

Y10 Physics progression (9-1 AQA syllabus and Kerboodle)

Key:

Separates only content

Assessment: Y10 teaching specialist team to organise. All classes to do the same assessment.

Required practical: See Y10 folder for guidance and practical sheets - To be written up in a 'skinny yellow exercise book' Name, class, and Required practicals on the front.

Have students divide it into thirds - Biology required practicals - page 1 in first third; Chemistry required practicals - page 1 in second third; Physics required practicals - page 1 in final third of lab book.

Absent students **MUST** copy up and record results. Other students perhaps take photographs? (Very good onion cell photos taken through the eyepiece lens of the microscope with 9sc1 last year)

There are 10 required practical tasks for separate science students. 9 for trilogy students. (Not prac 9)

Lesson Seps	Lesson Trilogy	Spec and Topic	Homework/ Assessment	Timecheck/ Assessment responsibility
1 Energy and Energy Resources				
Chapter P1: Conservation and dissipation of energy Sept' 2016 start				
01	01	P1.1 Changes in energy stores		
02	02	P1.2 Conservation of energy		
03	03	P1.3 Energy and work	Homework	Self/ peer
04	04	P1.4 Gravitational potential energy stores		
05	05	P1.5 Kinetic and elastic stores		
06	06	P1.6 Energy dissipation	Homework	Self/ peer
07	07	P1.7 Energy and efficiency		
08	08	P1.8 Electrical appliances		
09	09	P1.9 Energy and power	Targeted revision homework	
10	10	Conservation and dissipation of energy end of topic common assessment		PENS teacher assessment
11	11	Conservation and dissipation of energy next steps	Targeted moving forward homework	Student NS response
Chapter P2: Energy transfer by heating				
12	12	P2.1 Energy transfer by conduction		

13	13	Required practical 2: Testing thermal insulators		
14		<i>P2.2 Infrared radiation</i>		
15		<i>P2.3 More about infrared radiation</i>	<i>Homework</i>	<i>Self/ peer</i>
16	14	P2.4 Specific heat capacity		
17	15	Required practical 1: measuring specific heat capacity		
18	16	P2.5 Heating and insulating buildings		
19	17	End of topic common assessment		PENS teacher assessment
20	18	Assessment review and next steps	Targeted moving forward homework	Student NS response
Chapter P3: Energy resources - DW				
21	19	P3.1 Energy demands		
22	20	P3.2 Energy from wind and water		
23	21	P3.3 Power from the Sun and the Earth	Homework	Self/ peer
24	22	P3.4 Energy and the environment		
25	23	P3.5 Big energy issues		
26	24	End of topic common assessment		PENS teacher assessment
27	25	Assessment review and next steps	Targeted moving forward homework	Student NS response
2 Particles at work				
Chapter P4: Electric circuits DW				
28		<i>P4.1 Electrical charges and fields</i>		
29	26	P4.2 Current and charge		
30	27	P4.3 Potential difference and resistance	Homework	Self/ peer
31	28	Required practical 3: How does the resistance of a wire depend on the length?		
32	29	P4.4 Component characteristics		
33	30	Required practical 4: Investigating electrical components		
34	31	P4.5 Series circuits		

35	32	P4.6 Parallel circuits	Homework	Self/ peer
36	33	End of topic common assessment		PENS teacher assessment
37	34	Assessment review and next steps	Targeted moving forward homework	Student NS response
Chapter P5: Electricity in the home DW				
38	35	P5.1 Alternating current		
39	36	P5.2 Cables and plugs		
40	37	P5.3 Electrical power and potential difference	Homework	Self/ peer
41	38	P5.4 Electrical currents and energy transfers		
42	39	P5.5 Appliances and efficiency		
43	40	End of topic common assessment		PENS teacher assessment
44	41	Assessment review and next steps	Targeted moving forward homework	Student NS response
Chapter P6: Molecules and matter GS				
45	42	P6.1 Density		
46	43	Required practical 5: Density of regular and irregular shaped objects		
47	44	P6.2 States of matter		
48	45	P6.3 Changes of state	Homework	Self/ peer
49	46	P6.4 Internal energy		
50	47	P6.5 Specific latent heat		
51	48	P6.6 Gas pressure and temperature	Homework	Self/ peer
<i>52</i>		<i>P6.7 Gas pressure and volume</i>		
53	49	End of topic common assessment		PENS teacher assessment
54	50	Assessment review and next steps	Targeted moving forward homework	Student NS response
Chapter P7: Radioactivity				
55	51	P7.1 Atoms and radiation		

56	52	P7.2 The discovery of the nucleus		
57	53	P7.3 Changes in the nucleus	Homework	Self/ peer
58	54	P7.4 More about alpha, beta, and gamma radiation		
59	55	P7.5 Activity and half-life		
60		<i>P7.6 Nuclear radiation in medicine</i>		
61		<i>P7.7 Nuclear fission</i>	<i>Homework</i>	<i>Self/ peer</i>
62		<i>P7.8 Nuclear fusion</i>		
63		<i>P7.9 Nuclear issues</i>		
64	56	End of topic common assessment		PENS teacher assessment
65	57	Assessment review and next steps	Targeted moving forward homework	Student NS response

3 Forces in action

Chapter P8: Forces in balance (Most covered in Y9 - Revisit Feb '17)

