

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:

Applied Science BTEC follows the Pearsons Edexcel specification the extended certificate (360 Cr). The curriculum is delivered across 2 years and is taught down by two teachers (T1 and T2). Both teachers start of teaching unit 1. This is to strengthen the students in the basics of Applied Science before they do more specialist modules. These students sit the unit 1 exam in January of year 12. After this both teachers complete unit 2 together (2A, 2B, 2C and 2D). This unit is an internal assessed unit and it is a compulsory unit. In Year 13, teacher 1 delivers unit 3 which is a practical based exam (externally marked). In this unit students need to be able to plan, evaluate and process data across the 3 Science disciplines. In January they then sit the unit 3 exam. Teacher 2 starts delivering the optional unit (Unit 8) in September of year 13. This unit is internally marked by the teacher. After unit 3 has been completed in January, teacher 1 supports teacher 2 with delivering the optional unit. In year 12 students have 6 x 50 minute lessons per week. In Year 13, students have 7 x 50 minute lessons per week split between the two specialist teachers.

Students complete topic tests on unit 1 and 3 in order to support them with the external exams. Students are encouraged to achieve the best result in the first sitting rather than resitting these units. This reduces the amount of work for students over all whilst allowing use enough time to complete the internally marked units.

Year 12:

2	Programme Number & Title	BTEC Level 3 National Extended Certificate in Applied Science							
4	YEAR 12 September 2019 - July 2020								
5	Unit No & Title	Assessment Criteria	Hand Out Date	Hand In Date	Assessment Date	IV Sampling Date	Resubmission Date*	Assessor Name	IV Name
6	Unit 1: Principles and Applications of Science 1								
7	*External Exam	All	Started delivering content on 09/09/19	N/A	Exam date 15/01/2020	N/A	N/A	GVA/RIV/MWL/PSI	N/A
8	Unit 2: Practical Scientific Procedures and Techniques								
9	A: Undertake titration and calorimetry to determine the concentration of solutions	P1 P2 M1 D1	Started delivering content on 20/01/20	18/9/2020	22/9/2020	5/10/2020	09/10/2020	GVA/PSI	RIV/MWL
10	B: Undertake calorimetry to study cooling curves	P3 P4 M2 D2	Started delivering content on 20/01/20	18/9/2020	22/9/2020	5/10/2020	09/10/2020	RIV/MWL	GVA/MWL
11	YEAR 13 September 2020 - May 2021								
12	Unit 2: Practical Scientific Procedures and Techniques								
13	C: Undertake chromatographic techniques to identify components in mixtures	P5 P6 M3 D3	Started delivering content on 11/01/2021	08/03/2021	10/03/2021	22/03/2021	29/03/2021	RIV/MWL	GVA/MWL
14	D: Review personal development of scientific skills for laboratory work	P7 M4 D4	Started delivering content on 10/03/2021	23/04/2021	27/04/2021	10/05/2021	20/05/2021	RIV/MWL	RIV/MWL
15	Unit 3: Science Investigation Skills								
16	*External marked written task	All	Started delivering content on 7/09/20	Exam date (Year 2) Jan 2021	N/A	N/A	N/A	RIV/MWL	N/A
17	Unit 8: Physiology of human body systems								
18	A: Understanding the impact of disorders of the muscular/skeletal system and their associated corrective treatments.	P1 P2 M1 D1	07/09/2020	02/11/2020	04/11/2020	20/11/2020	25/11/2020	GVA/PSI	GVA/PSI
19	B: Understand the impact of disorders on the physiology of the lymphatic system and the associated corrective treatments.	P3 P4 M2 D2	04/11/2020	13/01/2021	15/01/2021	04/02/2021	10/02/2021		
20	C: Explore the physiology of the digestive system and the use of the corrective treatments for dietary-related disorders.	P5 P6 P7 M3 M4 D3	15/01/2021	22/02/2021	19/03/2021	24/02/2021	09/04/2021		
21	Lead Internal Verifier Signature	Name			Date				

Year 13:

Level 3 Assessment Plan 2020-2022									
Programme Number & Title		BTEC Level 3 National Extended Certificate in Applied Science							
YEAR 12 September 2020 - July 2021									
Unit No & Title	Assessment Criteria	Hand Out Date	Hand In Date	Assessment Date	IV Sampling Date	Resubmission Date*	Assessor Name	IV Name	
Unit 1: Principles and Applications of Science 1									
*External Exam	All	Started delivering content on 07/09/20	N/A	Exam date 04/01/2021	N/A	N/A	RIV/PSI JWA/GYA	N/A	
Unit 2: Practical Scientific Procedures and Techniques									
A: Undertake titration and calorimetry to determine the concentration of solutions	P1 P2 M1 D1	Started delivering content on 18/01/21	7/6/2021	10/6/2021	15/6/2021	23/6/2021	PSI/GYA	RIV/JWA	
B: Undertake calorimetry to study cooling curves	P3 P4 M2 D2	Started delivering content on 18/01/22	20/4/2021	22/4/2021	4/5/2021	18/5/2021	RIV/JWA	PSI/GYA	
C: Undertake chromatographic techniques to identify components in mixtures	P5 P6 M3 D3	Started delivering content on 22/04/2021	17/06/2021	22/06/2021	02/07/2021	12/07/2021	RIV/JWA	PSI/GYA	
YEAR 13 September 2021 - May 2022									
Unit 2: Practical Scientific Procedures and Techniques									
D: Review personal development of scientific skills for laboratory work	P7 M4 D4	Started delivering content on 17/01/2022	18/04/2022	20/04/2022	29/04/2022	09/05/2022	RIV/JWA	PSI/GYA	
Unit 3: Science Investigation Skills									
*External marked written work	All	Started delivering content on 13/09/21	Exam date (Year 2) Jan 2022	N/A	N/A	N/A	RIV/JWA	N/A	
Unit 3: Physiology of human body systems									
A: Understand the impact of disorders of the muscular/skeletal system and their associated corrective treatments.	P1 P2 M1 D1	13/09/2021	01/11/2021	03/11/2021	19/11/2021	26/11/2021	PSI/GYA	RIV/JWA	
B: Understand the impact of disorders on the physiology of the lymphatic system and the associated corrective treatments.	P3 P4 M2 D2	01/11/2021	17/01/2022	19/01/2022	01/02/2022	11/02/2022			
C: Explore the physiology of the digestive system and the use of the corrective treatments for dietary-related disorders.	P5 P6 P7 M3 M4 D3	17/01/2022	07/03/2022	09/03/2022	22/03/2022	31/03/2022			

