

North West Further Maths Support Programme

– Events Round Up –

Events Summary Autumn Half Term 1 2013 CPD

FP1
Liverpool 23rd October

A2 Further Pure
Lancaster 7th November

Geogebra for KS5
Liverpool 16th October

S1
Lancaster 2nd October
Liverpool 21st October

Extension & Enrichment for GCSE

Lancaster 25th September
Liverpool 7th October
Manchester 17th October

KS5 Teachers' Meetings (Free training events all run 2.5 hours in the afternoon)

Practical S1
Lancaster 2nd October
Liverpool 21st October

Enrichment
STMC Preparation Day
Liverpool 20th September
Manchester 3rd October

Year 13 Problem Solving/STEP (also Free Teacher CPD)

Lancaster 1st October
Manchester 14th October
Liverpool 21st October

For Events in Liverpool Contact:
martinbamber@furthermaths.org.uk
For Events in Manchester Contact:
abigailbown@furthermaths.org.uk
For Events in Lancaster Contact:
jamesgroves@furthermaths.org.uk

CPD Events

Our CPD programme, both locally and nationally, continues to expand. Courses are offered for AS and A2 Core Mathematics, Further Pure 1, A2 Further Pure and Year 12/13 Enrichment and ICT. See the full programme below and at www.furthermaths.org.uk/northwest.

This year for some events we are combining a CPD event and a KS5 Teacher's Meeting to create a format which we hope will appeal to even more teachers. See below for more details.

KS5 Teachers' Meetings

** NEW for 2013-14: Combined CPD and Teachers' Meetings **

These half-day events, to be held as last year in Manchester, Liverpool, Lancaster and Chester, focus on providing teachers with a range of resources to help enhance the teaching of the applied units. This year, for D1, M1 and S1, we are combining the Teachers' Meetings with a CPD event, so that teachers can choose to attend a full day, with the focus on subject knowledge enhancement on the morning followed by sessions on creating and using appropriate resources in the afternoon, or just the afternoon session on resources, similar to previous Teachers' Meetings. Dates are given below and full details of the programmes for these events will be posted on the website and circulated by email in the usual way.

Enrichment Events

After the success of last year's comprehensive range of KS4 and KS5 enrichments events, we are planning to hold a similar range again this year. The format will change slightly, with a "Fairground" being introduced at all events, and a mixed-school competition to conclude each day. There are events in Manchester, Liverpool, Lancaster, Chester and Cumbria to encourage as many schools as possible to take part. Again, see below for full details.

STEP / AEA Support + Problem Solving For Y12

After the increase in interest and provision for students and teachers with regard to support for STEP and AEA, this year we are introducing a range of events to assist sixth-form students with more advanced problem-solving techniques. The full programme will include sessions on University application, interview technique as well as advice and group sessions on solving more advanced problems and specific help with the Oxford MAT and STEP / AEA papers. For further details please see below or email Abi, James or Martin.

Teaching and Revision

The North West FMSP continues to support the teaching of Further Mathematics in schools and colleges in a number of ways. We are particularly keen to help schools that are willing to offer further mathematics in-house but have limited time and resources available. The FMSP's "Live Interactive Lectures" (LIL) now exist in many different units and for a number of examining bodies to support in-house teaching of FM.

SEE THE FURTHER MATHS WEBISTE www.furthermaths.org.uk for more details.

We will of course continue to offer direct tuition, both face-to-face and online, as previously, as well as a full programme of face-to-face and online revision days.



Key Enrichment Events Held in 2012-13

“Taking Maths Further”

Manchester University, 25th March 2013
University of Liverpool 28th March 2013



The first enrichment events of 2013, aimed at Y11 students to encourage them to think seriously about how choosing Mathematics and Further Mathematics at University might be an excellent decision, received an enormous boost with the engagement of the noted Stand-Up Mathematician Matt Parker to deliver both workshops and a key-note presentation. As always, Matt was an extremely funny and popular choice and the feedback we received from the events left us in no doubt that a repeat event in 2013-14 would be hugely popular.

“Mathamagic”

Manchester University, 1st July 2013
University of Liverpool 4th July
University of Lancaster 8th July 2013
Richard Rose Morton Academy 9th July 2013
University of Chester 11th July 2013



Now in its 4th Year, the Mathamagic format goes from strength to strength. This year we were very fortunate to have sufficient funding to engage the help of some noted names in the rapidly developing “Maths Speaker” circuit. Chris Robbins, Kevin Lord, Sue de Pomerai and Katie Steckles have been delivering fascinating, engaging presentations and workshops for some time now and we were delighted that they agreed to deliver a number of sessions at our summer Mathamagic programme. In addition, the renowned juggler, unicyclist and all-round maths entertainer Colin Wright gave a key-note talk at 5 of our 6 summer events and was as always hugely popular with both teachers and students.

