

The See Project Visit to the UK- Background Reading

Visit to the Black Country and some STEM Education Partners.

According to Wikipedia:

“The **Black Country** is an area of the West Midlands in England, north and west of Birmingham, including Dudley, Walsall, Sandwell and Wolverhampton.

In the Industrial Revolution, it became one of the most industrialised parts of Britain with coal mines, coking, iron foundries and steel mills; producing a high level of air pollution.

The 14-mile road between Wolverhampton and Birmingham was described as "one continuous town" in 1785. The first trace of The Black Country as an expression dates from the 1840s and it is believed that name comes from the black soot from heavy industries that covered the area, although the 30-foot-thick coal seam close to the surface is another possible reason”.

1) University of Wolverhampton

The University website says-

“The University of Wolverhampton has a long history of providing students with the opportunities presented by a first class education.

As a major player in the UK higher education sector, we continue to excel in the areas that have contributed to our excellent reputation: award-winning teaching, state-of-the-art facilities, international partnerships, strong business links and innovative research.

Our attractive offering to students includes:

- 300+ available courses
- 95% graduate employability*
- partnerships with over 1000 businesses
- 14 Research Centres with elements rated as world-leading**
- £45m campus investment over two years
- Outstanding facilities, including the multi-million Rosalind Franklin Science Building and Business School.

Today's modern University can be traced back to Wolverhampton's Mechanics' Institute and College of Art in the mid-1800s. These institutions, together with teacher training and health colleges that were later incorporated, developed our rich heritage and tradition of academic excellence in vocational higher education.

We continue to be guided by our coat of arms' motto 'Innovation and Opportunity' by widening participation in education and offering an outstanding portfolio of courses that challenge students to realise their potential. The quality of our teaching and learning was praised recently when we received a commendation, the highest possible accolade, following the Quality Assurance Agency (QAA) 2015 review.

We have a clear vision for our graduates and offer everything you need to **succeed** in a global economy. We aim to go beyond opening your mind and broadening your horizons - ensuring that as a graduate you'll be **digitally literate, knowledgeable** and **enterprising**, and have a **global outlook** on life. So study with us and join a community where:

Year on year our **student satisfaction** rate is increasing, currently

- 89% of our students say they can access IT facilities whenever they need to
- 84% are satisfied with the learning resources available
- 83% of our students are satisfied with the quality of their course.

The **real-world relevance** of what you study is confirmed by the fact that over **9 out of 10 of our graduates** go on to a job or further study. And our **students are award winners**, winning awards like BAFTA and Business Leaders of Tomorrow.

Our investment in **technology**, exceptional **resources** and the **expertise** of our staff will allow you to meet the challenges of a changing world and make your mark”.

We will visit the Rosalind Franklin Science Building and our training will be there.

The University says-

The Rosalind Franklin Science Building

The Rosalind Franklin Building is an exciting addition to the City Campus of the University of Wolverhampton. It serves students, staff and the wider community of the West Midlands in furthering the advancement of science.

The building provides a state of the art environment where students are taught the key practical skills associated with their studies in three large 90-seater teaching laboratories. Students work alongside research staff on projects which contribute toward new scientific discoveries in their field. The facilities also provide an opportunity for the wider community to engage in science, offering schools, colleges and local employers the chance to explore science and develop practical skills.

In addition the building houses a high-tech lecture- capture camera system which enables the activities from within the laboratory to be streamed in real time. This means that teaching can be delivered to wider audiences, bringing the community into science and streaming science into the community.

Teaching and Research Facilities

The facilities where you will study and work in the Rosalind Franklin building have been developed to meet the highest standards of modern teaching and research. We have designed well thought out spaces for the study of Chemistry, Molecular Biology, Forensics, Pharmacy, Biomedical Science, Microbiology, Polymer Research and Biotechnology.

Spanning 6 floors, spread over 6000sqm, the facilities have been created to cater for the student experience at all levels of study. Packed with the newest technology the Rosalind Franklin Building provides a fantastic platform where people can grow their talents.



Technology

In every teaching laboratory each student has access to a tablet computer which enables them to make notes, capture images and research aspects of their work in lectures, enabling them to capture the most detailed information about their experiments.

A state of the art lecture capture recording system makes it possible to stream experiments live from the outreach and project laboratories to schools and partner organisations located anywhere in the world. Video demonstrations of experiments are pre-recorded for students to prepare in advance of lectures and view in their own time as part of their studies.

Equipment

The Rosalind Franklin Building is equipped with a wide range of scientific equipment to facilitate teaching and research. Equipment for chemical analysis including Gas Chromatography, ICP

(Inductively Coupled Plasma) analysis, XRF (X-Ray Florence), XRD (X-Ray Diffraction) is available for students to make use of.

