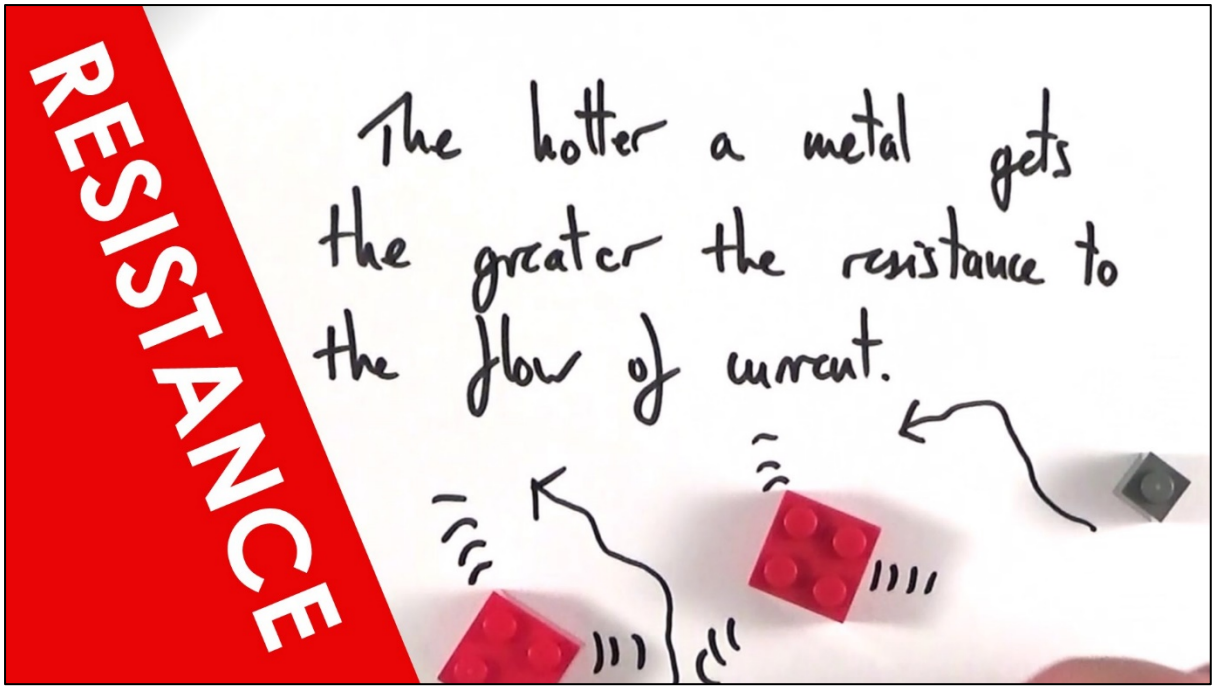
live

A Level Physics

18th Jan 2021 – Electrical Resistance Practical

Suitable for ALL exam boards



This session will look at a practical where potential difference (voltage) is changed, the current changes and the resistance of that component can be investigated.

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Question taken from:

Edexcel IAL Physics - January 2017 - Paper 3 (WPH03) - Question 8

8 A student investigates the resistance of a circuit component at different potential differences. Her results are shown in the table.

Potential difference across component V/V	Current through component I /mA
0	0
0.5	0
1.0	12
1.5	30
2	52
2.5	78

(a) Criticise her results.

(3)

(b) Plot a graph of V on the x-axis against I on the y-axis on the grid opposite and draw a line of best fit.

(5)

(c) (i) Use your graph to determine the resistance at 40 mA.

(4)

Resistance = ...

(ii) With reference to the resistance of the component, explain the shape of the graph between 0 and 0.5 V.

(2)