

Mathematics

**Intent**

**“Mathematics is the poetry of logical ideas”**

Mathematics at Belvue aims to make the students aware of the integral part maths plays in all facets of our lives and to develop the young people’s mathematical knowledge; skills and understanding so as to better access the world around them. We aim to give a broad, rich and enjoyable curriculum but with a particular emphasis on the practical application of number, money, sorting & classification, time and measure. We aim to offer students the opportunity to access appropriate nationally recognised accreditations. We aim for the young people to have the confidence and experience to be able to identify what mathematical skills and knowledge they need to apply to solve practical problems in their own lives.



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**Overview**

Mathematics is a powerful tool for independence and engagement in the world around us. To maximize the abilities of young people with learning disabilities it is important that mathematics is not taught in isolation rather that is taught within a context that is relatable, purposeful and enjoyable. Planning and developing work in the areas of Mathematics is taught with the National Curriculum as a guiding structure and delivered through four components, within each of which are a number of associated topics:

* **Number** e.g counting, ordering, addition, subtraction, division and multiplication, decimals and money, fractions and percentages
* **Shape, Space and Measures** e.g telling the time, measuring (length, weight, capacity), 2D and 3D shape, position and movement
* **Handling Data** e.g sorting, collecting data e.g tally charts,    presenting and interpreting data e.g graphs
* **Using and Applying** – combining and using the knowledge gained in all other components.

Our Math’s curriculum aims to provide equal opportunities for all to access the National Curriculum in three pathways: MLD-formal, SLD-semi-formal and SLDC-informal.

Importance is placed on the learning of number as this skill permeates all areas of numeracy. Maths is a key life skill; however, the abstract and conceptual nature of mathematics poses challenges to students with special needs. As such the content of the National Curriculum must be mediated to meet our student’s needs. A sequential approach is taken to meet the different needs of students:

* **Concrete Approach** – This is the first step that allows the students to explore maths using physical resources such as block, counters dice etc. Where possible there should be a tangible purpose to the items they are using.
* **Pictorial Approach** – This is when the children are solving problems where the use of images are involved. Where possible the images should relate to practical things in their everyday lives at school and at home.
* **Abstract Approach** – This is where numbers represent symbolic values and the children will solve problems using their number sentences. Where possible this is linked to the practical application of abstract maths.

Students in both Key stage 3 & 4 receive 4 maths lessons a week. Catch-Up Numeracy is used where appropriate and the majority of staffed are trained on this intervention. Weekly 1 to 1 math’s intervention sessions are available for those students with specific difficulties in math’s. In KS4 those student who require extension take part in a GCSE math’s option group for 2 sessions a week.

There is a particular emphasis on the practical application of number, money, sorting & classification, time and measure with students having opportunities to practice how these skills are used in functional day to day tasks. e.g managing money/shopping, understanding timetables and using measure in everyday life. To support this every class takes part in a fun, creative competitive enterprise project to raise money for the schools charity (FABS).

Our KS4 students engage in a course of study that leads to a variety of opportunities for external qualifications where appropriate. These include Life and Living Skills certificates, Entry Levels awards, Level 1 Award and Foundation GCSEs. There is also a specific focus to support **Preparation for Adulthood** and to build key mathematical skills that facilitateHealth, Employment, Independent Living and, Community Inclusion.

**Curriculum overview for Key Stage 3 and 4**

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| **OVERVIEW OF KS3 TOPICS**  In **KS3** topics are designed to support students to develop and build upon their core mathematical skills. While these topics are repeated each year the themes used to provide context change. This helps create a programme of learning that is rich whilst supporting students to make their maths skills more transferable. | | |
| **Autumn 1 Baselining** | **Spring 1** | **Summer 1** |
| **Quantity/Number** | * Pattern Sequences * Order * Sorting/Classification | * Data * Days * Weeks, months/Seasons, dates * Passage of time * Clocks |
| **Shape/location** |
| **Measure** |
| **Sorting/ Time** |
| **Sequence Patterns/ Order** |
| **Autumn 2** | **Spring 2** | **Summer 2** |
| • Number, Quantity  • Adding/Subtracting  • More/Less  • Money  (whole school enterprise project) | * Size * Weight * Capacity * Length & Height | * Shape * Positi |

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| **THEMES FOR ANNUAL CYCLE KS3**  In **KS3** themes are in the context of school and familiar surroundings. This is to support the development of maths skills that support students becoming more independent in their everyday life. | | | |
| **Cycle** | **Autumn** | **Spring** | **Summer** |
| **Cycle 1** | **Cooking** | **Housework (independent living)** | **Entertaining/parties** |
| **Cycle 2** | **Sport** | **Exercise** | **Games/Competitions** |
| **Cycle 3** | **Woods** | **Our Local Area** | **Gardening** |

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| **Autumn 1** | **Spring 1** | **Summer 1** |
| * Introduction to whole numbers * Data handling | * Working with whole numbers (Using (+-x÷) operations in real life situations * Patterns | * Working with time * Working with fractions |
| **Autumn 2** | **Spring 2** | **Summer 2** |
| * Using money * Whole School Enterprise Project | * Working with measures * Pre-Algebra (Entry 2 & 3) | * Working with 2D & 3D shapes * Working with angles & position |



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