

Secondary

Key Stage Expectations

Please note that electively home educated children are not required to follow the national curriculum. However, some parents like using the national curriculum as a guide, some prefer to adhere to it and some choose to develop their own education programmes.

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Key Stage 3

Expectations

Please note that electively home educated children are not required to follow the national curriculum. However, some parents like using the national curriculum as a guide, some prefer to adhere to it and some choose to develop their own education programmes.

KS3 English: Year 7

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| <p>A student classed as WORKING AT can:</p> <p>in READING</p> <ul style="list-style-type: none"> <input type="checkbox"/> Highlight, make notes, summarise key information <input type="checkbox"/> Use some relevant quotations <input type="checkbox"/> Use some subject terminology <input type="checkbox"/> Make some comments on the effect/impact on the reader <input type="checkbox"/> Make some comments on (compare) some of the writers' methods (language/structure/narrative voice) <input type="checkbox"/> Make some comments on the writer's main purpose and viewpoint <input type="checkbox"/> Make some comments on contextual influences | <p>in WRITING</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use basic sentence demarcation accurately (inc. speech marks) <input type="checkbox"/> Mostly using Standard English <input type="checkbox"/> Correctly spell: simple past/present tense endings, common plural words, common homophones <input type="checkbox"/> Use the main features of form/genre/purpose <input type="checkbox"/> Demonstrate a clear viewpoint <input type="checkbox"/> Use the main language devices <input type="checkbox"/> Write in paragraphs, in a clear order, with a clear opening and closing <input type="checkbox"/> Use different types of sentences (simple, compound, complex) <input type="checkbox"/> Use interesting words and words linked to topic |
| <p>A student classed as working with Greater Depth can:</p> <p>in READING</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use relevant quotations to support comments <input type="checkbox"/> Use relevant subject terminology <input type="checkbox"/> Clearly comment on the effect/impact on the reader <input type="checkbox"/> Clearly explain some of the contextual influences <input type="checkbox"/> Clearly explain (compare) some of the writers' methods (language/structure/narrative voice) <input type="checkbox"/> Clearly explain the writer's main purpose and viewpoint | <p>in WRITING</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use a range of sentence demarcation accurately (inc. dialogue) <input type="checkbox"/> Consistently using Standard English <input type="checkbox"/> Correctly spell: most plural words, all homophones and all basic vocabulary <input type="checkbox"/> Use the main features of form/genre/purpose for effect <input type="checkbox"/> Have a clear and consistent viewpoint from beginning to end <input type="checkbox"/> Effective use of language devices <input type="checkbox"/> Write in a logical order, with apt paragraphs, creating a cohesive whole <input type="checkbox"/> Beginning to use a wider range of sentences (adverbial starts etc) <input type="checkbox"/> Use a wider range of interesting words and words linked to topic |
| <p>A student classed as working with Greater Depth + can:</p> <p>in READING</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use carefully selected quotations to support comments <input type="checkbox"/> Use a range of accurate subject terminology <input type="checkbox"/> Comment on the effect/impact on different readers <input type="checkbox"/> Explain (compare) the impact of some of the writers' methods (language/structure/narrative voice) <input type="checkbox"/> Explain the writer's main purpose, viewpoint and message to the reader <input type="checkbox"/> Explore the relevance of contextual influences | <p>in WRITING</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use a wide range of accurate sentence demarcation (inc. semi colons, brackets) <input type="checkbox"/> Consistently using Standard English <input type="checkbox"/> Spell accurately throughout (with minor errors on complex vocabulary choices) <input type="checkbox"/> Thoughtfully use the main features of form/genre/purpose for effect <input type="checkbox"/> Have a clear and consistent viewpoint maintained throughout all paragraphs <input type="checkbox"/> Consciously crafted use of language devices (inc. extended metaphors) <input type="checkbox"/> Write with apt paragraphs that can be linked thematically (not just with connectives) <input type="checkbox"/> Write using a wide range of accurate sentence structures <input type="checkbox"/> Use some sophisticated vocabulary choices and accurate synonyms |

