

Real Maths Fest

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1. Introduction

On Wednesday 29th April, 2015, we held our inaugural [Real Maths Fest](#); I say inaugural as it seemed to be a great experience for all involved, I'm sure we will make this a bi-annual or annual event. We had an on-line/live maths lesson based on the maths of politics and a festival of maths activities in our sports academy.

We held the 'Real Maths Fest' as part of our promotion and improvement of maths in the College. We have had a number of initiatives to help promote and improve maths at Stoke including:

1. Termly 'maths week' where we have a theme such as fractions decimals and percentages.
2. We are following [Lesson study](#) a collaborative approach to developing SoW for Functional maths and GCSE maths.
3. I have delivered GCSE 'Mathematics Enhancement Programmes' (MEP) in collaboration with National Centre of Excellence in Teaching Mathematics (NCETM) and the West Midlands Centre of Excellence in Teacher Training (WMCETT), this has helped increase our GCSE maths team from 4 to 9 to meet increasing numbers of learners taking GCSE maths due to funding requirements of study programmes.
4. We are early adopters for the new Core maths Level 3 qualification supported by The '[Core Maths Support Programme](#)' (CMSP) and lead with another local college.
5. We have a graduate trainee who is undertaking research in what maths learners, academics and employers think they require.
6. Two members of the team have recently won a grant to develop Bowland Maths resources at College, with another College and with 3 schools.
7. We are accredited by NCETM as professional development providers to other schools and colleges.
8. We are part of the local [SASCAL](#) network of schools and colleges in Stoke on Trent and the local [Maths Hub](#) at Painsley high school.

I had the idea of a maths festival to build on these initiatives. The initial idea was that it would be a College event for our learners and we would base it around real world maths and this would support our work with core maths, functional maths and to a lesser extent GCSE maths.

My initial plan was that we would get our maths teachers and vocational teachers to develop and host a maths activity based on real world maths and that the vocational areas would do a maths activity set in the context of their vocational area. The finished event developed further with external delivers and participants, we also held an on-line/live maths lesson.

2. Activities

The event seemed to tap into a rich reserve of interest and learners from Sport, Travel & Tourism, IT, GCSE maths and Core Maths L3 all developed their own resources and hosted activities on the day. Overall details of the event are given in **Appendix 1** below.

Natacha Shakil, Nora Breen, Mark Walsh and I launched the day with the on-line '[Maths of Politics](#)' a mock election where learners acted as politicians pitching for their parties, the classrooms that interacted with the lesson, 19 of them each acted as constituencies. Each classroom was set up as a Polling station, with a ballot box and learners took part in a secret ballot.

We had never done a live on line lesson before, our Educational technologists took care of the technical planning. On the day before the lesson our ed tech came to me and said that the lesson was off as the software that we were to use was freezing and just hanging, however within 5 minutes another ed tech found that we could stream it live on 'You tube'.

The learners got a lot out of the lesson as it was maths in the context of Politics a week before the general election. Votes and seats were counted and UKIP won!

We had approximately 300 learners that took part in the lesson. The maths that they did or could follow up on was representing data, ratio, percentages, basic number, ways of calculating proportional representation through different voting systems and percentage swing.

The Maths Festival held in the sports academy ran from 11-4, hosts of activities included:

1. Maths teachers from Stoke College, other Colleges and local Schools.
2. Vocational teachers.
3. Learners from Stoke College.
4. University lecturers in maths education including Professor David Burghes, Plymouth University (and consultant on Teaching and Learning for CMSP) and Steve Pardoe from University of Warwick.
5. The OR Society, CMSP and FMSP

The activities were wide and varied; here are few that will give you a flavor of what the event was about:

- 'Beat then professor', a dice activity where learners took on Professor David Burghes, the world champion (who was beaten by a childcare learner from Stoke College!); more details are given in **Appendix 2** below.
- Maths of dance where Pawel Lesik, an ESOL lecturer, got learners to identify shapes formed from dance.
- A codebreaking activity where learners have to break a code to get to the next level, this was developed by Core Maths learners.
- Fermi estimation activities such as calculating the number of nappies a baby would wear in their lifetime were hosted and developed by Core maths learners.
- GCSE learners did a number of activities on how to use algebra and even had a formula to solve a Rubik cube.

- Catering lecturer Julie Johnson had a nutrition activity where learners had to match the amount of sugar in well-known fizzy drinks.
- Sports learners hosted activities based on grip strength and flexibility.
- Nora Breen had a sustainable exercise bike that built enough energy to light a lightbulb, power a radio and the super fit could boil a kettle!

3. Feedback

The day after the event there was excellent feedback and everyone, learners, vocational lecturers and senior management were talking about the activities, what they had done and the event. It seemed that we had been successful in promoting maths further in the College.

The activities had certainly pushed forward the idea that maths is all around us and I think the way we used vocational activities that used maths naturally gave the event credibility and we hope enhanced recruitment for Core Maths in years to come.

I am in no doubt that the 'Real Maths Fest' will contribute to the overall improvement of learner maths skills. An additional unexpected positive was that there was also a high level of cross sector professional development, from primary through to HE, amongst the staff taking part.

Will we have another Real Maths Fest? The answer is a resounding yes!



REAL MATHS FEST

29th April 2015

11am - 4pm Sports Academy, Stoke on Trent College

Stoke on Trent College, Sports Academy, Stoke Road, Shelton, ST4 2DG

Fun

Activities

Get involved

Improve your maths

The maths of politics - online lesson

If you want to get involved, host a stand, bring your students along or just join in the fun with real world maths activities!

Then please contact Martin Newton

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www.stokecollege.ac.uk

or scan the QR code to go straight to the event page

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