

Introduction

1. Alliance universities strongly support government aims to improve attainment in schools. As universities with a long history of supporting aspiration and progression to higher education, we know that raising attainment is the most effective way of supporting young people from widening participation (WP) backgrounds to enter university. 39% of our students come from WP backgrounds¹ and we recruit 30% of the sector's students from low participation neighbourhoods.² We achieve strong outcomes for these students – exceeding our benchmarks for non-continuation rates.³
2. 13 Alliance universities already sponsor schools and can demonstrate positive outcomes for their students (see Annex A). For example, **the University of Lincoln** sponsors the Lincoln UTC with Siemens and two academy schools in Holbeach – one secondary and one primary. The University Academy Holbeach (secondary) is unique as it not only offers sixth form provision, but also a range of apprenticeship training. The HE participation rate in South Holland, where the school is situated, is one of the lowest in the country at 7%. Since the university has sponsored the academy, the size of the sixth form has increased from 9 to 275 and the number of students progressing to HE has increased from 1 to 24.
3. However, our universities also engage in a wide range of other activities which are very effective within their local context. We have a considerable number of existing partnerships with schools and other local, regional and national stakeholders and are well-placed to scale-up our activity.

¹ HESA, Proportion of UK Domiciled young full time first degree entrants from NS-SEC 4-7 backgrounds, 14/15

² HESA, Number of UK Domiciled young full time first degree entrants from low participation neighbourhoods (POLAR3), 14/15

³ HESA, Benchmark - young full-time first degree entrants who continue or qualify at same HEP, 14/15

4. The consultation places particular value on universities setting up new schools to create more good and outstanding places. Some universities are well-placed to do this and should be encouraged to do so. Others can make as important a contribution – and at a greater scale – through other kinds of support. Our universities’ success arises from engaging in a wide range of different activities with schools – as well as providing support to students once they arrive at university. The new policy should incentivise, recognise and reward a range of activities – taking into account the university’s specific circumstances, location and strengths - as long as the university can demonstrate that it is making a real impact towards improving attainment.

How do universities invest in widening participation activities?

5. Alliance universities tend to prioritise their investment on activities which support student access, attainment and success – for example by increasing subject-specific mentoring and increasing the number and availability of work experience opportunities. They also work closely with communities in deprived areas to support progression, and with local authorities and other local stakeholders to support a coherent strategy for education and employment.
6. This prioritisation is important as we take large numbers of disadvantaged students who often need more help to stay on and succeed at university.
7. The extent to which Alliance universities employ bursaries varies but many spend nothing at all and for others it is extremely low – Kingston University, for example, spends 2% of its income on bursaries. Collectively, Alliance universities spend far less than selective universities on bursaries, both as a proportion of their income, and in absolute terms – 32% vs 55% or £3,139,000 vs. £6,955,000 (see Table 1).

Table 1: Spend on bursaries: Sector, UA and Russell Group⁴

Average	Access	Student success	Progression	Bursaries & scholarships	Fee waivers	Student choice	Hardship funds
University Alliance (£000s)	1,576	2,921	958	3,139	112	129	493
University Alliance %	18%	31%	11%	32%	1%	2%	5%
Russell Group (£000s)	2,873	1,241	515	6,955	272	1,186	168
Russell Group %	22%	9%	4%	55%	2%	7%	1%
Sector (£000s)	1,353	1,437	533	2,546	123	349	213
Sector %	24%	23%	9%	34%	2%	4%	4%

8. Any incentives placed on universities to work with schools should not discourage them from working with challenging schools. We are concerned that current proposals do not do enough to mitigate this threat. At the moment universities work with challenging schools as part of their widening participation activities and because they see it as integral to the civic role they play in their local community. However, in an increasingly uncertain operating environment – with concerns about Brexit and international student numbers, for example – universities are likely to become more risk averse. There is nothing in the Green Paper to discourage game-playing whereby universities do the bare minimum, cherry picking schools that are easier to transform or selecting students that are easier to teach. This would severely limit the impact of the policy.
9. In addition to attainment raising activities, we believe universities could be more flexible in their entry and assessment criteria to recognise potential in all its many varied forms. The Access Agreement process could encourage universities to do this.

