

ASHBROOK FIRST SCHOOL
SCIENCE POLICY STATEMENT

SCHOOL AIM:

"Everyone matters; everyone is important."

CO-ORDINATOR: Ms S Hunt

LINK GOVERNOR: Mrs A Tilston

AIM

In light of Every Child Matters our aim is to create an environment where we enable our children to achieve the best possible physical, personal and educational outcomes.

SUMMARY

Science is the study of chemical, physical and biological concepts in relation to the local environment and the world around us. This will involve active practical exploration.

LEARNING INTENTIONS

- To develop close and accurate observations using all senses
- To develop an interest in discovery, working individually and in groups
- To acquire and refine the practical skills needed to investigate
- To develop an understanding of conceptual ideas

ORGANISATION

The QCA Units of Study and Foundation Curriculum are being used, as appropriate, in order to develop children's knowledge and skills in Science. The general requirements for the programme of study allow for a balanced programme of Science activities which build on previous work and achievements. At both Foundation and Key Stage 1, the Science curriculum is planned to provide links with other subjects, as well as those activities which teach specific scientific skills. A whole school approach to Science is being developed which gives consideration to the progression of knowledge, skills, values and attitudes, and the use of resources.

MANAGEMENT

The curriculum for each year group is divided into six half-termly units and is delivered either in a cross-curricular manner using activities centring around a topic, or, by teaching specific scientific skills.

The Science Co-ordinator will be responsible for liaising with other subject co-ordinators in order to promote the use of science to support other curriculum areas.

TEACHING AND LEARNING

The QCA Units and Foundation Curriculum for Science will provide the framework for our Science Curriculum in conjunction with the National Curriculum.

The majority of learning should be through first-hand experiences about the immediate environment. It is important for children to develop skills which aid them in their approach and successful completion of an activity. These should include:

- Observation
Gathering information
Sorting, comparing & classifying
Measuring
Recording and communicating
Drawing conclusions
Investigating
- Hypothesis
Inference
Prediction
Evaluating
Interpreting data
Questioning
Applying findings
- A number of strategies can be used to extend children's learning: individual, group, whole class investigation.
- Use of books, films, information technology programs
- Thinking skills to complement the key skills within the National Curriculum.

CROSS CURRICULAR LINKS

Links are to be found between Science and a range of other curricular areas. However, the links should be genuine rather than contrived.

CONTINUITY AND PROGRESSION

To ensure continuity and progression it is vital that information is recorded and transferred in a comprehensive manner at regular, and appropriate, stages.

Children's science formative records are regularly monitored, reviewed and new targets for learning set.

Planning for Science occurs at three levels:

- Long Term - yearly planning
- Medium Term - half-termly planning
- Short Term - weekly planning and daily planning

DIFFERENTIATION (See also Special Needs Policy)

Our aim is to meet the needs of each individual child and involve them as far as possible in determining their next target and organisation of their pace of work.

Some children will be able to pursue more demanding work at higher levels and should be encouraged to do so. Some children will benefit from work at a lower level in order to help them consolidate particular skills. This will be addressed through planning.

EQUAL OPPORTUNITIES/SPECIAL NEEDS

All pupils will have access to Science on an equal basis, irrespective of gender, race or religion and at an appropriate level. As far as possible, any child with a specific disability will be provided with the same opportunities as his/her peers.

A broad, balanced and differentiated curriculum will be provided in order for each child to achieve their potential as far as their capability allows.

ASSESSMENT, RECORDING AND REPORTING

Assessment and testing is fundamental to the implementation of the National Curriculum and regular teacher assessments help to determine the child's level of performance. These assessments can be recorded in the Formative Record File.

The teacher should provide learning experiences which ensure that each individual child makes progress across the curriculum.

Much assessment will take place informally in the classroom and discussion between the teacher and the child will take place in order that targets can be negotiated, as appropriate.

All assessment tasks should be constructed so that they provide valuable learning experiences and a basis for future action.

At the end of each year children's progress is recorded in their Record of Achievement, which is sent home to parents and a copy kept in the child's file. Within our planning folders there will be a record of learning objectives covered by children during the year.

