

Senior Physics (General)
Learning & Assessment Overview 2021

Year 11				Year 12			
PHY Unit 1 Thermal, Nuclear and Electrical Physics		PHY Unit 2 Linear Motion and Waves		PHY Unit 3 Gravity and electromagnetism		PHY Unit 4 Revolutions in modern physics	
By the end of this unit, students will: 1. describe and explain heating processes, ionising radiation and nuclear reactions, and electrical circuits 2. apply understanding of heating processes, ionising radiation and nuclear reactions, and electrical circuits 3. analyse evidence about heating processes, ionising radiation and nuclear reactions, and electrical circuits 4. interpret evidence about heating processes, ionising radiation and nuclear reactions, and electrical circuits 5. investigate phenomena associated with heating processes, ionising radiation and nuclear reactions, and electrical circuits 6. evaluate processes, claims and conclusions about heating processes, ionising radiation and nuclear reactions, and electrical circuits 7. communicate understandings, findings, arguments and conclusions about heating processes, ionising radiation and nuclear reactions, and electrical circuits.		By the end of this unit, students will: 1. describe and explain linear motion and force, and waves 2. apply understanding of linear motion and force, and waves 3. analyse evidence about linear motion and force, and waves 4. interpret evidence about linear motion and force, and waves 5. investigate phenomena associated with linear motion and force, and waves 6. evaluate processes, claims and conclusions about linear motion and force, and waves 7. communicate understandings, findings, arguments and conclusions about linear motion and force, and waves.		Students will: 1. describe and explain gravity and motion and electromagnetism 2. apply understanding of gravity and motion and electromagnetism 3. analyse evidence about gravity and motion and electromagnetism 4. interpret evidence about gravity and motion and electromagnetism 5. investigate phenomena associated with gravity and motion and electromagnetism 6. evaluate processes, claims and conclusions about gravity and motion and electromagnetism 7. communicate understandings, findings arguments and conclusions about gravity and motion and electromagnetism.		Students will: 1. Describe and explain special relativity, quantum theory and the standard model 2. Apply understanding of special relativity, quantum theory and the standard model 3. Analyse evidence about special relativity, quantum theory and the standard model 4. Interpret evidence about special relativity, quantum theory and the standard model 5. Investigate phenomena associated with special relativity, quantum theory and the standard model 6. Evaluate processes, claims, and conclusions about special relativity, quantum theory and the standard model 7. Communicate understandings, findings, arguments and conclusions about special relativity, quantum theory and the standard model.	
Topics 1. Heating processes 2. Ionising radiation and nuclear reactions 3. Electrical circuits		Topics 1. Linear motion and force 2. Waves		Topics 1. Gravity and motion 2. Electromagnetism		Topics 1. Special relativity 2. Quantum theory 3. The Standard Model	
Unit Duration Yr 11 Weeks 1 - 16 (16 weeks)		Unit Duration Yr 11 Weeks 21 - 32 (12 weeks)		Unit Duration Yr 11 Weeks 33-38, Year 12 Weeks 1 - 12 (18 weeks)		Unit Duration Yr 12 Weeks 12 - 33, External Exam Weeks 34 - 37 (21 weeks)	
Assessment Task/s		Assessment Task/s		Assessment Task/s		Assessment Task/s	
FIA1 Data Test <i>Weighting: 10%</i>	FIA2 Research Report <i>Weighting: 20%</i>	FIA3 Experimental Investigation <i>Weighting: 20%</i>	FIA4 Examination <i>Weighting: 50%</i>	IA1 Data Test <i>Weighting: 10%</i>	IA2 Experimental Investigation <i>Weighting: 20%</i>	IA3 Research Report <i>Weighting: 20%</i>	EA4 Examination <i>Weighting: 50%</i>
<i>Conditions: 60 mins + 10 mins perusal, short responses, paragraphs, up to 500 words in total</i>	<i>Conditions: 10 hours class time, 1500-2000 words</i>	<i>Conditions: 10 hours class time, 1500-2000 words short response items</i>	<i>Conditions: 2 papers, each 90 mins + 10 mins perusal short response items</i>	<i>Conditions: 60 mins + 10 mins perusal, short responses, paragraphs, up to 500 words in total</i>	<i>Conditions: 10 hours class time, 1500-2000 words short response items</i>	<i>Conditions: 10 hours class time, 1500-2000 words</i>	<i>Conditions: 2 papers, each 90 mins + 10 mins perusal short response items</i>
<i>Issued: n/a Due: Week 7</i>	<i>Issued: Week 10 Due: Week 15</i>	<i>Issued: Week 20 Due: Week 27</i>	<i>Issued: n/a Due: Week 32</i>	<i>Issued: n/a Due: Week 4</i>	<i>Issued: Week 8 Due: Week 13</i>	<i>Issued: Week 18 Due: Week 24</i>	<i>Issued: n/a Due: Week 33-37</i>