⁴ Analysis of steady state data from OFFA, 2017-18 Access Agreements: institutional expenditure and fee levels, Sept 2016

Q: How can the academic expertise of universities be brought to bear on our schools system, to improve school-level attainment and in doing so widen access?

10. Universities are already engaged in a wide range of activities to support attainment and improve progression to higher education. It is right that there should be a requirement on them to evidence the impact of this activity and focus their efforts on that activity that can be shown to be most efficient and effective, given their local context.
11. As well as setting up and running ('sponsoring') schools, university activities with schools include developing outstanding teachers, challenging governing bodies, offering learning expertise and sharing learning environments and creating links into subject departments that link to important EBacc subjects. This allows them to have an impact at scale as well as addressing areas that require particular attention for example cold spots and specific subject areas. Some examples of this activity are listed in Annex B.

Q: Are there other ways in which universities could be asked to contribute to raising school-level attainment?

12. See Annex B. The key is long-term, sustained interventions with schools rather than one-off interventions, demonstrating they have ambitious strategies and evidencing the impact of their activities.
13. For example, **Nottingham Trent University** have made extensive use of data to test their approach to WP and student success, and to evaluate its impact. By comparing regional monitoring and evaluation data from students who have taken part in NTU's School, Colleges & Community Outreach (SCCO) intervention programme with data held on the Department for Education's (DfE) national pupil database NTU have found:
 - As many as 78% of young people who had previously taken part in SCCO activities achieved a Level 2 qualification including the 'gold standard' A*-C in English and maths at Key Stage 4. This compares with just 50% and 53% of

Nottingham city and Nottinghamshire county pupils respectively who achieved this standard.

- There is strong statistical evidence that the 'value added' score of SCCO participants was higher than the comparative score for all pupils. SCCO participants, therefore, performed significantly better than expected based on their prior attainment.
 - When comparing with the average value added scores of all pupils in participants' schools, statistical tests confirmed a significant association between participation in SCCO interventions and better than expected outcomes in terms of progress made between Key Stage 2 and Key Stage 4. In effect, SCCO participants, on average, achieved the equivalent of more than four higher grades across their best eight GCSE subjects than average.
 - Consistent with trends for all pupils, a lower proportion of SCCO participants from disadvantaged neighbourhoods (74%) achieved Level 2 qualifications (including English & maths A*-C) than those from relatively advantaged areas (81%). However, a greater proportion of participants from deprived areas achieved above average progress according to their value added scores than their counterparts from more advantaged areas. This was particularly noteworthy because, national data show that disadvantaged students have, on average, considerably lower value added scores than advantaged students. Therefore, the association between participation in SCCO interventions and improved outcomes was particularly pronounced for disadvantaged students.
14. Through their Partnerships for Attainment proposal, **Sheffield Hallam University** has developed a Sheffield City Region-wide strategy for promoting, securing and developing a high quality teacher workforce to benefit the educational achievement of the region's young people.

15. Recent policy has given schools more power to recruit and train their own teachers, to develop their own distinctive approaches to education, and to innovate and design programmes that are targeted to their specific needs. Many schools have seized this opportunity to take ownership and develop the next generation of expert classroom teachers. However, on their own schools and academy chains are not able to develop and sustain high quality programmes that can reach *all* schools or guarantee that good practice is spread to those areas that need it most.
16. The university will be held accountable to its ambitions by evidencing a high quality and consistent stream of teachers, strong teacher retention and improved student outcomes.

Q: Is the DFA guidance the most effective way of delivering these new requirements?

