

Curriculum Map 2021-2022: Year 13 Physics

Year Overview

	Teacher 1 (X4)	Teacher 2 (X2)
Autumn 1	Unit 6: Further Mechanics and Thermal Physics (Thermal physics)	Unit 6: Further Mechanics and Thermal Physics (Periodic motion)
Autumn 2	Unit 7: Fields and their consequences (Gravitation and Electric fields)	Unit 6: Further Mechanics and Thermal Physics (Periodic motion)
Spring 1	Unit 7: Fields and their consequences (Capacitors and Magnetism)	Unit 9 Astrophysics (Telescopes and classification of stars)
Spring 2	Unit 7: Fields and their consequences (Magnetic fields)	Unit 9 Astrophysics (Telescopes and classification of stars)
Summer 1	Unit 8: Nuclear Physics (Radioactivity)	Unit 9 Astrophysics (Cosmology)
Summer 2		

		Teacher 1 (X4 lessons per week)	Homework	Teacher 2 (X2 lessons per week)	Homework	Assessment
Autumn 1	30/08/2021	Week 1				
	06/09/2021	Week 2	Unit 6 Further mechanics and Thermal Physics: Thermal energy transfer		Unit 6 Further mechanics and Thermal Physics Circular motion	Page 99 warm up and exam questions
	13/09/2021	Week 3	Unit 6 Further mechanics and Thermal Physics: Thermal energy transfer	Page 109, Warm up questions and exam questions Q 1 and 2	Unit 6 Further mechanics and Thermal Physics Circular motion	
	20/09/2021	Week 4	Unit 6 Further mechanics and Thermal Physics: Thermal energy transfers / Ideal gases	Page 111 Warm up questions	Unit 6 Further mechanics and Thermal Physics Circular motion	
	27/09/2021	Week 5	Unit 6 Further mechanics and Thermal Physics: Ideal gases	Page 111 exam questions 1-3	Unit 6 Further mechanics and Thermal Physics Simple harmonic motion	CPAC write up
	04/10/2021	Week 6	Unit 6 Further mechanics and Thermal Physics: Ideal gases	Page 113 warm up questions 1-6 Exam question 1-3	Unit 6 Further mechanics and Thermal Physics Simple harmonic motion	
	11/10/2021	Week 7	Unit 6 Further mechanics and Thermal Physics: Molecular kinetic theory model	Page 115 warm up questions and exam question 1	Unit 6 Further mechanics and Thermal Physics Simple harmonic motion	
	18/10/2021	Week 8	Unit 6 Further mechanics and Thermal Physics: Molecular kinetic theory model	Page 117 Warm up questions and exam questions 1,2	Unit 6 Further mechanics and Thermal Physics Simple harmonic systems	Page 101 warm up and exam questions 1-4
Autumn 2	01/11/2021	Week 9	Unit 7: Fields and their consequences Newton's Laws	Page 121 warm up questions and 4 / exam question 1-	Unit 6 Further mechanics and Thermal Physics Simple harmonic systems	CPAC write up
	08/11/2021	Week 10	MOCK EXAM PERIOD		MOCK EXAM PERIOD	
	15/11/2021	Week 11	MOCK EXAM PERIOD		MOCK EXAM PERIOD	
	22/11/2021	Week 12	MOCK EXAM PERIOD		MOCK EXAM PERIOD	
	29/11/2021	Week 13	Unit 7: Fields and their consequences Gravitational field strength	Page 121 exam question 1-3	Unit 6 Further mechanics and Thermal Physics Simple harmonic systems CPAC	Page 105 warm up and exam questions
	06/12/2021	Week 14	Unit 7: Fields and their consequences Gravitation Potential	Page 123 warm up and exam question 1	Unit 6 Further mechanics and Thermal Physics Forced Vibration and resonance	
	13/12/2021	Week 15	Unit 6 Test Unit 6 Test feedback and DIRT		Unit 9 Astrophysics: Astronomical telescopes – refractors and reflectors	
Spring 1	03/01/2022	Week 16	Unit 7: Fields and their consequences Orbits of planets and satellites	Page 125 warm up and exam questions	Unit 9 Astrophysics: Astronomical telescopes – refractors and reflectors	Page 174 warm up and exam questions
	10/01/2022	Week 17	Unit 7: Fields and their consequences Coulombs Law and Electric field strength	Page 127 warm up and exam questions	Unit 9 Astrophysics: Astronomical telescopes – refractors and reflectors	
	17/01/2022	Week 18	Unit 7: Fields and their consequences Electric potential	Page 129 exam questions 1-3	Unit 9 Astrophysics: Radio telescopes, UV, IR and X ray and advantages of large diameters	

