Science and How My World Works Long Term Plan Semi-Formal and Formal

Phase	Text focus	Year A			Year B			Year C		
KS1	HT1	making things move	materials	growing plants	ourselves and our senses	animals in our environment – minibeasts	changing materials			
	HT2	ourselves, our bodies	animals – pets and farm animals	**Looking after our planet**	light and dark	**Looking after our planet**	plants in our environment			
LKS2	HT1	senses	teeth and eating	health and growth	slipping and griping	characteristics of materials	plants and animals in the local environment – habitats			
	HT2	light and shadows	minibeasts	**Looking after our planet**	**Seasonal changes**	forces and movement	**Looking after our planet**			
UKS2 and KS3	Formal	Chemistry Rocks and how they are formed	Physics Energy, Electricity and Forces	Biology Evolution and Inheritance	Physics The Earth, and the Universe	Biology Microorganisms, Disease and Health	Chemistry States of Matter			
	Semi-formal	Chemistry Properties and Changing States	Physics Forces and Magnets	Biology Our Bodies	Biology Living Things and their Habitats	Physics Electricity, Magnets and how things work	Chemistry Uses of Everyday Materials			
Y9-11 Formal	Yr9,10,11	Physics 1B – Waves and radiation	Biology 1B – Health, disease and the development of medicines	Chemistry 1B – Separating mixtures, breaking down substances, acids and metals	Physics 1A – Forces, movement and energy	Biology 1A – Cells, genetics, inheritance and modification	Chemistry 1A – Atoms, compounds and states of matter or Second pass project Copper Project	Students to complete second pass projects linked to their lowest assessment grades from previous papers		
Y9-11 Semi - formal	Yr9/10/11	Biology animals in our environment Looking after our planet	Chemistry States of Matter MC 3 Science 2.change texture	Physics Electricity TL 3 Science 5. carry out an action which	Weather, volcanoes earthquakes FG 16 geography 3. geography	Plants MF 3 Science 4. care for a plant or animal	Animals, including humans FG 3 Science 3. personal hygiene – body parts	Animals including humans KH 3. Show the differenc	Electricity TL 3 Science 5. carry out an action	The Environment FG 9 community 3. take

				cause a change to take place	record weather over a period of time			e between you and your friends	which cause a change to take place	part in an activity to improve your local environment

Semi-formal and Formal Curriculum- Enquiry skills

KS1- Year 9,10,11 (Semi Formal)

UKS2-KS3 (Formal)

- asking simple questions and recognising that they can be answered in different ways.
- observing closely, using simple equipment and measurement
- performing simple tests
- identifying and classifying
- using their observations and ideas to suggest answers to questions.
- gathering, recording, and communicating data and findings to help in answering questions.
- use scientific language and read and spell age-appropriate scientific vocabulary.
- begin to notice patterns and relationships.

Formal Curriculum- Accreditation

Year 9, 10, 11				
1.The development of scientific thinking: **a** the ways in which scientific methods and theories develop over time **b** using a variety of concepts and models to develop scientific explanations and understanding **c** appreciating the power and limitations of science and considering ethical issues. which may arise. **d** explaining every day and technological applications of science. **e** evaluating risks in practical science	**2 Experimental skills and strategies** **a** using scientific theories and explanations to develop hypotheses. **b** planning experiments to make observations, test hypotheses or explore phenomena. **c** applying a knowledge of a range of apparatus to select those appropriate for experiments. **d** carrying out experiments appropriately, having due regard to the correct manipulation of apparatus, the accuracy of measurements and health and safety considerations **e** making and recording observations and measurements using a range of apparatus and methods **f** evaluating methods and suggesting possible improvements and further investigations	**3 Analysis and evaluation** Applying the cycle of collecting, presenting and analysing data, including: **a** presenting observations and other data using appropriate methods. **b** translating data from one form to another. **c** carrying out and representing mathematical and statistical analysis. **d** representing distributions of results and making estimations of uncertainty. **e** interpreting observations and other data, including identifying patterns and trends, making inferences and drawing conclusions. **f** presenting reasoned explanations, including relating data to hypotheses. **g** being objective, evaluating data in terms of accuracy, precision, repeatability and reproducibility	**4 Vocabulary, units, symbols and nomenclature** **a** developing their use of scientific vocabulary and nomenclature **b** recognising the importance of scientific quantities and understanding how they are determined **c** using SI units and IUPAC chemical nomenclature unless inappropriate **d** using prefixes and powers of ten for orders of magnitude (e.g. tera, giga, mega, kilo, centi, milli, micro and nano) **e** interconverting units **f** using an appropriate number of significant figures in calculations	*Accreditation:* Pearson Edexcel Entry Level 1 - Entry Level 3 Science

How My World Works/ Science (Weekly Timing)		
	Semi-formal	Formal
KS1	60 mins or 2 x 30 mins	
LKS2	60 mins or 2 x 30 mins	
UKS2	60 mins or 2 x 30 mins	60 mins
KS3	60 mins or 2 x 30 mins	2 x 60 mins
Year 9,10,11	60 mins or 2 x 30 mins	2 x 60 mins (Entry Level Assessed)
KS5	Incorporated into Strand 6	
In KS4 (formal) all students work towards an Entry Level Qualification in Science.		