

<u>Calendar</u>	<u>Big Question/Theme</u>	<u>Small Questions</u>	<u>Assessment Opportunities and Criteria. Teacher feedback point (TFP)</u>	<u>Homework</u>
<p>Year 11</p> <p>Topic CC13</p> <p>Groups in the periodic table</p>	<p>How does the position of an element affect its chemical properties?</p>	<ol style="list-style-type: none"> 1. What are the main properties of alkali metals? 2. How do alkali metals react with water? 3. Why do alkali metals have different reactivities? 4. How do the physical properties of halogens change down group 7? 5. How do you test for chlorine? 6. How do halogens react with metals? 7. How can displacement reactions be used to work out the reactivity of halogens? 8. How can we explain the reactivity of halogens? 9. What happens to halogen atoms and halide ions during displacement? 10. Why are Noble gases unreactive? 11. How can Noble gases be used? 12. What trends are there in the physical properties of the Noble gases? 	<p>Each Ks4 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic.</p> <p>Exam questions are obtained from ExamWizard.</p> <p>Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking.</p> <p>Feedback is live throughout the lesson.</p> <p>Teachers circulate during phases to offer feedback.</p>	<p>Students provided with a homework booklet.</p> <p>Previously taught topics are assessed through exam questions. Students are provided with the knowledge to help them access the exam questions.</p> <p>Homework is checked and fed back on a weekly basis.</p>

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<p>Year 11</p> <p>Topic CP9</p> <p>Electricity and Circuits</p>	<p>How is electricity used in everyday life?</p>	<ol style="list-style-type: none"> 1. How does the structure of the atom affect the flow of electric current? 2. What are the names and symbols of components used in electric circuits? 3. What are the differences between series and parallel circuit? 4. What is charge and how does it link to current? 5. How is electric current measured? 6. What happens to the electric current in a series circuit and in a parallel circuit? 7. What is potential difference and how do you measure it? 8. What happens to the potential difference in a series circuit and in a parallel circuit? 9. What is electrical resistance? 10. What is the connection between potential difference, current and resistance? 11. How does adding resistors in series and parallel affect the resistance of the circuit? 12. How does the potential difference affect the current and resistance in fixed resistors, lamps and diodes? 13. How does light intensity and temperature affect light dependent resistors and thermistors? 14. How are circuits used to explore resistance in lamps, thermistors and LDRs? 15. What are the advantages and disadvantages of the heating effect of a current? 16. How can the energy transfer that causes the heating effect be explained? 17. How can unwanted energy transfer be reduced in wires? (H) 18. What is power and what units are used to measure it? 19. How is power related to the energy used in joules? 20. How can you calculate power when you know current, potential difference and/or resistance? 	<p>Each Ks4 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic.</p> <p>Exam questions are obtained from ExamWizard.</p> <p>Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking.</p> <p>Feedback is live throughout the lesson.</p> <p>Teachers circulate during phases to offer feedback.</p>	<p>Students provided with a homework booklet.</p> <p>Previously taught topics are assessed through exam questions. Students are provided with the knowledge to help them access the exam questions.</p> <p>Homework is checked and fed back on a weekly basis.</p>

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<p>Year 11</p> <p>Topic CB7</p> <p>Animal Coordination and Control</p>	<p>How do our bodies regulate our internal environment?</p>	<ol style="list-style-type: none"> 1. What are hormones and where are they produced? 2. What are the names of the target organs? 3. What is a positive feedback mechanism? 4. How does adrenaline prepare the body for fight or flight? 5. What is a negative feedback mechanism? 6. How does thyroxine affect metabolic rate? 7. What is the menstrual cycle? 8. What are the roles of oestrogen, progesterone, LH and FSH in the menstrual cycle? 9. How can hormones and barrier methods be used as contraception? 10. How can hormones increase the chance of pregnancy? 11. How is IVF carried out? 12. What is homeostasis? 13. How is glucose concentration measured? 14. How is blood glucose regulated? 15. How is type 1 diabetes caused and controlled? 16. How is type 2 diabetes caused and controlled? 17. What is the correlation between body mass and type 2 diabetes? 	<p>Each Ks4 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic.</p> <p>Exam questions are obtained from ExamWizard.</p> <p>Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking.</p> <p>Feedback is live throughout the lesson.</p> <p>Teachers circulate during phases to offer feedback.</p>	<p>Students provided with a homework booklet.</p> <p>Previously taught topics are assessed through exam questions. Students are provided with the knowledge to help them access the exam questions.</p> <p>Homework is checked and fed back on a weekly basis.</p>

