

# Curriculum Map & Rationale

## Mathematics

2019 - 2020





### Curriculum Purpose: Why study mathematics at Kings?

#### **Why do students at Ark Kings need to study mathematics?**

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

#### **What are the aims for your curriculum?**

**(i.e. What do you want students to be able to know and do by the time they leave Ark Kings)**

The national curriculum for mathematics aims to ensure that all pupils:

- ♣ become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- ♣ reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language
- ♣ can solve problems by applying their mathematics to a variety of routine and nonroutine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.

The programme of study for key stage 3 is organised into apparently distinct domains (number, algebra, geometry, proportion, statistics, probability), but pupils should build on key stage 2 and connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge in science, geography, computing and other subjects.

#### **Develop fluency** *KS3 / KS4*

- ♣ *consolidate their numerical and mathematical capability from key stage 2 and extend their understanding of the number system and place value to include decimals, fractions, powers and roots*
- ♣ *select and use appropriate calculation strategies to solve increasingly complex problems*
- ♣ *use algebra to generalise the structure of arithmetic, including to formulate mathematical relationships*
- ♣ *substitute values in expressions, rearrange and simplify expressions, and solve equations*
- ♣ *develop algebraic and graphical fluency, including understanding linear and simple quadratic functions*
- ♣ *use language and properties precisely to analyse numbers, algebraic expressions, 2-D and 3-D shapes, probability and statistics.*
- ♣ *consolidate their numerical and mathematical capability from key stage 3 and extend their understanding of the number system to include powers, roots {and fractional indices}*
- ♣ *select and use appropriate calculation strategies to solve increasingly complex problems, including exact calculations involving multiples of  $\pi$  {and surds}, use of standard form and application and interpretation of limits of accuracy*
- ♣ *consolidate their algebraic capability from key stage 3 and extend their understanding of algebraic simplification and manipulation to include*



quadratic expressions, {and expressions involving surds and algebraic fractions}

- ♣ extend fluency with expressions and equations from key stage 3, to include quadratic equations, simultaneous equations and inequalities
- ♣ move freely between different numerical, algebraic, graphical and diagrammatic representations, including of linear, quadratic, reciprocal, {exponential and trigonometric} functions
- ♣ use mathematical language and properties precisely.

#### **Reason mathematically** *KS3 / KS4*

- ♣ extend their understanding of the number system; make connections between number relationships, and their algebraic and graphical representations
- ♣ extend and formalise their knowledge of ratio and proportion in working with measures and geometry, and in formulating proportional relations algebraically
- ♣ identify variables and express relations between variables algebraically and graphically
- ♣ make and test conjectures about patterns and relationships; look for proofs or counterexamples
- ♣ begin to reason deductively in geometry, number and algebra, including using geometrical constructions
- ♣ interpret when the structure of a numerical problem requires additive, multiplicative or proportional reasoning
- ♣ explore what can and cannot be inferred in statistical and probabilistic settings, and begin to express their arguments formally.
- ♣ extend and formalise their knowledge of ratio and proportion, including trigonometric ratios, in working with measures and geometry, and in working with proportional relations algebraically and graphically
- ♣ extend their ability to identify variables and express relations between variables algebraically and graphically
- ♣ make and test conjectures about the generalisations that underlie patterns and relationships; look for proofs or counter-examples; begin to use algebra to support and construct arguments {and proofs}
- ♣ reason deductively in geometry, number and algebra, including using geometrical constructions
- ♣ interpret when the structure of a numerical problem requires additive, multiplicative or proportional reasoning
- ♣ explore what can and cannot be inferred in statistical and probabilistic settings, and express their arguments formally
- ♣ assess the validity of an argument and the accuracy of a given way of presenting information.

#### **Solve problems** *KS3 / KS4*

- ♣ develop their mathematical knowledge, in part through solving problems and evaluating the outcomes, including multi-step problems
- ♣ develop their use of formal mathematical knowledge to interpret and solve problems, including in financial mathematics
- ♣ begin to model situations mathematically and express the results using a range of formal mathematical representations
- ♣ select appropriate concepts, methods and techniques to apply to unfamiliar and nonroutine problems.
- ♣ develop their mathematical knowledge, in part through solving problems and evaluating the outcomes, including multi-step problems
- ♣ develop their use of formal mathematical knowledge to interpret and solve problems, including in financial contexts
- ♣ make and use connections between different parts of mathematics to solve problems
- ♣ model situations mathematically and express the results using a range of formal mathematical representations, reflecting on how their solutions may have been affected by any modelling assumptions
- ♣ select appropriate concepts, methods and techniques to apply to unfamiliar and nonroutine problems; interpret their solution in the context of the given problem.

