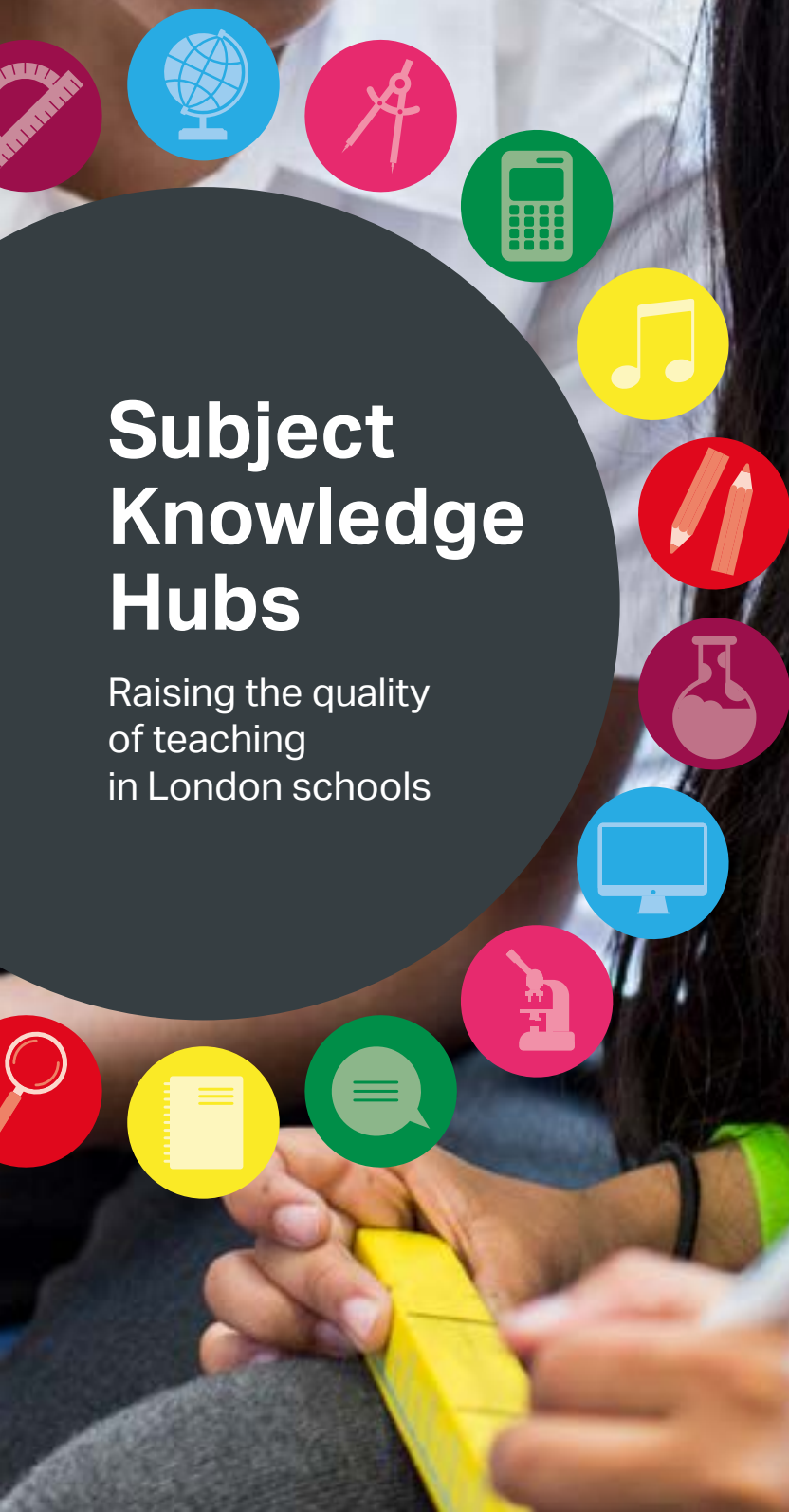


# Subject Knowledge Hubs

Raising the quality of teaching in London schools



---

# Contents

---

## Introduction 04

## Building blocks for success 06

Discover top tips for running your own hub

## ● Arts and humanities

Capital Classics 10

Connecting Knowledge 12

Fetch Me A Pen 14

Geography: a Subject Hub for London 16

Music Excellence London 18

Professional Language Networks Hub 20

West London Accelerated Language Learning Hub 22

---

---

## ● STEM

Capital Physics	24
Compton School Teaching School Alliance	26
Computing at School	28
Harrow Chemistry Hub	30
London Mathematics Lesson Study Hub	32
Maths Problem Solving Hub	34

## ● Targeted pupil groups

Christ the King Knowledge and Pedagogy Expertise Network	36
Glebe English as an Additional Language (EAL) Subject Knowledge Hub	38
Improving Educational Outcomes for Looked After Children	40
REAL Alternatives Hub	42

---

# Introduction

The London Schools Excellence Fund (LSEF) was set up to improve the quality of teaching in the capital. Between September 2013 and December 2015, the Mayor of London and Department for Education funded over 100 projects that reached every London borough and benefited over 13,000 teachers.

Following on from this success, the Mayor of London established a legacy fund to support 17 Subject Knowledge Hubs, running between January 2016 and August 2017. Through this fund, many of the hubs and networks central to the LSEF projects have been able to sustain and embed the good practice they had developed. Teachers from a range of schools have been given the opportunity to work together with subject and business experts. The fund has helped make excellent teaching in London schools more sustainable, with a strong focus on the continual improvement of teachers' subject knowledge and pedagogy.

This brochure provides an overview of the 17 Subject Knowledge Hubs, including their aims, feedback from teachers and key successes. You can find out more about the Subject Knowledge Hubs, including videos and their evaluations, by visiting the website:

**[www.london.gov.uk/hubs](http://www.london.gov.uk/hubs)**

You can also contact the Mayor of London's Education and Youth Team for more info:

**[educationprogramme@london.gov.uk](mailto:educationprogramme@london.gov.uk)**



Schools reached  
**900+**

Subject Knowledge Hubs  
across London

**17**

Pupils benefiting

**26,000+**

# Building blocks for success

Discover top tips for running your own hub



Through the London Schools Excellence Fund (LSEF) and Subject Knowledge Hubs, we've seen how effective hubs can be in supporting teachers across the capital. Our six building blocks for success highlight the key learning outcomes and options to consider if you're looking to run your own hub.

Further guidance and resources can be found on our website [www.london.gov.uk/hubs](http://www.london.gov.uk/hubs), including:

- Learning from the LSEF Thematic Report
- LSEF Sustainability and Impact Plan template
- Hub videos and evaluations

## 1 Let teachers take the lead

The most successful hubs place teachers at their heart, ensuring they can drive, shape and often lead activity. Conducting a needs assessment at the start of a project focuses hub activity to address key challenges faced by teachers. These challenges can include teacher isolation within subject departments, recent curriculum changes or ensuring successful primary to secondary transition. Collecting regular participant feedback and quantifiable pupil data also helps monitor outcomes, allowing you to adjust your approach if necessary.



Letting teachers take the lead has been central to the success of many hubs, particularly in peer collaboration, sharing and problem solving. Developing trusting relationships between peers may require an initial investment of time and resources from the hub lead. Teachers also develop stronger relationships when the purpose of collaboration is clearly defined and aligned with their own personal training needs – be sure to do this from the start. Many hubs use a ‘lead teacher’ model, which empowers teachers to support and mentor their peers. Not all teachers will be confident enough to take a lead role and some may require additional training or support; however a strong sense of ownership creates goodwill and commitment for everyone involved. Hubs should be designed by teachers, for teachers.

## **2** Get senior leaders on board

The importance of getting full senior leadership support has been a theme across many hubs. There have been various methods of doing this, including encouraging headteachers to sign a memorandum of understanding. This outlines what their school is committing to through the project and encourages understanding of the project from the start. Having this signed agreement in place can be especially important when it comes to allowing participant teachers time out of the classroom. Encouraging senior leadership attendance at certain hub events such as best practice days has also proven successful for hubs. It allows headteachers to see the project in action and witness its benefits to their staff first hand. Having a school’s senior leadership team on board and invested in a hub has also proven crucial in instances of staff change. If a participant teacher leaves their school, a strong relationship with its leadership team can ensure that their engagement continues and new participants are put forward.



