

St Edmund Campion Catholic School 5 Year Curriculum Summary: SUBJECT -SCIENCE

KS3	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
7	Key ideas Chemistry and physics,	Key ideas Biology	Key ideas-Physics	Chemistry	Biology and chemistry	Chemistry
Core Knowledge:	Particles	Cells	Energy Forces	Mixtures-	Reproduction- . Atoms	Periodic Table
Core skills: Evaluation, Describe, explain etc	Explain the processes of evaporation, condensation, diffusion, conduction and convection linked to particle model	Describe and explain the differences between types of cells, use of a microscope and how an organism functions.	Describe and explain advantages between renewable and non-renewable energy resources, energy changes in devices, draw Sankey diagrams and calculate efficiency. Explain how objects move linked to resultant forces, friction and Hooke's Law	Name equipment used and describe practical methods to separate mixtures. Apply knowledge to a range of scenarios.	Define key terms linked to reproduction and atoms. Describe and explain function of male and female reproductive organs linked to fertilisation, gestation and birth. Describe, compare and evaluate theories of the atom. Use chemical equations to represent reactions.	Describe and explain differences in the Periodic table ideas. Predict and describe reactions of Group 1,7 and 0. Explain reactivity of Group 1,7 and 0
Title of Assessment Quiz.	50QQ QWC	50QQ QWC in progress test 1	50QQ QWC- progress test 2	50QQ QWC	50QQ	50QQ
Title of the Quality of Written Communication Task (QWC)	QWC- Describe and explain how to work out the density of regular and irregular shape	QWC- Progress test 1 Describe and explain how to make a slide of a cell sample	QWC-Describe the advantages and disadvantages in using wind energy to generate electricity.	QWC- Describe a method to identify colours in ink		Optional time permitting. QWC- Describe the reactivity in Group 1 and 7
Resources:	Glossary Booklet Knowledge Organiser	Glossary Booklet Knowledge Organiser	Glossary Booklet Knowledge Organiser	Glossary Booklet Knowledge Organiser	Glossary Booklet Knowledge Organiser	Glossary Booklet Knowledge Organiser
Examinations:			Progress Test 1			Progress Test 2

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8	Biology and chemistry	Biology	Physics	Chemistry	Chemistry	Biology
Core Knowledge:	Food and nutrition Combustion-	Respiration, muscles, bones and fermentation	Electricity Waves	Acids and alkalis- Metals and their uses	Chemical reactions	Photosynthesis-Ecosystems
Core skills: Evaluation, Describe, explain etc	Define key terms linked to digestion and combustion. Describe functions of organs in digestive system and explain processes with digestion. Combustion- explain what combustion is and the production of carbon dioxide by human activity and the impact on climate.	Define key terms. Describe processes and explain links between respiration, muscles, bones and fermentation.	Define key terms and identify equipment used in electrical circuits. Describe trends in current, potential difference and resistance in a circuit Define key terms in Waves topic. Describe and evaluate waves and uses.	Define key terms in acids and alkali topic and metals and their uses. Describe chemical reactions involving acids and alkalis using equations. Describe and compare properties, extraction of and uses of metals.	Define key terms linked to chemical reactions. Describe chemical reactions using word and symbol equations.	Define key terms linked to photosynthesis and ecosystems. Describe and explain processes linked to photosynthesis. Describe data collection methods and analyse information.
Title of Assessment Quiz.	50QQ QWC	50QQ QWC	50QQ QWC-	50QQ QWC	50QQ	50QQ
Title of the Quality of Written Communication Task (QWC)	Describe how a student could test cow's milk to show it contains protein and starch	Progress test 3- Greenhouse affect		QWC Describe a method to identify a substance as alkali, acid or neutral.	Progress test 4- electricity waves	QWC- optional time permitting
Resources:	Glossary Booklet Knowledge Organiser	Glossary Booklet Knowledge Organiser	Glossary Booklet Knowledge Organiser	Glossary Booklet Knowledge Organiser	Glossary Booklet Knowledge Organiser	Glossary Booklet Knowledge Organiser
Examinations:			Progress Test 3			Progress Test 4