| Topic | KS3 maths age related expectation: Year 7 | | |
|---|---|---|---|
| | Working Towards | Working at | Greater depth |
| Number skills | <input type="checkbox"/> Round whole numbers to the nearest 10, 100, 1000. <input type="checkbox"/> Multiply whole numbers using a written method. | <input type="checkbox"/> Carry out calculations involving brackets. <input type="checkbox"/> Solve problems involving time and money using a calculator. <input type="checkbox"/> Order positive and negative numbers. <input type="checkbox"/> Add and subtract positive and negative numbers. <input type="checkbox"/> Recognise and use square numbers, square roots and triangle numbers. | <input type="checkbox"/> Find the HCF and LCM of two numbers. <input type="checkbox"/> Add, subtract, multiply and divide positive and negative numbers. <input type="checkbox"/> Carry out calculations involving squares, cubes, square roots and cube roots. <input type="checkbox"/> Estimate answers to complex calculations. |
| Multiplicative reasoning (ratio and proportion) | <input type="checkbox"/> Reduce a ratio to its simplest form. | <input type="checkbox"/> Share a quantity in 2 or more parts in a given ratio. <input type="checkbox"/> Use the unitary method to solve simple word problems involving direct proportion. <input type="checkbox"/> Solve word problems involving ratio. <input type="checkbox"/> Use percentages to compare simple proportions. | <input type="checkbox"/> Convert between metric and imperial units. <input type="checkbox"/> Solve simple word problems involving ratio and direct proportion. <input type="checkbox"/> Solve simple word problems involving ratio and inverse proportion. <input type="checkbox"/> Solve problems involving ratio and proportion using the unitary method. <input type="checkbox"/> Solve best buy problems. |
| Decimals and measures | <input type="checkbox"/> Measure and draw lines to the nearest millimetre. <input type="checkbox"/> Interpret the display of a calculator in different contexts. | <input type="checkbox"/> Round to decimal places. <input type="checkbox"/> Add and subtract decimals. <input type="checkbox"/> Multiply a decimal by an integer. <input type="checkbox"/> Divide a decimal by a whole number. <input type="checkbox"/> Write decimals in order of size. <input type="checkbox"/> Round decimals to the nearest whole number and to one decimal place. <input type="checkbox"/> Solve perimeter problems. <input type="checkbox"/> Convert between metric units of length, mass and capacity. | <input type="checkbox"/> Compare different proportions using percentages. <input type="checkbox"/> Calculate percentage increases and decreases. <input type="checkbox"/> Work backwards to solve a percentage problem. <input type="checkbox"/> Multiply decimals mentally. Solve problems involving area. |
| Fractions | <input type="checkbox"/> Add and subtract simple fractions. Understand percentage as 'the number of parts per 100'. | <input type="checkbox"/> Compare and simplify fractions. Add and subtract fractions. Work with equivalent fractions, decimals and percentages. <input type="checkbox"/> Compare simple fractions. <input type="checkbox"/> Simplify fractions by cancelling common factors. <input type="checkbox"/> Calculate simple fractions of quantities. <input type="checkbox"/> Work with equivalent fractions and decimals. <input type="checkbox"/> Use different strategies to calculate with percentages. | <input type="checkbox"/> Add and subtract mixed numbers. <input type="checkbox"/> Multiply and divide a mixed number. |
| Equations, functions and formulae | <input type="checkbox"/> Find outputs of simple functions written in words and using symbols. <input type="checkbox"/> Substitute positive integers into simple formulae written in words. | <input type="checkbox"/> Simplify expressions by collecting like terms. <input type="checkbox"/> Substitute into formulae. <input type="checkbox"/> Simplify simple algebraic expressions by collecting like terms. <input type="checkbox"/> Write simple formulae using letter symbols. | <input type="checkbox"/> Derive formulae from a description. <input type="checkbox"/> Expand expressions involving brackets. <input type="checkbox"/> Factorise an algebraic expression. <input type="checkbox"/> Simplify more complicated expressions by collecting like terms. |
| Equations | | <input type="checkbox"/> Write and solve simple equations. | <input type="checkbox"/> Solve problems using equations. <input type="checkbox"/> Write and solve equations that have brackets. <input type="checkbox"/> Write and solve equations with letters on both sides. <input type="checkbox"/> Solve equations that include x^2 and x^3 <input type="checkbox"/> Use trial and improvement to find solutions to 1 decimal place. |
| Sequences and Graphs | <input type="checkbox"/> Revisit sequences including term-to-term rules. <input type="checkbox"/> Read, generate and plot coordinates. | <input type="checkbox"/> Recognise straight-line graphs parallel to the axes. <input type="checkbox"/> Generate sequences from practical sequences, describing how patterns grow. <input type="checkbox"/> Begin to identify and use position-to-term rules. <input type="checkbox"/> Generate coordinates that satisfy a simple linear rule and plot the graph in the first quadrant. <input type="checkbox"/> Write the nth term of a sequence using algebra. | <input type="checkbox"/> Work out a given term in a simple arithmetic sequence. <input type="checkbox"/> Work out the midpoint of a line segment. <input type="checkbox"/> Recognise geometric sequences and work out the term-to-term rule. <input type="checkbox"/> Draw straight-line graphs. |

