

CAMDEN

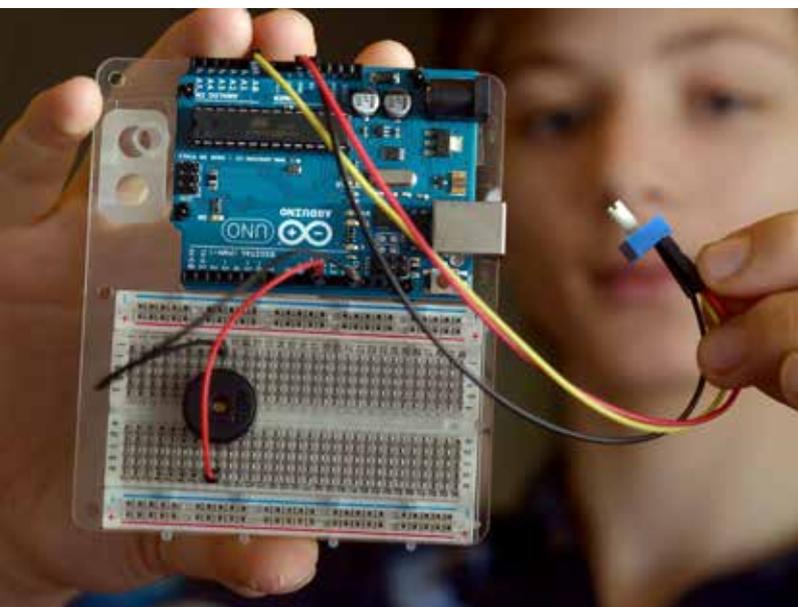
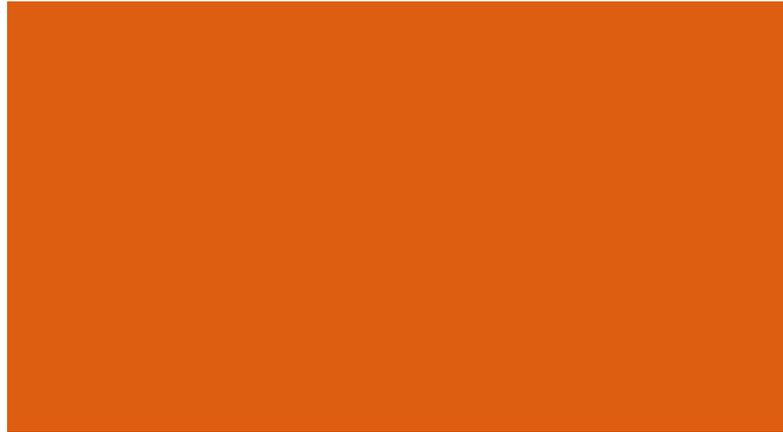
STEAM

SCIENCE, TECHNOLOGY, ENGINEERING, ARTS AND MATHEMATICS



# CREATING CAMDEN'S 21ST CENTURY TALENT

Report and recommendations of  
the Camden STEAM Commission





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# FOREWORD

I am proud to lead a borough at the heart of London's thriving economy. Camden is the home of innovation, a place where science, technology and creativity meet. Camden has high levels of wealth next to high levels of poverty, so we are determined that all the young people growing up here, regardless of background, have access to the very best opportunities that this borough has to offer. We want to work with Camden's employers to ensure we are an emblem of inclusive growth at the heart of London. We believe a fusion of creative and digital skills - a new 'STEAM approach' - is needed.

We launched our STEAM Commission in 2016, formed by leading representatives of the borough's schools, colleges, businesses and other key institutions. Its aim has been to highlight the growth sectors in Camden's economy, and to work with businesses to understand the skills they need now and in the future. Its ambition is to link them strongly with schools and Further Education (FE), to deliver the 21st Century Talent they need and to guarantee the best opportunities and futures for all our young people.

Camden Council has a very strong relationship with its 60 successful primary and secondary schools, 95% of which are currently rated good or outstanding. We enjoy close links with Capital City College Group, which has firm specialisms in STEM and the creative industries. Camden has a fantastic education and youth sector, and we have a diverse group of young people full of energy, creativity and talent.

The borough also hosts a range of world leading organisations across the creative, digital and scientific industries including Google, ASOS, Viacom, Facebook, Warner Brothers, the Wellcome Trust, the Francis Crick Institute, and Central St Martin's. We are a growing hub for start-ups and Small and Medium Enterprises, including All 3 Media and Bio Nano Consulting. All industries in the borough need a continuous and growing supply of creative, digital and scientific talent to ensure they can continue to grow and innovate. We welcome the fact that so many of our businesses are supporting such a diverse range of opportunities for our young citizens. They are stepping forward to volunteer their resources, inspire young people and provide them with the chance to gain experience and work.

Over the past 5 years, the **Camden Plan** has set out clear ambitions to address inequality in the borough, and create the conditions for and harness



**Council Leader, Cllr  
Georgia Gould**  
London Borough of Camden

the benefits of economic growth. This has led to significant successes in building stronger relationships between businesses and local education institutions. In partnership with the **Camden Business Board**, the Council has worked with employers to create more than 1600 apprenticeship and work experience

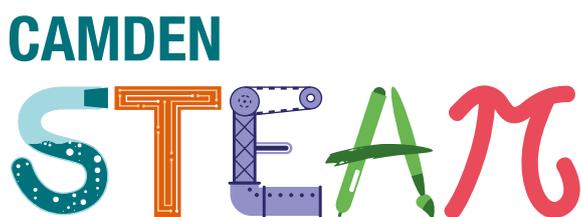
opportunities. Camden Apprenticeships provides a successful free service supporting businesses and young people to access the benefits of quality apprenticeships.

Camden's commitment to have the best schools in the country has been strengthened by pioneering new approaches such as **Camden Learning**, a new schools-led company to support collaboration and innovation across Camden's family of schools. Projects such as the ground-breaking **Primary Schools Careers Conferences** have also helped to inspire young minds about the world of work. Camden is already a great place to teach, and the borough needs to position itself as the place where creativity and innovation thrive, and where the best teachers continue to come.

Camden has also recently supported the creation of a new charity, the **Young Camden Foundation**. It is an innovative new cross-sector partnership, bringing the voluntary and community sector, Camden businesses, funders and the public sector together to support Camden's dynamic youth sector to open up opportunities for Camden's young people.

I would like to thank Dinah Caine, our chair, and all the many business leaders, teachers, young people and many others that have contributed. Together we will make sure our young people have the opportunities that meet their talent and creativity.

*Georgia Gaudel*



SCIENCE, TECHNOLOGY, ENGINEERING, ARTS AND MATHEMATICS

Camden Council has a **very strong relationship** with its



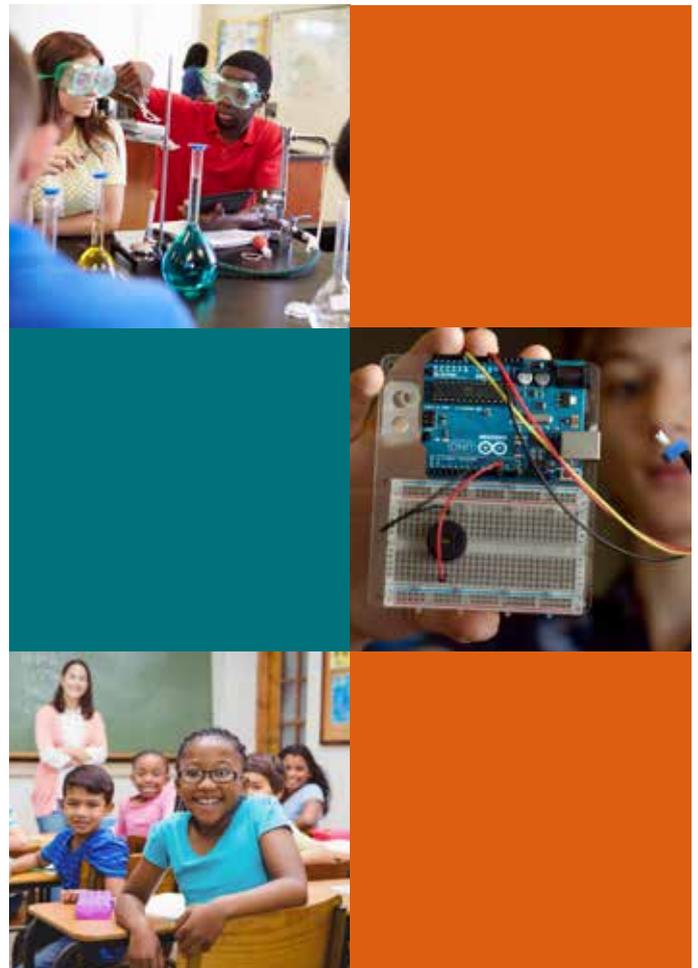
**successful primary and secondary schools,**



of which are **currently rated good or outstanding.**



**of primary school children** will be employed in jobs that currently don't exist.



# CHAIR'S INTRODUCTION

**Brexit means it will be ever more important that businesses are able to access the talent they need locally, to meet the challenges and opportunities of the 21st century economy. That economy is experiencing the beginning of a 4th Industrial Revolution defined by a fusion of technologies, and a blurring of the lines between the physical, digital, and biological. In planning for this demand, we need to consider not just the skills that businesses need now, but the skills they will need in the future, when the young people who are currently in schools and colleges reach the workplace. It's estimated that 65% of primary schoolchildren will be employed in jobs that don't currently exist. <sup>1</sup>**

