

GCSE Revision Advice				
Subject: History	Already completed: 2 Controlled Assessments (25%)		Marks (if known):	
Key Dates:				
<ul style="list-style-type: none"> Monday 3rd June (1:30 – 3:30) – History paper 1 (50%) (resit for some students) Monday 10th June (9:15- 10:30) – History paper 2 (25%) 				
Topics to revise: Paper 1				
1. Life in Nazi Germany	Question 2			
2. Nazi Foreign Policy	3			
3. Ireland 1921 -40	Question 10 and 11			
Topics to Revise Paper 2				
1.Cold war in eastern Europe 1945 - 68	2.Korean war	3.Cuban Missile Crisis	4.Vietnam war	5. Cold war in eastern Europe 1968- 91
Teacher advice:				
<p>For those doing the resit of paper 1 you should have all your notes for each of the 4 topic areas. You need to start going through them and learning these off. You could be practicing past paper questions against the clock at home as part of your revision. All these notes are on RM shared / History / GCSE 2013 folder. Each student should already have these on a memory pen</p> <p>For paper 2 you should be learning off the 5 essays and trying to write these out against the clock. You can be practicing sources and marking these yourself using the mark schemes from the CCEA website. Again all notes are on RM shared / History / GCSE 2013 folder. Each student should already have these.</p> <p>Easter is crucial – your revision needs to be well under way during this period</p>				

GCSE Revision Advice		
Subject: ICT	Already completed: Controlled Assessments Unit 1 – Database, Spreadsheets, Powerpoint. Unit 2 – GameMaker / Website Mark Allocation : 60%	Marks (if known): For student to complete
Key Dates: <ul style="list-style-type: none"> Thursday 6th June ICT Unit 3 (2 hours) 9.15 – 11.15 		
Topics To revise for Unit 3:		
1. Input and Output	8. Data Networks	15. Billing Systems
2. Storage	9. Digital Communication Methods	16. Virtual Reality and Simulation
3. Memory	10. Digital Communication Security	17. Computer Control and Data Logging
4. System Software	11. Mobile Digital Communication	18. Education
5. Gathering Data	12. Internet and Intranet	19. Employment
6. Data Checking	13. Internet Services	20. Leisure
7. Data Portability	14. Electronic Monetary Processing	21. Globalisation, Health and Safety, Legal Implications, Environmental Implications of ICT
Teacher advice: <p>Complete Questions from Textbook, Use Solutions from http://www.hodderplus.co.uk/myrevisionnotes/</p> <p>Complete Past Paper booklets. 2012, Specimen Paper, 2011, 2010. 2012 was the first year of the new specification. Some Questions on papers 2011 and 2010 are no longer examined.</p> <p>Use Teacher completed Past Paper mark scheme booklets. Available end of February 2013</p> <p>Use documents 1. Ccea_ict_core_notes.doc 2. UNIT 1 TOOLS AND APPLICATIONS THEORY.doc. These are on the school VLE, and should be printed.</p> <p>Easter revision is crucial</p>		

GCSE Revision Advice		
Subject: Physics	Already completed: 1 or 2 Controlled Assessments (25%)	Marks (if known): For student to complete
Key Dates: <ul style="list-style-type: none"> • February 2013 – Controlled Assessment 1 (25%) • March 2013 – Second CA if required. 		
Topics to revise:		
1. Waves		
2. Sound		
3. Light		
4. Static electricity		
5. Current electricity		
6. Earth in space		
Skills to be tested: <ul style="list-style-type: none"> • In CA planning and practical skills. • Exam technique prose and numerical style questions. • Knowledge of formulae. • LQS method. 		
Teacher advice: Always practice writing out the formulae with the appropriate units. Know the laws, principles and definitions. Complete Past Papers against the clock and get used to working to a deadline. Always score your work and compare it to the grade boundaries. Preparation over Easter is crucial to success.		

GCSE Revision Advice		
Subject: Technology AQA	Already completed: Theory Test (40%)	Marks (if known):
Key Dates: <ul style="list-style-type: none"> 19th April – Coursework Complete 60% 		
Teacher advice: Complete each page of folder to the highest standard possible. Use appropriate software as directed by the class teacher. Find time after school from 3.20 to 4.30 on Tuesday and Thursday evenings to complete coursework in workshop.		

GCSE Revision Advice		
Subject: Technology CEA	Already completed: Theory Test (20%) CA (20%)	Marks (if known):
Key Dates: <ul style="list-style-type: none"> 25th March – Coursework Complete 40% 		
Teacher advice: Complete each page of folder to the highest standard possible. Use appropriate software as directed by the class teacher. Find time after school from 3.20 to 4.30 on Tuesday and Thursday evenings to complete coursework. Ensure you have a full set of notes, a copy of the syllabus and access to PPQs and marks schemes.		

