

Ridgeway Primary School
Mathematics Policy
(March 2018)

Introduction

Our vision is that all children, who attend Ridgeway Primary School, should enjoy and succeed in mathematics, regardless of background because mathematics is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. We believe that it is necessary to equip pupils with a high-quality mathematics education which provides 'foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.' (National Curriculum 2013)

The Mathematics curriculum

'Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into apparently distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. They should also apply their mathematical knowledge to science and other subjects.' (National curriculum 2013)

We believe the 'mastery approach' to teaching maths is the underlying principle of mastering Mathematics. Instead of learning mathematical procedures by rote, we want pupils to build a deep conceptual understanding of concepts which will enable them to apply their learning in different situations.

At Ridgeway we follow the Mathematics Mastery programme where the curriculum is cumulative – each school year begins with a focus on the concepts and skills that have the most connections, which are then applied and connected throughout the school year to consolidate learning. This gives pupils the opportunity to 'master maths'; by using previous learning throughout the school year, they are able to develop mathematical fluency and conceptual understanding. To avoid teaching procedures we encourage pupils to develop a deep understanding in mathematics through 3 key principles;

1. Conceptual understanding

'Deep understanding' in maths is being able to represent ideas in many different ways using objects and pictures to represent abstract concepts.

Mathematics Mastery use the Concrete-Pictorial-Abstract (CPA) approach in order for pupils to develop a deep understanding. Reinforcement of learning is achieved by going back and forth between these representations, building pupils' conceptual understanding instead of an 'instrumental understanding'.

- Concrete – the doing: A pupil is first introduced to an idea or a skill by acting it out with real objects. This is a 'hands on' component using real objects and it is the foundation for conceptual understanding. Concrete refers to objects such as base ten blocks, fraction tiles, markers, or other objects that can be physically manipulated.

- Pictorial – the seeing: When a pupil has sufficiently understood the hands-on experiences performed, they can now relate them to pictorial representations, such as a diagram or picture of the problem.
- Abstract – the symbolic: A pupil is now capable of representing problems by using mathematical notation, for example: $12 \div 2 = 6$. This is the most formal stage of mathematical understanding. Abstract representations can simply be an efficient way of recording the maths, without being the actual maths.

We believe the meaning of symbols must be firmly rooted in experiences with real objects; otherwise it becomes rote repetition of meaningless memorised procedures.

2. Language and communication

The national curriculum for mathematics reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others. (National Curriculum 2013)

We believe that pupils should be encouraged to use mathematical language and full sentences throughout their maths learning to deepen their understanding of concepts.

The way pupils speak and write about mathematics has been shown to have an impact on their success in mathematics (Morgan, 1995; Gergen, 1995). We therefore staff should use carefully sequenced, structured approach to introducing and reinforcing mathematical vocabulary throughout maths lessons, so pupils have the opportunity to work with word problems from the beginning of their learning.

Every Mathematics Mastery lesson provides opportunities for pupils to communicate and develop mathematical language through:

- Sharing the key vocabulary at the beginning of every lesson in the Do Now section, and insisting on its use throughout;
- Modelling clear sentence structures and expecting pupils to respond using a full sentence;
- Talk Task activities, allowing pupils to discuss their thinking and reasoning of the concepts being presented;
- Plenaries which give a further opportunity to assess understanding through pupil explanations.

Pupils should revisit mathematical language from previous years and explore the concepts in greater depth. There should be opportunities for pupils to clarify vocabulary and explore activities that develop an understanding of the different concepts.

3. Mathematical thinking

We believe it is essential for pupils to develop mathematical thinking in and out of the classroom in order to fully master mathematical concepts. We want children to think like mathematicians, not just DO the maths.

We believe that pupils should:

- Explore, wonder, question and conjecture,
- Compare, classify, sort,
- Experiment, play with possibilities, vary an aspect and see what happens,

- Make theories and predictions and act purposefully to see what happens, generalise.

It is important that we support all pupils in developing their mathematical thinking, both in order to improve the way in which they learn, as well as the learning itself. Good questioning should be used to develop pupils' ability to compare, modify and generalise, all building a deeper understanding of mathematics.

