



Programme of Study – Grade 9 (Year 10) Chemistry

	Theme	Overview of key learning to take place	How learning will be assessed
Term 2	Topic 4.1	4.1 Stoichiometry (6.2 to be done in the 2nd Year) <ul style="list-style-type: none">I can use the periodic table to work out the Ar and MrI can explain what Ar and Mr are relative toI can use the periodic table to write chemical formula for ionic and covalent compoundsI can construct word and symbol equationsI can balance simple chemical equations	Examples of Formative Assessment to be used this term: Homework 2 x 60 minute tasks <ol style="list-style-type: none">Exam questions set as homeworkHomework assignments with recall tasks Summative assessment: Topic 4 end of unit Test paper (Multiple choice and long answer questions)
Term 2	Topic 4.2– Stoichiometry II / Titration	6.1 Chemical Energetics <ul style="list-style-type: none">I can define, and give three examples of EXOTHERMIC and ENDOTHERMIC reactionsI can draw simple energy profile diagrams for Exothermic and Endothermic reactionsI can apply the formula $\Delta H = m.Cp.\Delta T$I can explain bond breaking and bond making in terms of exothermic and endothermic reactionsI can use MEAN BOND data to calculate energy changes of a reaction 6.2 –Energy Transfer <ul style="list-style-type: none">I can explain what combustion is in terms of transfer of thermal energyI can list several uses of the radioactive isotope U-235	Examples of Formative Assessment to be used this term: Homework 2 x 60 minute tasks <ol style="list-style-type: none">Exam questions set as homeworkHomework assignments with recall tasks Summative assessment: Topic 6 end of unit Test paper (Multiple choice and long answer questions) Experimental demo of calorimetry experiments for exothermic and endothermic reactions and how to calculate ΔH
Term 2		7.1 – 7.2 Rates of Chemical Reactions <ul style="list-style-type: none">I can list the four ways to change the speed of a chemical reaction: surface area; temperature; concentration; catalystI can explain what a catalyst is and how it changes activation energy (including being able to draw an energy profile diagram which shows this)	Examples of Formative Assessment to be used this term: Homework 2 x 60 minute tasks <ol style="list-style-type: none">Exam questions set as homeworkHomework assignments with recall tasks

		<ul style="list-style-type: none"> I can use the KINETIC MODEL to explain what a SUCESSFUL PARTICLE COLLISION is I can explain how to do an experiment to measure the speed of a chemical reaction I can interpret graphs that show different speeds of chemical reactions I can explain what a PHOTOCHEMICAL reaction is 	<p>Summative assessment: End of Unit 7.1-7.2 end of Topic Test</p> <p>Experimental Demos:</p> <ol style="list-style-type: none"> 1) Sodium thiosulfate and Acid 2) Acid and Metal – Measuring Gas Produced Vs Time 3) Mg and Acid – Changing Surface Area
Term 2		<p>7.3 Reversible Reactions</p> <ul style="list-style-type: none"> I can explain what reversible reaction means using the \rightleftharpoons symbol Know the difference between HYDRATED copper sulphate and ANHYDROUS copper sulphate (including the colours of these compounds) 	<p>Examples of Formative Assessment to be used this term: Homework 2 x 60 minute tasks</p> <ol style="list-style-type: none"> 7. Exam questions set as homework 8. Homework assignments with recall tasks <p>Summative assessment: End of Unit 7.1-7.2 end of Topic Test</p> <p>Experimental Demos:</p> <ol style="list-style-type: none"> 1) Heating hydrated copper sulphate
Term 2		<p>7.4 Redox Reactions</p> <ul style="list-style-type: none"> I can define Oxidation and Reduction in terms of electron transfer (OILRIG) I can work out the oxidation states of elements and ions using the periodic table I can write $\frac{1}{2}$ equations to show simple oxidation and reduction changes of oxidation state I can identify oxidising and reducing agents from simple equations 	<p>Examples of Formative Assessment to be used this term: Homework 2 x 60 minute tasks</p> <ol style="list-style-type: none"> 9. Exam questions set as homework 10. Homework assignments with recall tasks <p>Summative assessment: End of Unit 7.3-7.4 end of Topic Test</p> <p>Experimental Demos:</p> <ol style="list-style-type: none"> 1) Thermite demo 2) Silver nitrate and Mg powder with water (displacement demo) 3) Halogen-halides reactions