### 3 Plan for sustainability

---

Planning for sustainability is fundamental and the sooner started, the better. Sustainability doesn't look the same for everyone, so it's important to have a realistic picture of the scale and type of activity you're looking to achieve over time. You can then consider what time, resources and leadership will be required to make this happen and crucially, how much it will cost.

It's easy to underestimate the management and administrative resources needed to keep a hub going. For example, peer led activities such as teach-meets may seem to offer a sustainable delivery model. However in reality, we know that teachers are often under-resourced. Teach-meets can be hard to sustain without an individual with the time and capacity to regularly organise and promote them.

Thinking about staff turnover and attrition should also form part of sustainability planning. Do you have a strategy in place for teachers leaving participating schools?

Furthermore, do you have a plan in place for any staffing changes within your own organisation? Over reliance on one or two individuals can be detrimental to your planning, particularly if expertise and commitment isn't shared across the wider team. Doing a SWOT analysis is a good tip here. The most successful hubs show a clear understanding of their strengths and weaknesses, as well as external opportunities and threats that they need to plan for. They have also considered different funding models to support long-term success. It may help to take a look at the Sustainability and Impact Plan template on our website [www.london.gov.uk/hubs](http://www.london.gov.uk/hubs) and work through the questions.

### 4 Build your network

---

Successful hubs provide a network, allowing participants to be part of something bigger and share knowledge and resources across organisations.

Networking events can be a powerful tool. They provide teachers with fantastic



---

opportunities to meet and learn from each other, helping to stop teachers feeling isolated. Being part of a network also opens up the wider educational landscape for teachers, allowing access to external support and subject-specific expertise through partners like universities, business or professional bodies.

The role of the lead organisation and partners is vital here. Whether a school, business, local authority or charity, it's important that the lead organisation has the resources and know-how to support the network. It will need to consider how the hub will communicate – both internally and externally. Many hubs have built up a successful social media presence, or established regular newsletters.

Relationships between teachers are more likely to be developed when lead organisations set aside sufficient resources at the outset to reduce barriers to participation. This might include agreeing to provide a venue, pro-actively arranging meetings and following up on agreed actions at appropriate times.

## **5 Plan your activity**

Successful hubs offer well-planned and well-delivered activities. Many hubs combine subject knowledge training with general pedagogical theory and practical skills. Unsurprisingly, this kind of activity is most effective when tailored to meet the needs of individual participants. This could involve



following a group training session with one-to-one mentoring support to help teachers apply learning to their own school context.

Some of the most effective hubs make use of relevant experts from within the education system – for example, subject champions in schools, higher education institutions and academic societies. These experts can deliver aspects of training, or act as mentors or coaches to participants. Hubs find one of the most effective ways to change teachers' practice is for experts to demonstrate the effectiveness of their suggested approach; for example, they may co-deliver a lesson. If experts aren't from a teaching background, it's important that their support is accessible to teachers, and in line with the National Curriculum. It's also important to acknowledge that different types of expertise may be needed to support an all-round improvement in teacher performance. Some hubs find it works to run cross-phase activity to promote collaboration between primary and secondary schools. It may also be necessary to consider differentiation and how you will support teachers to cater for pupils of different abilities. Detailed advice on these areas is available in the LSEF thematic report, which can be found on the website [www.london.gov.uk/hubs](http://www.london.gov.uk/hubs)

## **6 Share resources**

Producing and sharing useful resources is a key feature of many successful hubs. We know that teachers are short of time and navigating the wide range of resources available and identifying those of good quality is a challenge. Hubs enable teachers to share the best resources. This is time saving for teachers, enabling them to pool their knowledge and resources.

# Capital Classics

Bringing classics to London classrooms



Capital Classics aims to increase the provision of Latin in state schools across London. Historically, there was hardly any Latin teaching in London schools, especially in some North East London boroughs, where not a single school taught any of the classical subjects – Latin, Greek, Classical Civilisation or Ancient History.

In response, a Capital Classics partnership was set up, led by Classics for All. Beginning in areas of particular deprivation, Capital Classics has gone on to work with over 100 schools across London, with current work

seeking to ensure that classics teaching can be sustained indefinitely within these areas. Capital Classics' focus is largely on training teachers. Since August 2015 it has run an annual summer workshop, along with various sessions throughout the year. Hub leads have been fortunate enough to work with centres of excellence such as Camden School for Girls, who have also arranged enrichment events for pupils within the Capital Classics network. The hub is now pioneering new training routes for teachers, beginning with a partnership with Harris Academies.

“ Learning Greek helps me understand the etymology of English words as well as the evolution of language and communication.”



**LEAD ORGANISATION:**  
Classics For All

**FOCUS GROUP:**  
Primary/Secondary

**PROJECT LEAD:**  
Hilary Hodgson  
hilary@classicsforall.org.uk

For more information visit:  
<http://classicsforall.org.uk/regional-hubs/london-capital-classics/>

**CASE STUDY: SIOBHÁN CROMPTON, CLASSICS TRAINEE, ARK KING SOLOMON ACADEMY, WESTMINSTER**



“ As a teacher in an inner-city school, I am all too aware of the challenges our students face due to a lack of literacy, both from a cultural perspective and in terms of vocabulary. I am therefore extremely grateful for the support Classics for All is offering our school, since I know that exposure to Latin is an additional step towards closing the gap between the most privileged and the least. The fortnightly lessons we have received have been extremely helpful, both in terms of improving our own language skills and in discussing pedagogical issues that might arise. While we’re not quite ready to start teaching yet, long-term we look forward to awakening a passion for classics in our students!



**Numbers engaged with the network**

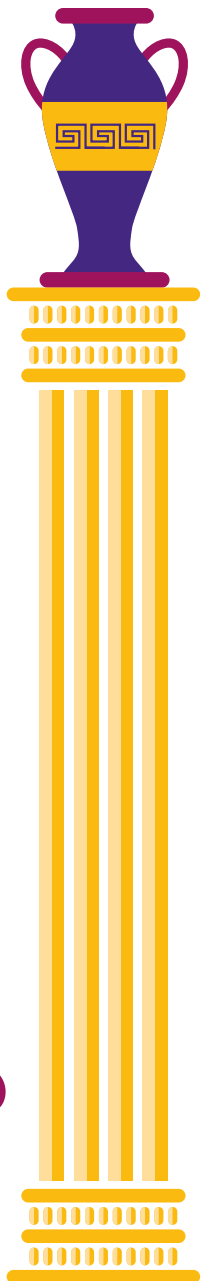
Primary/secondary schools

 **120**

Teachers

 **200**

- **75** new schools now support the introduction of **Latin, Ancient Greek, Ancient History** or **Classical Civilisation**
- **90%** of teachers described the training as **authoritative, practical** and **useful**
- **64%** of the participating London schools have Free School Meal levels above the national average



# Connecting Knowledge

Improving attainment in writing in primary education



This hub follows on from the successful Connecting Knowledge project, which was led by Rosendale Primary School and funded for two years by the London Schools Excellence Fund. During the original project, it was found that lesson study had a significant impact on outcomes in Maths for disadvantaged pupils in Lambeth. Borough data now shows that disadvantaged pupils are falling behind their peers in writing. The current Connecting Knowledge Hub aims to address this new inequality and support improved attainment in writing. Hub leads

coordinate cycles of lesson study in schools, led by trained Lesson Study Lead Practitioners. These Lead Practitioners were trained under the original Connecting Knowledge project and will in turn train a new cohort of participating teachers to be Lead Practitioners. Expectations for spelling, punctuation and grammar have increased significantly with the new national curriculum. The lesson study model focuses on the teaching and learning of these areas, whilst developing teachers' thinking about how pupils learn to write creatively.



**LEAD ORGANISATION:**  
Rosendale Primary School

**FOCUS GROUP:**  
Primary

**PROJECT LEAD:**  
Kate Atkins  
katkins@rosendale.cc

For more information visit:  
[www.connectingknowledge.org.uk](http://www.connectingknowledge.org.uk)

**CASE STUDY: PARTICIPANT TEACHER,  
CONNECTING KNOWLEDGE**

“As we progressed through the year, we realised that the problems ran deeper than providing more opportunities for speaking and listening and collaborative writing. We realised that children needed to be taught strategies for how to talk to each other and work in groups. Before we could see speaking and listening having an impact on writing, we would need to address this.”

