Mathematics 5 Year Curriculum Plan

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Trust Curriculum Policy Extract

The Trust curriculum ensures all pupils in the Trust experience a rich, broad and balanced experience, reflecting the FMAT mission of `Enriching lives, transforming futures`. **We want all our pupils to experience the joy and wonder of learning.**

We place a strong emphasis on nurturing the spiritual, moral, social and cultural development of pupils, along with a firm commitment to developing pupils' resilience and character **through the acquisition of life skills**. We are preparing all our pupils to contribute positively to modern British society **and have a suitable career and destination**. All pupils have the entitlement to study a rich and varied curriculum

The Trust values permeate the curriculum

Excellence: a curriculum of the highest quality to ensure excellent outcomes
Dedication: we believe there is dignity in hard work
Ambition: we want the very best for all of our students.
Integrity: moral purpose will underpin the curriculum decisions we make for our pupils
Tradition: British values, literacy and numeracy underpin the curriculum

A well-constructed curriculum will lead to good results because these results will reflect what pupils have learned. The curriculum is the progression model, enabling pupils to **know more, remember more and be able to do more.**

Teaching and Learning Vision

Knowledge is power. Information is liberating.
Kofi Annan

We believe all students, whatever their background, are able to become experts in the disciplines that they study. Their expertise will be achieved through quality teaching and the dissemination of deep knowledge by highly skilled and knowledgeable subject experts – in every classroom, every lesson, every day.

Our students have the right to be introduced to deep knowledge and a wealth of information from the spectrum of subjects that they study. They will be introduced to, and understand, theories and principles that have influenced, continue to influence, and will influence in the future, the world in which they live. They will be prepared to fully engage in academic discussion about their learning.

This learning will secure a successful place in society for our students. They will go further than they ever thought possible.

ENRICHING LIVES; TRANSFORMING FUTURES

Teaching and Learning Vision for the Mathematics Department

- Over the 5 years that our students are with us, we aim for them to acquire the mathematical skills, knowledge and qualifications to enable them to succeed in our 21st Century world.
- We challenge the preconceptions that both students and parents have about secondary mathematics by consistently demonstrating an inclusive and supportive environment.
- Staff constantly seek to develop their pedagogical and subject knowledge in order that we can provide the best possible learning experience for every child. "Every teacher needs to improve, not because they are not good enough, but because they can be even better." Dylan Wiliam.

We can turn every learner into an expert in *Mathematics,* at the same time as developing a love for the subject.

At the end of Year 11 students in *Mathematics* will….

Know…

- Standard numerical methods, both with and without a calculator.
- How to apply standard methods to a range of contexts and have the tenacity to approach an unfamiliar problem.
- The importance of ensuring an answer is fully correct and sensible, including appropriate units where applicable.
- Methods for self-checking of answers.

Understand…

- Key words and tier 3 vocabulary associated with the subject
- How to present mathematics correctly, including appropriate notation
- How to follow a standard process for a common type of problem or calculation
- The requirements of the appropriate exam specification, including exam techniques
- Common misconceptions in mathematics and why people may make these errors.
- The difference between an example and a proof, especially at higher tier GCSE, and the importance of being rigourous when asked to prove a statement.
- How to interpret statistical data and diagrams in a range of contexts.
- How real life problems can be modelled mathematically.
- How different areas of mathematics can be interleaved and how to recall and techniques from different areas of mathematics where necessary.

Be able to…

- Use standard techniques to solve problems both with and without access to a calculator
- Confidently approach an unfamiliar problem requiring the use of prior knowledge and skills
- Reach conclusions based on statistical data presented in a variety of contexts
- Communicate appropriately in mathematical contexts, including when being asked to prove or disprove a statement

Have been exposed to the following knowledge, theories, texts and experiences that span beyond the GCSE specification

- Year 11 students receive appropriate support and guidance as to their study options at post 16, whether that be A-Level Mathematics, Core Mathematics, GCSE Resit or Functional Skills courses.
- Be fluent in mathematics such that they can apply their skills to other curriculum areas
- Students will be sufficiently numerate to allow them to succeed in a 21st Century world.
- Through enrichment days every student will understand how to read their first pay slip, know how income tax is calculated and be able to produce a budget for their own finances.
- AMSP challenge for Year 10
- UKMT Maths Challenges at junior and intermediate level.

