

| | |
|---------------------------|-------------|
| Subject | Maths |
| Term | Cycle 1 |
| Duration (approx.) | 4 weeks |
| Module | Place Value |

Factual knowledge to be taught and assessed (including subject specific vocabulary).

- Writing and saying numbers in words
- Integers and decimals, ordering, positive and negative, using symbols =, ≠, <, >, ≤, ≥
- Multiplying/dividing by powers of 10
- Rounding, dp and sf
- Applications & problems

Skills and concepts to be developed and assessed (linking to identified AOs)

- Writing integers in numerals
- Writing integers in words
- Writing integers in expanded form
- Ordering integers
- Writing decimals in expanded form
- Comparing and ordering decimals
- Decimals on a number line
- Ordering positive and negative numbers
- Multiplying by 10, 100, 1000 etc
- Multiplying by 0.1, 0.01, 0.001 etc
- Dividing by 10, 100, 1000, 0.1, 0.01 etc
- Multiplying and dividing by powers of 10
- Rounding to the nearest 10, 100 1000 etc
- Rounding to decimal places
- Rounding to significant figures
- Midpoints and medians
- Convert common metric units

Formative Assessment/work prior to end of unit:

- Questioning in class.
- Sparx homework
- Independent completion of exercises.
- Follow up 5 every fortnight
- Low stakes quiz
- Use of whiteboards

Summative Assessment

45 minute written assessment based upon modules 1-3 during Autumn 2.

Retrieval Practice and developing student learning

Retrieval lesson starters

Retrieval will make up 40% of their 1 hour set homework

Spelling-Punctuation-Grammar

How will you promote high standards within this module?

- Emphasis given to key words.
- Definitions provided.
- Spellings corrected where necessary when marking.
- Develop the ability to communicate mathematically.

Link forward: where next for the learning?

Number topics are built upon throughout the year and revisited throughout KS3

| | |
|---------------------------|--------------------------|
| Subject | Maths |
| Term | Cycle 1 |
| Duration (approx.) | 3 weeks |
| Module | Addition and Subtraction |

Factual knowledge to be taught and assessed (including subject specific vocabulary).

- Addition and subtraction
- Inverting addition and subtraction,
- additive inverse, additive identity
- Applications & problems

Skills and concepts to be developed and assessed (linking to identified AOs)

- Column addition with integers and decimals
- Column subtraction with integers and decimals
- Strategies for addition and subtraction
- Number Bonds
- Working with decimals
- Inverse operations and fact families
- Maintaining Equality
- Zero pairs and the additive inverse
- Perimeter
- Angles
- Mean and Range
- Word Problems

Formative Assessment/work prior to end of unit:

- Questioning in class.
- Sparx homework
- Independent completion of exercises.
- Follow up 5 every fortnight
- Low stakes quiz
- Use of whiteboards

Summative Assessment

45 minute written assessment based upon modules 1-3 during Autumn 2.

Retrieval Practice and developing student learning

Retrieval lesson starters

Retrieval will make up 40% of their 1 hour set homework

**Spelling-Punctuation-Grammar
How will you promote high standards within this module?**

- Emphasis given to key words.
- Definitions provided.
- Spellings corrected where necessary when marking.
- Develop the ability to communicate mathematically.

Link forward: where next for the learning?

Number topics are built upon throughout the year and revisited throughout KS3

| | |
|---------------------------|-----------------------------|
| Subject | Maths |
| Term | Cycle 1 |
| Duration (approx.) | 4 weeks |
| Module | Multiplication and Division |

Factual knowledge to be taught and assessed (including subject specific vocabulary).