Problem solving

'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.' (National Curriculum 2013)

The Mathematics Mastery Programme places problem solving is at the heart of the curriculum as the essence of everything we do as mathematicians. Problem solving should not be an add-on at the end of a maths lesson or a weekly investigation lesson. We believe that a problem-solving approach is the key to mathematical success, and should be used continually throughout lessons to build on depth of understanding.

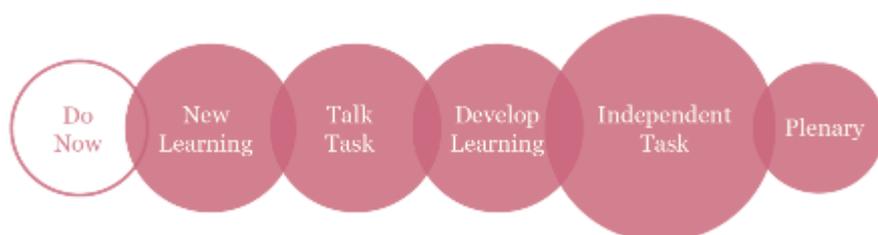
Pupils should be given every opportunity to explore, recognise patterns, hypothesise and be empowered to let problem solving take them on new and unfamiliar journeys. Even the most straight-forward of tasks can be an opportunity for pupils to investigate, seek solutions, make new discoveries and reason about their findings.

Teachers should consider using some of the suggestions below to help integrate problem-solving in your lessons:

- Plan tasks where pupils must apply and deepen their learning from previous units
- Incorporate questions that ask 'why' so that pupils have to explain their mathematical thinking
- Expose pupils to problems that have different possible solutions and get them to compare their approaches

Lesson Structure

At Ridgeway we have adopted a six part lesson structure;



1. Do Now Task

The purpose of the 'Do Now' task is to consolidate previous learning. This could be recapping on what was learnt the day before or a topic from a previous unit that is necessary for the current lesson.

Do Now tasks can be independent work that the children do about 5 minutes or a guided task with an adult to clarify misconceptions.

2. New Learning

The New Learning section introduces the main learning for the lesson, beginning by sharing the lesson's key vocabulary (Star Words). It is expected that this segment will require clear explanations and modelling.

The New Learning section usually lasts around 10 to 15 minutes, and may involve partner discussions and answering questions, so teachers can check pupils' understanding before moving onto the next parts of the lesson. If children are at different starting points for the lesson a TA may be used to differentiate the new learning.

3. Talk Task

As language is such an important feature of Mathematics Mastery, Talk Tasks are imperative. This segment allows talking about maths and comprehension to be developed, and provides opportunities to use mathematical language.

The main focus here is on the children working together in pairs or small groups and talking in full sentences about maths. Developing pupils' language is an important feature of the Mathematics Mastery approach, and taking turns and listening are important to children's development.

Pupils will need training in how Talk Tasks will look. Ensure that you are always using the correct language structures when modelling questions and responses, and insist that pupils respond fully at all times when they are replicating your language use. Assessment of understanding should take place during this segment by listening to pupils' explanations and discussions.

4. Develop Learning

The Develop Learning segment should mirror the New Learning earlier in the lesson, but aims to move the pupils' learning on further and deepen their understanding.

Learning could be developed by introducing different resources, adding a problem solving element, or encouraging further good language use following the Talk Task. This is a great opportunity to assess progress and understanding, and deal with any common misconceptions before pupils start independent work.

5. Independent Task

This segment should give pupils the opportunity to practise their Develop Learning by working independently and demonstrating what they have understood and learnt. Although this is an independent task, this does not mean that the children must work alone, in silence, as they should be encouraged to discuss mathematical concepts together using the key vocabulary of the lesson.

Here, tasks will often need to be adapted so they challenge everyone in the class. Teachers will need to consider how they can deepen mathematical thinking for those pupils who have accessed the learning with ease. Whilst the pupils are working independently, teachers should assess progress to pick up on any pupils that are struggling, or need additional challenge and to direct how the plenary will be used.

6. Plenary

The final part of the lesson should be used to reflect on learning, gather evidence for assessments and plan for future learning. It should sum up what the children have learnt during the lesson, consolidating all learning, address any common misconceptions, and may pose a question for the next lesson.