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| Angles and Shapes | <input type="checkbox"/> Use the rule for the sum of angles in a triangle. | <input type="checkbox"/> Describe the line and rotational symmetry of triangles. <input type="checkbox"/> Use the properties of isosceles and equilateral triangles to solve problems. <input type="checkbox"/> Use a protractor to measure and draw angles. <input type="checkbox"/> Use the rule for angles on a straight line, angles around a point and vertically opposite angles. <input type="checkbox"/> Solve angle problems involving quadrilaterals. | <input type="checkbox"/> Work out unknown angles involving parallel lines. <input type="checkbox"/> Understand how to prove that a result is true. <input type="checkbox"/> Solve problems involving quadrilaterals. <input type="checkbox"/> Work out the interior and exterior angles of a polygon. <input type="checkbox"/> Use a ruler and protractor to draw triangles accurately. <input type="checkbox"/> Calculate interior and exterior angles in a triangle. |
| Perimeter, area and volume | | <input type="checkbox"/> Calculate the area of 2D shapes. Calculate the perimeter of shapes made from rectangles and triangles. Know the properties of 3D shapes. <input type="checkbox"/> Calculate the volume of a cuboid. <input type="checkbox"/> Convert between different units of volume: cm^3 , ml and litres. | <input type="checkbox"/> Calculate the area of shapes made from rectangles and triangles. <input type="checkbox"/> Calculate the surface area of a cuboid. <input type="checkbox"/> Convert between different units of volume: cm^3 , ml and litres <input type="checkbox"/> Make conclusions based on the results of an experiment. |
| Transformations | <input type="checkbox"/> Identify all the symmetries of 2D shapes. | <input type="checkbox"/> Identify congruent shapes. <input type="checkbox"/> Recognise line and rotational symmetry in 2D shapes. <input type="checkbox"/> Describe a reflection on a coordinate grid. <input type="checkbox"/> Describe and carry out rotations on a coordinate grid. <input type="checkbox"/> Translate 2D shapes. | <input type="checkbox"/> Combine transformations |
| Analysing and displaying data | <input type="checkbox"/> Read and draw pictograms, bar charts and bar-line charts. <input type="checkbox"/> Read and construct grouped tally charts and frequency tables. | <input type="checkbox"/> Describe the correlation between two sets of data. <input type="checkbox"/> Calculate the mode, median, mean and range of a set of values. <input type="checkbox"/> Read and draw a compound bar chart. | <input type="checkbox"/> Interpret and draw dual bar charts and compound bar charts. <input type="checkbox"/> Compare sets of data using averages and the range. <input type="checkbox"/> Draw and interpret grouped frequency diagrams. <input type="checkbox"/> Draw and interpret pie charts. <input type="checkbox"/> Recognise when a graph is misleading. |
| Probability | <input type="checkbox"/> Use a probability scale with words. | <input type="checkbox"/> Understand the probability scale from 0 to 1. <input type="checkbox"/> Calculate the probability of an event not happening. <input type="checkbox"/> Estimate probability based on experimental data. | |

KS3 English: Year 8

A student classed as **WORKING AT** can:

in READING

- Use relevant quotations to support comments
- Use relevant subject terminology
- Clearly comment on the effect/impact on the reader
- Clearly explain (compare) some of the writers' methods (language/structure/narrative voice)
- Clearly explain the writer's main purpose and viewpoint
- Clearly explain some of the contextual influences

in WRITING

- Use a range of sentence demarcation accurately (inc. dialogue)
- Consistently using Standard English
- Correctly spell: most plural words, all homophones and all basic vocabulary
- Use the main features of form/genre/purpose for effect
- Have a clear and consistent viewpoint from beginning to end
- Effective use of language devices
- Write in a logical order, with apt paragraphs, creating a cohesive whole
- Beginning to use a wider range of sentences (adverbial starts etc)
- Use a wider range of interesting words and words linked to topic

A student classed as working **with Greater Depth** can:

in READING

- Use carefully selected quotations to support comments
- Use a range of accurate subject terminology
- Comment on the effect/impact on different readers
- Explain (compare) the impact of some of the writers' methods (language/structure/narrative voice)
- Explain the writer's main purpose, viewpoint and message to the reader
- Explore the relevance of contextual influences

in WRITING

- Use a wide range of accurate sentence demarcation (inc. semi colons, brackets)
- Consistently using Standard English
- Spell accurately throughout (with minor errors on complex vocabulary choices)
- Thoughtfully use the main features of form/genre/purpose for effect
- Have a clear and consistent viewpoint maintained throughout all paragraphs
- Consciously crafted use of language devices (inc. extended metaphors)
- Write with apt paragraphs that can be linked thematically (not just with connectives)
- Write using a wide range of accurate sentence structures
- Use some sophisticated vocabulary choices and accurate synonyms

A student classed as working **with Greater Depth +** can:

in READING

- Use precise quotations to support comments (being selective about what part of a sentence to quote)
- Use consistently accurate subject terminology
- Thoughtfully comment on the effect/impact on different readers
- Explore (compare) a range of the writers' methods (language/structure/narrative voice)
- Evaluate the success of the writer's message to the reader
- Evaluate the extent of contextual influences
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in WRITING

- Consciously craft writing using a wide range of consistently secure sentence demarcation
- Consistently using Standard English
- Spell accurately throughout – NO errors, even in complex vocabulary choices
- Consciously manipulate use the main features of form/genre/purpose for effect
- Have a clear and consistent viewpoint designed to manipulate the reader
- Consciously crafted and consistently secure use of language devices (inc. extended metaphors)
- Write using a paragraph structure designed to manipulate the reader
- Write using a full range of accurate sentence structures designed to manipulate the reader
- Independently use sophisticated, extensive vocabulary

