

AUTUMN 1: 2021

NEWSLETTER

GREAT NORTH MATHS HUB

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A word from our
Chair, Carol
Davenport.



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Thank You

The start of the new academic year brought much excitement to us all in the Maths Hub office, more so than usual. After a long period of working remotely, we are back in the office!

But this excitement hasn't just stopped at being back in the office. It has been excitement for meeting with our strategic partners across the region; excitement at meeting our colleagues from across the national Maths Hub network; excitement about the prospect of working with our Local Leaders of Maths Education Community face to face.

The most exciting prospect however is the prospect of being able to return to face to face delivery of our Work Groups; being able to hear the buzz in a room as professionals from across the region share ideas and offer support and encouragement. My goodness we have all missed this! The start of the new academic year brought much excitement to us all in the Maths Hub office, more so than usual. After a long period of working remotely, we are back in the office!

But this excitement hasn't just stopped at being back in the office. It has been excitement for meeting with our strategic partners across the region; excitement at meeting our colleagues from across the national Maths Hub network; excitement about the prospect of working with our Local Leaders of Maths Education Community face to face. The most exciting prospect however is the prospect of being able to return to face to face delivery of our Work Groups; being able to hear the buzz in a room as professionals from across the region share ideas and offer support and encouragement. My goodness we have all missed this!

Reflecting on this further, I have come to realise that all of this excitement has been caused by our desires to regroup as learning communities.



· Laura Tullock ·
· Maths Hub Lead ·

 MATHSHUBS
GREAT NORTH



Our vision here at the Great North Maths Hub is to encourage and support collaboration between schools, colleges and other settings: enabling teachers and educational professionals to work and learn together, developing and improving mathematics teaching, learning and leadership. All of this comes via a collaborative community. As Helen Keller stated, 'Alone we can do so little; together we can do so much.'

Over the past eighteen months, developing and sustaining a community online has proved challenging. Time to build those collaborative relationships, to talk openly and to share ideas has been limited to breakout rooms with the added frustrations of internet outage and cameras and microphones not working. Don't get me wrong, platforms such as Zoom, Teams and Google Meet have served us well, and will continue to allow us to meet more frequently over the year. I remember when we went into lockdown in March 2020 and I was the first to say (and sometimes shout) that we could never replicate good PD online because we would lose open and free discussions and therefore our sense of community.

Eighteen months later and I will be the first to admit I was wrong. I couldn't be prouder of the offer our community of Local Leaders of Maths Education have offered to schools over this time, and I couldn't be prouder of the way we in which participants across the region have committed to their own professional development during such a turbulent time. Yet something has been missing. Meeting online has allowed us to keep in touch, but has not allowed us to build our community as strongly as we would have liked. Now it feels like something is changing. Goodbye to discussions in breakout rooms, hello discussions over coffee!

Through stronger, more regular, screen free communication, trust will be built. With trust will come more possibilities to openly discuss areas of interest together. With all of this will come a stronger community. We have been strong during lockdowns; imagine how strong we can be now!

Carrying on the theme of community, our newsletters will this year draw on our wider community. As well as articles from our own Local Leaders Community, you will be able to read articles from our wider strategic partners. In this issue, for example, you can find information about those partners in our region and how they can support you with other elements of your school's curriculum and professional development.

I really can't wait to hear and see our learning communities coming back together this year. In the meantime, enjoy this newsletter. Happy reading!



Latest News:

Getting Involved With Maths Hubs This Year

As a Maths Hub, we provide support across all areas of mathematics to educational settings in our Great North region (Gateshead, Newcastle, Northumberland, North Tyneside, South Tyneside and Sunderland). For more information on our many funded opportunities, including those listed below, please get in touch:

Primary & EYFS



Lindsey Hassan

Lindsey.Hassan@churchillcc.org

Secondary



Anna Bunce

[Anna.Bunce@meadowdale.northumber
land.sch.uk;](mailto:Anna.Bunce@meadowdale.northumberland.sch.uk)

Post 16



Eleanor Baggaley

Eleanor.Baggaley@churchillcc.org

Post-16 National Projects (DfE Funded)

Supporting Post-16 GCSE Resit Work Group

Join us to explore effective ways of teaching key content to GCSE resit students, and effective ways of working with teachers of post-16 resit GCSE in the context of Covid recovery. This Work Group is suitable for both new and experienced teachers. All of the information you need, including dates, venue and sign-up details, can be found here: [Click to Download Flyer](#).🔗