**What values underpin the curriculum content?**

- A genuine enthusiasm for mathematics that translates in the classroom and around
- An appreciation for the problem-solving nature of mathematics, and an ability to see how those problem-solving skills can be linked to real life
- An attitude of multiple routes to solution being available, with students comfortable in exploring different avenues

**Curriculum Aims****What are the aims of specific stages of the curriculum?****Year 7 (New launched Maths Mastery Programme):**

The first term of year 7 focusses on developing understanding of the axioms and structures of number that are fundamental to mathematics. This underpins understanding of the algebraic notation developed in this term and in subsequent years. The spring term of year 7 focusses on geometry, an important area of mathematics for students to engage with. The cumulative nature of the curriculum means that students apply algebraic reasoning in new contexts. Students' understanding of fractions, decimals and percentages from KS2 is built upon throughout the year. This is developed more formally in the summer term where time is spent linking different interpretations of fractions and introducing ratio.

**Year 8:**

Year 8 continues to apply focus to developing number and geometry skills, with students building on the knowledge accumulated in year 7. Students begin to learn calculator skills, using with more complex geometry calculations such as area of a circle. Algebra skills are revisited with a new focus on factorising, and are able to plot and interpret graphs for the first time. Students also begin to see the link between proportion and graphs as their knowledge of ratio and proportion expands.

**Year 9:**

During year 9 the focus shifts away from number with continued focus on algebra and geometry, and this the first time that students see statistics and probability with large focus. Proportion and multiplicative reasoning continues to be a focus following on from year 8 with more of a real-life context, for example calculating interest rates, and working with similar shapes. Algebra skills become more advanced, with simultaneous equations being introduced, as well as use of quadratics in graphs. Year 9 may introduce some areas of 'higher' content, and in this case, teachers of lower attaining sets will adjust the curriculum to suit that particular group.

**Year 10 / 11:**

During year 10 and 11 the curriculum splits into two tiers, foundation and higher, and for the first time students begin to follow different programmes of study. Students follow a spiral curriculum, and all students begin their two year GCSE course by revisiting key threshold concepts – this is basic number and algebra skills for foundation, and more advanced number skills for higher. One of the aims of the maths curriculum is to problem solve, and this takes centre stage during the 2 year GCSE course, where students are regular required to combine different content areas of mathematics in order to solve problems.



**Curriculum Overview: Outline of taught and assessed content**

The table below outlines the whole curriculum overview for this subject area, and shows the journey that students take throughout their secondary education.

**Year 5**

<p>Counting with negative numbers, rounding numbers to nearest 10 up to 1 000 000, multiply and divide mentally by 10, 100, 1000, divide 3 digits by 1 and 2 digits,</p> <p>Find factor pairs and common factors, know prime numbers up to 19,</p> <p>Recognise and convert between improper and mixed numbers, find equivalent fractions, add a subtract fractions with same denominator, convert between decimals and fractions,</p> <p>Convert between fractions and percentages, solve problems involving fraction of amount and percentage of amount.</p>	<p>Convert between different units of measure, find approximates between imperial and metric measures</p> <p>Estimate volume and capacity, measure perimeter and area of compound shapes, solve problems converting between units of time.</p>	<p>Distinguish between regular and irregular polygons using angle and side rules, identify 3D shapes,</p> <p>Estimate and measure angles of all sizes, draw angles of all sizes, know basic angle rules</p> <p>Draw reflections and translations</p>	<p>Complete and read information about tables – two way, bar charts, frequency tables</p>
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**Year 6**

