Radnor House Sevenoaks - Curriculum Overview Maths year 7.

Our Aims are to develop in students:

- A positive attitude towards Mathematics

- An appreciation of the place and use of Mathematics in society together with the ability to apply Mathematical knowledge and understanding to solve problems which may arise in their own lives

- An appreciation of pattern and relationship in Mathematics

We follow the Sparx programme in Key Stage 3 which is in line with the national curriculum for maths. Within each topic there is extension material to stretch pupils. Teaching resources can be found on students Onenote.

More information on the national curriculum for KS3 can be found at
https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/239058/SECONDARY_national_curriculum_-_Mathematics.pdf

Other useful websites for Maths:

Online resource
Sparx Maths
Maths Genie - Free Online GCSE and A Level Maths Revision
https://corbettmaths.com/

Maths Careers:
http://www.mathscareers.org.uk/
http://www.ima.org.uk/quiz/
http://www.topuniversities.com/student-info/careers-advice/what-can-you-do-mathematics-degree
https://plus.maths.org/content/Career

Updated September 2022

Radnor House Sevenoaks - Curriculum Overview Maths year 7.

	Autumn Term	Spring Term	Summer Term
Year 7 **4.5 hours per week** **Any excess weeks allow for assessment and regular revision weeks**	**1. Number Sense** • Using number lines(M763) • Integer place value(M704) • Decimal place value(M522) • Ordering negative numbers(M527) • Rounding integers(M111) • Rounding decimals(M431) **2. Adding and Subtracting** • Adding integers(M928) • Adding decimals(M429) • Subtracting integers(M347) • Subtracting decimals(M152) **3.Multiplying and Dividing** • Multiplying and dividing by 10, 100 and 1000(M113) • Multiplying using place value(M911) • Using a written method to multiply integers(M187) • Using a written method to multiply decimals(M803) • Dividing numbers into equal groups(M462) • Using a written method to divide integers(M354) • Dividing with a remainder(M873) • Using a written method to divide by integers to get a decimal answer(M262)	**1. Line and shape properties** • Line properties(M814) • Shape properties(M276) • Symmetry(M523 **2.Perimeter** • Finding perimeters using grids(M920) • Finding the perimeter of rectangles and simple shapes(M635) • Finding the perimeter of compound shapes(M690) **3. Area** • Finding areas using grids(M900) • Finding the area of rectangles(M390) • Finding the area of compound shapes(M269) • Finding the area of triangles(M610) • Finding the area of compound shapes containing triangles(M996) **4. Coordinates and shapes**	**1.Angles** • Types of angles(M502) • Estimating angles(M541) • Measuring angles(M780) • Drawing angles(M331) • Angles on a line and about a point(M818) • Vertically opposite angles(M163) • Angles in triangles(M351) **2.Handling data and statistical diagrams** • Calculating the range(M328) • Calculating the median(M934) • Finding the mode(M841) • Calculating the mean(M940) • Interpreting frequency tables and two-way tables(M899) • Drawing and interpreting tally charts(M597) • Drawing and interpreting pictograms(M644) • Drawing bar charts(M460) • Interpreting bar charts(M738) • Collecting and recording data using tables(M945) • Presenting data and making conclusions(M450)

Updated September 2022

- Using a written method to divide by decimals(M491)

4. Calculating with negative numbers

- Adding and subtracting with negative numbers(M106)
- Multiplying and dividing with negative numbers(M288)

5. Order of operations

- Calculating with roots and powers(M135)
- Using the correct order of operations(M521)
- Using the commutative laws(M952)
- Using the associative laws(M409

6. Expressions

- Algebraic notation(M813)
- Algebraic terminology(M830)
- Simplifying expressions containing a single variable(M795)
- Simplifying expressions containing multiple variables(M531)
- Simplifying expressions containing non-linear terms(M949)

7. Substitution

- Substituting into expressions with one operation(M417)
- Substituting into expressions with multiple operations(M327)

- Reading and plotting coordinates(M618)
- Solving shape problems involving coordinates(M230)

5. Factors, multiples and primes

- Finding the lowest common multiple(M227)
- Finding factors and using divisibility tests(M823)
- Finding the highest common factor(M698)
- Finding prime numbers(M322)
- Prime factor decomposition(M108)

6. Fractions

- Finding fractions of shapes(M158)
- Constructing fractions(M939)
- Finding equivalent fractions(M410)
- Simplifying fractions(M671)
- Ordering fractions(M335)
- Converting between mixed numbers and improper fractions(M601)
- Adding and subtracting fractions(M835)
- Adding and subtracting mixed numbers(M931)

7. Brackets

- Finding averages from frequency tables(M127)
- Choosing suitable averages and solving problems(M440)
-

3.Proportion

- Solving proportion problems(M478)
-
- **4.Fractions, decimals and percentage**
  Reciprocals(M216)
- Multiplying fractions(M157)
- Dividing fractions(M110)
- Multiplying with mixed numbers(M197)
- Dividing with mixed numbers(M265)
- Fractions of amounts without a calculator(M695)
- Fractions of amounts with a calculator(M684)
- Converting between fractions and decimals(M958)
- Converting between fractions, decimals and percentages(M264)
- Ordering fractions, decimals and percentages(M553)
- Writing numbers as percentages of other numbers(M235)
-

5.Probability

- Using probability phrases(M655)

Updated September 2022

- Substituting into algebraic formulae(M208)
- Substituting into real-life formulae(M979)

8. Solving Equations

- Solving equations with one step(M707)
- Solving equations of the form $ax+b=c$(M634)
- Solving equations of the form $x/a+b=c$(M647)

9. Time

- Converting units of time(M515)
- Using clocks(M892)
- Calculating with time(M627)
- Using timetables(M963)
- Using calendars(M747)

10. Measures

- Estimating and measuring length, mass and capacity(M828)
- Converting units of length, mass and capacity(M774)
- Using appropriate units(M487)

- Using the distributive law(M637)
- Expanding single brackets(M237)
- Expanding single brackets and simplifying expressions(M792)
- Factorising into one bracket(M100)

- Writing probabilities as fractions(M941)
- Writing probabilities as fractions, decimals and percentages(M938)
- Probabilities of mutually exclusive events(M755)
- Sample space diagrams(M718)

Updated September 2022