



# **Buckstones Community Primary School**

## **Policy for Science**

**Written and agreed by staff: 15<sup>th</sup>. September 2022**  
**Adopted by Governors: Tuesday 20<sup>th</sup>. September 2022**

# Science Policy

## INTENT

### **Aims and Objectives:**

We live in an increasingly scientific and technological age where children need to acquire the knowledge, skills and attitudes to prepare them for life in the 21st century. We, at Buckstones Primary School, believe that the teaching of science develops in children an interest and curiosity about the world in which they live, and fosters in them a respect for the environment. Through the framework of the National Curriculum, science aims to:

- ❖ Equip children to use themselves as starting points for learning about science, and to build on their enthusiasm and natural sense of wonder about the world.
- ❖ Develop through practical work the skills of observation, prediction, investigation, interpretation, communication, questioning and hypothesising, and increased use of precise measurement skills and computing.
- ❖ Encourage and enable pupils to offer their own suggestions, and to be creative in their approach to science, and to gain enjoyment from their scientific work.
- ❖ Enable children to develop their skills of co-operation through working with others, and to encourage where possible, ways for children to explore science in forms which are relevant and meaningful to them.
- ❖ Teach scientific enquiry through contexts taken from the National Curriculum for science.
- ❖ Encourage children to collect relevant evidence and to question outcome and to persevere.
- ❖ Encourage children to treat the living and non-living environment with respect and sensitivity.
- ❖ Stress the need for personal and group safety by the correct usage and storage of resources.
- ❖ To enable children to appreciate that we do not always know the answers and results when carrying out scientific enquiry.

### **The Philosophy and Ethos:**

We believe science encompasses the acquisition of knowledge, concepts, skills and positive attitudes. Through the programmes of study in the National Curriculum science document children will acquire and develop these skills throughout their Primary years.

We believe that science promotes communication in a specific and precise language involving mathematical and logical thinking. It allows children to develop ways of finding out for themselves and gives them practice in problem solving.

As their knowledge and understanding increases and they become more proficient in selecting and using scientific equipment and collating and interpreting results they will become increasingly confident in their growing ability to come to conclusions based on real evidence. Science fosters a healthy curiosity in children about our universe and promotes respect for the living and non living. It allows children to develop original ideas and a questioning attitude.

In science, pupils are encouraged to be open- minded and to try and make sense of what they see and find out. We take as many opportunities as possible to encourage scientific enquiry through open-ended activities where we develop the skills to enable children to recognise the need for fair testing.

To promote the enjoyment of science, we at Buckstones, hold an annual science day where we explore a topic/topics through a hands-on approach where the children can experience and develop their practical investigative skills.

## **IMPLEMENTATION**

What will Science look like in the classroom?

- \* Science will be taught to enthuse and inspire learners to question the world around them.
- \* Lesson starter activity - reviewing previous learning and consolidation of knowledge and skills through starter activities.
- \* Specify key vocabulary to be used and its meaning. Knowledge mats to be available
- \* Conduct investigations that are engaging and create awe and wonder, inspiring young minds to investigate independently or with appropriate scaffolding
- \* Research, investigation and interpretation of findings.
- \* Children will communicate their scientific knowledge and understanding appropriately and will be able to apply this to their knowledge outside of school.
- \* Children will be able to evaluate their learning
- \* Display materials, vocabulary and resources to support and enhance learning.

\* Appropriately challenging texts will be available to develop wider understanding.

Scientific skills are embedded into lessons to ensure that skills are systematically developed throughout the children's school career and new vocabulary and challenging concepts are introduced through direct teaching. This is developed through the years, in-keeping with the topics.

Teachers demonstrate how to use scientific equipment, and the various scientific skills in order to embed scientific understanding. Teachers find opportunities to develop children's understanding of their surroundings by accessing outdoor learning and links to local areas.

Our pupils will:

\* Be engaged because they enjoy and are challenged by the curriculum we have designed for them through topics, activities, resources and enrichment opportunities.

\* Be resilient and enthusiastic learners.

\* Develop Scientific knowledge and skills over time because of careful planning, teaching is designed to ensure that children know more and remember more over time.

## **Equal Opportunities:**

At Buckstones Primary School, we are committed to providing all children with an equal entitlement to scientific activities and opportunities regardless of race, gender, culture or class.

## **Inclusion:**

In school we aim to meet the needs of all our children by providing a variety of approaches and tasks appropriate to ability levels. This will enable children with learning and/or physical difficulties to take an active part in scientific learning, practical activities and investigations and to achieve the goals they have been set. Some children will require closer supervision and more adult support to allow them to progress whilst more able children will be extended through differentiated activities. By being given enhancing and enriching activities, more able children will be able to progress to a higher level of knowledge and understanding appropriate to their abilities.

## **IMPACT**

Pupil voice will show:

- \* A progression of learning and understanding, with appropriate vocabulary.
- \* A developed understanding of the methods and skills of scientists at an age appropriate level.
- \* A progressively developing understanding of key scientific themes and concepts, as identified in the medium term plans.
- \* Confidence in discussing Science and their own work.

Displays around school and books will show:

- \* A varied and engaging curriculum which develops a range of scientific skills.
- \* Pupils have had opportunities for practice and refinement of skills.
- \* Clear progression of skills in line with expectations set out in progression documents.
- \* That pupils, over time, develop a range of skills across all of the areas of the Scientific curriculum.

The subject leader will:

Monitor and moderate regularly through:

- Monitoring of planning
- Learning Walks
- Observations
- Scrutiny of Books/Work
- Moderation of work
- Discussions with Pupils/Pupil Voice Questionnaires
- Staff Meetings and Staff Audits
- Meetings/observations with the nominated governor

Subject leader will also organize an annual Science day.

## Assessment and Record Keeping:

Assessment for learning is continuous throughout the planning, teaching and learning cycle. However children are more formally assessed using a variety of methods:-

- ❖ Observing children at work, individually, in pairs, in a group, and in classes.
- ❖ Questioning, talking and listening to children.
- ❖ Considering work/materials / investigations produced by children together with discussion about this with them.
- ❖ End of unit assessment tests or assessments.
- ❖ The 'Rising Stars' assessment scheme is used to assess children in years 1-6, at the end of each topic area.
- ❖ Tracking attainment at the end of each topic. This information is passed onto the next class teacher and to the science co-ordinator.

Children's progress is continually monitored and tracked throughout their time at Buckstones School (see policy for Monitoring and Evaluating the Curriculum including the Role of the Subject Co-ordinators).

## Health and Safety:

In regard to science work in school, all teachers will be conversant with the 'Be Safe' safety booklet. Where appropriate, reminders will be given to children about potential hazards and care of the equipment they are using.

Any trips should have been planned with due regard to the school policy on taking children on outings. LA guidance may need to be sought on trips involving farms etc.

## Resources:

- ❖ General resources are kept in the science area, in the AV room
- ❖ All teachers and teaching assistants must return resources neatly and ensure that the area is kept tidy at all times. Children should not return resources. It is the responsibility of the individual teacher to inform the Science Co-ordinator of any damage to or breakage of equipment.
- ❖ Requests for new equipment or resources are made to the science co-ordinator.
- ❖ Computer software can be found in the science area.