| (1) |  | LTP for both cycle A and cycle B: Maths |
| :---: | :---: | :---: |
|  |  | Y7 |
|  | Key area of understanding | Number \& place value Addition and subtraction |
|  | Knowledge \& skills development | Number and place value: <br> - count from 0 to and across 100 , forward and backwards, beginning with 0 or 1 , and from any given number <br> Addition and subtraction: <br> - add and subtract 1-digit and 2-digit numbers to 20 (9 $+9,18-9)$, including zero |
|  | Key area of understanding | Measure Geometry Statistics |
|  | Knowledge \& skills development | Measure: measure and record using non-standard units Geometry: recognise and name common 2-D shapes, including: square, rectangle, circle and triangle Statistics: Read and interpret a simple pictogram |
| ․․品in | Key area of understanding | Fractions <br> Multiplication \& division |
|  | Knowledge \& skills development | Fractions: demonstrate some understanding that 'share' requires them to distribute some of a group of objects and equally share concrete objects <br> Multiplication \& division: distinguish between 'one' and 'lots', when shown an example of a single object and a group of objects and begin to understand that multiplication is repeated addition |
| $\begin{aligned} & \text { N } \\ & \text { م } \\ & \text { 름 } \end{aligned}$ | Key area of understanding | Measure Geometry Statistics |
|  | Knowledge \& skills development | Measure: begin to measure and record using standard units Geometry: describe and perform half a turn to the left and to the right <br> Statistics: Begin to read and interpret a block graph |
|  | Key area of understanding | Addition and subtraction Measure Geometry |
|  | Knowledge \& skills development | Addition \& subtraction: add three 1-digit numbers <br> Measure: measure and record using standard units <br> Geometry: recognise and name common 3-D and 2-D shapes, including cube, pyramid and sphere |


| Y8 |  |
| :---: | :---: |
| Number \& place value Addition and subtraction |  |
| Number \& place value: recognise the place value of each digit in a 2 -digit number (tens, ones) and count in steps of 2, 3,5 and 10 , count in tens from any number, and give 10 more or less than a given number to 100 <br> Addition and subtraction: recall and use number bonds and related subtraction facts within 20 |  |

## Number \& place value

Addition and subtraction
Number \& place value: compare and order numbers from 0 up to 100; use <, > and = signs. Arrange, read and write numbers in increasing and decreasing order
Addition and subtraction: add and subtract numbers with up to two 2 -digits using partitioning methods

| Measure | Measure |
| :--- | :--- |
| Geometry | Geometry |
| Statistics | Statistics |

Statistics Geometry: identify and describe the properties of 2-D shapes
Statistics: Sort objects using a Venn diagram
netry
Statistics
Measure: compare and order lengths, mass,
volume/capacity and record the results using $>$, < and =
Geometry: identify 2-D shapes on the surface of 3-D
shapes, for example rectangle and square on a cuboid, circle on a cylinder, triangle on a pyramid
Statistics: Begin to construct charts and graphs

## Fractions

Multiplication \& division
Fractions
Multiplication \& division
ractions: recognise, name and write $1 / 2$ as one of two equal parts of an object, shape or quantity
Multiplication \& division: recall multiplication and division
facts for the 2 multiplication tables and use the
multiplication (x), division ( $\div$ ) and equals ( $=$ ) signs to read and write mathematical statements

| Measure | Measure <br> Geometry <br> Statistics |
| :--- | :--- |
| Statistics |  |

Measure: identify and use the correct measuring tool/vessel with a degree of accuracy
Geometry: describe and perform a quarter and three quarter turn turn to the left and to the right Statistics: Sort objects using a Carroll diagram

| Addition and subtraction | Ad |
| :--- | :--- |
| Measure | Meometry |
| Ged |  | numbered unit

Geometry: recognise angles as a property of shape and associate angle as an amount of turning and begin to identify different types of lines
Statistics: Continue to construct charts and graphs

## Addition and subtraction

Measure
Geometry
Addition \& subtraction: add and subtract numbers with up to two 2-digits including using column addition without carrying and column subtraction without
Measure: read relevant scales to the nearest numbered unit

