Star of the Sea Progression Map For Science – Early Years Foundation Stage							
	Y.G	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Knowledge (Breadth)	Nur	Ourselves		Changes Outside	Senses	Growing and Observing Plants	
Knowledge (Breadth)	Rec	Autumn	Time Travellers	Winter	Plants Spring	The World Around Us	Animal Kingdom
		Early Learning Goals					
Communication and language		• Children give their attention to what others say and respond appropriately, while engaged in another activity. • Children follow instructions involving several ideas or actions. They answer 'how' and 'why' questions about their experiences and in response to events. • Children express themselves effectively, showing awareness of listeners' needs. They use past, present and future forms accurately when talking about events that have happened or are to happen in the future. They develop their own narratives and explanations by connecting ideas or events.					
Physical development		• Children handle equipment and tools effectively.					
PSED		• Children are confident to try new activities. They are confident to speak in a familiar group, will talk about their ideas, and will choose the resources they need for their chosen activities. They say when they do or don't need help. • Children work as part of a group or class, and understand and follow the rules.					
Understanding the world		• The world: children know about similarities and differences in relation to places, objects, materials and living things. They talk about the features of their own immediate environment and how environments might vary from one another. They make observations of animals and plants and explain why some things occur, and talk about changes.					
Technology		• Children select and use technology for particular purposes.					
Expressive Arts and Design		• Children represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role-play and stories.					

Star of the Sea Progression Map For Science – Key Stage 1							
	Y.G	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Knowledge (Breadth)	1	Everyday Materials Seasonal Change	Everyday Materials	Animals including Humans Seasonal Change	Animals including Humans	Plants Seasonal Change	Plants Seasonal Change
Knowledge (Breadth)	2	Animals including Humans		Uses of Everyday Materials		Plants	Living Things and their Habitats
		Working Scientifically					
General		Asking simple questions and recognising that they can be answered in different ways					
		• While exploring the world, the children develop their ability to ask questions (such as what something is, how things are similar and different, the ways things work, which alternative is better, how things change and how they happen). Where appropriate, they answer these questions. • The children answer questions developed with the teacher often through a scenario. • The children are involved in planning how to use resources provided to answer the questions using different types of enquiry, helping them to recognise that there are different ways in which questions can be answered.					
Observing changes over time		Observing closely, using simple equipment.					
		• Children explore the world around them. They make careful observations to support identification, comparison and noticing change. They use appropriate senses, aided by equipment such as magnifying glasses or digital microscopes, to make their observations. • They begin to take measurements, initially by comparisons, then using non-standard units.					
Comparative and fair tests		Performing simple tests.					
		• The children use practical resources provided to gather evidence to answer questions generated by themselves or the teacher. They carry out: tests to classify; comparative tests; pattern seeking enquiries; and make observations over time.					
Identifying and classifying		Identifying and Classifying					
		• Children use their observations and testing to compare objects, materials and living things. They sort and group these things, identifying their own criteria for sorting. • They use simple secondary sources (such as identification sheets) to name living things. They describe the characteristics they used to identify a living thing.					
Looking for naturally occurring patterns and relationships		Using their observations and ideas to suggest answers to questions.					
		• The children record their observations e.g. using photographs, videos, drawings, labelled diagrams or in writing. • They record their measurements e.g. using prepared tables, pictograms, tally charts and block graphs. • They classify using simple prepared tables and sorting rings.					
Recording and reporting findings		Gathering and recording data to help in answering questions.					
		• The children record their observations e.g. using photographs, videos, drawings, labelled diagrams or in writing. • They record their measurements e.g. using prepared tables, pictograms, tally charts and block graphs. • They classify using simple prepared tables and sorting rings.					