Transitions

Transitions are times when pupils move from place to place or activity to activity. Pupils spend a lot of time in transitions – by necessity – and when they are in transitions they are always learning. As every second counts in a Mathematics Mastery lesson, transition activities are a very important component. Between tasks, children sing songs or do call and response activities with the teacher. These activities are exciting for the pupils, and helps to keep them focused on the learning and the lesson flowing. It is imperative that the transitions are smooth, snappy and meaningful, so these will need a lot of practice initially. Although these may seem repetitive at first, this repetition will aid learning, and eventually each lesson will use a variety of transitions.

Maths Meetings

Maths Meetings are a vital part of the Mathematics Mastery programme, used to consolidate key learning for 10-15 minutes every day outside of the maths lesson.

Maths Meetings provide an opportunity to teach and revise 'general knowledge maths' which may not explicitly be covered during the maths lesson, and also allows the daily integration of maths into the surrounding environment. This means that pupils are practicing concepts and skills on a regular basis, meaning they are continually building on their mastery of these concepts.

Maths Meetings should be a positive part of the day which everyone looks forward to and pupils should be fully engaged with. Singing and chanting should form an integral part of the Maths Meetings, and should be delivered from a Maths Meeting board or flipchart as a visual structure for pupils to become familiar with.

Calendar maths and place value should be included in every Maths Meeting and the rest of the meeting should change regularly according to the topics you wish to revise and consolidate. Maths Meetings can be used in all year groups within your school, as it gives the teacher opportunities to reinforce and consolidate key areas of the curriculum, and also allows time to introduce topics and concepts that may be part of the next unit.

Timestables

'Pupils should become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.' (National Curriculum 2013)

Cross-Curricular

At Ridgeway we believe that mathematics lessons should be interactive, fast-paced and fun – with all pupils fully engaged therefore we understand the importance of creative freedom when planning lessons. Where links can be made with other areas of the curriculum to enrich experience for pupils they should be.

Calculation (See Mathematics Mastery calculation policy)

This policy outlines the different calculation strategies that should be taught and used in Years 1 to 6 in line with requirements of the Primary National Curriculum. The Calculation Policy is intended to be embedded as Mathematics Mastery programme is rolled out year on year. Children particularly in upper key stage two will continue with the methods they have previously taught so to avoid confusion however if children are struggling to grasp these then CPA approach may help support them in their understanding.

Differentiation

'The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be challenged through being offered rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on (National curriculum 2013)

The Mathematics Mastery programme doesn't differentiate in the 'traditional' three ways as one of its main aims is to significantly reduce the range of attainment in classrooms.

We stick by the idea that differentiation should not be through accelerating through the curriculum or task modification in the traditional sense (making numbers bigger, providing more questions, making calculations

'harder' etc.) but that differentiation should be carefully planned and come from our three principles of Mathematics Mastery(see above)

Students should be encouraged to explore and investigate topics in greater depth, so they build a stronger understanding of the main maths concepts within that topic. We believe that in order to make differentiation successful, teachers should adapt tasks to suit the needs of their pupils. Differentiation should be built into the lesson resources by the teacher, as they know their pupils' progress and understanding best.

As this is a new approach some children will have gaps in their learning especially in upper KS2 and differentiation will need to take account of this. Some children will need to build up to the main objective for the lesson by initially working through the 'learning steps' which may come from previous year groups.

In order to successfully engage with the Mathematics Mastery programme resources and provide appropriate support and challenge for all of your pupils, it is essential that staff adapt and differentiate. Differentiation should involve the adaptation of tasks and learning opportunities so that all pupils can access the same material. By using scaffolds and constraints to provide support and challenge, all pupils can work with the same content and access deep mathematical thinking and reasoning. We maintain that differentiation should not be achieved by accelerating through the curriculum or task modification as associated with the levels for the previous national curriculum (making numbers bigger, providing more questions, making calculations 'harder' etc.) but that learning should be carefully planned with our three principles of Mathematics Mastery in mind. Scaffolding and constraints, 'intelligent' task design and rich Low Threshold High Ceiling tasks will ensure that every child succeeds in mathematics.