Developed their cultural and social capital through the following extra-curricular work

- Entries to the UKMT junior and intermediate maths challenges, giving students the opportunity to access mathematical problems outside of the GCSE curriculum.
- Enrichment day activities relating to real-world mathematics, such as managing personal finances, understanding our tax system, including external speakers and educational visits where possible.
- Form time competitions to promote recreational mathematics.
- Marking of Pi Day (14th March) and an opportunity for extra activities to be organised.

- Students to have access to the online platforms MyMaths and Dr Frost Maths to support their learning.

5 Year Curriculum Plan

- The 5 year curriculum plan provides a logical progression through the National Curriculum for KS3, following onto the Edexcel Foundation or Higher GCSE specification.

- All students in KS3 will cover broadly the same topics at the same time. It is expected that different students will have different start and end points within each topic, but the learning journey is structured to allow teachers to stretch all pupils to reach their full potential. This will also allow for seamless transitions where there are any changes to setting and staffing during the 5 years.

- Topics have been carefully sequenced to promote depth of learning, with some of the repetition of topics removed to allow time for learning, as opposed to just teaching, to take place. For example, fractions are taught in year 7 and not formally revisited until year 9. However, pupils will still encounter fractions interleaved with other topics.

- Standard, trust-wide resources support the delivery of the 5 year curriculum plan to ensure consistency of delivery and appropriate support for staff.

- As well as weekly opportunities for deep feedback time is allocated on the learning journeys for review and recap.

- *Important: Phasing-in strategy*

  - *Year 7 will start the 5 year learning journey in September 2020*
  - *Year 8 will follow a revised version of the learning journey in 2020-21, before joining up with the year 9 journey in September 2021*
  - *Year 9 will follow a transition scheme of work in 2020-21 before joining the year 10 learning journey in September 2021*
  - *Year 10 and 11 will continue to follow a legacy scheme of work*

Year 7 *Mathematics* at Smiths Wood Academy

- The Smiths Wood Year 7 *Mathematics* curriculum prepares all students for secondary mathematics with a heavy numeracy focus, together with a tentative introduction to algebra. Our students are studying this because a fluency with numbers is necessary to fully access the rest of the curriculum as well as to succeed in life.
- All students will complete a trust-wide baseline assessment and will be placed in a class broadly following either the Higher, Core or Support objectives from the learning journey, but with no ceiling on their attainment.
- The curriculum has been sequenced in this way because good number skills underpin everything else within secondary mathematics and provides an opportunity to identify and close gaps from KS2. Much of the knowledge and skills from the year 7 curriculum are prerequisite for year 8 and beyond.
- Every lesson starts with a trust-wide Do Now activity based around practice retrieval to reinforce previous learning.
- Students complete 3 weekly 'milestone' assessments as well as a weekly knowledge check to monitor progress against the learning objectives.
- Enrichment opportunities available for all students include form time competitions, World Pi day and access to online platforms.

Year 7 Themes of Study:

Place value: This is required in most areas of mathematics. Place value also helps understand the meaning of number and order of numbers. Decimals are used commonly in everyday life, for example money and measurement.

Rounding: Students will be asked to round their answers to a number of decimal places or significant figures across a range of topics in their 5 year journey. An understanding of this is also important for bounds at GCSE.

Negative numbers: Students should be equally competent and fluent in dealing with both positive and negative numbers. This is vital so as not to create barriers to other topics higher up the school.

Conversions: Students must be able to convert between different units in order to solve problems in a range of contexts including area, volume, capacity time and curency.

BIDMAS: Without an understanding of BIDMAS, students would conduct calculations in the wrong order. It is also an opportunity to explore use of a calculator.

Multiples and factors: Factors and multiples are especially important in working with expanding, factorising and working with fractions as well as finding numbers in patterns.

Index laws: Index notation is a short way of writing a number that is multiplied by itself several times, eg. the number of stars in the Milky Way is around 10^{11}. Knowledge of index laws is required for standard form.

