



ASHFIELD SCHOOL

Maths Intervention Review

2019-2020

Overview of Intervention

Catch up:

Power of 2 (Buddy Maths):

Buddy Maths is a book based intervention where students are paired up with a year 12 buddy. They completed an initial assessment based on material taken from the books. Their buddy reads out or shows them the questions, the student's then attempt to answer the questions. If they consistently answer the questions correct, they move onto to new topics, if they answer bits wrong, the buddy provides support to help them overcome that hurdle.

The impact of this intervention on the year 7s is that they grow in confidence with their maths, have another opportunity away from lessons to revisit areas they have struggled with and work alongside a positive role model.

Numeracy Intervention:

A member of staff runs a series of sessions that cover the basic mathematics skills needed at secondary level. While working with very small groups the member of staff can discover the barriers facing that student in being successful and help them pass by that barrier. Students are identified, tested and then retested as part of this particular intervention. An in-house assessment is used to calculate gains made.

The impact of this intervention is that they gain a significantly better understanding of the basics in mathematics, they can apply these skills to the mastery curriculum that they follow in their normal lessons and grow in confidence as they feel they can achieve more.

These catch up based interventions are designed to support the students that join us from primary school in the 'below average' category. We give them additional time and support out of lessons in order to help build the necessary foundations for their secondary school journey.

More able:

Tutor Time Intervention:

During tutor time we invite a number of year 11 students to take part in an intervention programme. These are targeted groups of students either looking to push for a grade 4 or 5 along with students aiming to push grade 5s into 6s or above. While the time allocated to this intervention is short, the consistency and regular revision helps retention and recall and supports students work in lessons.

The impact of this intervention is to support students in their knowledge recall and application. It can help fill in gaps that may have developed over time. Students gain more confidence and are given more ways to revise and be independent.

Further Maths:

Further maths is an additional GCSE we offer to higher ability students. It is extremely appealing to students that already know they want to pursue A level maths as it bridges the gap between the GCSE and A level courses.

This intervention impacts the students in a number of ways, such as supporting their preparation for achieving the top grades on their core GCSE exams as well as bridging the gap between GCSE and A level. They can see where they skills they have learned are going to be used next which helps improve retention and recall.

Individual UKMT Maths Challenge:

The individual UKMT Maths challenge is designed to challenge the most able from each year group. It is divided up into 'Junior' (year 7 and 8), 'Intermediate' (year 10 and 11) and 'Senior' (year 12 and 13)

Students take a problem solving assessment; they can be awarded a bronze, silver or gold certificate based on the score they achieve. Students achieving the required threshold are invited to take part in the kangaroo or Maths Olympiad to compete further into the competition.

Team UKMT Maths Challenge:

The team UKMT Maths challenge is designed to challenge the most able from each year group. It is divided up into 'Junior' (year 8 and 9) and 'Senior' (year 12 and 13)

Four students, two from each eligible year group go to another centre and take part in a number of rounds of problem solving activities. Teams that win are then invited to compete in further team challenges against students in other regions of the country.

The junior challenge is hosted at Ashfield School.

The impact of this intervention is that it allows all of the students that take part to be part of a national competition, challenge themselves with problem solving activities they might not get in the classroom and for the team event, work alongside peers from different year groups and meet students from other schools.

All of these 'more able' interventions are designed to push the most able students at the school beyond the boundaries of the core GCSE course. Allowing them access to addition qualifications or ways in which we they can apply their understanding.

Enrichment:

Class teacher intervention:

A number of class teachers have run after school revision sessions (especially high numbers of these for year 11 / 12 and 13 students). Some sessions were drop-in sessions for general help. Some sessions were topic based sessions focussing on particular elements of the higher and foundation courses.

The impact of these after school revision sessions on the students, allows them to regularly revisit and recall previous knowledge. Keeping the work fresh in their minds ready for an up and coming assessment or a new topic where it may appear.

Raising the Grade:

Raising the grade is a day session run through Nottingham Trent University. The session is aimed at pupils in year 11 that are pushing for a grade 4 or 5 but are struggling to break that boundary.

On the day students are split up and given a variety of different activities, such as revision strategies and tips to remember facts and information better, ways of looking at problems and alternative approaches to questions.

The raising the grade trip impacts the students by allowing the students to visit a local University, allow them to work with students from other schools and to spend some extra time working on areas of mathematics that are frequent barriers to achieving higher grades.

Bletchley Park:

A group of year 8 students (mostly MAT) were taken to Bletchley Park. The aim of the trip was to look at applications of Maths in the real world, give them an insight into real code breaking in an out of classroom environment.

Students were given packs of information and code breaking tasks to complete while looking at the real Enigma machine used to crack real codes sent during World War 2.

The impact of this trip on the students is that it allows students to see a part of the history of maths in action. How applying mathematical knowledge can have a sizable impact in society along with experiencing maths outside of the classroom.

All the enrichment interventions are designed to allow the students the opportunity to gain a better understanding in the subject, provide support or see maths in the real world. They also motivate students more as they see a clear purpose behind some uses of the subject.