- Multiplication and Multiples
- Division and Factors
- Applications and problems

Skills and concepts to be developed and assessed (linking to identified AOs)

- Fill in multiplication grids and spot patterns
- Multiply integers using columns
- Multiply decimals
- Multiply with grids
- List models and common multiples, identify LCM
- Understand multiplication as repeated addition
- Divide integers using multiplication facts
- Use different representations of division
- Use fact families of multiplication and division using inverse operations
- Divide by decomposing
- Divide decimals
- List factors and common factors
- Interpret word problems
- Work out the area of rectangles
- Work out the volume of cuboids
- Understand and use tests of divisibility

Formative Assessment/work prior to end of unit:

- Questioning in class.
- Sparx homework
- Independent completion of exercises.
- Follow up 5 every fortnight
- Low stakes quiz
- Use of whiteboards

Summative Assessment

45 minute written assessment based upon modules 1-3 during Autumn 2.

Retrieval Practice and developing student learning

Retrieval lesson starters

Retrieval will make up 40% of their 1 hour set homework

Spelling-Punctuation-Grammar

How will you promote high standards within this module?

- Emphasis given to key words.
- Definitions provided.
- Spellings corrected where necessary when marking.
- Develop the ability to communicate mathematically.

Link forward: where next for the learning?

Number topics are built upon throughout the year and revisited throughout KS3

| | |
|---------------------------|--------------------------|
| Subject | Maths |
| Term | Cycle 2 |
| Duration (approx.) | 3 weeks |
| Module | Powers, Roots and Primes |

Formative Assessment/work prior to end of unit:

- Questioning in class.
- Sparx homework
- Independent completion of exercises.
- Follow up 5 every fortnight
- Low stakes quiz
- Use of whiteboards

Factual knowledge to be taught and assessed (including subject specific vocabulary).

- Squares to 15^2 and cubes to 10^3
- Calculating other powers, evaluating numerical expressions with powers
- addition and subtraction rules with positive indices, power of zero
- Roots as inverses of powers
- Prime numbers, product of primes,
- applications and problems

Skills and concepts to be developed and assessed (linking to identified AOs)

- Square and cube numbers
- Writing and evaluating powers
- Reasoning with repeated multiplication
- Index Laws
- Square roots and cube roots
- Higher-order roots
- Powers and roots of larger or smaller numbers
- Prime Numbers
- Prime factor composition and decomposition
- Using Prime Factors
- Problems with powers, roots and primes
- Areas and Volumes

Summative Assessment

45 minute written assessment based upon modules 4 to 6 during Spring 1

Retrieval Practice and developing student learning

Retrieval lesson starters

Retrieval will make up 40% of their 1 hour set homework

Spelling-Punctuation-Grammar

How will you promote high standards within this module?

- Emphasis given to key words.
- Definitions provided.
- Spellings corrected where necessary when marking.
- Develop the ability to communicate mathematically.

Link forward: where next for the learning?

Number topics are built upon throughout the year and revisited throughout KS3

| | |
|---------------------------|---------------------|
| Subject | Maths |
| Term | Cycle 2 |
| Duration (approx.) | 2 weeks |
| Module | Order of Operations |

Formative Assessment/work prior to end of unit:

- Questioning in class.
- Sparx homework
- Independent completion of exercises.
- Follow up 5 every fortnight
- Low stakes quiz
- Use of whiteboards

Summative Assessment

45 minute written assessment based upon modules 4-6 during Spring 2.

Retrieval Practice and developing student learning

Retrieval lesson starters

Retrieval will make up 40% of their 1 hour set homework

Factual knowledge to be taught and assessed (including subject specific vocabulary).

- Order of operations
- Inverse order of operations (e.g. "I think of a number"), including function machines

Skills and concepts to be developed and assessed (linking to identified AOs)

- Understand the structure of arithmetic
- Carry out the four operations in the correct order
- Carry out the four operations and exponentiation in the correct order
- Carry out calculations involving brackets in the correct order
- Solve mixed problems

Spelling-Punctuation-Grammar

How will you promote high standards within this module?

- Emphasis given to key words.
- Definitions provided.
- Spellings corrected where necessary when marking.
- Develop the ability to communicate mathematically.

Link forward: where next for the learning?

