Calendar	Big Question/Theme	Small Questions	Assessment Opportunities and Criteria. Teacher feedback point (TFP)	Homework
Term 1 Year 9 Topic 9B Plant Growth	How do plants grow?	1. What happens when plants photosynthesise and respire? 2. What affects the rate of photosynthesis? 3. How are leaves, roots and stems adapted for their function? 4. How do substances enter and leave plants? 5. What is starch and how is it made? 6. What is the chemical test for starch? 7. What chemicals are needed for plants to germinate? 8. Why are plants cross bred? 9. How does increased human population affect food supply? 10. How is selective breeding done?	Each Ks3 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic. Exam questions are obtained from ExamPro. Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking. Optional: there is an assessment for each topic in the Pearsons SOW.	Homework is set weekly. Students given knowledge (previously taught) to study and then complete questions. This is fed back in the revisit phase every week.

Calendar	Big Question/Theme	Small Questions	Assessment Opportunities and Criteria. Teacher feedback point (TFP)	Homework
Term 1 Year 9 Topic 9F Reactivity	What are the different types of chemical reactions?	1. What are the differences between chemical and physical reactions? 2. How can particle theory explain gas pressure? 3. How do metals react with air, water and acids? 4. How are metals placed into a reactivity series? 5. How are metals protected from rusting? 6. What is the test for oxygen? 7. How can you speed up a combustion reaction? 8. What are endothermic and exothermic reactions? 9. Why do some reactions need a supply of energy? 10. What is a displacement reaction? 11. How can we predict whether a reaction will occur or not? 12. Why is the method of extracting a metal related to its cost and reactivity? 13. How are metals extracted from their ores? 14. What is oxidation and reduction?	Each Ks3 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic. Exam questions are obtained from ExamPro. Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking. Optional: there is an assessment for each topic in the Pearsons SOW.	Homework is set weekly. Students given knowledge (previously taught) to study and then complete questions. This is fed back in the revisit phase every week.

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Term 1 Year 9 Topic 9I Forces and motion	How do forces affect the movement of objects?	1. What are the different types of forces? 2. What are the effects of balanced and unbalanced forces? 3. Why do moving objects have a top speed? 4. How can energy be stored and transferred? 5. What is the conservation of energy? 6. What does efficiency mean? 7. What is speed and mean speed? 8. What is the formula that relates speed, distance and time? 9. How can we represent a journey using a distance-time graph? 10. How can a simple lever multiply forces r distances? 11. What is the load, effort and pivot around a level? 12. What factors affect the size of a moment? 13. Why will something balance if the moments are equal and opposite? 14. How can simple machines magnify forces? 15. What factor affect the total work done?	Each Ks3 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic. Exam questions are obtained from ExamPro. Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking. Optional: there is an assessment for each topic in the Pearsons SOW.	Homework is set weekly. Students given knowledge (previously taught) to study and then complete questions. This is fed back in the revisit phase every week.

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Term 1 Year 9 Topic 9J Force fields and electromagnets	What are the uses of electricity and how can we control current?	1. What is a force field? 2. What is the shape of a magnetic field? 3. What factors affect the strength of gravity? 4. How can you calculate the weight of a mass? 5. Why can insulating material be given a charge by rubbing? 6. How do electrically charged objects affect each other? 7. What is an electric field? 8. How can switches be used to control different parts of a circuit? 9. How does current behave in series and parallel circuits? 10. How does voltage behave in series and parallel circuits? 11. What factors affect resistance? 12. What is the formula that relates voltage, current and resistance? 13. What is an electromagnet? 14. How can you change the strength of an electromagnet? 15. What are the uses of electromagnets?	Each Ks3 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic. Exam questions are obtained from ExamPro. Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking. Optional: there is an assessment for each topic in the Pearsons SOW.	Homework is set weekly. Students given knowledge (previously taught) to study and then complete questions. This is fed back in the revisit phase every week.

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Winter/Spring Year 9 Topic CC1 States of Matter	How does arrangement of particles affect a substance and its properties?	1. What are particles like in substances in the solid, liquid and gas states? 2. What changes happen to particles during the different changes of state? 3. How do you decide what state a substance will be in at a given temperature?	Each Ks4 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic. Exam questions are obtained from ExamWizard. Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking. Feedback is live throughout the lesson. Teachers circulate during phases to offer feedback.	Students provided with a homework booklet. Previously taught topics are assessed through exam questions. Students are provided with the knowledge to help them access the exam questions. Homework is checked and fed back on a weekly basis.

