



Hampton Court House

Curriculum Outline 2020/21 – Year 13 Physics (JWM)

Autumn 2020

Principal Text: *Physics AQA A-level Year 2*

Having made very good progress towards the end of last year, students will be able to start with some revision of previous topics as we complete some of the required practicals.

Students will then study fields and their effects, learning about gravitational and electric fields, how capacitors work, store energy, and what effect they have on circuits.

At the same time they will be studying nuclear physics, being introduced to the models and mathematics used to explain nuclear instability, exponential decay, and the extraction of energy from the nucleus.

Assessment of students' progress will be through a mixture of homework exercises and end of topic tests with questions from a bank of AQA past paper resources.

There will also be a number of required practical activities through which various practical competencies will be assessed by the teacher.

Links with fundamental values
The students have more practice of the Scientific Method which embraces evidence over opinion in order to understand and make sense of the world around them.
They will work on their own and in teams in order to promote resilience and mutual respect and tolerance of others. They will be encouraged to reflect on their own work and listen to the views of others.

Social, moral, spiritual and cultural content
We will provide an awareness of science as a social and cultural activity, which has strengths and limitations. The children's curiosity will be stimulated by demonstrating interesting scientific phenomena so they can appreciate and question the world around them. They will develop investigative abilities, paying due regard to safe practice.
We will acknowledge and recognise the contributions from scientists from around the world who have made significant contributions to the advancement of science.

Spring 2021

Principal Text: *Physics AQA A-level Year 2*

The Spring Term will see students continue their study of fields, now considered magnetic induction and how it can be used to generate electricity.

Students will also begin the astrophysics module, looking in some detail at the workings of telescopes, how stellar objects are classified and cosmology.

Summer 2021

Principal Text: *Physics AQA A-level Year 2*

The Summer Term will be dedicated to revision for the upcoming A-Level exams.