



KS3 Science

Science 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)

Key strategies of effective formative assessment on a **termly / half termly basis** within KS3 Science include:

For Years 7 and 8 and for the first term for Year 9 students complete end of topic or half termly assessments approximately every 8-12 lessons. These consist of exam style questions downloaded from Exampro and are consistent with departmental schemes of work and match PLCs for each topic. The tests also include how science works (HSW) questions. They test the learning outcomes accurately and fairly and are capable of effectively differentiating levels of ability as there are higher or foundation assessments available as follows:

- The foundation assessment is made up of 60% old National Curriculum (NC) Level 3 and 4 questions and 40% NC Level 5 questions.
- The higher assessment is made up of 40% old National Curriculum (NC) Level 5 questions and 60% NC Level 6, 7 and GCSE questions.

These are self or peer assessed using mark schemes and checked by staff. The marks for these assessments are expressed as a percentage and stored on a central KS3 Spreadsheet. These tests are kept in folders by students. For the academic year 2020_21 the order of delivery of the tests is planned as follows:

Year 7:

Autumn	Spring	Summer
Transition test	Force and gravity	Energy costs and transfers
Variation and interdependence	Cells	Plant reproduction and acids and alkalis
Particle model and separating mixtures		

Year 8:

Autumn	Spring	Summer
Healthy living, metals and non- metals	Photosynthesis	Earth's structure and Universe
Breathing and respiration	Waves and light	Sound, pressure and magnetism
Current, voltage and resistance		

Year 9:

Autumn
Digestion and evolution

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 are teacher assessed and moderated.

Please see the assessment calendar for summative assessment dates.

<https://www.cromptonhouse.org/assessment/>

Periodic table and types of reaction

Chemical energy, work and heating

Practical write ups are assessed through a number of investigations planned for formative feedback by teachers as follows:

Year 7	Year 8	Year 9
Variation hand span/foot size	Breathing and heart rate	Isa Chemistry
Microscopes	Respiration	Isa Physics
Red cabbage indicator	Metals and acids	Isa Biology
Filtration and evaporation	Mable run	Practical chemistry
Hooke's law	Ohm's law	Practical Biology
Model of sweat	Reflection	Practical Physics
	Electromagnets	

Literacy tasks are embedded in the scheme of work in the form of Big Writes and extended 6-mark questions as follows for year 7 and 8, to be peer assessed or teacher assessed, delivered as homework or classwork:

Year 7	Topic	Big Write	Long answer Qu
Biology	Variation and interdependence	✓	
	Cells		✓
	Movement		✓
	Plant reproduction	✓	
	Human reproduction	✓	✓
Chemistry	Elements	✓	
	Particle model		✓
	Separating mixture		✓
Physics	Contact forces and gravity	✓	
	Energy costs	✓	

		<table><tr><th>Year 8</th><th>Topic</th><th>Big Write</th><th>Long answer Qu</th></tr><tr><td>Biology</td><td>Healthy Living</td><td>✓</td><td></td></tr><tr><td></td><td>Photosynthesis</td><td>✓</td><td>✓</td></tr><tr><td>Chemistry</td><td>Metals and non- metals</td><td></td><td>✓</td></tr><tr><td></td><td>Universe</td><td>✓</td><td>✓</td></tr><tr><td></td><td>Earth's resources</td><td></td><td>✓</td></tr><tr><td></td><td>Climate</td><td>✓</td><td></td></tr><tr><td></td><td>Wave properties and light</td><td>✓</td><td>✓</td></tr></table>	Year 8	Topic	Big Write	Long answer Qu	Biology	Healthy Living	✓			Photosynthesis	✓	✓	Chemistry	Metals and non- metals		✓		Universe	✓	✓		Earth's resources		✓		Climate	✓			Wave properties and light	✓	✓	
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Weekly Implementation	<p>Key strategies of effective formative assessment in action in hourly lessons within KS3 Science include:</p> <ul style="list-style-type: none">· Tiered verbal questioning (Bloom’s) to assess prior knowledge and understanding, challenge new learning, and promote links between topics and other subjects (usually mathematics, chemistry and physics, PE).· Investigative tasks and write ups allow both staff and students to assess working scientifically skills, drawing tables, graphs, drawing conclusions.· Peer and self- assessment of test, Big Writes and 6- mark extended answer questions to reflect on their learning and red pen to address misunderstandings· Mini plenaries/ progress checks throughout the lesson· Hooks· Mini quizzes, true or false, bingo using key words using exercise books or mini whiteboards· Wagolls given to support learning· Complete now tasks· Homework<ul style="list-style-type: none">• Research tasks for new topics/ ideas creation of posters and leaflets• Seneca assignments set• Doodle quizzes and interactives utilized																																		