**All Saints’ Academy Mathematics KS3 Curriculum**

|  |  |  |  |
| --- | --- | --- | --- |
| Cycle | 7 | 8 | 9 |
|  | Knowledge & Skills | Enrichment | Cross-Curricular | Knowledge & Skills | Enrichment | Cross-Curricular | Knowledge & Skills | Enrichment | Cross-Curricular |
| 1 | **Number**Positive and Negative Integers; Place Value**Algebra**Simplifying and collecting terms; Simple equations  *End of Module Assessment* | ***Fortnightly Number Challenge*** | **Physics:** Finding Potential Difference, Current and Resistance by rearranging V=IR | **Number**Factors & Multiples; Rounding & Estimation; Error Intervals;Percentage increase/decrease.**Ratio**Dividing ratio into parts; Scale factors & scale diagrams; Speed – distance – time.*End of Module Assessment* | ***Smoothies Project*** | **LIFE Programme:**Estimate the cost of a typical weekly shop by rounding to nearest pound**Physics:**Share the potential difference across two resistors in a series circuit | **Algebra**Factorising;Expanding double brackets;Rearranging formulae;Linear, quadratic, reciprocal and exponential graphs;Graphical solution of straight line equations;Geometric Sequences.*End of Module Assessment* | ***Frogs Project*** | **PE:**Look at the flight of a ball as a quadratic parabolic shape**Art:** Look at Art which can be generated by various number sequences |
| Careers | **Accountancy Jobs** | **Architecture**  | **Data Scientist** |
| 2 | **Number**Equivalence of fractions; Four operations on fractions; Percentages and FDP, simple percentage increase.**Statistics**Line and bar charts; Averages.*End of Module Test Assessment* | ***Showersave Project*** | **Geography:** Use examples of populations and demographic to consider bar charts | **Algebra**Substitution into formulae and expressions; Multiplying over a single bracket; Solving linear equations; Plotting and sketching linear functions; $y=mx+c$; Sequences and nth term.*End of Module Test Assessment* | ***Algebra******Challenge*** | **Physics:**Look at the straight-line graph for Hook’s Law | **Geometry**Line segments;Constructions;Volume and surface area of prisms, cylinders and composite solids Transformations;Similar & Congruent triangles;Pythagoras’ Theorem;Euler’s Formula and Solid shapes. *End of Module Test Assessment*  | **UKMT Intermediate Maths Challenge** | **DT:**Look at the strength of triangles. Technical drawing aspects of mathematical constructions |
| Careers | **Financial Advisor** | **Research Scientist** | **Carpentry** |
| 3 | **Geometry**Types of angle, angles in parallel lines & triangles;Transformations - translation, reflection, rotation; Symmetry & Congruence; Perimeter & Area.*End of Module Test Assessment* | **UKMT Junior Maths Challenge** | **Business Studies:** Look at use of farming space and profit and expenditure  | **Geometry** Quadrilaterals; Polygons and angles; Area and perimeter of quadrilaterals; Circumference & Area of Circles**Statistics**Pie charts; Scatter graphs.*End of Module Test Assessment* | **UKMT Junior Maths Challenge** | **Geography/****Physics:**Circumference and radius of Earth and other planets**Business Studies/****Geography:** Look at % spend of GDP by Government | **Probability**Simple probability and experiments;Sum of outcomes;Sample space diagrams;Venn diagrams.**Statistics**Discrete, continuous and grouped data;Measures of Central Tendency.*End of Module Test Assessment* |  | **LIFE Programme:**Look at simple probabilities of gambling**English:**Text Analysis comparison of similar texts |
| Careers | **Computer Games Designer**  | **Animator** | **Actuary** |