| Topic | KS3 maths age related expectation: Year 8 | | |
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| | Working Towards | Working at | Greater depth |
| Number - factors and powers and working with powers | <input type="checkbox"/> Add subtract multiply and divide positive numbers. <input type="checkbox"/> Calculate using squares and cubes. | <input type="checkbox"/> Use the laws of indices for multiplying and dividing. <input type="checkbox"/> Understand the effect of multiplying and dividing by any integer power of 10. <input type="checkbox"/> Calculate with powers. <input type="checkbox"/> Round to a number of significant figures. <input type="checkbox"/> Simplify expressions involving powers and brackets. <input type="checkbox"/> Substitute integers into expressions. <input type="checkbox"/> Estimate answers to calculations. <input type="checkbox"/> Add, subtract, multiply and divide negative numbers. <input type="checkbox"/> Calculate square and cube roots. <input type="checkbox"/> Use mental methods to calculate combinations of powers roots and brackets. | <input type="checkbox"/> Use prime factor decomposition to find the HCF and LCM. <input type="checkbox"/> Use the index laws in algebraic calculations and expressions. <input type="checkbox"/> Write and simplify expressions involving brackets and powers. <input type="checkbox"/> Factorise an algebraic expression. <input type="checkbox"/> Use prime factor decomposition to find the HCF or LCM or two numbers. |
| Percentages, decimals and fractions | <input type="checkbox"/> Recognise equivalent fractions. | <input type="checkbox"/> Recognise recurring and terminating decimals. <input type="checkbox"/> Use the equivalence of fractions, decimals and percentages to compare proportions. | <input type="checkbox"/> Work out percentage increase and decrease. |
| Calculating with fractions, decimals and percentages | <input type="checkbox"/> Use appropriate methods for multiplying fractions. <input type="checkbox"/> Add and subtract fractions with the same denominator | <input type="checkbox"/> Calculate percentage change. <input type="checkbox"/> Add and subtract fractions with any size denominator. <input type="checkbox"/> Use strategies for dividing fractions. <input type="checkbox"/> Find the reciprocal of a number. | <input type="checkbox"/> Recognise fractional equivalents to important recurring decimals. <input type="checkbox"/> Change a recurring decimal into a fraction. <input type="checkbox"/> Work out an original quantity before a percentage increase or decrease. <input type="checkbox"/> Calculate the effect of repeated percentage changes. |
| Decimals and ratio | <input type="checkbox"/> Use ratios involving decimals. | <input type="checkbox"/> Use the symbols > and < between two negative decimals. | <input type="checkbox"/> Multiply decimals with up to two decimal places. <input type="checkbox"/> Multiply and divide by decimals. <input type="checkbox"/> Solve proportion problems involving decimals. |
| Scale Drawings and Measures | | <input type="checkbox"/> Use and interpret maps. <input type="checkbox"/> Use similarity to solve problems in 2D shapes. | <input type="checkbox"/> Draw diagrams to scale using bearings. <input type="checkbox"/> Use and interpret scale drawings. <input type="checkbox"/> Use congruence to solve problems in triangles and quadrilaterals. |
| Statistics, graphs and charts | <input type="checkbox"/> Interpret simple bar charts. <input type="checkbox"/> Find the mode median and range from a list of data. | <input type="checkbox"/> Calculate the mean from a simple frequency table. <input type="checkbox"/> Interpret simple pie charts. <input type="checkbox"/> Find mode, median and range from stem and leaf diagrams, and compare them for different data sets. <input type="checkbox"/> Describe types of correlation. | <input type="checkbox"/> Plot straight-line graphs. <input type="checkbox"/> Find the gradient of a straight-line graph. <input type="checkbox"/> Plot graphs using the gradient and y-intercept. <input type="checkbox"/> Find the equation of a straight-line graph. <input type="checkbox"/> Identify parallel and perpendicular lines. <input type="checkbox"/> Plot and use non-linear graphs. <input type="checkbox"/> Calculate angles and draw pie charts. |
| Straight line graphs | <input type="checkbox"/> Be able to plot coordinates in all 4 quadrants | <input type="checkbox"/> Recognising when values are in direct proportion. | <input type="checkbox"/> Plot a straight-line graph and work out its gradient. <input type="checkbox"/> Find midpoints of line segments. |
| Real life graphs | <input type="checkbox"/> Interpret line graphs. <input type="checkbox"/> Draw and interpret line graphs. | <input type="checkbox"/> Recognise when values are in direct proportion. <input type="checkbox"/> Plot graphs and read values to solve problems. <input type="checkbox"/> Interpret distance-time graphs. <input type="checkbox"/> Describe trends and make predictions based on information presented graphically. | <input type="checkbox"/> Draw and interpret distance–time graphs. <input type="checkbox"/> Interpret real-life graphs. |
| Lines and angles | <input type="checkbox"/> Use angle facts to work out missing angles. | <input type="checkbox"/> Using alternate angles to find unknown angles. <input type="checkbox"/> Identifying corresponding angles. | <input type="checkbox"/> Solving geometrical problems using side and angle properties of triangles and quadrilaterals. <input type="checkbox"/> Calculate the sum of the interior and exterior angles of a polygon. |

