

KS4 Physics

Allocation of chapters to year groups

Year group	2019/20	2020/21
9	1,3,4,5 <i>2 planned but not delivered due to lockdown</i>	1,2,3,4,5
10	<i>6 already taught in y9</i> 7,8,10 <i>9 planned but not taught due to lockdown</i>	2,6,7,8,10
11	11-16	9,11-16

Triple only content

P1 Conservation & dissipation of energy

Lesson	Lesson Topic	Assessment
1	Changes in energy stores	
2	Conservation of energy	
3	Energy & work	
4	Gravitational potential energy	
5a	Kinetic energy	FAR marking of exam questions
5b	Elastic energy	PA of spring graphs
6	Energy dissipation	
7	Energy & efficiency	
8	Electrical appliances	
9	Energy & power	SA/PA exam question
	DTT & revision	SA of diagnostic DTT FAR marking of final DTT.

P2 Energy transfer by heating

Lesson	Lesson Topic	Assessment
1a	Energy transfer by conduction	
1b	Thermal Insulation RP 2	FAR marking of RP exam Q p10 in book
2	Infrared radiation	
3	More about infrared radiation	SA/PA exam questions
4a	Specific heat capacity	
4b	Specific heat capacity RP 1	SA/PA RP exam questions
5	Heating & insulating buildings	
	DTT & revision	SA of diagnostic DTT FAR marking of final DTT.

P3 Energy resources

Lesson	Lesson Topic	Assessment
1	Energy demands	
2	Energy from wind & water	FAR marking of exam questions
3	Power from the sun & the earth	
4	Energy & the environment	
5	Big energy issues	SA/PA exam questions
	DTT & revision	SA of diagnostic DTT FAR marking of final DTT.

P4 Electric circuits

Lesson	Lesson Topic	Assessment
1	<i>Electrical charges & fields</i>	
2	Current & charge	
3a	Potential difference & resistance Resistance of ceramic (fixed) resistor RP3	FAR marking of at least 1 RP graph depending on ability of group. SA/PA other graphs
3b	Potential difference & resistance Resistance of a wire RP3	
4a	Component characteristics Resistance of filament bulb (demo of diode) RP4	FAR marking of exam RP questions
4b	Component characteristics Resistance of thermistor & LDR RP4	
5	Series circuits	
6	Parallel circuits	
7	Resistors in series & parallel RP3	
	DTT & revision	SA of diagnostic DTT FAR marking of final DTT.

P5 Electricity in the home

Lesson	Lesson Topic	Assessment
1	Alternating current	
2	Cables & plugs	FAR marking of exam questions
3	Electrical power & potential difference	
4	Electrical currents & energy transfer	
5	Appliances & efficiency	SA/PA exam questions
	DTT & revision	SA of diagnostic DTT FAR marking of final DTT.

P6 Molecules & matter

Lesson	Lesson Topic	Assessment
1a	Density	
1b	Density RP 5	SA/PA of RP exam Q p23 in book
2	States of matter	
3	Changes of state	
4	Internal energy	
5	Specific latent heat	FAR marking of exam questions
6	Gas pressure & temperature	
7	Gas pressure & volume	
	DTT & revision	SA of diagnostic DTT FAR marking of final DTT.

P7 Radioactivity

Lesson	Lesson Topic	Assessment
1	Atoms & radiation	

2	The discovery of the nucleus	
3	Changes in the nucleus	Far marking of exam questions
4	More about alpha, beta & gamma	SA/PA of exam questions
5	Activity & half-life	
6	Nuclear radiation in medicine	
7	Nuclear fission	
8	Nuclear fusion	SA/PA of exam questions
9	Nuclear issues	
	DTT & revision	SA of diagnostic DTT FAR marking of final DTT.

P8 Forces in balance

Lesson	Lesson Topic	Assessment
1	Vectors & scalars	
2	Forces between objects	
3	Resultant forces	
4	Moments at work	
5	More about levers & gears	
6	Centre of mass	FAR marking of exam questions
7	Moments & equilibrium	
8	The parallelogram of forces <i>HT only</i>	
9	Resolution of forces <i>HT only</i>	
	(DTT &) revision	SA of diagnostic DTT FAR marking of final DTT. triple/higher groups only

P9 Motion (usually taught after P10)

Lesson	Lesson Topic	Assessment
1	Speed & distance-time graphs	
2	Velocity & acceleration	FAR marking of exam questions
3	More about velocity-time graphs	
4	Analysing velocity-time graphs	
	DTT & revision	SA of diagnostic DTT FAR marking of final DTT.

P10 Force & motion (usually taught immediately after P8)

Lesson	Lesson Topic	Assessment
1a	Force & acceleration	
1b	Force & acceleration RP 7	
2	Weight & terminal velocity	FAR marking of exam questions
3	Forces & braking	
4	Momentum <i>HT only</i>	
5	Using conservation of momentum	
6	Impact forces	
7	Safety first	
8a	Forces & elasticity	
8b	Forces & elasticity RP 6	SA/PA of RP exam questions
		SA of diagnostic DTT FAR marking of final DTT.

P11 Force & pressure TRIPLE ONLY

Lesson	Lesson Topic	Assessment
1	Pressure & surfaces	
2	Pressure in a liquid at rest	
3	Atmospheric pressure	
4	Upthrust & floatation	
6 (7)	DTT & revision	SA of diagnostic DTT FAR marking of final DTT.

P12 Wave properties

Lesson	Lesson Topic	Assessment
1	The nature of waves	
2a	The properties of waves	
2b	Plane waves in a ripple tank RP 8	FAR marking of RP exam question
3	Reflection & refraction <i>HT only</i>	
4a	More about waves	
4b	Waves on string RP 8	
5	Sound waves	
6	The uses of ultrasound	<i>FAR marking of exam question</i>
7	Seismic waves	
	DTT & revision	SA of diagnostic DTT FAR marking of final DTT.

P13 Electromagnetic waves

Lesson	Lesson Topic	Assessment
1	The electromagnetic spectrum	
2a	Light, IR, microwaves & radio waves	
2b	Infra-red absorption/emission RP 10	FAR marking of RP exam questions
3	Communications	
4	UV, X-rays & gamma rays	
5	X-rays in medicine	
	DTT & revision	SA of diagnostic DTT FAR marking of final DTT.

P14 Light TRIPLE ONLY

Lesson	Lesson Topic	Assessment
1	Reflection of light	
2a	Refraction of light	
2b	Reflection & refraction of light RP 9	FAR marking of RP exam questions
3	Light & colour	
4	Lenses	
5	Using lenses	
	DTT & revision	SA of diagnostic DTT FAR marking of final DTT.

P15 Electromagnetism

Lesson	Lesson Topic	Assessment
1	Magnetic fields	SA of basic magnets questions
2	Magnetic fields of electric currents	
3	<i>Electromagnets in devices</i>	
4	The motor effect <i>HT only</i>	FAR marking of exam questions
5	<i>The generator effect</i>	
6	<i>The alternating-current generator</i>	
7	<i>Transformers</i>	
8	<i>Transformers in action</i>	
	DTT & revision	SA of diagnostic DTT FAR marking of final DTT.

P16 Space TRIPLE ONLY

Lesson	Lesson Topic	Assessment
1	<i>Formation of the Solar System</i>	
2	<i>The life history of a star</i>	
3	<i>Planets, satellites & orbits</i>	
4	<i>The expanding universe</i>	FAR marking of exam questions
5	<i>The beginning & future of the universe</i>	
	DTT & revision	SA of diagnostic DTT FAR marking of final DTT.