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<p>Year 11</p> <p>Topic CC14</p> <p>Rate of Reaction</p>	<p>How can different factors affect the speed of a reaction?</p>	<ol style="list-style-type: none"> 1. What changes can occur as a reaction proceeds? 2. How can we investigate rates of reaction? 3. How are graphs used to show rates of reaction? 4. What has to happen for two particles to react? 5. How does the speed of particles affect the rate of reaction? 6. Why do changes in temperature, concentration, surface area and pressure affect rates of reaction? 7. What is a catalyst? 8. How do catalysts work? 9. What are enzymes used for? 	<p>Each Ks4 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic.</p> <p>Exam questions are obtained from ExamWizard.</p> <p>Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking.</p> <p>Feedback is live throughout the lesson.</p> <p>Teachers circulate during phases to offer feedback.</p>	<p>Students provided with a homework booklet.</p> <p>Previously taught topics are assessed through exam questions. Students are provided with the knowledge to help them access the exam questions.</p> <p>Homework is checked and fed back on a weekly basis.</p>

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<p>Year 11</p> <p>Topic CC15</p> <p>Rate of Reaction</p>	<p>Why do some reactions release heat whilst some absorb heat?</p>	<ol style="list-style-type: none"> 1. What are exothermic and endothermic reactions? 2. What are some examples of exothermic and endothermic reactions? 3. How can heat changes in solution be investigated? 4. How can endothermic and exothermic reactions be explained in terms of bonds? 5. How are exothermic and endothermic reactions modelled? 6. How are energy changes in reactions calculated (H) 	<p>Each Ks4 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic.</p> <p>Exam questions are obtained from ExamWizard.</p> <p>Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking.</p> <p>Feedback is live throughout the lesson.</p> <p>Teachers circulate during phases to offer feedback.</p>	<p>Students provided with a homework booklet.</p> <p>Previously taught topics are assessed through exam questions. Students are provided with the knowledge to help them access the exam questions.</p> <p>Homework is checked and fed back on a weekly basis.</p>

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<p>Year 11</p> <p>Topic CC16</p> <p>Fuels</p>	<p>What is Crude oil and how is it used?</p>	<ol style="list-style-type: none"> 1. What are Hydrocarbons? 2. Why is Crude oil so useful? 3. Why is crude oil non-renewable? 4. How is crude oil separated? 5. What are the names and uses of the main fractions from crude oil? 6. What are the differences in the molecules found in different fractions from crude oil? 7. What is the main type of hydrocarbon found in crude oil? 8. What are the features of a homologous series of compounds? 9. Why do alkanes form a homologous series? 10. What happens during the complete combustion of a hydrocarbon? 11. What happens during the incomplete combustion of a hydrocarbon? 12. What problems does incomplete combustion cause? 13. Why do some hydrocarbon fuels release sulfur dioxide when they are used? 14. Why are oxides of nitrogen produced by engines? 15. What problems are caused by acid rain? 16. Why is Cracking needed? 17. What happens during the cracking of crude oil fractions? 18. What are the advantages and disadvantages of hydrogen and petrol as vehicle fuels? 	<p>Each Ks4 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic.</p> <p>Exam questions are obtained from ExamWizard.</p> <p>Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking.</p> <p>Feedback is live throughout the lesson.</p> <p>Teachers circulate during phases to offer feedback.</p>	<p>Students provided with a homework booklet.</p> <p>Previously taught topics are assessed through exam questions. Students are provided with the knowledge to help them access the exam questions.</p> <p>Homework is checked and fed back on a weekly basis.</p>

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<p>Year 11</p> <p>Topic CC17</p> <p>Atmosphere</p>	<p>Why is our atmosphere changing and what are the consequences?</p>	<ol style="list-style-type: none"> 1. What are the names of some common gases produced by volcanoes? 2. What evidence is there for the composition of the Earth's early atmosphere? 3. How do scientists explain the formation of the oceans? 4. What are the names of some greenhouse gases? 5. How is the greenhouse effect caused? 6. What is the link between fossil fuel combustion and climate change? 	<p>Each Ks4 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic.</p> <p>Exam questions are obtained from ExamWizard.</p> <p>Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking.</p> <p>Feedback is live throughout the lesson.</p> <p>Teachers circulate during phases to offer feedback.</p>	<p>Students provided with a homework booklet.</p> <p>Previously taught topics are assessed through exam questions. Students are provided with the knowledge to help them access the exam questions.</p> <p>Homework is checked and fed back on a weekly basis.</p>

