

# Benchill Primary School Mathematics Policy



Approved by Benchill Committee Nov-14  
Prepared by L Miller Nov-14  
Review Nov-15

## Mathematics (England)

We believe this policy relates to the following legislation:

- Education Act 1996
- Education Act 1997
- Standards and Framework Act 1998
- Education (National Curriculum) (Temporary Exceptions for Individual Pupils) (England) Regulations 2000
- Education Act 2003

The following documentation is also related to this policy:

- Designing and Timetabling the Primary Curriculum - a practical guide for Key Stage 1 and 2 (Qualifications and Curriculum Authority 2002)

We believe 'mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary in most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, and a sense of enjoyment and curiosity about the subject.' (The National Curriculum in England (DfE) 2013)

We have a duty to ensure compliance with the revised National Curriculum and with the application of the new programmes of study and attainment targets. We understand that 'the National Curriculum provides pupils with an introduction to the core knowledge that they need to be educated citizens.'

Our well-balanced curriculum promotes the spiritual, moral, cultural, cultural, mental and physical development of pupils and prepares them for the opportunities, responsibilities and experiences of later life. We will develop pupils' spoken language, reading and writing in all subjects and will develop pupils' mathematical fluency.

We wish to work closely with the School Council and to hear their views and opinions as we acknowledge and support Article 12 of the United Nations Convention on the Rights of the Child that children should be encouraged to form and to express their views.

We as a school community have a commitment to promote equality. Therefore, an equality impact assessment has been undertaken and we believe this policy is in line with the Equality Act 2010.

We believe it is essential that this policy clearly identifies and outlines the roles and responsibilities of all those involved in the procedures and arrangements that is connected with this policy.

## Aims

- To ensure that all pupils become fluent in the fundamentals of mathematics so that pupils have conceptual understanding and are able to recall and apply their knowledge rapidly and accurately to problems.
- To ensure that all pupils reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- To ensure that all pupils can solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions.  
(The National Curriculum in England (DfE) 2013)
- To develop an enthusiasm for and fascination with mathematics.
- To increase the confidence of each pupil in mathematics to enable them to apply the knowledge and skills with assurance.
- To develop pupils' initiative and ability to work both independently and in cooperation with others.
- To develop pupils' ability to communicate mathematics.
- To develop pupils' ability to use and apply mathematics across the curriculum and in real life.
  - To develop pupils' ability to calculate accurately and efficiently, both mentally and in writing and paper, drawing on a range of calculation strategies
- To promote the teaching of numeracy and literacy within all subjects.
- To share good practice within the school.
- To work with other schools to share good practice in order to improve this policy.

## **Roles and Responsibility for the Policy**

### **Role of the Governing Body**

The Governing Body has:

- appointed a member of staff to be responsible for the curriculum leadership of Mathematics;
- delegated powers and responsibilities to the Headteacher to ensure all school personnel and stakeholders are aware of and comply with this policy;
- responsibility for ensuring compliance with the legal requirements of the National Curriculum;
- responsibility for ensuring that the school complies with all equalities legislation;
- nominated a designated Equalities governor to ensure that appropriate action will be taken to deal with all prejudice related incidents or incidents which are a breach of this policy;
- responsibility for ensuring funding is in place to support this policy;
- responsibility for ensuring this policy and all linked policies are maintained and updated regularly;
- responsibility for ensuring all policies are made available to parents;
- the responsibility of involving the School Council in the development, approval, implementation and review of this policy;
- nominated a link governor to visit the school regularly, to liaise with the Headteacher and the coordinator and to report back to the Governing Body;

- responsibility for the effective implementation, monitoring and evaluation of this policy

### **Role of the Headteacher and Senior Leadership Team**

The Headteacher and the Senior Leadership Team will:

- ensure all school personnel are aware of and comply with this policy;
- work closely with the subject leader and the link governor;
- ensure compliance with the legal requirements of the National Curriculum;
- consider disapplying a pupil from all or part of the National Curriculum for a period of time if this will benefit the child;
- encourage parents to take an active role in curriculum development;
- provide leadership and vision in respect of equality;
- provide guidance, support and training to all staff;
- monitor the effectiveness of this policy by:
  - observing teaching and learning
  - planning scrutinies and work trawls
  - discussions with pupils and members of the school council
- annually report to the Governing Body on the success and development of this policy

### **Role of the Subject Leader**

The Subject Leader will:

- lead the development of this policy throughout the school;
- work closely with the Headteacher, SENCO and intervention staff;
- be accountable for standards in this subject area;
- monitor standards by:
  - auditing the subject area
  - review of the scheme of work
  - monitoring teachers planning
  - lesson observations
  - scrutinising children's work
  - discussions with pupils
- ensure continuity and progression throughout the school;
- devise a subject improvement plan;
- provide guidance and support to all staff;
- provide training for all staff on induction and when the need arises regarding;
- attend appropriate and relevant INSET;
- keep up to date with new developments;
- undertake an annual audit and stock take of resources;
- purchase new resources when required and in preparation for the new academic year;
- manage the subject budget effectively;
- undertake risk assessments when required;
- review and monitor;

