

Reactivity

Lesson 17 - Producing a Voltage L2

Chemistry - Key Stage 3

Miss Fenner



What is the independent variable?

Option 1

The variable I measure

Option 2

The variables I keep the same

Option 3

The variable I change



Which combination of metal electrodes produces the biggest voltage?

Independent - the combination of metal electrodes.



What is the dependent variable?

Option 1

The variable I measure

Option 2

The variables I keep the same

Option 3

The variables I change



Which combination of metal electrodes produces the biggest voltage?

Dependent - the voltage produced.



Independent Practice

Which combination of metal electrodes produces the biggest voltage?

Draw a results table for our investigation.



Independent Practice

Which combination of metal electrodes produces the biggest voltage?

Table to show how the pair of metal electrode affects the voltage produced.

Metal pairs	Voltage produced (V)



Metal pairs	Voltage produced (V)
Copper and Aluminium	1.2
Copper and Zinc	0.7
Copper and Iron	0.6
Copper and Copper	0

Which pair of metal electrodes produced the biggest voltage?

Copper and Aluminium



Metal pairs	Voltage produced (V)
Copper and Aluminium	1.2
Copper and Zinc	0.7
Copper and Iron	0.6
Copper and Copper	0

Which pair of metal electrodes produced no voltage?

Copper and Copper



Metal pairs	Voltage produced (V)
Copper and Aluminium	1.2
Copper and Zinc	0.7
Copper and Iron	0.6
Copper and Copper	0

Which pair of metals are furthest apart on the reactivity series?

Copper and Aluminium



Independent Practice

Metal pairs	Voltage produced (V)
Copper and Aluminium	1.2
Copper and Zinc	0.7
Copper and Iron	0.6
Copper and Copper	0

1. Which pair of metals produced the biggest voltage?
2. What voltage did they produce?
3. Which pair of metals produced the smallest voltage?
4. What voltage did they produce?
5. Can you link the distance of the metal pair on the reactivity series to the results?
6. Can you explain why this might be?



Independent Practice

1. The pair of metals that produced the biggest voltage were copper and aluminium.
2. They produced 1.2V.
3. The pair of metals that produced the smallest voltage were copper and copper.
4. They produced 0V.
5. The further apart a pair of metals on the reactivity series, the higher the voltage they produced.
6. This is because when there is a bigger difference in their reactivity there will be a bigger build up of charge on one of the metal electrodes than the other creating a bigger potential difference (voltage).

