De La Salle School Science Curriculum Year 8

Year 8 Term 1	Year 8 Term 2	Year 8 Term 3
Students will build on the work completed in year 7 on the periodic table; investigating elements, mixtures and compounds. They build on this to look at the conservation of mass and the following chemical reactions: neutralisation, exothermic and endothermic reactions, combustion, thermal decomposition, metal and acid reactions and displacement reaction. In living together student build on the knowledge of cells to look at the structure of leaves, plant transport systems and photosynthesis. This leads on to looking at food chains / webs, competition, pyramids of number, adaptations and human impact on the environment.	Students will build on knowledge from year 7. They will look at stores of energy, energy transfer. We start to introduce the use of equations to calculate missing values based on experimental evidence and start to change to subject of equations. In earth and its resources, we look at the three types of rock with examples of each. They will look at the difference between weathering and erosion and how these link to the rock cycle. They will look at the structure of the Earth, the carbon cycle, climate and global warming and how day, night and seasons result from the rotation of the Earth on its tilted axis and movement around the sun.	In waves, the students will look at properties of light and sound. They will look at how reflection and refraction occur and use this to explain how the eye and cameras work. They will apply knowledge to develop and understanding about the colours of light and how we see coloured objects. In wonderous variety the students will look at sexual and asexual reproduction. The structure of DNA and how we inherit our features. They will look at types of variation and the causes, collecting data and building on graph skills to plot graphs of the different types of variation. They will look at selective breeding, genetic modification and the importance of maintaining biodiversity and the causes of extinction. Finally, they will look at electricity and magnetism. They will learn different symbols for electrical components and use these to draw series and parallel circuit diagrams. They will look at what is meant by static electricity, linking this and magnetism back to previous work on forces. They will look at how we use magnets for navigation, linking this back to the structure of the Earth that they studied earlier in the year.
Knowledge, Skills and Understanding		
Module 1: Reactions • Elements, compounds and mixtures • Periodic table • Acids and alkalis • Neutralisation • Combustion • Energy in reactions • Metals and non-metals • Metals and acids • Displacement reactions	**Module 3: Energy** • Energy stores and transfers • GPE • Efficiency • Renewable and non-renewable energy • Power • Work done • Heat transfer	**Module 5: Waves** • Waves • Reflection • Refraction • The eye • Correcting vision • Colour • Cameras • Sound • How we hear

• Reactivity series **Module 2: Living together** • Leaf adaptations • Photosynthesis • Testing leaves for starch • Limiting factors • Structure of a flower • Seed dispersal • Competition • Food chains and web • Interdependence • Bioaccumulation • Adaptations of plants and animals	**Module 4: Earth and its resources** • Rock cycle • Structure of the Earth • Carbon cycle • Climate change • Day night • Seasons • Solar system	• Light v sound **Module 6: Wonderous variety** • Structure of DNA • Variation • Inherited v environmental factors • Fossils • Extinction • Classification • Selective breeding **Module 7: Electricity and magnetism** • Circuits • Symbols • Voltage • Current • Resistance • Model circuits • Static electricity • Magnetism • Earth's magnetic field • Electromagnets
Assessment and Assessment Focus		
Key knowledge questions End of module assessments Feedback on investigation methods Show me boards Regular questioning to check progress	Key knowledge questions End of module assessments Feedback on investigation methods Show me boards Regular questioning to check progress	Key knowledge questions End of module assessments Feedback on investigation methods Show me boards Regular questioning to check progress