- annually report to the Governing Body on the success and development of this policy

## **Role of Teachers**

Teachers will:

- comply with all aspects of this policy;
- work closely with the subject leader to develop this policy;
- implement the national curriculum;
- devise medium and short term planning;
- develop mathematical fluency, numeracy and mathematical understanding in all subjects;
- develop pupils' spoken language, reading, writing and vocabulary in all subjects;
- plan and deliver good to outstanding lessons;
- plan differentiated lessons which are interactive, engaging, of a good pace and have a three part structure;
- plan and implement 'Targeted Maths' effectively.
- plan and deliver 'Big Maths'.
- have high expectations for all children and will provide work that will extend them;
- assess, record and report on the development, progress and attainment of pupils;
- achieve high standards;
- celebrate the success of pupils in lessons
- implement the school's equalities policy and schemes;
- report and deal with all incidents of discrimination;
- attend appropriate training sessions on equality;
- report any concerns they have on any aspect of the school community
- seek help from the subject leader where necessary

## **Role of Pupils**

Pupils will:

- be aware of and comply with this policy;
- be encouraged to work in partnership with the school by making decisions and exercising choice in relation to their educational programme;
- listen carefully to all instructions given by the teacher;
- ask for further help if they do not understand;
- participate fully in all lessons;
- develop their learning by completing all homework set;
- participate in discussions concerning progress and attainment;
- treat others, their work and equipment with respect;
- support the school Code of Conduct and guidance necessary to ensure the smooth running of the school;
- liaise with the school council;
- take part in questionnaires and surveys

## Role of the School Council

The School Council will be involved in:

- determining this policy with the Governing Body;
- discussing improvements to this policy during the school year;
- organising surveys to gauge the thoughts of all pupils;
- reviewing the effectiveness of this policy with the Governing Body

## Role of Parents/Carers

Parents/carers will:

- be aware of and comply with this policy;
- be encouraged to take an active role in the life of the school by attending:
  - parents and open evenings
  - parent-teacher consultations
  - curriculum development workshops
- be encouraged to work in school as volunteers;
- be encouraged to respond to curriculum information newsletter;
- be informed via termly newsletters of their child's topics;
- asked to provide suggestions and ideas for improving this subject;
- be asked to take part periodic surveys conducted by the school on curriculum development;
- be invited to make presentations to pupils on aspects of this subject area;
- encourage effort and achievement;
- encourage completion of homework and return it to school;
- provide the right conditions for homework to take place;
- expect their child to hand in homework on time;
- join the school in celebrating success of their child's learning;

## Policy Procedure

### Teaching and Learning Style

We use a variety of teaching and learning styles in order to develop children's knowledge, skills and understanding.

#### Provision

Pupils are provided with a variety of opportunities to develop and extend their Mathematical skills, including:

- Group work
- Paired work
- Whole class teaching
- Individual work

## **Pupils engage in:**

- the development of mental strategies
- written methods
- practical work
- investigational work
- problem solving
- mathematical discussion
- consolidation of basic skills and number facts
- maths games

## **Curriculum Planning and Organisation**

Teachers collaborate on the planning of the subject to ensure parity in provision and to share expertise. Curriculum planning is managed in three phases namely:

### **Long Term Planning**

- details what is to be taught over the year
- provides teaching guidelines and overall objectives for each year group for the whole year

### **Medium Term Planning**

- organises the subject into termly or half-termly sections
- is more detailed and the objectives are more specific in nature
- is developed by the teachers, who respond to the needs of their pupils
- ensures a balanced distribution of work is undertaken across each term

### **Short Term Planning**

- details the subject curriculum over the week
- plans lessons in detail with specific class objectives
- sets individual learning goals for each pupil
- uses assessment data to plan targeted lessons

## **Links with ICT**

The use of information and communication technology will promote, enhance and support the teaching of this subject area. However, calculators 'will not be used as a substitute for good written and mental arithmetic but will be 'introduced near the end of KS2 to support pupils' conceptual understanding and exploration of more complex number problems, if written and mental arithmetic are secure.'

## **Inclusion**

We believe that we are an educationally inclusive school as we are concerned about the teaching and learning, achievements, attitudes and well-being of all our pupils. We aim to provide places for all pupils who express a preference to join this school.