Calendar	Big Question/Theme	Small Questions	Assessment Opportunities and Criteria. Teacher feedback point (TFP)	Homework
Winter/Spring Year 9 Topic CC2 Separating Mixtures	What are the ways of separating and purifying mixtures?	1. What is the difference between a pure substance and a mixture? 2. What happens to its particles when a solid melts? 3. How do melting points allow you to spot the difference between pure substances and mixtures? 4. How can filtration be used to separate mixtures? 5. How can crystallisation be used to separate mixtures? 6. What are the hazards and risks when separating mixtures by filtration and crystallisation? 7. How can chromatography be used to separate mixtures? 8. What are the differences between mixtures and pure substances on a chromatogram? 9. How do you calculate Rf value? 10. What is distillation? 11. How do simple distillation and fractional distillation differ? 12. How would you reduce risks when carrying out a distillation experiment? **13.** How would you choose which method to use to separate a mixture? 14. How is drinking water produced? 15. Why must water used in chemical analysis be pure?	Each Ks4 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic. Exam questions are obtained from ExamWizard. Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking. Feedback is live throughout the lesson. Teachers circulate during phases to offer feedback.	Students provided with a homework booklet. Previously taught topics are assessed through exam questions. Students are provided with the knowledge to help them access the exam questions. Homework is checked and fed back on a weekly basis.

ring Year 9 Topic CP1 Motion	motion?	2. What are three examples of scalar quantities? 3. What are three examples of vector quantities? 4. What is the connection between speed, velocity and acceleration? 5. How do you use the equation relating average speed, distance and time? 6. In metres per second, what are the typical speeds that someone might move at during the course of a day? 7. How do you interpret distance-time graphs? 8. How do you calculate acceleration? 9. How are acceleration, initial velocity and final velocity related? 10. What is meant by uniform acceleration? 11. What is the acceleration of freefall? 12. How is deceleration identified on a velocity/time graph? 13. How is distance determined from a velocity/time graph? 14. How do you calculate and compare accelerations on a velocity-time graph?	followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic. Exam questions are obtained from ExamWizard. Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking. Feedback is live throughout the lesson. Teachers circulate during phases to offer feedback.	provided with a homework booklet. Previously taught topics are assessed through exam questions. Students are provided with the knowledge to help them access the exam questions. Homework is checked and fed back on a weekly basis.

ring Year 9 Topic CB1 Cells	development of the microscope allowed us to find out more about sub - cellular structures found in plant, animal and bacterial cells?	2. What's the difference between a light and electron microscope? 3. What's the difference between magnification and resolution? 4. What are the sub-cellular parts and function of an animal cell? 5. What are the sub-cellular parts and function of a plant cell? 6. What are the three differences between animal and plant cells? 7. What is a eukaryotic cell? 8. How are gametes adapted to their function? 9. How is a ciliated cell adapted for its function? 10. How are the epithelial cell in the small intestine adapted to its function? 11. What is a prokaryotic cell? 12. How is a bacterial cell adapted for its function? 13. Which kind of large organic molecule are enzymes? 14. Why is an enzyme a biological catalyst? 15. How do enzymes work? 16. What are the role of enzymes in the digestive system? **17.** How is enzyme activity affected by temperature, pH and substrate concentration? 18. How would you calculate the rate of enzyme activity? 19. Which tests are used to identify the main substances in food? 20. What is diffusion, osmosis and active transport?	followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic. Exam questions are obtained from ExamWizard. Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking. Feedback is live throughout the lesson. Teachers circulate during phases to offer feedback.	provided with a homework booklet. Previously taught topics are assessed through exam questions. Students are provided with the knowledge to help them access the exam questions. Homework is checked and fed back on a weekly basis.

Calendar	Big Question/Theme	Small Questions	Assessment Opportunities and Criteria. Teacher feedback point (TFP)	Homework
Summer/ Spring Year 9 Topic CC3	How does an elements place in the periodic table relate to its atomic structure?	1. How has the model of the atom changed over the last 200 years? 2. How do parts of atoms compare with each other 3. Why do atoms have no overall charge? 4. Why is most of the mass of an atom found in the nucleus? 5. What does the atomic number tell you about an element? 6. How can you calculate the numbers of protons, neutrons and electrons in atoms? 7. How can you describe an identify isotopes of elements? 8. Why are the relative atomic masses for some elements not whole numbers? 9. How do you calculate the relative atomic mass of an element?	Each Ks4 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic. Exam questions are obtained from ExamWizard. Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking. Feedback is live throughout the lesson. Teachers circulate during phases to offer feedback.	Students provided with a homework booklet. Previously taught topics are assessed through exam questions. Students are provided with the knowledge to help them access the exam questions. Homework is checked and fed back on a weekly basis.