GCSE Revision Advice		
Subject: Religion	Already completed: 50% completed at end of Year 11	Marks (if known): Pupil will complete
Key Dates: <ul style="list-style-type: none"> Tuesday 21st May 2013 		
Topics to revise: <ul style="list-style-type: none"> Christian Values Christian Marriage Christian Vocation The Sacrament of Reconciliation Christian Healing Christian responses to global issues 		
Skills to be tested: <ul style="list-style-type: none"> Knowledge of Church teaching from scripture An understanding of why the Church teaches what it does An ability to present your own opinion and be able to justify it 		
Teacher advice: Your work booklet contains the main information that you need to know. Go through this booklet and highlight Church teaching on each topic. You must be able to quote this. Be able to answer all the questions out of the revision booklet.		
All notes and revision booklets for both Year 11 and Year 12 are located on both RM Shared documents and VLE!		

GCSE Revision Advice		
Subject: French	Already completed: 3 Controlled Assessments (45%)	Marks (if known):
Key Dates: <ul style="list-style-type: none"> • Written Controlled Assessment (15%) – Wednesday 6th March • Monday 13th May (1:30pm) – French Listening (20%) • Thursday 13th June (9:15am) – French Reading (20%) 		
Topics to revise:		
1. Numbers	8. Jobs / Future Career	15. Directions / positions
2. Places and directions	9. World problems	16. Technology
3. Hobbies	10. House and home	17. Part time job
4. Weather	11. Daily routine	18. Family
5. Health and Illness	12. Household chores	19. School
6. Festivals	13. Media	20. Travel and holidays
7. Environment	14. Town v country	21. Sports
Skills to be tested: <ul style="list-style-type: none"> • Listening • Reading 		
Teacher advice: <ol style="list-style-type: none"> 1) Go through the vocabulary sections in the 4th and 5th year booklets and learn this vocabulary or download the essential GCSE vocabulary document from the VLE (<i>this is the same vocabulary</i>). Do not spend time learning vocabulary that you already know – focus on what you don't know! Make a list of this vocabulary, learn it and get someone to test you from French to English. 2) Learn the vocabulary on the synonyms document. This vocabulary is essential for the reading and listening papers. 3) Complete the additional reading and listening activities which are on the VLE. 4) Re-do any past paper for additional practice and see if you can do better than the first time you did it. <p>Easter is crucial – you must have revised the vocabulary during this important period</p>		

GCSE Revision Advice		
Subject: Spanish	Already completed: 3 Controlled Assessments (45%)	Marks (if known): For student to complete
Key Dates: <ul style="list-style-type: none"> • Wednesday 27th February – Controlled Assessment 4 (15%) • Friday 17th May (1:30) – Spanish Listening (20%) • Tuesday 28th May (1.30) – Spanish Reading (20%) 		
Topics to revise:		
1. Numbers	8. Jobs / Future Career	15. Directions / positions
2. Places and directions	9. World problems	16. Technology
3. Hobbies	10. House and home	17. Part time job
4. Weather	11. Daily routine	18. Family
5. Health and Illness	12. Household chores	19 School
6. Festivals	13. Media	20. Travel and holidays
7. Environment	14. Town v country	21. Sports
Skills to be tested: <ul style="list-style-type: none"> • Listening • Reading 		
Teacher advice: Go through the 4 th year booklet and the Essential Vocabulary for GCSE booklet. Do not spend time learning vocabulary that you already know – focus on what you don't know! Make a list of this vocabulary, learn it and get someone to test you from Spanish to English. Complete Past Paper Reading and Listening booklets Easter is crucial – you must have revised the vocabulary during this important period		

GCSE Revision Advice		
Subject: Music	Already completed: Controlled Assessment (30%) 2 compositions to be submitted by end of March	Marks (if known):
Key Dates: <ul style="list-style-type: none"> • March 30th – Controlled Assessment Composition Folio Submitted (15%) • April 16th May 1st (date TBC) – Performing (solo, ensemble & viva) (35%) • Friday 24th May Music Listening Paper (35%) 		
Topics to revise:		
1.Repeated Rhythmic Patterns – Mars/Dies Irae/Canon/Symphony No.7 mvt.II	2. Incidental Music – Davy Jones Theme/ Morning & Hall of the Mountain King/Dr Who/Overture	3. Vocal Music – Messiah (recitatives/chorus/aria)/ Run/Erl King/One Short Day & What is this feeling
Knowledge & Listening Skills to be tested: - For all set works: <ul style="list-style-type: none"> • Title of movement, title of work, composer, period/dates, instruments, keys & time signatures, features specific to AoS (e.g. what are the ostinatos?, how does it work as an incidental piece?, how are the words set?), compositional features (melody/rhythm/harmony/dynamics/etc.), stylistic features (why is Baroque?/20th Century/etc.), features of interest (what helps the music exciting, which of two versions do you prefer? – give music reasons why) One question on Music Industry: <ul style="list-style-type: none"> • Factors affecting it – technology, employability, financial, etc. – from given data/statement – address the issue! Holistic Knowledge: <ul style="list-style-type: none"> • Use other notes to reinforce music vocabulary – use the correct terms as much as possible in your answers 		
Teacher advice: <ul style="list-style-type: none"> • Highlight/reduce CCEA notes on set works – compile own key points/mind maps on each set work • Listen to each set work actively and analyse almost as a running commentary • Predict type of questions from simple factual recall (name of work/composer) to aural skills (what instruments are playing, type of cadence, devices, etc.) to opinions/analysis (what is happening, how, why?) • Keep actively listening to genres you don't usually listen to – orchestral, choral, jazz, etc. • Prepare fully for performance – easy marks to be gained – aim for full marks 		