We work hard to offer equality of opportunity and diversity to all groups of pupils within school such as children:

- from both sexes;
- who have Special Educational Needs;
- who are looked after;
- from minority faiths, ethnicities, travelers, asylum seekers, refugees;
- who are gifted and talented;
- who are at risk of disaffection;
- who are young carers;
- who are sick;
- who have behavioural, emotional and social needs;
- from families who are under stress

We believe we have a duty to ensure that all children have equal rights to the opportunities offered by education and that all children will be encouraged to fulfil their potential in their academic, physical and creative achievements.

We want to give all children the right to access high quality educational experiences, to take part in a broad and balanced curriculum and to be part of the social life of the school.

We recognise that within the school we have more able, gifted and talented children. We believe that:

- more able children demonstrate a higher ability than average for the class and often require differentiated tasks and opportunities to learn through challenges;
- gifted children are those who have the ability to do well in more than one subject;
- talented children demonstrate an innate talent or skill in creative, cultural or sporting fields

We have an even greater obligation to plan and deliver well-structured lessons with appropriate assessment plus ambitious targets for pupils who have low levels of prior attainment or come from disadvantaged backgrounds.

Also, we have a duty to cater for pupils whose first language is not English by planning teaching opportunities to help them develop their English and to gain full access to the National Curriculum.

## **Differentiation**

Differentiation is best defined as 'the process by which differences between learners are accommodated so that all students in a group have the best possible chance of learning.'  
(Geoff Petty)

The main purpose of differentiation is to challenge and raise standards of learning by ensuring that curriculum objectives are accessible to all our children despite their backgrounds or abilities. We see differentiation as a form of integration and not exclusion.

Differentiation must reflect the learning objective and can be achieved in a variety of ways either by task, by support or by outcome and should be chosen by fitness for purpose.

We want all children to achieve success, therefore we will ensure they are given differentiated tasks that are matched to their level of attainment so that they can demonstrate successfully what they know, understand and can do. Assessment data of each child is used to plan targeted lessons, where pupils are taught specifically to their needs.

The main feature of effective differentiation is good planning resulting in effective teaching and learning with children making good progress. Also we expect to see in all classes interested well motivated children responding to challenges, children working productively on task and being aware of their own progression.

### **Special Educational Needs**

We want pupils with identified special educational needs to have full access to all subjects of the National Curriculum with teachers planning lessons that have no barriers to pupils achieving and with appropriate targets relating to the subject.

### **Assessment for Learning**

Teachers will:

- carry out continuous assessment;
- use short-term assessments matched to the teaching objectives to adjust their planning;
- make comments in pupil's books related to the teaching objective; as per the schools marking policy;
- carry out half-termly assessments to measure progress against key objectives to adjust planning; Using Rising Stars and assertive mentoring; which will also assess progress against school and national targets.
- carry out long-term assessment to assess progress against school and national targets;
- administer national tests and assessment in Y2 and Y6;
- carry out tests at the end of Y3, Y4 and Y5;
- use long-term assessments to help them plan for the next academic year;
- inform parents and carers of their child's progress and targets

### **Monitoring & Review of the Subject**

Monitoring of standards of children's work and the quality of teaching is the responsibility of the subject coordinator supported by the Headteacher and the SLT.

Standards will be monitored by:

- looking at pupils work
- subject observations
- pupil discussions
- audit of subjects
- scrutiny of planning
- general curriculum discussions
- pupil assessment outcomes

### **Contribution of the Subject to other Areas of the Curriculum**

Mathematics contributes to many subjects within the primary curriculum and opportunities will be sought to draw mathematical experience out of a wide range of activities. This will allow children to begin to use and apply mathematics in real contexts.

### **Resources**

The school has a full range of resources to support the teaching of this subject throughout all year groups. Resources are upgraded and replenished when the need arises. An annual stock take and audit is undertaken by the subject coordinator in the summer term in preparation for the next academic year.

### **Raising Awareness of this Policy**

We will raise awareness of this policy via:

- the School Handbook/Prospectus
- the school website
- the Staff Handbook
- meetings with parents such as introductory, transition, parent-teacher consultations and periodic curriculum workshops
- school events
- meetings with school personnel
- communications with home such as weekly newsletters and of end of half term newsletters
- information displays in the main school entrance

### **Training**

All school personnel:

- have equal chances of training, career development and promotion
- receive training on this policy on induction which specifically covers:
  - National Curriculum programmes of study and attainment targets for all subjects
  - teaching and learning
  - planning
  - assessment
  - key skills

- receive periodic training so that they are kept up to date with new information
- receive equal opportunities training on induction

### Equality Impact Assessment

Under the Equality Act 2010 we have a duty not to discriminate against people on the basis of their age, disability, gender, gender identity, pregnancy or maternity, race, religion or belief and sexual orientation.

This policy has been equality impact assessed and we believe that it is in line with the Equality Act 2010 as it is fair, it does not prioritise or disadvantage any pupil and it helps to promote equality at this school. (See Initial Equality Impact Assessment)

### Monitoring the Effectiveness of the Policy

The practical application of this policy will be reviewed annually or when the need arises by the coordinator, the Headteacher and the governors.