Developing Core Maths Pedagogy Work Group

Delivered in partnership with AMSP, this Work Group offers you an opportunity to further develop teaching approaches which support the open-ended and contextualised problem-solving skills needed by students of Core Maths and you will explore effective links to teaching in other subject areas. This Work Group starts next month so get in quick! Further details and links to register are here: [Click to Download Flyer](#).🔗

A Level Pedagogy Work Group

This Work Group is an opportunity for like-minded teachers across the region to work collaboratively on developing effective strategies for teaching A Level maths. Sessions are led by an experienced A Level maths teacher and Professional Development Lead and are always well-received. You can read comments from previous participants, find out more and register using the links on this flyer: [Click to Download Flyer](#).🔗



Secondary National Projects (DfE Funded)

BRAND NEW PROGRAMME FOR 2021: Maths Non-Specialists

We are delighted to offer, for the first time, a programme to support teachers who are currently teaching maths but who have not undertaken initial teacher training subject specialism in maths. This exciting new project enables teachers to develop the specialist subject knowledge needed for teaching maths at secondary. All of the details you need including dates, venues and links to register can be found here: [Click to Download Flyer.](#)

Secondary Teaching for Mastery Work Groups

Is Teaching for Mastery an approach which you want to develop further in your own classroom? Or, are you looking towards a collaborative approach which can be embedded across your department? Or perhaps you're looking to refine your existing systems and hone mathematical pedagogy? Whichever stage you are at, the Teaching for Mastery programme offers funded professional development activities - including opportunities for bespoke in-school support. More details can be found here: [Click to Download Flyer.](#)

Mathematical Thinking for GCSE Work Group

For teachers working at KS4, this is an opportunity to examine practical and theoretical elements in the context of your own students' GCSE attainment. This Work Group aims to deepen teachers' understanding of mathematical thinking as it relates to problem-solving and reasoning, using practical task types to explore what it means for students to get better at mathematical thinking and what this looks like in practice. More details can be found here: [Click to Download Flyer.](#)

DfE Funded KS2 - KS3 Transition Project (DfE Funded)

Year 5 - 8 Continuity Work Group

A fantastic opportunity for colleagues in primary, middle and secondary schools to work together on issues of maths curriculum and pedagogy. This popular project promotes cross-phase discussions to support schools to make use of common approaches, representations and language, and to deepen understanding of the KS2 and KS3 curriculum. Due to demand, we are offering additional cohorts this year. More details can be found here: [Click to Download Flyer.](#)



Primary and EYFS National Projects (DfE Funded)

Teaching for Mastery: Readiness

Mastery Readiness is a unique and bespoke programme of professional development to support teaching colleagues and leaders. Covering themes including vision and culture, mindset, systems, arithmetical proficiency and subject expertise; this programme engages the school community to reflect on maths pedagogy. It is an opportunity to work collaboratively and supportively on effective maths learning and teaching. Mastery Readiness promotes gradual, sustainable, long term impact. [Click to Download Flyer.](#)

Specialist Knowledge for Teaching Maths

This year, we have a suite of projects to support colleagues.

For teachers working in EYFS, we are offering a Work Group exploring Pattern, Shape, Space and Measure. Due to high demand, we are running two work groups but you will need to get in quick! For teaching assistants working in KS1 and KS2, our Primary TA Work Group is recruiting now. This programme is an opportunity for teaching assistants who have not received maths specific subject training to develop specialist knowledge for teaching maths in order to best support the pupils they work with.

For teachers of KS1 and KS2, our Primary SKTM Work Group offers funded CPD to deepen your mathematical subject knowledge and to develop pedagogical knowledge of effective maths teaching. Click on the relevant links to find out more:

[EYFS](#)

[PRIMARY TEACHERS](#)

[TEACHING ASSISTANTS](#)

Early Career Teachers - New National Project for 2021!

To support schools with their responsibilities outlined by the Early Career Framework, we are delighted to offer specialist subject knowledge programmes for Early Career Teachers.

We have a programme for [Primary](#) and a programme for [Secondary](#).

Click on the links to find out more. There are limited spaces and high demand so you will need to get in touch soon to secure a place.



Our Partners

Across the Great North Maths Hub, we work closely with other strategic partners to enhance and strengthen the offer we can provide to our schools. Some of the partners we work with are listed below with their contact details. Get in touch with them to see how they can support you!