GCSE Revision Advice		
Subject: Drama	Already completed: 2 Controlled Assessments (60%) Completed Early March	Marks (if known): Writing: 40%
<ul style="list-style-type: none"> • Key Dates: March Practical Examination- May Written Paper: 40% 		
Topics to revise:		
Costume Question: Blood Bros. 8% 15 Mins.	Refer closely to Handouts.	Status-Time period-6-8 Items (Material,Colour Reason) One Paragraph Justify.
Rehearsal /Improvisation Blood Brothers 20% 45 Mins.	Read over your text and revise the detailed work you did on Improvisation and Rehearsal Techniques.	
Scripted:		
Cuckoos's Nest		
12%- 30 mins.		
Skills to be tested: Written All answers must be presented as follows: Paragraphed. Appropriate use and Spelling of Key Vocabulary. Grammar and Punctuation must be up to standard.		
Teacher advice: (1)Complete 2 Costume Questions for: Mickey-Edward-Mr. Lyons-Mrs. Johnstone Ensure that you cover all time periods: 1969-1975-1980-1986 (2)Prepare 1-2 Improvised Rehearsals for the 4 leading characters and demonstrate how these helped in the Development of the Character. Select different parts of the play. Prepare 1-2 Rehearsal Strategies for the main characters – at different parts of the play. Demonstrate how these helped develop your Character through Interpretation- Voice-Movement--Facial Expression. (3) Prepare 100 words on your Research for Cuckoo's Nest Prepare a detailed Answer on how you used Voice-Movement-Facial Expression at 2 Key moments of Action and Quoting specific Text Refer closely to all Handouts detailing the Best Responses. Do 2 Timed Past Papers over the Easter Break: 1hrs. 30 Mins for each paper.		
<u>LINES MUST BE LEARNED OVER MID-TERM</u>		

GCSE Revision Advice		
Subject: Irish	Already completed: 3 Controlled Assessments (45%)	Marks (if known): For student to complete
<p>Key Dates:</p> <ul style="list-style-type: none"> • Week beginning 8th April – Controlled Assessment 4 (15%) Writing • Wednesday 15th May (9am) – Irish Listening (20%) • Wednesday 22nd May (9am) – Irish Reading (20%) 		
<p>Topics to revise:</p> <p>The topic of ‘The Individual’. This topic will form the basis of your final controlled assessment which will be writing task to be completed after Easter. You must use all the resources available on RM Shared Documents.</p> <p>Skills to be tested:</p> <ul style="list-style-type: none"> • Writing – Controlled Assessment No. 4 • Listening (see dates above) • Reading (see dates above) 		
<p>Teacher advice:</p> <p>Make sure you fully understand all the vocabulary in the ‘Individual’ document. You must use personal opinions and justifications, as well as a wide range of idiomatic language in your final writing task.</p> <p>Revisit all your past paper reading and listening papers. Complete any outstanding exercises in the CCEA GCSE Irish Text book.</p> <p>Easter is crucial – you must have perfect your writing task during the Easter Holidays.</p>		

GCSE Revision Advice		
Subject: Additional Mathematics	100% Examination There is no coursework or controlled assessment in Additional Mathematics. Use of a calculator is permitted in both written papers.	
Key Dates: <ul style="list-style-type: none"> • Tuesday 21st May (1.30pm – 3.30pm) – Paper 1 – Pure Mathematics (50%) • Friday 24th May (1:30pm – 3.30pm) – Paper 2 – Mechanics & Statistics (50%) 		
Topics to revise:		
Pure Mathematics (50%)	Mechanics (25%)	Statistics (25%)
1. Algebraic Fractions	1. Velocity/ Time Graphs	1. Classifying & Illustrating Statistical Data
2. Three Simultaneous Equations	2. Uniform Acceleration Formulae	2. Summary Measures
3. Trig Graphs	3. Newton's Law	3. Time Series (Moving Averages)
4. Transformation of Graphs	4. Vectors	4. Correlation & Regression
5. Sine & Cosine Rule	5. Equilibrium of Particles & Rigid Bodies	5. Probability
6. Three Dimensional Trigonometry		
7. Logarithms		
8. Matrices		
9. Differentiation		
10. Integration		
Teacher advice: Go through the notes and worked examples. Additional Mathematics is a doing subject the more questions you do the better you will become. Complete all Past Paper questions within your booklet and also the 2007 – 2012 Past Papers again. Examination practice is crucial.		