		P8.1 Scalars and vectors		
		P8.2 Forces between objects		
		P8.3 Resultant forces	Homework	
		<i>P8.4 Moments at work</i>		
		<i>P8.5 More about levers and gears</i>		
		P8.6 Centre of mass		
		<i>P8.7 Moments and equilibrium</i>		
		P8.8 The parallelogram of forces		
		P8.9 Resolution of forces		
		End of topic common assessment		PENS teacher assessment
		Assessment review and next steps	Targeted moving forward homework	Student NS response

Chapter P9: Motion (Most covered in Y9 - Revisit Feb '17)

		P9.1 Speed and distance-time graphs		
		P9.2 Velocity-time graphs		

		P9.3 More about velocity-time graphs	Homework	
		P9.4 Analysing motion graphs		
		End of topic common assessment		PENS teacher assessment
		Assessment review and next steps	Targeted moving forward homework	Student NS response
Chapter P10: Forces and Motion (Most covered in Y9 - Revisit Feb '17)				
		P10.1 Force and acceleration		
		Required practical 7: investigate the effect of varying the force on the acceleration of an object of constant mass, and the effect of varying the mass of an object on the acceleration produced by a constant force.		
		P10.2 Weight and terminal velocity		
		P10.3 Forces and braking	Homework	
		P10.4 Momentum		
		<i>P10.5 Using conservation of momentum</i>		
		<i>P10.6 Impact forces</i>		
		<i>P10.7 Safety first</i>		
		P10.8 Forces and elasticity		
		Required practical 6: Stretch tests		
		End of topic common assessment		PENS teacher assessment
		Assessment review and next steps	Targeted moving forward homework	Student NS response
Chapter P11: Force and pressure (Most covered in Y9 - Revisit Feb '17)				
		<i>P11.1 Pressure and surfaces</i>		
		<i>P11.2 Pressure in liquids at rest</i>		
		<i>P11.3 Atmospheric pressure</i>	<i>Homework</i>	
		<i>P11.4 Upthrust and flotation</i>		
		End of topic common assessment		PENS teacher assessment

		Assessment review and next steps	Targeted moving forward homework	Student NS response
4 Waves, electromagnetism and space				
Chapter P12: Waves				
66	58	P12.1 The nature of waves		
67	59	P12.2 The properties of waves		
68	60	Required practical 8: Investigating waves in a ripple tank		
69	61	P12.3 Reflection and refraction	Homework	Self/ peer
70	62	P12.4 More about waves		
71		<i>P12.5 Sound waves</i>		
72		<i>P12.6 The uses of ultrasound</i>	<i>Homework</i>	<i>Self/ peer</i>
73		<i>P12.7 Seismic waves</i>		
74	63	End of topic common assessment		PENS teacher assessment
75	64	Assessment review and next steps	Targeted moving forward homework	Student NS response
Chapter P13: The electromagnetic spectrum				
76	65	P13.1 The electromagnetic spectrum		
77	66	P13.2 Light. infrared, microwaves, and radio waves		
78	67	Required practical 10: Absorption and emission of radiation		
79	68	P13.3 Communications	Homework	Self/ peer
80	69	P13.4 Ultraviolet waves, X-rays, and gamma rays		
81	70	P13.5 X-rays in medicine		
82	71	End of topic common assessment		PENS teacher assessment
83	72	Assessment review and next steps	Targeted moving forward homework	Student NS response
Chapter P14: Light				
84		<i>P14.1 Reflection of light</i>		

85		<i>P14.2 Refraction of light</i>	<i>Homework</i>	<i>Self/ peer</i>
86		Required practical 9: Investigating the reflection and refraction of light		
87		<i>P14.3 Light and Colour</i>		
89		<i>P14.4 Lenses</i>	<i>Homework</i>	<i>Self/ peer</i>
90		<i>P14.5 Using lenses</i>		
91		End of topic common assessment		PENS teacher assessment
92		Assessment review and next steps	Targeted moving forward homework	Student NS response
Chapter B15: Electromagnetism				
93	73	P15.1 Magnetic Fields		
94	74	P15.2 Magnetic fields and electric current		
95		<i>P15.3 Electromagnets in devices</i>	<i>Homework</i>	<i>Self/ peer</i>
96	75	P15.4 The motor effect	Homework	Self/ peer
97		<i>P15.5 The generator effect</i>		
98		<i>P15.6 The alternating-current generator</i>	<i>Homework</i>	<i>Self/ peer</i>
99		<i>P15.7 Transformers</i>		
100		<i>P15.8 Transformers in action</i>		
101	76	End of topic common assessment		PENS teacher assessment
102	77	Assessment review and next steps	Targeted moving forward homework	Student NS response
Chapter P16 Space				
138		<i>P16.1 Formation of the solar system</i>		
139		<i>P16.2 The life history of a star</i>		
140		<i>P16.3 Planets, orbits, and satellites</i>	<i>Homework</i>	<i>Self/ peer</i>
141		<i>P16.4 The expanding universe</i>		
142		<i>P16.5 The beginning and the future of the universe</i>		
143		End of topic common assessment		PENS teacher assessment

144		Assessment review and next steps	Targeted moving forward homework	Student NS response
-----	--	----------------------------------	----------------------------------	---------------------