Sequences: Learning about sequences helps students in spotting patterns, and also interleaves algebra through finding the position-to-term rule for sequences and generating sequences by substitution. You can use sequences to perform a piece of music or do a kata in martial arts. Knowing how a pattern continues can help us to know what to expect, for example when planets are going to appear in the night sky.

Coordinates: Can help with map reading, cross curricular with Geography and PE. This will have been covered in KS2 but allows for extension to, for example, midpoints.

Linear graphs: Closely related to both coordinates and sequences this will also help to develop graph plotting skills for use in science, for example. This also provides an opportunity to interleave with conversion, studied earlier in the year, through the use of conversion graphs.

Fractions,and decimals: Fractions are seen in everyday life, for example, recipes may contain fractional amounts, like ½ teaspoon. When scaling a recipe up you need to multiply fractions. Dividing by fractions helps you work out how many 1/3 litre glasses you can fill from a 2 litre bottle. Decimals are used commonly in everyday life, for example money and measurement

Year 7 Units of Study Autumn 1 (trust schools to start Sept 2020)		Length of unit (lesson)
Please see learning journey for Yr 7 for additional details		
Unit 1	Place Value	4
Unit 2	Addition/Subtraction	4
Unit 3	Multiplication	4
Unit 4	Division	4
Unit 5	Rounding and estimating	4
Unit 6	Order of operations	4
Unit 7	Metric Units	4

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Year 7 Units of Study Autumn 2		Length of unit
Unit 1	Types of number	4
Unit 2	Factors and multiples	4
Unit 3	Introduction to algebra	4
Unit 4	Expanding single brackets	4
Unit 5	Functions	4
Year 7 Units of Study Spring 1		Length of unit
Unit 1	Properties of shape	4
Unit 2	Angles - drawing/measuring/point/line/opposite	4
Unit 3	Angles - shapes	4
Unit 4	Simplify/Equivalent/Order Fractions	4
Unit 5	Calculate with fractions (1)	4
Year 7 Units of Study Spring 2		Length of unit
Unit 1	Calculate with fractions (2)	4
Unit 2	Area and perimeter of quadrilaterals	4
Unit 3	Area of triangles and trapezia	4
Unit 4	Types of sequence (1)	4
Year 7 Units of Study Summer 1		Length of unit
Unit 1	Types of sequence (2)	4
Unit 2	Linear sequences	4
Unit 3	Mathematical movement - Graphs	4
Unit 4	Straight line graphs	4
Unit 5	Measuring data	4
Year 7 Units of Study Summer 2		Length of unit

Unit 1	Presentation of data (1)	4
Unit 2	Presentation of data (2)	4
Unit 3	Construction	4
Unit 4	Review Point	8

Year 8 Mathematics at Smiths Wood Academy

- The Smiths Wood Year 8 *Mathematics* curriculum builds upon the predominantly number based Year 7 curriculum before moving on to further algebra and geometry topics.
- The curriculum is sequenced in this way because a solid foundation in geometrical topics such as angles and circles are vital to prepare pupils for GCSE level study.
- Every lesson starts with a trust-wide Do Now activity based around practice retrieval to reinforce previous learning.
- Students complete 3 weekly 'milestone' assessments as well as a weekly knowledge check to monitor progress against the learning objectives.
- Enrichment opportunities available for students include the UKMT junior maths challenge for higher attaining students, as well form time competitions, World Pi day and access to online platforms for all.

Year 8 Themes of Study:

Fractions: Fractions are seen in everyday life, for example, recipes may contain fractional amounts, like ½ teaspoon. When scaling a recipe up you need to multiply fractions. Dividing by fractions helps you work out how many 1/3 litre glasses you can fill from a 2 litre bottle.

Percentages: Percentages are used all over the real world. Pupils need to understand what a percentage is, how to work with them and the common misconceptions associated with them. Eg. Why will a 40% decrease not undo a 40% increase? This also links in with proposed enrichment day activities on finances and taxes.

Ratio and proportion: Ratio and proportion are all around us. A glass of squash needs the right ratio of squash to water, but what is the difference between a ratio and a fraction? How to you convert between the two? This topic will also lay the foundation for inverse proportion at GCSE.