<p>Use negative numbers in context, round numbers to a given degree of accuracy,</p> <p>Identify common factors, multiples and primes</p> <p>Multiply and divide by up to 4 digit numbers by 1 and 2 digit numbers</p> <p>Simplify fractions, add and subtract fractions and mixed numbers with different denominators, multiply and divide fractions</p> <p>Find a percentage of an amount using multiples of 5s and 10s</p>	<p>Solve problems involving similar shapes, solve problems involving metric conversions</p> <p>Generate linear number sequences, express worded problems using algebra, solve algebraic problems with two unknowns, plot points in all four quadrants of coordinate grid</p>	<p>Calculate the area of parallelograms and triangles</p> <p>Name parts of a circle inc diameter and radius</p> <p>Draw 2D shapes given dimensions and angles, Construct nets from 3D shapes</p> <p>Find unknown angles in triangles, quadrilaterals and regular polygons, find missing angles at a point on a line or vertically opposite</p> <p>Draw and translate simple shapes on a coordinate grid</p>	<p>Construct pie charts and line graphs, calculate the mean</p>
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	Autumn Term	Spring Term	Summer Term
	<b>KS3</b>		
<b>Year 7 (Maths Mastery)</b>	<p><i>Number systems and axioms</i> Place value systems including bases other than 10, laws of commutativity, associativity and distributivity</p> <p><i>Factors, multiples and BIDMAS</i> Factors, primes, multiples, square and cube numbers, establishing an order of operations</p> <p><i>Positive and negative numbers</i> Using negative numbers with all four operations</p> <p><i>Expressions, equations and sequences</i> Finding missing terms, determine nth term rules write expressions and form equations</p>	<p><i>Angles</i> Measure and drawing angles, apply rules of angles around a point and on a line, determine angles in parallel lines</p> <p><i>Classify 2D shapes</i> Classify shapes according to their properties, determine rotational and line symmetry</p> <p><i>Construct triangles and quadrilaterals</i> Use ruler, protractor and compass to construct 2D shapes</p> <p><i>Coordinates</i> Plot in all four quadrants, determine equations of horizontal and vertical lines, find mid points of line segments</p> <p><i>Area of 2D shapes</i> Area of triangles and quadrilaterals, and form and solve equations involving area</p> <p><i>Transforming 2D shapes</i> Translate, rotate and reflect in the cartesian plane, enlarge by a positive scale factor</p>	<p><i>Primes, factors and multiples</i> Prime factor decomposition, LCM and HCF, square and cube roots</p> <p><i>Fractions</i> Converting between fractions and decimals, apply all four operations to fractions, convert between mixed numbers and improper fractions, find fraction of an amount</p> <p><i>Ratio</i> Introduce ratio notation, determine relationship between fractions and ratios, split a quantity into a ratio</p> <p><i>Percentages</i> Find percentage of an amount, increase and decrease by a percentage, reverse a percentages</p>
<b>Assessment</b>	<p>Multiple choice Eedi quizzes 2 per week</p> <p>Half termly cumulative tests</p> <p>End of Autumn ACA: Multiple choice and written paper</p>	<p>Multiple choice Eedi quizzes 2 per week</p> <p>Half termly cumulative tests</p>	<p>Multiple choice Eedi quizzes 2 per week</p> <p>Half termly cumulative tests</p> <p>End of Summer ACA: Test created by AQA for Maths mastery programme</p>



<p><b>Year 8</b></p>	<p><i>Unit 1: Number</i> Introduced to negative numbers and apply generalisations to indices</p> <p><i>Unit 8: Calculations with fractions</i> Apply all four operations to fractions and begin to work with mixed numbers</p> <p><i>Unit 4: Expressions and equations</i> Apply laws of indices to algebra and begin to expand and factorise, solve two step equations, find nth term</p> <p><i>Unit 2: Area and volume</i> Calculate the area of quadrilaterals, triangles and compound shapes, and find the volume of cuboids and cross prisms</p>	<p><i>Unit 5: Real life graphs</i> Plot and interpret graphs showing real life scenarios and evaluate the information shown</p> <p><i>Unit 7: Lines and angles</i> Key angle facts of quadrilaterals, find interior and exterior angles of any regular polygon</p> <p><i>Unit 10: Percentages, decimals and fractions</i> Convert between FDP, convert between recurring decimals and fractions, begin to find a number as a percentage of another</p> <p><i>Unit 6: Decimals and ratio</i> Work with significant figures and multiply by very large and very small numbers, divide a quantity into a given ratio</p>	<p><i>Unit MM: Circumference and area of circles</i> Calculate the area and circumference of a circle in terms of pi and a rounded number</p> <p><i>Unit 3: Statistics, graphs and charts</i> Draw and interpret stem and leaf, frequency table, two way table, scatter graph</p> <p><i>Unit 9: Straight line graphs</i> Begin to work with direct proportionality, understand what the gradient of a line represents and draw straight lines using table of values</p>
<p><b>Assessment</b></p>	<p>ACA assessment – cumulative 2 x deep mark per unit assessed</p>	<p>2 x deep mark per unit Formative assessment only</p>	<p>ACA assessment – cumulative 2 x deep mark per unit assessed</p>