Special Educational Needs

Children with SEN are taught within the daily mathematics lesson and are encouraged to take part when and where possible through differentiation meeting the needs from their IEP's. In some instances this may mean personalised activities and learning.

When additional support staff are available to support groups or individual children they work collaboratively with the class teacher and feedback information on progress throughout the lesson.

Ideas for depth

This is a tool to help teachers differentiate and challenge pupils to develop a mathematical thinking and reasoning within a concept. Each of the ten ideas are represented by a picture or symbol, meaning after introduction, the tasks can be easily identified by pupils without the need for written instruction. (See appendix 1)

Questioning

Questioning plays a crucial role in developing mathematical thinking, by helping students to identify thinking processes, making connections between ideas and building new understanding. It is important that staff adapt the Mathematics Mastery Lesson Guides to include their own questioning based on the needs of their pupils.

It is really important to model good questions and answers in lessons. Students should be encouraged to speak in full, correct sentences and should be prepared to explain and justify answers when prompted. When students struggle with this it can be tempting to think or say "I know what you're trying to say..." and to move on, but this is not encouraged. Students should be pushed to explain themselves with clarity and precision as much as possible.

Questioning is a useful way of engaging, supporting and challenging students. In this context, good questions would prompt new thinking, probe understanding and promote discussion, pushing students

outside of their comfort zone. Rather than accepting a given answer, teachers can always probe further by asking 'how' and 'why' questions.

Open questions can be used to elicit responses from students that move beyond simply carrying out a calculation or procedure. Using open questions allows students to develop their thinking and problem solving skills and allows the teacher to make a more informed judgement about current understanding and misconceptions

Teacher's Planning and Organisation

In year groups that are fulling using the Mathematics Mastery programme the pre prepared lessons plans should annotated by class teachers to demonstrate differentiation and use of additional adults as well as SEND provision. Staff in all other year groups will follow the same principles/components as MM and lesson structure but will use the 'White Rose' scheme to plan from using the following template for planning.

Year Group _____ Term _____ Unit _____ Week commencing _____

	Do it now task	Key Learning	Star Words	Main lesson structure
Lesson 1				
	Independent learning and differentiation			Key Questions
Lesson 2				
	Independent learning and differentiation			Key Questions
Lesson 3				
	Independent learning and differentiation			Key Questions
Lesson 4				
	Independent learning and differentiation			Key Questions
Lesson 5				
	Independent learning and differentiation			Key Questions

White Rose Planning

Like the Organisation of the Mathematics Mastery Curriculum the Autumn term in all year groups is focussed around number, place value and calculation. This ensures that Pupils have good foundations on which to build new learning and enable pupils to make connections.

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value		Number: Addition and Subtraction			Number: Multiplication and Division				Measurement		
Spring	Number: Multiplication and Division		Measurement		Number: Fractions						Consolidation	
Summer	Number: Fractions			Geometry: Property of shapes		Measurement				Statistics	Consolidation	

Year Group		Y3		Term		Autumn					
Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Number – place value Identify, represent and estimate numbers using different representations. Find 10 or 100 more or less than a given number; recognise the place value of each digit in a three digit number (hundreds, tens, ones). Compare and order numbers up to 1000 Read and write numbers up to 1000 in numerals and in words. Solve number problems and practical problems involving these ideas. Count from 0 in multiples of 50 and 100		Number – addition and subtraction Add and subtract numbers mentally, including: a three-digit number and ones; a three-digit number and tens; a three digit number and hundreds. Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction. Estimate the answer to a calculation and use inverse operations to check answers. Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.		Number – multiplication and division Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs. Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in context. Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.		Measurement Measure, compare, add and subtract: lengths (m/cm/mm). Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. Measure the perimeter of simple 2D shapes. Continue to measure using the appropriate tools and units, progressing to using a wider range of measures, including comparing and using mixed and simple equivalents of mixed units.					