Kings Priory School and Cardinal Hume Catholic School Computing Hubs - supporting schools, teachers and trainee teachers with their computing needs. This includes funded, high-quality primary and secondary computing CPD and the Computer Science Accelerator (CSA) certification giving you the subject knowledge and confidence to teach computing up to GCSE level. Teachers can access a range of programmes covering all phases (Early Years to KS5)

Please get in touch with your local computing hub for primary or secondary computing support:

Cardinal Hume Computing Hub
Local authority areas supported:
Newcastle, Gateshead, Durham and
Cumbria

www.cardinalhumecomputinghub.com

teachcomputing@chs.bwcet.com

Tel: 0191 487 7638

[@ComputingHubNE](https://twitter.com/ComputingHubNE)

Kings Priory Computing Hub
Local authority areas supported:
Northumberland, North Shields,
South Shields and Sunderland

teachcomputing@kps.woodard.co.uk

Tel: 01912 585995

[@NCCENorthEast](https://twitter.com/NCCENorthEast)



The Three Rivers Teaching School Hub facilitates access to outstanding professional development across Newcastle, Northumberland and North Tyneside. In addition, we provide nationally accredited development programmes at each career stage:

- Initial teacher training
- Early Career Teacher Programme
- Appropriate Body for ECT's
- Specialist NPQ's (Leading teaching, teacher development and behavior)
- Leadership NPQ's (Senior Leader, Headship and Executive Leadership)

We are committed to building a strong network of delivery partners; collaborating, learning, and working together is fundamental to driving improvement.

[@3rtsh](https://twitter.com/3rtsh)

www.3rtsh.co.uk

teachingschool.hub@the3rivers.net



Northern Lights Teaching School Hub are the designated 'hub' for Sunderland, Gateshead and South Tyneside to provide and signpost to exceptional professional development including statutory frameworks and nationally accredited programmes. By creating strong, committed and collaborative partnerships with schools and providers in the region, the Hub will play a significant role in:

- Initial Teacher Training (ITT)
- Early Career Framework - Full Induction Programme (ECF)
- Appropriate Body Services
- National Professional Qualifications (specialist and leadership NPQs)
- Wider CPD including networking and signposting.

Our mission is to provide 'the best professional development for schools to achieve the best outcomes for children and young people' across our region.

[@NLTSHub](https://twitter.com/NLTSHub)

<https://northernlightstsh.co.uk/>

tshinfo@nllt.co.uk



The National STEM Centre has teamed up with schools and learning centres around the country to develop several Science Learning Partnerships. North Tyneside Learning Trust forms part of the collaboration for the North East Hub. We offer comprehensive science CPD programmes for science teachers, technicians and teaching assistants across the region. Our CPD leaders are drawn from experienced educational consultants, practising teachers, technicians and partners across the region.

Local Authorities covered: Northumberland, Newcastle, North Tyneside, Gateshead, Sunderland & South Tyneside

Contact us: [@NTLT_ScienceLP](https://twitter.com/NTLT_ScienceLP)

STEM@ntlearningtrust.org.uk

<https://ntlearningtrust.org.uk/regionalpartnerships/science-learning-partnership>



Checkpoints:

Free secondary resources, with teaching guides and answers!

Checkpoints are diagnostic activities designed to help secondary teachers assess the understanding students have brought with them from primary school and suggest ways to address any gaps that become evident.

What have your Year 7s been taught in their primary school? What representations and strategies are they familiar with? These are the questions that Checkpoints address. Carefully-crafted activities that really delve into the structures and relationships within maths, allowing secondary teachers to really see where their pupils are and to plan accordingly. These diagnostic activities encourage challenge, time for thinking and time to talk. They will allow you to see which of your pupils rely on procedures and which can make those vital connections and reason to find the most efficient methods.



• **Anna Bunce** •
• Deputy Maths Hub Lead •
• (Secondary) •



Checkpoint 3: Comparing representations

Amina, Beth and Cameron each use a representation to show a different number.



- What number is represented by each student?
 - What is the same and what is different about their numbers?
 - Can you write a calculation using one or more of the operations from the box on the right to connect their numbers? Why or why not?
- ?
- What would you need to change to write a calculation connecting **all three** numbers? Is there more than one way to do this?

Checkpoints have been written by a team of primary and secondary experts at the NCETM, using concepts only in the Year 6 curriculum, so nothing should be new to your secondary pupils. Teachers are already reporting pupils are stumbling. The Checkpoints are really highlighting the gaps and showcasing where we need to backtrack, to ensure understanding within the Year 7 curriculum.

My first experience was using Checkpoint 1 from the properties of number deck. As you can see, initially this is assessing their understanding of the term 'multiple' and 'generating certain multiples'. This really highlighted those that were confident and could manipulate their understanding in a different context. It also led to great discussion about the place value of numbers and the efficient strategies we could use when dealing with larger numbers. For example, a Year 8 pupil noted, "Only the Tens and Ones changed, I could ignore all the other digits", with the response from another pupil, "Yes, but you still have to include all the other digits in your answer."

