## Aims for Science

The national curriculum for science aims to ensure that all pupils:

•develop scientific knowledge and conceptual understanding through the specific disciplines of biology, chemistry and physics

•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

•are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future

Pupils should be taught to:

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| ***Working Scientifically***  •asking relevant questions and using different types of scientific enquiries to answer them  •setting up simple practical enquiries, comparative and fair tests  •making systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers  •gathering, recording, classifying and presenting data in a variety of ways to help in answering questions  •recording findings using simple scientific language, drawings, labelled diagrams, keys, bar charts, and tables  •reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions  •using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions  •identifying differences, similarities or changes related to simple scientific ideas and processes  •using straightforward scientific evidence to answer questions or to support their findings. |
| ***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***  •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***  Forces and magnets  Compare how things move on different services  •notice that some forces need contact between 2 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 |