September 2019

CLIFTON COMMUNITY PRIMARY SCHOOL

SCIENCE POLICY

'Enjoy and Achieve Together'

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Change History

Version	Date	Change Description	Stored
1	November 2019	Altered to incorporate the Intent / Implementation and Impact of the Science Curriculum	Co-ords / staff shared
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CLIFTON PRIMARY SCHOOL

CURRICULUM POLICY FOR SCIENCE

Mission Statement: 'Enjoy and Achieve Together'

At Clifton Primary School we believe it is important that:

- children are given the opportunity to explore and understand the world in which they live.
- science is about giving children the tools to develop their ideas and ways of working that enable them to understand the world through investigation with independence, resilience and enjoyment.
- a broad and balanced science education is the entitlement of all children, regardless of ethnic, origin, gender, class, aptitude or disability.

Intent – what we will do

Knowledge:

We want our children to:

- develop both scientific knowledge and conceptual understanding through working scientifically.
- develop knowledge and understanding of how scientific processes work and how these will help them answer questions about the world around them.
- be curious and question why and how things happen.
- begin to be equipped with the scientific knowledge required to understand the uses and implications of science today and for the future.
- gain confidence and to become life-long learners of STEM subjects in and out of school.

Skills:

We want our children to:

- develop an understanding of scientific processes.
- acquire practical scientific skills.
- develop the skills of investigation - including observing, measuring, predicting, hypothesising, experimenting, communicating, interpreting, explaining and evaluating.
- develop the use of scientific language, recording and techniques.
- develop the use of computing in investigating and recording.
- become effective communicators of scientific ideas, facts and data.
- work scientifically, conducting fair tests.
- to use scientific skills across the curriculum

Implementation – how we will do it

We aim to:

- Teach science (using the national curriculum) in ways that are imaginative, purposeful, well managed and enjoyable.
- Give clear and accurate teacher explanations and offering skilful questioning.
- Make clear links between science and other subjects.
- Ensure children are given enough time to study the four main areas of the science curriculum. These are: Scientific enquiry, Life and living processes, materials and their properties and physical processes.
- Offer ample opportunities for practical investigation and enquiry.

At Clifton Science is taught every half term, with the teaching and learning of science. being based on investigation, observation and application. We ensure children are exposed to many different scientific topics throughout their time at school.

In EYFS science is vital part of the topics covered over the year and it is integrated into their learning and play. We relate this to the scientific aspects of the objectives of the ELG, focusing on Understanding the World.

The teaching of Science in the EYFS:

- helps children to develop their knowledge and understanding of the world they live in, including the use of technology,
- helps children to understand how they relate to other human beings and the environment by , observing similarities and differences in relation to places, objects, materials and living things.
- enables children to explore features of their own immediate environment and how environments might vary from one another.
- Teaches children to make simple observations of animals and plants and explain why some things occur, and talk about changes.
- links purposefully to other areas of the curriculum to enhance children's understanding of science.

The teaching of Science in key stage 1 [KS1]:

- ensures children are given the opportunity to be curious, to ask questions and to experience and observe phenomena, looking more closely at the natural and humanly-constructed world around them.
- provides opportunities for children to develop key skills of observation, categorisation, classification and carrying out simple tests.
- ensures learning is hands on and first hand
- helps children to develop, use and understand key scientific language.

The teaching of Science in lower key stage 2 [KS2]:

- enables children to broaden their scientific views and knowledge of the world around them building upon what they have learned and remembered in key stage 1. This is achieved

through exploring, testing and observing the relationships between living things and familiar environments.
- enables children to develop their own ideas and understanding of the different scientific enquiries and which would be appropriate to use to find their answers.
- enables children to carry out simple and comparative fair tests and to find things out using primary and secondary sources.
- ensures children can draw conclusions using scientific language.

The teaching of science in upper key stage 2 [UKS2]

- focuses on the children developing a deeper understanding of a range of scientific areas and skills.
- ensures children can explore and talk about their ideas, think of their own questions about why things happen, and analyse data to a further level, making effective use of knowledge and skills from their mathematical learning
- exposes children to abstract ideas and enables them to select appropriate ways to investigate and to answer these questions.
- ensures children will use many different scientific enquiries by observing change, noticing patterns, classifying, carrying out fair tests and using primary and secondary sources.
  ensures children can create conclusions based on the data found and to be able to justify the answers using scientific knowledge and language accurately.

In KS1 and KS2 the curriculum overviews are available on a shared file. In addition to the knowledge and understanding aspects of the National Curriculum, emphasis is on scientific investigation and enquiry, including the correct use and care of scientific apparatus.

Teachers are encouraged to actively teach science skills, and reinforce learning with selected enquiry stimulations. We encourage children to ask and answer their own questions as often as they like.

Children should complete at least one investigation per topic. These investigations should be based on their current topic, but have a focus on developing the children's scientific skills. This allows our children to be exposed to scientific vocabulary and develop their enquiry skills outside of science lessons.

Impact - what we can do now:

Assessment and recording:

We collect evidence for impact in the form of:

- Scrutiny of children's work
- Teacher assessments made against the National Curriculum objectives at the end of each term recorded in the back of the book.* and an overall assessment at the end of the year.
- Photographic evidence
- Pupil voice
- Regular lesson observation
- Learning walks - Learning which is displayed on the working wall
- Reports to parents are written once a year, describing each child's attitude and attainment in science

Each topic commonly begins with a WOW lesson and to find out what the children already know. The learning objective for the lesson is always shared with the children. However, this may not always be at the beginning of the lesson. For example, if the investigation or enquiry leads the children to discovering the learning objective for themselves.

Children are involved in the process of self-improvement, recognising their achievements and acknowledging where they could improve on for next time. Challenges and fix-its are given appropriately to improve their science knowledge. Opportunities for self-generated questions are sought and children encouraged to seek the answers.

* 1=experienced, 2= met, 3= understood, 4= mastered

Safeguarding, Inclusion and Equal Opportunities:

At Clifton we have high aspirations and expectations for all children. Children learn and thrive when they are healthy, safe and engaged. In all subjects we are committed to safeguarding children and as such we maintain an ethos where children feel safe, encouraged to talk and are listened to. We ensure that children know they can approach and talk to adults if they are worried or in difficulty. We support children with their emotional wellbeing and health, recognising that subjects may sometimes be sensitive for children. Clifton Primary believes in inclusion and equal opportunities meaning that all children should have access to a broad and balanced curriculum, including Science, which enables them to make the greatest progress possible according to their individual abilities. We provide learning opportunities that are matched to the needs of the children making reasonable adjustments where needed. Lessons are planned in advance addressing any potential areas of difficulty and barriers to the children achieving are removed. We will ensure that expectations do not limit pupils' achievements, supporting where there is a need and extending children's learning who need further challenging.

As per the Equality Act 2010, it is the responsibility of all teachers to ensure that all children irrespective of SEN, gender, ethnicity, social circumstance and ability (including gifted and able children), have access to the curriculum and make the greatest progress possible.

Review:

This policy will be reviewed annually by the science curriculum leader.