You can use the checkpoints appropriately, throughout your secondary year groups.

NCETM are offering free training, directly from the secondary leadership team, alongside primary specialists, with secondary teachers sharing their initial experiences of the Checkpoints. To download the first four 'decks' (just the name for each topic in one large PowerPoint) and to sign up for the free training [click here](#).

Checkpoint 1: Enormous multiples

1 074 183

This number is a multiple of 11.
a) Write down the next three multiples of 11.

3 817 401

The same digits are rearranged to make a different number. This number is a multiple of 7.
b) Write down the previous three multiples of 7.

1 813 047

The same digits are rearranged again to make a different number. This number is a multiple of 3.
c) Write down the next three multiples of 6.

?

What other numbers must each of these be multiples of? How do you know?



A Word From Our Chair

Hello. My name is Dr Carol Davenport and I am the Chair of the Great North Maths Hub (GNMH) strategic Board. In my day job, I am an Associate Professor at Northumbria University and teach undergraduates on our Mathematics, Physics and Electrical Engineering Foundation year.

Through my role as Chair, I am privileged to hear about the great work that teachers of maths are doing throughout our region. Through the Work |Groups and projects led by the Maths hub, teachers collaborate regularly with the aim of improving the teaching and learning of maths in their schools. Starting from the very youngest children and then throughout their education, the GNMH helps teachers to ensure that children and young people have the best maths education that they can.

One of the strengths of the Work Groups is their ability to bring together teachers from different schools to share and develop good practice. Similarly, at a broader scale, the GHMH works collaboratively with other organisations to shape support for maths education in our region.

As we start to look at the education landscape over the next year, learning lessons from the changes necessitated by the pandemic, I hope that the GHMH is able to support you to support your students and schools.



• **Dr Carol Davenport** •
Chair of the Great North Maths
Hub •



Celebrations

Each newsletter, we like to celebrate the incredible work happening across our Great North region to support and develop mathematics learning and teaching. We would like to take this opportunity to celebrate the hard work, commitment and dedication of the educational practitioners listed below. This half term, these teachers have been incredibly busy behind the scenes; attending national training from NCETM, planning and preparing workshops, contributing to online communities and participating in local CPD for our Great North Leaders of Mathematics Education. And they do all of this in addition to their day job!

An enormous thank you to our passionate team of local leaders of mathematics education (LLME) who will be sharing their knowledge and expertise as Work Group Leads this year. They are:

Alex Frazer - North Tyneside EYSIS
Amy Burgess - Kenton Bar Primary School
Anna Bell - Seghill First School
Andrew Gordon - Harton Academy
Chris Maule - Fordley Primary School
Clare Swanepoel - Hudson Road Primary School
David Harding - Ponteland High School
Sue Taylor - Northumbria University
Emma Barker - Amberley Primary School
Emma Fox - Eastlea Primary School
Grace Coker - Westerhope Primary School
Helen Chambers - Wellfield Middle School
James Butler - NCEA Dukes Secondary School
Janine Smith - North Durham Academy
Jessica Torbitt - Kings Priory School
Jill Branch - Whitley Bay High School
Jo Morrison - Stephenson Memorial Primary School
John Bee - Parkhead Community Primary School
Jonny Foster
Kirstin Mulholland Northumbria University
Laura Collingwood - Cramlington Learning Village
Lisa Heatherington - North Tyneside Council
Louise Lennox - Cragside Primary School
Martyn Kelly - Front Street Primary School
Melissa Charlton - Knop Law Primary School
Hannah Tennet - St. Wilfrid's High School
Polly Urwin - Durham Johnston Secondary School
Rachael Robinson - Beacon Hill Primary School
Rachel Morgan - Regent Farm First School
Rachel Wilkinson - Front Street Primary School
Richard Allon - West Walker Primary School
Ruth Bustard - Kells Lane Primary School
Ruth Patrick - Cramlington Learning Village
Samantha Endacott - Holywell First School
Sarah Hollywood - New York Primary School
Stacey Schofield - Jarrow Cross Primary School
Steven Smith - Monkhouse Primary School
Steven Wragg - Valley Gardens Middle School
Tim Johnson - Sacred Heart Primary School
Tracey Graham - Gateshead College
Vicky Atkinson - Shotley Bridge Primary School
Vicky Barnes - Together for Children

THANK
YOU

