

Maths – Curriculum Statement

Students are admitted to Endeavour academy at various points during Key Stage 4, some students are admitted in Year 11 and will therefore be with us for shorter periods of time. Many students have missed large amounts of time in school prior to their admission. For this reason, our timetables need to be flexible and personalised with all courses offering a variety of qualification routes and supporting pathways to post 16 learning.

Intent

We endeavour to provide students with key skills to allow them to progress to their next transition point students will learn key functional/ life skills with regards to maths and how this can be useful in their future, such as with financial maths and different career paths.

Maths is a core subject and as such is studied by every student in the academy. Maths is an important part of daily life where qualities that are used in mathematics can be applied, such as abstract or special thinking, critical thinking, creativity, reasoning, and problem solving. Mathematics can even promote effective communication skills used in daily life.

Core curriculum links







Maths	English	Science
Calculating Predicting Problem solving Estimating Deducting Value	Vocabulary Justifying Speaking Listening Explaining	Predicting Estimating Analyse Interpret Data Graph skills



Careers in Mathematics

Science Construction Accountancy Economics Pharmacy Engineering Retail and sales Air traffic control Industrial design Network management Transport and logistics	Banking Statistics Insurance Actuarial work Bookkeeping Astronomy Management Architecture Sound technology Investment analysis Software development	Buying Teaching Health sciences Administration Stockbroking Surveying Meteorology Cyber security Market research Medical technology Computer games design
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Skills Builder

At Endeavour Academy we teach skills that are essential to any person no matter what career path they choose. Using resources and support from [The Skills Builder Partnership](#) we aim to develop students' understanding and confidence within these essential skills.

Skill	How is this developed
 <p>Listening</p>	<p>Students must receive, retain, and process new methods and ideas.</p> <ul style="list-style-type: none"> - Students solve problems with methods are given verbally. - Students responding to questions. - Students listening to ideas from other students.
 <p>Speaking</p>	<p>Students can verbalise information and ideas.</p> <ul style="list-style-type: none"> - Students describing and explaining how they found an answer. - Use of key terminology in in responding to questions and explaining. - Communication with peers during group activities.
 <p>Problem Solving</p>	<p>Students can find a solution to challenges.</p> <ul style="list-style-type: none"> - Applying knowledge to questions which draw on many skills. - Presenting them with abstract situations and have students explain or solve problems. - Recognising problems may have multiple solutions. - Recognising competence requires time and effort. - Developing independence in problem solving.
 <p>Creativity</p>	<p>Students can use their imagination and generation of new ideas.</p> <ul style="list-style-type: none"> - Approach at problems from a different perspective. - Participating in skills-based games to apply knowledge in a creative way. - Imagine how new concepts work mathematically.
 <p>Staying Positive</p>	<p>Students can use tactics and strategies to overcome setbacks and achieve goals.</p> <ul style="list-style-type: none"> - Students approach setbacks with a positive 'How can I improve?' attitude. - Students utilise support from staff and peers. - Demonstrating resilience strategies when faced with challenging situations. - Share experiences of how they overcame difficulties.
 <p>Aiming High</p>	<p>Students can set clear, tangible goals and devise a robust route to achieving them.</p> <ul style="list-style-type: none"> - Extension tasks within lessons that encourages students to take risks and take their learning to the next level. - Attempt to answer higher level questioning to extend answers and develop thinking. - Celebrate individual successes. - Students encouraged to set own improvement targets. - Aspirational targets and how this could help them to achieve in employment.

<p>Leadership</p> 	<p>Students can support and encourage others to achieve.</p> <ul style="list-style-type: none"> - Student led explanation of methods and processes. - Taking a lead role within the skills-based games. - Peer support in challenging tasks.
<p>Teamwork</p> 	<p>Students can work cooperatively with others to achieve.</p> <ul style="list-style-type: none"> - Participation in group work when solving maths problems. - Cooperative skills-based games. - Peer support when working through problems. - Recognising the importance of the contributions of others during class discussions.

Implementation

The curriculum is designed to ensure students can acquire key mathematical facts and strategies and allow them to develop these by applying them into a range of settings.

