



WIMBLEDON HIGH SCHOOL

ESTD 1880

EX HUMILIBUS EXCELSA

Director of Science, Technology and Engineering

Director of Science, Technology and Engineering – Recruitment Brief

Start date: September 2018 or earlier

Science at WHS

Physics, Chemistry and Biology have long been popular subjects at A Level and typically around a quarter of the year (24% in 2017) choose to study STEM at university. (In 2017, Biochemistry 7%, Biology 3%, Chemistry 2%, Maths 2%, Vet science 2%, Natural Sciences 3%, Medicine 3%, Engineering 2%.) We've seen girls with a combination of physics, maths and DT enter engineering courses – latterly on an unconditional offer. We run the Engineering Education Scheme for physicists in the Sixth Form, in partnership with industry specialists and lower down the school, some of our Year 7 girls have had considerable success designing asthma packs for the NHS over recent months, with their ideas worked up into prototypes and looking likely to be seen in NHS clinics in the near future.

Astrophysicist and Royal Astronomical Society member Dr Sheila Kanani is an alumna - she came back to school this term to talk to students about the Cassini-Huygens mission - as is

Professor Lynne Reid. Alumna Professor Valerie Howell left WHS in 1949 and went on to specialise in Space Science at the Science and Engineering Research Council; she recently left a generous legacy to the school, which enabled us to complete our STEAM room over the past summer holiday. The STEAM room was launched last month to some 200 guests from the school and beyond. There was a buzz and excitement that, as Director of STEAM, you will be able to foster and make your own, drawing on the considerable experience of the impressive team of creative and enthusiastic teachers, scientists in residence and support staff around you. Just a few weeks ago, we welcomed a team from Microsoft Schools (we are a partner school) to run a [Hacking STEM event at WHS](#), with students using the BBC microbit to complete various challenges.

Cross-curricular links are ever more important to prepare students for a challenging job market where innovation, thinking creatively and expansively will be key. A cross discipline approach will for example bring physics, maths, ICT and DT together in robotics (taking in biology and ergonomics in the design of artificial limbs / prosthetics). The opportunities for inspiring our students from a young age to pursue a career in science are limitless and promise to be extremely rewarding in this pivotal role.



Our curriculum and beyond

In terms of our curriculum, at Key Stage 3 we follow a bespoke combined science course, designed to engender an enthusiasm for the physical, chemical and living world. Lessons are heavily practical, with an emphasis on developing the skills required to be an outstanding scientist. The unifying themes of energy, building blocks and investigation are covered along with an introduction to the three main disciplines of Biology, Chemistry and Physics. In Year 9 we commence the Edexcel IGCSE course in all three sciences. The majority of students opt to take all three; some combine two traditional sciences with Computer Science.

In addition to the many co-curricular clubs on offer for girls of varying ages, plus curriculum trips and visits, enriching trips for Sixth Formers to NASA and the CERN collider (run by the GDST) alternate annually and there's a biennial expedition for biologists – to Costa Rica in 2016 and heading to Sri Lanka in summer 2018. We welcome experts in their field to give lectures to students, staff and parents.

Job Purpose

You will have overall responsibility for the professional leadership and management of Science, Engineering and Technology, ensuring that high standards of leadership and management are realised by the Heads of Department and Subject Leaders, high standards of teaching and learning are delivered, resources are used efficiently and effectively, the curriculum is managed and developed in accordance with school policy across the

faculty and girls are inspired and excited by the possibilities of Science, Engineering and Technology both in and beyond the school.

Accountability and responsibility

You will be accountable to the Head via the Deputy Head (Academic).

You will be responsible for the Head of Chemistry, Head of Biology, Head of Physics, Head of Design & Technology, Head of Computer Science and our Scientists in Residence.



Main accountabilities of the post:

Policy/Strategic direction and development

- Contribute to whole school policy-making and strategic planning as required by the Head.
- Prepare, monitor and update annual faculty plans in consultation with colleagues.
- Ensure that the school policies and strategies are embedded in the departmental schemes of work and operational plans.
- Develop a strategy for the promotion of Science, Technology and Engineering across and beyond the school.
- Contribute actively to the national discourse around the position and number of women in STEM roles and develop key strategies here to promote lifelong interest, confidence and engagement in these fields.

Leadership & management of others

- Lead and manage the faculty, recruiting, inducting, developing, deploying, motivating and appraising members of the faculty in conjunction with Heads of Departments to ensure that they have clear expectations of their roles, and that high performance standards are achieved and maintained.
- Empower members of the faculty to develop their leadership potential to ensure continuous improvement within the faculty.

