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Kingdown School Science Department
Information for Applicants – January 2020

Kingdown has a highly successful Science Department. We pride ourselves on the excellent standard of our teaching, our results, and the enjoyment we get from working in a stimulating, supportive and friendly atmosphere. I hope you gain a clear impression of our Department from these pages, and that you feel this is the type of work environment which would suit you. I look forward to receiving your application.

Antony Jordan-Mayhew
Curriculum Leader of Science

1. Department Structure and Main Responsibilities

We are the largest Department in the school - there are currently 20 teachers in the Science Department, supported by a team of 4 technicians. Teaching and Learning Responsibilities (TLR's) in the Science Department are as follows:-

• Curriculum Leader & Head of Department	:	Antony Jordan-Mayhew
• Assistant Head of Department	:	Rachel Bala
• Heads of Subject	:	Rachel Bala (Head of Biology) Sarah Henley (Head of Chemistry) Antony Jordan-Mayhew (Head of Physics) Lewis Henry (Head of Applied Science) Amalie Millest (Head of KS3)

We are a large department organised into Heads of Subject; Biology, Chemistry, Physics and Applied Science. A number of smaller responsibilities also exist within the Department, (e.g. SEN co-ordinator, Science Week Co-ordinator, Literacy co-ordinator, Numeracy co-ordinator, AG&T co-ordinator, Rewards Organiser), some of which are paid responsibilities.

Each of the 'A' Level subjects has a dedicated technician who is responsible for monitoring and maintaining equipment, ordering new stock and providing day to day support (particularly during periods of research investigations). The role of the technicians has been expanded, to incorporate more extensive in-class support in addition to the 'traditional' preparation and maintenance of apparatus. In our recent Practical Endorsement visit by the exam board the inspector wrote I his report that "The faculty is lucky to have an experienced and talented technical team who can cope with the heavy demands of their practical schedules".

Standard teaching contact times are:

- 42 periods per fortnight (84% class contact time) – full time teacher
- 40 periods per fortnight (80% class contact time) – NQT
- 40 periods per fortnight (80% class contact time) – Head of Subject
- 38 periods per fortnight (76% class contact time) – Second in Faculty

These contact times compare extremely favourably with many schools.

2. Professional Development

Kingdown prides itself on the quality of the professional development opportunities it offers to both its own staff, and to others. We have a comprehensive NQT induction programme, including regular professional development, INSET meetings and training, and the allocation of a subject mentor (from the Science Department) and a teaching 'buddy' (a recently qualified teacher from a different Department), to offer help and support during the first few months in teaching. All of the Department become involved in new staff training and we pride ourselves on giving them a very supportive environment in which to begin their teaching careers. We are also often asked to give both UK and International students a 'taster' of what teaching is like in a successful British comprehensive school, and have run INSET courses for other schools recently on a range of aspects of learning and leadership in Science. There are many opportunities to take on responsibilities and develop careers within our large thriving department.

3. Curriculum

Key Stage 3

Our ethos is to teach fun, practical filled lessons that deliver the principles of investigative science as well as core subject based content. We use a Kingdown produced scheme of learning that is built around the principles of mastery and retrieval practice to ensure that all students make progress across the key stage. The Scheme is the basis for our teaching, but we encourage teacher autonomy as long as the required content is covered and the assessment scheme used. The scheme is extremely detailed, including learning objectives, suggested teaching plans and starter and plenary ideas on a lesson-by-lesson basis. All staff adapt schemes and add resources as the year progresses and we are incredibly proud of the quality of our schemes. Progress is monitored by a series of end of unit tests, regular multiple choice tests and a variety of homework tasks designed to improve students core skills, literacy, numeracy and knowledge.

In Year 7 we teach pupils in 6 mixed ability sets and 4 groups with students identified as higher ability from primary. In Year 8 we have two strands containing 5 sets. In Year 9 we set all 11 teaching groups on ability from 9S1 to 9S11. Students are able to move freely between sets at any point after the end of Year 7. These groups then change in January when the students make their GCSE options and start down the path of Separate Sciences or Combined Science.