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| Area and volume - 2D shapes and 3D solids | <input type="checkbox"/> Calculate the areas of rectangles and triangles. <input type="checkbox"/> Calculate the volume of cubes and cuboids. | <input type="checkbox"/> Use 2D representations of 3D solids. <input type="checkbox"/> Calculate the volume of right prisms. <input type="checkbox"/> Calculate the circumference. <input type="checkbox"/> Calculate the area of a circle. <input type="checkbox"/> Calculate the surface area of cubes and cuboids. <input type="checkbox"/> Calculate areas of parallelograms and trapezia. <input type="checkbox"/> Find areas of compound shapes. | <input type="checkbox"/> Calculate the surface area of prisms. <input type="checkbox"/> Calculate the volume and surface area of a cylinder. <input type="checkbox"/> Use Pythagoras' theorem in right-angled triangles. |
| Constructions and loci | | <input type="checkbox"/> Draw triangles accurately using a ruler and protractor. <input type="checkbox"/> Construct triangles using a ruler and compasses. | <input type="checkbox"/> Bisect a line using a ruler and compasses. <input type="checkbox"/> Bisect angles using a ruler and compasses. <input type="checkbox"/> Use loci to solve problems. |
| Transformations | | <input type="checkbox"/> Find the perimeter and area of 2D shapes after enlargement. | <input type="checkbox"/> Describe and carry out translations. <input type="checkbox"/> Describe and carry out reflections. <input type="checkbox"/> Describe and carry out rotations. <input type="checkbox"/> Enlarge a shape. <input type="checkbox"/> Enlarge a shape using negative scale factors. <input type="checkbox"/> Transform 2D shapes using a combination of reflection, rotation, enlargement and translation. |
| Expressions and equations | <input type="checkbox"/> Collect like terms to simplify equations | <input type="checkbox"/> Expand brackets. <input type="checkbox"/> Solve real life problems using equations. | <input type="checkbox"/> Understand and simplify algebraic powers. <input type="checkbox"/> Simplify expressions involving brackets, use rules for indices and factorise expressions. |
| Probability | | <input type="checkbox"/> Calculate and compare probabilities. | <input type="checkbox"/> Find the probabilities of mutually exclusive outcomes and events. <input type="checkbox"/> Use relative frequency to estimate the probability of an event. <input type="checkbox"/> Estimate probability using data from an experiment. <input type="checkbox"/> Work out the expected results when an experiment is repeated. |

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| <p>A student classed as WORKING AT can:</p> <p>in READING</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use carefully selected quotations to support comments <input type="checkbox"/> Use a range of accurate subject terminology <input type="checkbox"/> Comment on the effect/impact on different readers <input type="checkbox"/> Explain (compare the impact of some of the writers' methods (language/structure/narrative voice) <input type="checkbox"/> Explain the writer's main purpose, viewpoint and message to the reader <input type="checkbox"/> Explore the relevance of contextual influences | <p>in WRITING</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use a wide range of accurate sentence demarcation (inc. semi colons, brackets) <input type="checkbox"/> Consistently using Standard English <input type="checkbox"/> Spell accurately throughout (with minor errors on complex vocabulary choices) <input type="checkbox"/> Thoughtfully use the main features of form/genre/purpose for effect <input type="checkbox"/> Have a clear and consistent viewpoint maintained throughout all paragraphs <input type="checkbox"/> Consciously crafted use of language devices (inc. extended metaphors) <input type="checkbox"/> Write with apt paragraphs that can be linked thematically (not just with connectives) <input type="checkbox"/> Write using a wide range of accurate sentence structures |
| <p>A student classed as working with Greater Depth can:</p> <p>in READING</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use precise quotations to support comments (being selective about what part of a sentence to quote) <input type="checkbox"/> Use consistently accurate subject terminology <input type="checkbox"/> Thoughtfully comment on the effect/impact on different readers <input type="checkbox"/> Explore (compare) a range of the writers' methods (language/structure/narrative voice) <input type="checkbox"/> Evaluate the success of the writer's message to the reader <input type="checkbox"/> Evaluate the extent of contextual influences | <p>in WRITING</p> <ul style="list-style-type: none"> <input type="checkbox"/> Consciously craft writing using a wide range of consistently secure sentence demarcation <input type="checkbox"/> Consistently using Standard English <input type="checkbox"/> Spell accurately throughout – NO errors, even in complex vocabulary choices <input type="checkbox"/> Consciously manipulate the main features of form/genre/purpose for effect <input type="checkbox"/> Have a clear and consistent viewpoint designed to manipulate the reader <input type="checkbox"/> Consciously crafted and consistently secure use of language devices (inc. extended metaphors) <input type="checkbox"/> Write using a paragraph structure designed to manipulate the reader <input type="checkbox"/> Write using a full range of accurate sentence structures designed to manipulate the reader. |
| <p>A student classed as working with Greater Depth + can:</p> <p>in READING</p> <ul style="list-style-type: none"> <input type="checkbox"/> Clear embedding of quotations, which flow with the essay. <input type="checkbox"/> Subject terminology use is secure and support analysis rather than lead it <input type="checkbox"/> Developed and structured analysis, looking at layers of meaning and various connotations <input type="checkbox"/> Uses a clear thesis statement which forms a cohesive argument <input type="checkbox"/> Follows a clear methodology <input type="checkbox"/> Analysis looks at patterns across the whole text <input type="checkbox"/> Include references to critical analysis <input type="checkbox"/> Evaluate success in relation to text of same genre - intertextuality | <p>in WRITING</p> <ul style="list-style-type: none"> <input type="checkbox"/> Writing is fully crafted for impact <input type="checkbox"/> Structured for effect with internal paragraph structures used intentionally <input type="checkbox"/> Consciously crafted and consistently secure use of sophisticated language devices throughout <input type="checkbox"/> Paragraph structures designed to manipulate the reader (connections within paragraphs for coherence) <input type="checkbox"/> Fluent with NO grammatical errors <input type="checkbox"/> Impressive and extensive use of vocabulary |