Headline Figures

Raising the grade – Year 11:

83% achieved a grade 4 or above

28% achieved a grade 5 or above

Further Maths Level 2 – Year 11:

93% achieved A⁺ - A

100% achieved A⁺ - B

Tutor intervention – Year 11:

100% achieved a grade 4 or above

89% achieved a grade 5 or above

Power of 2 (Buddy Maths) – Year 7:

Number of students 13

% improved score 85%

% improved confidence 61%

Male 4

% improved score 100%

% improved confidence 50%

Female 9

% improved score 78%

% improved confidence 67%

SEN 8

% improved score 88%

% improved confidence 62%

PP 11

% improved score 82%

% improved confidence 64%

Numeracy Intervention:

1 Term Per Group	Cohort Size
Year 7	49
Boys	17
Girls	32
PP	24
Non-PP	25

Category	Pre-Test	Final Test	Increase	Mark Increase
Average	39%	48%	8%	14
Boys	38%	44%	6%	10
Girls	41%	50%	9%	15
PP	37%	46%	9%	15
SEN	38%	44%	5%	9

Maths Challenge results – 7-8:

Number of students	168
% achieved bronze	20%
% achieved silver	5%
% achieved gold	3%
Male	88
% achieved bronze	20%
% achieved silver	9%
% achieved gold	3%
Female	80
% achieved bronze	20%
% achieved silver	1%
% achieved gold	3%
SEN	24
% achieved bronze	25%
% achieved silver	8%
% achieved gold	4%
PP	35
% achieved bronze	11%
% achieved silver	6%
% achieved gold	9%

Maths Challenge results – 10-11:

Number of students	102
% achieved bronze	19%
% achieved silver	8%
% achieved gold	2%
Male	51
% achieved bronze	22%
% achieved silver	10%
% achieved gold	4%
Female	51
% achieved bronze	16%
% achieved silver	6%
% achieved gold	0%
SEN	11
% achieved bronze	9%
% achieved silver	0%
% achieved gold	0%
PP	17
% achieved bronze	18%
% achieved silver	6%
% achieved gold	6%

Further Detailed Information

Power of 2 (Buddy Maths):

85% of year 7's made progress based on their 'intervention tracking assessment'.

61% identified they had improved in confidence in Maths

Surname Forename	Highest Assessment score	Difference from pre-test	Progress	Highest Confidence score	Difference from pre-test	Progress
Male Student	14	6	Y	5	-1	N
Female Student	14	4	Y	7	5	Y
Female Student	5	2	Y	1	0	N
Male Student	12	10	Y	7	6	Y
Female Student	15	-1	N	8	0	N
Female Student	19	5	Y	7	2	Y
Female Student	17	1	Y	7	4	Y
Female Student	17	7	Y	4	0	N
Female Student	17	0	N	7	2	Y
Male Student	16	2	Y	7	2	Y
Female Student	12	7	Y	5	1	Y
Female Student	14	4	Y	3	-1	N
Female Student	19	6	Y	4	3	Y

Led by a maths LPA, the power of 2 intervention worked extremely well with this selection of students. The buddies from year 12 were very good with the students and worked hard to help and support them. The two students that failed to demonstrate an improvement were high scores on their pre-test, which always makes it more challenging to show an improvement.

Tutor intervention (year 11):

A maths teacher led the intervention for year 11's on two different days. Some students came for the intervention on both days* where others appeared just once per week. The focus of these sessions was on the overlap questions from foundation and higher tiers. This gave them regular practice on topics they may not have covered for a while and worked on their recall and retention skills, along with exam technique.

89% of the students achieved a grade 5 or above. With 100% achieving a grade 4 or above.

Yr 11 Tutor intervention	Result
Wednesday group	
Male Student	5
Male Student *	5
Female Student *	5
Male Student *	6
Female Student *	5
Thursday group	
Female Student	5
Female Student	5
Male Student	5
Female Student	4

Further Maths Level 2 – Year 11:

A maths teacher led the intervention held during tutor time. The focus of these sessions was to deliver the required content for the further maths course. Students were then provided with further work to continue with during their own time or after school revision.

93% achieved A⁺ - A

100% achieved A⁺ - B

Students name	Total Score	Grade
Male Student	152	A ⁺
Female Student	122	A ⁺
Male Student	121	A ⁺
Female Student	99	A ⁺
Female Student	126	A*
Male Student	99	A
Male Student	155	A ⁺
Male Student	138	A*
Female Student	125	A*
Male Student	125	A*
Male Student	143	A*
Female Student	130	A*
Female Student	93	B
Female Student	110	A

Raising the Grade (year 11):

Raising the grade is organised at Nottingham Trent University by their Outreach team. It involves four workshops throughout the day focusing on different revision strategies and common misunderstandings or misconception.

As we send staff to help run some of the sessions we were allocated an extra day, so we invited 29 students over the two days.

83% of the students we invited achieved a grade 4 or higher in their final GCSE result.

31% achieved a grade 5 or higher.

Student name	Gender	Final grade
Female Student	F	4
Male Student	M	4
Female Student	F	5
Female Student	F	5
Female Student	F	4
Male Student	M	4
Male Student	M	5
Male Student	M	6
Male Student	M	3
Female Student	F	4
Female Student	F	4
Female Student	F	4
Female Student	F	4
Female Student	F	4
Female Student	F	2
Female Student	F	5
Female Student	F	4
Male Student	M	5
Female Student	F	5
Female Student	F	4
Female Student	F	4
Female Student	F	4
Female Student	F	3
Female Student	F	3
Female Student	F	5
Male Student	M	4
Female Student	F	5
Female Student	F	4
Female Student	F	3
Male Student	M	4