Number topics are built upon throughout the year and revisited throughout KS3

| | |
|---------------------------|-----------------|
| Subject | Maths |
| Term | Cycle 2 |
| Duration (approx.) | 3 weeks |
| Module | Directed Number |

Formative Assessment/work prior to end of unit:

- Questioning in class.
- Sparx homework
- Independent completion of exercises.
- Follow up 5 every fortnight
- Low stakes quiz
- Use of whiteboards

Summative Assessment

45 minute written assessment based upon modules 4-6 during Spring 1

Factual knowledge to be taught and assessed (including subject specific vocabulary).

- Understanding directed numbers
- Adding and Subtracting directed number
- Multiplying, dividing and powers directed number

Retrieval Practice and developing student learning

Retrieval lesson starters

Retrieval will make up 40% of their 1 hour set homework

Skills and concepts to be developed and assessed (linking to identified AOs)

- Place directed numbers on number lines
- Compare and order directed numbers
- Identify zero pairs
- Add directed numbers
- Subtract directed numbers
- Multiply directed numbers
- Divide directed numbers
- Use exponentiation with directed numbers

Spelling-Punctuation-Grammar How will you promote high standards within this module?

- Emphasis given to key words.
- Definitions provided.
- Spellings corrected where necessary when marking.
- Develop the ability to communicate mathematically.

Link forward: where next for the learning?

Number topics are built upon throughout the year and revisited throughout KS3

| | |
|---------------------------|-----------|
| Subject | Maths |
| Term | Cycle 3 |
| Duration (approx.) | 5 weeks |
| Module | Fractions |

Factual knowledge to be taught and assessed (including subject specific vocabulary).

- Visual representations
- Equivalent fractions, proper and improper fractions, complement of a fraction
- Adding and subtracting fractions
- Fractions of Amounts
- Multiplying and Dividing

Skills and concepts to be developed and assessed (linking to identified AOs)

- Identify and write fractions
- Represent fractions with diagrams and shading
- Identify fractions that are greater than 1
- Convert between mixed numbers and improper fractions
- Identify fractions that are equal to 1
- Work with equivalent fractions
- Write fractions in their simplest form
- Order fractions
- Add and subtract fractions
- Work out fractions of amounts
- Write one number as a fraction of another
- Referent wholes and finding the whole
- Multiply fractions by integers

- Multiply fractions by fractions
- Divide fractions

Formative Assessment/work prior to end of unit:

- Questioning in class.
- Sparx homework
- Independent completion of exercises.
- Follow up 5 every fortnight
- Low stakes quiz
- Use of whiteboards

Summative Assessment

45 minute written assessment based upon modules 7-9 during Summer 2

Retrieval Practice and developing student learning

Retrieval lesson starters

Retrieval will make up 40% of their 1 hour set homework

Spelling-Punctuation-Grammar

How will you promote high standards within this module?

- Emphasis given to key words.
- Definitions provided.
- Spellings corrected where necessary when marking.
- Develop the ability to communicate mathematically.

Link forward: where next for the learning?

Number topics are built upon throughout the year and revisited throughout KS3

| | |
|---------------------------|--|
| Subject | Maths |
| Term | Cycle 3 |
| Duration (approx.) | 4 weeks |
| Module | Manipulating and Simplifying expressions |

Formative Assessment/work prior to end of unit:

- Questioning in class.
- Sparx homework
- Independent completion of exercises.
- Follow up 5 every fortnight
- Low stakes quiz
- Use of whiteboards

Summative Assessment

45 minute written assessment based upon modules 7-9 during Summer 2

Retrieval Practice and developing student learning

Retrieval lesson starters

Retrieval will make up 40% of their 1 hour set homework

Spelling-Punctuation-Grammar

How will you promote high standards within this module?

- Emphasis given to key words.
- Definitions provided.
- Spellings corrected where necessary when marking.
- Develop the ability to communicate mathematically.

Link forward: where next for the learning?

Algebra topics are built upon throughout the year and revisited throughout KS3

Factual knowledge to be taught and assessed (including subject specific vocabulary).