In addition to the support of these noted individuals, we were helped as always by the students on the Mathematics Enhancement Course at the University of Chester. This next generation of maths teachers organised a superb Mathematical Fairground for our Chester event which helped get that very hot day off to a wonderful start.

At most of our events this summer, we also held the ever-popular Dragon Maths competition and, as has become standard at these sessions, we are not afraid to mix up students from different schools: as always, a quiet start turns into a noisy finish as the students overcome any hesitations they may have in order to co-operate with their colleagues to solve the usual range of fiendish puzzles.

We would like to thank all the students, teachers, organisers, helpers and presenters at these sessions - over 750 people - who helped to make them such a success. We look forward to your involvement in next year’s programme.



Events in Autumn Half Term 2 2013

CPD

AS Core

Chester 12th November

A2 Core

Chester 14th November

D1

Liverpool 25th November

Problem Solving for GCSE

Liverpool 28th November

Manchester 5th December

E&E for GCSE 2

Lancaster 4th December

KS5 Teachers’ Meetings

Practical D1

Liverpool 25th November

Enrichment

Senior Team Maths Challenge

Liverpool 20th November

Manchester 21st November

Lancaster 22nd November

Year 12 Problem Solving (also Free Teacher CPD)

Liverpool 2nd December

Manchester 9th December

Taking Maths Further

Manchester 16th December

Liverpool 18th December

Cumbria 11th December

For Events in Liverpool Contact:

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Don't forget to register your school or college for FREE access to thousands of pages of resources on the new-look INTEGRAL website.

Register at:

www.furthermaths.org.uk

Key Enrichment Events Held in 2012-13 [continued]

“MathsWorks” – Liverpool University 15th July

After the success of the inaugural MathsWorks in summer 2012 – an event for Y12 students to demonstrate the variety and usefulness of mathematics in the world of work – we tweaked the programme and held another very successful event this summer. We were delighted with the response to our request for speakers to deliver 20-minute sessions describing the use of mathematics in their work: presentations on such topics as oceanography, glass manufacture, marine navigation, salmon farming and footballer-movement analysis testify to the diversity and ubiquity of mathematics in modern life.

In particular we were extremely lucky to be able to hear Dr Stephen Lynch of MMU – Liverpool raised and schooled – talk about his cutting edge research into the use of brain modelling to influence a new generation of superfast computers.

Several of our presenters also agreed to deliver workshops to elaborate further on their work and we made sure that every school was represented at every session so that students could talk about their experiences afterwards. And they did: one email described students discussing non-stop on the way home what they had learned from the day and how much they had enjoyed the experience.

Once again, a massive Thank You to all our presenters and helpers – we really do appreciate the time and enthusiasm you devote to these projects.



North West Mathematics Competitions

UKMT Senior team Challenge 12th November Liverpool
UKMT Senior team Challenge 12th November Manchester
UKMT Senior team Challenge 21st November Lancaster

Year 10 Team Challenge 5th March Chester
Year 10 Team Challenge 7th March Lancaster
Year 10 Team Challenge 13th March Manchester
Year 10 Team Challenge 14th March Liverpool
Year 10 Team Challenge FINAL 29th April Manchester



The selection of photos from our very successful series of competitions this year indicates the vibrancy of this form of mathematics enrichment. We find that ALL competitors, whether they win or not, find the concept of competing against other schools in mathematics challenges compelling. Many of our enrichment events play down the notion of competition and focus on teamwork, perseverance and individual satisfaction but that is not to say we don't wholeheartedly embrace the idea when the conditions are right. We make a point of sending personal invitations to schools for whom participation in maths competitions is a new experience and we are always delighted when students from these schools are won over by the event.

If your school has not previously entered teams in any mathematics challenges, please consider getting involved. Your students will love it and it is a great opportunity to expand their mathematical horizons.



