

# WINDSOR SIXTH FORM SUMMER WORK



## A Level Physics

### Task 1 Atomic Structure

You will study nuclear decay in more detail at A Level covering the topics of radioactivity and particle physics. In order to explain what happens you need to have a good understanding of the model of the atom. You need to know what the atom is made up of, relative charges and masses and how sub atomic particles are arranged.

The following video explains how the current model was discovered

[www.youtube.com/watch?v=wzALbzTdnc8](http://www.youtube.com/watch?v=wzALbzTdnc8)

Describe the model used for the structure of an atom including details of the individual particles that make up an atom and the relative charges and masses of these particles. You may wish to include a diagram and explain how this model was discovered by Rutherford.

### Task 2 Electricity

At A Level you will learn more about how current and voltage behave in different circuits containing different components. You should be familiar with current and voltage rules in a series and parallel circuit as well as calculating the resistance of a device.

<http://www.allaboutcircuits.com/textbook/direct-current/chpt-1/electric-circuits/>

<http://www.physicsclassroom.com/class/circuits>

Produce a colourful and well-illustrated A3 poster that includes the following information: Current in Series and Parallel circuits; Potential Difference in Series and Parallel circuits; Ohm's Law.

Extension: Watch The Fantastic Mr Feynman

<https://www.youtube.com/watch?v=H9fjhQMsDW4>

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