GCSE Revision Advice		
Subject: Mathematics	Already completed: Module T3 45%	Marks (if known): T3:
Key Dates: <ul style="list-style-type: none"> Tuesday 11th June (a.m.) – Module (45%) [For students repeating module only] Friday 14th June (a.m.) – Completion Paper (55%) [Non-calculator paper followed directly by calculator paper] 		
Topics to revise:		
1. Surds	9. Probability	17. Nets, Plans, Elevations
2. Standard Form	10. Tree Diagrams	18. Loci & Constructions
3. Ratio	11. Transformations	19. Inequalities
4. Finance	12. Changing the subject	20. Algebraic Fractions
5. Recurring decimal to fraction	13. Perimeter, Area and Volumes	21. Substituting values into formulae
6. Indices	14. Dimensions	22. Metric & Imperial Units
7. Proportion	15. Graphs	
8. Expanding & Factorising, Equations	16. Compound Measures & Travel Graphs	
Skills to be tested: Number, Algebra, Shape, Space & Measures, Data Handling through <ul style="list-style-type: none"> Non-calculator Paper Calculator Paper 		
Teacher advice: <u>Mathematics is learnt by ‘doing’ questions!</u> Do not spend time practising topics that you already have mastered – focus on what you don’t know! Make a list of formulae to be memorised, learn it and get someone to test you from it. Complete Past Paper booklet and revise through papers that have been corrected and returned. Download new T6 papers from RMSHared. Easter is crucial – you must have revised during this important period. Ensure that you have all necessary equipment – calculator, protractor, compass, ruler, pencil, rubber, sharpener & pens.		

GCSE Revision Advice		
Subject: Geography	Already completed: Paper 1 – Theme A, B and C (4 th year module, 37.5%) Controlled Assessment (25%)	Marks (if known):
Key Dates: <ul style="list-style-type: none"> • Tuesday 4th June – Paper 1 – Theme A, B, C (4th yr module) 1.30pm-3pm • Wednesday 12th June – Paper 2 – Theme D, E, F (5th yr module) 9.15am-10.45am 		
Topics to revise: Paper 1 – Theme A, B, C (4 th yr module) all key words and a detailed revision list can be found on the VLE and also on RM shared documents, Geography, GCSE folder. Paper 2 – Theme D, E, F (5 th Year module) - all key words and a detailed revision list can be found on the VLE and also on RM Shared documents, Geography, GCSE folder.		
Teacher advice: <ul style="list-style-type: none"> • Remember to follow the rule – Statement, Elaborate, Consequence. • Case study material – facts, figures, place names, specific details to places are needed. • Remember that the term evaluate refers to both positives and negatives • Always read the question, there may be several parts to one question eg you may be asked you to evaluate the sustainability of strategies. • Use the Past Paper questions on the CCEA website to help with revision • Good Luck 		

GCSE Revision Advice		
Subject: LLW	Already completed: 1 Controlled Assessment (30%) 2 exams (27%)	Marks (if known): For student to complete
Key Dates: <ul style="list-style-type: none"> • Ongoing – Controlled Assessment 2 (30%) • Friday 10th May (9.15) – Employability exam (13%) 		
Topics to revise: all sections relevant to Employability in textbook; : ongoing preparation / research for Controlled Assessment		
Skills to be tested: <ul style="list-style-type: none"> • Writing • Reading • Application of knowledge 		
Teacher advice: Controlled Assessment: do thorough preparation, as directed by your teacher, for the various individually completed controlled sections. Ensure you bring relevant and appropriate materials when necessary.	Exam: ensure notes and homework are completed fully, on time and are in class at all times; <ul style="list-style-type: none"> - focus on exam style questions for each section, honing your technique; - prepare properly and fully complete any past paper exams we do in class or as homework. 	General advice: ask questions if you are ever in doubt; read exam questions carefully and answer in a relevant manner. There is still 43% of your final mark available!