<p><b>Year 9</b></p>	<p><i>Unit 1: Number</i> Introduce negative powers and powers of ten, begin working with standard form</p> <p><i>Unit 2: Expressions and formulae</i> Substitute into formulae and change the subject of formulae, expand double brackets</p> <p><i>Unit 8: Sequences and graphs</i> Work with more advance sequences, find the equation of a line, find equation of parallel lines</p> <p><i>Unit MM: Proportion</i> Solve direct proportion problems by unitary method or drawing, solve inverse proportion questions</p>	<p><i>Unit 5: Constructions</i> Accurate construction of triangles, angles, nets of solids and loci of points</p> <p><i>Unit MM: Congruency</i> Identify congruent and similar shapes and calculate missing sides and angles</p> <p><i>Unit 7: Circles, Pythagoras and prisms</i> Revisit geometry of circles, apply Pythagoras' theorem and find surface area of right prisms and cylinders</p> <p><i>Unit 6: Equations and inequalities</i> Solve equations with unknowns on both sides, and solve linear inequalities</p> <p><i>Unit 8: Sequences and graphs</i> Solve simultaneous equations, construct and use graphs of quadratics</p>	<p><i>Unit 9: Probability</i> Begin to use the language of probability, list outcomes, and calculate the probability of two independent events</p> <p><i>Unit 3: Dealing with data</i> Design data collectors, calculate and compare averages</p> <p><i>MM: Scatter graphs</i> Plot scatter graphs and describe correlations</p> <p><i>Unit 4: Multiplicative reasoning</i> Complete transformations particularly enlargement, calculate percentage change and compound interest</p> <p><i>Unit 10: Comparing shapes</i> Refer back to similar triangles, begin to work with trigonometric ratios</p>
<p><b>Assessment</b></p>	<p>ACA assessment – cumulative 2 x deep mark per unit assessed</p>	<p>2 x deep mark per unit Formative assessment only</p>	<p>ACA assessment – cumulative 2 x deep mark per unit assessed</p>



**KS4**

<p><b>Year 10 - Foundation</b></p>	<p><i>Unit: Indices</i> Index laws and their roots, apply laws of indices</p> <p><i>Unit: Standard form</i> Convert between standard form and ordinary numbers and complete calculations with standard form</p> <p><i>Unit: Fractions</i> Apply all four operations to with fractions and mixed numbers</p> <p><i>Unit: Percentage change</i> Increase and decrease by a percentage, calculate compound interest, calculate with multipliers</p> <p><i>Unit: Sequences</i> Generate and use arithmetic, geometric and quadratic sequences, and find the nth term of an arithmetic sequence</p> <p><i>Unit: Ratio and similarity</i> Write and use basic ratios, understand ratio within geometry</p> <p><i>Unit: Transformations</i> Complete all four transformations including enlarging by a fractional scale factor</p>	<p><i>Unit: Algebraic reasoning</i> Revisit basic algebra skills including expanding and factorizing, solve linear inequalities, and find the equation of a straight line</p> <p><i>Unit: Right angled triangles</i> Apply Pythagoras and trig ratios to right angled triangles to find missing sides and angles</p> <p><i>Unit: Decimals and measures</i> Complete calculations involving decimals, convert between metric units and construct and use plans drawn to scale</p> <p><i>Unit: Angles</i> Use angles in parallel lines and calculate interior and exterior angles of any polygon, solve angle problems giving reasons</p> <p><i>Unit: Vectors</i> Represent 2D vectors and calculate with vectors</p>	<p><i>Unit: Area, surface area and volume</i> Find area of basic shapes, and volume of basic prisms, find surface area of cuboids and right prisms</p> <p><i>Unit: Constructions and loci</i> Construct accurate triangles and quadrilaterals, construct angles and loci</p> <p><i>Unit: Sampling</i> Use the vocabulary of sampling and complete stratified sampling</p> <p><i>Unit: Probability</i> Calculate relative frequency, and calculate probability using a sample space diagram, find a probability using a venn diagram.</p>
<p><b>Assessment</b></p>	<p>Non ACA – school to set 1 calculator paper as assessment 1 x deep mark per unit, created from GCSE papers</p>	<p>1 x deep mark per unit , created by GCSE papers</p>	<p>ACA assessment – Holistic assessment - full set of 3 GCSE papers 1 x deep mark per unit, created by GCSE papers</p>