A statement of the policy's effectiveness and the necessary recommendations for improvement will be presented to the Governing Body for further discussion and endorsement. (See Policy Evaluation)

### Linked Policies

▪ Curriculum	▪ Teaching and Learning
▪ Differentiation	▪ Assessment
▪ Monitoring and Evaluation	▪ Self-Evaluation & School Improvement
▪ Special Educational Needs	▪ Gifted and Talented
▪ English as an Additional Language (EAL)	▪ Disability Non Discrimination

<b>Headteacher:</b>		<b>Date:</b>	
<b>Chair of Governing Body:</b>		<b>Date:</b>	

## Initial Equality Impact Assessment

Please complete an initial equality impact assessment once this policy has been customised to suit your purposes.

Policy Title	The aim(s) of this policy	Existing policy (✓)	New/Proposed Policy (✓)	Updated Policy (✓)
			✓	

This policy affects or is likely to affect the following members of the school community (✓)	Pupils	School Personnel	Parents/carers	Governors	School Volunteers	School Visitors	Wider School Community

Question	Equality Groups															Conclusion										
<b>Does or could this policy have a negative impact on any of the following?</b>	Age			Disability			Gender			Gender identity			Pregnancy or maternity			Race			Religion or belief			Sexual orientation			Undertake a full EIA if the answer is 'yes' or 'not sure'	
	Y	N	NS	Y	N	NS	Y	N	NS	Y	N	NS	Y	N	NS	Y	N	NS	Y	N	NS	Y	N	NS		
		✓				✓				✓				✓				✓				✓				
<b>Does or could this policy help promote equality for any of the following?</b>	Age			Disability			Gender			Gender identity			Pregnancy or maternity			Race			Religion or belief			Sexual orientation			Undertake a full EIA if the answer is 'no' or 'not sure'	
	Y	N	NS	Y	N	NS	Y	N	NS	Y	N	NS	Y	N	NS	Y	N	NS	Y	N	NS	Y	N	NS		
	✓				✓				✓				✓				✓				✓					
<b>Does data collected from the equality groups have a positive impact on this policy?</b>	Age			Disability			Gender			Gender identity			Pregnancy or maternity			Race			Religion or belief			Sexual orientation			Undertake a full EIA if the answer is 'no' or 'not sure'	
	Y	N	NS	Y	N	NS	Y	N	NS	Y	N	NS	Y	N	NS	Y	N	NS	Y	N	NS	Y	N	NS		
	✓				✓				✓				✓				✓				✓					

<b>Conclusion</b>	We have come to the conclusion that after undertaking an initial equality impact assessment that a full assessment is not required.
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<b>Preliminary EIA completed by</b>	<b>Date</b>	<b>Preliminary EIA approved by</b>	<b>Date</b>

## Policy Evaluation

Points to be considered	Yes	No	N/A	Please supply evidence
• Policy annually reviewed				
• Policy in line with current legislation				
• Coordinator in place				
• Coordinator carries out role effectively				
• Policy endorsed by governing body				
• Policy regularly discussed at meetings of the governing body				
• School personnel aware of this policy				
• School personnel comply with this policy				
• Pupils aware of this policy				
• Parents aware of this policy				
• Visitors aware of this policy				
• Local community aware of this policy				
• Funding in place				
• Policy complies with the Equality Act				
• Equality Impact Assessment undertaken				
• Policy referred to the School Handbook				
• Policy available from the school office				
• Policy available from the school website				
• School Council involved with policy development				
• All stakeholders take part in questionnaires and surveys				
• All associated training in place				
• All outlined procedures complied with				
• Linked policies in place and up to date				
• Associated policies in place and up to date				
<b>A statement outlining the overall effectiveness of this policy</b>				

## Policy Approval Form

<b>Policy Title:</b>						<b>Date when written:</b>			
<b>Policy written by:</b>					<b>New Policy</b> (✓ or x)	<input type="checkbox"/>	<b>Revised Policy</b> (✓ or x)	<input type="checkbox"/>	
<b>Stakeholders consulted in policy production:</b> (✓ or x)	<b>Governors</b>	<b>Senior Leadership Team</b>	<b>Teaching Personnel</b>	<b>Support Personnel</b>	<b>Administrative Personnel</b>	<b>Parents</b>	<b>Pupils</b>	<b>Local Community</b>	
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Date when approved by Governors:</b>			<b>Date when presented to stakeholders:</b>			<b>Date when implemented:</b>			
<b>Published on:</b> (✓ or x)	<b>School Website</b>			<b>School Prospectus</b>			<b>Staff Handbook</b>		
	<input type="checkbox"/>			<input type="checkbox"/>			<input type="checkbox"/>		