The curriculum is planned over a two-year time frame following the Edexcel GCSE Mathematics specification alongside the NCFE Functional Skills Mathematics specification.

It is designed to be flexible in terms of pathways and the needs of the students, whilst being broad, balanced, and ambitious, covering the full range of strands within mathematics.

Course Level

Students follow a linear GCSE in mathematics with the aim to complete the course in a final exam in the summer of Year 11. The course has two tiers of entry and students are assessed on ability regularly and entered for the appropriate tier. The two tiers are:

- Foundation grades – 5 – 1
- Higher grades – 9 – 3

Edexcel exam board will be used.

Below is a link to the specification that will be used

<https://qualifications.pearson.com/en/qualifications/edexcel-gcses/mathematics-2015.html>

We also offer Functional Skills Maths at Entry Level 3, Level 1, and Level 2 through the Northern Council for Further Education (NCFE). This qualification is awarded via on demand assessments that students are entered for based on their current level and is Pass/Fail at that level.

Progression through the functional skills qualification:

Entry Level 3 → Functional Skill Level 1 → Functional Skills Level 2.

Functional skills level 2 qualification is an equivalent of grade 4 at GCSE.

[Functional Skills - English and Maths | NCFE | NCFE](#)

Learning Content

Below is a list of the content within GCSE Mathematics.

Number	Transformations
Algebra	Ratio and proportion
Graphs, tables, and charts	Right-angled triangles
Fractions and percentages	Probability
Equations, inequalities and sequences	Multiplicative reasoning
Angles	Constructions, loci and bearings
Averages and range	Quadratic equations and graphs
Perimeter, area and volume	Fractions, indices and standard form
Graphs	Congruence, similarity and vectors
More algebra	

Full details of teaching content can be found by following the link below.

<https://qualifications.pearson.com/en/qualifications/edexcel-gcses/mathematics-2015.html>

Assessment

On admission, all students complete a baseline assessment to allow teachers to identify starting points, track progress and apply interventions where necessary and is used to evaluate progress from point of entry to point of leaving Year 11.

Half termly assessments and mock exams using past papers are part of our summative assessment procedures.

Live marking, feedback and opportunities for students to discuss their learning form part of our planning and marking procedures, where students can identify areas for development and make improvements as required.

Periodic skills checks are used with students to help them practice and recall facts and strategies across a broad range of topics within maths, allowing for practice and development of skills as well as identify gaps or misconceptions in knowledge.

Formative assessments take place in the shape of multiple-choice quizzes, discussions, and self-marking. This information helps form our planning which can adapt to accommodate any gaps identified.

Impact

Our main goal is for our students to be able to clearly explain what they have learned and demonstrate these skills across the curriculum and outside of the classroom setting. Students make progress within the subject during their time at Endeavour Academy and leave with a qualification that is suitable to their ability and their next stage of progression.

Extension tasks and revision programmes:

Below is a link to Sparx Maths, which is an online learning platform for maths and will be one of the main tools used for homework within maths:

[Sparx Maths](#)

Below is a link to onmaths, this is a useful resource for practicing exam style GCSE questions:

<https://www.onmaths.com/>

Below is a link to Corbettmaths, which has resources available for students to use to review key areas of maths

[Corbettmaths – Videos, worksheets, 5-a-day and much more](#)

How parents can help develop skills:

Use mathematical language during your discussions, for example involving them in cooking activities where there is a need to weigh, convert, and measure and ask them what the ratio of milk to flour may be. Allow your child to help calculate home budget expenditures for example ask them to estimate shopping budgets for special occasions such as Christmas then involve them in the process to see if they had estimated costs accordingly.

We understand that some parents may feel they lack confidence with mathematics and that the curriculum is forever evolving. At Endeavour Academy we have excellent relationships with East Durham College where there are several courses available to enhance adult numeracy skills. Should you be interested in brushing up on your numeracy skills then please see the link below:

[Functional Skills Maths \(Fast Track\) | East Durham College \(edc.ac.uk\)](#)

Should you wish to find out more about what our students learn from Mathematics lessons and how we apply this across our curriculum then please contact Endeavour Academy.