| Topic | KS3 maths age related expectation: Year 9 | | |
|---|--|---|---|
| | Working Towards | Working at | Greater depth |
| Number | <input type="checkbox"/> Rounding to different degrees of accuracy. <input type="checkbox"/> Manipulating decimal numbers - adding, subtracting, multiplying and dividing. <input type="checkbox"/> Finding square and cube roots and recognising powers. | <input type="checkbox"/> Work out the total number of ways of performing a series of tasks. <input type="checkbox"/> Estimate answers to calculation as well as using one calculation to find the answer to another. <input type="checkbox"/> Write a number as the product of its prime factors. <input type="checkbox"/> Use prime factor decomposition and Venn diagrams to find the HCF and LCM. <input type="checkbox"/> Understand and use index laws. <input type="checkbox"/> Write numbers and perform calculations using standard form. <input type="checkbox"/> Understand the difference between irrational and rational numbers. | <input type="checkbox"/> Use negative and fractional indices. <input type="checkbox"/> Simplify a surd. <input type="checkbox"/> Rationalise the denominator. |
| Fractions, ratio, decimals and percentages | | <input type="checkbox"/> Work with fractions to include, adding, subtracting, multiplying, dividing and comparing. <input type="checkbox"/> Find a fraction and percentage of an amount or quantity. <input type="checkbox"/> Use decimals to find quantities. <input type="checkbox"/> Convert between fractions, decimals and percentages. <input type="checkbox"/> Calculate simple interest, VAT as well as percentage increases and decreases. <input type="checkbox"/> Compare ratios and finding quantities using ratios. <input type="checkbox"/> Recognise and use direct proportion. <input type="checkbox"/> Work out percentage increases and decreases. | <input type="checkbox"/> Write ratios in the form 1:n or n:1 <input type="checkbox"/> Solve problems involving ratio and proportion <input type="checkbox"/> Solve real life problems involving percentages. |
| Algebra | <input type="checkbox"/> Know the difference between an expression, equation, a formula and an identity. <input type="checkbox"/> Write and simplify expressions. <input type="checkbox"/> Substitute numbers into expressions and formulae. <input type="checkbox"/> Expand brackets. <input type="checkbox"/> Represent inequalities on a number line. <input type="checkbox"/> Recognise and extend sequences. | <input type="checkbox"/> Use rules of indices to simplify algebraic expressions. <input type="checkbox"/> Expand single brackets and the product of two brackets. <input type="checkbox"/> Factorise algebraic expressions including quadratic expressions. <input type="checkbox"/> Use the difference of two squares. <input type="checkbox"/> Substitute and rearrange formulae. <input type="checkbox"/> Find a general formula for the nth term of an arithmetic sequence. <input type="checkbox"/> Determine whether a particular number is a term of a given arithmetic sequence. <input type="checkbox"/> Work out the terms in a Fibonacci-like sequence. | <input type="checkbox"/> Solve problems using geometric sequences. <input type="checkbox"/> Find the nth term of a quadratic sequence. |
| Angles and trigonometry | <input type="checkbox"/> Identify congruent shapes. <input type="checkbox"/> Understand and use the angle properties of parallel lines. | <input type="checkbox"/> Solve angle problems in triangles and quadrilaterals. <input type="checkbox"/> Calculate interior and exterior angles of regular polygons. <input type="checkbox"/> Understand and use Pythagoras' Theorem. <input type="checkbox"/> Use trigonometric ratios to calculate lengths and angles of a right angled triangle. | <input type="checkbox"/> Find angles of elevations and depression. <input type="checkbox"/> Know the exact angles of the sine, cosine and tangent of some angles <input type="checkbox"/> Use trigonometric ratios to solve problems. |
| Perimeter and area | <input type="checkbox"/> Calculate the perimeter and area of rectangles, triangles, parallelograms and trapeziums. <input type="checkbox"/> Calculate surface area and volume of cuboids and prisms. | <input type="checkbox"/> Find perimeter and area of compound shapes. <input type="checkbox"/> Calculate the area and circumference of a circle, semi-circle and quarter circles. <input type="checkbox"/> Convert between metric units of area and volume. | <input type="checkbox"/> Solve problems involving volumes and surface areas of prisms, cylinders, spheres, pyramids and cones. <input type="checkbox"/> Calculate arc lengths, angles and areas of sectors. |
| Transformations, bearings and constructions | <input type="checkbox"/> Recognise and describe 3D shapes using the correct mathematical properties. <input type="checkbox"/> Identify and sketch planes of symmetry of 3D shapes. <input type="checkbox"/> Draw angles and 2D shapes accurately using a ruler, protractor and compass. <input type="checkbox"/> Recognise nets and make accurate drawings of nets of common 3D objects. <input type="checkbox"/> Find and use three-figure bearings. <input type="checkbox"/> Use angles at parallel lines to work out bearings. | <input type="checkbox"/> Draw plans and elevations of 3D solids. <input type="checkbox"/> Reflect, rotate, translate and enlarge 2D shapes. <input type="checkbox"/> Draw and use scales on maps and scale drawings. <input type="checkbox"/> Use bearings. <input type="checkbox"/> Construct triangles, perpendicular bisector of a line and an angle bisector. <input type="checkbox"/> Draw a locus and use loci to solve problems. | <input type="checkbox"/> Enlarge shapes by fractional and negative scale factors about a centre of enlargement. |