A 2013 Oxford University study found that computerisation could lead to the loss of 47% of jobs over the coming decades as artificial intelligence (A.I.) is increasingly capable of making the decisions once handled by roles ranging from receptionists, to factory workers and bankers.<sup>2</sup> However, within creative employment, 87% of jobs have been found to be at low or no risk of automation. Between 2011 and 2015, employment in the creative industries also grew by 19.5%, compared to growth of just 6.3% in the wider UK economy.<sup>3</sup> As venture capitalist and Google and Microsoft alumnus Kai-Fu Lee said recently:

“Art and beauty is very hard to replicate with A.I. Given [that] A.I. is more objective, analytical, [and] data driven, maybe it's time for some of us to switch to the humanities, liberal arts, and beauty, ”

Going forward the development of Emotional Intelligence will be as critical as the development of Artificial Intelligence. And that is why the Commission recognises creativity as key to the fluid mix of skills that companies and individuals need to succeed in a rapidly changing environment.



**Dinah Caine CBE**  
Creative Skillset and the  
Creative Industries Council

Just as STEM skills are essential to growth and productivity right across the economy, so are creative skills and the ability to innovate. Businesses that fuse creativity, digital and science skills have been demonstrated to have higher levels of growth and innovation than the wider economy.<sup>4</sup>

In addition, there is evidence that study of, and access to, creativity benefits academic performance and employability. It offers the potential to improve diversity, by making maths and science more practical and relevant, and more attractive to currently underrepresented groups. Learning through culture



of jobs in **creative employment** are at low or **no risk** of automation.

In comparison, **45%** of jobs in the **wider UK economy** are estimated to be **at risk**.

and creativity improves attainment in maths and reading and increases cognitive abilities.<sup>5</sup> It also fosters curiosity, broadens horizons and builds the confidence to explore new ideas and ways of thinking.

In responding to this changing skills picture, the Commission recognises that policy makers can narrowly interpret STEM as the key to growth, linked to certain sectors of the economy and occupations. The Commission believes that a blending of scientific, engineering, technology, maths and creative skillsets are needed in varying degrees in occupations across the economy and that creative subjects should not only be taught alongside the “core” academic subjects, but all these subjects should be taught through each other. Bringing creativity into science education, or teaching digital skills as part of the creative arts, helps to reinforce learning, build connections and develop the creative, adaptable problem solvers our economy needs. Extra-curricular activity is also a very important route to deliver this fusion.

Combining what we would historically describe as the Sciences and the Arts, together with entrepreneurship will be key to the future of businesses and individuals’ life chances, developing people with creative flair and technical excellence. As the Chair of the Arts Council Sir Nicholas Serota said recently: “We must ensure every child can achieve their creative potential, whether that’s as an artist, scientist or an engineer. Our strength as a society and as a competitive economy depend on it.”

Camden’s STEAM Commission set out to celebrate the borough’s successful creative knowledge economy and to ensure it continues to succeed by

having access to diverse talent. Our address has been local and focused on practical action. We hope that our work in Camden will be seen as a useful input to critical ongoing considerations at a national and international level. We also hope the issues we have highlighted as needing addressing at regional and national level will be given serious consideration and smooth our path in achieving our recommendations going forward.

It is to Camden Council’s credit that it has been typically forward-looking in setting up this Commission, and I want to thank its new leader, Georgia Gould, for having asked me to Chair. I have been well supported by a terrific set of Commissioners, drawn from some of Camden’s most successful businesses, working together with schools, colleges and other partners to develop an ambitious set of recommendations. I thank them for all the time and commitment they have given to our work and to making our meetings so productive, stimulating and enjoyable.

We want to start work now to make our recommendations a reality. A reference group of Commissioners will remain in place for this next year. They will help the Council as it develops a detailed delivery plan to put our recommendations into action. We are calling on business, schools and colleges, and the Council to rally to this cause. Sign up to make your contribution to developing Camden’s 21st Century Talent. Your support is vital to enabling our businesses and our next generations to be as successful as they can be as the 4th industrial revolution unfolds ...so join us on this journey ...it’s going to be creative!

1. The Future of Jobs and Skills, World Economic Forum, 2016
2. C.B.Frey and M.A. Osborne, The Future of Employment: How Susceptible are Jobs to Computerisation?, Oxford Martin School, 2013
3. A Closer Look at Creatives, Nesta, 2017
4. The Fusion Effect, Nesta, 2016
5. **ImagineNation**: The value of Cultural Learning, The Cultural Learning Alliance, 2015

# THE COMMISSION

The Camden STEAM (Science, Technology, Engineering, Arts and Maths) Commission was set up in July 2016. An external Chair, Dinah Caine CBE of Creative Skillset and the Creative Industries Council, was appointed to lead its work.

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The Commission was established with the aims of:

- Highlighting Camden's unique economy and the STEAM skills needed for the roles of the future
- Encouraging greater fusion in creative, digital and scientific education
- Mobilising business resources to drive skills and careers education
- Tackling underrepresentation and providing all Camden young people with better access to the opportunities available locally



**Chair: Dinah Caine** (CBE), Creative Skillset and the Creative Industries Council



**Rob Earrey** is Headteacher at Fitzjohn's Primary School



**Cllr Georgia Gould** is the Leader of Camden Council



**Diane Chang** is Business Lead to the Vice President EMEA at Facebook



**Geraldine Davies** is Lead Co-Principal at UCL Academy



**Carl Gombrich** is Director of the Arts and Sciences Bsc Degree programme at UCL



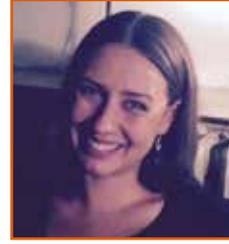
**Saba Asif** is a Camden Deputy Youth MP



**Di Maxfield-Twine** is Vice-President HR at Viacom



**Lia Commissar** is Programme Manager: Education and Neuroscience at Wellcome Trust



**Catherine Knivett** is Principal Policy Officer for Digital Skills Strategy, SMEs and Employment at the Greater London Authority



**Glen Saberton** is a Lead Artist at Rocksteady



**Pete Dudley** is Director of Education at Camden Council



**Amanda Timberg** is Head of Staffing Programs, EMEA at Google



**Eden Lungby** is a Camden Deputy Youth MP



**Saul Klein** (OBE) is a Partner at LocalGlobe



**Omid Shiraji** is Chief Information Officer at Camden Council



**Louisa Pointon** is Senior HR Officer at Arup



**Maureen Williams** is Headteacher at La Sainte Union School



**Andy Wilson** is CEO of Capital City College Group

# EXECUTIVE SUMMARY



## What is STEAM?

**STEAM** is an acronym for **Science, Technology, Engineering, Arts and Mathematics**. It has developed from a conviction that creativity, expressed as the Arts, is vital to STEM. The Commission recognises that more connected curriculums are needed across all of the subject areas. This means an interdisciplinary approach, building connections and using them to create innovative solutions to problems. In educational delivery, the Commission interprets the A in STEAM to include the following subjects: Art & Design, Music, Dance, Drama, Expressive & Performing Arts, Media, and Design & Technology, which collectively the Commission defines as creativity.

The Commission also uses the phrase “creative, digital and scientific” throughout this report to describe at very top level the broad disciplines that it believes are a key combination in developing Camden’s 21st Century Talent.

## The Principles

In Camden we want to ensure that every young person is inspired by the possibilities when creativity fuses with digital and science, and every business can access the talent it needs to succeed.

The opportunities for Camden’s businesses and young people are clear. By bringing our schools, colleges and businesses closer together, we can encourage and develop the workforce of the future with the skills they really need. Learning can be brought to life through practical industry experiences, and we have a wealth of organisations in Camden to draw on. The mechanisms and facilitators of engagement between businesses and schools need to be better joined up and signposted, to achieve our objective of a closer relationship between industry and education.

