

YEAR 10 PHYSICS (SEPARATE SCIENCE) TIMETABLE 2020 - 2021

		OAK ACADEMY LINKS TO USE					
DATE W/C	WEEK	Topic	Lesson title	Combined science (FT)	Combined science (HT)	Physics	Core content
07-Sep-20	2	P1 CONSERVATION AND DISSIPATION OF ENERGY	Energy review				<ul style="list-style-type: none"> Correct misconceptions Recall definitions of key terms and use them correctly Apply understanding to exam style questions.
14-Sep-20	3						
21-Sep-20	4	P4 ELECTRIC CIRCUITS	Static electricity				<ul style="list-style-type: none"> Describe the production of static electricity and sparking by rubbing surfaces Describe evidence that charged objects exert forces of attraction or repulsion on one another when not in contact Explain how the transfer of electrons between objects can explain static electricity
			Drawing electrical circuits				<ul style="list-style-type: none"> Draw circuits, using correct common circuit symbols
28-Sep-20	5		Current and charge				<ul style="list-style-type: none"> Describe electrical current Use the equation $Q=It$ to calculate any value given the other two, changing units where necessary
			Potential difference				<ul style="list-style-type: none"> Describe what is meant by potential difference and resistance in circuits Recall and apply the equation linking charge, energy and potential difference
05-Oct-20	6		Electrical Resistance				<ul style="list-style-type: none"> Describe what happens to current when potential difference and resistance are varied Use an equation linking potential difference, current and resistance to calculate any value given the other two
			Series circuits				<ul style="list-style-type: none"> Predict current and pd in series circuits Describe the effect of adding resistors in series circuits Use Ohm's Law to calculate current, resistance or pd
12-Oct-20	7		Parallel circuits				<ul style="list-style-type: none"> Describe and apply the rules for pd and current in a parallel circuit Describe the effect of adding resistors in parallel Use Ohm's law to find pd, resistance or current in parallel circuits.
			Series and parallel Circuits				<ul style="list-style-type: none"> Compare series and parallel circuits. Use Ohm's Law to find pd, current and resistance in circuits.
19-Oct-20	8	Properties of Resistors				<ul style="list-style-type: none"> Make and record measurements to find the pattern of resistance in a fixed resistor Plot a graph of the data obtained Describe and explain the relationship between current, pd and resistance in a fixed resistor 	
		Filament lamps				<ul style="list-style-type: none"> Make and record measurements to find the pattern of resistance in a filament lamp Plot a graph of the data obtained Calculate resistance for the values collected Describe and explain the relationship between current, pd and resistance in a filament lamp 	
HALF TERM							
02-Nov-20	9	P4 ELECTRIC CIRCUITS	Diodes				<ul style="list-style-type: none"> Recognise and draw the symbol for a diode Process secondary data and plot a graph of the data Describe and explain the pattern of current and pd with a diode
			Light dependent Resistors				<ul style="list-style-type: none"> Identify variables to change, measure and control to test a hypothesis Collect and display results appropriately Explain how resistance changes with light levels in an LDR Explain how LDRs can be used to switch lights on when it gets dark
09-Nov-20	10		Thermistors				<ul style="list-style-type: none"> Draw a circuit diagram to illustrate how to test the resistance of a thermistor Process secondary data appropriately and use it to inform a conclusion Explain the use of thermistors as a thermostat
		Review of electrical circuits					<ul style="list-style-type: none"> Tackle misconceptions for electrical circuits Recall key definitions and equations. Apply understanding to exam style questions.
16-Nov-20	11	P5 ELECTRICITY IN THE HOME	Domestic electricity				<ul style="list-style-type: none"> Describe the features of UK mains supply and three core cable Explain the use of live, neutral and earth wires Explain the difference between direct and alternating potential difference
			Electrical power - part 1				<ul style="list-style-type: none"> Recall and apply the equation linking current, potential difference and power Change units and the subject of equations where necessary Recall and apply the equation to calculate power, current or resistance Change units and the subject of equations where necessary
23-Nov-20	12		Electrical power - part 2				<ul style="list-style-type: none"> Recall and apply the equation linking energy, power and time Recall and apply the equation linking charge, energy and potential difference
30-Nov-20	13		Multi-Step calculations				<ul style="list-style-type: none"> HT Be able to solve problems using multi-step or multiple equations.
07-Dec-20	14		Domestic electricity review				<ul style="list-style-type: none"> Tackle misconceptions for domestic electricity Recall key information and definitions Apply understanding to exam style questions.
14-Dec-20	15		Case study: Benjamin Franklin				<ul style="list-style-type: none"> Study the work of Benjamin Franklin and how it relates to electricity.
CHRISTMAS HOLIDAYS							