Year 7 Discoverers

Sparx Maths

BUDEHAVEN MATHS

One and all

Articulate Represent Connect

Year 7 | Scheme of Learning | Sparx Maths Codes

Autumn | Half Term 1

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
WB	4/9/23	11/9/23	18/9/23	25/9/23	2/10/23	9/10/23	16/10/23
	Unit 1: Sequences		Unit 2: Algebraic Notation		Unit 3: Equality & Equivalence		Consolidation

Autumn | Half Term 2

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
WB	30/10/23	6/11/23	13/11/23	20/11/23	27/11/23	4/12/23	11/12/23	18/12/23
	Unit 4: Place value & ordering integers & decimals			Unit 5: Fraction, decimal & percentage equivalence			Revision, assessment & feedback	

Spring | Half Term 3

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
WB	8/1/24	15/1/24	22/1/24	29/1/24	5/2/24	12/2/24
	Unit 6: Addition & subtraction		Unit 7: Multiplication and division			Unit 8: Fractions & percentages

Spring | Half Term 4

	Week 1	Week 2	Week 3	Week 4	Week 5
WB	26/2/24	4/3/24	11/3/24	18/3/24	25/3/24
	Unit 9: Operations & equations with directed number			Unit 10: Addition & subtraction of fractions	

Summer | Half Term 5

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
WB	15/4/24	22/4/24	29/4/24	6/5/24	13/5/24	20/5/24
	Unit 11: Constructing, measuring & using geometric notation			Unit 12: Developing geometric reasoning		

Summer | Half Term 6

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
WB	3/6/24	10/6/24	17/6/24	24/6/24	1/7/24	8/7/24	15/7/24
	Unit 13: Developing number sense		Unit 14: Sets and probability		Unit 15: Prime numbers		Consolidation

Weeks 1 & 2

Unit 1: Sequences

Learning Objectives:

- ❑ Term-to-term rules for numerical sequences (M381)
- ❑ Term-to-term rules for sequences of patterns (M241)

Weeks 3 & 4

Unit 2: Understand and use algebraic notation

Learning Objectives:

- ❑ Algebraic notation (M813)
- ❑ Algebraic terminology (M830)
- ❑ Function machines (M175, M428)
- ❑ Substituting into expressions with one operation (M417)
- ❑ Substituting into expressions with multiple operations (M327)
- ❑ Substituting into algebraic formulae (M208)
- ❑ Substituting into real-life formulae (M979)
- ❑ Substituting into position-to-term rules (M166)
- ❑ (H) Position-to-term rules for arithmetic sequences (M991)
- ❑ (H) Position-to-term rules for sequences of patterns (M866)

Weeks 5&6

Unit 3: Equality and equivalence

Learning Objectives:

- ❑ Solving equations with one step (M707)
- ❑ Simplifying expressions containing a single variable (M795)
- ❑ Simplifying expressions containing multiple variables (M531)
- ❑ (H) Simplifying expressions containing non-linear terms (M949)

Week 7

Consolidation

- ❑ Complete tasks from any of the units of work above

Weeks 1, 2 & 3

Unit 4: Place value & ordering integers & decimals

Learning Objectives:

- ❑ Using number lines (M763)
- ❑ Integer place value (M704)
- ❑ Decimal place value (M522)
- ❑ Rounding integers (M111)
- ❑ Rounding decimals (M431)
- ❑ Calculating the range (M328)
- ❑ Calculating the median (M934)
- ❑ (H) Using standard form with positive indices (M719)
- ❑ (H) Using standard form with negative indices (M678)

Weeks 4, 5 & 6

Unit 5: Fraction, decimal & percentage equivalence

Learning Objectives:

- ❑ 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)
- ❑ 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)

Weeks 7 & 8

Consolidation

- ❑ Complete tasks from any of the units of work above

Weeks 1 & 2

Unit 6: Solving problems with addition and subtraction

Learning Objectives:

- ❑ Adding integers (M928)
- ❑ Adding decimals (M429)
- ❑ Subtracting integers (M347)
- ❑ Subtracting decimals (M152)
- ❑ Finding perimeters using grids (M920)
- ❑ Finding the perimeter of rectangles and simple shapes (M635)
- ❑ Finding the perimeter of compound shapes (M690)
- ❑ Interpreting frequency tables and two-way tables (M899)
- ❑ Interpreting bar charts (M738)
- ❑ Calculating with time (M627)
- ❑ Using timetables (M963)
- ❑ Using calendars (M747)

