



# St Luke's C of E (Aided) Primary School

## Science and Environmental Learning Policy

**Updated: 13<sup>th</sup> October 2023**

**Approved: 24<sup>th</sup> January 2024**

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**Minute number: 7**

**Signature of Chair of Governors Meeting:** *VAD onie*

### Rationale

It is a primary aim of our school that every member of the school community feels valued and respected, is given the opportunities to thrive and flourish and that each person is treated fairly and well which is demonstrated through our school vision.

### Our Vision

Through our Christian values we will **aspire** to be more like Jesus; **believe** all as having equal worth and dignity in God's eyes and help all our children to **achieve** their God-given potential knowing that,

***'we can do all things through Christ who strengthens us'***

Philippians 4:13.

The school's Science & Environmental Learning policy, driven by our vision, motto and core values is a key factor in the success of our school Mission which states:

Our mission will be driven by our vision, motto and values so that together, ***we can do all things through Christ who strengthens us.*** We will:

- Foster a secure, happy, and nurturing Christian environment where all can **aspire, believe and achieve.**
- Offer a well-disciplined school in which high expectations encourages **friendship** and **forgiveness.**
- Establish effective links between home and school that enables parents and teachers to work together for the benefit of their child so that they can **achieve** their God-given potential.

### Spirituality In the Science Curriculum

At St Luke's our curriculum reflects our Theologically Rooted Vision. In every area we provide opportunities to ensure that the curriculum and extra-curricular opportunities meet the spiritual needs of all learners. In Science opportunities for spiritual development may be seen through activities which allow pupils to **encounter** ideas, **reflect** on their experience and have opportunities to **respond** to what they have learned such as:

- Exploring growth and change,
- Posing questions which cannot always be answered
- Reflecting on the living world
- Learning about ourselves
- Awe and wonder in nature

Spirituality in Science will be monitored through lesson observation, book trawl, pupil voice and learner action.

## **AIMS**

At St Luke's our aim is to develop children's knowledge, skills and understanding which will enable them to make sense of the world in which they live, through investigation and questioning. Science helps to enliven a child's curiosity in finding out why things happen in the way they do. We teach methods of enquiry and investigation to stimulate creative thought and questioning. Children learn that Science affects the future on a personal, national and global level. We ensure that skills are progressive from foundation to the end of key stage 2, building on the communication and Knowledge and Understanding of the World, through into the Enquiry skills of the National Curriculum.

We believe that a broad and balanced science education is the entitlement of all children, regardless of ethnic origin, gender, class, aptitude or disability. Science should be motivational and exciting for all, pupils and staff alike. This means that our science teaching includes the following:

- To encourage and build upon our children's natural curiosity, stimulating them to ask questions and motivate them to investigate;
- To develop their knowledge and understanding of science, making the concepts we study relevant to their everyday life and giving them opportunities to explore and observe at first hand where possible;
- To teach children scientific skills and strategies and to develop positive attitudes which encourage them to share response using appropriate vocabulary;
- To prepare our children for life in an increasingly scientific and technological world.

## **Progression**

To ensure progression from Foundation through to Year 6, to meet National expectations, we have developed a Learner Profile for each year group which is based on the National Curriculum for science. The expectations for each topic are based on the skills used and developed in order to become a good scientist.

The Learner profile ensures that key scientific skills are developed to enable our aim of making all children see themselves as scientists achievable. Knowledge and understanding is also developed, building on Foundation work continuing to use children's interests and experiences in a non-repetitive way.

Vocabulary is also progressive throughout the school, and staff are encouraged to challenge and support this vocabulary throughout, using Word Aware, as well as precision teaching.

## **Organisation**

Teachers are responsible for the teaching of Science. It is taught in topics through a combination of whole class / year group teaching, group and individual work. The topics are based on the Science National Curriculum with scope for teacher's own initiatives and ideas.

Teachers will encourage children to have develop skills in observation, discussion, debate and research. In order to ensure a balanced curriculum, knowledge and 'Working Scientifically' will be taught alongside each other and not independently.

Working Scientifically is more than just fair testing. The framework in the National Curriculum comprises five approaches. These are:

- **Observing changes over time** – What happens to bean seeds when I plant them?
- **Looking for naturally occurring patterns and relationships** – Do beans curl clockwise or anti-clockwise as they grow?

- **Identifying and classifying things** – There were 12 different types of beans in the market in France. What are they?
- **Researching using secondary sources** – Gardeners say that growing beans is good for the soil. Why would this be the case?
- **Comparative and fair testing** – does it make any difference if I put fertiliser on the beans when they are growing?

There is a Learner Profile (Long Term Plan) which all teachers are expected to follow, as this is used to support the delivery of their lessons. How work is recorded is dependent on the activity and the enquiry skill focus of the lesson, however any skills related work is recorded in the Science section of each child's Learning Journey.

### **Inclusion**

Teaching follows the guidelines of the whole school policies for equal opportunities, SEN, EAL and G&T. Planning ensures that all abilities and learning styles are catered for, and TA support is outlined to support a target group. Teaching is generally in mixed ability groups enabling peer support and independence within the groups. Support and extension materials are provided as appropriate.

### **Learning Environment**

Each year group has a dedicated science display board which is related to the topic being taught. These should be interactive and include children's work and subject specific vocabulary that the children should be encouraged to use – Word Aware. New technology is used where appropriate.

### **Monitoring**

At St Luke's there is a yearly monitoring plan for all subject areas ensuring that there aren't any clashes. Monitoring takes the form of work trawls, learning walks, planning trawls, pupil interviews and lesson observations, which occur once per year. Triangulated feedback from this monitoring, informs further developments within the subject.

### **Assessment**

In Early Years, assessment takes the form of observations / work produced against Early Years statements. In KS 1 and 2, assessment is through tracking, as marking is to NC objectives. Teachers record progress termly, which is monitored, under-achievement to be identified and areas for development to be addressed.

### **Marking and Feedback**

Children use the smiley-face system of marking their own work in relation to the Can I? statement for that session provided by the teacher at the beginning of the lesson. Staff will mark in reply to the face and Can I? statement and provide steps for improvement and progression either verbally or written.

### **Resourcing**

St Luke's is well resourced for science and resources are kept in a central store, located with Maths and Topic. Resources are grouped by equipment rather than topic boxes. When a class takes a box they place their class name in the space enabling other members of staff to locate equipment.

There is a yearly budget for science and staff indicate extra resources required and these are ordered on a batch basis.

### **Health and Safety**

Health and Safety for science follows the whole school policy. The Be safe booklet from the ASE is available for all staff and is distributed yearly for staff to indicate that they have refreshed their knowledge of health and safety.

CLEAPSS bulletins for science and technology are printed and available on the science notice board in the PPA room. Use is also made of the CLEAPSS booklets for particular activities.

Each member of staff is responsible for the activities and health and safety of their pupils.

### **Monitoring and Review**

It is the responsibility of the science subject leader to:

- Monitor the standards of children's work and the quality of teaching in science;
- Support colleagues in their teaching, by keeping them informed about current developments in science;
- To evaluate strengths and weaknesses in science and report these to the Headteacher/Governors through monitoring;
- Use allocated management time to review evidence of children's work, and to observe science lessons across the school.