Geometry: describe rotation as a turn and in terms of right angles for quarter and half turns (clock-wise and anti-

|  |  |  |  | clockwise), and movement in a straight line. |
| :---: | :---: | :---: | :---: | :---: |
|  | Key area of understanding | Multiplication \& division Fractions Statistics | Multiplication \& division Fractions Statistics | Multiplication \& division Fractions Statistics |
| N | Knowledge \& skills development | Multiplication \& division: recognise and write the multiplication symbol ( $x$ ) and the division symbol ( $\div$ ) in mathematical statements, calculating the answer with the teacher using concrete objects <br> Fractions: recognise, name and write $1 / 2$ as one of two equal parts of an object <br> Statistics: Begin to create a block graph | Multiplication \& division: recall multiplication and division facts for the 5 and 10 multiplication tables and continue to use the multiplication $(\mathrm{x})$, division $(\div)$ and equals $(=)$ signs to read and write mathematical statements <br> Fractions: recognise, name and write $1 / 4$ and $3 / 4$ as parts of an object, shape <br> Statistics: Interpret pictograms where the picture represents more than ' 1 ' | Multiplication \& division: recognise and use the inverse relationship between multiplication and division to check calculations and ensure students can recognise and show that multiplication can be done in any order (commutative) and division cannot <br> Fractions: recognise, name and write fractions $1 / 4,1 / 3,1 / 2$, $2 / 3$ and $3 / 4$ of a whole <br> Statistics: Extract and interpret information from a range of charts and tables and begin to work from a range scales |

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All students will also work weekly on their personalised number fluency development

|  |  | GCSE trajectory LTP for : Maths |  |
| :---: | :---: | :---: | :---: |
|  |  | Y10 | Y11 |
| 7$\bar{E}$$\frac{7}{7}$$\frac{1}{4}$ | Key area of understanding | Properties of number Units of measure | Patterns and sequences Ratio and proportion |
|  | Knowledge \& skills development | Properties of number: <br> - Understand and use place value <br> - Order positive integers <br> - Apply the four operations, including formal written methods, to integers <br> - Recognise and use relationships between operations <br> - Use the concepts and vocabulary of prime numbers, factors (divisors) and multiples <br> Units of measure: <br> - use standard units of measure and related concepts (length, area, volume/capacity, mass, time, money, etc.) <br> - measure line segments and angles in geometric figures, including interpreting maps and scale drawings | Patterns and sequences: <br> - generate terms of a sequence from either a term-to-term or a position-to-term rule <br> - recognise and use sequences of triangular, square and cube numbers Ratio and proportion: <br> - use ratio notation, including reduction to simplest form <br> - understand and use proportion as equality of ratios <br> - relate ratios to fractions <br> - express the division of a quantity into two parts as a ratio |
|  | Key area of understanding | Properties of 2D shapes Statistical diagrams | Constructions and Scale drawings Scatter graphs |
|  | Knowledge \& skills development | Properties of 2D shapes: <br> - use conventional terms and notations <br> - derive and apply the properties and definitions of: special types of quadrilaterals, including square, rectangle, parallelogram, trapezium, kite and rhombus; and triangles and other plane figures using appropriate language <br> - identify and apply circle definitions and properties <br> Statistical diagrams: <br> - interpret and construct frequency tables, bar charts \& pie charts | Constructions and Scale drawings: <br> - use the standard conventions for labelling and referring to the sides and angles of triangles; draw diagrams from written description <br> - use the standard ruler and compass constructions <br> Scatter graphs: <br> - apply statistics to describe a population <br> - use and interpret scatter graphs of bivariate data; recognise correlation and know that it does not indicate causation <br> - draw estimated lines of best fit |
|  | Key area of understanding | Negative numbers Perimeter and area | Percentages Compound measures |
|  | Knowledge \& skills development | Negative numbers: <br> - order positive and negative integers <br> - apply the four operations, including formal written methods, to integers, both positive and negative <br> Perimeter and area: <br> - know and apply formulae to calculate area of: rectangles, rectilinear composite shapes area of triangles \& parallelograms <br> - calculate the perimeters of 2D shapes, including composite shapes | Percentages: <br> - Define percentage as 'number of parts per hundred <br> - Interpret fractions and percentages as operators <br> - Interpret percentages as a fraction or a decimal <br> Compound measures: <br> - use standard units of mass, length, time, money and other measures (including standard compound measures) using decimal quantities where appropriate <br> - round numbers and measures to an appropriate degree of accuracy (e.g. to a specified number of decimal places or significant figures) <br> - change freely between related standard units (e.g. time, length, area, volume/capacity, mass) and compound units (e.g. speed, rates of pay, prices, density, pressure) in |