It was hugely powerful to plan with really great teachers who all had ideas and experience that was different to my own. This combined with dedicated planning time allowed us to produce really innovative and research backed lesson plans. Watching and delivering these lessons really helped us to improve our teaching. We began incorporating and adapting successful aspects of lesson study into our everyday teaching.

“I enjoyed the process and the opportunity to deepen my understanding of how children learn to write.”

**Teachers benefits from the study process**

Confidence to take risks

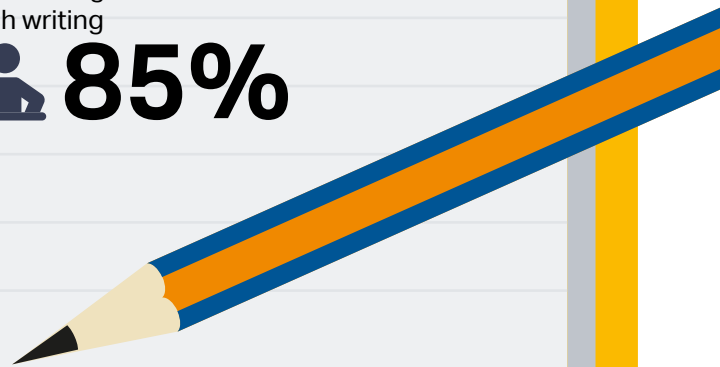
★ **100%**

Deeper understanding of how pupils learn to write

🧠 **100%**

Broader range of skills to teach writing

★👤 **85%**



# Fetch Me a Pen Leadership Hub

Increasing knowledge, skills and confidence in the teaching of academic literacy



The Fetch Me a Pen (FMaP) Leadership Hub supports academic literacy and writing in London secondary schools. It seeks to extend and embed the work carried out by the original London Schools Excellence Fund FMaP project. The hub is led by Mulberry School for Girls and involves schools both within Tower Hamlets and across Greater London. It aims to build leadership capacity in schools to support teaching and learning related to academic writing. An investigative approach of creating, trialling and evaluating

literacy-teaching methods was developed by the original FMaP project. Literacy leaders use this method to work with Science and Humanities teachers to better support and resource the writing needs of new curriculums. Ultimately, the hub provides a platform to develop the leadership skills of those with a responsibility for whole-school academic literacy. It brings together teachers in targeted subjects so that they can share and improve their own practice around the teaching of writing.

Downloads of resources

↓ **12,487**

Teachers engaged

★  **36**

Pupils benefiting

 **650+**

**LEAD ORGANISATION:**

Mulberry School for Girls

**FOCUS GROUP:**

Secondary

**PROJECT LEAD:**

Daniel Ingman

dingman@mulberry.towerhamlets.sch.uk

For more information visit:

[www.fetchmeapen.org](http://www.fetchmeapen.org)

**CASE STUDY: RUTH SMITH, ACTING HEADTEACHER, MULBERRY SCHOOL FOR GIRLS**

“ At the heart of Fetch Me a Pen has been a commitment to equip teachers with the tools to develop the academic literacy of their students. Part of this is building their own confidence to experiment with language in their subject disciplines. Underpinning this work has been the creation of a safe and truly collaborative learning environment. This has given teachers the time and space to intellectually engage and to create a literacy approach, bespoke to the specific needs of their students. It's been wonderful to see how Fetch me a Pen has continued to grow over the year, with even more teachers from a range of different schools and subjects gaining the confidence and knowledge to develop academic writers, regardless of their starting point.

As a result of the project, our own KS4 results have increased significantly. There is tangible evidence from lesson visits and the quality of the students' writing, that our pupils can articulate their thinking in a sophisticated and fluent way. Despite the enormous socio-economic disadvantage our pupils face, I am very proud of the way our teachers expect the very best and believe that, with the right literacy tools, anyone can write in a highly academic way. This is regularly reinforced by the number of visitors who are astounded by the way our students think and write.



# Geography: a Subject Hub for London

Enhancing teaching, learning and careers support for geography in London



The hub aims to improve the teaching and learning of geography in the capital. It builds on the Royal Geographical Society's successful programme 'Rediscovering London's Geography', which supported over 200 schools and 800 teachers between 2014 and 2015. Through the development of local continual professional development (CPD) hubs across 16 boroughs and the publication of award winning online educational resources, teachers continue to develop their confidence and subject knowledge. The project also provides pupil engagement activities to promote the value of studying geography to higher levels.

The project has expanded and has supported over 350 schools and 450 teachers in its second phase, from 2016 to 2017. Local hubs are complemented by a programme of subject specialist CPD and 'Going Places with Geography' events, which focus on careers in geography and the importance of further study. For secondary schools, the hub has specifically supported the introduction of new GCSE and A-level courses from September 2016. For primary schools it focuses on non-specialist teachers of geography. The UCL Institute of Education (IOE) provides complementary CPD activities to accompany this project.



**CASE STUDY: RICHARD MAURICE, GEOGRAPHY CONSULTANT, HARRIS FEDERATION**

“ I have been leading a geography network within the Harris Federation since 2014. We are made up of some fifty plus geography teachers from across London, and a clear need identified when I took on the role was for high quality subject-specific CPD, led by geographers for geographers. It has been fantastic working with, and being supported by, the Subject Hub for London.

The project has helped us source and fund subject-specific training by a number of external consultants. Sessions have included; teaching geography at primary level, using GIS in geography lessons, and a topic update on geopolitics.

We have also benefited hugely from a grant given by the project, which we have spent on technical fieldwork equipment. This equipment is loaned out, free of charge, to our academies so they can run low cost fieldtrips for their students. As I go into departments and lessons from across the Harris Federation, I am pleased to see first-hand the impact the project has had on the quality of geography teaching within our schools. I look forward to seeing how our students develop into thoughtful young geographers.



**LEAD ORGANISATION:**  
Royal Geographical Society (with IBG)

**FOCUS GROUP:**  
Primary/Secondary

**PROJECT LEAD:**  
Steve Brace

**PROJECT CO-ORDINATOR:**  
Bryony Collins  
B.Collins@rgs.org

For more information visit:  
[www.rgs.org](http://www.rgs.org)

**Number of people benefiting**

Teachers

 **450+**

Pupils

 **1600+**

**Rediscovering London's Geography Project**



# Music Excellence London

Transforming Key Stage 3 music in London schools



Music Excellence London is a dynamic network of classroom teachers, music education hubs, and cultural organisations that supports excellent musical teaching and learning at Key Stage 3 in London. It's a pan London offer, which includes open access to online resources, an active social media community, webinars, peer-to-peer support and public events. By tackling isolation amongst KS3 music specialist teachers, Music Excellence London supports development of subject specific pedagogy and improves subject knowledge.

It provides a vital infrastructure to improve communication between schools and the wider music sector. It also pools information about CPD and cultural learning opportunities offered by associate partners, including workshops, concerts and artist visits. In addition, Music Excellence London offers a rolling events programme, which addresses burning issues for Key Stage 3 music, as identified by teachers.

**CASE STUDY: KATIE HASLERA, TEACHER ADVOCATE, MUSIC EXCELLENCE LONDON**

“ I've been teaching at Woodford County High School for 5 years, and have been really glad to be a part of the Music Excellence London network. The regular teach-meets have given me the opportunity to share ideas and resources with teachers from all across the city. It's given me some great ideas for my teaching, planning and assessment for Key Stage 3. Being part of a small music department, I feel it's made a great difference to be able to link up with other teachers and to benefit from the support that a wider network can bring - as well as to hopefully offer some support to others too through the webinars and conferences. I know that my students enjoy their music lessons, and really engage with the practical music-based curriculum that we deliver to them. Music Excellence London has been a great influence on this. The work that they've done so far has been really appreciated by teachers I know in other schools too.

