



Forces - I can:

- explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object
- identify the effects of air resistance, water resistance and friction, which act between moving surfaces
- recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.

Living Things & Their Habitats - I can:

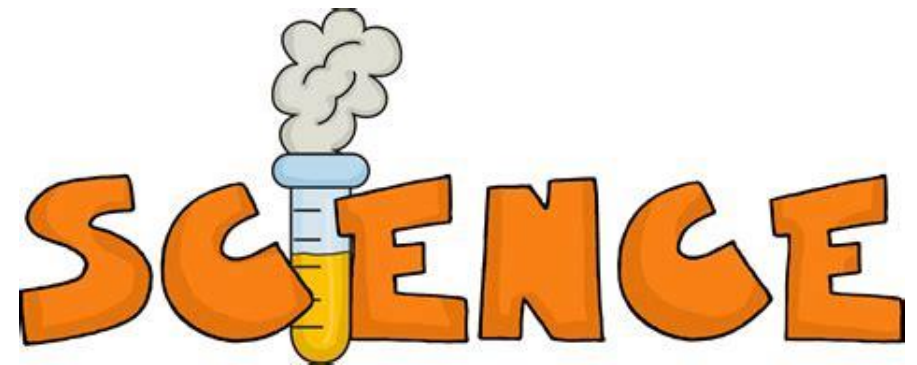
- describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird
- describe the life process of reproduction in some plants and animals.

Animals (including humans) - I can:

- describe the changes as humans develop from birth to old age (including puberty)

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 is 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 its 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 5



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 statements of expectations for Year 5. 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 (Upper Key Stage Two) - I can:

- plan different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- take measurements, using a range of scientific equipment, with increasing accuracy and precision - taking repeat readings when appropriate

- record data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- use test results to make predictions to set up further comparative and fair tests
- reporting and presenting findings from enquiries, including conclusions, causal relationships and explanations of and degree of trust in results, in oral and written forms such as displays and other presentations
- identify scientific evidence that has been used to support or refute ideas or arguments

Earth & Space - I can:

- describe the movement of the Earth, and other planets, relative to the Sun in the solar system
- describe the movement of the Moon relative to the Earth
- describe the Sun, Earth and Moon as approximately spherical bodies
- use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky



States of Matter - I can:

- compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity (electrical and thermal), and response to magnets
- know that some materials will dissolve in liquid to form a solution, and describe how to recover a substance from a solution
- use knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating
- give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic
- demonstrate that dissolving, mixing and changes of state are reversible changes
- explain that some changes result in the formation of new materials and that this kind of change is not usually reversible, including changes associated with burning and the action of acid on bicarbonate of soda