| $\begin{aligned} & \text { N } \\ & \text { Non } \\ & \text { ñㄹ } \end{aligned}$ | Key area of understanding | 3D shapes <br> Averages and range | Transformation and vectors Algebraic expressions |
| :---: | :---: | :---: | :---: |
|  | Knowledge \& skills development | 3D shapes: <br> - use conventional terms and notations: <br> - rotation symmetries <br> - identify properties of the faces, surfaces, edges and vertices of: cubes, cuboids, prisms, cylinders, pyramids, cones and spheres <br> - construct and interpret plans and elevations of 3D shapes <br> Averages and range: <br> - interpret, analyse and compare the distributions of data sets <br> - appropriate graphical representation involving discrete, continuous and grouped data <br> - appropriate measures of central tendency (median, mean, mode and modal class) and spread <br> - apply statistics to describe a population | Transformation and vectors: <br> - identify, describe and construct congruent and similar shapes, including on coordinate axes, by considering rotation, reflection, translation and enlargement (including fractional scale factors) <br> - apply addition and subtraction of vectors <br> Algebraic expressions: <br> use and interpret algebraic notation, including: <br> - $a b$ in place of $a \times b$ <br> - $3 y$ in place of $3 \times y$ <br> - $a^{2}$ in place of $a \times a, a^{3}$ in place of $a \times a \times a$ |
|  | Key area of understanding | Working with decimals Accuracy and rounding | Solving and setting up equations |
|  | Knowledge \& skills development | Working with decimals: <br> - order positive and negative decimals <br> - use the symbols $=, \neq,<,>, \leq, \geq$ <br> - understand and use place value <br> - recognise and use relationships between operations <br> - estimate answers; check calculations using approximation and estimation, including answers obtained using technology <br> Accuracy and rounding: <br> - use standard units of mass, length, time, money and other measures (including standard compound measures) using decimal quantities where appropriate <br> - round numbers and measures to an appropriate degree of accuracy (e.g. to a specified number of decimal places or significant figures <br> - use inequality notation to specify simple error intervals due to truncation or rounding | Solving and setting up equations: <br> - Solve linear equations in one unknown algebraically (including those with the unknown on both sides of the equation) <br> - Revision |
|  | Key area of understanding | Fractions and mixed numbers <br> Geometrical reasoning - Angle properties <br> Probability | Revision and examinations |
|  | Knowledge \& skills development | Fractions and mixed numbers: <br> - $\quad$order positive fractions <br> apply the four operations, including formal written methods, simple <br> - <br> fractions (proper and improper) <br> -1 or greater than 1 <br> - apply the four operations, including formal written methods, to mixed <br> numbers both positive and negative; <br> Geometrical reasoning - Angle properties: <br> - apply the properties of angles at a point, angles at a point on a straight <br> - $\quad$une, vertically opposite angles <br> - $\quad$inderstand and use alternate and corresponding angles on parallel lines |  |



Probability:

- apply ideas of randomness, fairness and equally likely events to calculate expected outcomes of multiple future experiments
- relate relative expected frequencies to theoretical probability, using appropriate language and the $0-1$ probability scale
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| (1) |  | Entry level trajectory LTP for: Maths |  |
| :---: | :---: | :---: | :---: |
|  |  | Y10 | Y11 |
|  | Key area of understanding | Number \& place value Addition and subtraction | Number \& place value Addition and subtraction |
|  | Knowledge \& skills development | Number \& place value: recognise the place value of each digit in a 2 -digit number (tens, ones) and count in steps of $2,3,5$ and 10 , count in tens from any number, and give 10 more or less than a given number to 100 <br> Addition and subtraction: recall and use number bonds and related subtraction facts within 20 | Number \& place value: compare and order numbers from 0 up to 100; use $<,>$ and $=$ signs. Arrange, read and write numbers in increasing and decreasing order Addition and subtraction: add and subtract numbers with up to two 2 -digits using partitioning methods |
|  | Key area of understanding | Measure Geometry Statistics | Measure Geometry Statistics |
|  | Knowledge \& skills development | Measure: compare measurements -eg longer and shorter Geometry: identify and describe the properties of 2-D shapes Statistics: Sort objects using a Venn diagram | Measure: compare and order lengths, mass, volume/capacity and record the results using $>$, < and = <br> Geometry: identify 2-D shapes on the surface of 3-D shapes, for example rectangle and square on a cuboid, circle on a cylinder, triangle on a pyramid <br> Statistics: Begin to construct charts and graphs |
|  | Key area of understanding | Fractions <br> Multiplication \& division | Fractions <br> Multiplication \& division |
| -1 - 号 in | Knowledge \& skills development | Fractions: recognise, name and write $1 / 2$ as one of two equal parts of an object, shape or quantity <br> Multiplication \& division: recall multiplication and division facts for the 2 multiplication tables and use the multiplication (x), division ( $\div$ ) and equals ( $=$ ) signs to read and write mathematical statements | Fractions: recognise, name and write $1 / 4$ and $3 / 4$ as parts of an object, shape or quantity Multiplication \& division: write and calculate mathematical statements for multiplication and division for known multiplication tables |
| N음in | Key area of understanding | Measure Geometry Statistics | Measure Geometry Statistics |
|  | Knowledge \& skills development | Measure: identify and use the correct measuring tool/vessel with a degree of accuracy Geometry: describe and perform a quarter and three quarter turn turn to the left and to the right <br> Statistics: Sort object using a Carroll diagram | Measure: begin to read relevant scales to the nearest numbered unit <br> Geometry: recognise angles as a property of shape and associate angle as an amount of turning and begin to identify different types of lines <br> Statistics: Continue to construct charts and graphs |
| $\begin{aligned} & \text { - } \\ & \stackrel{\rightharpoonup}{0} \\ & \stackrel{E}{E} \\ & E \\ & \tilde{E} \end{aligned}$ | Key area of understanding | Addition and subtraction Measure Geometry | Revision and assessment |
|  | Knowledge \& skills development | Addition \& subtraction: begin to add and subtract numbers with up to two 2-digits Measure: choose and use appropriate measurements to estimate <br> Geometry: identify and describe the properties of 3-D shapes including the number of edges, vertices and faces |  |
|  | Key area of understanding | Multiplication \& division Fractions Statistics |  |
|  | Knowledge \& skills development | Multiplication \& division: recall multiplication and division facts for the 5 and 10 multiplication tables and continue to use the multiplication (x), division ( $\div$ ) and equals (=) signs to read and write mathematical statements <br> Fractions: recognise, name and write $1 / 4$ and $3 / 4$ as parts of an object, shape <br> Statistics: Interpret pictograms where the picture represents more than ' 1 ' |  |