**LEAD ORGANISATION:**

Sound Connections

**FOCUS GROUP:**

Secondary

**PROJECT LEAD:**

Philip Flood

philip@sound-connections.org.uk

For more information visit:

[www.musicexcellence.org.uk](http://www.musicexcellence.org.uk)

**Numbers engaged with the network**

Schools

 **120+**

Teachers

 **210+**

Attendees at Inspire Event

 **60**

“ Music Excellence London is a supportive forum and an opportunity to reflect on teaching practice and wider educational issues. The Inspire Day was so useful for meeting a range of professionals outside teaching. ”

# Professional Language Networks

Support, advice and professional development for London's language teachers



The Professional Language Networks Hub aims to enhance language teachers' subject knowledge and leadership skills. It does this by using evidence-based approaches to develop their practice, building upon the work already accomplished by the University of Westminster through the London Schools Excellence Fund. Through the project, the development of local hubs is overseen by a team of mentors from the University of Westminster. Mentors provide lead practitioners in each hub with the training and academic knowledge needed to confidently develop their own and other's

her's practice through evidence-based approaches. The project includes a complementary programme of continual professional development and allows for networking and sharing of best practice through termly hub meetings. There are opportunities for peer teaching and observations, as well as lead practitioners having the chance to plan and deliver sessions at bi-annual Network for Languages London conferences. It is hoped that lead practitioners will be equipped and empowered to sustain their hubs and continue to support and upskill colleagues.

**CASE STUDY: VICKY LINKE, DEPUTY HEADTEACHER,  
CHESTERTON PRIMARY SCHOOL**



“As a school we have thoroughly enjoyed being a part of the hub. We have benefited greatly from the support offered and have attended four hub meetings since last summer, as well as the Network for Languages conference in November. These events have allowed our staff to network with other practitioners who are equally passionate about languages. It has proved to be an essential way to keep up to date with new initiatives and share good practice. At the June conference, our Spanish lead had the opportunity to present a workshop to other schools on raising cultural awareness in MFL lessons. She did this alongside a newly qualified teacher who she had been mentoring, as well as lead practitioners from Rutherford House School. They spoke about our partnership with a school in Spain and the impact it is having on our pupils. The hub has also provided us with support and advice on the Erasmus+ application process. We can now send 10 members of our staff on this amazing CPD opportunity in Spain. Taking part in the hub has directly impacted all of our staff. Our MFL lead has been able to talk to other schools about teaching strategies and now uses more authentic resources as a direct result of this training.”

**LEAD ORGANISATION:**  
University of Westminster

**FOCUS GROUP:**  
Primary

**PROJECT LEAD:**  
Domini Stone  
D.A.Stone@westminster.ac.uk

For more information visit:  
[www.networkforlanguageslondon.org.uk](http://www.networkforlanguageslondon.org.uk)

“Presenting to a wider audience at the Network for Languages London conference has been a good way to develop as a practitioner and this experience will be useful in my role as a Senior Leader in Education.”

Lead teachers received the Association of Language Learning's Language Teacher of the Year Award

★ 2

Events held

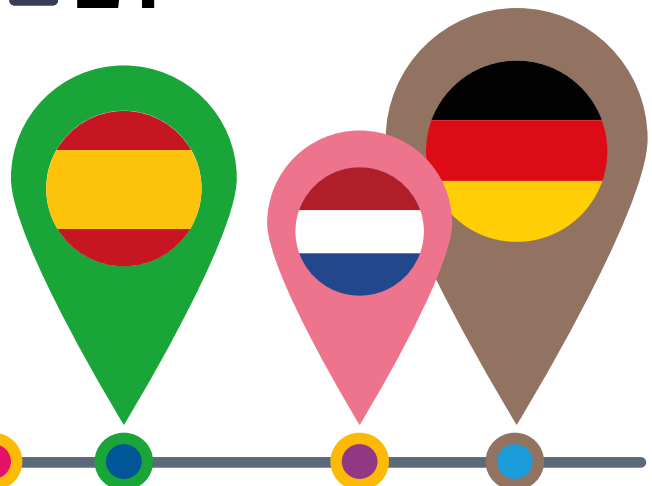
📅 21

Lead teachers who have spoken at national conferences

👤 12

Teachers benefiting

★ 300+



# West London Accelerated Language Learning Hub

Equipping pupils to produce high quality spontaneous language



Through the West London Accelerated Language Learning Hub, expert teachers from Twyford CofE Academies Trust are proving CPD in Modern Foreign Languages (MFL). The aim is to develop pupils' confidence and competence in the MFL classroom, equipping them with the skills needed to produce high-quality spontaneous language. The project stems from a Canadian system called Accelerative Integrated Methodology (AIM). AIM uses repetition, actions and common phrases to boost confidence in spontaneous speaking, listening and writing. It was piloted by Twyford Academy under the original London Schools Excellence Fund.

The project now provides training and resources for teachers across nine secondary schools in Ealing. This is delivered through five sessions, which focus on how to use target language and gestures in the MFL classroom. Teachers are invited into lessons to see first-hand how the AIM methodology can be used to integrate grammatical structures into language teaching, prior to the explicit teaching of grammatical rules. As pupil confidence and competence increases, further sessions focus on how toolkits can be introduced into language lessons to facilitate the independent production of written and spoken target language.

Percentage of Year 7 who exceeded their end of year target

★ **90%**

Percentage of the SEN group involved in the project reached their targets

★ **100%**



**LEAD ORGANISATION:**

Twyford Church of England Academy

**FOCUS GROUP:**

Secondary

**PROJECT LEAD:**

Sharon Moody

S Moody@twyford.ealing.sch.uk

For more information visit

[www.london.gov.uk/hubs](http://www.london.gov.uk/hubs)



**CASE STUDY:** ADELE HUGHES, LANGUAGE TEACHER AND HUB PARTICIPANT, DORMER'S WELLS HIGH SCHOOL



“” The sessions at Twyford and William Perkin Schools were a great introduction to what AIM entails. They were thought provoking in terms of how AIM can be used in school both with lower and higher ability students. They also gave a useful insight into how AIM can be adapted to other topics areas – this was useful for someone like me who isn't creative! I have been thoroughly inspired by the sessions, so much so that we'll be using AIM in our school. This will hopefully lead to a new initiative to help improve progress of students in French.

“ Being involved in the hub has really helped me particularly with some of my lower ability groups. Using rhyme and gesture in teaching is both enjoyable for the students and has helped their ability to process and remember a foreign language. It's been a great experience for myself and for my students.”



# Capital Physics

Championing uptake and attainment of physics in the capital



Capital Physics is a programme of professional development for physics teachers and technicians. It is run by the Institute of Physics (IOP) with additional support from the Ogden Trust.

The project provides termly meetings for six school clusters across London. These meetings allow the schools to share ideas, run demonstrations and have focussed discussions on active approaches to teaching and learning. Each cluster of around ten schools also has its own Capital Physics Coach – someone deeply

experienced in A-Level teaching and pedagogy, who works with the cluster, alongside an Ogden Trust Teacher Fellow. Coaches visit schools in order to work with smaller groups of teachers and technicians. They also run enrichment activities and there is an annual conference held for participating schools.

The project supports physics teaching at Key Stage 5 with the aim of increasing the number of pupils, particularly girls, completing their studies and moving on to higher education.





“ I don't know what it's like for other subjects, but my word the support available for physics teachers is incredible.”



**LEAD ORGANISATION:**

Institute of Physics

**FOCUS GROUP:**

Secondary

**PROJECT LEAD:**

Robert Birke

**PROJECT CO-ORDINATOR:**

Daniel Heanes

Daniel.Heanes@iop.org

For more information visit:

[www.iop.org](http://www.iop.org)

**Number of people who benefit**

Teachers

 **240**

Pupils

 **2656**

Number of schools engaged

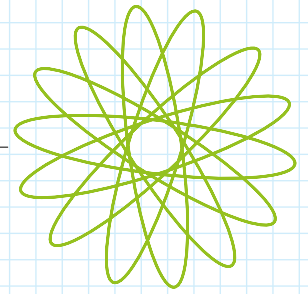
 **77**

**CASE STUDY: MEGAN GREET, HEAD OF PHYSICS, EASTBURY COMMUNITY SCHOOL**

“ Over the three years of my practice, I have been involved with the Capital Physics project and benefited in many ways, most especially from formal support to develop our department. Through Capital Physics, I have been inspired to come up with my own novel experiments and collaborate with other physics practitioners. This has led to new opportunities through linking with other schools and has also facilitated meaningful enrichment

projects for our students. Having access to events and twilight CPD sessions has helped me to confidently take on the role as Head of Physics and Associate Head of Science and feel that I can support the other teachers in my department. Within the wider science department, working with the IOP and Robert's flexibility about the content of our CPD sessions has led to a renewed enthusiasm for physics amongst non-specialists.