Year Group		Y3		Term		Autumn					
Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Number – place value Identify, represent and estimate numbers using different representations. Find 10 or 100 more or less than a given number; recognise the place value of each digit in a three digit number (hundreds, tens, ones). Compare and order numbers up to 1000 Read and write numbers up to 1000 in numerals and in words. Solve number problems and practical problems involving these ideas. Count from 0 in multiples of 50 and 100		Number – addition and subtraction Add and subtract numbers mentally, including: a three-digit number and ones; a three-digit number and tens; a three digit number and hundreds. Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction. Estimate the answer to a calculation and use inverse operations to check answers. Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.		Number – multiplication and division Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables. Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication (x), division (÷) and equals (=) signs. Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in context. Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.		Measurement Measure, compare, add and subtract: lengths (m/cm/mm). Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. Measure the perimeter of simple 2D shapes. Continue to measure using the appropriate tools and units, progressing to using a wider range of measures, including comparing and using mixed and simple equivalents of mixed units.					

National Curriculum Statement		All students															
Place Value	Find 10 or 100 more or less than a given number.	Fluency	Reasoning	Problem Solving													
		<ul style="list-style-type: none"> Find 10 more and less than the following numbers: 23, 65, 96 146, 192, 374 What is 100 more or less than these numbers? 283, 591, 1392, 2901, 1892 Fill in the missing numbers: <table border="1"> <tr> <td>10 less</td> <td>Starting number</td> <td>10 more</td> </tr> <tr> <td></td> <td>325</td> <td></td> </tr> <tr> <td>674</td> <td></td> <td></td> </tr> <tr> <td></td> <td>892</td> <td></td> </tr> <tr> <td></td> <td></td> <td>1001</td> </tr> </table>	10 less	Starting number	10 more		325		674				892				1001
10 less	Starting number	10 more															
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In KS2 each child at the beginning of the lesson will stick in the template below showing the learning objectives and learning steps for the lesson. The activities for the lesson are listed in the boxes below the learning objective/steps. Activities should be differentiated in the columns left to right. ALL pupils should have the opportunity to reason and problem solving before moving onto the next column. At the end of the lessons pupils highlight how they have worked (concrete, pictorial and abstract) and the learning step they have achieved as well as the activities they have completed showing how they have progressed in the lesson.

L.O.:		Learning Steps		Input by:	
Date: 09.11.17				T	
				TA	
Practice and consolidation	A				
	Fluency				
Deepen	Problem Solving				
	Reasoning				

In KS1 pupils stick in the below template at the beginning of their work each day which shows the learning objectives for the lesson. At the end of the lessons pupils highlight how they have worked (concrete, pictorial and abstract) and the learning step they have achieved.

Date: Friday		MYLO			
Learning Objective :					
Learning Conversation			Teacher Reply		

Intervention

Based on teacher assessment during the daily maths lesson, teachers will identify pupils who have not fully grasped the lesson content. These pupils receive targeted intervention, ideally on the same day and delivered by the teacher during Making Moves in Maths sessions), to enable them to keep up. Do Now tasks can also be planned in to address misconceptions.

Making Moves in Maths sessions should ideally be carried out as soon as possible for approximately 15 minutes, so pupils are able to recap on concepts regularly and consolidate their understanding. This should be done in addition to the mathematics lesson so pupils do not miss out on the learning taking place in the lessons.

Interventions should be planned to provide opportunities for the adult to introduce or reinforce the learning from the lesson on that day (depending on when the session takes place) as well as to allow pupils to practice learning from previous lessons. The use of CPA is encouraged, to ensure pupils understand the concepts in concrete and pictorial representations before moving onto the abstract form.

Closing the Gap

Same-day interventions should be carried out to ensure all pupils keep up with their peers. However, we recognise that some pupils will have more significant gaps in their learning for a number of reasons, so some pupils should have access to 'closing the gap' interventions. These catch up materials include suggested tasks that are designed to be implemented for 5-10 minutes daily. They can be completed throughout the year in small groups or one-to-one depending on the pupils' needs.

The keep-up materials are not designed to replace the maths lesson, rather to provide additional support to teachers for addressing specific gaps to ensure that there are no barriers to pupils' learning. These materials are provided for teachers to use outside the maths lesson to ensure potential areas of difficulty are addressed so that pupils can move through the programme of study at the same pace; where all pupils are focusing on the same key learning in every lesson.

