









# Homemade Light Switch

- On/Off Switch
  - Construct mechanical connection between Pin 0 and 3V
  - Use *digital read* blocks to get Pin 0 status (open/off = 0, closed/on = 1)
  - Display switch status (0/1, micro:mojis)...





# Homemade Light Switch

• On/Off Switch

• Now use switch status to control LED instead...









# Homemade Light Switch

• On/Off Switch

• One possible solution...







## Dimmer Switch

- Use a Rheostat/Potentiometer as a dimmer or blink frequency control
  - Use *analog read* block from the Rheostat pin

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# ACŤÍVÍŤY

### Use a Button or Dial to Control Music or Light (Sensor, Control System)





#### DC Motors

- Direct Current (DC)
  - Handheld Fans
  - Propellers
  - Tires
  - Merry-go-rounds
  - Ferris wheels
  - •Etc...









#### Servo Motors

- Servo motors integrate a DC motor with gears, potentiometer/rheostat, and a control circuit
- Controls specific angle/position for shaft
  - Applications:
  - Robotic arms
  - Auto focus
  - Automatic Doors
  - Printers

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> Etc...







## ACŤÍVÍŤY

# Motorize Your Project! (motors)





# Radio Control

• Radio/Bluetooth

Use the Radio blocks to get micro:bits to talk to one another. This can be used to:

- Create remote switches one micro:bit acts as sensor and sends msg to a remote micro:bit, which drives a motor
- Integrate various crowd/density sensing applications



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## ACŤÍVŤÍY

### Make Anything! (Open-Ended Exploration)