- Monitor Heads of Department and Subject Leaders leadership and management practice in the faculty and advise strategies for further development.
- Chair faculty meetings to ensure that they are used effectively to review performance and that actions are recorded and implemented.
- Coordinate and lead the Scientists in Residence.

Teaching and learning

- Promote excellence in teaching and learning to ensure all pupils develop their potential and are equipped for life beyond school.
- Exemplify in own practice the skills of teaching and learning typified by lead professionals, and ensure that good practice is shared throughout the faculty.
- Ensure that in departments, schemes of work are used, reviewed and modified to enable the maintenance and development of high standards of teaching and learning.
- Ensure that the Heads of Department are monitoring pupils' work and the classroom practice of those in their department to ensure high standards are maintained.
- Keep up to date with developments in the faculty subject areas and education in general to ensure that best practice is adopted within the faculty.

- Ensure that each department's delivery and development of the curriculum is effective in meeting the needs of all pupils.
- Contribute to the broader life of the school by supporting and leading curricular and extra-curricular events such as school productions and activity days.
- Embrace opportunities and partnerships with schools, businesses, universities and other external bodies which will allow the girls to develop their awareness, experience and understanding of these disciplines beyond the classroom and the school.
- Develop cross-curricular links within the school with other subjects which will allow for the development and promotion of Science, Engineering and Technology.

Extra-curricular activities

- Seek opportunities for the provision of extra-curricular activities in the faculty and advise the Heads of Department and Subject Leaders.
- Actively promote interest in the subject outside the immediate physical and timetabled confines of the faculty.

Marketing and external links, including public occasions

- Actively promote the faculty within the school community to encourage pupils' interest in the subject areas.
- Contribute to the positive promotion and marketing of the school and the GDST in the local and wider community.
- Lead the faculty's contribution to marketing events and external links.



Management of resources

- Monitor the faculty's allocated budget and purchasing arrangements, to ensure the efficient and effective use of all resources.
- Identify and collate the future resourcing needs and aspirations for the departments within the faculty, for consideration in the school budget planning process.
- Ensure that all resources are of benefit to teaching and learning and maintaining high standards in the faculty.
- Ensure that all resources are fit for purpose and used in accordance with health and safety guidelines in ORACLE.

Monitoring, evaluation & assessment

- Ensure that within the faculty individual pupil progress is regularly assessed, recorded and reported and used to inform future teaching.
- Monitor and ensure that the Heads of Department and Subject Leaders are also monitoring pupil progress through the use of performance and benchmarked data to ensure that high standards of learning are achieved and maintained.

Training & development of self and others

- As a lead professional set personal targets and take responsibility for own continuous professional development.
- Ensure that training needs within the faculty are identified, appropriately met, and that all members of the faculty are active in their own personal and continuous professional development.

All school staff are expected to:

- Work towards and support the school vision and the current school objectives outlined in the School Development Plan.
- Contribute to the school's programme of extra-curricular activities.
- Support and contribute to the school's responsibility for safeguarding students.
- Work within the school's health and safety policy to ensure a safe working environment for staff, students and visitors
- Work within the GDST's Diversity Policy to promote equality of opportunity for all students and staff, both current and prospective.
- Maintain high professional standards of attendance, punctuality, appearance, conduct and positive, courteous relations with students, parents and colleagues.
- Engage actively in the performance review process.
- Adhere to policies as set out in the GDST Council Regulations, ORACLE and GDST circulars.
- Undertake other reasonable duties related to the job purpose required from time to time.

This job description should be seen as enabling rather than restrictive and will be subject to regular review.

Person Specification

Skills Required

Leadership skills: the ability to lead and manage people to work towards a common goal	Essential
Decision making skills: the ability to solve problems and make decisions	Essential
Teamwork: the ability to work collaboratively with others	Essential
Communication skills: the ability to make points clearly and understand the views of others	Essential
Self-management skills: the ability to plan time effectively and organise oneself well.	Essential
Sound IT skills in particular use of cloud based technology	Essential

Knowledge Base

Excellent professional knowledge and understanding	Essential
Excellent subject knowledge	Essential
Understanding of national and examination curricular requirements of the subject.	Essential
Up to date with professional developments in the subject and other aspects of education	Essential

