Denton Community College
Departmental Curriculum Map

Subject: Science

Year Group: 10

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6
Topics	1. Cell Biology 2. Organisation 3. Infection and Response 4. Bioenergetics Recap	1. Bonding, Structure and the eriodic table 2. Chemical and Energy Changes	1. Energy 2. Electricity 3. Particle Model of Matter	1. Inheritance, Variation and Evolution 2. Ecology	1. Organic Chemistry 2. Using Resources 3. Chemistry of the Atmosphere recap 4. Chemical Analysis Recap	1. Forces
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 & painkillers Drug development	1. Recap Y9 *Transition metals* Bonding Atomic structure & periodic table development Ionic compounds Properties of matter Polymers Giant covalent Small molecules Carbon compounds Metallic bonding & alloys *Nanoparticles* 2. Recap Y9 Extracting metals	1. Recap Y9 Kinetic energy Gravitational & elastic potential Specific heat capacity (*) *Insulation (*)* 2. Recap Y9 Resistance Resistors Power & energy *Static* *Electric fields* 3. Particle model Density (*) Specific latent heat Internal energy & gas pressure	1. Recap Y9 Mitosis & meiosis *Protein synthesis* Understanding genetics Inheritance probability Genetic engineering Evolution & antibiotic resistance *Evolution theory & speciation* Fossils & extinction 2. Recap Y9 Feeding relationships	1. Alkanes Fractional distillation Hydrocarbon properties Cracking 2. Potable water (*) Waste treatment Lifecycle assessments Metal extraction 3. Evolution of the atmosphere Pollution 4. Recap Y9 *Chemical tests (*)* *Instrumental methods*	1. Recap Y9 Stopping D-T graphs V-T graphs Elasticity (*) Elastic potential *Pressure* Newton's laws Acceleration (*) Uniform acceleration Momentum (HT) Resolving vectors (HT) *Moments*

	Monoclonal antibodies 4. Photosynthesis (*) Respiration Metabolism	Soluble salts (*) Electrolysis (*) Acids *Chemical & fuel cells* *Titrations*	Specific heat capacity *Boyle's Law*	*Trophic levels* Sampling (*) Cycles Biodiversity *Food security* *Decomposition (*)* *Impact of environmental change*		
When will students be assessed?	Bi-weekly tests	Bi-weekly tests	Bi-weekly tests	Bi-weekly tests	Bi-weekly tests	Bi-weekly tests
How will students be assessed?	Each topic will be assessed at an appropriate time using a key piece An end-of-unit exam will be completed after all 3 topics have been taught	Each topic will be assessed at an appropriate time using a key piece An end-of-unit exam will be completed after all 3 topics have been taught	Each topic will be assessed at an appropriate time using a key piece An end-of-unit exam will be completed after all 3 topics have been taught	Each topic will be assessed at an appropriate time using a key piece An end-of-unit exam will be completed after all 3 topics have been taught	Each topic will be assessed at an appropriate time using a key piece An end-of-year exam will be completed to assess the learning since September	Each topic will be assessed at an appropriate time using a key piece
Key Vocabulary	See medium term plans & student exercise books	See medium term plans & student exercise books	See medium term plans & student exercise books	See medium term plans & student exercise books	See medium term plans & student exercise books	See medium term plans & student exercise books
Homework opportunities to broaden or deepen student knowledge	One weekly task linked to topics covered in class	One weekly task linked to topics covered in class	One weekly task linked to topics covered in class	One weekly task linked to topics covered in class	One weekly task linked to topics covered in class	One weekly task linked to topics covered in class
Links to the National Curriculum	**WORKING SCIENTIFICALLY** ● The development of scientific thinking	**WORKING SCIENTIFICALLY** ● The development of scientific thinking	**WORKING SCIENTIFICALLY** ● The development of scientific thinking	**WORKING SCIENTIFICALLY** ● The development of scientific thinking	**WORKING SCIENTIFICALLY** ● The development of scientific thinking	**WORKING SCIENTIFICALLY** ● The development of scientific thinking

	● Experimental skills and strategies ● Analysis and evaluation ● Vocabulary, units, symbols and nomenclature **SUBJECT CONTENT** ● Cell biology ● Transport systems ● Health, disease and the development of medicines ● Photosynthesis	● Experimental skills and strategies ● Analysis and evaluation ● Vocabulary, units, symbols and nomenclature **SUBJECT CONTENT** ● Atomic structure & the periodic table ● Structure, bonding & the properties of matter ● Chemical changes ● Energy changes in chemistry	● Experimental skills and strategies ● Analysis and evaluation ● Vocabulary, units, symbols and nomenclature **SUBJECT CONTENT** ● Energy ● Electricity ● The structure of matter	● Experimental skills and strategies ● Analysis and evaluation ● Vocabulary, units, symbols and nomenclature **SUBJECT CONTENT** ● Evolution, inheritance & variation ● Ecosystems	● Experimental skills and strategies ● Analysis and evaluation ● Vocabulary, units, symbols and nomenclature **SUBJECT CONTENT** ● Chemical & allied industries ● Earth & atmospheric science ● Chemical analysis	● Experimental skills and strategies ● Analysis and evaluation ● Vocabulary, units, symbols and nomenclature **SUBJECT CONTENT** ● Forces ● Forces and motion

Separate Science content only
(*) Required Practical