

Maths in Motion Challenge for Schools



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PRIMARY SCHOOLS

Class Teacher, St. Patrick's R.C. Primary School, Billingham

I can't underestimate the value of this project to the children. Maths can generally be seen as a bland subject by some, and particularly their parents. The Challenge gives the children a real drive, whether they are high achievers or those who are struggling with certain concepts. It motivates them to actually want to learn the skills they are going to need as they see the benefits and outcomes of their work in the race and this, in turn, benefits the school. STEM is now seen as something to enjoy.

I also used this Challenge in my previous school and we got into the top 250 most improved primary schools of 2016. Much of that achievement is down to the work done on this Challenge. I've seen children come into my class with very low aspirations in maths and leave as National Champions wanting to do more. Taking part in this Challenge has been one of the highlights of my teaching career!

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Headteacher, Kingston Primary School, Kingston, Western Australia

Am I pleased to have got involved in this project! We only joined in at the beginning of September and I've already recorded a marked improvement in the children taking part. They have become seriously interested in mathematics in a way that I've never seen before. They WANT to do more maths that will help them to set their cars up better and they really understand what they are doing! The fervour has even reached the homes of many of my children and the last race we had before Christmas was attended by a room full of very excited parents! The Challenge has really changed the way we operate for the better. Motivated children, interested parents and subject improvement throughout – result! The secondary school into which we feed has also joined the Challenge much to the great joy of our former pupils (and the Head of Mathematics!)

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STEM Co-ordinator, Blackheath High School for Girls, Junior Department

The maths skills involved in this project are many and varied but more than that, what this Challenge gives us is a real-world context that is actually meaningful and engaging. It gets the girls excited very about maths and STEM in general. They are learning how to work as part of a team to achieve a goal in exactly the same way as people do in the real workplace. We have definitely seen an improvement in the girls who take part.

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Headteacher, Liss Junior School, Hampshire

I thought you might be interested to know that I have looked after a pupil who joined us at the beginning of this academic year. This particular child's background indicates that he had not made much progress since beginning junior school for a variety of different reasons. However, since joining our school he has taken up membership of the Maths in Motion Club, despite the perceived mathematical challenge that MiM entails. He has required some individual input in most sessions. However, it is fast becoming evident that he is getting the 'hang' of the maths involved and is enthusiastic to be seen as an equal member of the club and his peer group.

On entry to KS2 he had only achieved 1c for mathematics and by the end of year five was just 2a, reflecting progress of only 5 fine levels in nine terms. By the spring term of this year he has already moved on to a 3C in mathematics reflecting a real acceleration in progress. I am certain that this is in part largely due to the additional maths experiences he has gained through MiM and the motivation it has provided him with for the subject.

I hope the information above helps you to convince others of the impact MiM can have on the learning and understanding of maths and science at this level – it is, quite simply, incredible!

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Class Teacher, Peel Park Primary School, Bradford

ALL the members of our Year 6 MiM Club were the same children entered for the Level 6 SATs recently. The mock results from their L6 and KS3 L5-7 tests were between 78 - 94 percent. The L5 mock test results were between 92 - 100 percent – staggering! Our other children were given a trial go at the L6 mock and scored an average of just 38%.

I put this down mainly to the massive gain in confidence that they get once they have joined the MiM Club. They immediately start applying the higher level skills in class, they request extra help from senior staff members to get their heads around the new, for them, style of maths they need and they want to see themselves do well in the races.

Maths in Motion massively increases self belief and, in some startling cases, very quickly. For instance Kashf one of our newest members (5 weeks only) was very shy, quiet and usually got overlooked. Last Friday she volunteered to shout out the girls challenge to all the boys (snarling and looking very fierce) for sports week – something that she would not have dreamed of doing before joining our MiM Club.

This is so much more than a maths challenge – thank you for a job well done!

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SECONDARY SCHOOLS

Head of Maths, Chatham & Clarendon Grammar School

We have been running an after school 'MiM Club' for 11 years. In that time I have witnessed many students who had previously lacked confidence in the subject become totally enthusiastic in a very short space of time. The Challenge puts Maths into such a perfect 'real life' environment for them that they can very quickly grasp what is needed and, perhaps more importantly, why! The excitement of it all spills over into other areas of school life and creates a great deal of discussion and general interest. Some of our 6th form maths students were so disappointed that they were too old to participate that they have undertaken a project with one of our feeder primary schools and we have seen a marked improvement there too, right across the board. We are proud to say that we have won through to the Finals on several occasions but we are even prouder to say that many of our former students have chosen to take Engineering as a career path. Academically, the software ticks so many boxes that teaching with it is a pleasure.

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Teacher of Mathematics, Harrow International School, Beijing

This is so popular with the children, we are in the process of fully integrating the Challenge into our classroom teaching. Even the most reluctant students can't resist having a go! It has brought a freshness to the way we teach maths and are now looking to expand what we do still further. We have already had parents involved in the racing and that was massively well received by everyone too!

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Maths Teacher, Harlaw Academy

I have run this as a lunchtime Club for 4 years and it never ceases to amaze me how enthusiastic my pupils get each year. They really do get totally immersed and become self-motivated. Several of them have gained their CREST Bronze Award as a result of getting involved. This is one Challenge that works – thank you.

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School Improvement, Coombe Dean School, Plymouth

We have been using this program with our bottom and middle set pupils for just one term and the difference in both attitude and achievement has been nothing short of amazing. Maths is no longer something for 'the other kids' – they all want to get involved in it!