Star of the Sea Progression Map For Science – Lower Key Stage 2							
	Y.G	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Knowledge (Breadth)	3	Rocks	Animals including Humans	Plants	Forces and Magnets	Light	
Knowledge (Breadth)	4	Living Things and their Habitats	Electricity	Animals including Humans	States of Matter	Sound	
		Working Scientifically					
General		Asking relevant questions and using different types of scientific enquiries to answer them					
		• The children consider their prior knowledge when asking questions. They independently use a range of question stems. Where appropriate, they answer these questions. • The children answer questions posed by the teacher. • Given a range of resources, the children decide for themselves how to gather evidence to answer the question. They recognise when secondary sources can be used to answer questions that cannot be answered through practical work. They identify the type of enquiry that they have chosen to answer their question.					
Observing changes over time		Making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers					
		• The children make systematic and careful observations. • They use a range of equipment for measuring length, time, temperature and capacity. They use standard units for their measurements.					
Comparative and fair tests		Setting up simple practical enquiries, comparative and fair tests					
		• The children select from a range of practical resources to gather evidence to answer questions generated by themselves or the teacher. • They follow their plan to carry out: observations and tests to classify; comparative and simple fair tests; observations over time; and pattern seeking.					
Identifying and classifying		Identifying differences, similarities or changes related to simple scientific ideas and processes.					
		• Children interpret their data to generate simple comparative statements based on their evidence. They begin to identify naturally occurring patterns and causal relationships.					
Looking for naturally occurring patterns and relationships		Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions					
		• They draw conclusions based on their evidence and current subject knowledge. • They identify ways in which they adapted their method as they progressed or how they would do it differently if they repeated the enquiry. • Children use their evidence to suggest values for different items tested using the same method e.g. distance travelled by a car on an additional surface. • Following a scientific experience, the children ask further questions which can be answered by extending the same enquiry.					
Recording and reporting findings		Recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables. Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions. Using straightforward scientific evidence to answer questions or to support their findings. Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and					
		• The children sometimes decide how to record and present evidence. They record their observation e.g. using photographs, videos, pictures, labelled diagrams or writing. They record their measurements e.g. using tables, tally charts and bar charts (given templates, if required, to which they can add headings). They record classifications e.g. using tables, Venn diagrams, Carroll diagrams. • Children are supported to present the same data in different ways in order to help with answering the question. • Children answer their own and others' questions based on observations they have made, measurements they have taken or information they have gained from secondary sources. The answers are consistent with the evidence. • They communicate their findings to an audience both orally and in writing, using appropriate scientific vocabulary.					

Star of the Sea Progression Map For Science –Upper Key Stage 2							
	Y.G	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Knowledge (Breadth)	5	Earth and Space	Forces	Properties and Changes of Materials	Living things and their Habitats		Animals including Humans
Knowledge (Breadth)	6	Evolution and Inheritance	Electricity	Animals including Humans		Light	Living things and their Habitats
		Working Scientifically					
Observing changes over time and measuring		Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate • The children select measuring equipment to give the most precise results e.g. ruler, tape measure or trundle wheel, force meter with a suitable scale. • During an enquiry, they make decisions e.g. whether they need to: take repeat readings (fair testing); increase the sample size (pattern seeking); adjust the observation period and frequency (observing over time); or check further secondary sources (researching); in order to get accurate data (closer to the true value).					
Comparative and fair tests		Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary. Using test results to make predictions to set up further comparative and fair tests • Children independently ask scientific questions. This may be stimulated by a scientific experience or involve asking further questions based on their developed understanding following an enquiry. • Given a wide range of resources the children decide for themselves how to gather evidence to answer a scientific question. They choose a type of enquiry to carry out and justify their choice. They recognise how secondary sources can be used to answer questions that cannot be answered practically. • The children select from a range of practical resources to gather evidence to answer their questions. They carry out fair tests, recognising and controlling variables. They decide what observations or measurements to make over time and for how long. They look for patterns using a suitable sample. • Children use the scientific knowledge gained from enquiry work to make predictions they can investigate using comparative and fair tests.					
Looking for naturally occurring patterns and relationships		Identifying scientific evidence that has been used to support or refute ideas or arguments • Children answer their own and others' questions based on observations they have made, measurements they have taken or information they have gained from secondary sources. When doing this, they discuss whether other evidence e.g. from other groups, secondary sources and their scientific understanding, supports or refutes their answer. • They talk about how their scientific ideas change due to new evidence that they have gathered. • They talk about how new discoveries change scientific understanding.					
Recording and reporting findings		Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scattergraphs, bar and line graphs. Reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations • The children decide how to record and present evidence. They record observations e.g. using annotated photographs, videos, labelled diagrams, observational drawings, labelled scientific diagrams or writing. They record measurements e.g. using tables, tally charts, bar charts, line graphs and scatter graphs. They record classifications e.g. using tables, Venn diagrams, Carroll diagrams and classification keys. • Children present the same data in different ways in order to help with answering the question. • In their conclusions, children: identify causal relationships and patterns in the natural world from their evidence; identify results that do not fit the overall pattern; and explain their findings using their subject knowledge. • They evaluate, for example, the choice of method used, the control of variables, the precision and accuracy of measurements and the credibility of secondary sources used. • They identify any limitations that reduce the trust they have in their data. • They communicate their findings to an audience using relevant scientific language and illustrations.					