At The Carlton Junior Academy, we strive to support and prepare our children for their future. We liaise with The Carlton Infant Academy, sharing our Intent and Implementation, to ensure the children have the best learning outcomes they can. Through this, we can build on the skills the children have learned at The Carlton Infant Academy, supporting them to grow and achieve, ready and prepared for Key Stage 3.

In Key Stage 1, children will learn to use the following methods, processes and skills:

* Asking simple questions
* Observing closely using simple equipment
* Identifying and classifying
* Using their observations and ideas to suggest answers to questions
* Gathering and recording data to help in answering questions

After learning these skills, the children are prepared and feel confident during Key Stage 2 to expand their scientific knowledge. The skills and methods learned in Key Stage 1 are still used during Key Stage 2 Science lessons, and are introduced to a wider-range of skills.

Through implementing the National Curriculum objectives and using our school vison and ethos, our curriculum aims to support children to achieve at least aged-related expectations in the following programmes of study; Plants, Animals Including Humans, Rocks, Light, Forces and Magnets, Living Things and Their Habitats, States of Matter, Sound, Electricity, Properties and Changes of Materials, Earth and Space, Forces and Evolution and Inheritance.

Each of these units of learning follows a specific sequence of learning, which has been carefully planned out to ensure it is suited to each child’s needs and covers all areas of learning needed. In Lower Key Stage 2, the children are encouraged to ask questions about scientific concepts and carry out experiments with support. In doing this, they will:

* Learn what a fair test is
* Take measurements using a range of equipment
* Gather and record data
* Report their findings orally and in writing

In Upper Key Stage 2, children will continue to practise the skills mentioned above, but with more depth and precision. When carrying out experiments, they will:

* Understand what variables are and how to control them
* Take measurements from a range of equipment, understanding the need for repeated measure to increase accuracy
* Gather and record data using labels, classification keys, tables, scatter graphs and bar and line graphs
* Use test results to make further predictions to set up further comparative and fair tests
* Make conclusions on the test carried out, both orally and in writing

From building upon the skills learned in Key Stage 1 and teaching new skills and methods during Key Stage 2, children are ready to adapt those skills to Key Stage 3:

* Manipulation of standard laboratory equipment
* Planning of experiments and collection of data
* Graph drawing
* Analysing experiments and drawing conclusions
* Development of writing **skills** – how to describe and explain **scientific** concepts
* Manipulation and use of data