

Stage 1 Physics: Overview Semester 1 2018

Teacher: Kathy Keenan

This program is for a cohort of students intending to continue to Physics at Stage 2. This is presented as Semester 1 of a two-semester program.

Term 1	Topic	Assessment
<p>Weeks 1-8</p>	<p>Linear Motion and Forces</p> <ul style="list-style-type: none"> • SI units and conversions • Scientific notation • Vectors and scalars • Constant velocity • Speed and velocity • Instantaneous and average velocity • Acceleration • Motion under constant acceleration • Graphical Representations • Equations of motion • Acceleration due to gravity • Projectile Motion • Force • Newton's Laws of Motion • Friction 	<p>Folio 1 – Science Inquiry Skills, (Design Investigation) (25%) Parachute Format: Practical report Word length: Max 1000 words (excluding apparatus, method and results) Class time allocated: One lesson to design and develop hypothesis, two lessons to complete practical, two lessons to analyse data and prepare a report. Students submit a draft for feedback.</p> <p>SAT 1 – Science Understanding (25%) Motion and Forces Test Calculator allowed, Stage 1 Physics formula sheet provided. 90 minutes</p>
<p>Weeks 9-11 Term 2 Week 1-4</p>	<p>Energy and Momentum</p> <ul style="list-style-type: none"> • Energy • Work • Kinetic Energy • Potential Energy • Conservation of Energy • Power • Efficiency • Momentum • Impulse • Conservation of Momentum • Elastic Collisions • Inelastic Collisions 	<p>Folio 2 - Science as a Human Endeavour (25%) Space Flight. Format: Article, oral presentation or video. Word length: 1000 words or 6 minutes. Students submit an outline for feedback. Class time allocated: One week for research and support.</p>

<p>Weeks 5-8</p>	<p>Heat</p> <ul style="list-style-type: none"> • Heat energy and temperature • Heat transfer • Conduction • Convection • Radiation • Thermal Expansion • Specific Heat capacity • Changes of state • Evaporation and Boiling • Latent heat • Condensation and solidification • Sublimation and deposition 	<p>SAT 2 Science Inquiry Skills and Science Understanding (25%) Rock design, build and testing</p> <p>Format: Report – 5 minute screencast or slideshow presentation to the class. Class time allocated: two weeks to design, build, test and possible redesign and test.</p> <p>Students will provide a risk assessment before any testing.</p>
<p>Week 9</p>	<p>Revision for Exam</p>	
<p>Week 10</p>	<p>Exam on Topics from Semester 1 Wednesday 4th July 2018 Calculator allowed, Stage 1 Physics formula sheet provided. 90 minutes</p>	