FMSP NW: Provisional Calendar of Events: 2013 – 2014

NORTH-WEST KS5 ENRICHMENT DAYS 2013-14

Event	Date	Location	Aimed at:
Events Associated with the UKMT Senior Maths Challenge:			
STMC Preparation Day	30 th September	University of Liverpool	4 Y10 students /1 teacher
STMC Preparation Day	3 rd October	University of Manchester	4 Y10 students /1 teacher
Events for Enhancing Sixth Form Problem Solving Skills (leading to STEP / AEA preparation):			
Autumn Term:			
Y13 Enhanced Problem Solving	1 st October 2013	University of Lancaster	Able Y13 students
Y13 Enhanced Problem Solving	14 th October 2013	University of Manchester	Able Y13 students
Y13 Enhanced Problem Solving	21 st October 2013	University of Liverpool	Able Y13 students
Y12 Problem Solving 1	2 nd December 2013	University of Liverpool	Able Y12 Students
Y12 Problem Solving 1	9 th December 2013	University of Manchester	Able Y12 Students
Spring Term:			
Y13 Problem Solving for STEP/AEA	27 th January 2014	University of Manchester	STEP / AEA students
Y13 Problem Solving for STEP/AEA	3 rd February 2014	University of Lancaster	STEP / AEA students
Y13 Problem Solving for STEP/AEA	10 th February 2014	University of Liverpool	STEP / AEA students
Year 12 Problem Solving 2	6 th March 2014	University of Manchester	Able Y12 Students
Year 12 Problem Solving 2	17 th March 2014	University of Liverpool	Able Y12 Students
Summer Term:			
Y13 Preparing for STEP/AEA	12 th May 2014	University of Liverpool	STEP / AEA students
Y13 Preparing for STEP/AEA	14 th May 2014	University of Lancaster	STEP / AEA students
Y13 Preparing for STEP/AEA	15 th May 2014	University of Manchester	STEP / AEA students
Year 12 Modelling and EPQ	23 rd June 2014	University of Manchester	Able Y12 Students
Year 12 Modelling and EPQ	30 th June 2014	University of Liverpool	Able Y12 Students
Other KS5 Enrichment Events:			
AS Core Revision	31 st March 2014	University of Liverpool	Y12 Maths Students
A2 Core Revision	28 th April 2014	University of Liverpool	Y12 Maths Students
Mathsworks	2 nd July 2014	University of Liverpool	Y12 Maths Students

NORTH-WEST KS4 ENRICHMENT DAYS 2013-14

Event	Date	Location	Aimed at:
Autumn Term:			
Taking Maths Further	Wed 11 th December	Cumbria tbc	Able Y11 students
Taking Maths Further	Mon 16 th December	University of Manchester	Able Y11 students
Taking Maths Further	Wed 18 th December	University of Liverpool	Able Y11 students
Spring Term:			
Year 10 Competition	Wed 5 th March	University of Lancaster	4 Y10 students /1 teacher
Year 10 Competition	Wed 12 th March	University of Liverpool	4 Y10 students /1 teacher
Year 10 Competition	Thurs 13 th March	University of Chester	4 Y10 students /1 teacher
Year 10 Competition	Thurs 20 th March	University of Manchester	4 Y10 students /1 teacher
Summer Term:			
Year 10 Competition Final	Thurs 1 st May	University of Manchester	Top 5 teams from each heat
GCSE A* Revision Days	Thurs 15 th May	University of Manchester	Able Y10 students
Manchester Mathamagic	Mon 7 th July	University of Manchester	Able Y10 students
Lancaster Mathamagic	Wed 9 th July	University of Lancaster	Able Y10 students
Cumbria Mathamagic	Thurs 10 th July	Cumbria tbc	Able Y10 students
Mersey Mathamagic	Mon 14 th July	University of Liverpool	Able Y10 students
Chester Mathamagic	Wed 16 th July	University of Chester	Able Y10 students

FMSP NW: Provisional Calendar of Events: 2013 – 2014 (continued)

