Bishop Heber High School

Subject	Year	Term
Chemistry	13	1

Topic

Organic Chemistry and Physical Chemistry

Content (Intent)

Prior Learning (Topic) Physical, Inorganic and Organic Chemistry

Physical Chemistry - Thermodynamics including Born Haber cycles and Gibbs free energy calculations, Rate Equations, Equilibrium constant for Homogenous systems**,** Acids and Bases

Organic Chemistry - Carboxylic acids and their derivatives, Acylation, Aromatic Chemistry, Amines, Polymers, Amino Acids, Proteins and DNA

Future Learning (Topic) Organic Chemistry, Inorganic and Physical Chemistry

What Knowledge and Skills will be taught (Implementation)	How will your understanding be assessed & recorded (Impact)
Physical Chemistry 1. Thermodynamics including Born Haber cycles and Gibbs free energy calculations 2. Rate Equations **Organic Chemistry** 1. Carboxylic acids and their derivatives, Amines, Acylation 3. Aromatic Chemistry **Required practical 7** Measuring the rate of reaction - by an initial rate method andby a continuous monitoring method. **Required practical 10** Preparation of: a pure organic solid and testing of its purity	End of topic tests - A level grading and formative feedback given. Homework – a percentage, A level grade and Formative feedback provided.
Physical Chemistry 1. Equilibrium constant for Homogenous systems 2. Acids and Bases **Organic Chemistry** 1.Polymers, Amino Acids, Proteins and DNA **Required practical 9** Investigate how pH changes when a weak acid reacts with a strong base and when a strong acid reacts with a weak base. **Required practical 12** Separation of species by thin-layer chromatography.	End of topic tests - A level grading and formative feedback given. Autumn Exam - A level grading and formative feedback given. Homework – a percentage, A level grade and Formative feedback provided.

How can parents help at home

Ensure all class notes and content files are complete and homework submitted on time
Encourage pupils to revise for tests and exams and to create revision resources such as flash cards and posters.
Encourage pupils to actively research future University courses and careers.

Helpful further reading/discussion (including Reading and Vocabulary Lists)

Reading

Text Book - CGP New A-Level Chemistry for AQA: Year 1 & 2 Student Book with Online Edition

Websites

- A-levelchemistry.co.uk
- ChemGuide.co.uk (written by Jim Clark)
- AQA website

Books – Calculations in AS/A level Chemistry by Jim Clark
Essential Maths Skills for A- Level Chemistry - CGP

Vocabulary Lists

Disulphide Bridges
Nucleotides
Homogeneous
Heterogeneous
Buffers