Calendar	Big Question/Theme	Small Questions	Assessment Opportunities and Criteria. Teacher feedback point (TFP)	Homework
Summer/ Spring Year 9 Topic CP2	What affects motion?	1. What is the difference between the speed of an object and its velocity? 2. How do we represent all of the forces acting upon an object? 3. What are resultant forces and how do you calculate them? 4. What happens to the motion of an object when the forces on it are balanced? What if they are unbalanced? (Newton's First Law) **5. What is centripetal force? (H)** 6. What is the difference between mass and weight? 7. What are the factors that determine the weight of an object? 8. How do you calculate weight? 9. What factors affect the acceleration of an object and how do you calculate them? (Newton's Second Law) **10. What is inertial mass and how is it defined? (H)** 11. What is Newton's Third Law and how does it apply to stationary objects? **12. How do objects affect each other when they collide? (H)** **13. How is momentum calculated? (H)** **14. How is momentum related to force and acceleration? (H)** **15. What happens to momentum in collisions? (H)** 16. How do we measure and calculate human reaction times? 17. What are the factors that affect stopping distances? 18. What is work done and how is it calculated? 19. What is kinetic energy and how is it calculated? 20. How are work done and kinetic energy related to breaking distances? 21. What are the dangers caused by large decelerations and how can these be reduced? **22. How can you use momentum to calculate the forces involved in crashes? (H)**	Each Ks4 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic. Exam questions are obtained from ExamWizard. Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking. Feedback is live throughout the lesson. Teachers circulate during phases to offer feedback.	Students provided with a homework booklet. Previously taught topics are assessed through exam questions. Students are provided with the knowledge to help them access the exam questions. Homework is checked and fed back on a weekly basis.

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Summer/ Spring Year 9 Topic CB2	What is mitosis and its importance in growth, repair and asexual reproduction?	1)What are stem cells, where are they found and what can they be used for? 2)What are the benefits and risks of using stem cells in medical treatments? 3)How do animals grow? 4)How are percentile charts used to monitor growth? 5)Why is differentiation of cells important in animals? And can you give any examples? 6)How do plants grow? 7)How are some plant cells adapted to their function? 8)Why is differentiation important in plants? 9)Why is mitosis important? 10)What happens in the different stages of mitosis? 11)How do cancer tumours occur? 12)What is the structure and function of the 3 types of neurones? 13)How is the sensory neurone adapted to its function? 14)How does the nervous system allow the body to respond to stimuli? 15)How are the relay neurone and motor neurone adapted to their function? 16)How does the structure of the reflex arc allow faster reactions to stimuli? 17)How does an impulse travel across a synapse? 18)How do you calculate neurotransmission speed?	Each Ks4 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic. Exam questions are obtained from ExamWizard. Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking. Feedback is live throughout the lesson. Teachers circulate during phases to offer feedback.	Students provided with a homework booklet. Previously taught topics are assessed through exam questions. Students are provided with the knowledge to help them access the exam questions. Homework is checked and fed back on a weekly basis.

Calendar	Big Question/Theme	Small Questions	Assessment Opportunities and Criteria. Teacher feedback point (TFP)	Homework
Summer/ Spring Year 9 Topic CC4	How does an elements place in the periodic table relate to its atomic structure?	1. What are the symbols of some common elements? 2. How did Mendeleev arrange elements into a periodic table? 3. How did Mendeleev use his table to predict the properties of undiscovered elements? 4. Why was Mendeleev right to alter the order of some elements in his table? 5. What is an elements atomic number? 6. How are the elements arranged in the modern periodic table? 7. What information does an electronic configuration give? 8. How do you work out and show the electronic configuration of an element? 9. How is the electronic configuration of an element related to its position in the periodic table?	Each Ks4 module is followed by a common assessed task (CAT). This is comprised of a mixture of exam questions based on that topic. Exam questions are obtained from ExamWizard. Teacher will mark exam questions and provide a class feedback sheet. Students will NTG by responding to marking. Feedback is live throughout the lesson. Teachers circulate during phases to offer feedback.	Students provided with a homework booklet. Previously taught topics are assessed through exam questions. Students are provided with the knowledge to help them access the exam questions. Homework is checked and fed back on a weekly basis.