- Algebraic notation
- Creating expressions
- Collecting like terms
- Multiplying and Dividing Expressions
- Expanding and Factorising
- Substitution

Skills and concepts to be developed and assessed (linking to identified AOs)

- Use algebraic notation and write simple expressions
- Identify the different parts of an expression and begin to simplify
- Add and subtract expressions
- Multiply and divide expressions by using index laws
- Expand a single bracket- multiply using the distributive law
- Divide using the distributive law
- Factorise into a single bracket
- Substitute values into expressions

| | |
|---------------------------|-------------|
| Subject | Maths |
| Term | Cycle 3 |
| Duration (approx.) | 4 weeks |
| Module | Percentages |

Factual knowledge to be taught and assessed (including subject specific vocabulary).

- FDP equivalence
- Percentages of Amounts
- Application and Problem Solving

Skills and concepts to be developed and assessed (linking to identified AOs)

- Write decimals as fractions
- Write fractions as decimals
- Work with terminating and recurring decimals
- Match percentages and their equivalent fractions and decimals
- Understand referent wholes
- Find a percentage of an amount
- Use decimal multipliers
- Find one percentage given another
- Increase and decrease amounts by percentages
- Understand percentages in graphs and charts

Formative Assessment/work prior to end of unit:

- Questioning in class.
- Sparx homework
- Independent completion of exercises.
- Follow up 5 every fortnight
- Low stakes quiz
- Use of whiteboards

Summative Assessment

45 minute written assessment based upon modules 7-9 during Summer 2

Retrieval Practice and developing student learning

Retrieval lesson starters

Retrieval will make up 40% of their 1 hour set homework

Spelling-Punctuation-Grammar

How will you promote high standards within this module?

- Emphasis given to key words.
- Definitions provided.
- Spellings corrected where necessary when marking.
- Develop the ability to communicate mathematically.

Link forward: where next for the learning?

Number topics are built upon throughout the year and revisited throughout KS3

| | |
|---------------------------|------------------------------------|
| Subject | Maths |
| Term | Cycle 3 |
| Duration (approx.) | 4 weeks |
| Module | Estimation and use of a Calculator |

Factual knowledge to be taught and assessed (including subject specific vocabulary).

- Using a calculator
- Time
- Rounding and Estimating

Skills and concepts to be developed and assessed (linking to identified AOs)

- Using the calculator
- Calculations with time
- Interpret Timetables
- Approximations
- Approximating powers and surds
- Error intervals
- Estimation
- Related calculations
- Truncation

Formative Assessment/work prior to end of unit:

- Questioning in class.
- Sparx homework
- Independent completion of exercises.
- Follow up 5 every fortnight
- Low stakes quiz
- Use of whiteboards

Summative Assessment

45 minute written assessment based upon modules 7-9 during Summer 2

Retrieval Practice and developing student learning

Retrieval lesson starters

Retrieval will make up 40% of their 1 hour set homework

**Spelling-Punctuation-Grammar
How will you promote high standards within this module?**

- Emphasis given to key words.
- Definitions provided.
- Spellings corrected where necessary when marking.
- Develop the ability to communicate mathematically.

Link forward: where next for the learning?

Number topics are built upon throughout the year and revisited throughout KS3

| | |
|---------------------------|---------|
| Subject | Maths |
| Term | Cycle 1 |
| Duration (approx.) | 4 weeks |
| Module | |

Number topics are built upon throughout the year and revisited throughout KS3

Factual knowledge to be taught and assessed (including subject specific vocabulary).

Skills and concepts to be developed and assessed (linking to identified AOs)

Formative Assessment/work prior to end of unit:

- Questioning in class.
- Sparx homework
- Independent completion of exercises.
- Follow up 5 every fortnight
- Low stakes quiz
- Use of whiteboards

Summative Assessment

45 minute written assessment based upon modules 1-3 during Autumn 2.

Retrieval Practice and developing student learning

Retrieval lesson starters

Retrieval will make up 40% of their 1 hour set homework

Spelling-Punctuation-Grammar
How will you promote high standards within this module?

- Emphasis given to key words.
- Definitions provided.
- Spellings corrected where necessary when marking.
- Develop the ability to communicate mathematically.

Link forward: where next for the learning?