Sacred Heart High School

Key Stage 3 Curriculum

CHEMISTRY

INTENT *(the unique contribution the subject makes to general education)*

Science for All: Development of scientific thinking and modelling abstract theories through research, testing & evaluating

- Understand how scientific methods and theories develop over time.
- Use a variety of models such as representational, spatial, descriptive, computational and mathematical to solve problems, make predictions and to develop scientific explanations and understanding of familiar and unfamiliar facts.
- Explain everyday and technological applications of science; evaluate associated personal, social, economic and environmental implications; and make decisions based on the evaluation of evidence and arguments.

THEMES (KNOWLEDGE & UNDERSTANDING)

- C 1. Atomic Structure
- C 12. Chemical analysis
- C 2. The periodic table
- C 3. Structure
- and bonding

SKILLS

- AO1 demonstrate knowledge and understanding of scientific ideas and scientific techniques
- AO2 apply knowledge and understanding scientific ideas, scientific enquiry, techniques and procedure
- AO3 analyse information and ideas to interpret and evaluate, make judgements and draw conclusion, develop and improve experimental procedures

YEAR 7	YEAR 8	YEAR 9
[See separate 'Science' curriculum]	[See separate 'Science' curriculum]	• Give examples to show how scientific methods and theories have changed over time. Explain, with an example, why new data from experiments or observations led to changes in models or theories. Decide whether or not given data supports a particular theory. • Recognise/draw/interpret diagrams. Translate from data to a representation with a model. Use models in explanations, or match features of a model to the data from experiments or observations that the model describes or explains. Make predictions or calculate quantities based on the model or show its limitations. Give examples of ways in which a model can be tested by observation or experiment. • Describe and explain specified examples of the technological applications of science. Describe and evaluate, with the help of data, methods that can be used to tackle problems caused by human impacts on the environment. • Demonstrate the knowledge and skills of the required practicals.

ASSSESSMENT

- Assessment 1: Atomic structure
- Assessment 2: atomic structure, chemical analysis and structure and bonding
- Assessment 3: all topics from Y9 (see above)

STRETCH & CHALLENGE

- Take it further questions & tasks, focus on specific exam skills, research and evaluation

ENRICHMENT OPPORTUNITIES

- Taking part in 'Chemistry Live'