Newport Girls' High School **Y7-11 Learning Overview**

Subject:	Chemistry	**Lead Teacher:**	R Wright	**Year:**	11

Curriculum organisation

Students are taught in mixed groups of 30 for **two** hours per week. They are not grouped by ability.

Overview of Topics & Key Information

Term	Unit(s) of Work	Key Enquiry Questions	Key Content/ Terminology	Skills developed	**How will your child be learning?**
Autumn Term	• Organic chemistry (3)	• What are the reactions of carboxylic acids • How are addition polymers and condensation polymers formed? • How are amino acids formed? • What is DNA?	• Carboxylic acids • Esters • Addition polymerisation • Condensation polymerisation • Amino acids • DNA	• Use appropriate scientific vocabulary and theory correctly	• Whole class discussion • Pair work • Practical activities • Problem-solving tasks • Watching short video clips • Research tasks
Spring Term	• Chemistry of the atmosphere	• What are the gases in the atmosphere • How has the earth's early atmosphere changed? • How have human activities contributed to global climate change?	• Proportions of gases in the atmosphere • Greenhouse gases • Global climate change • Carbon footprint • Atmospheric pollution	• Describe patterns in data • Make prediction using scientific knowledge and understanding • Present observations and data appropriately	
	• Using resources	• How do we make water that is fit to drink? • How is waste water treated? • What are alternative methods for extracting metals? • What is life cycle assessment? • How is corrosion prevented? • How are fertilisers manufactured?	• Potable water • Waste water treatment • Life cycle assessment and recycling • Corrosion and alloys • Ceramics, polymers and composites • The Haber process and NPK fertilisers	• Use appropriate techniques, apparatus and materials to carry out practical work safely. • Make and record observations and measurements. • Select plan and carry out investigations to test predictions • Evaluate reliability of methods and suggest possible improvements	
Summer Term	• Revision		• Revision of topics covered in year 9 • Past papers		

Equipment needed for lessons	How will learning and progress be assessed?
• Standard school stationery • Exercise book • Calculator	• End of unit tests (subject knowledge focus) • Formal assessment week (May) • Peer and self assessment • Homework tasks (often research or project based) • Retrieval practice activities

Extension & Enrichment opportunities	What can you do to support your child?
• Revision guides are available from OUP to help with exam preparation • Suggested websites include https://www.bbc.co.uk/bitesize https://www.freesciencelessons.co.uk/ https://www.physicsandmathstutor.com/ https://www.scisheets.co.uk/ • Podcasts to inspire wider interest https://www.thenakedscientists.com/ https://www.scientificamerican.com/podcasts/ • Work is sometimes taken beyond the limits of the specification in order to provide greater depth of knowledge and understanding of material • Extension tasks are provided within the course which generate greater interest in the subject and help prepare students for A level	• Take an active interest in their learning

Inclusion	
In lessons	**Subject specific**
• Teachers follow student passports to ensure that the needs of all students with SEND are met. • Work is enlarged to the necessary size for visually impaired students. • Teachers will ensure that classrooms are quiet learning environments where possible and will dim lights to support students with sensory needs. • Students have the use of laptop if they have a SEND need whereby use of a laptop supports them. • Hearing impaired students are supported through use a radio aid and teachers ensure that students can lip read at all times during lessons. • Dyslexic students are encouraged to use coloured overlays when they are required to read long passages. • Use of dyslexic friendly fonts and coloured backgrounds used in PowerPoints/resources. • Students with ADHD are given movement breaks, fidget toys and lessons are 'chunked' to aid concentration. • Students are seated according to their needs, students work with the SENDCo to decide upon this.	• For pupils with visual impairment, enlarged graph paper for plotting graphs during experiments • Physical impairment – where possible we amend practical equipment or provide a magnifying glass to view instruments • Hearing impaired – show videos with subtitles • Some laboratories have height-adjustable benches for wheelchair access • Cater for latex allergies by providing disposable gloves • Colour blindness

If you have any questions about this Learning Overview, please contact the named Teacher above.