Suggested order of teaching – SL

The student book is structured to allow you to teach the core content (Chapters 1–10) to a combined class of Analysis and approaches and Applications and interpretation students, before dividing into course-specific groups. If, however, you are teaching a class of only Applications and interpretations students, you may wish to follow the suggested order of teaching outlined below, which groups together content from the core section of the syllabus with content that is specific to the Applications and interpretations course.

This is a planning document that is meant to be amended. The dates are not fixed and should be adapted to fit the calendar provided by your school.

Year 1

| **Wk** | **Unit** | **Topics** | **Student book chapter(s)** | **T&L resource(s)** |
| --- | --- | --- | --- | --- |
| 1 | 1 | Standard form | 1 | Activity: Large numbers |
| 2 | 1 | Arithmetic sequences and series | 2 | The Fibonacci numbers and the golden ratio |
| 3 | 1 | Exponents and logs | 1 | Logarithms in chemistry |
| 4 | 1 | Upper/lower bounds | 1 |  |
| 5 | 1 | Systems of equations (tech) | 1 |  |
| 6 | 1 | Geometric sequences and series | 2 | Allowance payments problem |
| 7 | 1 | Applications | 2, 11 | Credit cards  Activity: The mathematics of credit |
| 8 |  |  |  |  |
| 9 |  |  |  |  |
| 10 | 2 | Straight line geometry | 3, 4 | Activity: Linear programming |
| 11 | 2 | Function notation | 3, 4 |  |
| 12 | 2 | Graphs of functions (tech) | 3, 4 | Activity: Interpreting graphs |
| 13 | 2 | Maximizing | 12, 13 |  |
| 14 | 2 | Modelling | 12, 13 | Activity: Bacterial growth |
| 15 | 2 | Modelling | 12, 13 | Activity: Ferris wheel |
| 16 |  |  |  |  |
| 17 |  |  |  |  |
| 18 | 3 | Area and volume | 5 | Heron’s formula for the area of a triangle |
| 19 | 3 | Sine and cosine rules, applications | 5 |  |
| 20 | 3 | Unit circle | 5 |  |
| 21 | 3 | Applications |  | Calculating the distance between two points on Earth  Activity: Distances on Earth |
| 22 | 3 | Arc lengths, area of sectors, radians | 5 |  |
| 23 | 3 | Perpendicular bisectors | 14 |  |
| 24 | 3 | Voronoi diagrams | 14 | Voronoi diagrams |
| 25 |  |  |  |  |
| 26 | 4 | Data sampling | 6, 15 | Sampling techniques  Misleading data |
| 27 | 4 | Histograms, cumulative frequency | 6 | Activity: Statistical analysis project |
| 28 | 4 | Measures of central tendency, variance | 6 |  |
| 29 | 4 | Linear correlation | 6, 15 |  |
| 30 | 4 | Probability | 7 |  |
| 31 | 4 | Probability | 7 |  |
| 32 |  |  |  |  |
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| 34 |  |  |  |  |
| 35 |  |  |  |  |
| 36 |  | Exams and exploration |  |  |

Year 2

| **Wk** | **Unit** | **Topics** | **Student book chapter(s)** | **T&L resource(s)** |
| --- | --- | --- | --- | --- |
| 1 |  | Exploration |  |  |
| 2 |  |  |  |  |
| 3 | 4 | Binomial distribution | 8 |  |
| 4 | 4 | Normal distribution | 8 |  |
| 5 | 4 | *χ*2 test | 15 |  |
| 6 |  |  |  |  |
| 7 | 5 | Limits, rate of change | 9 |  |
| 8 | 5 | Increasing/decreasing functions | 9 | Calculus: What is a rate of change? |
| 9 | 5 | Tangents and normals | 9 | Economics |
| 10 | 5 | Maximum/minimum points | 16 |  |
| 11 | 5 | The second derivative, maximum/minimum points | 16 |  |
| 12 | 5 | Optimization | 16 | Activity: What is optimization? |
| 13 | 5 | Introduction to integration | 10, 16 |  |
| 14 | 5 | Area under curve | 10, 16 |  |
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