



# Hampton Court House

## Curriculum Outline 2019/20 – Year 11 Mathematics (SJD & AL)

### Autumn 2019

Principal Text: *Edexcel GCSE Maths Higher Student book and Edexcel GCSE Maths Higher Practise book*

Revision of core topics in GCSE:

- number
- algebra
- trigonometry
- mensuration
- data handling
- probability
- limits of accuracy including upper and lower bound
- addition, subtraction and multiplication of vectors
- statistics: time series data, charts and diagrams, histograms, scatter graphs and correlation

Links with fundamental values

The maths curriculum promotes the British values of tolerance and resilience on a daily basis through problem solving and understanding of complex concepts.

Social, moral, spiritual and cultural content

Moral, Spiritual, Social and Cultural themes

There are few opportunities in Mathematics for discussion of Moral or Spiritual matters, despite the National Curriculum's spurious suggestion that Mathematical Truth has a moral value, or that there is some spiritual aspect to the idea of an infinite set.

### Spring 2020

Principal Text: *Practice Papers, Edexcel GCSE Maths Higher Student book and Edexcel GCSE Maths Higher Practise book*

- sequences.
- solving quadratic functions graphically (interpret roots, turning points).
- graphs of linear functions
- quadratic functions
- simple cubic functions and the reciprocal function  $y=1/x$
- exponential functions and trigonometric functions.
- exact values of specified sin and cos

Where we can contribute is in equipping children to use quantitative reasoning in social contexts and our teaching of Statistics in particular should use examples where data can be used to support inferences in worthwhile real-world contexts.

Mathematics lessons also offer good opportunities for students to learn to be realistic in assessing their own achievements; to set targets for their learning and plan to attain these; to learn to work co-operatively; to manage feelings of frustration when faced with difficulties; in general, to acquire a learning mentality. However, students do not easily transfer learning from one context to another, and it is important to draw their attention to what they might implicitly be learning – or they won't.

### Summer 2020

Principal Text: *Practice Papers*

- revision and practice

Opportunities to independently extend learning  
The students are given two sets of homework a week, which they should complete independently.

They are given web sites to work with and are expected to come to maths clinic with topics they are not confident in.