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| $\text { (1) } 1$ |  | Entry level trajectory LTP for : Maths |  |
| :---: | :---: | :---: | :---: |
|  |  | Y12 | Y13 |
|  | Key area of understanding | Number \& place value Addition and subtraction | Number \& place value Addition and subtraction |
|  | Knowledge \& skills development | Number \& place value: recognise the place value of each digit in a 2-digit number (tens, ones) and count in steps of $2,3,5$ and 10 , count in tens from any number, and give 10 more or less than a given number to 100 <br> Addition and subtraction: recall and use number bonds and related subtraction facts within 20 | Number \& place value: compare and order numbers from 0 up to 100 ; use $<,>$ and $=$ signs. Arrange, read and write numbers in increasing and decreasing order Addition and subtraction: add and subtract numbers with up to two 2-digits using partitioning methods |
|  | Key area of understanding | Measure Geometry Statistics | Measure Geometry Statistics |
|  | Knowledge \& skills development | Measure: compare measurements -eg longer and shorter Geometry: identify and describe the properties of 2-D shapes Statistics: Sort objects using a Venn diagram | Measure: compare and order lengths, mass, volume/capacity and record the results using $>$, < and = <br> Geometry: identify 2-D shapes on the surface of 3-D shapes, for example rectangle and square on a cuboid, circle on a cylinder, triangle on a pyramid <br> Statistics: Begin to construct charts and graphs |
|  | Key area of understanding | Fractions Multiplication \& division | Fractions <br> Multiplication \& division |
| - | Knowledge \& skills development | Fractions: recognise, name and write $1 / 2$ as one of two equal parts of an object, shape or quantity <br> Multiplication \& division: recall multiplication and division facts for the 2 multiplication tables and use the multiplication ( x ), division ( $(\div$ ) and equals ( $=$ ) signs to read and write mathematical statements | Fractions: recognise, name and write $1 / 4$ and $3 / 4$ as parts of an object, shape or quantity Multiplication \& division: write and calculate mathematical statements for multiplication and division for known multiplication tables |
| $\begin{aligned} & \text { N } \\ & \text { No } \\ & \text { 듬 } \end{aligned}$ | Key area of understanding | Measure Geometry Statistics | Measure Geometry Statistics |
|  | Knowledge \& skills development | Measure: identify and use the correct measuring tool/vessel with a degree of accuracy Geometry: describe and perform a quarter and three quarter turn turn to the left and to the right <br> Statistics: Sort object using a Carroll diagram | Measure: begin to read relevant scales to the nearest numbered unit Geometry: recognise angles as a property of shape and associate angle as an amount of turning and begin to identify different types of lines <br> Statistics: Continue to construct charts and graphs |
|  | Key area of understanding | Addition and subtraction <br> Measure <br> Geometry | Revision and assessment |
|  | Knowledge \& skills development | Addition \& subtraction: begin to add and subtract numbers with up to two 2-digits <br> Measure: choose and use appropriate measurements to estimate <br> Geometry: identify and describe the properties of 3-D shapes including the number of edges, vertices and faces |  |
|  | Key area of understanding | Multiplication \& division Fractions <br> Statistics |  |
|  | Knowledge \& skills development | Multiplication \& division: recall multiplication and division facts for the 5 and 10 multiplication tables and continue to use the multiplication (x), division ( $\div$ ) and equals (=) signs to read and write mathematical statements <br> Fractions: recognise, name and write $1 / 4$ and $3 / 4$ as parts of an object, shape <br> Statistics: Interpret pictograms where the picture represents more than ' 1 ' |  |

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