

## **Forward Planning**

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

**Academic Year: 2022-2023**

|                      |                              |
|----------------------|------------------------------|
| <b>Class:</b>        | <b>S7</b>                    |
| <b>Subject:</b>      | <b>Mathematics 3 periods</b> |
| <b>Teacher:</b>      | <b>Mrs Juliet Palmer</b>     |
| <b>No. Students:</b> | <b>6</b>                     |

## Curriculum – Long-Term Planning

| Dates                 | Content and Methodology  | Types of Assessment  | Key Competences   | Textbooks / Materials   |
|-----------------------|--|--|---|---|
| 05/09/22 – 21/10/22   | <p>Exponentials and Logarithms<br/>Indices-review of laws of indices, fractional indices</p> <p>Study of exponential and logarithmic functions – using graphing calculators</p> <p>Solving exponential equations<br/>Exponential growth and decay – applied to real life problems</p>  | <p>Every week either:<br/>Homework checked in Class<br/>Quiz on homework set</p> <p>TEST-Integration<br/>Exam style analysis questions</p> | <p>STEM</p> <p>Digital</p> <p>Reading/writing<br/>Entrepreneurship</p>        | <p>Core C1/C2 A Level<br/>Mathematics for Edexcel Oxford publishing<br/>Core C3/C4 A Level<br/>Mathematics for Edexcel Oxford publishing</p> <p>HL Maths for the International Student – Haese and Harris</p> <p>Pure Mathematics – Bostock and Chandler</p>      |
| Vacances de Toussaint |  |  |   |   |
| 07/11/22- 16/12/22    | <p><b>Integration</b><br/>Concept of integration – by comparison with differentiation<br/>Definite integrals<br/>Indefinite integrals<br/>Applications: Distance time velocity, Areas in the plane, Volumes of revolution, Arc length – real life application to problems<br/>Differentiating exponential functions and logarithms – by investigation using digital tool</p> | <p>Every week either:<br/>Homework checked in Class<br/>Quiz on homework set</p> <p>Exam Style Questions – marked</p>                      | <p>Cultural<br/>Entrepreneurship<br/>STEM<br/>Reading/Writing<br/>Digital</p> | <p>Core C1/C2 A Level<br/>Mathematics for Edexcel Oxford publishing<br/>HL Maths for the International Student – Haese and Harris</p> <p>Pure Mathematics – Bostock and Chandler</p> <p>Previous European Baccalaureate exam papers – analysis questions only</p> |

| Noël - Christmas                          |   |  |  |  |
|---|---|--|--|--|
| <b>03/01/23 –<br/>10/02/23</b>            | <b>Revision for PreBac</b><br><br><b>PreBac exams</b><br><br><b>Statistics</b><br>Correlation, regression – related to real life problems – modelling and using digital tool<br>Scatter diagrams, box plots<br>Pearsons' product-moment correlation coefficient | <b>Pre-Bac Exams (week of 16th January)</b><br><br>Every week either:<br>Homework checked in Class<br>Quiz on homework set                       | Entrepreneurship<br>Literacy<br>STEM<br>Digital<br>Cultural Awareness and Expression (modelling) | <b>Previous Pre-Bac exam papers</b><br><br>Statistics 1 A Level Mathematics for Edexcel<br><br>HL Maths for the International Student – Haese and Harris |
| Vacances d'hiver                          |   |  |  |  |
| <b>27/02/23 –<br/>14/04/23</b>            | <b>Probability</b> – recap Binomial distribution<br>Continuous variables Normal distribution<br><b>Statistics</b><br>Null Hypothesis significance testing procedure and practice  | Every week either:<br>Homework checked in Class<br>Quiz on homework set<br><b>Test – probability distributions</b><br><br><b>Test statistics</b> | Entrepreneurship<br>Literacy<br>STEM<br>Digital<br>Cultural Awareness and Expression (modelling) | HL Maths for the International Student – Haese and Harris<br><br>Edexcel GCE Statistics 1<br>Edexcel GCE Statistics 2<br><br>Previous Bac papers         |
| Vacances de Paques – Bac Paper to hand in |   |  |  |  |
| <b>01/05/23 –<br/>26/05/2023</b>          | Analysis Revision<br><br>Probability and Statistics Revision  | <b>Exam papers marked in class</b><br><br><br><br><b>European Baccalaureate Exams</b>  |  | Previous Bac papers  |

\* Link to 8 key competences:

1. Literacy (reading and writing)
2. Multilingualism
3. Mathematics, Science, Technology and Engineering
4. Digital
5. Personal, Social and Learning to Learn
6. Citizenship
7. Entrepreneurship
8. Cultural Awareness and Expression