



KS4 PHYSICS

Physics Assessment Map

| Definition | | Formative Formative Assessment 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. | Summative Summative Assessments 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. |
|------------|----------------------------------|---|---|
| Intent | | 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. | 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. |
| 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">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 contentrevisiting 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 onactively involving students in the process of teaching and learningbuilding students' skills for peer- and self-assessment helping students to understand their own learning, and developing appropriate strategies for 'learning to learn' <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> |

Interim Implementation (Termly / Half Termly)

GCSE Physics students have access to an extensive range of exam questions in each of their study booklets that are used in lessons and are usually self (or peer) marked by students allowing them to develop their exam technique.

GCSE Physics students complete low-stakes tests at regular intervals. The tests are either based on the AO1 factual content or made up from exam questions selected centrally from AQA GCSE Physics Exampro and marked by the teacher.

For the current cohort of GCSE Physics students, the order of delivery of the course and tests is planned as follows (there may be minor changes to this scheme if required)

Year 10:

| Summative/Formative | Assessment Content | Feedback type | H/WK or Class |
|------------------------|--|-----------------|---------------|
| Autumn 1 | | | |
| Formative | Exam questions on Energy Efficiency | Written | HW |
| Formative | Exam questions on Renewable Energy & Efficiency | Written | HW |
| Autumn 2 | | | |
| Summative Assessment 1 | Year 9 & 10 topics | Written | CW |
| Maintenance Marking | Book and/or booklet | Green pen/stamp | - |
| Spring 1 | | | |
| Formative | Electricity & Electricity in the Home (Christmas HW) | Written | HW |
| Summative Assessment 2 | Year 9 & 10 Topics | Written | CW |
| Spring 2 | | | |
| Formative | Exam questions on SPC & LH plus the RP | Written | HW |
| Maintenance Marking | Book and/or booklet | Green pen/stamp | - |
| Summer 1 | | | |
| Formative | Exam Questions on Radioactivity | Written | HW |
| Formative | Exam Questions on Waves Topic | Written | HW |
| Summer 2 | | | |
| Summative Assessment 3 | Year 9 & Year 10 Topics | Written | CW |

Summative assessments 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 in Year 11 are made using questions from the previous season's GCSE examinations, with questions that are not available to students through exam board websites.

Summative assessments in Year 10 are made using questions from GCSE papers though not necessarily that of the previous season. Questions are chosen that are not included in student work booklets or in any revision material provided to students.

Mark allocation:

In all assessments for separate science students sitting the higher tier papers, questions included are approximately 40% standard demand and 60% high demand, to accurately reflect the demand of the terminal GCSE exams.

For Combined Science students in Year 10, implemented from Summer 2022 and in all summative assessments going forward, summative assessments contain questions with a progressive range of demand. These questions are then separated in analysis to generate grades based on final GCSE tiers with Foundation/Standard demand questions (Grades 1-5) and Standard/Higher demand questions (Grades 4-9). The more favourable grades are selected and reported to students and parents.

Performance in Year 10 assessments are then used to inform recommendation of tiering decisions for Year 11 mocks and final GCSE examinations.

Summative assessments are marked by the department as a whole – teachers mark one or two questions for the whole cohort following mark schemes collated by the Head of Physics from the exam board mark schemes.

Year 10:

Deadline for Summative Assessment 1: W/C 21st November

Deadline for Summative Assessment 2: W/C 6th February

End of Year Exams: W/C 19th June and 26th June

Year 11:

Mock 1: W/C 17th October and 31st October

Mock 2: W/C 20th February and 27th February

| | <p>Year 11:</p> <table><tr><th>Summative/Formative</th><th>Assessment Content</th><th>Feedback type</th><th>H/WK or Class</th></tr><tr><td colspan="4">Autumn 1</td></tr><tr><td>Formative</td><td>Exam Questions on Forces</td><td>Written</td><td>HW</td></tr><tr><td>Summative</td><td>Mock 1</td><td>Written</td><td>CW</td></tr><tr><td colspan="4">Autumn 2</td></tr><tr><td>Formative</td><td>Exam Questions on Momentum</td><td>Written</td><td>HW</td></tr><tr><td>Maintenance Marking</td><td>Book and/or booklet</td><td>Green pen/stamp</td><td></td></tr><tr><td colspan="4">Spring 1</td></tr><tr><td>Formative</td><td>Exam Questions on Waves</td><td>Written</td><td>HW</td></tr><tr><td>Formative</td><td>Exam Questions on Further Light</td><td>Written</td><td>HW</td></tr><tr><td colspan="4">Spring 2</td></tr><tr><td>Summative</td><td>Mock 2</td><td>Written</td><td>CW</td></tr><tr><td>Maintenance Marking</td><td>Book and/or booklet</td><td>Green pen/stamp</td><td></td></tr><tr><td colspan="4">Summer 1</td></tr><tr><td>Formative</td><td>Exam Questions Motors & Generators</td><td>Written</td><td>HW</td></tr><tr><td>Maintenance Marking</td><td>Book and/or booklet</td><td>Green pen/stamp</td><td></td></tr><tr><td colspan="4">Summer 2</td></tr><tr><td></td><td></td><td></td><td></td></tr></table> | Summative/Formative | Assessment Content | Feedback type | H/WK or Class | Autumn 1 | | | | Formative | Exam Questions on Forces | Written | HW | Summative | Mock 1 | Written | CW | Autumn 2 | | | | Formative | Exam Questions on Momentum | Written | HW | Maintenance Marking | Book and/or booklet | Green pen/stamp | | Spring 1 | | | | Formative | Exam Questions on Waves | Written | HW | Formative | Exam Questions on Further Light | Written | HW | Spring 2 | | | | Summative | Mock 2 | Written | CW | Maintenance Marking | Book and/or booklet | Green pen/stamp | | Summer 1 | | | | Formative | Exam Questions Motors & Generators | Written | HW | Maintenance Marking | Book and/or booklet | Green pen/stamp | | Summer 2 | | | | | | | | |
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| Summative/Formative | Assessment Content | Feedback type | H/WK or Class | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Autumn 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Formative | Exam Questions on Forces | Written | HW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Summative | Mock 1 | Written | CW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Autumn 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Formative | Exam Questions on Momentum | Written | HW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance Marking | Book and/or booklet | Green pen/stamp | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spring 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Formative | Exam Questions on Waves | Written | HW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Formative | Exam Questions on Further Light | Written | HW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Spring 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Summative | Mock 2 | Written | CW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance Marking | Book and/or booklet | Green pen/stamp | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Summer 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Formative | Exam Questions Motors & Generators | Written | HW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Maintenance Marking | Book and/or booklet | Green pen/stamp | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Summer 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| Weekly Implementation | <p>Key strategies of effective formative assessment in action in hourly lessons within KS4 Physics include:</p> <ul style="list-style-type: none">• Student self-marking of retrieval starter questions• Questioning to assess prior knowledge and understanding, challenge new learning, and promote links between topics and other subjects (often Chemistry, Biology, Mathematics, Geography, PE).• Practical tasks, data analysis and explanations allow staff and students to assess AO3 working scientifically skills, drawing tables, graphs, making conclusions.• Use of mini whiteboards where appropriate for e.g. multiple choice questions, quizzing of new tier 3 vocabulary.• Peer and self- assessment of exam questions used in lessons (from booklets)• Fact check quick tests on keywords and definitions- centrally printed A5 sheets (End of Topic). | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |