

# Science Policy



**Deepcar**  
**St. John's C.E.**  
**Junior School**

Approved by staff and Governors Jan 2022

## A Policy for Science

### Teaching:

Science is taught weekly, once an afternoon. Science units are planned in an order which support the teaching and learning linked to certain seasons, so that they support links to other curriculum subjects and to the length of time needed to teach each one. Alongside this, we ensure that Working Scientifically skills are built up from lower key stage two to upper key stage two.

Science is based around four Core Concepts:

- Discover, answer and generate questions
- Acquiring knowledge and making links
- Science in our lives
- Scientific enquiry.

Every lesson will draw upon one or more these concepts and the children will use and understand what these concepts means. As a result, they will understand the central skills needed in order to think as a scientist. The Core Concepts will be evident in the classroom environment and in the children's books.

The science curriculum is split into three areas:

**Biology**- Animals including humans, Plants, Living things and their habitats

**Physics**- States of matter, Properties and changes of materials

**Chemistry**-Electricity, Forces and magnets, Light, Sound, earth and space

Combining both the substantive knowledge and the disciplinary knowledge is key to children developing their understanding and knowledge in all three curriculum areas.

Teachers use Medium Term Plans for each unit of work taught. These plans highlight prior knowledge for each unit so that teachers know what the children have previously learnt. This is then brought into lessons and built upon. Teachers update these plans to suit the needs of the children in their class.

To support children's vocabulary and knowledge, Knowledge Mats for each unit are given to the children. The children are expected to use them to spell scientific vocabulary correctly and for aiding understanding. Every lesson, the children complete Memory Makers in order to ensure previous learning is revisited regularly and brought back to the forefront of the children's minds.

Every lesson will be planned and pitched Age Related Expectations (ARE) and challenges for those children working at Great Depth (GD) will be planned. Chilli 1 activities are pitched at ARE but the child will require additional support to achieve this. Chilli 2 activities are pitched at ARE and the children completes this independently, in pairs or a s a group.

Chilli 3 activities are provided in some lessons and will encourage children to further develop their knowledge, give reason and justify and ask further questions.

## **Marking:**

Teachers will give oral and written feedback during science lessons and will be marked in accordance with the whole school policy. Children will also self-assess and peer assess their work.

## **Learning Walls:**

Each class has a learning wall devoted to science, where key questions, vocabulary and learning from the current topic is displayed and referred to in lessons. Children's work is displayed in classrooms and is also celebrated around school on communal displays.

## **Resources:**

Science resources are kept in the resources room (on the right hand side) and in the cupboard between the Staffroom and Rainbow Room. The school has access to Collins Snap Science scheme to help ideas and guidance for teaching. This includes online planning and resources. Other online resources such as: PLAN assessment, Explorify, Concept Cartoons also add to the collection of resources available to teachers.

## **Assessment:**

The children progress is monitored continually and is used to inform future teaching and learning. By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study as set out in the National Curriculum. These are set out as statutory requirements.

In Y3, Y4, Y5, and Y6 science is assessed every topic, which is roughly every half term.

PITA (Point in Time) assessments are used to assess the children's knowledge and understanding in Biology, Physics and Chemistry at Age Related Expectations in each year group.

Assessment methods:

- Teacher use a range of AfL strategies in lessons to assess the children's understanding and support their assessment. These allow the teacher to observe, listen and question the children's understanding.
- Evidence shown in children's written work, and the level at which they needed support or worked independently guides the teacher's judgement.
- Children also complete a 'Know It All Grid' at the beginning of a unit of work and at the end and this also helps to build a bigger picture of what each child has learnt.
- Children complete a Memory Maker at the beginning of most lessons which allows teachers to assess the children's knowledge and understanding of taught topics.