Science

Science at the Skegness Academy looks at the world through enquiring eyes, encouraging pupils to investigate for themselves and explain why things happen in the world around them.
Students develop a variety of analytical and life skills such as how to hypothesise, predict, observe, measure, record, conclude, evaluate and justify the conclusions they make. Students become adept at making their own judgements on claims which are made in the media and elsewhere, using a variety of sources of information. We hope that all students will become independent investigators and thinkers who can take a critical look at the world around them and determine how science shapes their lives.

Years 7 & 8

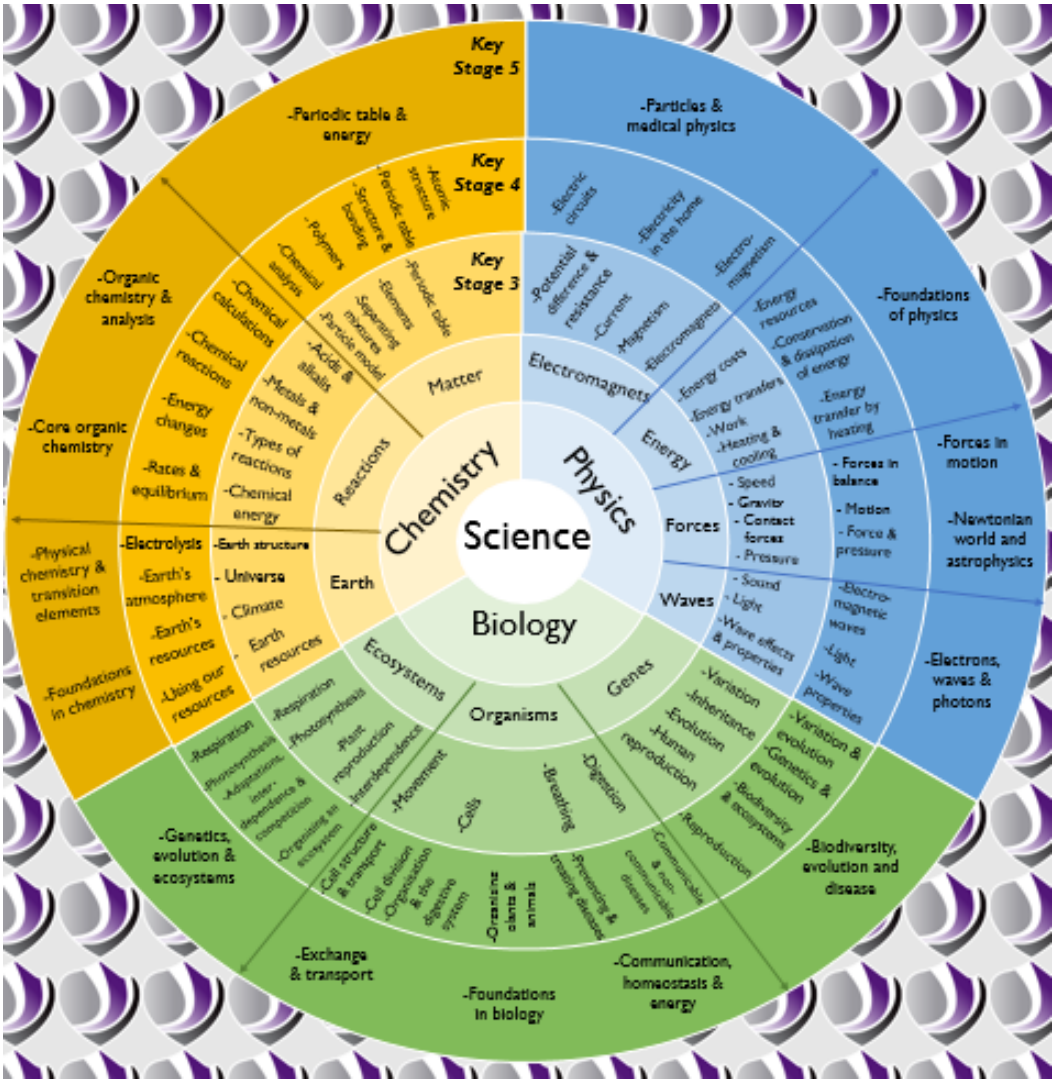
During years 7 & 8, students will learn the key scientific principles using the Activate scheme of work published by Collins.

At the Skegness Academy, we have adapted the scheme of work to blend with our Curriculum intent and the concept of the 'Big Ideas'. The table below summarises the layout of the ten big ideas, which are the foundations of biology chemistry and physics:

Discipline	Big idea	
Biology	Organisms	
	Ecosystems	
	Genes	
Chemistry	Matter	
	Reactions	
	Earth	
Physics	Forces	
	Electromagnets	
	Energy	
	Waves	

The Big Ideas feature in years 7 & 8 but also link to the teaching of science in years 9, 10 & 11 and into Sixth Form.

This is illustrated in the diagram below:



In year 9, students move into the key concepts covered in the GCSE. These are the fundamental concepts covered within the GCSE that are essential to fully understand the detailed information within the GCSE. These key concepts continue to develop the Big Ideas from years seven and eight.

In year 10, the students build on the content and skills of the GCSE's. At the Skegness Academy, all students start following the AQA Combined Science: Trilogy specification or the AQA Separate Sciences. This will allow every student to gain two GCSE's in Science by completing elements of Biology, Chemistry and Physics; or One GCSE in each of the sciences respectively. The Trilogy course is comprised of six examinations, each with an equal weighting of 16.7%. Each separate science GCSE is comprised of three examinations with an equal weighting of 33.3%.

Progress of the students within year 9 will determine whether they can move onto the separate sciences in year 10 or remain completing the double award.

More information for the AQA Combined: Trilogy can be found here:
http://www.aqa.org.uk/subjects/science/gcse/combined-science-trilogy-8464

More information for the AQA separate sciences can be found here:
https://www.aqa.org.uk/subjects/science/gcse/biology-8461
https://www.aqa.org.uk/subjects/science/gcse/chemistry-8462
https://www.aqa.org.uk/subjects/science/gcse/physics-8463

In year 11, the students are completing either the three separate sciences (GCSE Biology, GCSE Chemistry and GCSE Physics) or the Combined Science: Trilogy award following the AQA syllabus. Students complete the content and skills up to Easter and then focus on reviewing the material in preparation for their exams in May to June.

Sixth Form Science

We offer the three main sciences at Key Stage 5. Year 12 and 13 AS and A2 Level courses are modular - OCR Biology, OCR Chemistry and OCR Physics.

Links for the three A-level science can be found below:

https://www.ocr.org.uk/qualifications/as-and-a-level/biology-a-h020-h420-from-2015/

https://www.ocr.org.uk/qualifications/as-and-a-level/chemistry-a-h032-h432-from-2015/

https://www.ocr.org.uk/qualifications/as-and-a-level/physics-a-h156-h556-from-2015/

In summary:

- The ‘big ideas’ are key concepts in Science which under-pin the content of the curriculum.
- Literacy and numeracy skills are developed throughout the Science curriculum as proficiency in both fields is required for pupils to excel in Science learning.
- The Science curriculum is completed by the contextualisation of scientific concepts in order to improve student engagement, widen students’ awareness of the applications of science throughout society and to provide opportunities for pupils to begin exploring their ability to apply concepts to unfamiliar contexts; embracing the creative nature of science.
- Students will be inspired by the Science curriculum and their aspirations for the future will be elevated through the promotion of Science-related careers and science skills, which are beneficial to employment in a wide-range of fields including; observational skills, data presentation and data analysis.