17. Yes. DFA guidance is an effective way to require institutions to focus on impactful activities.
18. The OFFA and DFA, along with strong messaging from government, has led to considerable improvement across the sector in terms of widening participation and supporting student success. We hope the TEF will also support this activity.
19. However, the DFA will need to continue to have a strong role in the new Office for Students and be able to set targets for those institutions not achieving what they should or not being sufficiently ambitious in their planned activities. The Bill must be explicit that the access and participation functions of OfS, including the power to ultimately approve or refuse an access and participation plan, must sit with the Director for Fair Access and Participation.
20. Members believe this commitment to widening participation brings benefits to their region, to their staff and to their student body. However, it should be noted that requiring universities to spend an increasing amount of their

access money on specific interventions means diverting a corresponding amount of the fees students are paying to things other than their own education and support. There is therefore a risk that this policy could undermine trust in the funding settlement between government, universities and current and prospective students.

Q: What is the best way to ensure that all universities sponsor schools as a condition of higher fees?

21. We do not agree that all universities should be compelled to sponsor schools as a condition of charging higher fees.
22. As explained above, we support the government's aims for universities to play a key role in supporting and improving the attainment of young people but sponsoring a school is not the only, or necessarily the best way, to achieve this. We need to focus on the ends not the means.
23. We also believe that 2018/19 is an unrealistically short time frame to require universities to commit to sponsoring a school. If all the building blocks are already in place – such as existing strong relationships with schools and local stakeholders, existing student body, existing building, etc – then this timeframe may be achievable (though the deadline for these access agreements is expected to be the end of April 2017 which is very soon). However, assuming many of these schools will be established from scratch, a much longer lead time would be needed. We suggest it will take at least a full year to set up the school and about 3-4 years before significant improvement can be recognised with “lead indicators” available from year 2 onwards.
24. Most Alliance universities already sponsor schools and can demonstrate their positive impact on the schools they sponsor. For example, both UWE Bristol's Trust in Learning and Cabot Learning Federation schools have seen significant improvement in educational attainment (see Table 2) and have experienced notable culture change among both staff and students. The majority of schools in both trusts are either good or outstanding and most

have improved their Ofsted status following sponsorship (Table 3). The University and both Trusts are committed to school improvement and are often approached to support schools in need of improvement. As such, even after improvement, sustaining and further improving schools is a significant challenge as you will see from the results (Table 2).

25. UWE, Bristol has played a critical role in the journey of school improvement, however the university ascribes the improvement to a number of factors including leadership support and change; curriculum and pastoral support; partnership working, scrutiny and challenge and investment in resources and infrastructure.
26. The CLF, UWE Bristol and consequently Bristol has gained national recognition through its success and a number of high profile visits including the whole of HM Cabinet including the Prime Minister and Education Secretary in 2012. The now National Schools Commissioner Sir David Carter was knighted for his services to Education and school improvement during his time as the Chief Executive Officer of the CLF. Sir David is a visiting Professor of the University which enables a continuing dialogue and influence on education policy and supports the University to lead discussion surrounding the HEI involvement with the changing School landscape of federations, school collaborations and Multi Academy Trusts.
27. However, even with a long and strong history of sponsoring schools, the process is not always straightforward – with schools’ Ofsted ratings varying and changing over time (it is worth noting that Ofsted inspections and criteria also change and evolve over time) – see Table 3 below. It is also important to stress that UWE Bristol supports other schools which they do not sponsor in similar ways.

Table 2. Key Stage 4 percentage improvement at Trust in Learning Academies, BTEA and Cabot Learning Federation Secondary Schools (5 A*-C GCSEs incl. English and maths)

Secondary		5 A*-C Eng & Maths										2016		
School	Local Authority	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	5 A*-C Eng & Maths	Progress 8	Improvement since sponsorship
Bridge Learning Campus	Bristol	10	17	21	36	34	40	45	45	37	21	45	41.8	+28
Orchard School Bristol	Bristol	19	23	20	35	37	36	38	44	39	43	44	44	+9
City Academy Bristol	Bristol	18	21	24	34	36	34	40	35	29	42	40	38.6	n/a
Bristol Brunel Academy	Bristol	12	19	35	25	45	41	45	45	48	44	52	47.1	+17
Bristol Metropolitan Academy	Bristol	21	29	34	30	39	42	34	47	54	47	51	47.9	+21