Too often career insights are enjoyed by the privileged, and those with personal connections. Camden’s greatest asset is its diversity, both of its residents and its thriving business community. By working together we can create a resilient local economy with opportunities for all that continues to grow and innovate.

The Commission has spoken to a wide range of organisations and groups across a number of events and received submissions from a borough wide call for evidence. The following key principles were agreed to inform the Commissions discussions:

1. Camden’s businesses should work with educators in helping our young people develop the creative, digital and scientific skills they need for the future world of work. This will ensure our businesses can recruit the local talent they need to innovate and grow.

2. Learning through a fusion of creativity, digital and science should be available to every young person in Camden at some point during their education, through school, youth services/community activities and work experiences.
3. All Camden young people should have equal access to the wealth of creative opportunities in our thriving economy, and receive quality careers education and advice, supporting them to overcome barriers.
4. Camden’s education should provide balanced and exciting creative curriculum pathways, that enable Camden students of all backgrounds to achieve excellence and to realise their creative potential through university, technical and apprenticeship routes.
5. Camden is already a great place to teach. Camden schools should continue to develop themselves as places where creativity and innovation thrive, and where the best teachers aim to come.
6. All Camden young people should be inspired and supported to take ownership of their career paths and to support each other in exploring different options and challenging stereotypes.

## The Recommendations

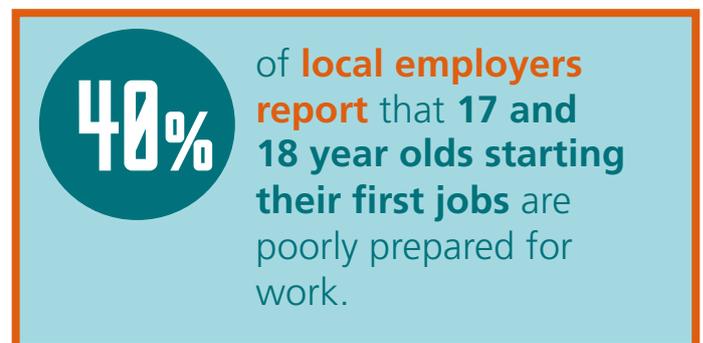
The Commission tasked itself with developing recommendations for mainstream education and youth services covering primary, secondary and post-16 age groups. This includes alternative provision and Camden’s pupil referral units, as well as the borough’s 16-19 college, Capital City College Group. Camden also benefits from a world-renowned higher education sector, and Central St Martin’s and University College London have both contributed to Commission discussions. The Commission hopes the HE sector will play its part going forward in helping to make these recommendations a successful reality.

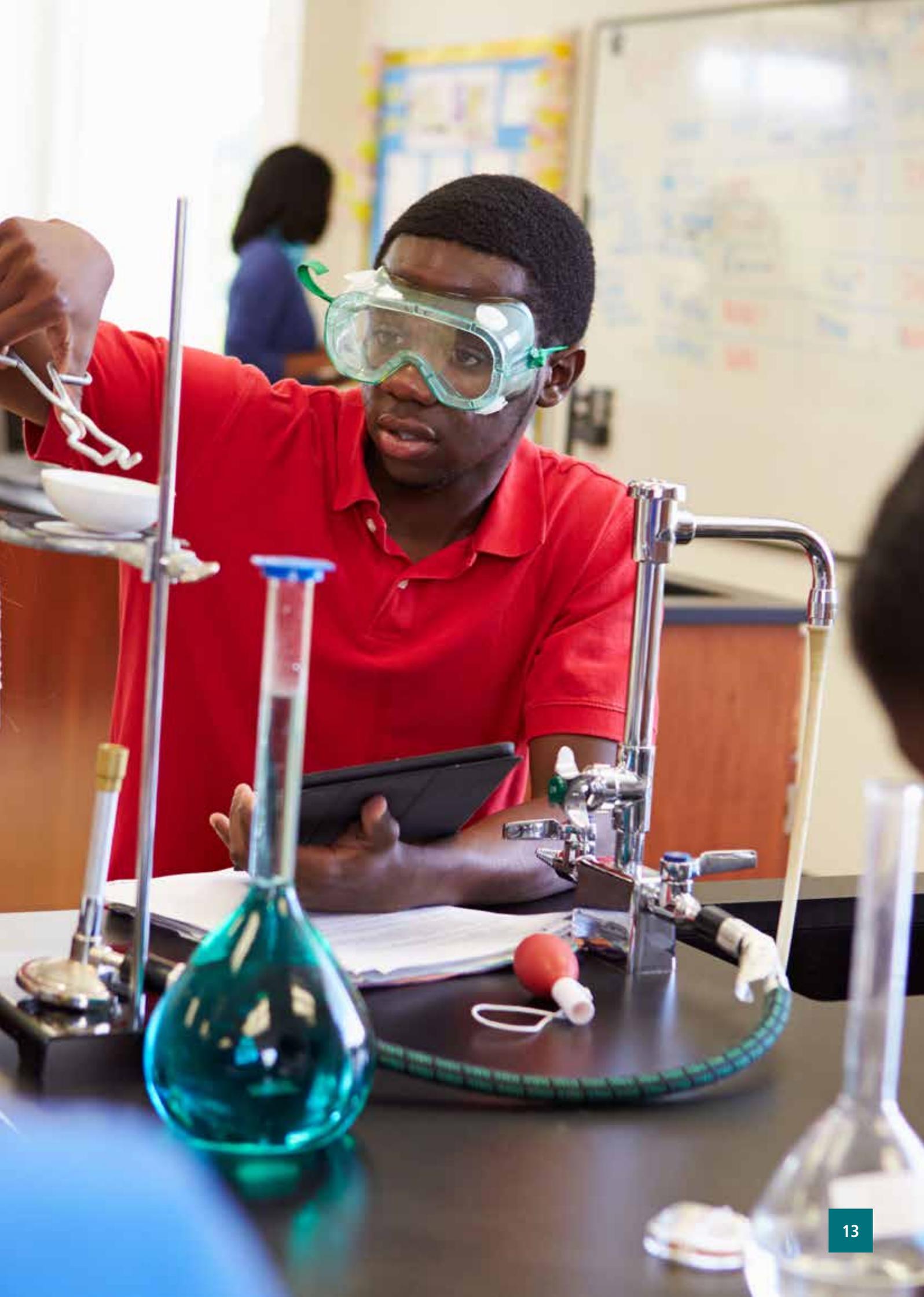
In order to help all interested parties to play their part the Commission has identified a specific menu of actions to ensure a pipeline of local talent to create and sustain a 21st century economy. It now calls on Camden Council, local businesses, schools and FE and HE to sign up to its 21st Century Talent pledge, to engage with the recommendations and deliver opportunities for young people.

The Commission also calls on regional and national policy makers to recognise the value of developing creative, digital and scientific skills for future jobs, and to make the wider changes needed to achieve that pipeline of talent. Critically, a reference group of Commissioners agrees to oversee and support the development of an implementation plan for its recommendations, and support that implementation in the first year.

### **The STEAM Commission makes the following recommendations to improve access to STEAM learning and job roles in Camden:**

1. That every Camden Governing Body for schools and FE should include a governor with relevant industry or professional experience, tasked with ensuring there is regular and consistent access to careers advice and guidance, in line with London Ambitions. This must include advocating the compelling case for combining creative, digital and science subjects.
2. This should be supported by a network of STEAM Ambassadors drawn from business and working with schools and FE. They will volunteer their knowledge and experiences to inspire young people to progress and achieve through creative, digital and science learning.
3. That Camden works with education institutions to develop a network of youth STEAM champions within schools, FE and alumni, providing inspiring role models and raising aspirations and ambitions.
4. That Camden Council commissions a STEAM hub as part of Camden Learning to work with teachers and employers to facilitate a more connected curriculum around creative, digital and science subjects, and support the network of STEAM Ambassadors, governors and youth champions.
5. That businesses contribute to a range of activities targeted at improving the equality of opportunities for career insight, work experience and apprenticeships. These could include the Camden Summer University, primary careers conferences, and a borough wide STEAM week where businesses open their doors.
6. That Camden businesses collaborate with the Young Camden Foundation to facilitate one or more 'Camden Challenge' events to collaboratively engage all young people in the creative and employability skills needed for the jobs of the future and to target underrepresented groups.
7. That the quality and visibility of the borough's STEAM apprenticeships and technical education offer is improved to raise aspirations and support diversity. Opportunities include a review of the borough's post-16 education, and the potential to establish a local Institute of Technology focused on combining traditional STEM areas with creative subjects.
8. That the Council work with schools and colleges to provide young people, parents, teachers, governors and Ambassadors with actionable intelligence on 21st century jobs through the STEAM hub, inspiring them on the opportunities available to all in creative, digital and scientific occupations.





