

Sparx Maths


Year 8 | 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: Ratio and scale | Unit 2: Multiplicative <br> change | Unit 3: Multiplying and <br> dividing fractions | 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: Working in the cartesian plane | Unit 5: Representing <br> data | Unit 6: Tables and <br> probability | Consolidation |  |  |  |  |

## 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 7: Brackets, equations \& inequalities |  |  |  | Unit 8: <br> Sequences | Unit 9: <br> Indices |

## 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 10: Fractions and percentages |  | Unit 11: Standard index <br> form |  |  |

## 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 12: Developing <br> number sense | Unit 13: Angles in <br> parallel lines \& polygons | Unit 14: Area of trapezia <br> \& circles |  |  |  |

## 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 15: <br> Line <br> symmetry <br> $\&$ <br> reflection | Unit 16: Data handling cycle |  |  |  |  | Unit 17: Measures of <br> location |

## Unit 1: Ratio and Scale

Learning Objectives:
Writing and simplifying ratios (M885)

- Using equivalent ratios to find unknown amounts (M801)

Sharing amounts in a given ratio (M525)
$\square$ Writing ratios in the form 1:n (M543)

- Converting between ratios, fractions and percentages (M267)
$\square$ Identifying parts of circles (M595)
Finding the circumference of circles (M169)


## Unit 2: Multiplicative change

Learning Objectives:
Colving proportion problems (M478)
$\square$ Value for money (M681)
$\square$ Interpreting real-life graphs (M771)
[ Currency conversion (U610)
$\square$ Drawing and interpreting scale diagrams (M112)
$\square$ Understanding similarity (M377)

- Finding unknown sides in similar shapes (M324)


## Unit 3: Multiplying and dividing fractions

Learning Objectives:

- Multiplying fractions (M157)
$\square$ Reciprocals (M216)
$\square$ Dividing fractions (M110)
$\square$ Multiplying with mixed numbers (M197)
$\square$ Dividing with mixed numbers (M265)


## Consolidation

Complete tasks from any of the units of work above

## Unit 4: Working in the cartesian plane

Learning Objectives:

- Reading and plotting coordinates (M618)
$\square$ Solving shape properties involving coordinates (M230)
(R) Substituting into algebraic formulae (M208)
[ Plotting horizontal and vertical lines (M797)
$\square$ Plotting straight line graphs (M932)
(H) Calculating midpoints (M622)
$\square$ (H) Finding equations of straight-line graphs (M544)


## Unit 5: Representing data

Learning Objectives:
$\square$ Types of data (U322)
$\square$ Collecting and recording data using tables (M945)
$\square$ Interpreting frequency tables and two-way tables (M899)
$\square$ Interpreting frequency tables with grouped data (M441)

- Plotting and interpreting scatter graphs (M769, M596)
$\square$ Using lines of best fit (U128)


## Unit 6: Tables and probability

Learning Objectives:
U Using probability phrases (M655)
$\square$ Writing probabilities as fractions (M941)
$\square$ Writing probabilities as fractions, decimals and percentages (M938)
$\square$ Probabilities of mutually exclusive events (M755)

- Sample space diagrams (M718)
- Venn diagrams (M829)
- Probabilities from Venn diagrams (M419)


## Consolidation

Complete tasks from any of the units of work above

## Unit 7: Brackets, equations \& inequalities

Learning Objectives:
$\square$ Using the distributive law (M637)
$\square$ Expanding single brackets (M237)
Expanding single brackets and simplifying expressions (M792)
$\square$ Factorising into one bracket (M100)
[ (H) Expanding double brackets (M960)
$\square$ (R) Solving equations of the form $a x+b=c$ (M634)
(R) Solving equations of the form $x / a+b=c$ (M647)
$\square$ Solving equations of the form $(x+a) / b=c(M 401)$

- Solving linear equations involving brackets (M902)
$\square$ Solving single inequalities (M118)
(H) Solving equations with the unknown on both sides (M554)
$\square$ Constructing and solving equations (M957)
$\square$ Algebraic terminology (M830)