Key Stage 4

We have redesigned our curriculum in light of the Government changes to Education and the new AQA Science GCSEs. We aim to provide an appropriate and stimulating curriculum for all our students, whether they wish to obtain the English Baccalaureate or not.

We have two groups of students at KS4. Between 30% and 40% of our cohort have chosen to study the **Separate Sciences** and will do Biology, Chemistry and Physics. These gives us 3 or 4 groups which are taught by specialist teachers over 2 ½ years with 5 lessons per fortnight for each subject. The rest of the year group will study **Combined science** (AQA Trilogy) taught by 2 teachers over 2 ½ years with 10 lessons over a fortnight. These GCSEs lead on to four options post 16; AQA Biology, OCR Chemistry, OCR Physics and AQA Level 3 Extended certificate Applied Science.

Each combined science group is taught by two separate teachers allowing teachers to be able to teach within specialism and to share out of specialism teaching with their partner teacher. We have a wide range of teaching materials available, and follow our own detailed teaching schemes which we have written and resourced.

In the last exam series we collated results from the five different science GCSEs that we offered with 73% of students obtaining at least two science grades at 4 or above and we have consistently improved this measure over the last 4 years. Our separate science results produced an ALPs grade 3 putting us in the top 25% of schools in the country. Our combined science results produced an ALPs 4 placing us in the top 40% of schools in the country. Our results show that we have consistently produced added value to students over the last 4 years.

Key Stage 5

We run large successful A Level courses in Biology, Chemistry and Physics as well as an Extended Certificate in Applied Science. Within the A Level courses we have a total of 6 Year 12 classes and 6 Year 13 classes and have over 30 applications for each of the main sciences for next year ensuring that we will have 2 classes in each of Biology, Chemistry and Physics in Y12 next year. This allows us to ensure that all full time teachers within the department are given KS5 experience. We have selected different examination boards for our 'A' Level courses. As we have spent a lot of time evaluating the content and assessment criteria and chosen the courses we think suit our learners the most.

4. Department Accommodation and Resources

The Science Department is housed together in one block and comprises 12 laboratories, 3 computer rooms that we share, a large main prep-room and 5 smaller rooms which double as prep-rooms and office space. All full time science teachers in the Department have their own room in which they teach and we are on a rolling programme of laboratory refurbishment for our oldest laboratories. We have good facilities, including your own office space and computer; we provide a wide variety of resource materials – including a number of class sets of different text books and a selection of videos now on the media server so they are easy to show in class.

5. Extra-Curricular Activities

In the past few years we have been running a successful Science Club for the Gifted and Talented. This has involved the use of computer simulations and a range of practical work, working towards the BA Crest Awards at Silver and Gold level. One of our students has been so successful at this scheme that he has been invited to Downing Street to discuss his views on Science teaching in the UK! We also participate fully in National Science Week, where we take KS3 off curriculum in lesson time to fulfil a fun competition project. We are also currently running a wildlife club and looking to implement a STEM programme for students as well.

6. Further Information

The Ethos of the Science Department

The Science Department at Kingdown is a successful, dynamic, forward thinking and risk-taking Department. We are keen to embrace new developments which enhance the learning experience we provide for our learners.

We aim to instil a lifelong interest in science in our pupils, and provide them with skills they can use no matter what their future profession. The Department has a supportive, friendly atmosphere where new ideas and approaches are welcomed and openly discussed. We always aim to make our science lessons challenging, stimulating and fun and achieve this through careful planning and creating high quality resources.

What Sort of Person Do We Want?

The focus for our Department is firmly on '***teaching and learning'***, and looking at ways of improving and enhancing the learning experience our students receive. We are therefore looking first and foremost for an excellent classroom practitioner who can bring new ideas and approaches to the Department. We will also require enthusiasm, hard work and a sense of humour. In return we will offer you support when you need it, excellent career progression and training, as well as a stimulating and vibrant working atmosphere. If you are looking for a new challenge in a supportive environment with a like-minded team of professionals then we would love to hear from you – and will look forward to meeting you at interview.