



A BRIGHTER FUTURE

## Science Policy

*Science is a body of knowledge which is built up through experimental testing of ideas and which is organised in a way that makes it easy to use. Science is also a methodology, a practical way of finding reliable answers to questions we may ask about the world around us.*

### Purpose

- To establish an entitlement for all pupils
- To establish expectations for teachers and pupils
- To promote continuity and coherence across the academy
- To promote a shared understanding of science

### Aims of Policy

To encourage children to:

- retain and develop their natural sense of curiosity about the world around them
- develop a set of attitudes which will promote scientific ways of thinking, including perseverance, objectivity and a recognition of the importance of teamwork.
- come to understand the nature of "scientific method" involving: meticulous observation, the making and testing of hypotheses, the design of fair and controlled experiments, the drawing of meaningful conclusions through critical reasoning and the evaluation of evidence using a range of investigation types.
- become effective communicators of scientific ideas, facts and data.
- begin to build a body of scientific knowledge and understanding which will serve as a foundation for future enquiry.
- Value the contributions of all members of the academy community.

### Expectations

- By the time children leave our academy, we expect them to make links between ideas and explain phenomena using simple models and theories. We expect them to think about the positive and negative effects of scientific developments and relate them to everyday situations.
- By the end of Foundation Stage the majority of children are expected to achieve the Early Learning Goal – Knowledge and understanding of the world, which includes observing things

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around them, identifying simple differences, similarities as well as likes and dislikes and begins to ask questions about the world around them.

- By the end of each Key Stage most children will have met the relevant expectations (KSI, LKS2 and UKS2)
- The expectations will reflect the new curriculum (2014) and assessing without levels.

## **Time Allocation**

- The time allocated for science is in line with recommendations for key stages one and two. This amounts to a minimum of 1 hour / 1½ hours per week at both key stages.
- In addition, it is expected that cross-curricular links will contribute to pupils learning where appropriate.
- All bases are teaching through a Creative Curriculum approach, with explicit science lessons also taught in KS2, linking pupils learning across the curriculum.

## **Teaching and Learning/ Planning**

The creative curriculum based on skills taught from the National Curriculum forms the basis of teaching and learning; revisions to planning across academy is to lead planning away from QCA.

Teachers work towards independent learning and plan for different working groups e.g. whole class/small group/paired/individual.

Teaching uses many different formats and focus on the practical using strategies such as;

- ◆ instructing/directing
- ◆ modelling/demonstrating
- ◆ explaining
- ◆ questioning
- ◆ recording
- ◆ discussing
- ◆ consolidating
- ◆ evaluating
- ◆ summarising

Clear objectives are set for each session and are shared with pupils. Teachers differentiate according to the needs of the pupils.

Science is encouraged and developed across the curriculum and links are made where appropriate.

ICT is used where it enhances, extends and complements science teaching and learning.

There will be emphasis on scientific vocabulary and understanding and through the use of practical activities.

## **Inclusion**

All children receive science teaching where activities are differentiated according to ability. In addition, where identified pupils are considered to require targeted support to enable them to work towards age appropriate levels support will be implemented.

More able pupils are planned for in line with our Gifted and Talented Policy. The needs of children with English as an additional language will be met through planning, support from EB's EAL consultant, and Bilingual support assistants where appropriate. This is supported by our equal opportunities/ EAL policies.

## **Parental/Community involvement**

We value parent involvement in children's development of science and promote a home academy partnership in the following ways:

- celebrations – assemblies, academy performances, displays
- homework - in line with our homework policy and home/academy agreement
- external agency links, such as the Life Caravan

## **Assessment, Recording and Reporting**

Assessments are made in line with the academy assessment policy. Teachers report to parents twice a year at parents' evenings and in the annual report to parents. Children are assessed on entering the academy and are formally assessed at the end of each key stage. Teachers assess pupils at the end of each half-term, using a mixture of teacher assessment and formal assessment processes, and complete a tracking sheet to highlight progress and next targets which is passed with them as they progress through the academy.

Teachers use assessment for learning to ensure planning is based on prior attainment and that pupils know what they need to do to achieve the next steps. Marking is in line with the academy marking and feedback policy.

Recording of pupils' work is covered by a variety of strategies, worksheets to be largely avoided as much as possible (used in homework situations). Use of photographic evidence and the use of speaking and listening are to be paramount in all lessons.

## **Staff Development**

Science has a working group (one representative from each key stage) who meet regularly to plan staff CPD and work within their key stage to ensure that science is covered effectively and thoroughly. Teachers are expected to keep up to date with subject knowledge and use current materials that are available in academy. Training needs are identified as a result of whole academy monitoring and evaluation, performance management and through induction programmes. These will be reflected in the Academy Development Plan which includes the Science Action Plan. The science co-ordinator will arrange for relevant advice and information, such as feedback from courses or newsletters, to be disseminated. Where necessary the science group leads or organises academy based training.

## **Resources and Accommodation**

A range of general science resources is available in academy; these are located in the hall cupboard. Boxes are labelled to specific items. The academy library contains a range of non-fiction books relevant to science and a reasonable resource of ICT software is available in the library and on the academy network.

Year groups are allocated a science budget to use to enhance and support the topics that they are teaching. The year groups look after their own resources, however these are also to be shared across academy if necessary.

## **Monitoring and Evaluation**

Science is monitored by teachers, the science co-ordinator and the working group, the head teacher and governors. Having identified priorities, the science co-ordinator, along with the working group, constructs an action plan that forms part of the Academy Development Plan. This forms the basis for any monitoring activities and will clearly identify when, who and what is to be monitored and how this will take place e.g. classroom observation, planning scrutiny, work sampling etc.

## **Review**

This policy will be reviewed every two years or according to the Academy Strategic Plan.

April 2015