

| | Year 7 | Year 8 | Year 9 | Year 10 | Year 11 |
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| Autumn 1 | <p><u>Analysing and displaying data</u> S2- Tables, charts and diagrams S4- median, mean, mode, modal class and range</p> <p><u>Number skills</u> N1 – Order positive and negative integers, decimals and fractions N2 - Apply the four operations N3 – Inverse operations N4 – Prime numbers, factors and multiples N6 – Powers and roots N14 – Estimation and approximation N15 – Rounding to decimal places and significant figure</p> <p>Maths A.O: 1-3</p> <p>Assessment Pearson's end of topic test</p> | <p><u>Number skills</u> N2 - Apply the four operations N3 – Inverse operations N4 – Prime numbers, factors and multiples N6 – Powers and roots</p> <p><u>Area and volume</u> G1- Using conventional terms and notation in geometry G16 – Area and volume G17 – area and circumference of a circle</p> <p>Maths A.O: 1-3</p> <p>Trip to the local canal looking at a canal lock</p> <p>Assessment Pearson's end of topic test</p> | <p><u>Number</u> N1 - Order positive and negative integers, decimals and fractions N2 - Apply the four operations N3 - Inverse operations N4 - Prime numbers, factors and multiples N5 - Systematic listing strategies N6 - Powers and roots N7 - Calculate roots with integer and fractional indices N13 - Units of mass, length, time and money N14 - Estimation and approximation N15 - Rounding to decimal places and significant figures</p> <p>Maths A.O: 1-3</p> <p>Assessment Base line test</p> | <p><u>Graphs</u> N13- Units of mass , length, time and money A7- Functions -Coordinates in 4 quadrants A9- $y=mx+c$ A10- Interpret gradients A12-Interpret graphs A14- Plot graphs in real contexts A17-Solve equations using graphs R11- Compound units R14- Rate of change graphs G14- Standard units of measure</p> <p><u>Transformations</u> R6-Express using Ratio G1-Use conventional terms in geometry G7- Congruent shapes G24-Use 2d Vectors</p> <p>Maths A.O: 1-3</p> <p>Entry level 1-3 Functional skills level 1 and 2 Edexcel GCSE papers1-3</p> <p>Assessment Entry level on demand examination papers EL1-3.</p> | <p><u>Fractions, indices and standard form</u> N2 - Apply the four operations N3 - Inverse operations N6 - Powers and roots N7 - Calculate roots with integer and fractional indices N8 - Surds N9 - Standard form</p> <p><u>Congruence, similarity and vectors</u> R6 - Express a multiplicative relationship between two quantities R12 - Compare lengths, area and volume using ratio notation G3 - Angles at a point, on a straight line and in parallel lines G5 - Congruence criteria for triangles SSS, SAS, ASA, RHs G6 - Apply angle facts, triangles congruence and similarity and properties of quadrilaterals G7 - Congruent and similar shapes G17 - area and circumference of a circle G19 - Apply the concept of congruence and similarity including the relationships between lengths areas and volumes G24 - Describe translations as 2D vectors</p> |