NORTH-WEST KS5 CPD 2013-14

Event	Date	Location
Autumn Half Term 1:		
Year 13 Enhanced Problem Solving *	Tuesday 1 st October	University of Lancaster
Teaching S1 CPD	Wednesday 2 nd October	University of Lancaster
Teaching S1 CPD	Wednesday 9 th October	University of Liverpool
Year 13 Enhanced Problem Solving *	Monday 14 th October	University of Manchester
Geogebra for A Level	Wednesday 16 th October	University of Liverpool
Year 13 Enhanced Problem Solving *	Monday 21 st October	University of Liverpool
Teaching FP1 CPD	Wednesday 23 rd October	University of Liverpool
Autumn Half Term 2:		
Teaching A2 Further Pure CPD	Thursday 7 th November	University of Lancaster
Teaching AS Core CPD	Tuesday 12 th November	University of Chester
Teaching A2 Core CPD	Thursday 14 th November	University of Chester
Teaching D1 CPD	Monday 25 th November	University of Liverpool
Y12 Problem Solving 1 *	Monday 2 nd December	University of Liverpool
Y12 Problem Solving 1 *	Monday 9 th December	University of Manchester
Spring Half Term 1:		
Teaching D2 CPD	Monday 13 th January	University of Manchester
Teaching M1 CPD	Monday 20 th January	University of Liverpool
Y13 Problem Solving for STEP *	Monday 27 th January	University of Manchester
Geogebra for A Level	Wednesday 22 nd January	University of Lancaster
Teaching M1 CPD	Thursday 30 th January	University of Manchester
Y13 Problem Solving for STEP *	Monday 3 rd February	University of Lancaster
Y13 Problem Solving for STEP *	Monday 10 th February	University of Liverpool
Spring Half Term 2:		
Teaching A2 Mechanics CPD	March (date tbc)	University of Lancaster
Enriching the A Level Core	Monday 3 rd March	University of Lancaster
Y12 Problem Solving 2 *	Thursday 6 th March	University of Manchester
Enriching the A Level Core	Monday 10 th March	University of Chester
Y12 Problem Solving 2 *	Monday 17 th March	University of Liverpool
Summer Half term 1:		
Y13 Preparing Students for STEP *	Monday 12 th May	University of Liverpool
Y13 Preparing Students for STEP *	Thursday 15 th May	University of Manchester
Summer Half Term 2:		
Teaching A2 Further Pure	Monday 9 th June	University of Liverpool
Teaching D2 CPD	Wednesday 11 th June	University of Lancaster
Teaching AS Core CPD	Wednesday 11 th June	University of Liverpool
Teaching A2 Further Pure	Monday 16 th June	University of Manchester
Teaching A2 Core CPD	Wednesday 18 th June	University of Liverpool
Teaching S2 CPD	Thursday 19 th June	University of Manchester
Year 12 Modelling and EPQ	Monday 23 rd June 2014	University of Manchester
Year 12 Modelling and EPQ	Monday 30 th June 2014	University of Liverpool
Teaching A2 Mechanics CPD	Thursday 3 rd July	University of Chester

* = joint teacher / student events: see later section on KS5 Enrichment

FMSP NW: Provisional Calendar of Events: 2013 – 2014 (continued)

NORTH-WEST KS4 CPD 2013-14

Event	Date	Location
GCSE Enrichment and Extension CPD:		
Extension & Enrichment Day 1	Wednesday 25 th September	University of Lancaster
Extension & Enrichment Day 1	Monday 7 th October 2013	University of Liverpool
Extension & Enrichment Day 1	Thursday 17 th October 2013	University of Manchester
Extension & Enrichment Day 2	Wednesday 4 th December	University of Lancaster
Extension & Enrichment Day 2	Thursday 23 rd January	University of Liverpool
Extension & Enrichment Day 2	Monday 3 rd February	University of Manchester
Other GCSE CPD:		
Problem Solving at GCSE	Thursday 28 th November	University of Liverpool
Problem Solving at GCSE	Thursday 5 th December	University of Manchester
Problem Solving at GCSE	Wednesday 15 th January	University of Lancaster
Geogebra for GCSE	Tuesday 1 st July	University of Manchester

NORTH-WEST KS5 TEACHERS' MEETINGS 2013 – 2014

These meetings are held in the afternoon and are intended to help ALL KS5 teachers by focusing on methodology and resources rather than content. Consequently, some familiarity with content is assumed.

Event	Date	Location
Autumn Term:		
Practical S1	Wednesday 2 nd October	University of Lancaster
Practical S1	Wednesday 9 th October	University of Liverpool
Practical D1	Monday 25 th November	University of Liverpool
Spring Term:		
Autograph 1	Wednesday 15 th January	University of Liverpool
Practical M1	Monday 20 th January	University of Liverpool
Practical M1	Thursday 30 th January	University of Manchester
Practical M2	March (date tba)	University of Lancaster
Autograph 2	Wednesday 2 nd April	University of Liverpool
Summer Term:		
Autograph Statistics	Wednesday 21 st May	University of Liverpool
Practical S2	Thursday 19 th June	University of Manchester
Practical M2	Thursday 3 rd July	University of Chester

For further help and advice on anything related to Mathematics in KS4 and KS5, and for further information on items contained in this newsletter, please contact one of us:



Martin Bamber martinbamber@furthermaths.org.uk

Abigail Bown abigailbown@furthermaths.org.uk

James Groves jamesgroves@furthermaths.org.uk