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9	<i>Phy/Chem/Bio</i>	<i>Bio/Phy</i>	<i>Chem/Bio</i>	Phys/Chem	Chem/phy	Chem/Blo
Core Knowledge:	Energy+ energy resources History of the atmosphere Environmental science	Transport in animals +plants Particles	Rates of reaction Health + disease	Waves Crude oil	Chemical reactions Electromagnetic waves	Periodic Table Genetics + evolution
Core skills:	Define key terms linked to each topic Describe key features of processes, compare and evaluate situations applying scientific knowledge in a range of scenarios linked to exam style questions.	Define key terms linked to each topic Describe key features of processes applying scientific knowledge in a range of scenarios linked to exam style questions.	Define key terms linked to each topic Describe key features of processes, compare and evaluate situations, applying scientific knowledge in a range of scenarios linked to exam style questions.	Define key terms linked to each topic Describe key features of processes, compare and evaluate situations applying scientific knowledge in a range of scenarios linked to exam style questions.	Define key terms linked to each topic Describe key features and uses of processes, applying scientific knowledge in a range of scenarios linked to exam style questions.	Define key terms linked to each topic Describe key features, trends and patterns, compare and evaluate situations applying scientific knowledge in a range of scenarios linked to exam style questions.
Title of Assessment Quiz.	50QQ	50QQ	50QQ	50QQ	50QQ	50QQ
Title of the Quality of Written Communication Task (QWC)	Extended exam question	Extended exam question	Extended exam question	Extended exam question	Extended exam question	Extended exam question
Resources:	Glossary Booklet Knowledge Organiser PPQ	Glossary Booklet Knowledge Organiser PPQ	Glossary Booklet Knowledge Organiser PPQ	Glossary Booklet Knowledge Organiser PPQ	Glossary Booklet Knowledge Organiser PPQ	Glossary Booklet Knowledge Organiser PPQ
Examinations:			Progress Test 5			Progress Test 6

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KS4 GSCE Exam Board: AQA Trilogy CS BIOLOGY	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
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Core Knowledge:	Preventing + treating disease Non communicable disease	Photosynthesis	Respiration	Adaptations, interdependence + competition	Organising an ecosystem	Biodiversity and ecosystems
Core skills:	Define key terms linked to each topic Describe key features of processes, compare and evaluate situations applying scientific knowledge in a range of scenarios linked to exam style questions.	Define key terms linked to photosynthesis Describe key features of processes, compare and evaluate situations applying scientific knowledge in a range of scenarios linked to exam style questions. Complete required practical	Define key terms linked to respiration Describe key features of processes, compare and evaluate situations applying scientific knowledge in a range of scenarios linked to exam style questions.	Define key terms linked to adaptations, interdependence + competition Describe key features of processes, compare and evaluate situations applying scientific knowledge in a range of scenarios linked to exam style questions.	Define key terms linked to ecosystems Describe key features of processes, compare and evaluate situations applying scientific knowledge in a range of scenarios linked to exam style questions.	Define key terms linked to each topic Describe key features of processes, compare and evaluate situations applying scientific knowledge in a range of scenarios linked to exam style questions. Complete required practical
Title of Assessment piece (mini test)	50QQ/end of topic test exam style questions	50QQ/end of topic test exam style questions	50QQ/end of topic test exam style questions	50QQ/end of topic test exam style questions	50QQ/end of topic test exam style questions	50QQ/end of topic test exam style questions
Title of the Quality of Written Communication Task (Essay, Practical write up)	Extended exam question(teacher marked)	Extended exam question(self assessed)	Extended exam question(teacher marked)	Extended exam question(self assessed)	Extended exam question(teacher marked)	Extended exam question(self assessed)
Resources:						
Examinations:	Examination 1		Examination 2		Examination 3	

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KS4 GCSE Exam Board: AQA Trilogy CS CHEMISTRY/	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
10						
Core Knowledge:	CS-Energy changes	CS- Structure + bonding	CS-Electrolysis	CS-Chemical calculations	CS- Rates of reactions + equilibrium	CS- Review topics from year 9 academic year 2019-2020
Core skills:	Define key terms linked to energy changes Describe key features of processes, compare and evaluate situations applying scientific knowledge in a range of scenarios linked to exam style questions. Complete Required practical	Define key terms linked to structure and bonding. Describe key features of in each type of bonding, describing and explaining properties of structures, applying scientific knowledge to a range of scenarios linked to exam style questions.	Define key terms linked to electrolysis. Describe and explain key features of processes, applying scientific knowledge to a range of scenarios linked to exam style questions. Complete Required practical.	Define key terms linked to chemical calculations Use formulas to calculate solutions and apply scientific knowledge to a range of scenarios linked to exam style questions. Complete Required practical.- SEPARATE ONLY	Define key terms linked to rates of reactions and equilibrium. Describe and explain factors which affect rate of reactions. applying scientific knowledge to a range of scenarios linked to exam style questions. Complete Required practical.	Define key terms linked to all topics- crude oil, The earth's atmosphere, Earth's resources. Describe and explain factors which affect rate of reactions. applying scientific knowledge to a range of scenarios linked to exam style questions. Complete Required practical if required.
Title of Assessment piece (mini test)	50QQ/end of topic test exam style questions	50QQ/end of topic test exam style questions	50QQ/end of topic test exam style questions	50QQ/end of topic test exam style questions	50QQ/end of topic test exam style questions	50QQ/end of topic test exam style questions
Title of the Quality of Written Communication Task (Essay, Practical write up)	Extended exam question(teacher marked)	Extended exam question(self assessed)	Extended exam question(teacher marked)	Extended exam question(self assessed)	Extended exam question(teacher marked)	Extended exam question(self assessed)
Resources:						
Examinations:	Examination 1		Examination 2		Examination 3	