## 21st Century Talent Pledge

To address its recommendations, the STEAM Commission has drawn together a menu of activities for businesses, schools, FE and the Council. These activities will be coordinated through the STEAM hub being developed as part of Camden Learning. Organisations interested in committing to any of the activities below should contact: [steampledge@camden.gov.uk](mailto:steampledge@camden.gov.uk)

Ask	Businesses	Schools and FE	Camden Council
<b>Volunteer</b>	<ul style="list-style-type: none"> <li>• For staff to volunteer to act as careers governors on school and FE governing bodies, promoting STEAM</li> <li>• Volunteer as STEAM Ambassadors, supporting careers education, and creative, digital and science learning</li> <li>• Volunteer as speakers in schools</li> </ul>	<ul style="list-style-type: none"> <li>• To appointment a governor with responsibility for careers</li> <li>• To link with an industry STEAM ambassador</li> <li>• appoint STEAM youth champions</li> </ul>	<ul style="list-style-type: none"> <li>• Develop a hub within Camden Learning to support the network of STEAM governors, ambassadors and youth champions</li> <li>• Coordinate existing online and digital career insight resources</li> </ul>
<b>Welcome</b>	<ul style="list-style-type: none"> <li>• To register to take part in the <b>Founders4Schools</b> work experience pilot in Camden</li> <li>• To open businesses to young people for visits as part of a STEAM week</li> </ul>	<ul style="list-style-type: none"> <li>• To join the Founders4Schools work experience pilot</li> </ul>	<ul style="list-style-type: none"> <li>• To develop a STEAM week and to broker opportunities between schools and colleges, and local employers</li> </ul>
<b>Employ</b>	<ul style="list-style-type: none"> <li>• To recruit apprenticeships according to skills-based criteria and a personalised support offer</li> <li>• To offer paid internships – pointing to guidance from industry</li> </ul>	<ul style="list-style-type: none"> <li>• To inspire young people through careers education and advice about the quality opportunities available locally through apprenticeships</li> </ul>	<ul style="list-style-type: none"> <li>• Camden Apprenticeships to support employers looking to improve their local recruitment of apprentices</li> <li>• Develop a Knowledge Quarter higher apprenticeship and work experience offer</li> </ul>
<b>Educate</b>	<ul style="list-style-type: none"> <li>• To support with learning and curriculum enhancement, equipping young people with work relevant skills</li> </ul>	<ul style="list-style-type: none"> <li>• Develop post-16 pathways that embed employer opportunities for curriculum development and work experience</li> <li>• Establish a STEAM focused Institute of Technology</li> <li>• Adopt the Gatsby Benchmarks for careers</li> </ul>	<ul style="list-style-type: none"> <li>• Support schools and colleges in developing a more connected curriculum that develops the rounded skills needed for future jobs</li> <li>• Help to contribute to the development of a STEAM Index</li> <li>• Develop a broad offer of STEAM technical options alongside A-levels as part of Camden's post-16 review</li> </ul>

Ask	Businesses	Schools and FE	Camden Council
<b>Inspire</b>	<ul style="list-style-type: none"> <li>To develop and run free courses for young people as part of the Camden Summer University</li> <li>To deliver careers education and insights for young people, teachers and parents</li> <li>To join a “Camden Challenge” through the Young Camden Foundation, engaging young people and developing creative and employability skills</li> </ul>	<ul style="list-style-type: none"> <li>Run STEAM careers events for technical and academic pathways aimed at parents and young people</li> <li>To join Camden Spark’s network to access curriculum enrichment and careers education</li> </ul>	<ul style="list-style-type: none"> <li>Young Camden Foundation run a Camden Challenge to lead curriculum development, employability events, and creative arts, digital and science enrichment activities</li> <li>Audit of existing careers provision and a careers education programme targeted at underrepresented groups</li> <li>Recruit a STEAM artist in residence to develop connected curriculum opportunities</li> <li>Run a STEAM focused Primary Careers Conference</li> </ul>

## Our message to regional and national education policy makers

The Commission is aware that local policy does not exist in isolation. In order for Camden and other areas to achieve the best for all their young people and meet the skills needs of our 21st century economy, we have the following messages for policy makers:

- Government should champion the importance of combining creative, digital and science subjects. Young people should be provided both with access to a curriculum and to extra curricula activity which allows them to creatively combine this range of subjects, enabling them to take advantage of future opportunities in an economy in its fourth industrial revolution.
- The Industrial Strategy and the Mayor of London’s Skills for Londoners taskforce should recognise the importance of creativity as an equal partner with the sciences and digital. A fusion of these skills should be promoted in London’s skills strategy.
- Relevant industries should provide regular intelligence about current and future talent requirements to inform national, regional and local industrial strategy. This should also inspire comprehensive careers information and step up campaigns to develop the 21st Century talent businesses need to grow and thrive.
- Camden’s proposed network of STEAM Ambassadors for schools and colleges should be extended across London to ensure this emphasis on a fusion of skills is properly implemented across all education and careers provision.
- A national ‘STEAM Index’ should be developed to provide better, more visible pathway data to guide young people on the subjects and skills that lead to STEAM careers.
- The Department for Education should make more resources available to tackle the range of barriers preventing recruitment and retention of staff for teaching the creative arts, digital and science skills. The ability to connect different curriculums to create STEAM should be included as part of teacher training, and industry professionals targeted for teacher recruitment.
- The new proposed system of Technical Levels proposed by the government should provide for greater opportunities for inter-disciplinary learning and continued transition between academic and technical education.

# GLOSSARY

**Camden Learning:** A schools' company, formed from the Camden School's Led Partnership and providing provides school improvement, professional learning and support services for all Camden maintained schools.

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**Camden Plan:** The Camden Plan 2012-2018 is the council's strategic vision for the borough. Through the Camden Commission, the council is currently reviewing how it will set its priorities for 2018 to 2023.

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**Camden Spark:** A Cultural Education Partnership in Camden, connecting schools with local arts and cultural organisations in the borough to enrich young people's education.

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**Capital City College Group:** The result of a recent merger between Westminster Kingsway College and City&Islington College.

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**EBacc:** The English Baccalaureate is a school performance measure. It allows people to see how many pupils get a grade C or above in the "core academic subjects" at key stage 4 in any government-funded school. Core subjects include English, mathematics, history or geography, the sciences (including computing), and languages.

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**Further Education (FE):** Education for people who have left school, but distinct from university or Higher Education. Further Education often includes access to higher education courses and work related qualifications.

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**Institutes of Technology:** A Government initiative intended as a response to the higher level technical skills gap, particularly in STEM subjects. The Institutes will be developed as new centres of technical education, building on successful existing examples.

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**LA SWAP:** A 6th form consortium formed between La Sainte Union, William Ellis, Acland Burghley and Parliament Hill schools.

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**NEET:** A young person who is not in education, employment or training.

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**Primary Careers Conferences:** Organised by Camden Council and the Knowledge Quarter in 2014 and 2015, to support children in relating skills, values and school subjects to careers from an early age and inspiring them about their education.

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**SMEs:** Small and Medium sized Enterprises. Although definitions vary, these are generally considered to be organisations with 0-250 employees.

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**Young Camden Foundation:** A new charitable youth foundation which involves bringing the voluntary and community sector, Camden businesses, funders and the public sector together to build stronger partnerships and pull in more funding for youth services is now available.

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**Creativity, problem solving, communication and collaboration are**

**amongst the top 10 SKILLS** most sought after by employers in London job adverts.







## Our Opportunity in Camden

Camden launched the STEAM Commission to celebrate our unique creative, digital and scientific economy, highlight the outstanding education offer available to students locally and make sure all our young people can access the opportunities it offers, by building stronger links between schools, FE and businesses. With Britain now leaving the EU and skills gaps widening, we urgently need to develop the skills of the next generation. Young people need the skills to not only meet the emerging talent gaps, but to be the innovators that create new products and future markets.

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This is vital for Camden's economy, which relies heavily on its supply of talent for its continued success. Whilst UK employment overall has grown by only 4.1% over the past five years, in the same time employment in Camden has enjoyed growth of 19.5%.<sup>6</sup> Employment in creative, digital and scientific industries in Camden has expanded 34% over the same period and represents 31% of those working in the borough.<sup>7</sup> If these businesses are to continue to grow and develop, they will need access to talent with the right blend of skills and the ability to put these into practice in the workplace.