Collecting like terms: Simplifying makes algebra less complicated and easier to use. This will often be interleaved into another question, eg. 'Give your answer in its simplest form.'

Substitution: Tentatively introduced in year 7 through sequences and linear graphs, we formally teach substitution in year 8. This also has real-life applications such as

substituting into scientific formulae. At the most basic level this is following a 'rule' such as 'I start with 3, I multiply it by 2 and I add 5'.

Expressions: An expression is a 'statement' in algebra. Eg. If I square has sides of length x then an expression for the perimeter of the rectangle would be 4x. This prepares students for forming and solving equations at GCSE.

Expanding and factorising: As an extension to expanding single brackets in year 7 double brackets will be introduced in year 8. Expanding brackets is multiplying two algebraic expressions together, factorising is the opposite of expanding.

Changing the subject of a formula: Cross curricular with science. In a formula e.g. speed = distance/ time, you may be given the distance and speed and have to rearrange the formula in order to calculate the time taken. Required at GCSE also to find the inverse of a function, solve simultaneous equations and derive iterative formulae.

Solving equations: Knowing how to solve equations helps you solve other problems such as finding one mass when given another. Engineers building large structures have to solve many equations to make sure that the structure is strong enough and will not fall down. Required at GCSE to solve simultaneous equations.

Probability: Calculating probabilities can help you work out is games are fair. Modelling probabilities by experimenting can help scientists predict the outcomes of random events. Car insurers use probability to assess how likely a driver is to have an accident.

Properties of shapes: This helps students identify and organise visual information. Learning about shapes also helps students understand other signs and symbols.

Angles: Engineers need to know about angle properties between parallel lines when designing buildings like the Shard in London. Knowing the angles in a triangle helps pinpoint the exact location of an aircraft. Interleaving with displaying data in pie charts is important here.

Nets: Supports students in being able to visualise shapes, work out the number of faces, vertices and edges. Supports students in being able to calculate surface area. Nets are required for packaging. Food manufacturers look at the nets for food cartons very carefully in order to work out the most efficient way to cut the cardboard.

Plans and elevations: Used in jobs such as engineering, design and architecture. If you apply for planning permission to build a new house or an extension, you need to send plan and elevation drawings of the new building to the council for approval.

Construction and loci: Pupils often struggle with the dexterity needed to use compasses and early experience of this is valuable. Students need to be able to construct circles, angle bisectors, perpendicular bisectors, accurate drawings of triangles and angles.

Scale drawing: Scale diagrams have a range of applications including maps, building plans and scale models. An understanding of scale drawings is important for bearings questions at GCSE and can also be interleaved with conversions studied in year 7.

Year 8 Units of Study Autumn 1 (trust schools to follow as much as possible but will have individual adjustments for 20/21)		Length of unit (lesson)
Please see learning journey for Yr 8 for additional details		
Unit 1	Multiplication/Division of Decimals	4
Unit 2	FDP (1)	4
Unit 3	FDP (2)	4
Unit 4	Percentages	4
Unit 5	Simplifying ratios inc. conversion to fractions	4
Unit 6	Sharing into a ratio	4
Unit 7	Ratio problems including FDP	4
Year 8 Units of Study Autumn 2		Length of unit
Unit 1	Expressions and equivalence	4
Unit 2	Substitution into formulae	4
Unit 3	Expanding pairs of brackets	4
Unit 4	Factorisation - common factors	4
Unit 5	One step/Two step equations	4
Year 8 Units of Study Spring 1		Length of unit
Unit 1	Rearranging formulae	4
Unit 2	Linear equation with unknowns on both sides	4
Unit 3	Construct and solve linear equations	4
Unit 4	Construct and solve linear equations - properties of shapes	4

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Unit 5	Angles in parallel lines	4

Year 8 Units of Study Spring 2		Length of unit
Unit 1	Bearings	4
Unit 2	Scale conversions	4
Unit 3	Percentage change	4
Unit 4	Simple interest	4

Year 8 Units of Study Summer 1		Length of unit
Unit 1	Probability 1	4
Unit 2	Probability 2	4
Unit 3	Circumference of circles	4
Unit 4	Area of circles	4
Unit 5	Properties of 3D shapes	4

