Year Group	Reception	Year 1	Year 2	Year 3	Year 4
Topic	**Dinosaurs; Traditional Tales**	**London**	**London**	**Disappearing Rainforests**	**Disappearing Rainforests**
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	**Dinosaurs - name & identify,** diet (omnivore/carnivore/herbivore), appearance. Formation of **fossils**. What other animals hatch from an **egg**? How can we **help save our planet**? (impact of plastic waste affecting **animals**). Litter picking on school grounds. **Making pancakes** (observe changes to ingredients) **Daily weather update.** --- **Life-cycle** of a hen &/or butterfly. **Grass experiment** - grow grass seed in different conditions. **Baking gingerbread** (observe changes to ingredients). **Materials experiment** - which materials would be suitable to build a house? **Daily weather update.** **Spring walk** - changes to weather & environment.	**Everyday materials** **Identify/name different materials -** recognise properties make them fit for purpose- metal for keys etc. Use **language** to describe properties- bendy, stretchy. **Explore magnets –** investigate, explore and problem solve. --- **Plants:plant materials** **Daffodils -** flower parts, bulb as food storage. **Seeds** - Look closely at different seeds: explore dispersal, different size, shape etc. **Plant investigation**- look at plants under a microscopre photograph, draw and label **Understand the basic structure of a tree**	**Everyday materials** **Identify/name different materials -** recognise properties make them fit for purpose- metal for keys etc. Use **language** to describe properties- bendy, stretchy. **Explore magnets –** investigate, explore and problem solve. --- **Plants:plant materials** **Daffodils -** flower parts, bulb as food storage. **Seeds** - Look closely at different seeds: explore dispersal, different size, shape etc. **Plant investigation**- look at plants under a microscopre photograph, draw and label **Understand the basic structure of a tree**	**Living things and their habitats: A world of living things** **Vertebrates and invertebrates** **Types of plants -** sorting & categorising, investigative skills**.** **Comparing habitats** - local habitats compared with rainforest habitats. **Organisms** and their preferred places to live. --- **Animals including humans; The circle of life** **Sequencing food chains** - predators, herbivores, omnivores and carnivores. **Digestion** - steps of digestion, use of different components e.g. teeth, enzymes etc **Comparing human and animal digestion** **Diets** - of humans and animals **Teeth** - Roles of different teeth. **Healthy teeth –** investigative skills.	**Living things and their habitats: A world of living things** **Vertebrates and invertebrates** **Types of plants -** sorting & categorising, investigative skills**.** **Comparing habitats** - local habitats compared with rainforest habitats. **Organisms** and their preferred places to live. --- --- **Animals including humans; The circle of life** **Sequencing food chains** - predators, herbivores, omnivores and carnivores. **Digestion** - steps of digestion, use of different components e.g. teeth, enzymes etc **Comparing human and animal digestion** **Diets** - of humans and animals **Teeth** - Roles of different teeth. **Healthy teeth –** investigative skills.

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