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<p>Year 11</p> <p>Topic CP10</p> <p>Magnetism and the Motor effect</p>	<p>What are magnetic forces and how are they used?</p>	<ol style="list-style-type: none"> 1. How are magnets used? 2. What shape are magnetic fields and how can they be plotted? 3. What is the evidence that the Earth has a magnetic field? 4. How is a magnetic field around a wire related to the current? 5. What factors affect the strength of the magnetic field around the wire? 6. How does the magnetic field around a wire change when the wire is made into a coil? 7. How can electricity and magnetism combine to produce forces? (H) 8. How is the force on a wire in a magnetic field used to make an electric motor turn? (H) 9. How can we calculate the size of the force produced by a current in a magnetic field? (H) 	<p>Each Ks4 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic.</p> <p>Exam questions are obtained from ExamWizard.</p> <p>Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking.</p> <p>Feedback is live throughout the lesson.</p> <p>Teachers circulate during phases to offer feedback.</p>	<p>Students provided with a homework booklet.</p> <p>Previously taught topics are assessed through exam questions. Students are provided with the knowledge to help them access the exam questions.</p> <p>Homework is checked and fed back on a weekly basis.</p>

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<p>Year 11</p> <p>Topic CB8</p> <p>Exchange and transport in animals</p>	<p>How and why are substances transported around our bodies?</p>	<ol style="list-style-type: none"> 1)What substances need to be transported into and out of the body? 2)Why is the surface area: volume ratio important for exchange of substances? 3)How are the lungs adapted for gas exchange? 4)What are the components of blood? 5)How are the components of blood adapted for their function? 6)What are the components of the circulatory system? 7)How are blood vessels adapted for their function? 8)What is the structure of the heart? 9)How does the heart pump blood? 10)How do you calculate cardiac output? 11)Why do organisms need to respire? 12)What is the word equation for respiration and why is it an exothermic reaction? 13)What is the difference between aerobic and anaerobic respiration? 	<p>Each Ks4 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic.</p> <p>Exam questions are obtained from ExamWizard.</p> <p>Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking.</p> <p>Feedback is live throughout the lesson.</p> <p>Teachers circulate during phases to offer feedback.</p>	<p>Students provided with a homework booklet.</p> <p>Previously taught topics are assessed through exam questions. Students are provided with the knowledge to help them access the exam questions.</p> <p>Homework is checked and fed back on a weekly basis.</p>

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<p>Year 11</p> <p>Topic CP11</p> <p>Electromagnetic Induction</p>	<p>What is Electromagnetic Induction and how is it used?</p>	<p>What is meant by electromagnetic induction? (H)</p> <p>What is a transformer?</p> <p>How does a transformer work? (H)</p> <p>What is the National Grid?</p> <p>Why are transformers used to help transmit electricity around the country?</p>	<p>Each Ks4 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic.</p> <p>Exam questions are obtained from ExamWizard.</p> <p>Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking.</p>	<p>Students provided with a homework booklet.</p> <p>Previously taught topics are assessed through exam questions. Students are provided with the knowledge to help them access the exam questions.</p> <p>Homework is checked and fed back on a weekly basis.</p>

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Year 11 Topic CP12	How do we describe the motion of particles relating volume, pressure and temperature?	<p>How do the particle arrangements in solids, liquids and gases explain their properties?</p> <p>What happens to the particles when a substance changes state?</p> <p>How can you calculate the density of a substance?</p> <p>How can you calculate the density of a substance of an unknown volume?</p> <p>Describe an experiment to find the volume of an irregular object</p> <p>What effect does heating a substance have on the substance?</p> <p>How can we reduce unwanted energy transfers</p> <p>What do specific heat capacity and specific latent heat mean?</p> <p>How is a change in thermal energy related to the mass, specific heat capacity and temperature difference?</p> <p>How can we calculate the energy needed to make a substance melt or evaporate?</p> <p>How can we calculate the energy released when a substance condenses or freezes?</p>	<p>Each Ks4 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic.</p> <p>Exam questions are obtained from ExamWizard.</p> <p>Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking.</p>	<p>Students provided with a homework booklet.</p> <p>Previously taught topics are assessed through exam questions. Students are provided with the knowledge to help them access the exam questions.</p> <p>Homework is checked and fed back on a weekly basis.</p>

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<p>Year 11</p> <p>Topic CP13</p> <p>Forces and Matter</p>	<p>How do forces affect the energy within a stretched object?</p>	<ol style="list-style-type: none"> 1. How do forces cause object to change shape? 2. What is the difference between elastic and inelastic deformation? 3. What is the relationship between force and extension when an object is deformed? 4. How can you conduct an experiment to investigate the extension and work done when applying forces to a spring? 5. What is the spring constant? 6. What is the equation that links force, extension and the spring constant? 7. Can you calculate the energy transferred in a spring? 	<p>Each Ks4 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic.</p> <p>Exam questions are obtained from ExamWizard.</p> <p>Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking.</p>	<p>Students provided with a homework booklet.</p> <p>Previously taught topics are assessed through exam questions. Students are provided with the knowledge to help them access the exam questions.</p> <p>Homework is checked and fed back on a weekly basis.</p>