOR KEYBOARD STROKE  
    digitalWrite(ledPin, HIGH);  
  }  
  else {  
    // turn LED off:  
    // Keyboard.release(' '); //FOR KEYBOARD STROKE  
    digitalWrite(ledPin, LOW);  
  }  
  // lastButtonState = buttonState; ///FOR DEBOUNCING  
}
```