Physics Long Term Plan Year 9 2019-20

Temperance Term

W/C	2nd September	9th September	16th September	23rd September	30th September	7th October	14th October	21st October
Topic	**P1 – Energy**							
	There are changes in the way energy is stored when a system changes. Students should be able to describe all the changes involved in the way energy is stored when a system changes, for common situations. For example: • an object projected upwards • a moving object hitting an obstacle • an object accelerated by a constant force • a vehicle slowing down • bringing water to a boil in an electric kettle.							
Challenge	Experimentally compare and constrast two electric motors that both lift the same weight through the same height but one does it faster than the other.							
Assessment	P1 mid-unit exams and review							
W/C	HALF TERM	4th November	11th November	18th November	25th November	2nd December	9th December	CHRISTMAS
Topic		**P1 – Energy**						
		Students should be able to calculate the amount of energy associated with a moving object, a stretched spring and an object raised above ground level.						
Challenge		Calculate the amount of energy stored in or released from a system as its temperature and state changes.						
Assessment		P1 unit exams and review						

Physics Long Term Plan Year 9 2019-20

Justice Term

W/C	6th January	13th January	20st January	27th January	3rd February	10th February	HALF TERM
Topic	**P2 - Electricity**						
	Describe the current characteristics through an ohmic conductor (at a constant temperature) is directly proportional to the potential difference across the resistor. This means that the resistance remains constant as the current changes.						
Challenge	Limitations of the simple model above include that in the model there are no forces, that all particles are represented as spheres and that the spheres are solid.						
Assessment	P2 mid unit exams and review						
W/C	24th February	2nd March	9th March	16th March	23rd March	30th March	EASTER
Topic	**P2 - Electricity**						
	Students should be able to describe with examples where there are energy transfers in a closed system, that there is no net change to the total energy. Students should be able to explain ways of reducing unwanted energy transfers, for example through lubrication and the use of thermal insulation.						
Challenge	Identify environmental issues arising from the use of energy resources and evaluate the power to deal with the issues considering political, social, ethical or economic considerations.						
Assessment	P2 unit exams and review						

Physics Long Term Plan Year 9 2019-20

Courage Term

W/C	20th April	27th April	4th May	11th May	18th May	HALF TERM
Topic	**P3 - Particle model of matter**					
	Students should be able to explain the differences in density between the different states of matter in terms of the arrangement of atoms or molecules.					
Challenge	Explain the differences in density between the different states of matter in terms of the arrangement of atoms or molecules.					
Assessment	P3 mid-unit exams and review					
W/C	1st June	8h June	15th June	22nd June	29th June	6th July
Topic	**KS3 Internal Exams**		**P3 - Particle model of matter**			
			Students should be able to explain the differences in density between the different states of matter in terms of the arrangement of atoms or molecules.			
Challenge			Fully explain why heating does not always cause a rise in temperature.			
Assessment			P3 unit exam and review			