

Curriculum Overview 2019-2020

Science

Intention

In Science lessons at Beacon High, we aim to stimulate your curiosity in finding out why things happen the way they do. We do this through teaching an understanding of natural observations: how can we describe things in enough detail for others to understand? What words do we need to understand in order to explain what we see?

We teach methods of enquiry and investigation, including practical investigations and experiments. We also consider our place in the natural world, and how scientific literacy can empower us to make better life choices.

Implementation at Key Stage 3

At Key Stage 3, we follow the [National Curriculum](#) in Years 7 and 8; learning all three science subjects together as a sequence of topics. These topics include:

	Biology	Chemistry	Physics
Year 7	Cells Reproduction Respiration	Acids and alkalis The periodic table Separating substances	Forces Motion Space
Year 8	Genetics and evolution Health Digestion	Atomic structure Chemical reactions Metals and non-metals Earth's atmosphere	Electricity Energy Light and Sound

In Year 9, we move on to a Key Stage crossover unit which reviews the learning from Key Stage 3 and builds depth to ensure students have a firm foundation before starting GCSE Sciences.

We aim to enhance learning in science through practical work, visits and other opportunities. For example, all year 9 students participate in the Islington STEM Careers Day, allowing them to find out more about science-related jobs and careers.

Implementation at Key Stage 4

We follow the [Edexcel GCSE specification](#) for the Sciences. The majority of students complete GCSE Combined Science which leads to two GCSEs.

Around 20% of students are chosen by their teacher to study Triple Science (GCSE Biology, Chemistry and Physics) and are awarded three GCSEs. This decision is made in year 9 and is based on attainment, progress and ability.

Overview of Key Stage 4

GCSE Science is assessed through six exams at the end of year 11: 2 Biology exams, 2 Chemistry exams and 2 Physics exams.

- Combined Science exams are 70 minutes long each.
- Triple Science exams are 135 minutes long each.

As well as assessing the scientific ideas learned throughout Key Stage 4, the GCSE Science exams also assess students on a range of required practical tasks called [Core Practicals](#). The Core Practicals have replaced coursework in GCSE Science.

Students also need to learn the [equations](#) used in their Physics exams.