



Hallsville Primary School

Mathematics Policy

2013

## Hallsville Primary School Mathematics Policy

### **Rationale:**

Mathematics is all around us; it underpins much of our daily lives and our future as individuals and collectively (Ofsted). At Hallsville our aim is to ensure that children have the best possible grounding in mathematics during their primary years.

### **Aims:**

At Hallsville Primary School we aim to:

- ✓ Promote a positive attitude towards mathematics and enjoyment of mathematics
- ✓ Ensure that all our children are competent and confident in their mathematical knowledge, concepts and skills
- ✓ To enable all children to understand the value of mathematics in everyday situations
- ✓ Raise standards and achievement levels in mathematics by allowing children to have the ability to communicate mathematics both independently and in cooperation with others.

### **Objectives:**

- To give children opportunities in everyday mathematics lessons for real life situations and application of understanding
- To encourage pupils to work logically and systematically in problem solving and multi-step problems
- To develop a range of strategies for both written and mental calculations
- To develop the use of mathematical language through speaking and listening to include reasoning about all strands
- To develop the skills of effective use of apparatus
- To develop effective use of calculators and other ICT based apparatus within the daily mathematics lesson
- To develop an understanding and application of skills in each of the blocks of the renewed framework
  - Block A: Counting, partitioning and calculating (6 weeks)
  - Block B: Securing number facts and understanding shape (9 weeks)
  - Block C: Handling Data and measures (6 weeks)
  - Block D: Calculating, measuring and understanding shape (6 weeks)
  - Block E: Securing number facts, relationships and calculating (9 weeks)

### **Organisation and Approach**

Each child will experience one hour of numeracy every day. They will experience a range of whole class, group and individual learning. They will experience a range of mental, written, verbal and practical approaches to learning. Over the academic year each pupil will revisit each of the five blocks, three times. The blocks have allocated time that needs to be spent on them. This ranges from 6 to 9 weeks. Where a block requires 6 weeks of teaching, 2 weeks will be spent on it at one time. Where a block has a 9 week allocation, 3 weeks are spent on it each time it is re visited. Each time the child will review, extend and apply their understanding of that area of mathematics. To reinforce the mathematics that takes place in school, each child will receive Ocean maths game every fortnight. Also children receive task-based

homework at the end of each week, which is based on the work that is carried out in class. Teachers should use the pitch and expectations document to support this.

### **National Numeracy Strategy**

The school follows the Renewed Primary Framework for teaching numeracy to ensure that all parts of the national curriculum program of study are taught.

#### **Planning:**

- 1) **Long term planning** – The Renewed Framework for Numeracy
- 2) **Medium term planning** - Renewed Framework for Numeracy and Cumbria weekly overviews, turn these into programmes of work for each half term, mapping out what needs to be done week by week in order to achieve these goals.
- 3) **Short Term Planning:**  
This includes weekly plans.  
Numeracy documents are: unit objectives; Cumbria planning resource; mental/oral overview; Pitch & Expectations, Bond Assessment Papers resource book and Rising stars Mental Maths tests.

From Year One to Year Six pupils are placed into ability groups. Within each of these groups they are further differentiated two to three ways. Any exceptional pupils, far above or below the ability of other learners, may be taught or supported individually. Each pupil works within their own ability level through supported and scaffolded teaching and learning. During each lesson pupils experience a range of whole class teaching and modelling focusing on specific mathematical skills, group, paired or individual learning. Pupils have an opportunity to apply their understanding to real life situations or problem solving activities. The time for each of these varies from lesson to lesson depending on the teacher's on going day to day assessment of the pupils learning. (See teaching and learning policy)

### **Mental Mathematics**

Pupils are given opportunities every lesson for mental strategies. This helps each pupil to be confident in using mental mathematical skills by continually reinforcing the pupils learning and understanding. At least twice a month pupils in Key Stage 2 spend one session focusing on mental strategies from across the topics within the curriculum by completing the Rising Stars Mental mathematics test. The test is then used as a diagnostic to address pupils understanding and misconceptions. Teachers also test children on their times tables skills which are displayed as curricular targets inside the classroom. (See below for times tables expectations for each year group).

#### **Basic skills times tables expectations for each year group:**

**Year 1:** Count on or back in ones, twos, fives and tens and use this knowledge to derive the multiples of 2, 5 and 10 to the tenth multiple

**Year 2:** Derive and recall multiplication facts for the 2, 5 and 10 times-tables and the related division facts; recognise multiples of 2, 5 and 10

**Year 3:** Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times-tables and the corresponding division facts; recognise multiples of 2, 5 or 10 up to 1000

**Year 4:** Derive and recall multiplication facts up to  $12 \times 12$ , the corresponding division facts and multiples of numbers to 12 up to the twelfth multiple.

**Year 5:** Recall quickly multiplication facts up to  $12 \times 12$  and use them to multiply pairs of multiples of 10 and 100; derive quickly corresponding division facts

**Year 6:** Use knowledge of multiplication facts to derive quickly squares of numbers to  $12 \times 12$  and the corresponding squares of multiples of 10.

### **Equal Opportunity Considerations**

We aim to give equal access to relevant mathematical activities to meet the needs of all children. Pupils who experience learning difficulties (SEN children) are given activities appropriate to their level of understanding. Classroom activities are planned to include those pupils who experience difficulty. Pupils who speak English as an additional language are given the opportunity to talk about mathematics and develop their mathematical language and reasoning. Those who have been identified as being gifted and talented in mathematics are given additional enrichment tasks in class to broaden their understanding.

### **Assessment**

Children's attainment and future needs are constantly evaluated through on going assessment for learning. This is carried out through observation, questioning and marking of pupils work. Pupils are given opportunities to self-assess using both their knowledge and how to apply it and the marking within their books. Marking should focus on identifying elements of success and on one or two areas to improve. Children must be given classroom time to respond to teacher's marking and carry out an improvement on a piece of completed work. The teacher or TA will highlight any improvements that need to be corrected or improved.

Pupils are also formally assessed three times a year using QCA (Quality Curriculum Advisory body) tests that supports and informs teacher assessments. The summer term QCA tests completed by pupils in year 6 are marked externally. Over the course of the year each pupil is expected to make two sub levels of improvement. These termly assessments allow teachers to highlight pupils who are not making sufficient progress and focus their teaching to the needs of pupils through interventions such as every child counts (KS1), 1:1 catch up, next steps and numeracy booster. Pupils also use QCA assessment tests to identify targets for areas of learning, which they need to work on. Targets are placed at the front of pupils maths book.

### **Monitoring**

The post holder and the senior management team monitor the teaching and learning through examination of planning folders, monitoring of books for differentiation, presentation, marking and progression on a termly basis. Lesson observations are carried out in the Spring Term. Mathematical displays are observed at the beginning of the school year, teachers are required to use the conditions for learning. Each term the post holder will carry out objective led mathematical learning walks. Feedback is given both formally and informally to individual staff teachers and year groups. This feedback is used by teachers to enhance their own teaching and continue good practise.