Living Things & Their Habitats - I can:

• recognise that living things can be grouped in a variety of ways
• explore and use classification keys to help group, identify and name a variety of living things in their local and wider environment
• recognise that environments can change and that this can sometimes pose dangers to living things.

Animals (including humans) - I can:

• describe the simple functions of the basic parts of the digestive system in humans
• identify the different types of teeth in humans and their simple functions
• construct and interpret a variety of food chains, identifying producers, predators and prey.

How to support science discovery and learning at home

• be brave and let them loose in the kitchen – making mixtures from the contents of the cupboard is a brilliant way to spend a wet afternoon http://www.science-sparks.com/2013/04/27/kitchen-science-round-up

• cook together – being able to plan and cook a balanced meal is a vital life skill and often much more enjoyable when the children get involved http://www.bbcgoodfood.com/recipes/category/family-kids

• get out and about hunting for mini-beasts - building houses for the caterpillars and ladders for spiders can be loads of fun http://www.woodlandtrust.org.uk/naturedetectives

• find a patch of soil in the garden and plant your own veg – it's rewarding, it's cost effective and it's tasty http://naturallysavvy.com/live/10-fruits-and-vegetables-to-plant-with-your-kids

• if you get the chance visit museums and exhibitions – the majority are free and often have special events on during school holidays https://www.dayoutwiththekids.co.uk/things-to-do/yorkshire/west-yorkshire/leeds/sightseeing/museums-art-galleries

Year 4

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.*

DfE Science Curriculum 2014

At Meltham Moor we aim to deliver the science curriculum through as many practical, hands on lessons as possible. Lots of key English and maths skills are needed to complete the work and large elements of geography and history are taught alongside the science.

The children are expected to use key scientific vocabulary accurately and precisely. It can be tricky to understand this specialist vocabulary. It is important that the children build up this extended vocabulary in order for them to access the KS3 & KS4 science curriculum. By encouraging your child to use key words and discussing their meaning it will really help them to develop their understanding and enjoyment of science as well as setting down solid foundation stones for later progression.

Set out below are the topics and the 'I can' expectations for Year 4. Although split over the year the topics are not taught discretely and we aim to include as many cross-curricular links as possible. Working scientifically specifies the understanding of the nature, processes and methods of science for each year group. It is not taught as a separate strand but woven throughout each topic.

Working Scientifically (Lower Key Stage Two) - I can:

• ask relevant questions and using different types of scientific enquiries to answer them
• set up simple practical enquiries, comparative and fair tests
• make systematic and careful observations and, where appropriate, taking accurate measurements using standard units, using a range of equipment, including thermometers and data loggers
• gather, record, classify 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.

Electricity - I can:

• identify common appliances that run on electricity
• construct a simple series electrical circuit, identifying and naming its basic parts, including cells, wires, bulbs, switches and buzzers
• identify whether or not a lamp will light in a simple series circuit, based on whether or not the lamp is part of a complete loop with a battery
• recognise that a switch opens and closes a circuit and associate this with whether or not a lamp lights in a simple series circuit
• recognise some common conductors and insulators, and associate metals with being good conductors.

States of Matter - I can:

• compare and group materials together, according to whether they are solids, liquids or gases
• observe that some materials change state when they are heated or cooled, and measure or research the temperature at which this happens in degrees Celsius (°C)
• identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature.

Sound - I can:

• identify how sounds are made, associating some of them with something vibrating
• recognise that vibrations from sounds travel through a medium to the ear
• find patterns between the pitch of a sound and features of the object that produced it
• find patterns between the volume of a sound and the strength of the vibrations that produced it
• recognise that sounds get fainter as the distance from the sound source increases