Creativity is the key to this challenge. Creative occupations not only form one of the fastest growing parts of our economy, but are also the most resilient to future automation.<sup>8</sup> Recent studies have shown 87% of UK creative employment is at low or no risk of automation. In comparison, 45% of jobs in the wider UK economy are estimated to be at risk. By combining creative, digital and scientific skills in education we can support young people to develop the abilities they need for this evolving world of work. This is a world in which a diversity of ideas and outlooks is ever more important. The study of creative subjects alongside STEM, and more importantly the creative study of STEM itself, encourages this diversity by making the sciences more relevant and accessible to wider audiences of young people.<sup>9</sup>

According to recent research completed by Centre for London, companies are looking, "not only for people with digital skills, but with broader entrepreneurial attitudes and business skills, especially at senior levels. Companies increasingly want creative, autonomous and flexible, 'multi-layered Renaissance people' – polymaths whose skills stretch beyond the purely technical."<sup>10</sup>

**Employment** in creative, digital and scientific industries in Camden has **expanded**



over the same period and **represents**



of those working in the borough.

“Companies increasingly want creative, autonomous and flexible, ‘multi-layered Renaissance people’ – polymaths whose skills stretch beyond the purely technical”

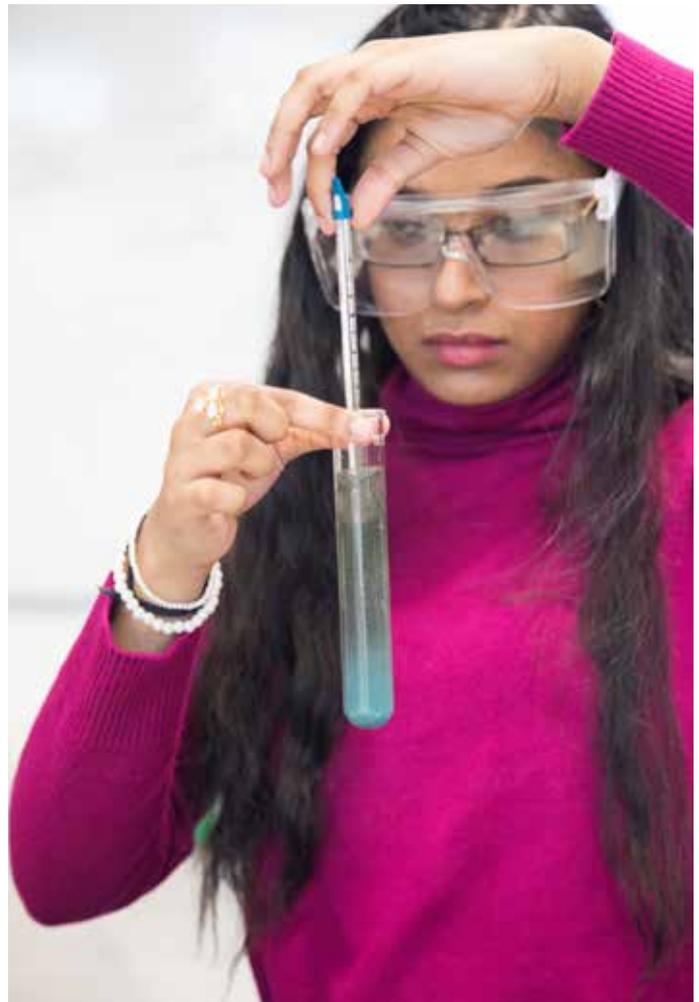
## Education in Camden

The Commission builds on the successful work of the Camden Education Commission and Equality Taskforce, which aimed to support all Camden schools towards achieving “Good” or “Outstanding” reviews from Ofsted and to narrow the attainment gaps between different student groups. This led to the creation of the Schools Led Partnership, and its formation into a schools’ company, Camden Learning. The organisation provides training, resources and support to all Camden schools and FE, and is targeted at raising attainment and sharing good practice.

Currently 95% of Camden schools are rated good or outstanding and there have been significant improvements in attainment in recent years. The percentage of Camden students achieving 5 or more GCSE’s A\*-C increased from 56% in 2013/14 to 62% in 2015/16. Camden also has the fifth highest rate in the country in terms of girls entering Maths and sciences A-levels (50.5%).<sup>11</sup>

Across all students just under a third of the A-levels studied in Camden are in Maths and Science. This is also matched by a high proportion of Camden young people studying creative arts. Despite continued pressures on creative teaching nationally, currently one third of “STEAM” A-levels studied by Camden young people are in the creative arts.<sup>12</sup>

The proportion of young people continuing in education after GCSE’s is high in Camden, and has continued to rise to 94.5%. However, of those young people staying on in education following their GCSE’s, only 69% attend a school 6th form and 52% continue to A-levels, with the rest studying vocational and technical courses. The result is that school 6th forms in Camden are very small. This presents challenges post-16 in continuing to deliver a broad and balanced curriculum available to all students.



We are also currently going through a period of huge education policy reform, and schools face a number of pressures. Changes to the new national formula are expected to result in significant reductions in funding for Camden schools. Recent reforms to the curriculum and exams in secondary schools also place an additional burden on teachers. The introduction of the **English Baccalaureate** (EBacc) as a central performance measure for schools, which does not include the creative arts, has already had a significant impact nationally. Government teacher training allocations for Design and Technology teachers have fallen by 11% and declined by 9% for Art and Design.<sup>13</sup> This is despite significant demand for these creative skills from UK industry.

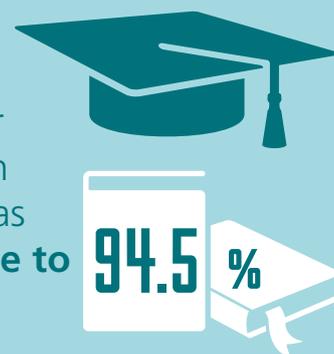
The further education sector has also undergone continuous change for a number of years. The landscape is set to shift again with the introduction of “**T-Levels**”, reforming the current complex range of 13,000 technical qualifications into 15 new “routes”. The changes are aimed at aligning technical education more closely with occupations and employers, and linking with the recent introduction of the **Apprenticeship Levy**.

### The careers offer

Careers education and guidance in schools has faced challenges in recent years. In 2011, the coalition government transferred responsibility for providing careers education and guidance from local authorities to schools. The funding that had previously supported Connexions was not transferred to schools. Across England, this has resulted in a decline in the consistency, quality and quantity of careers support. Ofsted’s review, *Going in the Right Direction?* found that only one in five schools were effective in providing careers guidance to students in Years 9, 10 and 11.<sup>14</sup>

The response in Camden was to develop a borough wide offer, now provided through Camden Learning. All Camden schools commission external careers guidance for their young people, and the majority of schools provide additional resources targeted towards vulnerable student groups and those at risk of becoming NEET. However, limitations often result in only one careers interview taking place per pupil, with a focus on upper age groups.<sup>15</sup> Work experience in Camden is often limited to Years 10 and 12. Schools report capacity issues in organising work experience which are expected to increase into the future.<sup>16</sup> There is a need for an ongoing programme of careers education, linking primary to secondary, and preparing young people for the careers guidance they receive later in their education.

The proportion of **young people continuing in education** after GCSE’s is high in Camden, and has continued to **rise to**



### Inequality and underrepresentation

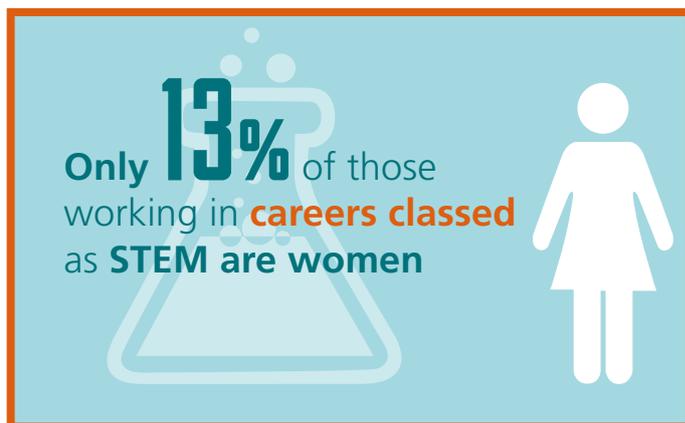
Amongst those working in the UK creative economy, women make up only 36% of employees, BME 11% of employees, and those from poorer backgrounds 8% of employees. This is despite the latter group representing 66% of those working in the UK economy as a whole.<sup>17</sup> At the same time only 13% of those working in careers classed as STEM are women.<sup>18</sup> Although the number of women on apprenticeships is consistently higher than men, they only represent 10% of those in IT, 40% of those on creative and digital and 3% of those on engineering apprenticeships.

