Thoughts about what is *in* and *out* in the new VCAA Study Design 2016/2017

This is not exhaustive and my opinion. When we receive the VCAA official version I will email.

New in 2016 Year 11	New in 2017 Year 12	Gone completely
Assessment: • Research investigation Unit 1 • Practical investigation Unit 2 **Content** • More emphasis on lab work with experimental skills listed as dot points in the *Key Knowledge* section not just in *Key Skills* • More detailed understanding required of electronic configuration using Schrodinger model including the exceptions of Cu and Cr • More understanding about nanoparticles • Naming organic compounds up to C10 and structural isomers up to C7. • Real effort to relate chemical concepts to practical real-life situations/contexts (selected by the teacher) • Return to greater examination of water supplies and treatment and contamination	**Assessment:** • Practical investigation Unit 4 **Content** • Gases moved from Year 11 • More emphasis on structure and bonding when comparing fuels • Aldehydes and ketones • Stereoisomers: identifying chiral centres and using cis-trans to name very simple substituted alkenes • Food chemistry • More detailed understanding of carbohydrates and their chemistry • More detailed understanding of fats and oils and their chemistry including role of antioxidants • Vitamins and principles of the action of coenzymes	• Historical aspects of periodic table • Kinetic molecular theory • Heterogeneous equilibrium • Acid base equilibrium, K_a, etc • Back titrations • Aspirin • Medicines • DNA • Thin layer and Gas chromatography • Specific details of industrial production of ammonia, sulfuric acid or nitric acid

The organisation of the topics seems different because the approach has been to teach techniques as the student needs to use them in a particular area - just a different way to look at concepts and techniques.

For example: when *Analysis of water* for salts, ions, contaminants, organic compounds, acids and base is taught with all the associated usual theory, the related techniques of gravimetric analysis (including mass-mass stoichiometry), colorimetry, UV-Vis spectroscopy, AAS, HPLC and volumetric analysis and included.

The idea is to show the relevance of these techniques in contexts, which is different to the former approach. The order of concepts reflects the Australian Chemistry Curriculum to some extent as well.