



## KS5 Physics

# Physics Assessment Map

Definition		Formative	Summative
		<p><b>Formative Assessment</b> is defined within our assessment policy as the frequent interactive assessment of what students currently know and understand to identify learning needs and adjust teaching appropriately.</p>	<p><b>Summative Assessments</b> are defined within our schemes of work to determine students' knowledge and understanding, to test the achievement of learning outcomes at the end of a specified period of study. They are assessments used to determine progression, indicate levels of achievement and predicted grades.</p>
Intent		<p>At Crompton House School, formative assessment is integral to everyday teaching. It has the needs of our students at its core (to build up confidence and reduce anxiety) and it is embedded into teaching activities within each lesson. Via the use of formative assessment approaches, low stakes testing and retrieval practice techniques, our aim is to be best prepared to help our students to embed and use knowledge fluently to improve long term knowledge retention, to meet all students' needs through differentiation and adaptation of teaching, and to achieve a greater equity of student outcomes.</p>	<p>The aim of summative assessment at Crompton House School is to help us to know our students better, to assess their potential and improve performance. Our emphasis is on measuring and evaluating student outcome by finding out what students already know, understand and can do, and then using the outcomes from our summative assessments to influence how we teach, plan improvements and identify struggling students. Our aim is a hand in glove relationship that exists between learning objectives, assessments and teaching.</p>
Timescales	Annual Implementation and Impact	<p>Formative assessment at Crompton House School supports students' progress towards learning of knowledge, concepts and skills by:</p> <ul style="list-style-type: none"> <li>consistently monitoring students' developing knowledge, understanding, and skill related to the topic at hand in order to know how to proceed with instruction in a way that maximizes the opportunity for student growth and success with key content</li> <li>revisiting topics/concepts/skills throughout each year; this is a core focus of our teaching and homework policies; in applying low stakes testing, students gain a firmer grasp of knowledge so they can recall and apply this much later on</li> <li>actively involving students in the process of teaching and learning</li> <li>building students' skills for peer- and self-assessment helping students to understand their own learning, and developing appropriate strategies for 'learning to learn'</li> </ul> <p>Our processes of effective formative assessment give teachers confidence in making judgement about the progress of their students. Our students, who are actively building their understanding of new concepts, who have developed a variety of strategies that enable them to place new ideas into a larger context, and who are learning to judge the quality of their own and their peer's work against well-defined learning goals and criteria, are also developing skills that are invaluable for learning throughout their lives. The little and often approach reinforces good habits and changes attitudes towards learning. Via frequent retrieval practice and low stakes testing, students will become more and more aware of what they are remembering.</p>	<p>If our students are not rigorously assessed, we would have no way to track progress throughout the year and no way to identify problems in time to correct them. We are therefore committed to the implementation of well thought out and carefully written summative assessments, which are directly linked to departmental schemes of work and PLCs (personalised learning checklists) in order to allow for an effective analysis of student strengths and weaknesses and evaluation of student outcomes.</p> <p>Our summative assessments will demonstrate results that reveal a degree of mastery and analysis of students' progress towards intended goals. The rigour of questions on each assessment, specifically aligning these to what is taught, will define the rigour of Crompton House, as a school, and in doing so, will determine what our students will achieve. We are focused on creating an environment in which each student is expected to learn at high levels and our summative assessments are written to require a rigorous demonstration of learning.</p>
		<p>Key strategies of effective formative assessment on a <b>termly / half termly basis</b> within KS5 Physics include:</p> <p><b>Year 12 – Alongside the summative assessments there are common homework assignments in each topic which are made up of exam paper questions. (See Marking &amp; Feedback Document, Summary SoW)</b></p> <p><b><i>Assessed Practicals (Students are awarded a Pass/Fail on practical skills at the end of Year 13)</i></b></p>	<p><b>Summative assessments</b> are directly linked to PLCs and used as a means to assess the security and depth of understanding a student has attained against the key course content we have defined for them. They are consistent with departmental schemes of work and PLCs. They test the learning outcomes accurately and fairly and are capable of effectively differentiating levels of student achievement where required. Summative assessments are teacher assessed and moderated.</p>

	<p><b>Interim Implementation</b> (Termly / Half Termly)</p>	<p>1 Investigation into the variation of the frequency of stationary waves on a string with length, tension and mass per unit length of the string.  2 Investigation of interference effects to include the Young's slit experiment and interference by a diffraction grating.  3 Determination of g by a free-fall method  4 Determination of the Young modulus by a simple method.  5 Determination of resistivity of a wire using a micrometer, ammeter and voltmeter.  6 Investigation of the emf and internal resistance of electric cells and batteries by measuring the variation of the terminal pd of the cell with current in it.</p> <p><b>Year 12 – Alongside the summative assessments there are common homework assignments in each topic which are made up of exam paper questions. (See Marking &amp; Feedback Document &amp; Summary SoW)</b></p> <p><b><i>Assessed Practicals (Students are awarded a Pass/Fail on practical skills at the end of Year 13)</i></b>  7 Investigation into simple harmonic motion using a mass-spring system and a simple pendulum.  8 Investigation of Boyle's (constant temperature) law and Charles's (constant pressure) law for a gas.  9 Investigation of the charge and discharge of capacitors. Analysis techniques should include log-linear plotting leading to a determination of the time constant RC.  10 Investigate how the force on a wire varies with flux density, current and length of wire using a top pan balance.  11 Investigate, using a search coil and oscilloscope, the effect on magnetic flux linkage of varying the angle between a search coil and magnetic field direction.  12 Investigation of the inverse-square law for gamma radiation.</p>	<p><b>Year 12:</b>  Deadline for Summative Assessment 1: W/C 16<sup>th</sup> October  Deadline for Summative Assessment 2: W/C 22<sup>nd</sup> January  End of Year Exams W/C 29<sup>th</sup> April &amp; 6<sup>th</sup> May</p> <p><b>Year 13:</b>  Mock 1: W/C 16<sup>th</sup> and 30<sup>th</sup> October  End of Topic Tests: W/C 18<sup>th</sup> December  Mock 2: W/C 5<sup>th</sup> February and 12<sup>th</sup> February</p>
	<p><b>Weekly Implementation</b></p>	<p>Key strategies of effective formative assessment in action <b>in hourly lessons</b> within KS5 Physics include:</p> <ul style="list-style-type: none"> <li>• Each topic has a booklet of exam style questions. Students regularly complete these questions in a timed manner.</li> <li>• Use of whiteboards to complete questions to assess understanding.</li> <li>• Multiple choice questions are used in lessons to test understanding and problem solving.</li> <li>• There are set homework assessments for each sub-topic within a topic. They comprise of exam questions provided by the exam board.</li> </ul>	