STEAM has the power to enthuse and motivate young people, drawing in underrepresented groups to higher level STEM training. The *Aspires* report by King’s College London identified that although 70% of young people perceive science and scientists positively, becoming a scientist was the second least preferred career option amongst 10-14 year olds. In contrast, creative arts related careers rated the second most popular amongst the same group.<sup>19</sup> Including the creative arts in STEM provides an opportunity to make scientific and technical subjects more accessible, whilst breaking down the subject silos between the STEAM subjects and fostering greater creativity.

There is a need for positive role models in Camden to address some of the continuing inequalities in the destinations of young people. Locally, White British students eligible for Free School Meals and Somali young people are four times more likely to be NEET after Key Stage 4.<sup>20</sup> Apprenticeships also continue to be a more popular route for disadvantaged young people. Young people from the most deprived areas are four times as likely to start an apprenticeship after leaving year 13 as those from more affluent areas. This is also mirrored in higher proportions of young people with Special Educational Needs and those eligible for free school meals starting apprenticeships after Year 12 and Year 13 in Camden.

There are also some differences in the subject choices of key groups of young people. The creative arts remain considerably more popular amongst female and non-BME young people, whilst digital qualifications are more popular amongst young men and Maths and Science qualifications are more popular amongst BME students. It is in attainment where there are more significant differences though. Male, BME and students eligible for Free School Meals all have results in Maths, Science and Creative Arts that are consistently lower than their peers at KS4 and KS5.<sup>21</sup>

Learning through the creative arts can increase achievement in Maths and Science. It has also been demonstrated to improve performance of those from low-income families and lead to better employability outcomes.<sup>22</sup> Creativity should be used as a prism through which STEM learning takes place, formally in the classroom and through extra-curricular activities. It has the power to raise attainment and improve diversity by making technical subjects more accessible and enthusing education.



“Creativity should be used as a prism through which STEM learning takes place”

6. Business Register and Employment Survey (2015)
7. Camden analysis, ONS: Science and Technology category
8. Nesta, Creativity vs Robots, 2014
9. STEM vs STEAM: The Gender Gap, Two Bit Circus
10. This is for Everyone: Connecting young people and the tech city cluster, Centre for London, 2015
11. Careers and Enterprise Company, Cold Spots Data, 2016
12. Camden STEAM KS4 and KS5 analysis
13. Initial teacher training allocations: academic year 2017 to 2018, DfE, 2017
14. Going in the Right Direction?, Ofsted, 2013
15. Camden mini-careers audit, 2016
16. Camden mini-careers audit, 2016
17. Creative Industries 2016: Focus on Employment, DCMS
18. WISE UK Statistics 2014
19. Aspires 1, Kings College London
20. Camden Key Stage 4 and 5 Destinations Surveys, 2016
21. Camden STEAM KS4 and KS5 analysis
22. ImagineNation: the value of cultural learning, Cultural Learning Alliance, 2017



# FINDINGS AND RECOMMENDATIONS



**The current picture around education, skills and careers is complex and still evolving. The launch of this report will take place after an unexpected General Election, and the outcome of that will have to be factored into the development of the action plan and its implementation.**

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To ensure that the Commission fully understood the context in making its recommendations, its membership included a range of industry, education, youth and government representatives. The Commission opened with three events held across Camden, aimed at collecting the views of industry professionals, subject teachers and careers leads. This was followed by a borough wide call for evidence, workshops with young people and Commission sessions to evaluate the feedback compiled.

Themes the Commission considered included the changing nature of work, current and future skills demands and inequalities in careers opportunities. They repeatedly heard how the concept of “careers” was becoming obsolete and how jobs would increasingly rely on people having the right blend of skills to adapt to new roles. Problem solving, emotional intelligence and creativity were frequently mentioned as qualities equally sought after as the technical skills needed for particular occupations. It’s important that our young people gain industry exposure and are able to develop these broader flexible skills. However, the Commission also heard that access to industry experiences and extra-curricular activities were still most often enjoyed by those from more privileged and connected backgrounds.

In developing its recommendations, the Commission was guided by the principle of building on existing good practice and identifying achievable actions. Recommendations concentrate on actions to be taken forward by the Council, by businesses and by schools to enable Camden’s young people to develop a framework of transferable skills for the future world of work. These include problem solving, work related learning, digital skills, communication and creativity.

In the UK creative economy Women make up only **36%** of employees,



**BME** **11%** of employees, and those from poorer backgrounds **8%** of employees

Local policy does not exist in isolation however. The Commission also has a number of messages for regional and national policy makers to create the conditions for growth, and expand the benefits of the Commission. These are outlined in the executive summary at the start of this report.

**Included below are the Commission’s detailed recommendations. These incorporate the findings and evidence, and a range of suggested actions for businesses, schools, FE and the Council:**

### **Providing leadership on STEAM careers in schools**

- 1. That every Camden Governing Body for schools and the college should include a governor with relevant industry or professional experience, tasked with ensuring there is regular and consistent access to careers advice and guidance, in line with London Ambitions. This must include advocating the compelling case for combining creative, digital and science subjects**

A number of Camden schools already have governors with responsibility for careers oversight, and many make good use of local industry professionals. Camden schools benefit from a network of governors with a fantastic range of skills and occupations. Our governors include architects, designers, doctors and tech professionals, drawn from some of the borough's largest businesses. The Commission heard that it is those schools with existing connections, often through parents or governors, which are most successful in engaging businesses. These industry links are not equal across schools, which means some young people are not able to access the same opportunities as others.

London wide research has found that while employers are often present on governing bodies, they are not universally so. They are not always given a leadership role on the governing body that relates to their skills and experience, or their knowledge of the jobs market.<sup>23</sup> The Commission heard that whilst Camden schools often make use of governors' professional skills, their careers expertise is rarely drawn on. This is important if our young people are to be inspired about future job roles, and to develop the creative and scientific skills to succeed in them.

Camden currently encourages schools to complete an annual skills audit to help them understand and capitalise on the resources on their boards. However, Camden's Governor Skills Audit, and the training programme for governors, don't currently reference careers.

London Ambitions recommends that "every good institution will have a governor with oversight for ensuring the organisation supports all students to relate their learning to careers and the world of work from an early age."<sup>24</sup> Department for Education statutory guidance also sets out the responsibilities of the governing body in advising school leadership on careers education and guidance.

Schools should make use of the existing professional expertise of their governors to support careers. STEAM businesses should volunteer their staff to sit on governing bodies. Camden Learning should update its skills audit and training materials to help schools harness the benefits of governors' professional experience and networks to support careers education in STEAM. There are a range of valuable resources to draw on including Wellcome Trust's **Questions for Governors** - (currently being updated to include careers), and the **Gatsby Benchmarks**, which provide actions and resources on careers for school leaders. Governors will also be supported with resources for their careers briefs through the STEAM hub (recommendation 3) and the local network of Enterprise Advisors delivered by the Careers and Enterprise Company.

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## **Building the creative, digital and scientific capacity in Camden schools and FE**

### **2. This should be supported by a network of STEAM Ambassadors drawn from business and working with schools and FE. They will volunteer their knowledge and experiences to inspire young people to progress and achieve through creative, digital and science learning**

In providing its evidence to the Commission, MedCity highlighted the need to support schools and FE and ensure teachers are kept up to date with the latest developments in industry. With the innovative range of creative, digital and scientific organisations in Camden it should be possible to bring learning to life with the newest technologies and approaches. A network of STEAM ambassadors should be developed to provide teaching staff with confidence in the possibilities, and to link them to the wealth of resources in the local area.

There are a number of existing resources to draw on in developing this network. The **Careers and Enterprise Company** is currently working with half of Camden secondary schools, through its Enterprise Advisor network. Their aim is to place interaction with employers at the centre of a young person's education journey. They encourage the use of the Gatsby Benchmarks to build strong careers education and guidance strategies in schools, supporting schools and colleges to develop lasting relationships with business.<sup>25</sup> There is already a key focus in these benchmarks on STEM and highlighting the relevance of STEM learning to a wide range of future job roles. The organisation has developed a "Compass" tool for schools to self-assess their progress against the benchmarks, and to support them in developing a high quality careers offer. The Commission recommends that the focus on STEM now needs to be strengthened and extended to also incorporate creativity, and the Commission sees implementing this approach in Camden as a useful pilot for the Careers and Enterprise Company.

In addition, STEMNET also provides a national programme of ambassadors, STEM clubs and informal advice and support for schools. They have played a positive role in increasing enthusiasm for science, almost doubling the interest amongst young people for science courses through their programmes.

The Commission is aware that the Creative Industries are developing an early **Sector Deal** and are looking for those industries to develop a more joined up and equivalent level of support to STEMNET.