Year 8 Units of Study Summer 2		Length of unit
Unit 1	Volume of shapes	4
Unit 2	Plans and elevations	4
Unit 3	Constructions	4
Unit 4	Project	8

Year 9 *Mathematics* at Smiths Wood Academy (first teaching September 2021)

- The Smiths Wood Year 9 Mathematics curriculum prepares students for GCSE mathematics by building upon skills from year 7 and 8. These units have been chosen here because they are the KS3 National Curriculum content most relevant to starting GCSE study.
- For summer term 2 the curriculum will split into foundation and higher strands, although differences will be minimised at this stage to avoid pupils being capped.
- Every lesson starts with a trust-wide Do Now activity based around practice retrieval to reinforce previous learning.
- Students complete 3 weekly 'milestone' assessments as well as a weekly knowledge check to monitor progress against the learning objectives.

ENRICHING **LIVES;** TRANSFORMING **FUTURES**

- Enrichment opportunities available for students include the UKMT junior maths challenge for higher attaining students, as well form time competitions, World Pi day and access to online platforms for all.

Year 9 Themes of Study

Probability: Calculating probabilities can help you work out is games are fair. Modelling probabilities by experimenting can help scientists predict the outcomes of random events. Car insurers use probability to assess how likely a driver is to have an accident.

Averages: Averages are useful as they summarise a large amount of data into a single value making it easier to compare data. For example to see which mobile phone we want we may want to take into consideration the mean battery life of each phone.

Collecting data: Calculations involving frequency tables and grouped data are introduced here. This is good preparation for GCSE as there are frequent misconceptions with regards averages from frequency tables.

Presenting data: Displaying data in a graph makes it easier to interpret. For example, if a bar chart is used to display the hours of sunshine per day in a number of holiday destinations, you can see at a glance which destination is the sunniest. Students will need an understanding of graphs as they are used everywhere in life for example to show house price change as you move further away from the city.

Inequalities: Inequalities are used to compare quantities. This topic is closely interleaved with solving equations and can also be used to express upper and lower bounds for an amount.

Pythagoras and trigonometry : Lots of jobs require the use of Pythagoras and trigonometry (engineers, builders, architects, landscapers etc.) It is something that will reoccur multiple times through GCSE and A-level study.

Year 9 Units of Study Autumn 1 (Start Sept 2021)		Length of unit (lesson)
Please see learning journey for Yr 9 for additional details		
Unit 1	Unit Conversions	4
Unit 2	Index Laws (1)	4
Unit 3	Standard Form (1)	4
Unit 4	Standard Form (2)	4
Unit 5	Rounding and Bounds	4

Unit 6	Inequalities	4
Unit 7	Direct Proportion	4
Year 9 Units of Study Autumn 2		Length of unit
Unit 1	Inverse Proportion	4
Unit 2	Compound Units	4
Unit 3	Drawing Graphs (1) and (2)	8
Unit 4	Equation of a line	4
Year 9 Units of Study SPRING 1		Length of unit
Unit 1	Real Life Graphs	4
Unit 2	Angles in polygons (1) and (2)	8
Unit 3	Similarity and congruence	4
Unit 4	Pythagoras'	4
Year 9 Units of Study SPRING 2		Length of unit
Unit 1	Trigonometry	4
Unit 2	Venn Diagrams (including set notation)	4
Unit 3	Two way tables	4
Unit 4	Tree Diagrams	4
Year 9 Units of Study SUMMER 1		Length of unit
Unit 1	Factorising quadratics	4
Unit 2	Quadratic Sequences	4
Unit 3	Frequency tables	4
Unit 4	Stem and Leaf	4
Unit 5	Scatter graphs	4