John Cabot Academy	South Glos'				63	73	73	72	74	67	73	61	50.2	-2
Hans Price Academy	North Somerset						23	45	40	46	38	38	42.5	+15
Kings Oak Academy	South Glos'						32	51	41	46	41	45	45.8	+13
Bath Community Academy	Bath and North East Somerset						28	25	18	38	26	56	41	+31
Hanham Woods Academy	South Glos'							39	44	50	54	45	41.4	+1
BTE Academy	South Glos'										36	65	48.9	+29
Digitech	South Glos'													n/a

Table 3: Ofsted inspections/ results

School	Phase	Federation	Last Ofsted Inspection	Date
Summerhill Academy	Primary	CLF	2 Good	14/05/2014
Walls court Farm Academy	Primary	CLF	2 Good	28/04/2016
Begbook Primary Academy	Primary	CLF	2 Good	05/06/2013
Frome Vale Academy	Primary	CLF	2 Good	09/07/2014
Minerva Primary Academy	Primary	CLF	2 Good	09/07/2014
Charborough Road School	Primary	OAT	2 Good	30/09/2010
Callicroft Primary Academy	Primary	OAT	2 Good	25/06/2015
Stoke Lodge Primary School	Primary	OAT	2 Good	30/09/2011
Filton Ave Infant School	Primary	TILA	1 Outstanding	22/06/2011
Parson Street Primary School	Primary	TILA	2 Good	05/11/2014
BTE Academy (UTC)	Secondary	BTEA	2 Good	22/04/2015

Bristol Brunel Academy	Secondary	CLF	2 Good	12/06/2013
Bristol Metropolitan Academy	Secondary	CLF	2 Good	24/05/2012
Hans Price Academy	Secondary	CLF	2 Good	12/06/2013
City Academy Bristol	Secondary	CLF	4 Inadequate	22/01/2015
Bath Community Academy	Secondary	CLF	4 Inadequate	25/05/2016
Abbeywood community School	Secondary	OAT	2 Good	23/10/2014
Bradley Stoke Community School	Secondary	OAT	2 Good	12/04/2013
Orchard School Bristol	Secondary	TILA	2 Good	21/10/2015
Kings Oak Academy	All through	CLF	2 Good	12/06/2013
Bridge Learning Campus	All through	TILA	2 Good	12/03/2015
John Cabot Academy & CLF Post 16	Secondary & post 16	CLF	3 Requires Improvement	08/06/2016
Digitech	Yr 10 & post 16	CLF	none	

Haywood Village Academy	Primary	CLF	none	
Meadowbrook Primary School	Primary	OAT	none	
Filton Hill Primary School	Primary	OAT	none	
Hanham Woods Academy	Secondary	CLF	none	

28. Where sponsoring a school has been shown to be successful, this has required considerable resource and commitment from the sponsoring university, meaning that the number of schools universities sponsor is likely to grow very slowly (there are just over 150 universities and nearly 25,000 schools in the UK). By contrast, through their wider activities universities are able to achieve greater and more widespread impact. The University of Hertfordshire, for example, has achieved influence at national scale through projects such as the Primary Science Quality Mark (PSQM) which enables primary schools in the UK to evaluate, strengthen and celebrate their science provision. The PSQM is recommended as an improvement mechanism by Ofsted, and has been used by about 10% of UK primaries.

29. We argue that the government should instead focus on:

- ❖ Requiring universities to set ambitious targets for their work to widen participation and support schools to improve, and use data and evidence the impact of their activities so that access agreement money is only invested in activities that can be shown to be impactful.
- ❖ Supporting the leadership and continuing professional development of teachers through long term and wide-reaching partnerships. This could include providing continuity and support for Initial Teacher Training and ongoing teacher support and professional development or – through university business schools – developing bespoke, flexible (and subsidised) MBA programme for school leaders. We know that good teachers are essential in driving up standards and inspiring Head Teachers are instrumental in driving improvement in schools.⁵
- ❖ If the term ‘sponsorship’ must be used we suggest the definition not be confined to setting up and running a school, but be broadened to mean

⁵ See, for example, The Impact of School Leadership on Pupil Outcomes, <http://dera.ioe.ac.uk/11329/1/DCSF-RR108.pdf>

playing a wider role in improving standards and attainment across a range of schools. It is right that universities should be held accountable for this activity but the definition must recognise the wide range of institution-specific interventions as well as the partner roles that can be shown to be efficient and effective in delivering the desired outcomes.