<p><b>Year 11 - Foundation</b></p>	<p><i>Unit – More algebra</i> Expand quadratic expressions, factorise and solve quadratic equations</p> <p><i>Unit – Plotting and using graphs</i> Plot straight line graphs, quadratic graphs and negative quadratics graphs</p> <p><i>Unit - Ratio and Proportion</i> Calculate percentage change, calculate with ratio and solve FDPR problems</p> <p><i>Unit – Probability trees</i> List outcomes, construct and interpret frequency trees and probability trees</p> <p><i>Unit – Simultaneous Equations</i> Solve linear simultaneous equations using elimination and substitution</p> <p><i>Unit – Right angled triangles</i> Apply Pythagoras’ theorem and trigonometric ratios to find missing sides and angles of right angled triangles</p>	<p>REVISION</p>	
<p><b>Assessment</b></p>	<p>ACA – Holistic assessment - 2 GCSE papers from June 2019 (our school to complete additional one for full series) 1 x deep mark per unit</p>	<p>ACA – Holistic assessment - 3 GCSE papers from November 2019 (Spring 1) 1 x deep mark per unit, created from GCSE questions</p>	



<p><b>Year 10 – Higher</b></p>	<p><i>Unit 1: Number, indices and standard form</i>  <i>Rationalising surds, negative and fractional powers, estimating answers</i></p> <p><i>Unit 2: Algebraic reasoning and sequences</i>  <i>Factorising quadratics, nth term rule including quadratics, index laws in algebra</i></p> <p><i>Unit 3: Interpreting and representing data</i>  <i>Scatter graphs, stem and leaf, averages from [grouped] frequency tables</i></p> <p><i>Unit 4: Fractions, ratios and percentages</i>  <i>Calculating with fractions, reverse percentages, recurring decimals</i></p>	<p><i>Unit 5: Angles and trigonometry</i>  <i>Sum of interior and exterior angles of a polygon, using Pythagoras and trig ratios in right angled triangles</i></p> <p><i>Unit 6: Graphs</i>  <i>Gradients and equations of straight lines, parallel and perpendicular lines, drawing quadratic graphs, graphing a circle</i></p> <p><i>Unit 7: Area and volume</i>  <i>Conversion between metric units, surface area, area and circumference of circles, volume and surface area involving circles</i></p>	<p><i>Unit 8: Transformations and constructions</i>  <i>Reflection, rotating, translating, enlarged by negative and fractional scale factors, constructions with compass and ruler, solving problems with bearings</i></p> <p><i>Unit 9: Equations and inequalities</i>  <i>Quadratic formula, completing the square, solve simultaneous equations, including quadratic, inequalities on number lines</i></p> <p><i>Unit 10: Probability</i>  <i>Number of outcomes, probability trees, tree diagrams, conditional probability, mutually exclusive events</i></p> <p><i>Unit 11: Multiplicative reasoning</i>  <i>Repeated percentage change, direct and inverse proportion, speed and acceleration</i></p>
<p><b>Assessment</b></p>	<p>Non ACA – school to set 1 calculator paper as assessment                  1 x deep mark per unit, created from GCSE papers</p>	<p>1 x deep mark per unit , created by GCSE papers</p>	<p>ACA assessment – Holistic assessment - full set of 3 GCSE papers                  1 x deep mark per unit, created by GCSE papers</p>