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| | | | | | <p>G25 - Addition and subtraction of vectors</p> <p>Maths A.O: 1-3</p> <p>Entry level 1-3 Functional skills level 1 and 2 Edexcel GCSE papers 1-3 London Eye trip Assessment Paper 1 non Calc</p> |
| Autumn 2 | <p><u>Expressions, functions and formulae</u></p> <p>A1 - Algebra Simplifying A2 - Substitution A3 – Expressions A4 – Factorising A7 – Function machines</p> <p><u>Decimals and Measures</u></p> <p>N1 – Order positive and negative integers, decimals and fractions N2 - Apply the four operations Maths A.O: 1-3</p> <p>Assessment students use an American recipe and convert American measurements into British standard units. Students to peer assess end product for accuracy.</p> | <p><u>Expressions and equations</u></p> <p>A1 - Algebra Simplifying A2 - Substitution A3 – Expressions A4 – Factorising A5 – Rearranging formulae A6 – Algebraic proof A7 – Function machines</p> <p><u>Real-life graphs</u></p> <p>Maths A.O: 1-3</p> <p>A9- use the form $y = mx + c$ to identify parallel and perpendicular lines A10- Interpret gradients A14 Graphs</p> <p>Assessment create a game incorporating the use of a function machine</p> | <p><u>Algebra</u></p> <p>N1 - Order positive and negative integers, decimals and fractions N3 - Bidmas N4 - Factors and multiples A1 - Algebra Simplifying A2 - Substitution A3 - Expressions A4 - Factorising A5 - Rearranging formulae A6 - Algebraic proof A7 - Function machines A21 - Construct expressions Maths A.O: 1-3</p> <p>Assessment Teacher designed test topics covered</p> | <p><u>Ratio and proportion</u></p> <p>N11- Fractions in ratio problems N13- Use standard units R1- Change between standard and compound units R4-Ratio in simplest form R5- Divide using ratio R6- Express amounts as ratios R7 – Equality of ratios R8- Relate ratios to fractions R10- Proportion R11- Compound units R12 Compare length, area, volume using ratio R14- Interpret straight line graphs Maths A.O: 1-3</p> <p>POSSIBLE EXIT BETWEEN GROUPS ACCORDING TO FS ASSESSMENT RESULTS (SETTING CHECK)</p> | <p><u>More Algebra</u></p> <p>A3 - Expressions A5 - Rearranging formulae A6 - Algebraic proof A12 - Graphs of linear, quadratic and cubic functions A14 - Graphs A17 - Solving equations A19 - Simultaneous equations A21 - Translate simple situations or procedures into algebraic expressions or formulae R10 - Direct and inverse proportion R13 - Construct and interpret equations that describe and direct and inverse proportion R14 - Interpret the gradient of a straight line as a rate of change</p> |

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| | | | | <p>Entry level 1-3 Functional skills level 1 and 2 Edexcel GCSE papers1-3</p> <p>Assessment Pixl ratio and proportion assessment differentiated as necessary</p> <p>Enter students for FS Level 1 for Spring term</p> | <p>R16 - Set up, solve and interpret answers in growth and decay problems Maths A.O: 1-3</p> <p>POSSIBLE EXIT BETWEEN GROUPS ACCORDING TO FS ASSESSMENT RESULTS FINAL SETTING CHECK (GCSE)</p> <p>Entry level 1-3 Functional skills level 1 and 2 Edexcel GCSE papers1-3</p> <p>Assessment Paper 2 & 3 Calc</p> |
| Spring 1 | <p><u>Fractions</u> N8,N10,N11.N12.R3 N8 calculate exactly with fractions N10 working with decimals and fractions N11 identify and work with fractions in ratio problems N12 interpret fractions and percentages as operators R3 express one quantity as a fraction of another, where the fraction is less than 1 or greater than 1</p> <p><u>Probability</u> P3 , using appropriate language and the 0-1 probability scale P4 apply the property that the probabilities of an exhaustive set of mutually exclusive events sum to one</p> | <p><u>Decimals and ratio</u> N1 – Order positive and negative integers, decimals and fractions N2 - Apply the four operations N15 – Rounding to decimal places and significant figure <u>Lines and angles</u> G3 - Angles at a point, on a straight line and in parallel lines G4- Quadrilaterals</p> <p>Maths A.O: 1-3</p> <p><u>(with trip to Trip to Bank of England Museum, London-</u></p> <p>Assessment Batch cooking. Students to calculate ingredients needed for a higher volume</p> | <p><u>Graphs, tables and charts</u> G2 - Constructions G14 - Length, area, volume/capacity, mass, time, money G15 - Maps and scale drawings and use of bearings S2 - Tables, charts and diagrams S4 - Compare distributions S5 - Apply statistics to describe a population S6 - Scatter graphs</p> <p><u>Fractions and Percentages</u> N1 - Order integers, fractions and decimals N2 - Apply the four operations N3 - Recognise and use the relationships between</p> | <p><u>Right Angled Triangles</u> N7- Roots N15- Rounding R12- Compare length, area, volume using ratio G6- Apply angle facts G11-Geometric problem on coordinate axes G20- Pythagoras and trigonometry ratios G21_Exact values sin, cos, tan Probability N5- Systematic listing P1- Probability using frequency trees P2- Randomness. Fairness, likely outcomes P3- Theoretical probability and scales</p> | <p><u>Mocks and Revision</u> <i>Exam practice</i> Maths A.O: 1-3 MOCKS Papers 1-3</p> |

