

KS5 Long Term Plan 2020-2021

Subject: Chemistry

Exam Board: AQA



Statement of Intent

Curriculum Statement of Intent Science

The aim of the Science department here at St Pauls' is:

“Empowering students to take ownership of their learning enabling them to achieve outstanding results and become independent scientists realising the importance of science in their everyday lives. The Science Department are a dedicated, supportive team who value sharing good practice to make students be the best that they can be.”

Science at St Paul's is about developing student's ideas and ways of working that enable them to make sense of the world in which they live through investigation, as well as using and applying processing skills. We ensure that all children are exposed to high-quality teaching and learning experiences, which allow children to engage with practical experiments. They are immersed in scientific vocabulary, which aids students' knowledge and understanding not only of the topic they are studying, but also of the world around them. We intend to provide all students with a broad and balanced Science curriculum and encourage them to develop a sense of excitement and curiosity about Science.

Science teaching at St. Paul's involves adapting and extending the curriculum to match all pupils' needs across all 3 Key Stages. We ensure that all students are provided with rich learning experiences that aim to:

- Prepare our children for life in an increasingly scientific and technological world today and in the future;
- Help our children acquire a growing understanding of the nature, processes and methods of scientific ideas;
- Help develop and extend our students scientific concept of their world;
- Build on our students natural curiosity and developing a scientific approach to problems;
- Encouraging open-mindedness, self-assessment, perseverance and developing the skills of 3 investigations – including: observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating;
- Develop the use of scientific language, recording and techniques;
- Make links between science and other subjects.

Statement of Implementation:

A Level Physics follows the AQA specification. The Physics curriculum is delivered across 2 years and is taught down by two specialist teachers (T1 and T2).

In year 12 the students study the following units:

Unit	Teacher
1. Measurements and their errors	Integrated delivery with topics 1-9
2. Particles and radiation	Teacher 2
3. Waves	Teacher 2
4. Mechanics and materials	Teacher 1
5. Electricity	Teacher 2
6. a) Further mechanics	Teacher 1

In Year 12, students have 6 x 50 minute lessons per week, 3 lessons with each specialist teacher.

In year 13 the students study the following units:

Unit	Teacher
6. b) Thermal physics	Teacher 2
7. Fields and their consequences	Teacher 1
8. Nuclear physics	Teacher 2
9. Optional unit	Teacher 1 & 2

In Year 13, students have 7 x 50 minute lessons per week split between the two specialist teachers.

Lessons use a range of teaching approaches that allows students to master the assessment objectives assessed at the end of the course:

- AO1: Demonstrate knowledge and understanding of scientific ideas, processes, techniques and procedures
- AO2: Apply knowledge and understanding of scientific ideas, processes, techniques and procedures, in both theoretical and practical context, when handling qualitative and quantitative data
- AO3: Analyse, interpret and evaluate scientific information, ideas and evidence, to make judgements and reach conclusions.

Throughout the course students' complete 14 Required Practical (10 and 7 are split into A and B each), which develop their practical, analytical & evaluative skills, and promoting their interest in chemistry. The Required Practical are completed in Blue Lab Books, which include exam style questions to help prepare them for both internal and external assessments.

The curriculum content is assessed at the end of module via end of topic tests, which include interleaved question from previous modules of teaching, ensuring that the students are regularly reviewing previous learning. The reason for this is so that we can measure student's ability module to module and more specifically target student revision. Only a few modules are grouped into the same modular tests. The modules which are grouped are so small that end of unit tests would be challenging to make papers for. The end of topic tests mirror the nature of the final examinations, including covering all AOs. Prior to each end of unit test students sit informal knowledge tests. These assess the students AO1 recall and knowledge informing and focusing their revision.

To strengthen student's recall they do fortnightly 20 marker interleaved questions from previous topics. They are forewarned of the topics in advance which encourages independent regular revisiting of content whilst improving their exam technique.

Every half term teachers do consolidation lessons. These both enable stronger students to independently work on self-identified weaknesses whereas the lower end can receive one-to-one tutoring from the teacher.



