



Ecole Internationale Provence-Alpes-Côte d'Azur



## **Forward Planning**

### **Long-Term Semester Planning**

**Academic Year: 2020-2021**

<b>Class:</b>	<b>S6 5P</b>
<b>Subject:</b>	<b>Mathematics</b>
<b>Teacher:</b>	<b>T. Bonhomme</b>
<b>No. Students:</b>	<b>16</b>

## Curriculum – Long-Term Planning

### Notes:

- The students have access to the text book “Mathematics HL (Core) 2nd Edition; Haese & Harris Publications” – in the form of video projections / hard copies in the classroom and as a pdf document which can be copied onto their computer at home. This book, while it contains many useful exercises, does not directly follow the European Bac syllabus and so, depending on the chapter, is used to a greater or lesser extent and can be supplemented by sheets of exercises.
- The students are also given a “checklist” at the start of the year

Date	Competences	Learning Objectives	Activities	Resources	Learning Outcomes / Assessment
7/9/20 – 18/9/20	1,2,3,4	Functions 1: describing functions	TI Nspire, sketching graphs, sheets	HL book, TI Nspire, sheets	Marked homework, tests (formative and sommative), Diagnostic questions (formative assement)
21/9/20 – 2/10/20	1,2,3,4	Logarithms	Bingo for revising indices, TI Nspire investigation	HL book, TI Nspire, power point	Marked homework, tests (formative and sommative), Diagnostic questions (formative assement)
5/10/20 – 9/10/20	1,2,3,4	Functions 2: conjugate functions, sign tables	TI Nspire, sketching graphs, sheets	HL book, TI Nspire, sheets	Marked homework, tests (formative and sommative), Diagnostic questions (formative assement)
12/10/20 – 16/10/20	1,2,3,4	Limits 1: finding limits graphically, continuity	TI Nspire, investigations	TI Nspire, Sheets	Marked homework, tests (formative and sommative), Diagnostic questions (formative assement)

2/11/20 – 13/11/20	1,2,3,4	Vectors 1: 3D vector geometry		HL book, TI Nspire, sheets	Marked homework, tests (formative and sommative), Diagnostic questions (formative assement)
16/11/20 – 27/11/20	1,2,3,4	Limits 2: calculating limits of indeterminate forms	TI Nspire	TI Nspire, Sheets	Marked homework, tests (formative and sommative), Diagnostic questions (formative assement)
30/11/20 – 4/12/20	1,2,3,4	Differentiation 1: first principles, tangent to a curve	TI Nspire,	Khan Academy video, Podcast Marcus de Sautoy, HL book, TI Nspire, sheets	Marked homework, tests (formative and sommative), Diagnostic questions (formative assement)
7/12/20 – 11/12/20	1,3,4,	Probability: conditional probability and independence	Handshake problem, investigations..	HL book, TI Nspire	Marked homework, tests (formative and sommative), Diagnostic questions (formative assement)
4/1/21 – 15/1/21	1,2,3,4	Differentiation 2: calculating derivatives	TI Nspire, sheets (whodunnit, matching etc)	Khan Academy video, Podcast Marcus de Sautoy, HL book, TI Nspire, sheets	Marked homework, tests (formative and sommative), Diagnostic questions (formative assement)
18/1/21 – 22/1/21	1,2,3,4	Vectors 2: dot product & cross product in 3D		HL book, TI Nspire, sheets	Marked homework, tests (formative and sommative), Diagnostic questions (formative assement)
25/1/21 – 5/2/21	1,2,3,4,7	Applications of differentiation 1: variations, stationary points	TI Nspire – investigations..	HL book, TI Nspire, sheets	Marked homework, tests (formative and sommative), Diagnostic questions (formative assement)

8/2/21 – 19/2/21	1,2,3,4,5	Sequences and series	TI Nspire, sheets, Flocons de Koch	HL book, TI Nspire, sheets	Marked homework, tests (formative and sommative), Diagnostic questions (formative assement)
8/3/21 – 12/3/21	1,2,3,4,7	Applications of differentiation 2: optimisation problems, l'hôpital's rule	TI Nspire – optimisation problem..., sheets (Drink can optimisation...)	HL book, TI Nspire, sheets	Marked homework, tests (formative and sommative), Diagnostic questions (formative assement)
15/3/21 – 19/3/21	1,2,3,4	3D analytical geometry 1: lines		Sheets	Marked homework, tests (formative and sommative)
22/3/21 – 2/4/21	1,2,3,4	Complex numbers	TI Nspire, investigation	HL book, TI Nspire, sheets	Marked homework, tests (formative and sommative), Diagnostic questions (formative assement)
5/4/21 – 16/4/21	1,2,3,4	3D analytical geometry 2: planes, lines and planes		Sheets	Marked homework, tests (formative and sommative)
19/4/21- 14/5/21	1,2,3,4	Transformations of functions	TI Nspire investigations & graphic designing, sketching graphs, matching graph with formula	HL book, TI Nspire, sheets, power point	Marked homework, tests (formative and sommative), Diagnostic questions (formative assement)
17/5/21 – 4/6/21	1,3,4,6,8	Combinatorics	Handshake problem, investigations..	HL book, TI Nspire	Marked homework, tests (formative and sommative), Diagnostic questions (formative assement)