

Curriculum Intent

Curriculum Vision | *Chemistry; What is the purpose of the curriculum?*

Chemistry answers questions. We challenge students to expand their scientific knowledge and develop their core practical skills. Students are encouraged to interrogate information in order to find answers to existing problems as well as challenge current ideas. Chemistry helps us understand the world around us, make informed decisions and to fully comprehend the background to current events such as human health, climate change and the energy crisis. However, the world changes; new fuels, new vaccines, new pharmaceuticals, new materials, Chemistry is involved.

All students:

- We are ambitious for, and have high expectations of, all of our pupils and know that every student can experience success through obtaining a high level of knowledge and understanding around how Chemistry impacts on our everyday life.
- We believe that every student at NKS, regardless of prior or current attainment, has the right to build their foundational knowledge of chemical concepts. Through doing so they will be able to analyse and evaluate information and confidently articulate their ideas about Chemistry.
- Our use of investigative and enquiry practices across all classes ensures all students, including those with SEND, make progress in numeracy, working scientifically as well as developing their practical investigative and problem-solving skills.
- We have a fundamental belief that all children are entitled to experience the richness and difficulty of authentic material keeping pace with an evolving world where new technologies, discoveries and theories related to Chemistry are developed.

Successful navigation of the subject within the world:

- Our Chemistry curriculum aims to equip our students with logic, reason and problem-solving skills. These critical thinking skills enable students to make informed choices about important issues such as climate change, health care and the environment.
- Chemistry also empowers our students to work in future fields as diverse as engineering, forensics, pharmacology or geochemistry.

Chemistry



Key Stage 5
 The Year 12 course starts with GCSE transition tasks and the teaching of Module 2: Foundations of Chemistry. This unit is continually revisited throughout the two year course. We use the required practical activities to back up theoretical concepts allowing students to have an inquiry led experience.

Key Stage 4
 Key topics of Structure and Bonding, Chemical Changes are continually revisited, and this knowledge is built upon and skills are embedded using modelling, mathematics as well as investigative work.

Key Stage 3
 The aim of KS3 curriculum is for students to master the key skills and build foundational knowledge which can be applied to challenging and unfamiliar contexts.

The KS3 curriculum is broken down into topics from each of the three specialisms. Students focus on one topic before moving onto the next, enabling students to link the learning.

In Year 9 students begin the GCSE course allowing allow students the opportunity to study Triple Sciences..