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| | <p>Maths A.O: 1-3</p> <p>Assessment creation of a game that incorporates probability</p> | <p>of product based on measurements for one.</p> | <p>operations including inverse operations</p> <p>N4 - Prime numbers, factors, multiples, LCM, HCF and prime factorisation</p> <p>N8 - Surds</p> <p>N10 - Work interchangeably with terminating decimals and their corresponding fractions (such as 3.5 and 7/2 or 0.375 or 3/8)</p> <p>N12 - Interpret fractions and percentages as operators</p> <p>N15 - Round numbers and measures to an appropriate degree of accuracy</p> <p>R3 - Express one quantity as a fraction of another</p> <p>R9 - Percentage increase and decrease</p> <p>Maths A.O: 1-3</p> <p>Assessment Budgeting task including fractions and percentages</p> | <p>P4- Mutually exclusive and exhaustive outcomes</p> <p>P5 - Theoretical probability distribution and size</p> <p>P6- Enumerate sets systematically</p> <p>P7- Theoretical probabilities and experiments</p> <p>P8-Probability dependent and independent events</p> <p>Maths A.O: 1-3</p> <p>POSSIBLE EXIT BETWEEN GROUPS ACCORDING TO FS ASSESSMENT RESULTS (SETTING CHECK)</p> <p>Entry level 1-3 Functional skills level 1 and 2 Edexcel GCSE papers1-3</p> <p>Assessment Sit FS level 1 Or entry level</p> | |
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Spring 2

Ratio and Proportion

R3,R4,R5

R3 express one quantity as a fraction of another
R4 use ratio notation
R5 express the division of a quantity into two parts as a ratio; apply ratio to real contexts and problems
(Maths A.O: 1-3)

Trip to Bank of England Museum, London—

Assessment

Using ratio and proportion to create a balanced meal in food tech

Calculating with fractions

N8 calculate exactly with fractions

N10 working with decimals and fractions

Maths A.O: 1-3

Trip to Winton Gallery, Science Museum, London

Assessment

students creating their own word problems and swap with each other for completion

Equations, inequalities and sequences

N1 - Order integers, fractions and decimals

N3 - Recognise and use the relationships between operations including inverse operations

A2 - Substitution

A3 - Expressions, equations, formulae, identities

A5 - Re-arrange formulae

A7 - Expressions as functions

A17 - Solving equations

A21 - simultaneous equations

A22 - Inequalities

A23 - Sequences

A24 - Sequences

A25 - Quadratic sequences

Maths A.O: 1-3

Assessment

Pixl assessment equations, inequalities and sequences

Multiplicative reasoning

N13- Units of mass, length, time and money

R1- change between related standard units

R7- Use proportion as equality of ratios

R9- Percentages

R10- Direct and inverse proportion

R11- Compound units

R13- Inverse proportions

R16- Compound interest

G14- Standard units of measure

Maths A.O: 1-3

Assessment

Pixl assessment of multiplicative reasoning

POSSIBLE EXIT BETWEEN GROUPS ACCORDING TO FS ASSESSMENT RESULTS (SETTING CHECK)

Entry level 1-3
Functional skills level 1 and 2
Edexcel GCSE papers1-3

Maths Revision (Teacher Choice Focus from Mocks)

Maths A.O:1-3

Entry level 1-3
Functional skills level 1 and 2
Edexcel GCSE papers1-3

Summer 1

Lines and angles

- G1-Use conventional terms in geometry
- G3 - Angles at a point, on a straight line and in parallel lines
- G4- Quadrilaterals

Sequences and graphs

- A8,A9,A23,A24
- Maths A.O: 1-3
- A8 coordinates in all four quadrants
- A9 use the form $y = mx + c$ to identify parallel and perpendicular lines
- A23 – Term- to- term rule
- A24 - Sequences

Assessment

Collect data using staff and students at school, convert the data into a table, then a graph and then present their findings

Percentages, decimals and fractions

- N10 working with decimals and fractions
- N12 interpret fractions and percentages as operators
- R9 – Percentage increase and decrease

Straight line graphs

- A9- use the form $y = mx + c$ to identify parallel and perpendicular lines
- A10- Interpret gradients
- R10- Proportion
- R11- Com pound units
- R14- Rate of change graphs

Maths A.O: 1-3

Assessment

Collect data using staff and students at school, convert the data into a table, analyse findings and quantify them using percentages.

