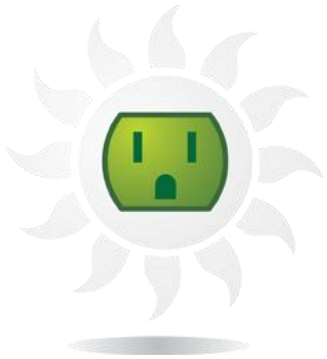
Lux Argenti

21W.732 - Project III

The Problem

- Dark room
- Have to turn on the room lights to see in a cupboard
- Waste of electricity



Don’t you wish you could help to counteract global warming?

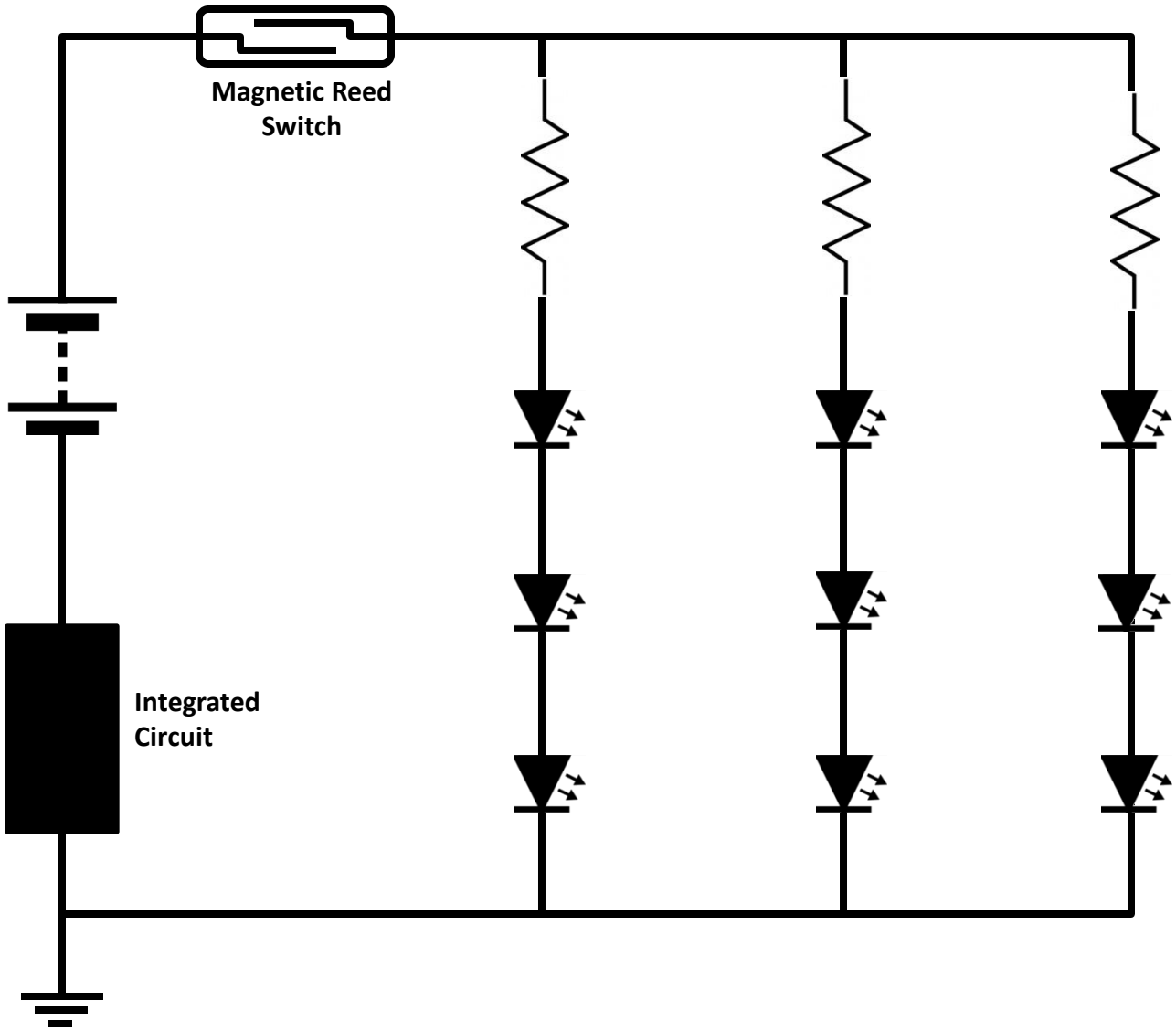
Background

- Refrigerators have a mechanical door switch
- What if the door doesn’t close?
  - Light stays on and wastes electricity

The Solution

- Magnetic switch cupboard light
- Only turns on when you need it
- Very sensitive just in case the door doesn’t close properly.

The Circuit



Simple

Safe

Inexpensive

Green!

Results

- Working prototype
- Estimated power saving:

  - Cost of Electricity: $00.05.80 / Kwh
  - String of LEDs uses about 3 Wh = .003 Kwh
  → ~ $00.03 / year

  Average lighting in a room: ~ 100 Wh = .1 Kwh
  → ~ $1.05 / year

Energy saved ~ 97%
Money saved ~ 97%

Future Improvements

- Housing the circuitry
- Increasing the sensitivity of the switch