The building also houses Genetic analysis equipment for the study of Forensic Science. Pill testing and manufacture equipment for Pharmaceutical studies. A £200,000 Confocal Microscope has also been purchased that enables the viewer to see the structure of living cells in 3 dimensions.

In Addition there is a tissue culture facility, a fermentation suite for the production of biological inoculum and a state of the art green house facility on the roof of the building for the study of Plant Biology.



2) RAF Cosford

Contacts – Philip Clayton and Lily Dean

RAF Cosford

The Royal Air Force Museum Cosford is located in Shropshire and offers a fun, entertaining day out for all the entire family. Situated next to an active airfield, this is the only place in the Midlands where you can get close to so many breath-taking aircraft for free.

Over 70 aircraft of international importance are housed in three Wartime Hangars and within the National. See the world's oldest Spitfire and a Lincoln Bomber, just two of the highlights in the [War in the Air](#) Collection. In [Test Flight](#), there is the TSR2 and Bristol Type 188 constructed from stainless

steel. The Transport Collection in [Hangar 1](#) includes the Comet 1A and Gnat T1, previously used by the Red Arrows. The engine and missile collections total over 60 and are arguably one of the finest collections in the world.

In 2007 the £12.5 million National Cold War Exhibition was opened at Cosford by Her Royal Highness Princess Anne. This land mark building truly has the 'wow' factor with its eye catching architecture and design. A number of the 19 aircraft are suspended in flying attitudes. Iconic cars, models, audio visual hotspots and life-size Russian (Matryoshka) dolls, tell the story of the Cold War in an innovative way. This is the only place in the UK where you can see Britain's three V Bombers: the Vulcan, Victor and Valiant.

Our activities



The dedicated Access and Learning team offer a choice of activities and [resources](#) which support educational studies. Workshops available are subject specific or can be cross-curricular.

In addition to onsite visits, the Access & Learning team provide outreach activity programmes to schools, local care homes and hospitals. More information on these services is available directly by contacting learning-cosford@rafmuseum.org.

School visits to the museum are very popular and all workshops require pre-booking. Please give as much notice as possible to ensure availability.

We look forward to welcoming you to the museum.

3) Jaguar Landrover Education Centre

New £650,000 JLR education centre opens June 2015

Jaguar Land Rover, the UK's largest automotive employer, today opened a brand new £650,000 Education Business Partnership Centre at its Engine Manufacturing Centre near Wolverhampton in

partnership with Staffordshire County Council, South Staffordshire Council, Wolverhampton City Council and Wolverhampton College.



Opening of the brand new £650,000 Education Business Partnership Centre



Pupils from Wednesfield High School

The new Education Centre will deliver school visits, work placements and bespoke education programmes for thousands of young people across the region each year.

Dr. Ralf Speth, CEO, Jaguar Land Rover, commented: "Jaguar Land Rover is a business driven by design, technology and innovation. It is critical that we attract talented young people to become the next generation of engineers to support our growing business.

"The Engine Manufacturing Centre will employ 1,400 people and will offer excellent employment opportunities to young people through our award winning traineeship, apprenticeship and graduate programmes. I'm delighted to open the Education Business Partnership Centre, which will play a key role in nurturing future talent and inspiring more young people to pursue engineering careers."

The new Education Business Partnership Centre uses a range of cutting edge technologies such as a holographic table which projects images of Jaguar Land Rover's Ingenium engines to show how they are manufactured. iPad stations using bespoke modules will be on hand for students to complete when they return from facility tours and young people will also be able to learn how to control and manipulate miniature robots, similar to those used in the facility.

Peter Bilson, Deputy Leader and Cabinet Member for City Assets, Wolverhampton City Council, speaking on behalf of Jaguar Land Rover Education Business Partnership Centre partners Staffordshire County Council, South Staffordshire Council Wolverhampton City Council and Wolverhampton College commented: "We are delighted to work in partnership with Jaguar Land Rover to support its school education programme. We are committed to providing the best possible educational opportunities for local young people across Staffordshire and the West Midlands and the Education Business Partnership Centre will be hugely valuable reinforcing the importance of

STEM subjects to modern industry, highlighting career opportunities and helping young people strengthen their employability skills as they prepare for the world of work."

Jaguar Land Rover's 'Inspiring Tomorrow's Engineers' programme promotes learning and engagement in STEM (science, technology, engineering and maths) subjects in collaboration with schools and colleges to inspire young people to consider careers in engineering and manufacturing. Key elements of the programme include dedicated Education Centres in the local areas close to Jaguar Land Rover facilities and imaginative 'Challenge' projects for groups of school pupils.