Qualifications/Attainment

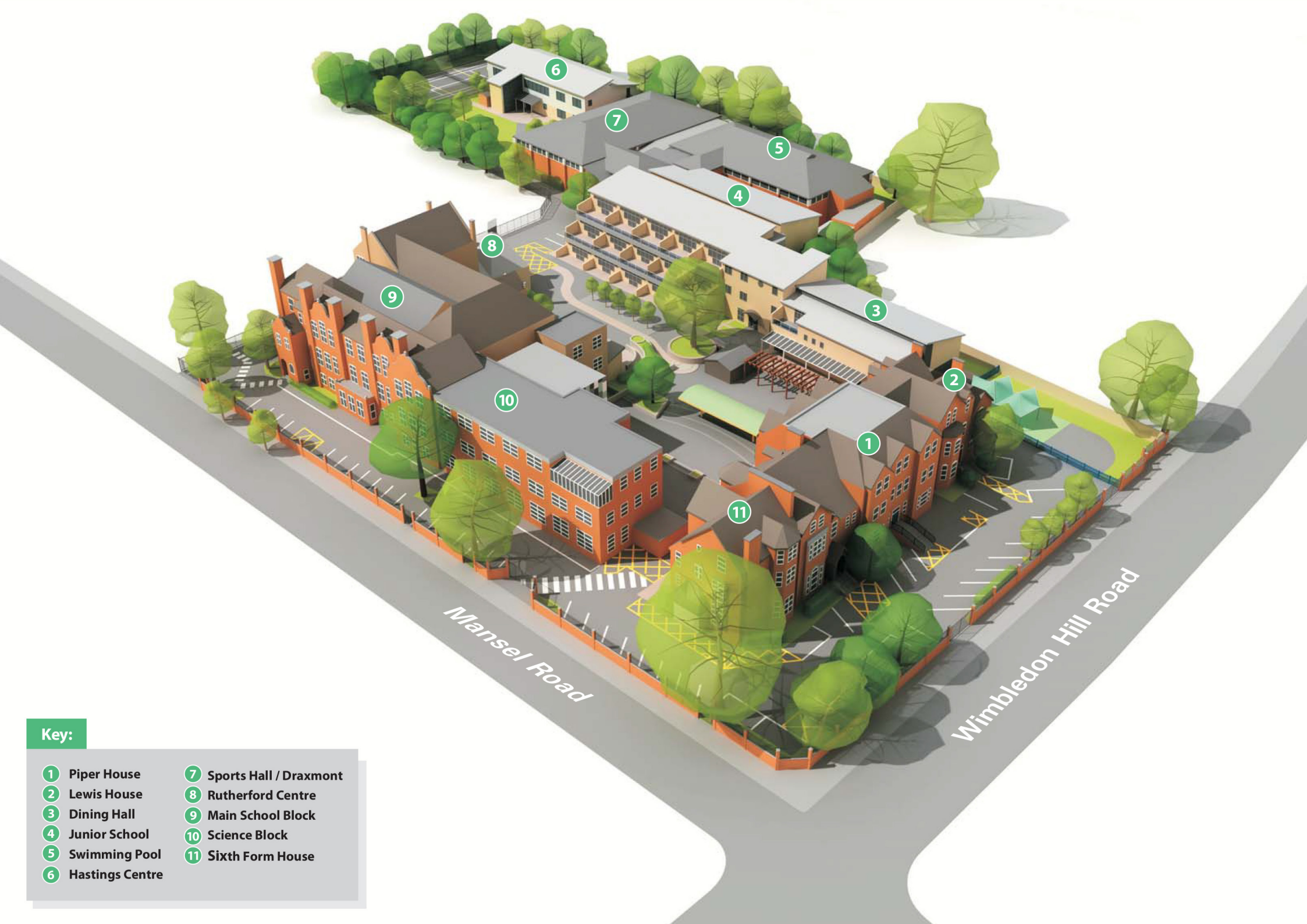
Qualified teacher status	Essential
Relevant honours degree - First or upper second	Essential
Post graduate qualifications for e.g. Master's degree/ post graduate diplomas	Desirable

Experience

Experience as a subject teacher covering KS3-5	Essential
Experience of teaching A level and GCSE in the subject for at least 2 cycles.	Essential
Experience of organising or participating in extra-curricular activities.	Desirable
Experience of participating in or leading a whole school initiative	Desirable
Significant successful experience as a subject leader or Head of Department	Essential