Weeks 3 & 4

Unit 7: Solving problems with multiplication and division

Learning Objectives:

- ❑ Finding the lowest common multiple (M227)
- ❑ Finding factors and using divisibility tests (M823)
- ❑ Finding the highest common factor (M698)
- ❑ 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)
- ❑ Using a written method to divide by decimals (M491)

Weeks 4 & 5

Unit 7 (continued): Solving problems with multiplication and division

Learning Objectives:

- ❑ Calculating with roots and powers (M135)
- ❑ Using the correct order of operations (M521)
- ❑ Using the commutative laws (M952)
- ❑ Using the associative laws (M409)
- ❑ Converting units of length, mass and capacity (M774)
- ❑ 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)
- ❑ (H) Finding the area of trapezia (M705)
- ❑ Calculating the mean (M940)

Week 6

Unit 8: Fractions and percentages of an amount

Learning Objectives:

- ❑ Finding fractions of shapes (M158)
- ❑ Constructing fractions (M939)
- ❑ Fractions of amounts without a calculator (M695)
- ❑ Fractions of amounts with a calculator (M684)
- ❑ Finding percentages of amounts without a calculator (M437)
- ❑ Finding percentages of amounts with a calculator (M905)

Weeks 1, 2 & 3

Unit 9: Operations & equations with directed number

Learning Objectives:

- ❑ Using number lines (M763)
- ❑ Ordering negative numbers (M527)
- ❑ Adding and subtracting with negative numbers (M106)
- ❑ Multiplying and dividing with negative numbers (M288)
- ❑ (R) Using the correct order of operations (M521)
- ❑ (R) Substituting into expressions with multiple operations (M327)
- ❑ (R) 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)
- ❑ Calculating with roots and powers (M135)
- ❑ Using a calculator (M757)

Weeks 4 & 5

Unit 10: Addition & subtraction of fractions

Learning Objectives:

- ❑ 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)
- ❑ (H) Adding and subtracting algebraic fractions(M336)

Weeks 1, 2 & 3

Unit 11: Constructing, measuring & using geometric notation

Learning Objectives:

- ❑ Using a ruler (M985)
- ❑ Line properties (M814)
- ❑ Shape properties (M276)
- ❑ Symmetry (M523)
- ❑ Types of angles (M502)
- ❑ Estimating angles (M541)
- ❑ Measuring angles (M780)
- ❑ Drawing angles (M331)
- ❑ Using a pair of compasses (M196)
- ❑ Constructing triangles (M565)
- ❑ Drawing pie charts (M574)
- ❑ Interpreting pie charts (M165)

Weeks 4, 5 & 6

Unit 12: Developing geometric reasoning

Learning Objectives:

- ❑ Angles on a line and about a point (M818)
- ❑ Vertically opposite angles (M163)
- ❑ Angles in triangles (M351)
- ❑ Angles in quadrilaterals (M679)
- ❑ Combining angle facts (M319)
- ❑ (H) Angles on parallel lines (M606)
- ❑ (H) Using quadrilateral properties to find angles (M393)
- ❑ (H) Angles in polygons (M653)

Weeks 1 & 2

Unit 13: Developing number sense

Learning Objectives:

- ❑ Using the commutative laws(M952)
- ❑ Using the associative laws(M409)
- ❑ Using the distributive law (M637)
- ❑ Rounding integers using significant figures(M994)
- ❑ Rounding decimals using significant figures(M131)
- ❑ Estimating calculations (M878)

Weeks 3 & 4

Unit 14: Sets and probability

Learning Objectives:

- ❑ Venn diagrams (M829)
- ❑ Using probability phrases (M655)
- ❑ Writing probabilities as fractions (M941)
- ❑ Writing probabilities as fractions, decimals and percentages (M938)
- ❑ Probabilities of mutually exclusive events (M755)
- ❑ (H) Probabilities from Venn diagrams (M419)

Weeks 5 & 6

Unit 15: Prime numbers

Learning Objectives:

- ❑ 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)
- ❑ (H) Finding the HCF and LCM using prime factor decomposition (M365)

Week 7

Consolidation

- ❑ Complete tasks from any of the units of work above