Race Awareness Training



Rajinder Kaur Mann OBE Chief Executive

Network for Black and Asian Professionals

The Network for Black and Asian Professionals (NBAP) is a social justice, not-for-profit organisation committed to supporting Black, Asian and Minority Ethnic (BAME) professionals to achieve their full career and civic potential.

NBAP Vision Statement:

“Leading the change to a highly skilled workforce for the 21st Century that reflects and celebrates ethnic, cultural and social diversity.”

At all times, the work of the NBAP will be characterised by a commitment to the values of:

- Integrity
- Social Justice
- Diversity
- Dynamism
- Dedication
- Excellence
- Equal Opportunities

The Network for Black & Asian Professionals is a social justice organisation which values its diverse workforce and welcomes individuals from all sections of the community. We embrace diversity and strive to provide equality for all.

We work in partnership with progressive employers, government and community organisations to make this a reality. Our strategies are practical and evidence-based and we work through:

NETWORKING

- Career and professional development
- Capacity building
- Positive Action initiatives
- Lobbying
- Advocacy and mediation
- Advice and guidance
- International partnerships
- Research & policy development
-

MAKING THE DIFFERENCE

We are a black led organisation with over 10 years expertise in delivering services to support BAME professionals and diverse communities.

As a professional and progressive membership organisation we are committed to:

- Empowering our members
- Providing practical and effective solutions to address equality and diversity issues in the work place
- Engaging organisations in the progression of projects designed to support BAME individuals and communities
- Raising aspirations of individuals from Diaspora communities

WE HAVE SUPPORTED

- the development of young people from Diaspora communities
- talented and ambitious black professionals into Senior Management roles
- organisations in implementing proactive approaches to ensure a balanced workforce reflecting the diversity of the UK
- BAME communities ensuring effective representation and civic engagement

Education and Business Delivery Techniques

Lorenzo Cosco

Education Business Deliverer



I have taken the leap and started my own business. After many years of promoting entrepreneurship in schools, I have now become one.

My company runs a range of Skills Development programmes in primary and secondary schools across the Black Country, Shropshire and Staffordshire.

You can find examples on my website – www.ebsltd.uk.com

Business supporters are always welcome to attend any events. You can promote your business/services or just come along and help develop skills in our young people.

Please get in touch. It would be great to hear from you

Sally Stone



Working with schools and businesses enables me to support young people's progression from education to further or higher education, employment and/or training and to realise the vast amount of opportunities that are available to them. Developing and maintaining relationships with as many companies and organisations as possible means I can support the delivery of Career and Work Related Learning Education by providing real examples of employees from a variety of job roles.

I work with Secondary and Primary Schools including Pupil Referral Units and Special Schools to support their Career Education and Work Related Learning. This involves delivering Career workshops, Raising Aspiration events and Enterprise Challenges to young people in order to develop their employability skills and awareness of the variety of career opportunities and progression routes available to them.

Organising employer engagement is vital in order to demonstrate to young people the variety of job roles there are and the different career paths people take.

School Visits

1) Wood Green Academy

"I am absolutely delighted to be the Head teacher of Wood Green Academy. Having worked at Wood Green since 1997 I take great pride in the success of the Academy and have seen it go from strength to strength.

We are thrilled to announce our impressive GCSE Level results in spite of all the recent changes in the examination system. 64% of students achieved 5 or more GCSEs at A* to C grades and 51% of students achieved 5 or more GCSEs at A* to C grades including English and Maths. In addition sixteen of our departments achieved over 70% A*-C at GCSE level. These results reflect the hard work and dedication that goes on at Wood Green by all involved, parents, carers, teachers, support staff, governors and friends.

Our A Level results are also equally as impressive. Students achieved a 99% pass rate with 78% of all entries at A*, A, B or C grades. 47% of all entries were A*, A or B grades. Twenty-four departments achieved 100% success rate at A Level. These are excellent results and reflect the commitment to high achievement at Wood Green.

I would like to congratulate everyone who has been involved in helping these young people achieve their success. Parents, carers, teachers, support staff and friends have all helped in producing such excellent results.

However Wood Green is not only about gaining excellent examination results it is a place where we germinate a thirst for knowledge, where we extend opportunities to students across a wide range of sporting and non-sporting activities and where we develop students with the skills to succeed in the next stage of their life”.

Mr James Topham
Head teacher

About Wood Green Academy Teaching School

Wood Green Academy has an unparalleled history of successful school to school support.

Wood Green Academy has been a designated Teaching School since September 2011 and is now responsible for the brokering of National Leaders of Education, (NLEs) Local Leaders of Education (LLEs) and Specialist Leaders of Education (SLEs) on behalf of WGATSA both across our alliance and beyond to further support the raising of standards in education. Deployments have been provided to several schools across the region with outstanding successes.