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D&T Teacher, Hinchingsbrooke, School, Huntingdon

The excitement this project creates is not far short of miraculous! We have students queuing up to get at the computers when the Club is running and they just can't get enough of it. We run this from the D & T Department, because it simply covers so much of the curriculum and my, how we have seen STEM embraced as a result. There is no doubt in my mind that the Maths in Motion cohort clearly show that being involved has brought a range of positive attributes to their education that others simply don't have.

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HoM, Tunbridge Wells Grammar School for Boys

We are, naturally, always looking for ways to motivate our borderline C/D students and we achieved that and more this year! Our GCSE results have reflected the work we have done and we now have a real buzz in most maths lessons. The project has been, and continues to be, absolutely brilliant!! We are integrating 'Maths in Motion' into our classroom teaching from Year 7 upwards from this year.

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Maths Teacher, Queen Elizabeth's Grammar School, Alford

This is definitely the most popular Club in this school by a long way and we have seen the motivation and enthusiasm it creates rise year on year right across the age range. Our KS4 group this year have realised why we 'do' maths and have gone from strength to strength. I cannot tell you if it has improved our GCSE results but I think I know that they might be down without it!

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HoM, Tollbar Academy, Grimsby

As Head of Maths, it has been part of my responsibility to demonstrate that mathematics has practical applications in the real world. Once they realise that the efficiency of their cars improve the more accurate they measure the circuits and the more accurate they do their calculations the better their car races, much of my job in this area is done!

When our two girls won our own series of races I witnessed a total change in a large number of our students. Suddenly maths was 'OK' and we have seen an uplift right through the school as a result.

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After School Engagement, The Glasgow Academy, Glasgow

Congratulations to you all! The way you run this Challenge is superb and you clearly understand the lot of the busy teacher! However, what you probably rarely see is the effect you have on the children who get involved. They absolutely love it! Mine come to an after school club full of motivation and anticipation. They even spend some of their spare time working on their 'cars' and the racing brings the house down! We've seen a marked improvement in the interest levels in maths and our results truly reflect this.

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CHILDREN

These are just some of the hundreds of comments we have had from children about the Challenge (ages in brackets) over the past year or so.

"I enjoy the Challenge because you don't have to be a sporty to win. It's so interesting I think I want to be an engineer when I leave school." (Aaron, 15)

"I never knew why we had to do maths until we did this." (Kerry, 13)

"It's so cool. I like working with my friends, solving problems together. We didn't do this before and it's a much better way of working." (Mandip, 14)

"Maths in Motion is so great because it lets you learn more but it's also fun. It also makes me want to have a job to do with cars." (Lewis, 10)

"I love the MIM Challenge because it's fun and it's maths. Maths wasn't my favourite subject before we did this (I actually didn't like it) but it is now." (Kaylie 9)

"The Challenge is really good because it helps me with my maths and it has made me want to be an engineer when I am older. It's soooooooooo much fun and one day I hope I'll win a race with my teammate Ben." (Rishi 9)

PARENTS

My son was part of a team of Year 5 students who took part in the Maths in Motion competition last spring. As the school starts to prepare to enter another Year 5 team it brings back fabulous memories for George which we wanted to share with you and offer our thanks.

Your programme seems unique as our son was captivated, he had previously been a little embarrassed of his mathematical ability. Moreover it provided George with an invaluable insight into what the future could hold if he continues to enjoy maths - it seems hard to demonstrate how maths can be applied at this level and you have done this brilliantly!

George loved the entire experience, from the tactical learning, speedy mental maths, teamwork and camaraderie. He was delighted to make it to the finals and his day in Gaydon was "so cool".

Thank you all for making maths "cool", for showing our son how his gift could become his job and for the inspiration this gives my other sons.

Alice ***** and George *****
Parent and pupil at St John's School, London, N11.

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Our daughter, who is 13, has always been reasonably interested in most subjects at school but is often regarded as a 'swat' by some of her classmates. As a result, she started to lose interest and her results suffered quite badly. I thought you might like to know that since a teacher, who was aware of this, got her involved in the 'Cars Racing Club', she has turned herself around and is heading in an upwards direction once again. The reason, according to *****'s teacher, is that once she started to do well in races, everyone wanted her for a 'teammate' and her popularity grew from there. This Challenge has given her back her confidence. She is now a well liked member of her year group, loves maths and wants to be either an engineer or a scientist when she finishes her education. Thank you.

Mrs. C. Speller, Hertfordshire

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TEACHER TRAINING

Each year we organise and deliver a series of teacher training courses. Primarily these are to help teachers use and understand the software but they are also used to promote the work and commitment that we have towards education and encouraging young people to consider taking up careers in engineering or the other STEM subjects. These courses are very well received as the statistics below show.

Teacher Training Course Evaluations

How well did the course meet with your expectations:
Exceeded: 1959 Met: 30 Did Not Meet: 1

How would you rate the course?
Excellent: 1792 Good: 197 Average: 1 Poor: 0

Will the course impact on your future work in school?
Yes: 1709 No: 125 Maybe: 156

How would you rate the presentation of the course?
The Presenters were: Excellent: 1804 Good: 152 Average: 33 Poor: 1

AND FINALLY.....

One of the best testimonials we have ever received was from the Mum of one of our past Champions. She wrote to tell us that “dreams do come true” and that ever since her son had got involved in the Maths in Motion Challenge he had dreamed and pestered her and her husband about helping him to become a car mechanic. She told us that her son had gone to university, got a degree in Engineering and that “he now earns his living travelling the world, working on and ‘tinkering’ with cars”. She went on to say that he was “blissfully happy” and then, almost as an aside, wrote, “Oh, by the way, S***** works for Maclaren F1 in the Pit Crew and it’s all down to you! I hope you don’t mind me writing but I thought you’d like to know.”

Enough said!