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|------------------------------------|--|---|--|
| Interpreting and representing data | <input type="checkbox"/> Draw and interpret comparative and composite bar charts. <input type="checkbox"/> Draw and interpret pie charts. | <input type="checkbox"/> Construct and use two-way tables. <input type="checkbox"/> Plot and interpret time series graphs. <input type="checkbox"/> Construct and interpret stem and leaf diagrams. <input type="checkbox"/> Plot and interpret scatter graphs determining whether or not there is a relationship between sets of data. <input type="checkbox"/> Decide which average is best for a set of data. <input type="checkbox"/> Estimate the mean and range from a grouped frequency table and find the modal class and the group containing the median. | <input type="checkbox"/> Use trends of time-series graphs to predict what might happen in the future. <input type="checkbox"/> Recognise misleading graphs. |
| Graphs | | <input type="checkbox"/> Linear graphs – plot, compare, find the gradient and y-intercept and use the equations of a straight line. <input type="checkbox"/> Draw and interpret distance-time graphs. <input type="checkbox"/> Understand velocity-time graphs. <input type="checkbox"/> Draw quadratic graphs. <input type="checkbox"/> Use graphs to solve quadratic equations. | <input type="checkbox"/> Find the coordinates, gradient and length of a line segment through two points. <input type="checkbox"/> Find the acceleration and distance from velocity-time graphs. <input type="checkbox"/> Find the equations of lines parallel or perpendicular to a given line. <input type="checkbox"/> Draw and use cubic graphs to solve cubic equations. <input type="checkbox"/> Draw the graph of a circle. <input type="checkbox"/> Draw graphs of reciprocal functions. |

Key Stage 4 Expectations

Please note that electively home educated children are not required to follow the national curriculum and are not required to complete any formal qualifications. However, some parents like using an exam syllabus as a guide, some prefer to adhere to it and some choose to develop their own education programmes.

KS3 English: Year 10/11

If you have chosen to register your child for exams, we advise they adhere to the Key Stage 4 examination syllabus, especially in year 11. Alternatively, you may like to look at Functional Skills English at Level 1 (equivalent to GCSE grades 1-3) or Level 2 (equivalent to GCSE grades 4-9). You may find the following links useful:

<https://www.jcq.org.uk/private-candidates/> - Joint Council for Qualifications – oversees all exams & timetables. Has information for private candidates.

<http://www.aqa.org.uk/> - Offers GCSE and Functional Skills exams. Downloadable syllabus.

<http://www.edexcel.org.uk/> - Offers GCSE and Functional Skills exams. Downloadable syllabus.

<http://www.ocr.org.uk/> - Offers GCSE and Functional Skills exams. Downloadable syllabus.

<http://www.wjec.co.uk/> - Offers GCSE and Functional Skills exams. Downloadable syllabus.

<https://www.cambridgeinternational.org/> - Offers iGCSE. Downloadable syllabus.