GCSE Revision Advice		
Subject: Business Studies	Already completed: Unit 1 (35%) Controlled Assessment (25%)	Marks (if known): August 2012 Not known yet
<p>Key Dates:</p> <ul style="list-style-type: none"> • Friday 24th May (9:15) – Unit 2 Business Development (40%) <ul style="list-style-type: none"> ○ 1 hr 40 minutes ○ Format: three structured questions with an incline of difficulty (See past paper questions) • Tuesday 21st May (9.15) – Unit 1 Business Start Up (Repeat students) (35%) <ul style="list-style-type: none"> ○ 1hr 20 minutes ○ Format: four structured questions (See past paper questions) 		
Topics to revise:		
Unit 2 – Business Development	Unit 1 (Repeat students only) Business Start Up	
1. Finance	1. Business Start Up	
2. Managing People	2. Production	
3. Business Growth	3. Marketing	
4. Business Plan		
<p>Skills to be tested:</p> <p>You will be tested on your ability to:</p> <ul style="list-style-type: none"> • Recall, select and communicate your knowledge and understanding of concepts, issues and terminology (AO1); • Apply skills, knowledge and understanding in a variety of contexts (AO2); and • Analyse and evaluate evidence, make reasoned judgements and present appropriate conclusions (AO3). 		
<p>Teacher advice:</p> <p>Complete all the past papers and revision questions (The revision questions for both examination papers have been emailed to all students C2k accounts, stored in Shared Documents and VLE).</p> <p>Use Chapters 1, 2, 3 & 4 of the textbook to assist with your preparations for the Unit 1 examination.</p> <p>Use Chapters 5, 6 & 7 of the textbook to assist with your preparations for the Unit 2 examination.</p> <p>Easter is crucial – you must revise thoroughly during this important period.</p>		

GCSE Revision Advice for biology...

Subject:

DAS biology
Discrete Biology

Already completed:

One module paper- year 11

Marks (if known):

For student to complete

Key Dates:

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DAS Biology:

Unit 1- 14th May [Repeat module];

Unit 2-5th June

Discrete Biology:

Unit 1- 5th June; [Repeat module];

Unit 2- 18th June.

Topics to revise:

As given in the specification.

Teacher advice:

Controlled assessment: Ongoing for next three weeks.

Students need to break units of work into sub units and make revision notes. They should use their workbooks to guide their revision and improve on exam technique. The learning of the notes is imperative to success.

GCSE Revision Advice		
Subject: ART	Already completed: Unit 1 – 60%	To be completed Unit 2 – 40%
Key Dates: <ul style="list-style-type: none"> • Completion of Coursework portfolio (Unit1)– 18th Jan • Completion of final piece - 25th Jan • Completion of ESA Prep work(Unit 2) – 8th Mar • ESA Exam 10hrs – 11th -15th March • Exhibition Completed - 12th April 		
UNIT 2 – Ongoing		
<ul style="list-style-type: none"> ▪ 1st Hand Photos ▪ 4 x A3 or equivalent drawing sheets ▪ 2 x Experimental media/ techniques worksheet ▪ Adapting artist style worksheet/s ▪ Planning outcome worksheet/s ▪ Evaluation and notes on your Artwork presented on your worksheets 		
Teacher Advice: Unit 1 course work and final piece should be complete. Use the student scheme of work booklet for planning, describing and evaluating your work in Unit 1 & 2. Explanation for evaluation and notes for worksheets are in the booklet.		

to be completed
before ESA Exam 10hrs

GCSE Revision Advice		
Subject: Moving Image Arts	Already completed: <u>Unit 1:</u> Acquisition of Skills in Moving Image Production (20%)	Marks (if known):
Key Dates: <ul style="list-style-type: none"> • Wednesday 13th February – Mock MIA Examination • Friday 19th April – Unit 2 - Submission of Visual Studies Book & 2 minute Moving Image Product (40%) • May – Unit 3 - Online Examination (40%) 		
Topics to revise:		
3 Set Texts Wallace & Gromit in The Wrong Trousers (1993) Dir: Nick Park William Shakespeare’s Romeo & Juliet (1996) Dir: Baz Luhrmann Young Frankenstein (1974) Dir: Mel Brooks		
Skills to be tested: <ul style="list-style-type: none"> • Understanding of Camera Techniques (camera framing & movement), Editing, Lighting, sound, mis-en-scene, genre conventions, styles & techniques. • Knowledge of 3 set texts. 		
Teacher advice: <u>Visual Studies Workbook</u> Ensure that all elements of your Visual Studies Workbook are of a high standard. <ul style="list-style-type: none"> • Storyline • Screen Play • Storyboard • Shot List • Location Shots • Visual References • Planning for lighting, props, costume, mis-en-scene. Consistency should be shown throughout. Eg: Storyboards should match the shot list which should match the screen play.		
Easter is crucial – you must have all footage complete before Term 3. Footage should be filmed, evaluated and filmed again to ensure a quality production.		
<u>Online Examination</u> Go through the GCSE booklet for useful terminologies.		
Revise Past Paper questions on the CCEA website and sample questions supplied.		

GCSE Revision Advice		
Subject: Physical Education	1 Controlled Assessment (20%) 2 Practical (40%) 3 Theory (40)	Marks (if known):
Topics to revise:		
1 Concepts	8. Health and safety	
2. Key Influences	9.Exercise and Training Programmes	
3. Impact of exercising and training	10.Exercise and training sessions	
4. Methods	11Individual performance in Physical activity	
5. Principles		
6. Monitoring and Assessment		
7. Effects		
Teacher advice: Make spider diagrams based on notes and text book. Use VLE for past papers and mark schemes.		

