**Science Skills and Knowledge Progressions for Year 3**

|  |  |  |  |
| --- | --- | --- | --- |
| **Skills Objectives** | Topic covered in  | Pupils Working Towards Expectations | Pupils Exceeding Expectations |
| Observe and explain | - observe and record changes/stages over time - explore and observe in the local environment / real contexts and record these observations |  |  |  |
| Grouping and classifying | -Decide how to sort or classify materials, living things or objects and give reasons for this- Compare and contrast different things and begin to explain reasons for these similarities and differences (e.g. Why do birds have thin bones but elephants have thicker bones?)- Record similarities and differences (e.g. what is similar about the skeletons of a elephant and a bird? What is different?)  |  |  |  |
| Questioning | -Explore their own ideas about “What if…?” questions, e.g. What if humans did not have skeletons?-Ask questions such as “What if we tried…?” “What if we changed…?”-With a group, suggest questions that can be observed or tested |  |  |  |
| Planning and predict | -Help to decide how to set up a simple fair test and begin to recognise when a test is not fair-Using their knowledge, make a prediction-With support/as a group, set up a simple, practical test -Make a choice from a list of things to change (variables) when conducting a fair test |  |  |  |
| Test and use equipment | -In a group, carry out a simple test discussing whether it is fair or not-Begin to make decisions about the type of simple equipment that might be used-Make simple, accurate measurements using whole number standard units using a range of equipment (e.g. measuring syringes, measuring cylinders) |  |  |  |
| Reporting and recording | - Record and present findings using simple scientific language (from Year 3 PoS) in a variety of ways. - Record findings using simple tables (e.g. simple tables, bar charts with scales given) and standard units-Produce increasingly detailed, annotated drawings.  |  |  |  |
| Analysing and explaining results | -Begin to notice patterns and simple changes in their data -Draw a simple conclusion to their original question and discuss whether it matched their prediction-Write a simple explanation of why something happened  |  |  |  |
| Evaluating | -Begin to recognise whether a test was unfair and suggest improvements. |  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Knowledge Objectives** | Topic covered in  | Pupils Working Towards Expectations | Pupils Exceeding Expectations |
| Plants | - identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers - explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant- investigate the way in which water is transported within plants- explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal. |  |  |  |
| Animals, including humans | Pupils should be taught to:- identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat- identify that humans and some other animals have skeletons and muscles for support, protection and movement. |  |  |  |
| Rocks | - Compare and group together different kinds of rocks on the basis of their appearance and simple physical properties.- Describe in simple terms how fossils are formed when things that have lived are trapped within rock - Recognise that soils are made from rocks and organic matter. |  |  |  |
| Light | - recognise that they need light in order to see things and that dark is the absence of light- notice that light is reflected from surfaces- recognise that light from the sun can be dangerous and that there are ways to protect their eyes- recognise that shadows are formed when the light from a light source is blocked by a solid object- find patterns in the way that the size of shadows change. |  |  |  |
| Forces and magnets | - compare how things move on different surfaces- notice that some forces need contact between two objects, but magnetic forces can act at a distance- observe how magnets attract or repel each other and attract some materials and not others- compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials- describe magnets as having two poles- predict whether two magnets will attract or repel each other, depending on which poles are facing. |  |  |  |