<p><b>Year 11 – Higher</b></p>	<p><i>Unit 12: Similarity and congruence</i> Find missing lengths of similar shapes, prove congruence</p> <p><i>Unit 13: More trigonometry</i> Sine rule, cosine rule, 3D trig and 3D Pythagoras, area of a triangle</p> <p><i>Unit 14: Further statistics</i> Stratified sampling, cumulative frequency diagrams, histograms, box plots, interquartile ranges</p> <p><i>Unit 15: Simultaneous equations</i> Solve graphically, and algebraically including with one quadratic</p> <p><i>Unit 16: Equations and graphs</i> Recognise and draw quadratic graphs, iteration, find roots of cubic equations, solve cubic equations</p>	<p><i>Unit 16: Circle theorems</i> Understand, use and prove all circle theorems, find the equation of a tangent to a circle at a given point</p> <p><i>Unit 17: Rearranging formulae</i> Apply all four operations to algebraic fractions, work with surds, rationalise denominator of a fraction, find inverse functions</p> <p><i>Unit 18: Vectors and geometric proof</i> Calculate resultant of two vectors, prove lines are parallel and prove points are co-linear, apply vector methods to simple geometric proof</p> <p><i>Unit 19: Proportion and graphs</i> Solve problems involving direct proportion, calculate the gradient of a tangent at a point, estimate the area under a non-linear graph</p>	
<p><b>Assessment</b></p>	<p>ACA – Holistic assessment - 2 GCSE papers from June 2019 (our school to complete additional one for full series) 1 x deep mark per unit</p>	<p>ACA – Holistic assessment - 3 GCSE papers from November 2019 (Spring 1) 1 x deep mark per unit, created from GCSE questions</p>	



**Threshold concepts**

	<b>Threshold Concept</b> – <i>A new idea that introduces a new way of thinking - high level concepts</i>	<b>How does this unlock future learning?</b>
<b>Year 7</b>	Number – Place value, negative numbers	Understanding of very large and very small numbers. Students will later need to link negatives to indices, and plotting of graphs.
	Algebra – Forming and simplifying expressions	Understanding the fundamental basics of algebra which will ultimately account for up to 40% of their final GCSE when linked with other areas of mathematics.
	Geometry- Classifying 2D shapes by their properties	Problem solving tends to involve some understand of shape whether 2D or 3D, so understanding the basic properties at this stage is crucial.
	Proportion – Ratio notation	Understanding how to represent values as a ratio is regularly involved in problem solving GCSE questions, and generally ratio is linked to other areas of maths particularly FDP
<b>Year 8</b>	Number – Converting between FDP, rounding and significant figures	Easily converting between FDP allows for metric conversions, problem solving when given different measures, while rounding and significant figures allow students to estimate effectively.
	Algebra – Solving basic equations (two step)	Beginning to solve basic algebra will allow students to quickly apply skills to problem solving questions
	Geometry – Key angle facts of parallel lines and quadrilaterals	GCSE generally content ‘big mark’ questions on applying angle rules, whether to lines or polygons. If students more readily understand these rules now they will find it easier to retrieve them during proof
<b>Year 9</b>	Number – Standard form and estimation	
	Algebra – Plotting straight lines	
	Geometry- Pythagoras and trigonometric ratios	
	Proportion – Similar shapes	



**Glossary of shared AKA definitions**

Threshold Concepts	<p>A core idea in a subject which unlocks a new way of thinking about something.</p> <p><i>Meyer and Land offer useful definitions of threshold concepts:</i></p> <ul style="list-style-type: none"> <li>- <i>Threshold concepts are the core ideas and processes that define the way of thinking and practicing for a discipline but are so ingrained that they often go unspoken or unrecognized by practitioners.</i></li> <li>- <i>A threshold concept can be considered as akin to a portal, opening up a new and previously inaccessible way of thinking about something. It represents a transformed way of understanding or interpreting or viewing something, without which a learner cannot progress.</i></li> </ul> <p style="text-align: right;"><i>Meyer &amp; Land (2003)</i></p>
Cumulative assessment	Assessment that tests all of the content taught up to that point in the course / stage.
Holistic assessment	Assessment that tests all of the content from the entire course. (Sometimes referred to as a global assessment). An example would be a full GCSE set of papers.
End of unit assessment	An assessment that tests only the content taught in a specific unit.
Domain knowledge	Knowledge that is specific to the subject discipline.
Curriculum aim	What you want students to have mastered (i.e. know or be able to do) by a specific point in the curriculum.
ACA (Ark Common Assessment)	An assessment that is delivered by a number of other Ark schools to the same year group, at the same time, under the same conditions. This assessment is then moderated within the network to create shared grade boundaries.
Internal Assessment	An assessment that has been designed or adapted by Ark Kings teachers.
External Assessment	A national assessment taken by students across the country of the same age, at the same time, under the same conditions.