Wood Green Academy is tremendously proud of its team of Lead Practitioners (LPs) and now nineteen Specialist Leaders of Education (SLEs) from a range of schools, subjects and phases; the Wood Green Academy Alliance (WGATSA) has an exceptional pool of skilled staff to support the raising of standards in schools across the region.

Partner Schools

ACE Academy
Bristnall Hall Academy
Deansfield Community School
Grace Academy Darlaston
Handsworth Wood Girls' Academy

John Masfield High School & Sixth Form Centre
Perryfields High School Specialist Maths and Computing College
Phoenix Collegiate
Pool Hayes Arts and Community School
RSA Academy
Shireland Collegiate Academy
SWB Academy
St Michaels C of E High
Stuart Bathurst Catholic High
The Burton Borough School
The Royal School, Wolverhampton
Wodensborough Ormiston Academy

Strategic Partner schools

Birmingham City University
Birmingham University
Codsall Community High
Moat Farm Junior School
Sutherland Co-operative Academy
The Burton Borough School
Lakeside Academy
Wednesbury Learning Community Trust
Windsor High & Sixth Form

2) Queen Mary Grammar School Walsall

Queen Mary's Grammar School is a selective boys' school, which takes an increasing number of girls into the sixth form. It has been designated a specialist languages college since 2002 and more recently acquired the status of a business and enterprise college. The school holds an International Schools award from the Department for Children, Schools and Families and has a Healthy Schools award. The percentage of students entitled to free school meals is very low compared to the national average, as is the proportion of students with learning difficulties and/or disabilities. Over half of the students are from minority ethnic groups. Whilst many pupils can speak languages other than English, none are at the earliest stages of learning English.

The overall effectiveness of the school is outstanding. In the short time since his appointment, the headteacher's drive and vision are having a significant impact on the life of the school. Standards, which are already very high, are continuing to rise as more students achieve the very highest grades. Although most students arrive at the school already having achieved very high levels of attainment

by the end of Key Stage 2, they go on to make outstanding progress throughout their time in school so that by the time they leave, standards are exceptionally high. Much of the reason for this high achievement is students' very high motivation for self-study and wanting to do well, as seen in their outstanding level of personal development. The school encourages and develops this by ensuring they have many opportunities for taking responsibility for their own learning. The outstanding range of extra-curricular opportunities enhances this and students are well served by the challenging courses, which motivate them to succeed. The majority of teaching is at good but the combination of students' attitudes and the wide range of curriculum experiences and support they receive ensures that their learning is excellent.

3) RSA Academy

Welcome from the Principal

"I would like to wish you a very warm welcome to the RSA Academy. Our mission is to develop well-rounded individuals who are successful in all aspects of their lives; citizens who can make a difference on a local and global scale and young people who have high aspirations for themselves and their community. Our students will be equipped with the knowledge, skills and competences to allow them to thrive in an ever-changing world. As a parent myself I want students to be challenged by new and exciting learning experiences and to have opportunities to develop all their talents. I believe that the Academy provides an exciting learning environment that your children will enjoy! Our range of partnerships with leading businesses, universities, the RSA Family of Academies and the RSA Fellows means that all our students have access to opportunities which are not available anywhere else. This helps to ensure that we raise the aspirations of all our students. Our Opening Minds curriculum challenges and prepares students to better understand and to learn. Students have access to the latest hi-tech environments to develop their competences and skills, preparing them for an ever-changing world. Our expectations are very high – attendance, behaviour, uniform and attitudes to learning should all be excellent. We will demand the very best from your child and they will need to be prepared to fully embrace our ethos and be a true ambassador for the RSA Academy. In return we offer the highest quality teaching and learning experiences from committed and highly skilled staff. The Academy provides a safe, secure and highly enjoyable environment for learning – as noted by Ofsted in their inspection in January 2014 – your child will be cared for, their self-confidence nurtured and mutual respect developed. Our impressive Academy building is designed to ensure that students are motivated and enthused in their learning and, as a result, should make the most of the opportunities provided for them. Disrupting other students from learning or bullying in any form is not acceptable and will not be tolerated. I believe that the partnership created between parents, students and our staff is the key to successful, enjoyable and highly valued education".

Useful Web links

<http://www.stemnet.org.uk/>

<http://rsaacademy.org/home/prospectus/>

<http://www.woodgreenacademy.co.uk/>

<http://www.qmgs.walsall.sch.uk/>

<http://www.wlv.ac.uk/>

<http://www.rafmuseum.org.uk/cosford/>

<http://www.jaguarlandrover.com/gl/en/responsible-business/social-responsibility/advancing-knowledge/education-business-partnership-centres/>

<http://www.bcstem.org/>

<http://www.bclm.co.uk/>

www.ebsltd.uk.com

<http://www.nbp.org.uk/>

<http://sipseducation.co.uk/>