St Edmund Campion Catholic School 5 Year Curriculum Summary: SUBJECT -SCIENCE

KS4 GCSE Exam Board: AQA Trilogy CS Physics	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
10						
Core Knowledge:	Radioactivity	Radioactivity/Electricity	Electricity/ Electromagnetism	Electromagnetism	Forces in balance	Forces in balance(continued)
Core skills:	Define key terms/formula linked to radioactivity. Describe key features of processes, complete calculations, interpret graphs, compare and evaluate situations and uses, applying scientific knowledge in a range of scenarios linked to exam style questions. Complete Required practical	Define key terms/diagrams/formula linked to radioactivity and electricity. Describe key features of processes, complete calculations, interpret graphs, compare and evaluate situations and uses, applying scientific knowledge in a range of scenarios linked to exam style questions. Complete Required practical	Define key terms/formula linked to electricity and electromagnetism. Describe key features of processes, complete calculations, interpret graphs, compare and evaluate situations and uses, applying scientific knowledge in a range of scenarios linked to exam style questions. Complete Required practical	Define key terms/formula linked to electromagnetism. Describe key features of processes, complete calculations, interpret graphs, compare and evaluate situations and uses, applying scientific knowledge in a range of scenarios linked to exam style questions. Complete Required practical	Define key terms/formula linked to forces in balance. Describe key features of processes, complete calculations, interpret graphs and diagrams, compare and evaluate situations and uses, applying scientific knowledge in a range of scenarios linked to exam style questions. Complete Required practical	Define key terms/formula linked to forces in balance. Describe key features of processes, complete calculations, interpret graphs and diagrams, compare and evaluate situations and uses, applying scientific knowledge in a range of scenarios linked to exam style questions. Complete Required practical
Title of Assessment piece (mini test)	50QQ/end of topic test exam style questions	50QQ/end of topic test exam style questions	50QQ/end of topic test exam style questions	50QQ/end of topic test exam style questions	50QQ/end of topic test exam style questions	50QQ/end of topic test exam style questions
Title of the Quality of Written Communication Task (Essay, Practical write up)	Extended exam question(teacher marked)	Extended exam question(self assessed)	Extended exam question(teacher marked)	Extended exam question(self assessed)	Extended exam question(teacher marked)	Extended exam question(self assessed)
Resources:						
Examinations:	Examination 1		Examination 2		Examination 3	

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KS4 GSCE Exam Board: AQA TRILOGY CS BIOLOGY	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
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Core Knowledge:	Nervous system Hormonal system	Homeostasis	Reproduction Variation + evolution	Genetics	Review and revision of topics from exam analysis of mocks.	GCSE exam paper practice + review Required practical.
Core skills:	Define key terms linked to each topic Describe key features of processes, compare and evaluate situations applying scientific knowledge in a range of scenarios linked to exam style questions.	Define key terms linked to homeostasis Describe key features of processes, compare and evaluate situations applying scientific knowledge in a range of scenarios linked to exam style questions.	Define key terms linked to each topic. Describe key features of processes, compare and evaluate situations applying scientific knowledge in a range of scenarios linked to exam style questions.	Define key terms linked to Genetics Describe key features of processes, compare and evaluate situations applying scientific knowledge in a range of scenarios linked to exam style questions.	Use KO, modelled questions in lessons and WTM as well as retrieval practice to attempt a range of exam questions in preparation for GCSE examinations. Review required practicals for paper 1 and 2 mock.	Lesson and WTM to attempt a range of exam questions in preparation for GCSE examinations. Review required practicals for paper 1 and 2 mock.
Title of Assessment piece (mini test)	50QQ/end of topic test exam style questions	50QQ/end of topic test exam style questions. Mock exam 1	50QQ/end of topic test exam style questions	50QQ/end of topic test exam style questions	Practice exam questions reviewing mark schemes GCSE exam papers	Practice exam questions reviewing mark schemes. Gcse exam papers
Title of the Quality of Written Communication Task (Essay, Practical write up)	Extended exam question(teacher marked)	Extended exam question(reviewed from mock exam 1)	Extended exam question(teacher marked)	Extended exam question(self assessed)	GCSE bio/che/phys exam papers	GCSE bio/chem/phys papers
Resources:						
Examinations:		Mock examinations		Mock Examinations	GCSE/BTEC public examinations	GCSE/BTEC public examinations

