

## **EXETER SCHOOL**



### **Head of Physics January 2018**

#### **The Appointment**

For January 2018, Exeter School seeks an enthusiastic, experienced Physics graduate to succeed Dr James Wilson as Head of Physics following his promotion to the Senior Management Team as Deputy Head (Academic).

The twin requirements of this position are to be an excellent teacher of Physics and to have the ability and drive to successfully manage the Physics department. The outline job description of the Head of Department role is at the end of this document.

Science is very strong at Exeter School and the Physics department is one of the largest and most successful in the country.

#### **The Physics Department**

As a department, we are passionate about our Physics and aim to inspire pupils to study Physics at A Level and then on to Physics-related subjects at university. We achieve this through a sharing of ideas, engaging pupils with the subject and enhancing our classroom provision with a programme of extra-curricular activities. We aim to academically stretch those pupils who are keen to follow a Physics-related path in the future whilst also fully supporting pupils who may only wish to study Physics up to GCSE.

The Physics Department is situated within the Science Centre which provides specialist accommodation for the three separate sciences, Electronics and ICT. The Physics department consists of four laboratories, two preparation rooms and a Physics resource room. Each laboratory is well equipped with a data projector and basic apparatus supported by more specialist equipment from the prep rooms. There is also a small room dedicated as a sixth form study room.

In terms of public examination results this is a very successful department with an average of over 88% A\* to B at A Level over the last three years. A typical year will have more than 35 pupils taking Physics in the Lower Sixth and around 30 pupils in the Upper Sixth. In 2013, 2014 and 2015 we received an award for excellence in Physics from the Good Schools Guide. Over the past three years, on average, 100% of pupils achieved A\* and A grades in GCSE Physics and 91% of these were A\*. In GCSE Science Double Award this year 91% of grades were A\* and A with 100% of grades A\* to C.

The department offers an extensive range of extra-curricular activities for pupils, ranging from a Lower School Science Club for year 7 pupils to a weekly Physics Club, AS Challenge and Physics Olympiad for the Sixth Form. In 2014, the department successfully launched a balloon into space and safely

retrieved it, along with some breath-taking photos. In 2015, we began an annual trip to the Diamond Light Source and in 2016 we took our first trip to the Culham Centre for Fusion Energy. There are also annual trips to the South West Festival of Physics, GCSE Science Live and Exeter University's Christmas Lectures. The school regularly hosts large Physics events for pupils including talks from Helen Czerski, Simon Singh and the Institute of Physics' Schools' Lecture Tour.

Exeter School is currently the hub school for the Exeter and East Devon Ogden Physics Partnership; a group of 9 schools aiming to promote Physics within the region. Along with serving as one of the 30 link schools for the Institute of Physics' Stimulating Physics Network, we host courses and events for teachers to further develop and share best practice across the region.

## **Departmental Aims**

The Physics Department aims to:

- foster a positive culture where every pupil has the opportunity to enjoy Physics,
- guide pupils to help them to continue to improve, right up to the highest level,
- convey the excitement and satisfaction that can be obtained by using Physics to attempt to answer some of the big questions, as well as the numerous applications of Physics in our everyday lives,
- provide an education that is stimulating, supportive and relevant for pupils going on to A-levels as well as those ending their science education at GCSE,
- develop pupil' experimental and investigative skills including an awareness of the limits of scientific data and the scientific method, and
- through all of the above, encourage pupils, irrespective of gender, to continue to explore the wonders of Physics at A Level and choose to study Physics and Physics-related subjects at university.

## **Departmental Staff**

The department is staffed by specialist Physics teachers: five full-time and one part-time. Practical work in the department is very well facilitated by one full-time Physics technician in conjunction with a full time Chief Science Technician.

## **The Curriculum**

KS2: The department provides specialist teaching for pupils in Year 6 at Exeter Junior School.

KS3: The course followed is designed by the department and aims to provide enhanced coverage of the National Curriculum. KS3 is completed in two years (Years 7 and 8) and pupils receive one double lesson per week.

KS4: The course begins in Year 9 and we follow the Edexcel IGCSE specification. All pupils study either separate IGCSEs in Biology, Chemistry and Physics or IGCSE Double Award Science. In both cases, pupils receive three periods of Physics per week.

A Level: Physics is a very popular A Level in the school. There are currently four sets in both the L6th and the U6th making Physics one of the largest A Level options in the school. Most pupils proceed to the full A Level. The department offers the AQA Physics specification. The vast majority of pupils enter university with a significant number going on to study Physics-related degrees. There are also an encouraging number of Oxbridge successes in Physics and Engineering.

## **The Role of the Head of Physics**

The Head of Department is responsible for the overall performance of the Department and will report, as necessary, to the Headmaster and Deputy Head (Academic) on all aspects related to the department.

In addition to the requirements of an excellent classroom teacher, we are looking for a Head of Department who will be able to:

- give a decisive lead to the department, imparting direction and drive
- be in touch with best practice within Physics teaching
- work alongside the other science department heads
- ensure that the practical aspect of the subject is taught safely and in line with best practice
- monitor closely the quality of teaching and learning within the department.
- analyse examination results and communicate this analysis to the Senior Management Team and to the department members
- hold regular departmental meetings to share national initiatives, whole-school issues and teaching methods; to operate the development planning process; to invigorate morale; and to establish team spirit
- develop and appraise the members of the department (including the induction of new staff)
- update regularly a departmental handbook, schemes of work and a Departmental Development Plan
- keep up to date with University requirements and courses
- encourage fresh thinking about the subject
- oversee the departmental budget