## Unit 8: Sequences

Learning Objectives:
$\square$ Substituting into position-to-term rules (M166)
$\square$ Position-to-term rules for arithmetic sequences (M991)
$\square$ Position-to-term rules for sequences of patterns (M866)

## Unit 9: Indices

Learning Objectives:
(R) Calculating with roots and powers (M135)
(R) Algebraic notation (M813)
$\square$ Index rules with positive indices (M608)
$\square$ Index rules with negative indices (M150)
$\square$ Simplifying expressions using index laws (M120)

## Unit 10: Fractions and percentages

Learning Objectives:
$\square$ (R) Converting between fractions, decimals and percentages (M264)
$\square$ Writing numbers as percentages of other numbers (M235)
$\square$ (R) Finding percentages of amounts without a calculator (M437)
$\square$ (R) Finding percentages of amounts with a calculator( M905)
$\square$ Percentage change without a calculator (M476)
$\square$ Percentage change with a calculator (M533)
$\square$ (H) Finding original values in percentage change problems (M528)

## Unit 11: Standard index form

Learning Objectives:
$\square$ (R) Multiplying and dividing by 10, 100 and 1000(M113)
$\square$ Using standard form with positive indices(M719)
$\square$ Using standard form with negative indices(M678)
$\square$ Multiplying and dividing numbers in standard form (U264)
$\square$ Adding and subtracting numbers in standard form (U290)
$\square$ Standard form with a calculator (U161)

## Unit 12: Developing number sense

## Learning Objectives:

(R) Rounding integers and decimals (M111, M431)

- Rounding integers using significant figures (M994)
$\square$ Rounding decimals using significant figures (M131)
(H) Finding error intervals (M730)
$\square$ Converting units of length, mass and capacity (M774)
$\square$ (H) Converting units of area (M728)
- (H) Converting units of volume (M465)

Calculating with time and the calendar (M627, M747)

## Unit 13: Angles in parallel lines and polygons

Learning Objectives:
(R) Angles on a line and about a point (M818)
$\square$ (R) Vertically opposite angles(M163)
(R) Angles in triangles and quadrilaterals (M351, M679)
$\square$ (R) Combining angle facts(M319)
$\square$ Angles on parallel lines (M606)
$\square$ Using quadrilateral properties to find angles (M393)
Angles in polygons (M653)

## Unit 14: Area of trapezia \& circles

Learning Objectives:
(R) Finding the area of rectangles and triangles (M390, M610)
$\square$ (R) Finding the area of compound shapes (M269, M996)
$\square$ (R) Finding the area of parallelograms (M291)

- Finding the area of trapezia (M705)
$\square$ (R) Identifying parts of circles (M595)
$\square$ Finding the circumference of circles (M169)
$\square$ Finding the area of circles (M231)
(H) Finding the area of sectors (M430)
(H) Finding the arc length of a sector (M280)


## Unit 15: Line symmetry and reflection

Learning Objectives:
$\square$ Symmetry(M523)

- Reflection (M290)


## Unit 16: Data handling cycle

## Learning Objectives:

Designing and using questionnaires (M493)
(R) Collecting and recording data using tables (M945)
(R) Drawing and interpreting tally charts (M597)
$\square$ (R) Drawing and interpreting pictograms (M644)
(R) Drawing and interpreting bar charts (M460, M738)
$\square$ Draw and interpret pie charts (M574, M165)
$\square$ Draw and interpret line graphs (M140, M183)
$\square$ Drawing and interpreting frequency polygons (U840)
$\square$ Presenting data and making conclusions (M450)
Comparing populations using diagrams (U520)

Unit 17: Measures of location
Learning Objectives:
(R) Averages and the range (M328, M934, M841, M940)
$\square$ Finding averages from frequency tables (M127)
$\square$ Finding averages from grouped data (M287)
$\square$ Choosing suitable averages and solving problems (M440)

