

18C – LEMON BATTERY

Analysis

Table 1 – Voltage produced

Metal combination	Negative electrode (metal at the black clip)	Positive electrode (metal at the red clip)	Voltage (V)

Questions

1. Which metal combination generated the largest voltage?
2. Which metal combination(s) generated the smallest voltage?
3. Based on your data, do you think that the type of metal has something to do with the voltage that is generated?

- ❓ 4. The metal that is at the negative electrode is the metal that loses electrons. Of the metals Cu, Pb and Zn, which one is most likely to lose electrons? Justify your choice.

- ❓ 5. The metal that is at the positive electrode is the metal that gains electrons. Of the metals Cu, Pb and Zn, which one is most likely to gain electrons? Justify your choice.

Extension – Engineering Challenge Results

Use the space below to make notes as you complete the engineering challenge.

Questions – Engineering Challenge

- ❓ 1. Which metal combination did you use?

- ❓ 2. How many lemon batteries did you use to generate enough electricity to light the LED?