OPERACY

- Thinking is an important human life skill which, like literacy and numeracy, has to be learned and practised to be effective.
- We use "thinking tools" to help with this process. These tools help us to generate often completely new ideas in all areas of the curriculum which may not have been considered before.
- Once the thinker has acquired the skills and techniques they can control and direct their thinking at will.

STAFFING AND RESOURCES

Class teachers are responsible for delivering the Science Curriculum within their class. There is a nominated member of staff who has responsibility for co-ordinating the curriculum and is supported by a Link Governor. (Role of the Science Co-ordinator - Appendix 1).

A full list of resource details is identified in Appendix 2.

MONITORING AND EVALUATION

The Curriculum Manager, the Science Co-ordinator and the Link Governor are responsible for ensuring the appropriate policy statements, guidelines and Schemes of Work are drawn up and revised in line with the School Improvement Plan.

The Curriculum Managers and the Science Co-ordinator are jointly responsible for the planning, teaching, learning, monitoring and evaluation throughout the school.

DATE WRITTEN

This policy was rewritten in Spring Term 2006 and will be regularly reviewed in line with the ever changing learning climate. This policy is fundamental to the success of Ashbrook School and will be actively shared with all stakeholders.

Appendix 1

ROLE OF THE SCIENCE CURRICULUM CO-ORDINATOR

To be responsible to the Headteacher, in liaison with the Curriculum Manager, for the co-ordination of the work in the specified curriculum area by undertaking the following:

- 1 Act as consultant in the specified curriculum area with other members of staff.
 - 1.1 Foster the necessary integration of curriculum planning and delivery throughout the school in consultation with colleagues
 - 1.2 Advise and support colleagues in aspects of their work:
 - individual children's needs
 - teaching/learning strategies - in conjunction with the Special Needs Co-ordinator, if appropriate
 - classroom management
 - planning, assessment and record keeping
 - use of resources
 - through planning support and observation
 - 1.3 Identify and advise on current and future needs and contribute to whole school planning and lead staff training for National Numeracy Strategy.
 - 1.4 Organise and purchase relevant teaching resources from within annual budget.
 - 1.5 Convene and chair relevant staff meetings in liaison with the Headteacher/Curriculum Manager by:
 - drawing up an agenda/timetable
 - preparing background/discussion papers
 - organising necessary equipment and material
 - organising guest speakers/advisors' input
 - noting decisions made/actions to be taken
 - ensuring appropriate follow up
 - 1.6 Refer colleagues, where necessary to external agencies for advice/support eg: Resource Centres, Library, Museums

- 1.7 Inform newly qualified teachers, new members of staff and supply teachers about arrangements for the curriculum area
- 1.8 Organise workshops for parents, as appropriate.
- 2 Take major responsibility for the development of the curriculum area.
 - 2.1 Keep abreast of current thinking by attending relevant courses/meetings, reading and research and share significant developments with other colleagues.
 - 2.2 Draw up and develop policy statements, guidelines and schemes of work as appropriate in consultation with the Headteacher and Curriculum Manager by:
 - preparing draft/discussion papers
 - chairing staff meetings
 - organising working groups, where appropriate
 - researching material and gathering information
 - attending INSET
 - feeding back progress to colleagues/governors
 - 2.3 Organise, manage and maintain resources in consultation with other colleagues.
 - 2.4 Monitor the effectiveness of work in order to improve the quality and continuity of work throughout the school.
 - 2.5 Liaise with colleagues with like responsibilities in the liaison group, and participate in National and local initiatives as and when appropriate.
- 3 Make a significant contribution to relevant school based in-service training, in liaison with the INSET co-ordinator and Curriculum Manager.
 - 3.1 Identify needs/intended outcomes
 - 3.2 Plan appropriate programme, involving advisory service and outside agencies as and when appropriate.
 - 3.3 Take responsibility for the overall organisation of the initiative.
 - 3.4 Devise means of effectively evaluating the outcomes.
 - 3.5 Formulate plan for further action, as appropriate.

This job description may be amended at any time after discussion with the relevant member of staff and the Headteacher.

RESOURCES

Science resources are stored in the Music Room. The resources are packed into individual boxes and clearly labelled with their contents.