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At this point in Year 9 students follow different pathways based on most appropriate tier of entry, but there will be crossover where necessary.		
Year 9 Units of Study SUMMER 2 **Foundation**		Length of unit (lessons)
Unit 1	Inequalities • Use correct notation to show inclusive and exclusive inequalities • Solve simple linear inequalities • Write down whole numbers which satisfy and inequality • Represent inequalities on a number line • Solve two sided inequalities	6
	During this half term students will sit their end of year exams plus receive appropriate deep feedback. In addition to this, time will be spent on ensuring students are confident with the following crossover topics studied earlier. This will be done by weekly fluency tasks and deep feedback. Extra deliberate practice will be given on any topics that student need to secure understanding. Integers and place value Decimals Indices, powers and roots Factors, multiples and primes Algebra: the basics Expressions and substitution into formulae Tables, charts and graphs Pie charts Scatter graphs Fractions, decimals and percentages Percentages Equations and inequalities Sequences	
Year 9 Units of Study SUMMER 2 **Higher**		Length of unit
Unit 1	Index laws • Zero, negative and fractional indices Calculating standard form Surds • Understand difference between rational and irrational numbers • Simplify surds	• 4

	• Rationalise a denominator		
Unit 2	Index laws and algebra Solve algebraic fractions Quadratics sequences	4	
Unit 3	Time series	2	
Unit 4	Recurring decimals	3	
Unit 5	Non calc trig	3	
	During this half term students will sit their end of year exams plus receive appropriate deep feedback. In addition to this, time will be spent on ensuring students are confident with the following crossover topics studied earlier. This will be done by weekly fluency tasks and deep feedback. Extra deliberate practice will be given on any topics that student need to secure understanding. 	Calculations, checking and rounding
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Indices, roots, reciprocals and hierarchy of operations
Factors, multiples, primes, standard form and surds
Algebra: the basics, setting up, rearranging and solving equations
Sequences
Averages and range
Representing and interpreting data and scatter graphs
Fractions and percentages
Ratio and proportion
Polygons, angles and parallel lines
Pythagoras' Theorem and trigonometry			

Year 10 Mathematics at Smiths Wood Academy

- The Smiths Wood Year 10 Mathematics curriculum is where pupils begin GCSE study in earnest, following the Edexcel Specification.
- The curriculum is split into foundation and higher tiers, although where possible students on both tiers study broadly the same topic at the same time to allow movement between tiers where appropriate.
- Do-Now activities focus on recall of prevous learning.
- Students complete 3 weekly 'milestone' assessments as well as a weekly knowledge check to monitor progress against the learning objectives.
- A mock exam at the end of the year aids pupils' preparation for GCSE.

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- Enrichment opportunities available for students include the UKMT intermediate maths challenge for higher attaining students, as well form time competitions, World Pi day and access to online platforms for all.

Presenting data: Displaying data in a graph makes it easier to interpret. For example, if a bar chart is used to display the hours of sunshine per day in a number of holiday destinations, you can see at a glance which destination is the sunniest. Students will need an understanding of graphs as they are used everywhere in life for example to show house price change as you move further away from the city.

Inequalities: Inequalities are used to compare quantities. This topic is closely interleaved with solving equations and can also be used to express upper and lower bounds for an amount.

Pythagoras and trigonometry : Lots of jobs require the use of Pythagoras and trigonometry (engineers, builders, architects, landscapers etc.) It is something that will reoccur multiple times through GCSE and A-level study.

Probability: Calculating probabilities can help you work out is games are fair. Modelling probabilities by experimenting can help scientists predict the outcomes of random events. Car insurers use probability to assess how likely a driver is to have an accident.

Averages: Averages are useful as they summarise a large amount of data into a single value making it easier to compare data. For example to see which mobile phone we want we may want to take into consideration the mean battery life of each phone.

Nets: Supports students in being able to visualise shapes, work out the number of faces, vertices and edges. Supports students in being able to calculate surface area. Nets are required for packaging. Food manufacturers look at the nets for food cartons very carefully in order to work out the most efficient way to cut the cardboard.

Plans and elevations: Used in jobs such as engineering, design and architecture. If you apply for planning permission to build a new house or an extension, you need to send plan and elevation drawings of the new building to the council for approval.

Construction and loci: Pupils often struggle with the dexterity needed to use compasses and early experience of this is valuable. Students need to be able to construct circles, angle bisectors, perpendicular bisectors, accurate drawings of triangles and angles.

