

Denton Community College 2022/23

Departmental Curriculum Map

Subject: Science Year Group: 10



	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Topics	 Cell Biology Organisation Infection & Response Bioenergetics Recap 	 Structure & Bonding Chemical & Energy Changes 	 Energy Electricity Particle Model of Matter Atomic Structure 	 Inheritance Ecology 	 Organic Chemistry Chemical Analysis 	Magnetism Chemistry of the Atmosphere
What will students do during this unit?	1. Recap Y9 Differentiation Cell division Molecule Movement Cultivating microbes 2. Recap Y9 Enzymes Non- communicable diseases Cancer 3. Types of Microbe Immunity Vaccines Antibiotics &	1. Recap Y9 Bonding Atomic Structure & Periodic Table development lonic compounds Properties of matter Polymers Giant covalent Small molecules Carbon compounds Metallic Bonding & alloys Nanoparticles Transition Metals	 Recap Y9 Kinetic energy Gravitational & Elastic potential Specific Heat Capacity Insulation Recap Y9 Resistance Resistors Power & Energy Static Electric fields Particle model Density Specific latent heat 	1. Recap Y9 Mitosis & Meiosis Protein Synthesis Understanding genetics Inheritance probability Genetic engineering Evolution & Antibiotic resistance Evolution theory & speciation Fossils & extinction	1. Alkanes Fractional Distillation Hydrocarbon Properties Cracking Alkenes Alcohols Carboxylic acids Polymers 2. Purity & formulations Gas tests Chromatography Chemical Tests Instrumental methods	1. Magnet properties & fields Electromagnetism Electric motors Generators & transformers 2. Evolution of the atmosphere Pollution



	Painkillers Drug development Monoclonal	Recap Y9 Extracting metals Soluble salts	Internal energy & gas pressure Specific heat	Recap Y9 Feeding relationships		
	antibodies	Electrolysis	capacity	Trophic levels		
	4. Photosynthesis	Acids	Boyle's Law	Sampling		
	Respiration	Chemical & fuel	4. Atomic structure	Cycles		
	Metabolism	cells	& its development	Biodiversity		
		Titrations	Radiation types	Food security		
			Nuclear equations	Decomposition		
			Half-life	Impact of		
			Using radiation	environmental		
			Background	change		
			radiation			
			Fission & fusion			
When will students be assessed?	Once every 3 weeks	Once every 3 weeks	Once every 3 weeks	Once every 3 weeks	Once every 3 weeks	Once every 3 weeks
How will	An end-of-unit exam	An end-of-unit exam	An end-of-unit exam	An end-of-unit exam	3 end-of-year exams	An end-of-unit exam
students be	will be completed	will be completed	will be completed	will be completed	will be completed	will be completed
assessed?	after all topics have	after all topics have	after all topics have	after all topics have	(Biology Paper 1,	after all topics have
	been taught, including a key piece that	been taught, including a key piece that	been taught, including a key piece that	been taught, including a key piece that	Chemistry Paper 1 & Physics Paper 1) to	been taught, including a key piece that
	students will improve	students will improve	students will improve	students will improve	assess the learning	students will improve
	after marking	after marking	after marking	after marking	since September	after marking
Key Vocabulary	See medium term	See medium term	See medium term	See medium term	See medium term	See medium term
	plans & student	plans & student	plans & student	plans & student	plans & student	plans & student
	exercise books	exercise books	exercise books	exercise books	exercise books	exercise books
Homework	One homework per	One homework per	One homework per	One homework per	One homework per	One homework per
opportunities	week linked to topics	week linked to topics	week linked to topics	week linked to topics	week linked to topics	week linked to topics
to broaden or deepen	covered in class	covered in class	covered in class	covered in class	covered in class	covered in class
student						
knowledge						

Links to the National Curriculum	WORKING SCIENTIFICALLY The development of scientific thinking Experimental skills and strategies Analysis and evaluation	WORKING SCIENTIFICALLY The development of scientific thinking Experimental skills and strategies Analysis and evaluation	WORKING SCIENTIFICALLY The development of scientific thinking Experimental skills and strategies Analysis and evaluation	WORKING SCIENTIFICALLY The development of scientific thinking Experimental skills and strategies Analysis and evaluation	WORKING SCIENTIFICALLY The development of scientific thinking Experimental skills and strategies Analysis and evaluation	WORKING SCIENTIFICALLY The development of scientific thinking Experimental skills and strategies Analysis and evaluation
	Vocabulary, units, symbols and nomenclature	Vocabulary, units, symbols and nomenclature	Vocabulary, units, symbols and nomenclature	 Vocabulary, units, symbols and nomenclature 	 Vocabulary, units, symbols and nomenclature 	 Vocabulary, units, symbols and nomenclature
	 SUBJECT CONTENT Cell biology Transport systems Health, disease and the development of medicines Photosynthesis 	 SUBJECT CONTENT Atomic structure & the Periodic Table Structure, bonding & the properties of matter Chemical changes Energy changes in chemistry 	 SUBJECT CONTENT Energy Electricity The structure of matter Atomic structure 	 SUBJECT CONTENT Evolution, inheritance & variation Ecosystems 	 SUBJECT CONTENT Chemical & allied industries Chemical analysis 	 SUBJECT CONTENT Magnetism & electromagnetism Earth & atmospheric science