GCSE Revision Advice		
Subject: GCSE Chemistry	Already completed: Unit 1: 33%.	Marks (if known): For student to complete
Key Dates: <ul style="list-style-type: none"> • Currently carrying out practical controlled assessment (25%) finishes 29/2/13. • 20/6/13 Unit 2 GCSE Chemistry 42% 		
Topics to revise: Unit 2 exam		
Reactivity of Metals	Materials	
Water		
Different Chemical Reactions.		
Rates of Reaction.		
Non-Metals and their Compounds		
Quantitative Chemistry		
Organic Chemistry		
Skills to be tested: <ul style="list-style-type: none"> • Recall of Knowledge • Application of Knowledge 		
Teacher advice: Use the Learning Intentions from the front of the workbook as a reference point for revision. Spend more time on topics that you are less comfortable with. You must test yourself while revising, do not just read your notes. Complete all Past Papers.		

Learning Intentions for **Reactivity Series Of Metals**

I will be able to

recall the reactivity series of metals, to include K, Na, Ca, Mg, Al, Zn, Fe and Cu;		
describe the reactions of:		
– K, Na and Ca with cold water; and		
– Mg, Al, Zn and Fe with steam,		
and how to collect the gas produced, where appropriate;		
describe the reactions of Ca, Mg, Al, Zn, Fe and Cu with air (oxygen);		
explain and describe the displacement reactions of metals with other metal ions in solution;		
collect and/or analyse experimental data to predict where an unfamiliar element should be placed in the reactivity series or to make predictions about how it will react		
examine the relationship between the extraction of a metal from its ore and its position in the reactivity series: for example aluminium, a reactive metal, is extracted by electrolysis, and iron, a less reactive metal, by chemical reduction with carbon or carbon monoxide;		
know that the extraction of a metal from its ore (usually an oxide) requires the process of reduction;		
describe the extraction of iron from haematite, including:		
– <i>the production of the reducing agent;</i>		
– the reduction of haematite; and		
– <i>the removal of acidic impurities;</i> and		
<i>recognise and explain important oxidation and reduction reactions in iron manufacture.</i>		

Learning Intentions for **Rusting, Oxidation and Reduction**

I will be able to

investigate experimentally rusting as the reaction of iron with water and air producing hydrated iron(III) oxide ;		
understand the methods used to protect iron from rusting, to include barrier methods, for example painting, oiling, plastic coating and suitable metal coating/plating (including galvanising)		
explain sacrificial protection of iron related to the reactivity series ;		
recognise oxidation as the addition of oxygen to, or removal of hydrogen from, a substance (reduction as the reversal of oxidation);		
relate important oxidation and reduction reactions to everyday examples (including rusting and combustion of fuels) and recognise oxidation and reduction from balanced symbol equations ;		

investigate experimentally: – reduction of copper(II) oxide using hydrogen; and – burning of magnesium and sulfur in air (oxygen);		
recognise and explain redox as a process involving electron transfer and be able to identify and explain the oxidation and reduction processes from a redox equation		
recognise and explain important oxidation and reduction reactions in industrial processes, to include iron and aluminium manufacture, and the Haber process.		

Learning Intentions for **Hard and Soft Water**

I will be able to

recall that the relative atomic mass of an atom is the mass of the atom compared with that of the carbon-12 isotope, which has a mass of exactly 12;		
collect and use quantitative data from the Periodic Table to calculate relative formula masses (relative molecular masses);		
understand that the relative formula mass of a substance in grams is known as one mole of that substance;		
convert the given mass of a substance to the amount of the substance in moles (and vice versa) by using the relative atomic or formula masses;		
understand the importance of scale in chemistry in terms of calculating moles from masses given in tonnes and kilograms, for example in industrial processes;		
understand that no atoms are lost or made in a chemical reaction and hence it is possible to interpret equations quantitatively;		
calculate the reacting masses of reactants or products, given a balanced symbol equation and using moles and simple ratio ;		
understand the term concentration of a solution expressed in moles per litre (mol/dm ³) – questions on titrations will not be asked, but concentrations of chemicals in solution may be given in moles per litre (mol/dm ³) if this is appropriate; and		
understand that when a solution is diluted the concentration changes but the total number of moles of solute does not, for example when 100 cm ³ of 0.2 mol/dm ³ solution of hydrochloric acid is diluted with deionised water to 200 cm ³ , the new concentration is 0.1 mol/dm ³ .		