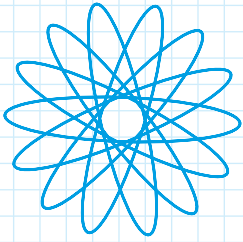
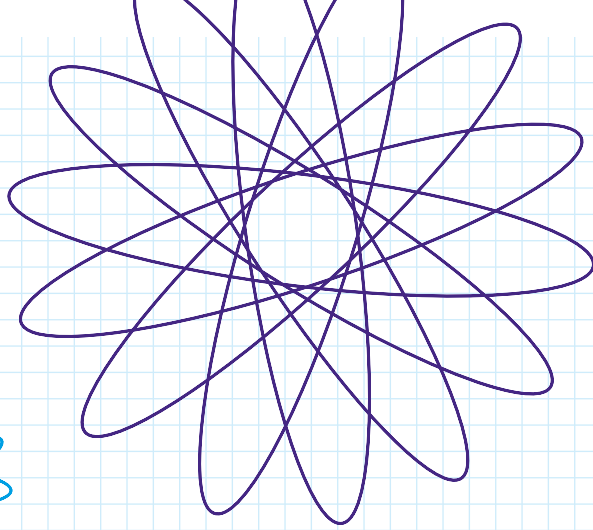
# Compton School Teaching School Alliance

Accelerating learning outcomes for more able maths students



The hub aims to accelerate transition progress for the rapid graspers in maths - improving maths skills for students working above the expected level. Participating schools are organised into three distinct geographic clusters, with one secondary and three primary schools per cluster. Specialists from the Compton Teaching School Alliance lead the planning and delivery of a sequential training programme for these clusters, boasting the equivalent of three days of face-to-face training across the length of the project. The training focuses on

developing teachers' understanding of key mathematical themes, which support the progress of more able pupils whilst linking to curriculum and assessment. A transitions handbook has also been produced to help embed learning and support future development. It details effective strategies and approaches to teaching more able mathematicians. Through this handbook and its training programme, the hub is improving teacher confidence, subject expertise and accelerating learning outcomes for pupils.



**LEAD ORGANISATION:**  
Compton Academy

**FOCUS GROUP:**  
Primary

**PROJECT LEAD:**  
Emma Hazlegreaves  
emma.hazlegreaves@thecompton.org.uk

For more information visit:  
[www.thecompton.org.uk](http://www.thecompton.org.uk)

**CASE STUDY:** WILL MCCONNELLOGUE,  
MATHS LEAD, LEA VALLEY PRIMARY SCHOOL



“ I have been teaching at Lea Valley Primary School for four years and am the Maths Leader. Our school has loved being part of the London Schools Excellence Fund. Our upper key stage 2 teachers have been to twilight CPD sessions where they were trained on activities to stretch the more able. The CPD was carefully crafted to meet our needs by auditing subject knowledge and all our teachers returned to school with lesson and extension ideas to ensure progress for all. The CPD improved our teachers’ subject knowledge and built their confidence. Our pupils visited The Compton School and took part in a maths masterclass for more able mathematicians; this was a hands-on day that stretched and challenged the pupils, and was really enjoyed by all. The pupils were full of enthusiasm, and still talk about it now. Some even mentioned it on their personal comment for their school report. We are really looking forward to the upcoming events including a Maths Magician day and the exciting maths challenge day! Our pupils have all been practicing and are eager to be picked to compete as part of the final team. I feel that the link with the Compton Secondary School has been invaluable this year and I look forward to continuing this in the future.

“ The project has been fantastic in giving teachers time and space to develop their maths knowledge, try out problems, and to think about how they can be taught in the primary classroom.”

Pupils attending Maths Masterclass

 **50**

CPD training and student events

 **19**

Schools involved

 **15+**



# Computing At School London

Providing outstanding CPD and resources to computing teachers across London



In 2014 the ICT curriculum was replaced with a new subject: Computing. Few teachers had an extensive background in computer science and they needed support in terms of pedagogy and subject knowledge. Computing At School (CAS) London is a joint project between Queen Mary University of London and King's College London, which supports teachers to deliver this new subject.

The project developed from earlier collaboration through the London Schools Excellence Fund and provides CPD, as well as free and accessible resources via its webpage. CAS London now supports a network of experienced Master Teachers

and Hub Leaders across the capital. Master Teachers lend their support to other primary and secondary schools, largely through delivery of specially adapted courses and small-group training in Computing. CAS London also works to strengthen collaboration with coding clubs, learning centres and industry partners.

The project's immediate impact has been to establish a sustainable London-wide support network which provides CPD and outstanding resources to Computing teachers across the capital. In the longer term, it aims for all London pupils to have access to an outstanding education in Computing.

Teachers accessing CPD

 **1700**

Resource downloads

 **54,000**

Free resources developed

 **108**

Hubs across London

 **29**

**LEAD ORGANISATION:**

Queen Mary University of London  
and King's College London

**FOCUS GROUP:**

Primary/Secondary

**PROJECT LEAD:**

Paul Curzon  
p.curzon@qmul.ac.uk

For more information visit:

[www.computingschool.org.uk](http://www.computingschool.org.uk)



“CAS London are fantastic and give a lot of contextual knowledge to the delivery of content.”

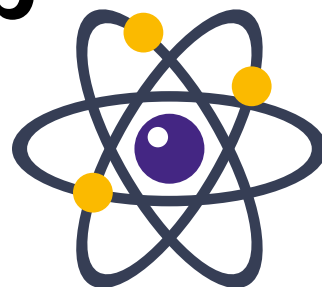
**CASE STUDY: ANNA KOPYCINSKA, COMPUTING TEACHER, TOWNLEY GRAMMAR SCHOOL**

“ I have been teaching computing for the past two years, however I have found it very challenging since I am not trained in the subject. Computing has always been my hobby and I taught myself how to program by signing up to online courses and reading books. However, I never thought that teaching computing would become my main career. When I was offered the job at Townley Grammar, I desperately needed some professional training to prepare me for teaching the subject.

There weren't many courses available, but I received a lot of support from fellow teachers. I used to observe more senior teachers before delivering the same lesson to my classes. I can now say that I am not worried about any of my lessons and I regularly use the resources provided by CAS. At present, I attend a GCSE CAS London course, which is a great opportunity for me to train in teaching KS4. I started to use my knowledge by challenging some of my year 9 students, who have chosen computing as one of their GCSE subjects. The courses are a brilliant opportunity for teachers wishing to retrain in computing at any level.

# Harrow Chemistry Hub

Providing tailored professional development for chemistry A-Level teachers



The Harrow Chemistry Hub is led by the University of Hertfordshire's Centre for STEM Education and includes schools and colleges in the London boroughs of Harrow, Hillingdon and Brent. It provides CPD for A-Level chemistry teachers and technicians. This CPD is long term, flexible and modular - tailored to meet participants' needs.

The hub is open to both recently qualified and experienced teachers. It supports participants to implement and embed new classroom approaches and to reflect on their own practice. Between CPD sessions, they undertake school based bridging tasks

and are encouraged to apply new subject knowledge and pedagogy in Key Stage 3 and 4 contexts. Participant teachers and technicians are also trained to deliver CPD themselves.

This widens participation and supports the hub's ongoing sustainability. Schools are encouraged to draw on support from stakeholders, volunteers and STEM Ambassadors, to enrich teaching and learning. Long term, it aims to inspire young people in chemistry and build a local community with a culture of developing practice together.

'Good' or 'Very Good' rating from  
CPD workshop participants

100%

Students benefiting

635+

Teachers and  
technicians engaging

45+

**LEAD ORGANISATION:**  
University of Hertfordshire

**FOCUS GROUP:**  
Secondary

**PROJECT LEAD:**  
Sue Sissling  
STEM@herts.ac.uk

For more information visit:  
[www.london.gov.uk/hubs](http://www.london.gov.uk/hubs)

**CASE STUDY:** REVATHY SELVARAJAH, CHEMISTRY TEACHER,  
PARK HIGH SCHOOL

“ When the opportunity of attending the Harrow Chemistry Hub arose I jumped at the chance. Reading research on specific aspects of chemistry and ways to avoid introducing misconceptions is something that teachers don't always get a chance to do. The huge array of ideas and practicals that have been shared with us changed how I would teach a topic. In particular I have used the microscale practicals with the displacement of halogens and reduction of iron on a match head – the students really engaged with this. I have shared some of these ideas and practicals with my department who have now gone on to try them within their lessons and see the benefits for themselves. This has been a fantastic opportunity to meet with local school teachers and build a relationship with them. What I had found most useful was that there was a range of different teachers with varying levels of experience. I am relatively early in my career so I found that when teachers shared their experiences and anecdotes of how they taught chemistry, it was truly valuable.