| Topic | KS3 maths age related expectation: Year 10/11 | | |
|----------------------------|---|---|--|
| | Working Towards | Working at | Greater depth |
| Multiplicative reasoning | <input type="checkbox"/> Calculate percentage profit or loss. <input type="checkbox"/> Find the original amount given the final amount after a percentage increase or decrease. <input type="checkbox"/> Calculate average speed, distance and time. | <input type="checkbox"/> Find an amount after repeated percentage change. <input type="checkbox"/> Solve problems involving compound measures. | <input type="checkbox"/> Solve growth and decay problems. <input type="checkbox"/> Use a formula to calculate speed and acceleration. <input type="checkbox"/> Convert between metric speed units. |
| Equations and inequalities | <input type="checkbox"/> Expand double brackets. <input type="checkbox"/> Recognise and plot quadratic functions. | <input type="checkbox"/> Rearrange and solve quadratics to find the roots. <input type="checkbox"/> Use the quadratic formula to solve a quadratic formula. <input type="checkbox"/> Solve quadratic equations by using a graph. <input type="checkbox"/> Solve simultaneous equations. <input type="checkbox"/> Solve inequalities and show the solution in a number line and using set notation. | <input type="checkbox"/> Solve quadratic equations by completing the square. <input type="checkbox"/> Solve simultaneous equations where both equations are multiplies. <input type="checkbox"/> Solve simultaneous equations where one is quadratic <input type="checkbox"/> Use real-life situations to construct quadratic and linear equations and solve them. |
| Equations and graphs | <input type="checkbox"/> Recognise, name and plot straight line graphs. <input type="checkbox"/> Find the midpoint and equation of a straight line. <input type="checkbox"/> Draw and use distance-time graphs. | <input type="checkbox"/> Solve simultaneous equations graphically. <input type="checkbox"/> Represent inequalities on graphs. <input type="checkbox"/> Find approximate equations graphically. | <input type="checkbox"/> Interpret graphs of inequalities. <input type="checkbox"/> Solve quadratic equations using the iterative process. <input type="checkbox"/> Sketch graphs of cubic functions and find their roots. <input type="checkbox"/> Solve cubic equations using the iterative process. |
| Algebra | | | <input type="checkbox"/> Add, subtract, multiply and divide algebraic fractions. <input type="checkbox"/> Simplify algebraic fractions. <input type="checkbox"/> Change the subject if more complex formulae. <input type="checkbox"/> Simplify and expand expressions involving surds. <input type="checkbox"/> Rationalise the denominator. <input type="checkbox"/> Use function notation. <input type="checkbox"/> Find composite and inverse functions. <input type="checkbox"/> Prove a result using algebra. |
| Probability | <input type="checkbox"/> Calculate simple probabilities from equally likely events. <input type="checkbox"/> Understand mutually exclusive and exhaustive outcomes. <input type="checkbox"/> Use two-way tables to record the outcomes from two events. <input type="checkbox"/> Work out probabilities based on experimental data. <input type="checkbox"/> Find and interpret probabilities based on experimental data. | <input type="checkbox"/> List all the possible outcomes of two events in a sample space diagram. <input type="checkbox"/> Find the probabilities of mutually exclusive outcomes and events. <input type="checkbox"/> Work out expected results for experimental and theoretical events and compare results to see if a game is fair. <input type="checkbox"/> Draw and use frequency tree and tree diagrams to work out probabilities of events. <input type="checkbox"/> Draw and use Venn diagrams to work out probabilities of events. | <input type="checkbox"/> Calculate probabilities of repeated events. <input type="checkbox"/> Draw and use a tree diagrams without replacement. <input type="checkbox"/> Use two-way tables, Venn diagrams and tree diagrams to calculate conditional probability. |
| Statistics | | <input type="checkbox"/> Find the quartiles and IQR from a stem and leaf diagram | <input type="checkbox"/> Draw and interpret cumulative frequency tables and diagrams. <input type="checkbox"/> Work out the median, quartiles and IQR from a cumulative frequency diagram. <input type="checkbox"/> Draw and interpret box plots. <input type="checkbox"/> Understand frequency density to draw and interpret histograms. |
| Trigonometry | <input type="checkbox"/> Understand and use Pythagoras' Theorem. <input type="checkbox"/> Understand and use trigonometric ratios to calculate angles and lengths. | <input type="checkbox"/> Understand how to find the trigonometric ratio of any angle. <input type="checkbox"/> Find the area of a triangle and segment of a circle. | <input type="checkbox"/> Know the trigonometric graph for each trigonometric function and use it to solve equations. <input type="checkbox"/> Use Pythagoras' theorem and trigonometry in 3D. <input type="checkbox"/> Know the trigonometric graph for each trigonometric function and use it to solve equations. <input type="checkbox"/> Use Pythagoras' theorem and trigonometry in 3D. |

| | | | |
|----------------------------|---|--|---|
| Similarity and congruence | | <input type="checkbox"/> Know the conditions of congruence to prove that shapes and triangles are congruent. <input type="checkbox"/> Use the ratio of corresponding sides to work out scale factors. <input type="checkbox"/> Find missing lengths of similar shapes. | <input type="checkbox"/> Prove that shapes are congruent. <input type="checkbox"/> Use similar triangles to work out lengths in real life. <input type="checkbox"/> Use the link between scale factors for length, area and volume to solve problems. |
| Circle theorems | | | <input type="checkbox"/> Understand, and use all circle theorems. <input type="checkbox"/> Find the equation of the tangent to a circle at a given point. <input type="checkbox"/> Prove all circle theorems. |
| Transformations | <input type="checkbox"/> Reflect, rotate, translate and enlarge a 2D shape. | <input type="checkbox"/> Describe single and combined transformations. | |
| Perimeter, area and volume | <input type="checkbox"/> Calculate the circumference, area, diameter and radius of a circle. <input type="checkbox"/> Work out areas and perimeters of semi circles and quarter circles. <input type="checkbox"/> Solve problems involving areas and perimeters of 2D shapes. | <input type="checkbox"/> Work out the volume and areas of cylinders, pyramids, cones, and spheres. <input type="checkbox"/> Work out the volumes and surface areas of composite solids. | |