Learning Intentions for **Quantitative Chemistry**

I will be able to

recall that the relative atomic mass of an atom is the mass of the atom compared with that of the carbon-12 isotope, which has a mass of exactly 12;		
collect and use quantitative data from the Periodic Table to calculate relative formula masses (relative molecular masses) ;		
understand that the relative formula mass of a substance in grams is known as one mole of that substance;		
convert the given mass of a substance to the amount of the substance in moles (and vice versa) by using the relative atomic or formula masses ;		
understand the importance of scale in chemistry in terms of calculating moles		

from masses given in tonnes and kilograms, for example in industrial processes;		
understand that no atoms are lost or made in a chemical reaction and hence it is		
calculate the reacting masses of reactants or products, given a balanced symbol equation and using moles and simple ratio ;		
understand the term concentration of a solution expressed in moles per litre (mol/dm ³) – questions on titrations will not be asked, but concentrations of chemicals in solution may be given in moles per litre (mol/dm ³) if this is appropriate; and		
understand that when a solution is diluted the concentration changes but the total number of moles of solute does not, for example when 100 cm ³ of 0.2 mol/dm ³ solution of hydrochloric acid is diluted with deionised water to 200 cm ³ , the new concentration is 0.1 mol/dm ³ .		

Learning Intentions for **Rates of Reaction**

I will be able to

describe the qualitative effects of temperature, concentration, particle size and catalysis on the rate of a chemical reaction;		
understand that the rate of a reaction may be determined by measuring the loss of a reactant or gain of a product over time and use the equation		
use the equation $1/\text{time} = \text{rate}$		
plan appropriate methods to measure the rate of the chemical reaction and collect reliable data (methods limited to measuring a change in mass or gas volume against time); the reactions studied should include:		
– metals with dilute acid;		
– marble chips with dilute hydrochloric acid; and		
– catalytic decomposition of hydrogen peroxide ;		
interpret rate data quantitatively, for example drawing graphs and making predictions about how the rate of reaction may change when one of the list of factors is altered ;		
make predictions and investigate the effects of changing concentration, particle size and temperature and adding a catalyst on the rates of chemical reactions, using ICT where appropriate ;		
use the collision theory to explain how the factors identified above influence the rate of a chemical reaction ; and		
understand that a catalyst is a substance which increases the rate of a reaction without being used up.		

Learning Intentions for **Energetics**

I will be able to

understand that reactions in which heat is given out are exothermic and that reactions in which heat is taken in are endothermic, for example neutralisation, thermal decomposition, combustion, rusting, displacement and hydration of copper(II) sulphate ;		
recall that bond breaking takes in energy and bond making releases energy, and understand that the overall energy change in a reaction is a balance of the energy taken in when bonds break in the reactants and the energy released when bonds		

form in the products;		
define thermal decomposition as the breakdown of a compound using heat, and describe the effect of heat on metal carbonates, for example calcium carbonate and copper carbonate ;		
understand that limestone (CaCO_3) undergoes thermal decomposition in a lime kiln and is used in the blast furnace to remove acidic impurities;		
know that limestone is quarried and is used both as a building material and to neutralise soil acidity; and		
evaluate the socio-economic and environmental effects of limestone quarrying .		

Learning Intentions for **Non-Metals and Their Compounds**

I will be able to

use the following tests in problem-solving situations to plan and carry out procedures to identify the gases (the test and expected positive result for each is given):		
– hydrogen test: apply a lighted splint – result: popping sound;		
– oxygen test: apply a glowing splint – result: it relights;		
– carbon dioxide test: use limewater – result: it changes from colourless to milky; and		
– water test: use anhydrous copper(II) sulfate (paper) – result: it turns blue;		
<i>Hydrogen</i>		
describe the laboratory preparation and collection of hydrogen using zinc and hydrochloric acid, and recall the diatomicity and the physical properties of hydrogen ;		
understand the reactions of hydrogen as a reducing agent, for example with oxygen to form water, with copper(II) oxide nitrogen to form ammonia, and its potential use as a clean fuel;		
recall the use of hydrogen in:		
– meteorological balloons; and		
– rocket engines;		
<i>Carbon and Carbon Dioxide</i>		
describe the combustion of carbon to carbon monoxide and carbon dioxide in a limited and plentiful supply of air respectively and realise the toxic effects of carbon monoxide caused by incomplete combustion of fuels;		
recall the physical properties of carbon dioxide; and		
investigate the reactions of carbon dioxide with water to form carbonic acid, and with calcium hydroxide solution (limewater) until carbon dioxide is in excess.		
realise that the release of carbon dioxide by burning fossil fuels increases the level of carbon dioxide in the atmosphere, appreciate that there is debate over whether this leads to global warming – the greenhouse effect – and recall effects of global warming;		
using data on the properties of carbon dioxide, explain its use in:		
– fire extinguishers;		
– carbonated drinks; and		
– dry ice;		
understand that during the first billion years of the Earth's existence there was intense volcanic activity which released gases that formed the early atmosphere;		

