Exam Board/Syllabus: Pearson (Edexcel)

Year 12

Year Group	Term	Module	Content	Assessment Content
12	1-2	Unit 1: Principles and Applications of Science (Biology and Chemistry)	In Chemistry, students will learn about structure and bonding in applications in science (A1) and the production and uses of substances in relation to properties (A2). They will develop their understanding of key concepts, such as intermolecular forces and periodicity as well as the application of calculations such as, mole, empirical formula and concentration calculations. In Biology, students will learn about the structure and function of cells and tissues (B1) and cell specialisation. They will review their knowledge of cells and tissues from GCSE and will widen their knowledge on the different types of cells and the key functions of a number of organelles.	Tests at the end of A1, A2, B1, B2, B3, C1, C2, and C3. Students do an end of subject test.
	3-5	Unit 1: Principles and Applications of Science (Biology, Chemistry and Physics) Unit 2: Practical Scientific procedures and techniques. (Learning Aims A and B)	In Chemistry, students will complete the production and uses of substances in relation to properties (A2) by learning about chemical properties of period 2 and 3 elements, key chemical reactions involving metals, oxidation states and redox reactions. In Biology, students will learn about the tissue structure and function (B3). They will describe and explain the role of the four main tissue types in animals and will look at the step by step process in which a chemical transmission occurs across a synapse. In Physics, students will learn about waves (C1), waves in communication (C2) and the use of electromagnetic waves in communication (C3). In Unit 2, students will carry out:- Learning aim A-Undertaking titration and colorimetry to determine the concentration of solutions. Learning aim B-Undertaking calorimetry to study cooling curves	Internal assessment of learning aims A, B, C and D. Coursework is assessed and internally verified before feedback is given to students. External Unit 1 exams in biology, chemistry and physics.
	6	Unit 2: Practical Scientific procedures and techniques. (Learning Aim C and D)	During this term students will complete the remaining two learning aims of the internally assessed unit 2. They will complete: - Learning Aim C-Undertaking chromatographic techniques to identify components in mixtures. Learning Aim D-Reviewing personal development of scientific skills for laboratory work.	

Year 13

Year Group	Term	Module	Content	Assessment Content
13	1-2	Unit 3: Science Investigation Skills (Learning Aims A-H)	In the externally assessed unit 3, students will study and complete the following learning aims:- A-Planning a scientific investigation B-Data collection, processing, analysis and interpretation C-Drawing conclusions and evaluation D-Enzymes in action E-Diffusion of molecules F-Plants and their environment G-Energy content of fuels H-Electrical Circuits	Students regularly assessed ay key points throughout the topic on planning, analysing and evaluating results. A number of past papers are completed to help students prepare for the January external exam. Internal assessment of learning aims A, B and C. Coursework is assessed and internally verified before feedback is given to students.
	3- 5	Unit 3: Science Investigation Skills (Review) Unit 10: Biological Molecules and Metabolic Pathways (Learning Aims A-C)	At the start of term 3, students will be prepped for the unit 3 external assessment by reviewing and completing a number of past examination papers. In unit 10, students will be complete a series of internal assessments on the different types of biological molecules, the two different types of respiration and photosynthesis. The three learning aims are: - A-Understanding the importance of biological molecules in living organisms and the effect of disruption on the structure and function. B-Explore the effect of activity on respiration in humans and factors that can affect respiratory pathways. C-Explore the factors that affect the pathways and the rate of photosynthesis in plants.	