Camden should use these existing successful resources, and work with businesses to develop an ambassador programme for Camden schools and FE, enabling learning through creative, digital and science and linking in to the latest industry innovations.

**Government teacher training** allocations for Design and Technology teachers have **fallen by**

**11%**

**and declined by** for **Art and Design.**

**9%**

This is despite significant demand for these creative skills from UK industry.

## Creating accessible and inspiring role models

### 3. That Camden works with education institutions to develop a network of youth STEAM champions within schools, FE and alumni, providing inspiring role models and raising aspirations and ambitions

The Commission heard from a range of young people who reported that they most wanted to hear about careers from people who they could relate to. The experiences of those who were just starting out in their careers were also considered of more interest than those who were perhaps more successful, but less relatable to young people.<sup>26</sup>

This reflects the findings of WISE, whose campaign, "People Like Me", aims to change the way girls experience careers guidance and improve the gender balance in science, technology and engineering. The Commission also heard from Future First, set up by a group of former students from William Ellis school in Camden. The organisation supports schools to build alumni networks, and has found that meeting former students helped 84% of young people realise that "people like me" can be successful.<sup>27</sup>

Camden should build on its successful existing examples of youth advocacy, such as the **Youth Council** and the **Children in Care Council** to develop a network of champions through schools and FE. For these young people, support through the Camden STEAM hub would help to build awareness and enthusiasm for creative, digital and scientific pathways. The youth champions would act as peer mentors and role models for other young people in Camden. This would also develop a pool of Camden alumni that schools could call on to mentor young people and discuss their journeys.

## Encouraging creative, digital and science fusion within the curriculum

### 4. That Camden Council commissions a STEAM hub as part of Camden Learning to work with teachers and employers to facilitate a more connected curriculum around the creative, digital and science subjects, and support the network of STEAM Ambassadors, governors and youth champions

The Commission heard a wide range of evidence on the benefits of engaging young people in creative projects and embedding creativity within STEM teaching, in supporting young people's learning, confidence, and future employability.

There are also great examples of this already taking in place in Camden.

- Torriano Primary School: have been running a whole school STEAM Exhibition since 2014, exploring global issues of sustainability, inequality, social justice and conflict through the creative use of science and technology.
- UCL Academy: also use larger societal issues as the focus for a more connected curriculum. This has led to higher levels of participation and attainment, and the elimination of a gender divide on STEM subjects.

- Camden Spark: is the borough's cultural education partnership, linking schools and young people to the wealth of creative assets in Camden for curriculum enrichment

Despite these initiatives, the Commission was concerned to hear from many educators that whilst opportunities for project based and cross-curriculum learning were often possible in primary, the conditions were more difficult in most secondary schools.<sup>28</sup> The constraints of the national curriculum in maintained secondary schools and recent changes at Key Stages 4 and 5 levels have made the combining of creative subjects with STEM subjects and the creative teaching of STEM harder to deliver.

Subject choices are also limiting students' exposure to a broad curriculum. Although in Camden the creative arts remain a popular choice for young people at Key Stage 5, none of the top ten most popular combinations involve an arts subject being combined with Maths and Science. This is mirrored nationally, where STEM subjects are combined with the Arts at A-level by less than 5% of students for most STEM related or Art and Design university courses.<sup>29</sup>

Currently 28.8% of the A levels studied in Camden are STEM, placing the borough roughly in the middle of the table against other local authorities. Nationally, students' perceptions that they learn interesting things in science drops from 74% in Year 6 to 58% in Year 11, greater practical application and opportunities for cross-curriculum learning could improve this.<sup>30</sup>

There is a need for Camden to play a facilitating role, building commitment for combining creative, digital and science subjects with school and college leadership and enabling links between businesses and schools. This will be possible through the proposed network of STEAM governors, ambassadors and youth champions, supported by training and resources. Teachers should also be able to access resources that provide the opportunity for cross-

Currently

28.8%

of the A levels studied in Camden are STEM, placing the borough roughly in the middle of the table against other local authorities.



curricular work and that draw out the skills needed for future jobs. This should build on the existing structure of Camden Learning, which already provides support to all Camden schools and FE.

There are also opportunities to draw on Camden Spark's existing network of 21 Camden schools and 65 local partners to develop the hub's resources. All Camden schools and the college should be encouraged to join Camden Spark's network.

There are a number of Camden schools that have established STEM labs from resources secured through development. There is an opportunity for these to become centres, supported by a Camden artist in residence delivering cross-curricular education.

There is also a role for national government to provide leadership in ensuring creativity and interdisciplinary learning are encouraged in schools. Ofsted should not designate a school as being "outstanding" without evidence of an excellent cultural and creative education. A lack of these opportunities should be reported on and raised as a matter of concern.

## Improving careers opportunities for all

**5. That businesses contribute to a range of activities targeted at improving the equality of opportunities for career insight, work experience and apprenticeships. These could include the Camden Summer University, primary careers conferences, and a borough wide STEAM week where businesses open their doors**

Employers recognise the importance of working with young people to build their future talent base and tackling diversity issues in industry. However, some companies reported that they had tended to engage most with those schools with existing resources and

where it was easiest to do so. There was a concern that schools with greater need were missing out.<sup>31</sup>

Across the country girls, BME, working-class and lower-attaining students, and those who are unsure of their aspirations or who plan to leave education post-16 are all significantly less likely to report receiving careers education.<sup>32</sup>

Tackling this issue requires schools and businesses to build closer relationships, and support under-represented groups. There are a wide range of organisations aiming to broker links, but this in itself presents a challenge for teachers and business leaders in navigating the complexity of options available. Both schools and businesses highlighted the need for a single point of contact for activities and events and to make connections between businesses and education providers.

Camden recruited a **Schools Brokerage Manager** in 2016, who is already helping to make these links. Through the STEAM hub (recommendation 4), the council should play a stronger role in signposting and facilitating relationships.

23. STEM vs STEAM: The Gender Gap, Two Bit Circus

24. London Ambitions: Shaping a successful careers offer for all young Londoners, 2015

25. What Works in Careers and Enterprise, The Careers and Enterprise Company, 2016

26. STEAM Commission focus groups (Youth Foundation and Takeover Day)

27. Annual Review 2015-16, Future First

28. Evidence from Arts & Technology STEAM Commission workshop

29. Uptake of GCE AS level subjects 2007-2013, Cambridge Assessment, 2014

30. Tough Choices, AT Kierney, 2016

Technology also offers a means of leveling the playing field and improving the equality of opportunity for young people. Camden based Founders 4 Schools have a successful online platform linking schools with creative, digital and science business leaders interested in volunteering their time for career insights. They have recently launched a new app for young people, enabling them to arrange work experience placements directly with employers. With the first national pilot taking place in Camden, all secondary schools and FE should sign up to take part, and Camden businesses should register to offer places.

In Camden there are a number of successful programmes offering all young people access to employers and the opportunity to broaden their skills. The **Primary Careers Conferences**, run in partnership with the Knowledge Quarter, have helped inspire children from an early age in the possibilities of future jobs. The **Camden Summer University** offers free courses every year across the summer holidays. The courses range from coding to fashion design, training in practical skills and providing tasters of different occupations. A number of Camden schools already participate in events for young people as part of STEM week, the Big Bang Fair and the Digital Careers Show, increasing exposure to the evolving roles available.

With the range of creative, digital and science specialisms amongst Camden employers, businesses should be engaging with these activities to benefit from Camden's diverse population and develop future STEAM talent. The borough should focus these successful initiatives into developing a unique programme of careers education, following young people through primary, secondary and post-16 and available to all. This should include a borough wide STEAM week with employers opening their doors to

businesses, drawing on the resources of the Careers and Enterprise Company. Businesses interested in participating in any of these activities should contact: [steampledge@camden.gov.uk](mailto:steampledge@camden.gov.uk)

## Challenging businesses to build opportunities for young people

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### 6. That Camden businesses collaborate with the Young Camden Foundation to facilitate one or more 'Camden Challenge' events to collaboratively engage all young people in the creative and employability skills needed for the jobs of the future and to target underrepresented groups

The STEAM Commission heard evidence from a wide range of Camden employers on the importance of young people developing the right skills for future jobs. Whilst technical skills were highly valued, businesses are often willing to provide on the job training in these. It is creativity, imagination and problem solving that are of greater significance to many employers. Atkins' response to the Commission was typical of many:

“ Specific knowledge can be taught, but employers need innate flexibility ”

Research by the CBI supports this. When recruiting graduates, nearly nine in ten employers considered attitude and work aptitude as more important than degree subject.<sup>33</sup> This is also reflected in analysis carried out by the GLA and Burning Glass on online vacancy postings in London. Amongst the top ten skills most sought after by employers, creativity makes up 8% of requirements, collaboration 11% and communication skills 35%.<sup>34</sup> The demand for creative skills is also higher in London than the UK as a whole.<sup>35</sup>

However, schools face challenges in developing this fusion of skills and creativity through the curriculum. The relegation of creative arts subjects from the English Baccalaureate or as “facilitating subjects” by some universities can discourage students from choosing a broad mix of creative, digital and scientific subjects.