All in all this year has been an incredible opportunity. I feel like my students, my department and myself have benefited massively from being part of this hub and I hope we can keep these relationships established for the long term.

# London Mathematics Lesson Study Hub

Creating self-sustaining maths communities through lesson study



The hub uses the East Asian method of lesson study to help teachers develop their knowledge of the new National Curriculum for maths. This includes looking at effective ways of tailoring the curriculum to meet pupils' needs. It works with primary and secondary schools, prioritising areas of maths that teachers commonly identify as the most difficult to teach and learn. Participants take an evidence-based approach to developing their practice, using pupil observations during lessons and also post-lesson pupil interviews.

This informs teachers' planning by developing better understanding of pupils' progress, challenges, misconceptions and needs. The hub's long term aim is to help create self-sustaining and self-sufficient communities of practice for maths across London who share their lesson studies as a means of creating and sharing new knowledge about how pupils are learning mathematics. These communities will regularly share their new knowledge in order for teachers across schools to benefit from their classroom enquiry.



Percentage increase in pupils meeting or exceeding teacher expectations\*

★ **18%**

\*After three cycles of lesson study

Number of teachers engaged

★  **117**

Number of schools reached

 **35**

Number of pupils benefiting

 **3400**

**LEAD ORGANISATION:**

London Borough of Camden

**FOCUS GROUP:**

Primary/Secondary

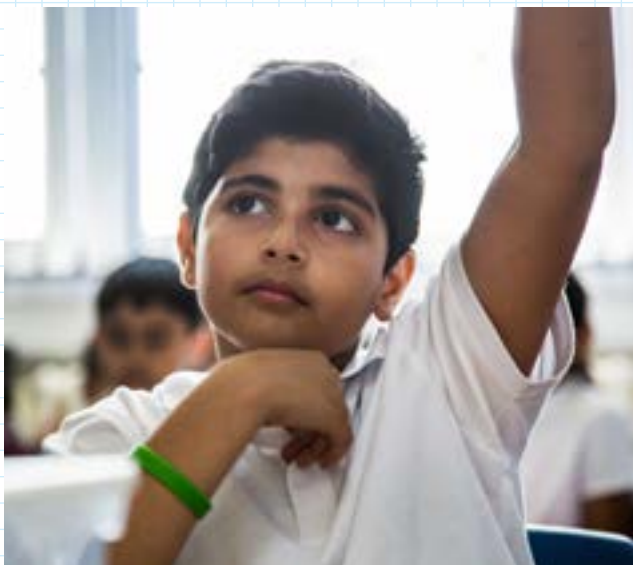
**PROJECT LEAD:**

Jean Lang

Jean.Lang@camden.gov.uk

For more information visit:

[www.lessonstudy.co.uk](http://www.lessonstudy.co.uk)



**CASE STUDY: JANE HULL, DEPUTY HEADTEACHER, SS PETER & PAUL'S CATHOLIC PRIMARY SCHOOL**

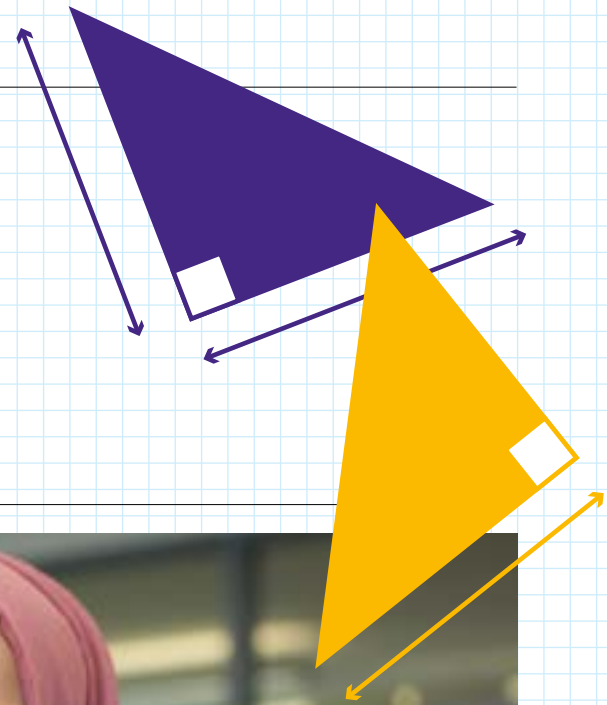
“ I have been teaching for 20 years and have undertaken a great deal of CPD but I was still amazed at how much could be learnt through the experience of a lesson study. The opportunity to plan, brainstorm and bounce ideas off each other helped us step out of our comfort zones to try new and innovative ways of teaching in our maths lessons. The experience of focusing in on a few children during a lesson gave us a much greater insight into the gaps, difficulties and misconceptions that children commonly held. Post lesson interviews with the children gave us immediate feedback about what really worked or didn't work for them so that we could quickly adapt our research lessons to cater more effectively

to their needs. What was learned from one lesson study cycle often led to school-wide efforts to address those similar issues across year groups and subject areas. In addition, being part of the lesson study Hub provided us with a chance to access excellent mathematics CPD along with the opportunity to meet with other schools involved in the project and share our findings and experiences. The feedback from each lesson study cycle, collated from all the schools involved by the hub leaders, enabled us to fine tune our lesson study practice to ensure we were getting the most from this learning experience. As a school we have benefited so much from it that we intend to roll out lesson study across our school next year.



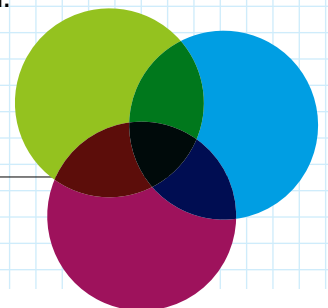
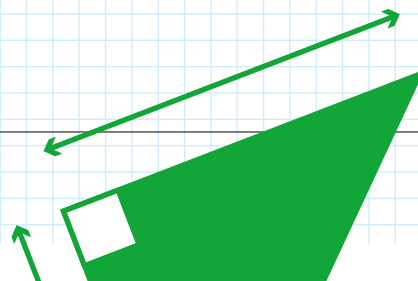
# Maths Problem Solving Hub

Confident teaching for resilient learning in mathematics



The Problem Solving Hub is led by the London Borough of Barking and Dagenham School Improvement Service in association with the London North East Maths Hub. The aim of the hub is to strategically align the wide-ranging influence of partners on mathematics education in the region. By reinforcing and enhancing existing strengths across the hub, schools develop as local centres of excellence. Lesson study is used as a key mechanism to sustainably affect

high quality professional development within and between schools. Hub activity builds on existing national and international networks, and gives schools access to external expert practice in lesson study and mathematical problem solving. Schools commit to developing and sharing this expertise in their local context, establishing a community of practice which enables purposeful and sustainable improvement in mathematics education across the region.



**CASE STUDY:** CHRIS HARRISON, HEADTEACHER,  
GEORGE CAREY CHURCH OF ENGLAND  
PRIMARY SCHOOL

“ George Carey Church of England Primary School has been involved in lesson study through the Problem Solving Hub for over three years. This has had a significant impact because it has given us a methodology to raise standards of provision. Teachers have collaborated to plan and deliver lessons focused on children’s dialogic learning and how they can solve problems for themselves through discussion and negotiation. The high level of professional dialogue supports classroom practitioners to think more deeply about the learning processes within their classrooms. External advisers joining us as part of the project have helped to extend and challenge this professional dialogue. Our Deputy Headteacher has grown in confidence in teaching maths in all of her lessons, and now leads on mathematical learning and developing a whole-school approach to lesson study. lesson study now extends across year groups and is a main driver to move teaching and learning from ‘good’ to ‘outstanding.’ Children really enjoy maths here and I have seen lesson study help teachers better understand how children think. Finding maths hard is OK, and by anticipating children’s difficulties teachers are designing great lessons to help with problem solving. We have great hopes for this work – watch this space!



