

**Impact** 





**Year Five** 

It is our intention all pupils should be taught essential aspects of the knowledge, methods, processes and uses of science. Through building up a body of key foundational knowledge and concepts, pupils should be encouraged to recognise the power of explanation and develop a sense of excitement and curiosity about natural phenomena. They should be encouraged to understand how science can be used to explain what is occurring, predict how things will behave, and analyse causes. Scientific vocabulary will be embedded within a broad and balanced curriculum.

Intent

In ensuring high standards of teaching and learning in science, we implement a curriculum that is progressive throughout the whole school. The school gives full coverage of, 'The National Curriculum programmes of study and 'Understanding of the World' in the EYFS. Teachers will build on our children's natural curiosity developing a scientific approach to problems. We promote the skills of investigation, observing, predicting, experimenting, communicating, interpreting, explaining and evaluating and develop the use of scientific language, recording and techniques.

**Implementation** 

The impact and measure of this is to ensure children not only acquire the appropriate age related knowledge linked to the science curriculum, but also skills which equip them to progress from their age related starting points, and within their everyday lives.

Living things and their habitats	Animals including humans	Properties and changes of materials	Earth and Space	Forces
I can describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird.	I can describe the changes as humans develop to old age.	I can compare and group together everyday materials on the basis of their properties, including their hardness, solubility, transparency, conductivity and response to magnets.	I can describe the movement of the Earth, and other planets, relative to the Sun in the solar system.	I can explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.
I can describe the life process of reproduction in some plants and animals.	I can work scientifically by researching the gestation periods of animals.	I can discover that some materials will dissolve in liquid to form a solution, and describe how to recover a substance.	I can describe the movement of the Moon relative to the Earth.	I can identify the effects of air resistance, water resistance and friction,that act between moving surfaces.

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I can recognise that environments can change and that this can sometimes pose dangers to living things.	I can construct and interpret a variety of food chains, identifying producers, predators and prey.	I can use my knowledge of solids, liquids and gases to decide how mixtures might be separated, including through filtering, sieving and evaporating.  I can experiment with dissolving, mixing and changes of state showing they are reversible changes.	I can describe the Sun, Earth and Moon as approximately spherical bodies.	I can recognise that some mechanisms, including levers, pulleys and gears, allow a smaller force to have a greater effect.
		I can explain that some changes result in the formation of new materials, and that this kind of change is not usually reversible.	I can use the idea of the Earth's rotation to explain day and night and the apparent movement of the sun across the sky.  I can understand why seasons change because of the Earths movement.	



Upper Key Stage Two Year Five

## **Upper Key Stage 2 National Curriculum Aims**

During years 5 and 6, pupils should be taught to use the following practical scientific methods, processes and skills through the teaching of the programme of study content:

- Planning different types of scientific enquiries to answer questions, including recognising and controlling variables where necessary
- Taking measurements, using a range of scientific equipment, with increasing accuracy and precision, taking repeat readings when appropriate
- Recording data and results of increasing complexity using scientific diagrams and labels, classification keys, tables, scatter graphs, bar and line graphs
- Using 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
- Identifying scientific evidence that has been used to support or refute ideas or arguments.