Companies in the creative, digital and sciences space thrive by identifying new talent and ideas, and Camden can capitalise on this. Businesses can develop challenges as creative learning opportunities for young people. These could focus on a specific problem or field, drawing in maths, computer skills, the creative arts and engineering. Techmix currently run hackathons with disadvantaged young people across London, solving business problems and providing exposure to the opportunities available through digital.

The Young Camden Foundation, should lead on this work, developing learning opportunities inside and outside the curriculum. This should involve challenging businesses to develop activities or solve problems, and working with businesses to create challenges for young people.

## Improving Camden’s technical education offer

**7. That the quality and visibility of the borough’s STEAM apprenticeships and technical education offer is improved to raise aspirations and support diversity. Opportunities include a review of the borough’s post-16 education, and the potential to establish a local Institute of Technology focused on combining traditional STEM areas with creative subjects**

Camden schools prepare young people well for university routes, with 68% of those leaving Year 13 going on to higher education (79% when including those taking gap years). Only 3% of Camden young people go on to apprenticeships and fewer students from Camden schools go on to Further Education than other London boroughs.<sup>36</sup>



In Camden, employers report that young people are failing to develop work relevant skills. 40% of local employers report that 17 and 18 years starting their first jobs with them are poorly prepared for work.<sup>37</sup>

We need a post-16 education system in Camden that offers clear, quality options to young people, whatever their intended route. The Commission heard from a range of young people that the options around technical education pathways were often unclear. They expressed confusion at the different qualifications available, and how these would prepare them for further education or work.<sup>38</sup> All young people on technical and apprenticeship pathways should be provided with advice on how to access university, and transitions between technical and academic pathways should be made easier.

Young people's perceptions were mirrored by the national **Sainsbury review**, which found the current system of technical education overly complex, and learners unaware of the value of technical education qualifications until too late. It also criticised the size of the post-secondary technical education system as extremely small.<sup>39</sup> There is increasing demand from young people for quality higher apprenticeship routes. Although 50% of young people nationally want to do a higher level apprenticeship, lack of availability currently means only 2% of apprenticeship starts are in higher apprenticeships.<sup>40</sup>

As part of its **post-16 review**, Camden should consider how a coordinated range of technical education routes in creative, digital and science can be offered across schools and FE. The review is focusing on how to better coordinate the resources of school 6th forms. In Camden these are currently very small, and there is an opportunity to consolidate into a stronger offer that includes technical education. There are already successful examples of this taking place, with the joining of four Camden school 6th forms into LA SWAP.

LA SWAP has recently developed a new post-16 pathway, Camden Creatives. This programme has partnered with local businesses to develop opportunities for industry exposure and practical projects that open up jobs and study in the creative arts to young people. Opportunities to develop workplace (or "softer") skills through Extended Project Qualifications should be encouraged for all students.

Also included in the review should be the national proposals for new high quality skills centres: Institutes of Technology. Camden should support the application of Capital City College Group to become an Institute of Technology, building on its existing specialisms in creative, digital and scientific industries.

Businesses should also play their part in improving the technical education offer for young people. Despite 21% of all businesses in England being located in London, London businesses make up only 9% of the workplaces employing apprentices. With the introduction of the Apprenticeship Levy, there are greater opportunities for employers to increase the volume and range of their apprentice recruitment. Recruiting apprentices according to skills-based criteria and personalised support offers opportunities to increase diversity. Employers have a role to play in raising awareness of the opportunities available through technical routes and apprenticeships, volunteering to speak at school careers events for parents and teaching staff. Businesses should also work with the GLA to develop apprenticeship standards for the skills and occupations they need.

In responding to the skills needs of industry, Camden Council and the Knowledge Quarter are developing a higher apprenticeship programme across science, technology and the creative industries. Knowledge Quarter members, including universities, should take advantage of the opportunity to build their own talent through this programme. Camden Apprenticeships can support businesses looking to recruit apprentices at all levels in their organisations.

## Improving access to the right information

**8. That the Council work with schools and colleges to provide young people, parents, teachers, governors and Ambassadors with actionable intelligence on 21st century jobs through the STEAM hub, inspiring them on the opportunities available to all in creative, digital and scientific occupations**

There is currently a mismatch between the supply of opportunities, and the job roles that young people want to pursue.<sup>41</sup> The Commission heard that labour market information (LMI) is often time consuming and difficult for teaching staff to access.<sup>42</sup> There is a need for up to date and clearly presented demand and skills data to support young people in making decisions about their careers and pathways.

This is a particular issue for the Creative Industries where the large number of small companies, high levels of freelancing and distinct sub sectors means there has been no consistent regularly updated LMI produced across the piece. As part of the work of the Creative Industries, Life Sciences and Industrial Digitalisation on their Sector Deals, the Commission is calling for this gap to be addressed in order to enable it to progress with this recommendation.

The London Economic Action Partnership (LEAP) has previously recommended that the GLA develop demand data tools to provide information on labour market skills and occupation needs.<sup>43</sup> Some work has already taken place, with tools like Skills Match London providing supply and demand data for various employment sectors.<sup>44</sup> GLA and Burning Glass are also using online vacancy postings to identify live skills trends across the region.<sup>45</sup> Camden careers advisors should work with the GLA and London Councils to develop a tool that provides the clear labour market information teachers, parents and young people need to make decisions about education and employment routes.

Although **50%** of young people nationally want to do a higher level apprenticeship, lack of availability currently means

only **2%** of apprenticeship starts are in higher apprenticeships.



One US approach to delivering this intelligence to educators, parents and policy makers is the Raytheon STEM Index.<sup>46</sup> The index collates data on education and employment to provide an interactive measure of science, technology, engineering and mathematics activity across the country. Camden should explore using existing national and local data to develop a similar “STEAM Index” for the borough, and provide young people and parents with the information they need to make informed choices.

30. Tough Choices, AT Kierney, 2016

31. STEAM Commission evidence (Atkins)

32. ASPIRES 2: Project Spotlight, 2016

33. CBI, Education and Skills Survey

34. Burning Glass Job Postings London data

35. Nesta Burning Glass UK data

36. Camden Key Stage 4 and 5 Destinations Surveys, 2016

37. Careers and Enterprise Company, Cold Spots Data, 2016

38. Capital City College Group focus group, January 2017 (held with 20 BTEC level 3 Science students)

39. Report of the Independent Panel on Technical Education, 2016

40. All About School Leavers, 2016

41. Careers guidance and inspiration in schools, DfE, 2015

42. Camden mini-careers audit, 2016

43. London Skills Data Review, 2015

44. Skills Match London, London Councils

45. London Job Postings Data, LondonDatastore

46. Raytheon STEM Index

# NEXT STEPS



**The Commission includes some of Camden's most successful businesses, working together with schools, colleges and other partners to develop an ambitious vision for our young people. A wide range of other organisations have also provided evidence to the Commission and helped to shape its recommendations. These positive partnerships offer a strong base to take forward the next stage of the Commission's work. Camden Council is committed to building on these existing partnerships and developing further opportunities to bring together businesses, schools and colleges, to improve the careers offer for young people.**

A reference group of Commissioners will remain in place for the first year of delivery to maintain oversight of the recommendations. Working with this reference group, the Council will develop a delivery plan to put the Commission's recommendations into action. The delivery plan will confirm roles, responsibilities, measurable indicators of success, resources and timescales. The Commission aims to achieve its immediate ambitions within two years and track impact against success indicators over a five year period.

# ACKNOWLEDGEMENTS

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**Future First**

**Founders4Schools**

**Torriano Primary School**

**Med City**

**WAC Arts College**

**Netley Primary School**

**Camden Centre for Learning**

**Castlehaven Community Association**

**Regent's High School**

**Roundhouse**

**William Ellis School**

**the Knowledge Quarter**

**New Scientist**

**Rungway**

**Connexions**

**Camden Spark**

**Camden Into Enterprise**

**Virgin Media**

**Hampstead School**

**Eleanor Palmer School**

**Wellcome Trust**

**Holts Academy**

**Inspire**

**Bio-Nano Consulting**

**Arcadia Group**

**Argent LLP**

**Arts Catalyst**

**Viacom**

**Rocksteady**

**Cockpit Arts**

**Brecknock School**

**Parliament Hill School**

**HOK**

**Camden Collective**

