

| Month | # of Days | Core Standard | Strand | Content | Skills | Activities | Assessments | Notes |
|-------|-----------|---------------|--------------------------|--|---|--|---|---|
| Aug. | 8 | | | Petrochemicals & Polymers | | | | page 317-332 cambridge IGCSE chemistry - Richard Harwood and Ian Lodge |
| | | OC28. C.2 | organic chemistry | Petroleum | Students shall know and describe the functional groups in organic chemistry | Quick check questions on pg-322 | quick check questions page 322 | |
| | | NS36 C.3 | Nature of Science | ● Alternative fuels and energy sources | Explore different sources of energy/ alternative sources of energy | for one of the fossil fuels search out and present in a systemic way the range of compounds found in it. | Research work and presentation | |
| | | OC29 C.2 | Organic Chemistry | ● Addition polymerization | Understand polymerization and its uses in daily life | video on polymerization / laws on plastic pollution | Research on types of polymers and their structures and the uses in daily life | page 325-332 Cambridge IGCSE chemistry - Richard Harwood and Ian Lodge |
| | | OC29 C.2 | Organic Chemistry | ● condensation polymerisation | Students shall demonstrate an understanding of the role of organic compounds in living and non-living systems | Research on impact of plastic bags on environment | Presentation on different identification symbols on plastics products | |
| | | OC29 C.2 | Organic | ● Biological polymers | develop an | Quick check questions on | worksheet on | |

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| | | | Chemistry | | understanding of different Biological polymers -protein, carbohydrates, lipids and their role. | pg-333 | types of polymers. | |
| | | | | Combustion | | | Quick check questions on pg-328/ | conquering chemistry - Roland Smith pg 274-301 |
| | | CONTENT STANDARD 23 | Kinetics & Energetics | ● 10.1 Exothermic and endothermic reactions | Differentiating | worksheet of Exothermic and endothermic reactions | Presentation on ways to measure air pollution and measures of control. | |
| | | | | | learn specific, practical techniques and application of knowledge and writing lab reports | Experiment- Exothermic and Endothermic reactions; video/ research work on regulation of industrial pollution | worksheet on greenhouse effect and global warming | |
| | | KE23 C.3 | Kinetics & Energetics | ● 10.2 Enthalpy | Graphical interpretation | end of the lesson exercises | Performance in class | |
| | | KE23 C.4 | Kinetics & Energetics | ● 10.3 Measuring enthalpy changes for reactions | Quantitative aspects/ problem solving | Exercises on pg 279 conquering chemistry | class work | |
| | | content standard 23 | | ● 10.4 Heat of combustion | Using table | investigate the factors that determine the heat produced | | |
| Sept. | 8 | KE23 C.6 | Kinetics and energetics | ● 10.5 Explaining chemical energy changes | Understanding by diagram | class work | Exercise pg 281. -282 | |
| | | KE23 C.6 | Kinetics and | ● 10.6 Activation | Comparing by graphical | | Quiz: 10.1- | |

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| | | | energetics | energy | representation | | 10.7 | |
| | | | | ●10.7 Ignition temperature | Understanding using examples | ● Exercises: 13-16 page 285 | Home work | |
| | | | | | good hand-eye coordination and the ability to use technical equipment with accuracy and writing lab reports | Experiment-Acid Rain ; Analyzing and Investigating Environmental Issues | class test | |
| | | NS36 C.3 | Nature of Science | ●10.8 Pollution from burning fossil fuels | Visualising a picture | Class discussion-sources of carbon monoxide, sulfur dioxide, oxides of nitrogen pollution | Discussion /debate Environmental Issues cause and effects | |
| | | S14 C.1 | Stoichiometry | ●10.9 The Greenhouse effect | Reasoning | ● Exercises: 17-18 page 289 | Make on proposal for implementation of school recycling program. (including cost, logestics, the process etc) | |
| | | content standard 23 | Kinetics and energetics | ●10.10 Rates of combustion reactions | Estimating rates | class discussion-slow combustion, fast combustion and explosion | class discussion | |
| | | E24 C.1 | equilibrium | ●10.11 Meaning of rate of reaction | Graphical representation | | | |
| | | AB19 C.1 | Acid and Bases | ●10.12 Factors influencing rate of reaction | Analysing | ● Exercises: 19-22 | class work | |
| | | | | ●10.13 Explanations | Understanding conepts | ● Exam style question | Home Work | |

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| Oct. | 8 | E24 C.1 | equilibrium | ●10.14 Temperature effect and Activation energy | analyzing and predicting | Mid term Test | Mid term summative test | |
| | | E24 C.1 | equilibrium | ●10.15 Catalysis | Visualising a picture | ● Exercises: 17-22 | Test score | |
| | | | | | Analysis and prediction | Experiment on Catalyst | laboratory report | |
| | | | | ●10.16 Explosions and small particles | Understanding concepts | ● Exercises: 23-31 | | |
| | | | | ● Exam Revision | | Test yourself page- 300 conquering chemistry | Unit Test | |
| Nov. | 8 | | | Chemical analysis and investigation | Develop and explain the appropriate procedure, controls, and variables (dependent and independent) in scientific experimentation | | | page 341-353 cambridge IGCSE chemistry - Richard Harwood and Ian Lodge |
| | | NS33 C.1 | Nature of Science | ● Inorganic analysis | | | | |
| | | NS33 C.1 | Nature of Science | | Analyze, identify and predict | ● test for gases/ Experiment on limewater test for CO2 | exercise 21 pg. 220 Olevel chemistry guide/ lab report | |
| | | | | ● Methods of collecting and drying gases | | | class test | |
| | | AB21 C.3 | Acid and Bases | ● other test -pH testing | Explain the role of the pH scale as applied to acids and bases. | Quick check questions on pg-346-347 | Response to a set of structured questions | |
| | | P6 C.3 | Periodicity | ● Organic analysis Chromatography | understanding concepts | | How is chromatograph | |

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| | | | | | | | y used in the real world | |
| | | NS33 C.1 | Nature of Science | <ul style="list-style-type: none"> Experimental design and investigation | Develop and explain the appropriate procedure, controls, and variables | Quick check questions on pg-346-347 | class test | |
| | | NS35 C.1 | Nature of Science | <ul style="list-style-type: none"> Interpreting observations and data | | Quick check questions on pg-353 | Research and presentation How are the analytical ideas applied in organic and inorganic chemistry | |
| | | | | | Students shall use mathematics, science equipment, and technology as tools to | Experiment on presence of water using cobalt chloride paper | Assess and Evaluate lab work | |
| | | NS36 C.1 | Nature of Science | <ul style="list-style-type: none"> Compare and contrast chemistry concepts in pure science and applied science | communicate and solve problems in chemistry | | research work | |
| Dec. | 4 | NS34 C.23 | Nature of Science | <ul style="list-style-type: none"> Research current events and topics in chemistry | students may use the computer room for research | Develop a presentation on the Research topic | Performance in class | |
| | | NS37 C.1 | Nature of Science | <ul style="list-style-type: none"> Research and evaluate science careers using the following criteria: educational requirements, salary, availability of jobs, and working conditions. | | Experiment on Chromatography; Research work | Research work evaluation | |
| | | | | | Students shall describe | Develop a presentation | Final- | |

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| | | | | | various careers in chemistry and the training required for the selected career. | on the Research topic | summative test | |