Angles

- G1- Using conventional terms and notation in geometry
- G3- Angles at a point, on a straight line and in parallel lines
- G4 - Quadrilaterals
- G6 - Congruence and similarity
- G7 - Translations
- G11 - Geometry on coordinate axes

Averages and range

- S1 – Infer properties of population and distributions from a sample
- S2 - Tables, charts and diagrams
- S4 - Compare distributions
- S5 - Apply statistics to describe a population

Maths A.O: 1-3

Trip to London Eye

Assessment

Pixl angles end of unit test

Constructions, loci and bearings

- R2-Scale factors, diagrams and maps
- R6- Express using ratio or fraction
- G1- Using conventional terms and notation in geometry
- G2 – Perpendicular and bisectors in loci
- G4 - Quadrilaterals
- G5- Congruence for triangles
- G6- Congruence and similarity
- G7- Translations
- G12- Properties of 3D shapes
- G13- Construct and interpret 3d shapes
- G15- Lines, angles and bearings

Quadratic Equations and graphs

- N4- Factors, multiples and primes
- A1- Algebraic manipulation
- A3 – Algebraic vocabulary
- A4- Simplify and manipulate algebra
- A6- Algebraic proof
- A8- Coordinates in 4 quadrants
- A11- Roots of quadratics
- A12- Graphs of linear and quadratic equations
- A14- Plot and interpret graphs
- A18-Solve quadratics by equation or graph
- Maths A.O: 1-3

Maths Examinations

- EL 1
- EL 2
- EL 3

- FS Level 1
- FS Level 2

GCSE

- Paper 1: 1 hr 30 mins (non-calc)
- Paper 2: 1 hr 30 mins (calc)
- Paper 3 : 1hr 30 mins (calc)

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| | | | | <p>Trip to London Eye</p> <p>Assessment Entry level, Level 1 or 2 FS Maths paper GCSE Paper 1 (non calc)</p> <p>POSSIBLE EXIT BETWEEN GROUPS ACCORDING TO FS ASSESSMENT RESULTS (SETTING CHECK)</p> | |
| <p>Summer 2</p> | <p><u>Transformations</u> G5,G7,G8,G19 Maths A.O: 1-3</p> <p>G5- Congruence for triangles G7- Translations G8 rotations, reflections and translations G19-</p> <p>Assessment Maths activity booklet based on topics from the year. Peer assessment of booklets.</p> | <p><u>Statistics, graphs and charts</u> S2- Tables, charts and diagrams S4- median, mean, mode, modal class and range S6 – Scatter graphs</p> <p>Maths A.O: 1-3</p> <p>Assessment Maths investigation incorporating statistics, graphs and charts. Written presentation to follow demonstrating methods used.</p> | <p><u>Perimeter, area and volume 1</u> Working on area of rectangles, parallelograms, triangles, trapezia and compound shapes and volume of prisms</p> <p>N13 - Use standard units of mass, length, time, money N14 - Estimation and approximation R1 - Converting between related standard units G12 - Properties of 3D shapes G14 - Length, area, volume/capacity, mass, time and money G16 - Area and volume G17 - Area and circumference of a circle Maths A.O: 1-3</p> <p>Assessment Pixl Perimeter, area & volume unit test</p> | <p><u>Perimeter, area and volume 2</u> Working on circumference and area of circles, semi circles and sectors; pyramids and cones volume of cylinders, spheres and composite solids</p> <p>N8- Fractions and multiples of π N14 – Estimation and approximation N15- Round numbers N16-Apply limits of accuracy R1- Converting between standard units G9- Circle definitions and properties G14- Length, area, volume/capacity, mass, time and money G16-Area and volume G17- Area and circumference of a circle G18- Arcs and areas of sectors Maths A.O: 1-3</p> | |

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| | | | <p>Entry level 1-3 Functional skills level 1 and 2 Edexcel GCSE papers1-3</p> | <p>Assessment Pixl Perimeter, area & volume unit test</p> <p>Entry level 1-3 Functional skills level 1 and 2 Edexcel GCSE papers1-3</p> |
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