**LEAD ORGANISATION:**  
London Borough of Barking  
and Dagenham

**FOCUS GROUP:**  
Primary/Secondary

**PROJECT LEAD:**  
Matt Lewis  
Matt.Lewis@lbbd.gov.uk

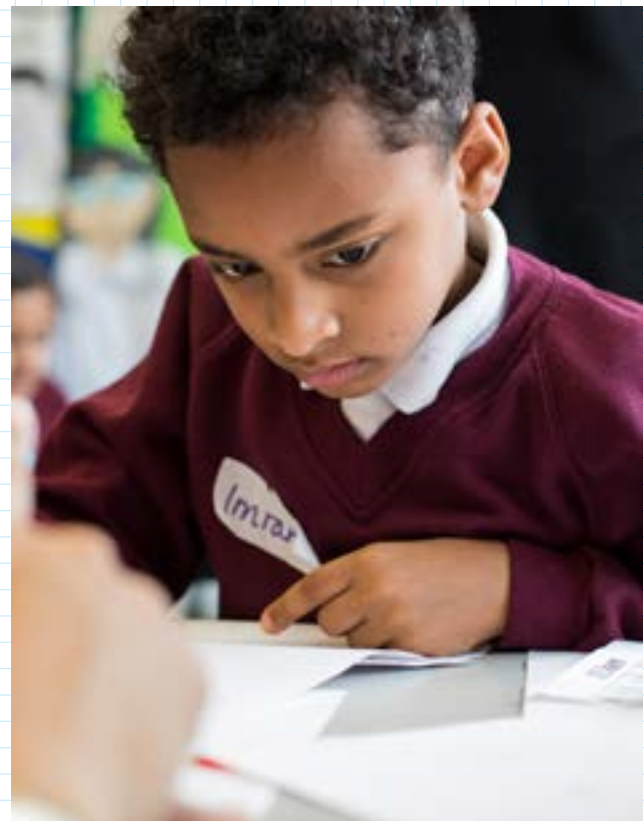
For more information visit:  
[www.london.gov.uk/hubs](http://www.london.gov.uk/hubs)

Number of teachers engaged

 **108**

Number of network and planning  
events with external advisers

 **30**



# Christ The King Knowledge and Pedagogy Expertise Networks

Nurturing meaningful cross-sector engagement to drive forward teaching and learning



This project began with a state-independent school research partnership, seeking to identify strategies and approaches which support the achievement of A/A\* grades at GCSE and A-Level.

The hub now seeks to address a crucial subject-specific CPD gap identified in its initial research, whilst also harnessing teachers' existing expertise. It uses a collaborative, research-based approach to deliver termly CPD. This is subject specific and, where relevant, the hub has partnered with subject associations and exam boards to bring in additional expertise. The hub has also hosted a research symposium to

consider the role and importance of research in schools. This brought together almost 100 individuals from schools, universities and educational bodies across England and Europe.

As part of five subject networks, participating teachers are collaborating to understand and refine what successful practice might look like in the transition from modular to linear courses. The hub aims to nurture the meaningful cross-sector engagement achieved so far. This is genuinely helping to drive forward teaching and learning and is enabling all involved to provide increasingly effective support to their pupils.



**CASE STUDY:** DEIRDRE KEARNEY, SUBJECT AMBASSADOR, CHRIST THE KING SIXTH FORM COLLEGE

“ I've taught at Christ the King College for five years, and have benefitted in so many ways from its LSEF cross-sector research network. As a teacher-researcher, I've learnt about different approaches for stretching my most able students, e.g. Harkness discussion, which I've since used with my classes. My experiences have also challenged me to think more deeply about myday-to-day practices. I've really appreciated ongoing opportunities to engage in professional dialogue about my subject because sometimes it's easy for this not to happen when we get caught up in 'the everyday'. I feel I'm now part of a wider network of chemistry teachers, who I can approach when I need to, and that I'm a resource for them too. This project has shown me my subject is the same wherever we teach - as are many of the challenges we face. Being part of the chemistry network has been so useful because we've been able to discuss these issues as a group and think about ways to support each other. Our hub has offered me lots of chemistry-specific CPD opportunities and I think its experiences like these that really help you to better understand your subject!



**LEAD ORGANISATION:**  
Christ The King Sixth Form College

**FOCUS GROUP:**  
Secondary

**PROJECT LEAD:**  
Dr Sue Sing  
S.Sing@ctksfc.ac.uk

For more information visit:  
[www.ctksfc.ac.uk](http://www.ctksfc.ac.uk)

Number of attendees at our hub's Research Symposium 2016

 **91**

Number of downloads of our research findings

 **148**

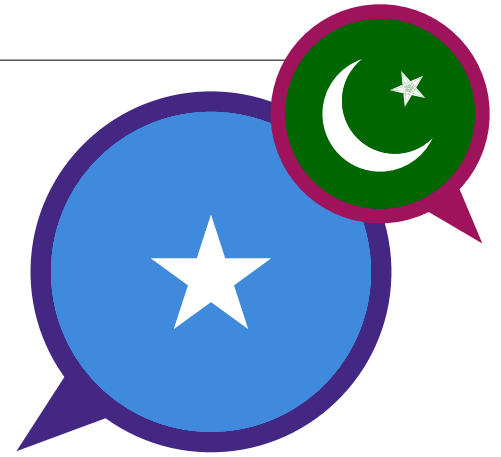
Number of schools engaged

 **67**



# Glebe EAL Subject Knowledge Hub

Improving oracy, literacy and writing skills for EAL pupils



The Glebe English as an Additional Language (EAL) Hub seeks to deepen teachers' knowledge and confidence in improving oracy, literacy and writing skills for EAL pupils. In part, this is about developing teachers' understanding of effective EAL pedagogy and practice. It also focuses on improving understanding of first and second language acquisition and the issues facing multi-cultural learners.

The project is delivered through a series of termly workshops, led by an academic expert from the Institute of Education (IOE), University College London. In addition to these termly meetings, participating

teachers are organised into four regional hubs in order to share good practice. Each hub is made up of three or four schools, supported by an EAL practitioner from the Glebe Knowledge Centre. Hub meetings take place between workshops and allow teachers to share and embed their learning. For participating teachers, the project builds confidence by developing understanding of the needs of EAL learners. The project hopes that these teachers will support an overall growth in school and regional expertise. Ultimately, this will result in EAL pupils growing in confidence and making accelerated progress in literacy, numeracy and writing.

Number of pupils who directly benefit

 **600+**

Number of training sessions held

 **10**

Teachers engaged

**21**



“ I have become more aware of developing confidence in EAL children – creating ways of getting them to showcase their skills in class.”



**LEAD ORGANISATION:**

Glebe Primary School

**FOCUS GROUP:**

Primary

**PROJECT LEAD:**

Emma Calderbank  
ecalderbank2.310@lgflmail.org

For more information visit:

[www.glebe.harrow.sch.uk](http://www.glebe.harrow.sch.uk)



**CASE STUDY: SUZIE ROOK, YEAR 4 CLASS TEACHER AND SEN/EAL LEADER, BYRON COURT PRIMARY SCHOOL**

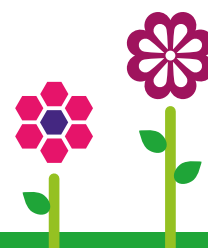
“ I have been teaching at Byron Court Primary School for three years, and have been grateful to be part of the Glebe EAL Subject Knowledge Hub project. The regular meetings at the IOE and our Brent hub meetings have really developed my overall confidence in teaching EAL learners. This confidence has been evident in my teaching and planning. I have found the sharing of resources and ideas the key to my overall development within this project. In particular, I have used wordless books. These books have developed

both my learner’s confidence and self-esteem. Throughout the project, the children involved have developed a ‘can do’ attitude and with this their language acquisition has grown. It has been a really worthwhile process that has helped me to understand what Action Research involves. Furthermore, sharing these ideas with my fellow colleagues has helped their overall classroom practice. I really hope that there will be opportunities to continue these network meetings, as the skills acquired have been really beneficial to the staff and children of Byron Court.



# Improving Educational Outcomes for Children Looked After

Sharing best practice for designated teachers



Following the success of the London Fostering Achievement programme (funded through the London Schools Excellence Fund) the Fostering Network and Achievement for All have continued to work in partnership. They have established two hubs to support the education of children looked after in the capital. The hubs are aimed at supporting London designated teachers for children looked after by sharing good practice and giving them an opportunity to network.