	24/01/2022	Week 19	Unit 7: Fields and their consequences Capacitance / parallel plate capacitor	Page 139 exam practice question 2 and 3	Unit 9 Astrophysics: Radio telescopes, UV, IR and X ray and advantages of large diameters	Page 177 warm up and exam questions	
	31/02/2022	Week 20	Unit 7: Fields and their consequences Energy stored by a capacitor	Page 133 Warm up and exam questions	Unit 9 Astrophysics: Radio telescopes, UV, IR and X ray and advantages of large diameters		
	07/02/2022	Week 21	Unit 7: Fields and their consequences Capacitor charge and discharge	Page 135 Exam questions 1,2, and 3	Unit 9 Astrophysics: Classification of stars by luminosity and Absolute magnitude		CPAC investigating the charge and discharge of a capacitor
	14/02/2022	Week 22	Unit 7: Fields and their consequences Magnetic flux density	Page 141 warm up questions and exam questions CPAC write up	Unit 9 Astrophysics: Classification of stars by luminosity and Absolute magnitude	Page 179 warm up and exam questions	CPAC how force varies with flux density
Spring 2	28/02/2022	Week 23	Unit 7: Fields and their consequences Magnetic flux density		Unit 9 Astrophysics: Classification of stars by luminosity and Absolute magnitude		
	07/03/2022	Week 24	Unit 7: Fields and their consequences Magnetic flux and flux linkage	Page 145 exam questions 1-3	Unit 9 Astrophysics: Classification by T, BB radiation and principles of use of the stellar spectral classes	Page 181 warm up and exam questions	
	14/03/2022	Week 25	Unit 7: Fields and their consequences Magnetic flux and flux linkage CPAC	CPAC write up	Unit 9 Astrophysics: Classification by T, BB radiation and principles of use of the stellar spectral classes		CPAC effect on magnetic flux varying the angle of a search coil
	21/03/2022	Week 26	Unit 7: Fields and their consequences Electromagnetic induction	Page 145 exam questions 1-3	Unit 9 Astrophysics: Classification by T, BB radiation and principles of use of the stellar spectral classes	Page 181 warm up and exam questions	
	28/03/2022	Week 27	Unit 7: Fields and their consequences Alternating currents	Page 147 warm up and exam question 2	Unit 9 Astrophysics: The HR diagram		
	04/04/2022	Week 28	Unit 7: Fields and their consequences The operation of a transformer Unit 7: Test	Page 151 warm up and exam questions	Unit 9 Astrophysics: Supernova, neutron stars and black holes	Page 183 warm up and exam questions	
Summer 1	25/04/2022	Week 29	Unit 7: Test feedback and DIRT Unit 8 Nuclear physics: Rutherford scattering	Page 155 exam question 1	Unit 9 Astrophysics: Doppler effect and Hubble's law	Page 187 warm up and exam questions	
	02/05/2022	Week 30	Unit 8 Nuclear physics: Alpha, beta and gamma radiation / Decay	Page 162-163 warm up and exam questions	Unit 9 Astrophysics: Quasars and Detection of exoplanets	Page 189 warm up and exam question	CPAC Investigating the inverse square law for gamma radiation
	09/05/2022	Week 31	Unit 8 Nuclear physics: Radioactive decay	CPAC write up	Unit 9 Test		
	16/05/2022	Week 32	Unit 8 Nuclear physics: Nuclear instability / nuclear radius	Page 157 exam questions 1 and 2	Unit 9 Test feedback and DIRT		
	23/05/2022	Week 33	Unit 8 Nuclear physics: Mass and Energy / induced fission / safety aspects				
Summer 2	06/06/2022	Week 34	Unit 8 Nuclear physics: Test Unit 8 Nuclear physics: Test feedback and DIRT				
	13/06/2022	Week 35					
	20/06/2022	Week 36					

	27/06/2022	Week 37					
	04/07/2022	Week 38					
	11/07/2022	Week 39					
	18/07/2022	Week 40					