Q: Should we encourage universities to take specific factors into account when deciding how and where to support school attainment?

30. Yes. It is essential that any requirement on universities to do more does not create perverse incentives where universities simply work with already advantaged schools and cohorts of students.
31. If the benefits of university engagement with schools are to be realised they must be encouraged to engage with schools and students in challenging circumstances. This should be achieved by taking account of added value scores, such as those developed at Nottingham Trent University and The Guardian League Table compilers.
32. Most universities already target their work with schools for example only working with those schools with a high proportion of FSM, non-selective state schools, low polar areas, BME, care leavers, SEN etc. and in specific subject areas e.g. EBacc/ STEM. This focus must be encouraged and maintained.
33. For example, in 2014/15 SHU partnership encompassed 161 schools and colleges. 53% of these schools and colleges fall within POLAR 3 quintile areas 1 or 2, and 41% are in areas with three or four indicators of deprivation. Consistently, around 45% of the University's undergraduate entrants are from schools and colleges within the partnership, demonstrating its continued importance and impact as a route into higher education. During 2014/15 547 engagements took place with these schools and colleges, a 78% increase over the last three years, demonstrating the University's ongoing commitment to and investment in this type of long-term engagement. 65% of

activity was with POLAR3 quintile 1 or 2 schools and colleges and 47% was with schools and colleges with three or four indicators of deprivation.

34. Any sponsorship with schools should feature within a university's overall strategy, including its widening participation strategy. A commitment of resources and staff expertise is essential.

Annex A

Alliance universities that currently sponsor schools:

1. Coventry University
2. Kingston University
3. Oxford Brookes University
4. Plymouth University
5. Sheffield Hallam University
6. University of Brighton
7. University of Greenwich
8. University of Hertfordshire
9. University of Huddersfield
10. University of Lincoln
11. University of Portsmouth
12. University of Salford
13. University of the West of England, Bristol

Alliance universities not currently sponsoring schools

1. Liverpool John Moores University
2. Manchester Metropolitan University – is the academic partner in Manchester of the Cooperative Academies Trust (since 2010)

3. Nottingham Trent University
4. Teesside University
5. The Open University
6. University of South Wales

Annex B

Examples of Alliance universities working with schools

Developing outstanding teachers:

- **The University of Brighton (UoB)** offers
 - University-led CPD, developed in conjunction with academy staff, for example, a year-long maths development programme, focusing on the teaching of mathematical reasoning; and a Phonics programme, focusing on early reading and Systematic Synthetic Phonics
 - Cross-Trust CPD, including a bespoke leadership programme for new and aspiring middle leaders (e.g. heads of subject or heads of key stages); and formal recognition for a group of outstanding teachers as the Trust's 'Lead Practitioners', who now lead coaching and support for other teachers;
 - Bespoke ITT intervention activities – where groups of ITT trainees, facilitated by members of university and academy staff, provide intensive support to GCSE students in academies (eg 'Maths Made to Measure' programme).
 - Through UoB's involvement pupil outcomes have improved. For example, in 2008, the secondary GCSE results in Hastings were the worst in the country (354 out of 354 boroughs). In the three predecessor secondary schools (that were replaced by two fully sponsored academies), the proportion of students gaining 5 or more A*-C GCSEs including English and maths were 12%, 16% and 34%. In 2015, one of the UoB academies achieved its best ever results (58%), placing it in the top 10% of similar schools nationally. Provisional progress data for 2016 similarly indicate that the academy will be in the top 10% nationally for progress. In another academy, the percentage of Year 11 students progressing to the local post 16 college has also increased significantly: from 19% in 2011/12 to over 50% in 2015/16.
- **Sheffield Hallam University (SHU)** offers:

- Programmes for teachers and advisers including an annual conference and series of 'Advising the Advisers' subject-based groups that provide a joined-up model of information and support around access to the institution's most selective course areas.
- 56,000 students and their influencers took part in these activities in 2014/15, an increase of 66% on 2013/14. Evaluations of activity show that 63% of respondents felt more positive about going to University after taking part and 69% felt that they knew more after taking part than they did before.
- All primary trainees at SHU undertake a series of "National Priority Placements", designed with school partners to allow trainees to observe high quality practice in four national priority areas: early reading, early number, SEND and English as an Additional Language (EAL). The placements build on university-based sessions that introduce trainees to important concepts and strategies and allow trainees to apply their understanding and work alongside experts in that area. For example, trainees on the Early Reading placement are required to work alongside a literacy specialist to plan and teach a phonics lesson to a group, evaluate the lesson and deliver a second lesson in light of their evaluation. They are also required to plan, teach and evaluate at least one guided reading session. During the placement trainees observe the teaching of phonics across a range of different year groups as well as discussing with teachers how they plan the provision of a rich language environment. This kind of short but highly focussed placement allows trainees to make rapid progress in a particular area.

Challenging governing bodies

- **University of the West of England (UWE, Bristol)**
 - Within Bristol and surrounding areas, UWE sponsors the CLF (15), TiLA (4) the Bristol Technology & Engineering Academy (UTC) and has Enhanced Partnerships with the South West Bristol Co-Operative Learning Trust and the Olympus Academy Trust.

- In all of these partnerships UWE Bristol has taken a vested interest in the Governance and management of the schools. The university has placed a great deal of importance on working in partnership with the schools supporting them to develop individual identities that best serve the communities in which they are situated. For example, UWE has provided mentoring and informal advice to support senior management through the various change processes. Working with existing management in this way provided a source of continuity through a period of change and demonstrated a committed and deep understanding of the surrounding context.
- The University supports staff to become school Governors, Directors and councillors, by offering up to 24 days a year for this work. As such the University has over 50 staff engaged in this work, many of which are on the boards of Bristol schools. Support is provided by a dedicated member of staff employed to oversee Academy and Trust Partnerships.
- For example, as Sponsor the University has the ultimate responsibility, delegated to the Members of the Trusts to appoint the Boards and oversee the management and progressive improvement of the Schools. The University has invested significantly in staff resources at a senior and middle management level through appointments of Jane Harrington (Deputy Vice Chancellor), Member & Director CLF; Guy Keith-Miller (Head of Academy and Trust Partnerships), Member & Director CLF, Sue Hughes, Andrew Evans and Suzanne Carrie – Academy Councillors; Gerry Rice (Associate Dean - Quality, Learning and Teaching in the Faculty of Health and Applied Sciences) Director & Chair of TiLA), Alastair Osborn (Head of Learning and Teaching Enhancement) Director TiLA. Susan Hughes (Associate Head of the Department of Education) Board Member. This high level and sustained involvement from UWE demonstrates the importance given to Enhanced Partnerships by the university.
- UWE Bristol's commitment to the schools and federations that it

sponsors is comprehensive and far ranging. For example, UWE has provided expertise in HR, Marketing, Finance among others and in the early days of creation, preparing the legal framework and completing the due diligence. The University and schools have also engaged in a broad range of activities to support school improvement including: CPD; ITE placement opportunities; access to resources, staff and networks, collaborative research bids and a coordinated delivery of outreach for KS2 – 5 'BoxED'.

Offering learning expertise and sharing learning environments:

- **Liverpool John Moores University (LJMU):**
 - Delivers a programme of volunteering in schools. This includes initiatives such as staff and student volunteers through governorship, facilitating mock interviews, assisting with reading and numeracy and acting as mentors to improve attainment in specific subjects.

