

Buile Hill Academy Enriching Lives, Inspiring Ambitions

Curriculum Guide For Parents: Mathematics







Our Vision and Approach in Maths

The Maths department at Buile Hill Academy aims to shape confident mathematicians who relish the challenge of maths. We support students to become independent, reflective thinkers, whose skills not only liberate them in maths but also empower them to engage effectively across the curriculum.

We build deep understanding, confidence and competence in mathematics. As well as being fluent mathematicians, we want students to be able to reason and to solve problems.

What our students will learn

Our ambitious and connected curriculum is sequenced to cover the following topics throughout the academic year:

- Number
- Algebra
- Ratio, proportion and rates of change
- Geometry and measures
- Probability
- Statistics

The curriculum places great emphasis on mathematical language and questioning so students can discuss the mathematics they are doing, and so support them to take ideas further.

The breakdown of topics covered across the year groups is detailed in the grid below. Please note this is subject to change as we adapt our curriculum to meet the needs of our students.



		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
K e y S t a g e 3	Y e a r	Place Value Properties of number	Arithmetic Procedure with integers and multiples Expressions and equations Assessment Point 1	Plotting Coordinates Perimeter and Area	Arithmetic proce- dures (including fractions)	Understanding multi- plicative rela- tionships: frac- tions and ratio Assessment Point 2	Transformations
	Y e a r 8	Proportional Reason- ing Ratio and scale Multiplicative change Multiplying and dividing frac- tions	Representations Working in the Carte- sian plane Representing data Tables & Probability Assessment Point 1	Directed Number Four operations with directed num- ber Algebraic Techniques Brackets, equations and inequalities Sequences Indices	Developing Number Fractions and per- centages Standard index form Number sense	Developing Geometry Angles in parallel lines and poly- gons Area of trapezia and circles Line symmetry and reflection Assessment Point 2	Reasoning with Data The data handling cycle Measures of location
	Y e a r 9	Reasoning with Alge- bra Straight Line Graphs Forming and Solving Equations Testing Conjectures	Constructing in 2 and 3 Dimensions Three-dimensional shapes Constructions and congruency Assessment Point 1	Directed Number Four operations with directed num- ber Reasoning with Num- ber Numbers Using percentages Maths and Money	Reasoning with Ge- ometry Deduction Rotation and transla- tion Pythagoras' Theorem	Reasoning with Pro- portion Enlargement and Similarity Solving Ratio and Proportion Problems Rates Assessment Point 2	Representations and Revision Probability Algebraic Representa- tion Revision
K e y S t a g e 4	Y e a r 1 0	Working with Number Equations and Ine- qualities	Equations and Ine- qualities Statistics Assessment Point 1	Ratio, fractions, per- centages and Interest Angles bearings and further trigo- nometry	Sequences and straight-line graphs Circles, surface area and volume.	Circles, surface area and volume. Probability	Accuracy and bounds Assessment Point 2 Transformations and constructions Consolidation
	Y e a r 1 F o u n d a ti o	Transformations Fractions Algebra	Ratio & proportion Standard form Multiplicative reason- ing Statistics & sampling averages Assessment Point 1	Responsive to AP1 Rearranging equa- tions, graphs of cubic and recip- rocal functions and simultane- ous equations Circles, cylinders, cones & spheres	Revision		
	Y e r 1 Hi g h	Iransformations Changing the subject of formulae, algebraic frac- tions Algebraic Fractions	Collecting data, cu- mulative fre- quency, box plots & histo- grams Circle Theorems Surds Assessment Point 1	Proof Direct & inverse proportion Further trigonometry & graphs of trigonometric functions	Vectors & geometric proof Reciprocal & expo- nential graphs. Gradient & area under graphs. Assessment Point 2		



How you can support your child's learning in Mathematics:

- Students will have a knowledge organiser for each of their schemes of learning. Students can use these to test themselves on the content throughout the term.
- Question your child on what they have learnt in lesson and help them to practice their times tables regularly.
- The students' homework will be set on Hegarty Maths once a week. Please encourage them to watch the supporting videos and to make notes before attempting the homework questions.
- Have a growth mindset Avoid saying things like:like "I can't do maths" or "I didn't like maths at school"
 your child may start to think like this themselves.

Point out the maths in everyday life. Include your child in activities involving numbers and measuring such as shopping, cooking and travelling. You could talk about the amount of money you have when you go shopping, how much the items cost and how much you have left after you have paid the bill. When baking, encourage your child to read the recipe and measure out the ingredients accurately, and when you are travelling, discuss location and direction.

Websites you can visit:

https://hegartymaths.com/

- Maths homework is set on a website called Hegarty Maths. This is an amazing website that gives video support for every question student's attempt, to make sure that homework can be completed independently. It also comes with some fantastic revision features to support students in doing some independent revision. It covers the whole curriculum with over 600 videos and 40,000 bespoke questions.
- This homework can be completed on any device with an internet connection. They will need to write notes on the video and all their working out, so they will need some paper to do this. Logging in is easy simply choose the school name, and then use their name and date of birth to log in. If your child is struggling to log in, please let their maths teacher know so they can check they are logging in with the correct details.
- We would like to encourage you to log in with your child to see what they are doing. You can watch the videos with them to see what methods they should be using, and you can view all of their past scores to see which areas they are struggling on.

https://whiterosemaths.com/homelearning/

• White Rose have produced short 'home learning' videos for each lesson. These show clearly and simply how to help your child to complete their class activities successfully.

https://www.bbc.co.uk/bitesize/subjects/z6vg9j6

• BBC Bitesize has a range of easy to follow lessons and videos to further support learning, revision and homework. The information has been written by subject teachers and covers a broad range of topics.

https://classroom.thenational.academy/subjects-by-key-stage

• Oak National Academy provides free video lessons, slides and worksheets to support students to keep learning. We recommend using Oak's resources to help your child recap, revise or catch up on any lost learning from school.



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Books you can purchase:

To master revision we suggest purchasing both a Revision Guides and a Revision Workbooks. This way the students will get plenty of exam-style worked examples and support to help them to understand key concepts before being applying this knowledge to practice questions. Remember that Maths is a tiered subject, so please check before you buy if it is the higher or foundation tier set of books that are required.

Pearson Revision Guides

Pearson Edexcel GCSE (9-1) Mathematics Foundation Tier Revision Guide

https://www.amazon.co.uk/REVISE-Edexcel-Mathematics-Higher-Revision/dp/1447988094/ref=sr 1 8? dchild=1&keywords=edexcel+maths+revision+guide&qid=1626439545&s=books&sr=1-8

Pearson Edexcel GCSE (9-1) Mathematics Foundation Tier Revision Workbook

Pearson Edexcel GCSE (9-1) Mathematics Foundation tier Revision Workbook: Catch-up and Revise: for home learning, 2021 assessments and 2022 exams (REVISE Edexcel GCSE Maths 2015) : Marwaha, Navtej: Amazon.co.uk: Books

Pearson Edexcel GCSE (9-1) Mathematics Higher Tier Revision Guide <u>https://www.amazon.co.uk/REVISE-Edexcel-Mathematics-Foundation-Revision/dp/1447988043/</u> <u>ref=pd_sbs_5/259-3993300-6915333?pd_rd_w=VSDPq&pf_rd_p=a3a7088f-4aec-4dbd-97cc-</u> <u>9a059581fe7b&pf_rd_r=V47PYMHQJGTD1VV1SEPB&pd_rd_r=73458eb7-7fe2-44c0-ae06-</u> <u>838a1c743609&pd_rd_wg=VkjUs&pd_rd_i=1447988043&psc=1</u>

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