**YEAR 12 PHYSICS WORK PLAN: Semester 2, 2018 – Mr Telleman**

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<th>NIT</th>
<th>TERM 3 TOPICS</th>
<th>ASSESSMENT</th>
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| 9.  | **Spinning the rotor**  
Electromagnetism  
\(F = Bqv = m\frac{v^2}{r}\), forces on a wire, forces between wires, galvanometer, torque, \(E = Blv\), \(F = BlI\).  
magnetic field strength, flux density, changing flux, ac & dc generators, motor effect. Ohmic losses, \(B = \frac{kI}{r}\), transformers and induction, electrical generation, solar power, nuclear power, alternative power sources, nuclear fission, nuclear fusion, nuclear radiation, radioactive decay, relativity | Written Task:  
Semester Test  
Assessing TOPIC 9 | Week 10  
Tues 18th September  
L4 - 6 |

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| 10.  | **The Search for Understanding?**  
Atomic structure; Charge and Coulomb's law; Electromagnetic spectrum; Equilibrium; Magnetic forces; Mass and weight; Mass–energy equivalence; Nuclear fission; Nuclear fusion; Nuclear radiation; Photoelectric effect; Quantum theory; Radioactive decay; Relativity; Wave refraction; Wave–particle duality | Extended Response Task  
Particle Physics:  
Open Ended Topic;  
4 weeks, class time and own time; individual report | Week 1: Handed Out  
Week 3: Monitoring  
Wed 24th Oct  
Week 4: Draft  
Fri 2nd Nov  
Week 6  
Due Date:  
Mon 12th Nov |

This work plan was last updated on Tuesday, 28 August 2018. The contents are subject to change – students will be advised in advance of any changes - regularly check for updates.