The materials are aimed mainly at key stage one pupils, having been designed to address common gaps in learning related to aspects of number. The tasks designed follow the key principles of Mathematics Mastery with the aim of increasing pupils' progress by providing activities that focus on addressing common misconceptions.

Exercise Books for Recording

It is school policy that the following pattern is used:

KS1 - 1 cm squares

Year 3: 1 cm squares – gradual move to 7 mm squares when READY

KS2 - 7 mm squares

All children are encouraged to work tidily and neatly when recording their work. When using squares one square should be used for each digit. When involved in routine practice of calculations the children are encouraged to fold a page in half creating two columns for answers.

Pupils Self-Assessment and Review

At Ridgeway, we believe that engaging pupils in their learning is essential. To do this we have introduced Learning Conversations, with increasing sophistication as pupils move up through the school. Pupils are encouraged to reflect on what they have learnt as well as their behaviour for learning and to set themselves targets. MyLOs also enable pupils in KS2 to see their learning as a journey.

Post and Pre assessments

The idea of Mathematics Mastery is keep up not catch up therefore pre and post assessments have been introduced across the school. Staff carry out pre assessments before the unit is taught to establish starting points for lesson planning. The pre assessment will include questions for the current year group's objectives about to be taught as well the previous year's objectives and for some SEN pupils years before that. The assessment will be repeated at the end of the unit to evaluate what progress has been made over time. The post assessments will include deepening greater depth questions in order to demonstrate progress of the higher attaining pupils

Assessment and Record Keeping

Teachers are expected to make regular assessment of each child's progress and to record these systematically. The following is the school policy for assessment in mathematics:

Termly Teacher Assessment

The evaluation of termly plans shows what has been taught and what has yet to be learned. Looking at the teacher assessment grids staff will be able to assess the level that each child in their class is working at. The teacher may wish to make notes on individual children whose progress differs markedly from the rest of the class, and the reasons for it on pupil progress sheets along with the attainment and progress of children in their class. These notes will then inform teacher's next steps in their teaching. In addition to this the coordinator will identify areas where progress is slow and put in the relevant support.

Formal standardised Assessment

Once a term or twice a term for Y2 + 6 children are formally assessed using standardised materials as part of the School's Assessment Policy to confirm teacher judgements. Teachers are responsible for analysing the data provided by these tests to identify strengths and areas for development.

Key Constructs

Key Constructs are some of the 'big ideas' in mathematics that are essential to understand to enable progress in the subject and to access other areas within each year group. These are the foci of our assessment teacher assessments. Staff should keep a record of evidence of these and this should be available when moderation takes place. A range of evidence should be supplied, such as evidence from classwork, standardised tests, pre and post assessments and Do Now tasks. Teachers should ensure that that evidence dated if fully independent.

Monitoring and evaluation

The Core Development team is released regularly in order to work alongside each other and SLT. This time is used to monitor and evaluate the quality and standards of mathematics throughout the school (in line with the school improvement plan) and enables the team to support teachers in their own classrooms. The CDT should carry out book scans and planning trawls to monitor standards. They should also hold regular interviews with pupils to gather information about their experiences of teaching and learning at Ridgeway. Opportunities for teachers to review the Programme, policy and published materials are given on a regular basis during staff meetings.

Reporting to Parents

Reports are completed before the end of the summer term and parents are given opportunity to discuss their child's progress on three separate occasions throughout the year. Teachers use the information gathered from their termly assessments to help them comment on individual children's progress.

Parental Involvement

- Parents are invited into school twice yearly to look at their children's work.
- An open evening is held once a year.
- Parents are invited to work alongside their children on occasions throughout the year as part of the Inspire workshop Agenda

Resources

All teachers should organise an area within the classroom/year group dedicated to mathematics resources. This area is easily accessible to all children and allows them to become familiar with all resources. In all mathematics Mastery year groups resources are purchased enough for each pupil in the class and stored in each classroom as advised by the programme.

Resources which are not used or required regularly are stored centrally in a Maths store cupboard.

The mathematics coordinator along with the CDT is responsible for auditing resource needs in the school and for ordering those resources needed to support teaching and learning.