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KS4 GCSE Exam Board: AQA TRILOGY CS CHEMISTRY	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
11						
Core Knowledge:	CS- Chemical analysis	Revision of Paper 1 topics	Review/Revise Paper 2 topics	Review/Revise Paper 2 topics	Review and revision of topics from exam analysis of mocks.	GCSE exam paper practice + review Required practical.
Core skills:	Define key terms linked to chemical analysis Describe key features of processes, compare and evaluate situations applying scientific knowledge in a range of scenarios linked to exam style questions. Complete Required practical	Use KO, modelled questions and retrieval practice to attempt a range of exam questions in preparation for mock examinations. Review required practicals for paper 1 mock.	Use KO, modelled questions and retrieval practice to attempt a range of exam questions in preparation for mock examinations. Review required practicals for paper 2 mock.	Use KO, modelled questions and retrieval practice to attempt a range of exam questions in preparation for mock examinations. Review required practicals for paper 2 mock.	Use KO, modelled questions in lessons and WTM as well as retrieval practice to attempt a range of exam questions in preparation for GCSE examinations. Review required practicals for paper 1 and 2 mock.	Lesson and WTM to attempt a range of exam questions in preparation for GCSE examinations. Review required practicals for paper 1 and 2 mock.
Title of Assessment piece (mini test)	50QQ/end of topic test exam style questions	Mock examination 1	Range of exam style questions	Range of exam style questions	Range of exam style questions with mark schemes	Range of exam style questions with mark schemes
Title of the Quality of Written Communication Task (Essay, Practical write up)	Extended exam question(teacher marked)	Review of extended questions in mock		Review of extended questions for paper 2	GCSE bio/che/phys exam papers	GCSE bio/chem/phys papers
Resources:						
Examinations:		Mock examinations		Mock Examinations	GCSE/BTEC public examinations	GCSE/BTEC public examinations

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KS4 GCSE Exam Board: AQA TRILOGY CS CHEMISTRY	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
11						
Core Knowledge:	Forces in motion	Forces in motion	Advanced heating of materials	Energy calculations	Review and revision of topics from exam analysis of mocks.	GCSE exam paper practice + review Required practical.
Core skills:	Define key terms/formula linked to forces in motion. Describe key features of processes, complete calculations, interpret graphs and diagrams, compare and evaluate situations and uses, applying scientific knowledge in a range of scenarios linked to exam style questions. Complete Required practical	Define key terms/formula linked to forces in motion. Describe key features of processes, complete calculations, interpret graphs and diagrams, compare and evaluate situations and uses, applying scientific knowledge in a range of scenarios linked to exam style questions. Complete Required practical	Define key terms/formula linked to this topic.. Describe key features of processes, complete calculations, interpret graphs and diagrams, compare and evaluate situations and uses, applying scientific knowledge in a range of scenarios linked to exam style questions. Complete Required practical	Learn, retrieve and use formulae for all energy calculations. Applying scientific knowledge in a range of scenarios linked to exam style questions.	Use KO, modelled questions in lessons and WTM as well as retrieval practice to attempt a range of exam questions in preparation for GCSE examinations. Review required practicals for paper 1 and 2 mock.	Lesson and WTM to attempt a range of exam questions in preparation for GCSE examinations. Review required practicals for paper 1 and 2 mock.
Title of Assessment piece (mini test)	50QQ/end of topic test exam style questions	50QQ/end of topic test exam style questions. Mock exam 1	50QQ/end of topic test exam style questions	50QQ/end of topic test exam style questions	Range of exam style questions with mark schemes	Range of exam style questions with mark schemes
Title of the Quality of Written Communication Task (Essay, Practical write up)	Extended exam question(teacher marked)	Extended exam question(with mock reviewed)	Extended exam question(teacher marked)	Extended exam question(self assessed)	GCSE bio/che/phys exam papers	GCSE bio/chem/phys papers
Resources:						
Examinations:		Mock examinations		Mock Examinations	GCSE/BTEC public examinations	GCSE/BTEC public examinations

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