

Potato Clocks - Notes 8

Purpose: To power a clock using only potatoes and other fruits

Hypothesis: 3 medium ~~new~~ russet potatoes will produce enough electrochemical energy to power a small LED clock.

Introduction: see example online

→ need ≥ 2 refs, textbook can be 1

→ background info on

- electricity: origins, uses, production
- electrochemical nrg
- how electricity is made - diff ways
- pro/cons of using electricity

Materials

- 3 zinc Electrodes (nails)
- 3 copper Electrodes (pennies)
- 3 potatoes
- 6 alligator clips
- LED clock or light

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↳ grade 9 science

↳ Electricity

↳ Notes and Due Dates

Methods

- 1) put one zinc electrode in each potato
- 2) put one copper electrode in each potato
- 3) connect electrodes, alternating zinc-copper-zinc-copper w/ alligator clips
- 4) attach last copper⁺ electrode: attach alligator clip w/ red⁺ wire
- 5) last zinc⁻ electrode: attach alligator clip w/ black⁻ wire
- 6) attach load: ⊕ terminal w/ red clip
⊖ terminal w/ black clip

if load doesn't run, try switching terminals

Results: Easy to interpret

# Potatoes	size of electrodes	load	load works
2	small	LED clock	yes
2	small	LED light	no
2	large	LED light	yes
2	large	noise maker	no barely
2 solid powerade	large	noise maker	Yes