In addition there are teacher's resource packs on:

- Electricity and Magnetism - AT4
- Forces and Energy - AT4
- Colour and Light - AT4

A half-size skeleton is kept in the Medical Room.

Please ensure that when equipment is used that it is put back in the correct place and any faulty equipment is sent to the Science Co-ordinator.

MEASUREMENT OF TIME

Tocker Timers.....	4 in Year 3 + 4
Transam Sand Timers.....	1 minute x 7
Transam Sand Timers.....	3 minute x 4
Transam Sand Timers.....	5 minute x 4
Seconds hand stopclock	
Stopwatch	
Stopwatch LCD.....	x 1
Water Timers.....	x 2
- sets of 1/2 minute, 1 minute, 2 minute	
Egg Timers.....	x 5

MEASUREMENT OF CAPACITY

Funnels.....	large x 11
Funnels.....	small x 4
Round buckets with measurements -	varied sizes, 2000 ml-50ml x 10

MAGNETISM

Box of magnets.....	x 1
Large horseshoe magnet.....	x 2
Small horseshoe magnet.....	x 1
Magnetic adhesive tape.....	x 1
Metal cubes and Metal discs	

MEASUREMENT OF MASS/WEIGHT

Centicubes.....	x 1000+
Centicube base trays.....	x 8
Kitchen scales.....	x 1
Slotted masses 10g.....	x 9
Slotted masses 5g.....	x 6
Slotted masses 100g.....	x 5
Measuring spoons - set of 5.....	x 1

COLLECTING EQUIPMENT

Transparent buckets.....	x 5
Transparent buckets (with measurements).....	x 2
Petri dishes.....	x 12
Droppers.....	x 10
Pooters.....	x 5
Pond nets.....	x 3
Pond dippers.....	x 2

OBSERVATION

Miniscopes.....	x 3
Bausch & Lomb microscopes.....	x 9
Hand lenses.....	x 8
Small hand lenses.....	x 20
Zoom lenses.....	x 2
Magnispectors.....	x 4
Midispectors.....	x 5
Minispectors.....	x 47
LEM Tripod magnifiers.....	x 5
Two-way/Little Learner microscopes.....	x 4
Binocular microscopes.....	x 5
Tripod magnifiers.....	x 2
Binoculars.....	x 1
Wormery.....	x 1

CONSTRUCTION

Duplo.....	Reception
Wooden bricks	
Crate of large construction toys	
Lego.....	Year One
Large crate of Tactic	

Stickle Bricks
Wooden bricks

Lasy..... Year Two
Clix
Lego
Wooden bricks
Reo-click
First Gear

Construx..... Year Three
Straws
Lego
Clix
Technic Lego

Cogs, wheels and springs..... a selection
Magnetism..... a selection
Bulbs..... a selection
Candles..... a selection
Assorted balls..... a few
Assorted rocks..... a selection
Fossils and bones..... a selection
Electricity..... full selection
Toys..... a selection
Materials..... wooden blocks
Fabrics..... a selection
Minibeasts..... selection of hand puppets
Marbles..... a selection

COLOUR AND LIGHT

Coloured acetate sheets..... x 2 packets
Kaleidoscope..... x 1
Torches..... x 2
Filter papers..... x 1 box
Filter papers..... x 1 packet
Prisms..... x 4
Plane mirrors.....largest size..... x 16
Plane mirrors..... x 13
Plane mirrors..... x 1 packet
Plane mirrors.....smallest size..... x 16
Convex/concave mirrors..... x 16
Light box..... x 1

MEASUREMENT OF TEMPERATURE

Thermostik.....	x 4
Digital thermometer.....	x 2
Stirring thermometers.....	
Maximum/minimum thermometers.....	x 2
Spirit thermometer.....	x 1
Pool/bath thermometer.....	x 1

During their time at Ashbrook School children may have the opportunity to use:

- Hand lenses
- Magnispectors
- Minispectors
- Tripod magnifiers
- Microscopes
- Thermometers
- Timers
- Magnets
- Bulbs
- Buzzers
- Torches
- Mirrors
- Skeleton
- Collecting equipment
- Construction kits
- Ramp with various surfaces
- Minibeast puppets

JUNE 2001