Year Group	Reception	Year 1	Year 2	Year 3	Year 4
Topic	**Transport; Under the Sea/Pirates**	**Explore the World**	**Explore the World**	**We'll Meet Again**	**We'll Meet Again**
Skills:					
Planning and Communication and Sources	**Questions why things happen.** **Comments and asks questions about aspects of their familiar world such as the place where they live or the natural world.** Create simple representations of events, people and objects. **Make links and notice patterns in their experiences.** **Build up vocabulary that reflects the breadth of their experience.**	**Draw simple pictures.** **Talk about what they see and do.** **Use simple charts to communicate findings.** **Identify key features.** **Ask questions.**	**Describe their observations using some scientific vocabulary.** **Use a range of simple texts to find information.** **Suggest how to find things out.** **Identify key features.** **Ask questions.**	**Use pictures, writing, diagrams and tables as directed by their teacher**. **Use simple texts, directed by the teacher, to find information.** **Record their observations in written, pictorial and diagrammatic forms.** **Select the appropriate format to record their observations.**	**Record observations, comparisons and measurements using tables and bar charts.** Begin to plot points to form a simple graph. Use graphs to point out and interpret patterns in their data. **Select information from a range of sources provided for them.**
Enquiring and Testing and Obtaining and Presenting Evidence	**Show curiosity about objects, events and people.** **Engage in new experiences and learn by trial and error.** **To make predictions about what they think will happen and why.** **Find ways to solve problems / find new ways to do things / test their ideas.** **Answer how and why questions about their experiences.**	**Test ideas suggested to them.** **Say what they think will happen.** **Use first hand experiences to answer questions.** **Begin to compare some living things.**	**Use simple equipment provided to aid observation.** **Compare objects, living things or events.** **Make observations relevant to their task.** Begin to recognise when a test or comparison is unfair. **Use first hand experiences to answer questions.**	**Put forward own ideas about how to find the answers to questions.** **Recognise the need to collect data to answer questions.** Carry out a fair test with support. Recognise and explain why it is a fair test. **With help, pupils begin to realise that scientific ideas are based on evidence.**	**With help, pupils begin to realise that scientific ideas are based on evidence.** Show in the way they perform their tasks how to vary one factor while keeping others the same. **Decide on an appropriate approach in their own investigations to answer questions.** Describe which factors they are varying and which will remain the same and say why.
Observing and Recording	Observe the effects of physical activity on their bodies. **Use senses to explore and make observations of the world around them.** **To look closely at similarities, differences, patterns and change.**	**Make observations using appropriate senses.** **Record observations.** **Communicate observations orally, in drawing, labelling, simple writing and using ICT.**	**Respond to questions asked by the teacher.** **Ask questions.** **Collect and record data (supported by the teacher).** **Suggest how they could collect data to answer questions.** **Begin to select equipment from a limited range.**	**Make relevant observations.** Measure using given equipment. **Select equipment from a limited range.**	Carry out measurement accurately. **Make a series of observations, comparisons and measurements.** **Select and use suitable equipment.** **Make a series of observations and measurements adequate for the task.**

	Talk about some of the things they have observed, such as plants, animals, natural and found objects. **Develop ideas of grouping, sequences, use and effect.**				
Considering Evidence and Evaluating	**Talk about why things happen and how things work.** **Talk about what they have found out, and explain how they found it out.** **Develop their own explanations by connecting ideas or events.**	**Make simple comparisons and groupings.** **Say what has happened.** **Say whether what has happened was what they expected.**	**Say what has happened.** **Say what their observations show and whether it was what they expected.** **Begin to draw simple conclusions and explain what they did.** **Begin to suggest improvements in their work.**	**Begin to offer explanations for what they see and communicate in a scientific way what they have found out.** Begin to identify patterns in recorded measurements. Suggest improvements in their work. **Evaluate their findings.**	**Predict outcomes using previous experience and knowledge and compare with actual results.** **Begin to relate their conclusions to scientific knowledge and understanding.** Suggest improvements in their work, giving reasons.
Knowledge	**Reception**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
NC aims for Key Stages 1 (Years 1 and 2) and 2 (Years 3-4): S1: develop **scientific knowledge and conceptual understanding** through the specific disciplines of biology, chemistry and physics (describe processes and key characteristics; build up specialist vocabulary; apply mathematical knowledge by collecting, presenting and analysing data) S2: develop understanding of the **nature,processes and methods of science** through different types of science enquiries that help them to answer scientific questions about the world around them (working scientifically; observing over time; pattern seeking; identifying, classifying and grouping; comparative and fair testing - controlled investigations; seeking answers to questions) S3 are equipped with the scientific knowledge	**Hedgehogs** - diet, habitat, facts. What does **hibernation** mean? **Rice Krispie traffic lights** (observe changes to ingredients). **Daily weather update.** **Summer walk** - changes to weather & environment. Exploring **magnets** - what objects attract/repel and why? (continuous provision). --- **Floating & sinking** - which objects float/sink and why? **Sea creatures** - diet, habitat, facts. **Freezing/melting.** Making and **cooking fish cakes** (observe changes). **Sun safety** - sunglasses, long sleeved clothing, seek shade etc. **Daily weather update**.	**Everyday Materials: exploring changes** Help in the garden and **Identify changes in ice over time** as it melts. **Consider how to speed up or slow down the melting process** and how this is useful. **Investigate puddles** - identify changes overtime. **Explore wax. –** properties and characteristics --- **Animals including humans - Habitats** **Explore and research the allotment as a habitat**– plant allotment and create good growing conditions **Create a bug hotel with different microhabitats** – predict which creatures each will attract gather data. Harvest, draw and eat food from the allotment.	**Everyday Materials: exploring changes** Help in the garden and **Identify changes in ice over time** as it melts. **Consider how to speed up or slow down the melting process** and how this is useful. **Investigate puddles** - identify changes overtime. **Explore wax. –** properties and characteristics --- **Animals including humans - Habitats** **Explore and research the allotment as a habitat**– plant allotment and create good growing conditions **Create a bug hotel with different microhabitats** – predict which creatures each will attract gather data. Harvest, draw and eat food from the allotment.	**Electricity: Electric personalities** **Uses at home -** electrical appliances, safety. **Circuits & components** **Conductors and insulators** **How does electricity travel?** – Investigative skills. --- **Plants: Feast of flowers, fruits and seeds** **Lifecycle of flowering plants** - **Parts of a flower** Pollination Seed formation and dispersal Fruit	**Electricity: Electric personalities** **Uses at home -** electrical appliances, safety. **Circuits & components** **Conductors and insulators** **How does electricity travel?** – Investigative skills. --- --- **Plants: Feast of flowers, fruits and seeds** **Lifecycle of flowering plants** - **Parts of a flower** Pollination Seed formation and dispersal Fruit

required to understand the **uses and implications of science**, today and for the future.					