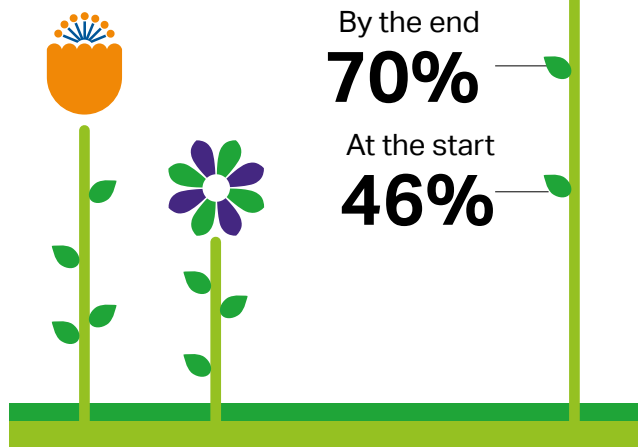
The London Designated Teacher Hub was hosted by Virtual School headteachers and ran pan-London twilight sessions for designated teachers. These sessions shared evidence-based practice with a positive

impact on educational outcomes for children looked after. The Croydon Designated Teacher Hub embeds the good practice explored in the London Designated Teacher Hub and provides local support and professional development for teachers. It was led by Edenham High School and supported by an Achievement for All coach and the Croydon Virtual School. This hub has now been mainstreamed into the Croydon Virtual School Designated Teacher Arena.

Resources from the hub have been incorporated into the **London Fostering Achievement Toolkit for Schools**, which is free to access and full of tools and information.



**Increase in attendees who now regularly work with other schools in relation to children looked after:**



**LEAD ORGANISATION:**  
The Fostering Network and Achievement For All

**FOCUS GROUP:**  
Primary/Secondary

**PROJECT LEAD:**  
Anne Cameron  
Anne.Cameron@afaeducation.org  
Lizzie Thomas, The Fostering Network

For more information visit:  
[www.afaeducation.org](http://www.afaeducation.org)  
[www.thefosteringnetwork.org.uk](http://www.thefosteringnetwork.org.uk)

**CASE STUDY:** ANNA ROBINSON, DESIGNATED TEACHER, ARCHBISHOP TENISON SCHOOL



“” The Croydon Hub for Designated Teachers has been fantastic support and CPD for me as the Designated Teacher this year. The opportunity to meet with other Designated Teachers (DTs) and to suggest training I would like has enabled me to learn a huge amount in a very short time. I would absolutely recommend attending future meetings to every DT. As a result of one of the hub meetings, we have developed our learning interventions using the Sutton Trust research to create a one-to-one metacognition session weekly with each of our Children Looked After (CLA). We have also changed the way that we work with foster carers to develop our level of communication following a talk at the hub from a foster carer about how key this is. We now email our carers weekly. We've changed our Personal Education Plan (PEP) procedure so that we consult more fully with CLA before the PEP to do it how and where they want to.

“ I feel better able to support the young person and carer in meetings and prepare more effectively. I feel more in control as an educator and better able to hold other agencies to account.”

**Feedback from Croydon Hub**  
51 teachers responded

★ **100%**  
of the teachers said the sessions had **boosted their confidence** around supporting children looked after

★ **100%**  
of the teachers rated the sessions **useful** or **very useful**



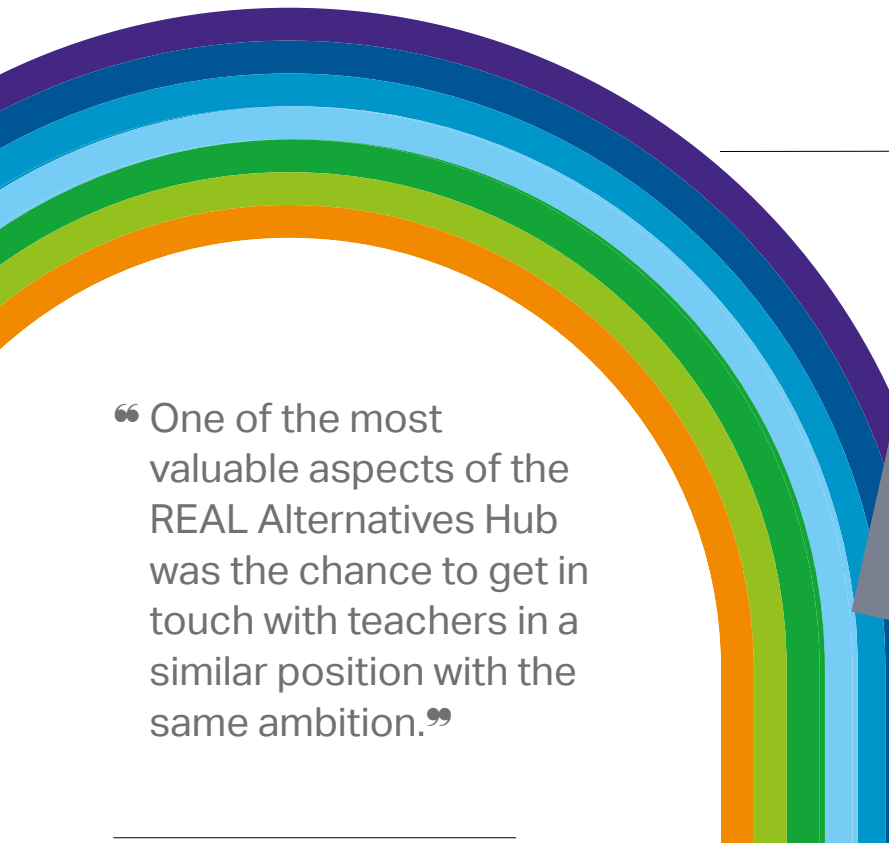
# REAL Alternatives Hub

Disciplined innovation for alternative learning



REAL Alternatives is a specialist cohort hub led by TBAP Teaching School Alliance (TSA) and the Innovation Unit. It supports teachers who work with challenging and vulnerable learners. These learners exist both in mainstream schools and alternative provisions. The REAL Alternatives Hub is a community of ambitious teachers, schools and providers who believe that innovation is necessary to unlock the unique challenges facing these learners across our education system. It seeks to support them to reach their full potential in both school and adult life.

The hub complements the work of the TBAP Teaching School Alliance through its network of schools and also draws new participants from across London and the surrounding counties. Hub schools jointly develop new ways of working building upon the evidence of what works in the UK and international examples of advanced practice. Teachers are collaborating to design, implement and evaluate new practice and bespoke projects in their schools to see a positive impact on pupils in terms attendance, behaviour and learning outcomes.



“One of the most valuable aspects of the REAL Alternatives Hub was the chance to get in touch with teachers in a similar position with the same ambition.”

**LEAD ORGANISATION:**  
TBAP Teaching School Alliance  
& The Innovation Unit

**FOCUS GROUP:**  
Primary/Secondary

**PROJECT LEAD:**  
Wendy Fagan  
wfagan@tbap.org.uk

For more information visit:  
[www.tbap.org.uk](http://www.tbap.org.uk)

Teachers engaged

★  **80+**



Bespoke projects designed and delivered

★ **5**



**CASE STUDY:** AISHA DE LIZARAZO, TBAP MFL TEACHER, TBAP 16-19 ACADEMIC AP ACADEMY

“ I have been teaching Modern Foreign Languages (MFL) in the Alternative Provision (AP) sector for the past six years and I know it can be challenging, learners find it hard to engage with the material or find any enjoyment in repetitious grammar drills. I have also often been struck by how disempowered AP learners feel when it comes to education. This project however, took away all of the usual restrictions in the classroom and gave my students the freedom to be independent, to be responsible for their own learning and progression, whilst simultaneously learning to associate

language learning with fun. Through the combination of blended learning with individualised activities, this project let me return the power of learning to my students and gave them the tools to motivate themselves. I also rarely have a chance to share my teaching practices with a wider network, and I relished the forums and open ‘critical friend’ sessions during which I met with some truly inspiring practitioners. I cannot overstate the monumental impact the project has had on my teaching practice, my confidence in myself and the confidence of my students.



## Contact

[educationprogramme@london.gov.uk](mailto:educationprogramme@london.gov.uk)

## For more info:

[www.london.gov.uk/hubs](http://www.london.gov.uk/hubs)

