Mathematics Sample Program

Curriculum Area Plan

Secondary Levels 7-10

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| Number and Algebra Sub-strands  | **Levels** |
| Number and place value (F–8) | F – 8 |
| Fractions and decimals (1–6) | 1 – 6 |
| Real numbers (7–10) | 7 – 10 |
| Money and financial mathematics (1–10) | 1 – 10 |
| Patterns and algebra (F–10) | F – 10 |
| Linear and non-linear relationships (7–10) | 7 – 10 |

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| Measurement and Geometry Sub-strands | **Levels** |
| Using units of measurement (F–10) | F- 10  |
| Shape (F–7) | F – 7 |
| Geometric reasoning (3–10) | 3 – 10 |
| Location and transformation (F–7) | F – 7 |
| Pythagoras and trigonometry (9–10) | 9 – 10 |

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| Statistics and Probability Sub-strands  | **Levels** |
| Chance (1–10) | 1 – 10 |
| Data representation and interpretation (F–10) | F – 10 |

# Mathematics Curriculum Area Plan - Sample Program – Years 7 to 10

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|  | **Week** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** |
| **Year 7**  | **Semester 1** | **Surveys and displaying data 7.1.1** | **Whole numbers, factors and multiples 7.1.2** | **Angles, lines and shapes - 7.1.3** | **Length and area - 7.1.4** | **Number puzzles and patterns - 7.1.5** | **Integers, fractions and number lines - 7.1.6** | **Probability and proportion - 7.1.7** |
| Sub-strand: Data representation and interpretation | Sub-strand: Number and place value | Sub-strand: Geometric reasoning | Sub-strand: Using units of measurement | Sub-strand: Patterns and algebra | Sub-strands: Real numbers; Number and place value | Sub-strand: Chance |
| **Semester 2** | **Fractions - 7.2.1** | **Patterns, rules and equations - 7.2.2** | **Statistical data - 7.2.3** | **Decimals, percentages and simple ratios** **7.2.4** | **Coordinates, graphs and transformations 7.2.5** | **Time and money - 7.2.6** | **Solids, volume, capacity and mass - 7.2.7** |
| Sub-strand: Real numbers | Sub-strand: Patterns and algebra | Sub-strand: Data representation and interpretation | Sub-strand: Real numbers | Sub-strand: Patterns and algebra | Sub-strand: Using units of measurement | Sub-strand: Using units of measurement; Shape |
| Sub-strand: Location and transformation | Sub-strand: Money and financial mathematics |
| **Year 8**  | **Semester 1** | **Positive and negative integers - 8.1.1** | **Maps, networks and coordinates - 8.1.2** | **Properties of plane shapes - 8.1.3** | **Measurement: time and shapes - 8.1.4** | **Collecting and displaying data - 8.1.5** | **Money and Percentages 8.1.6** | **Algebra Expressions - 8.1.7** |
| Sub-strand: Number and place value | Sub-strand: Linear and non-linear relationships | Sub-strand: Geometric | Sub-strand: Using units of measurement | Sub-strand: Data representation and interpretation | Sub-strand: Money and financial mathematics; Real numbers | Sub-strand: Patterns and algebra |
| **Semester 2** | **Linear functions and graphs - 8.2.1** | **Real numbers and indices** **- 8.2.2** | **Angles, polygons and solids - 8.2.3** | **Linear equations - 8.2.4** | **Volume and surface area****8.2.5** | **Probability and simulation - 8.2.6** | **Ratios and rates - 8.2.7** |
| Sub-strand: Patterns and algebra; Linear and non-linear relationships | Sub-strand: Real numbers | Sub-strand: Geometric reasoning | Sub-strand: Patterns and algebra | Sub-strand: Using units of measurement | Sub-strand: Chance | Sub-strand: Real numbers |
| **Year 9**  | **Semester 1** | **Number and financial mathematics - 9.1.1** | **Pythagoras’ theorem - 9.1.2** | **Algebra techniques - 9.1.3** | **Linear relations and coordinate geometry - 9.1.4** | **Rate, ratio and proportion****9.1.5** | **Probability - 9.1.6** | **Similarity and trigonometric ratios - 9.1.7** |
| Sub-strand: Real numbers; Money and financial mathematics | Sub-strand: Pythagoras and trigonometry | Sub-strand: Patterns and algebra | Sub-strand: Patterns and algebra | Sub-strand: Patterns and algebra | Sub-strand: Chance | Sub-strand: Geometric reasoning; Pythagoras and trigonometry |
| **Semester 2** | **Applications of trigonometry - 9.2.1** | **Linear equations - 9.2.2** | **Indices and scientific notation - 9.2.3** | **Shapes, prisms and cylinders - 9.2.4** | **Statistics - 9.2.5** | **Further algebra - 9.2.6** | **Non-linear relations - 9.2.7** |
| Sub-strand: Pythagoras and trigonometry | Sub-strand: Linear and non-linear relationships | Sub-strand: Real numbers; Patterns and algebra | Sub-strand: Using units of measurement | Sub-strand: Data representation and interpretation | Sub-strand: Patterns and algebra | Sub-strand: Patterns and algebra |
| **Year 10**  | **Semester 1** | **Measurement - 10.1.1** | **Linear relationships - 10.1.2** | **Statistics Univariate - 10.1.3** | **Number and financial applications - 10.1.4** | **Coordinates geometry and simultaneous equations 10.1.5** | **Algebra techniques - 10.1.6** |
| Sub-strand: Using units of measurement | Sub-strand: Linear and non-linear relationships | Sub-strand: Data representation and interpretation | Sub-strand: Real numbers; Money and financial mathematics; Patterns and algebra | Sub-strand: Patterns and algebra | Sub-strand: Patterns and algebra |
| **Semester 2** | **Quadratic functions - 10.2.1** | **Trigonometry - 10.2.2** | **Geometry - 10.2.3** | **Probability - 10.2.4** | **Statistics Bivariate - 10.2.5** | **Relations and their graphs - 10.2.6** |
| Sub-strand: Linear and non-linear relationships | Sub-strand: Pythagoras and trigonometry | Sub-strand: Geometric reasoning | Sub-strand: Chance | Sub-strand: Data representation and interpretation | Sub-strand: Linear and non-linear relationships |
|  | **Week** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** |

\* Based on 3 hours teaching time per week

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| **Key** | **Number and Algebra Strand** |  | **Statistics and Probability Strand** |  | **Measurement and Geometry Strand** |  | **Topic, level, semester and sequence** |