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Year 10 Units of Study		Length of unit (lessons)
Unit 1	Fractions, ratio and Percentages	10

|		
	• Percentage Changes • Direct and inverse proportion • Recurring decimals	
Unit 2	Algebra • Solving Linear Equations • Expanding and factorising • CTS (higher only) • Solving linear simultaneous equations • Solving quadratic simultaneous equations (higher only)	15
Unit 3	Pythagoras and Trigonometry • SOHCAHTOA • Sine and Cosine rule (higher only)	10
Unit 4	Displaying Data • Averages • Averages from grouped data • Stem and Leaf Diagrams • Scatter Graphs • Frequency Polygons • Cumulative Frequency (higher only) • Pie charts • Pictograms • Histograms (higher only)	15
Unit 5	Area and Volume • Compound shapes • Surface area • Nets	10
Unit 6	Transformations and Constructions	10
Unit 7	Inequalities • On a number line • Solving • Regions on a graph	10
Unit 8	Probability	

Year 11 Mathematics at Smiths Wood Academy

- The Smiths Wood Year 11 Mathematics curriculum aims to prepare pupils for GCSE, further study or the world of work.
- The curriculum is split into foundation and higher tiers, there will be more divergence between tiers once we move into the bespoke curriculum for phase 2.
- Do-Now activities focus on recall of previous learning using the '5-a-day'
- Students complete regular practice papers both online for homework and have a weekly exam paper based lesson.

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- Enrichment opportunities available for students include the UKMT intermediate maths challenge for higher attaining students, as well form time competitions, World Pi day and access to online platforms for all.
- It is the aim that new content can be finished by January to allow for a bespoke curriculum for groups based on areas of weakness identified on the mock in November.
- Revision of all topics from the year 7-11 curriculum as appropriate.

Year 11 Units of Study		Length of unit (lessons)
Unit 1	Similarity and Congruency • SAS, ASA, SSS, RHS • Transformations	8
Unit 2	Circles • Circle theorems (higher only) • Area and circumference • Arcs and Sectors	10
Unit 3	Vectors • Column vectors • Proof	5
Unit 4	Algebraic Proof (higher only)	8

The *Subject* Department Learning Journey at a glance
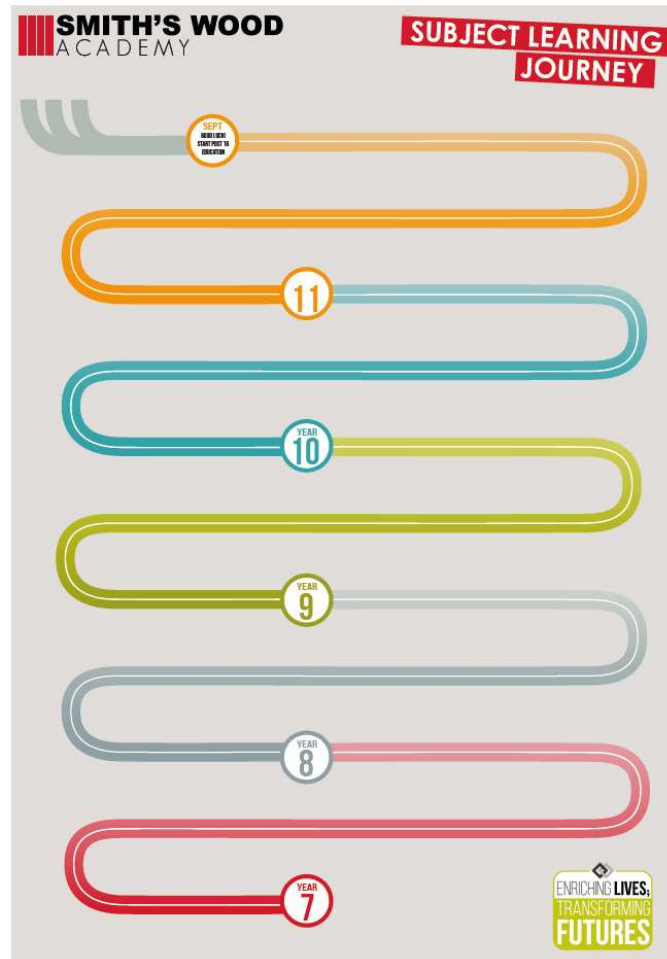
To include – topics, purpose of study and assessment points. To show how and why the curriculum is sequenced in the way in which it is.