Attitude/approach

Ability to enthuse children and adults	Essential
Possess a positive attitude and approach to change and development	Essential
Flexible and firm with the ability to know when to be either	Desirable
Enjoy rising to the challenges inherent in a school environment	Essential
Lifelong learner	Essential

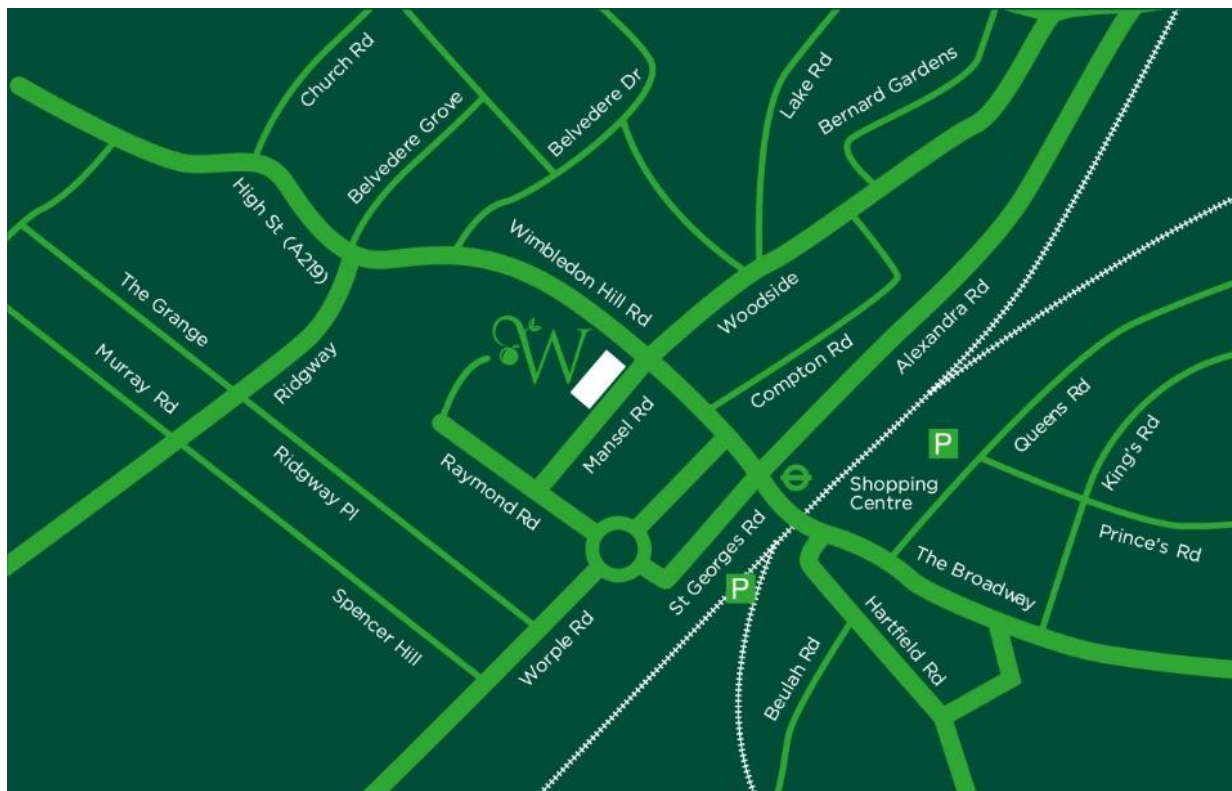


Key:

- | | |
|-------------------|--------------------------|
| 1 Piper House | 7 Sports Hall / Draxmont |
| 2 Lewis House | 8 Rutherford Centre |
| 3 Dining Hall | 9 Main School Block |
| 4 Junior School | 10 Science Block |
| 5 Swimming Pool | 11 Sixth Form House |
| 6 Hastings Centre | |

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Wimbledon High School is conveniently situated in the heart of Wimbledon.

The station is a few minutes' walk away, serving National Rail, London Underground and Tramlink.

Buses 93, 493, 200, 57 and 131 stop nearby.

If you are driving to Wimbledon to visit the school, please use one of the two public car parks marked on the map and allow plenty of time. Parking in Mansel Road and surrounding roads is limited to a few metered bays.

We regret that there is no visitor parking available on the school site.

Our playing fields are at Nursery Road, a ten minute walk down Worple Road.

Wimbledon High School

Mansel Road, London, SW19 4AB

wimbledonhigh.gdst.net

Head

Mrs Jane Lunnon

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