understand that scientists have developed theories to answer questions about the Earth's atmosphere; one theory suggests that it was mainly carbon dioxide and this composition changed as living organisms evolved and carbon dioxide became locked in carbonates and fossil fuels ;		
<i>Nitrogen and Ammonia</i>		
recall the physical properties and diatomicity of nitrogen and describe the lack of reactivity of nitrogen;		
recall that nitrogen is used:		
– as a coolant;		
– in food packaging; and		
– in manufacture of ammonia;		
recall that ammonia is used in the:		
– manufacture of fertilisers;		
– production of nitric acid; and		
– manufacture of nylon;		
recall the conditions (approximate temperature and pressure and name of catalyst) required in the Haber process and understand that the process involves a reversible reaction between nitrogen and hydrogen forming ammonia; and		
recognise and explain the important reduction reaction in the Haber process.		
<i>Oxygen</i>		
In the context of how science works, students should be able to:		
recall the diatomicity and physical properties of oxygen;		
investigate safely and accurately the reaction of oxygen with hydrogen, carbon, sulfur, magnesium, zinc, iron and copper ;		
describe combustion as the reaction of fuels with oxygen, forming oxides and releasing energy;		
recall that oxygen is used in:		
– breathing apparatus;		
– steel making;		
– welding; and		
– rocket engines;		
know the proportion of different gases in the atmosphere:		
– about four-fifths (80%) nitrogen;		
– about one-fifth (20%) oxygen; and		
– small proportions of various other gases including carbon dioxide, water vapour and noble gases ;		
<i>Sulfur</i>		
recall the physical properties of sulfur;		
describe the combustion of sulfur to form sulfur dioxide and the reaction of iron and sulfur, and recall the physical properties of sulfur dioxide;		
understand that sulfur dioxide from the combustion of fossil fuels reacts with water in the air to form acid rain and describe the socio-economic and environmental effects of acid rain, to include:		
– corrosion of limestone buildings and statues;		
– killing fish in rivers and lakes; and		
– defoliating trees ; and		
describe the measures used to prevent acid rain, including removing sulfur from fuels before combustion, burning less fossil fuels, and removing sulfur dioxide from industrial and vehicle emissions.		

Learning Intentions for **Organic Chemistry**

I will be able to

understand the terms fossil fuel, renewable resource and non-renewable resource;		
know that the chemicals obtained from crude oil are called hydrocarbons and that a hydrocarbon is a molecule consisting of carbon and hydrogen atoms only;		
describe the separation of crude oil by fractional distillation into its different fractions, for example refinery gases, petrol, naphtha, kerosene, diesel oil and bitumen;		
evaluate the environmental implications of oil spillages ;		
define a homologous series as a family of organic molecules that have the same general formula, show similar chemical properties, show a gradation in their physical properties and differ by a 'CH ₂ ' unit;		
understand the term homologous series applied to:		
– alkanes (C _n H _{2n+2});		
– alkenes (C _n H _{2n});		
– alcohols (C _n H _{2n+1} OH); and		
– carboxylic acids (C _n H _{2n+1} COOH)		
(names, molecular formulae, structural formulae and physical state at room temperature and pressure are to include the first four alkanes, the first two alkenes, methanol, ethanol, methanoic acid and ethanoic acid);		
understand that a functional group is a reactive group in a molecule and recognise the functional group in alkenes (C=C), alcohols (-O-H) and carboxylic acids (-COOH), and realise that alkanes do not have a functional group, which makes them less reactive organic molecules; and		
plan an experiment to determine the presence of C=C in a variety of organic compounds using bromine water .		
<i>Fuels and Combustion Addition Polymerisation Alcohols</i>		
understand that complete combustion of hydrocarbons and of alcohols produces carbon dioxide and water and that incomplete combustion of hydrocarbons and of alcohols produces carbon monoxide and water and sometimes carbon (soot) – equations for the production of soot are not required;		
describe the combustion of alkanes, alkenes and alcohols, to include observations and tests to identify the products;		
evaluate the use of hydrocarbon fuels, cleaner fuels and alternative energy sources in terms of socio-economic, environmental, technological and ethical grounds ;		
describe how monomers, for example ethene or chloroethene (vinyl chloride), can join together to make very long chain molecules called polymers and the process is known as addition polymerisation;		
write equations for the polymerisation of ethene and chloroethene (vinyl chloride);		
relate the uses of polythene and PVC to their properties and compare the properties of polymers to traditional materials ;		
understand that addition polymers are non-biodegradable and evaluate the advantages and disadvantages of their disposal by landfill and incineration;		
know that ethanol is used in alcoholic drinks, as a solvent and as a fuel;		
recall the preparation of ethanol from ethene and steam (conditions not required)		

and write a symbol equation for this reaction;		
describe the preparation of ethanol from sugars by fermentation (equation for fermentation of sugars not required); and		
discuss the social impact and harmful effects of ethanol in alcoholic drinks.		
<i>Ethanoic Acid</i>		
In the context of how science works, students should be able to:		
know that ethanoic acid is a carboxylic acid and can be described as a weak acid;		
investigate experimentally the reactions of ethanoic acid with sodium carbonate, sodium hydroxide and magnesium and test any gas produced; and		
recall that a dilute solution of ethanoic acid is used as vinegar to flavour food.		