- **University of Portsmouth (UoP):**
 - UoP is part of the Portsmouth Education Partnership of all 10 secondary schools in Portsmouth. Among the issues on which the partnership focuses are collective action on teacher recruitment and retention, collective action on curriculum development and subject networks, and collective action on key inclusion issues.
 - The University has also run a Parent Ambassador pilot⁶ whereby parents who currently have a child at university, but have no experience of attending Higher Education themselves, attend events, careers fairs and options evenings at local schools and colleges to help other parents learn more about HE and the opportunities in HE for their children.

Creating links into subject departments that link to important EBacc subjects:

⁶ <https://www.sunoutreach.org/news/new-parent-ambassador-scheme-lau>

- **Nottingham Trent University:**
 - The 'Raising the Grade' programme is a series of technique sessions and conferences in schools and the University focusing on revision. Delivered by outreach staff trained in learning and teaching methodologies and teams of highly skilled teachers, under the supervision of subject specialists, the aim is to raise levels of achievement at GCSE and to help those from non-traditional backgrounds progress to HE. This model is designed for students who are likely to struggle to achieve a grade C in their GCSE.
 - In the 'Revise Wise' technique session, pupils critically evaluate different revision techniques and digital revision tools. Using examples from various core curricula, pupils identify the techniques most appropriate for them. Pupils then progress onto the revision conferences which cover priority subjects: Maths, English, Science and Modern Foreign Languages. Each conference focuses on topics where borderline learners traditionally lose marks. Through enabling the pupils to develop their own personalised revision techniques and focusing on known areas of weakness, the model builds confidence and determination.
 - 69% of NTU Outreach participants achieved higher key Stage 2 to Key Stage 4 'value added' scores than the average for their school. Participants on the maths conference achieved the equivalent of half a grade higher at maths GCSE than expected.
- **Liverpool John Moores University (LJMU):**
 - Works in partnership with other bodies such as MerseySTEM in terms of stimulating interest in STEM through inspiring young people at events such as The Big Bang, and delivering workshops in school and on campus. Such events include ensuring pupils have the opportunity

to engage with employers from STEM related industries as well as trained student advocates delivering interactive sessions promoting STEM subjects in schools. In addition, LJMU successfully bid for funding to deliver the Royal Society of Chemistry's Chemistry for All programme, which will run until July 2019 and involves six local secondary schools. The programme promotes chemistry to school children from widening participation backgrounds through engaging outreach interventions and will support STEM provision in the Merseyside region. The University is match funding this project. LJMU also leads on a collaborative programme through the Merseyside Network for Collaborative Outreach targeting the engagement of young women in STEM subjects.

- **UWE, Bristol:**
 - Through its BoxED programme, UWE Bristol offers a focused outreach programme of STEM (Science, Technology, Engineering and Maths) related activities to a large number of schools in the region, not just those it sponsors. The overall aim of the programme is to keep more young people interested in STEM and improve the numbers of students from our region going into further and higher education. BoxED are 'boxed' (or easily transportable) activities that are based on the research and teaching at UWE. Research and teaching staff design them with UWE BoxED staff and supported by UWE education staff to ensure they target the national curriculum. Students can choose from a range of activities, for example:
 - **Micro-plastics & Microscopes**

Pupils use university standard microscopes to explore the ecosystems of our oceans and understand the issues of toxic accumulation of micro-plastics. Comparing real samples of diverse marine zooplankton to beauty products containing micro-plastics, they get a first-hand understanding of food chain interdependence and human impact on marine environments.
 - **Forensics**

A career-themed activity where students participate in blood pattern analysis, fingerprint detection and identifying trace samples to understand how science solves crime. Pupils learn a mix of laboratory and field skills, working alongside UWE undergraduate scientists.

- **University of Portsmouth:**
 - At the primary level UoP work with 19 primary schools in Portsmouth each year. For year 5s they offer in-school workshops and for year 6s day visits to the University. UoP's Dental Academy and Institute for Cosmology and Gravitation also run in-school subject workshops.