



Department Curriculum Intent: Science

What are the aims of our curriculum at Campsmount? How does it incorporate the educational principles evident in the whole school intent?

The overall aim of the curriculum in science is to provide a stimulating and challenging education for our learners. The curriculum covers a wide range of knowledge for learners to absorb and apply to real world contexts. Our curriculum shows challenge and ambition by allowing learners to develop critical thinking skills, objective scientific enquiry and evaluative skills. In addition, we have implemented high level scientific texts into our scheme of learning as well as integrated the high five literacy strategy across our midterm plans. Our learning is inclusive as not only does it include this wide range of knowledge and skills, but is also appropriately scaffolded and differentiated to allow all students to access the learning. Science literacy is at the fore-front of all learning. Science and the media is references at appropriate points e.g. vaccines, climate change. Everyday Science is regularly shared within science.

How do we ensure our curriculum meets and exceeds the requirements of the National Curriculum?

The AQA specifications, meet the demands of the national curriculum. In addition, opportunities are provided to apply knowledge to less familiar (but relevant) contexts. Furthermore, embedded into the schemes of work are opportunities for students to read high quality texts taken from scientific journals and articles. This, in conjunction with the high five literacy strategy, allows learners to not only strengthen their literacy skills but also exceed the boundaries set by the specification.

What specifications do we follow at KS4 and 5 and why?

AQA is the exam board used at KS4 and KS5. KS3 follows the AQA KS3 syllabus. Staff are familiar with AQA, have had successful track record of results and it creates consistency of language in exam questions and content.

How do we ensure that we meet the needs of all learners and in particular those who are Pupil Premium or SEND?

Exam analysis highlights priority groups. Therefore intervention and LEARN tasks can be used to address these identified weaknesses. Content and skills are accessible to all learners with appropriate scaffolding and differentiation. The department also follows the premium first strategies as per Campsmount policy. The science curriculum is literacy led to improve students ability to access literacy demanding content and questions (focus on tier 3 subject specific language).

Why do we teach the topics/schemes in the order we teach them?

At KS5, the topics are taught in the order of the specification. If two (or more) staff members teach the same class, topics will be distributed between those staff members. Special consideration will be given towards whether a topic is needed prior to a later topic as it contains content or skills required in later topics/units. In addition, specific disciplines may be given to specific staff. For example, at KS5 chemistry there are physical chemistry, inorganic chemistry and

organic chemistry areas of the specification. Each of these specific areas will be given to one teacher. This allows for continuity of content and skills as well as allows staff to further teach within specialism.

At KS4, the topics are taught in the order suggested by the AQA specification. The exception is physics where we deliver P3 and P4 before P1 and P2. This decision was made due to the relative difficulties of the content learned. P3 and P4 are the easier units. This allows students time to develop maturity and skills ready for the more difficult units.

At KS3, they follow the AQA syllabus. This decision was made to provide top-down consistency within the academy.

How do we develop our subject knowledge effectively? What impact does this have on curriculum planning?

There are inconsistencies in the amount of science learners have had in primary school. Our lessons have been planned early on to teach these skills as new or to provide extension opportunities to more able students.

By following the AQA specifications, core scientific principles are learned at KS3, further embedded at KS4 and further developed into other contexts at KS5. This layered approach allows us to ensure subject knowledge taught at KS3 is reinforced in later key stages to secure knowledge and understanding. This also allows more time for students to develop their application of knowledge within topics to better cater for the demands of examinations at the end of KS4 and KS5.

Statement of assessment intent:

At KS3 we have formative assessment every 4-6 lessons and summative assessments at the end of each half term. These assessments provide a percentage and allow staff to identify areas for development. At the end of the academic year an end of year assessment is sat to determine student's progress.

At KS4 students also sit formative assessments in lessons every 4-6 lessons but will also sit full exam papers (or department produced equivalents) following the whole school PPE and data point schedules.

At KS5, we also deliver end topic(s) tests. In addition, students will sit full exam papers (or department produced equivalents) following the whole school PPE and data point schedules. Furthermore, students are required to carry out practical assessments which are tracked on AQA provided spreadsheets and produce a lab book of evidence to support.

All assessments at all key stages are fed back by their respective teachers to inform students where and how to improve for later summative assessments, whether in that year or future key stages.