TRIMLEY ST. MARTIN

Maths Policy 2015

Trimley St Martin Primary School
Created April 2015

Standards, Expectations & Recording of maths in KS1 & KS2

The school believes in encouraging children to have very high expectations of recording and presentation in mathematical work. Methods of recording and presentation of work should be modelled by teachers and children should build on these skills throughout their time in school.

Action	Support	Expectations & Monitoring
Presentation of maths books ~Very High expectations of presentation are set for children's books. Children are shown how to present and record their work. ~~~ ~Methods for mathematics are exemplified and children understand the benefit to mathematical work.	~Children are given regular feedback about their presentation of work and ways of recording are discussed. They are shown examples of what a good one looks like and how to improve their work. ~Expectations are clearly set, explained and readily discussed. ~Positive feedback is given and improvement noted. ~High expectations for each piece of work are set and maintained.	~ Presentation of work monitored by the class teacher when marking and progress checked identifying areas for improvement then addressed as a whole class or discussed individually. ~ Book scrutiny carried out and feedback given to whole staff and individual teachers. Enabling whole school issues or individual year groups to be addressed.
Organisation of the page Each day should start on a new page with a : ~Short subject title [Year 2 onwards] ~Number date – in left corner. ~Margin ~Full use of squares to set numbers out~ with a square for each number of an integer. ~All lines drawn with a ruler. ~ R.T. s and R.P. s written at the bottom and end of a piece of work in green. ~ Corrections and next step response from children written in green pen.	~Examples of presentation and how to set work out given to the children regularly. ~Use of a squared mathematics book to show examples of how to set out work under the visualizer. ~ Children are given opportunities to be proud of and share their work. ~ Examples from books are used under the visualizer so that children have the opportunity to see example from others work, share ideas. *~ YEAR R will need margins drawn in to their books working towards doing this independently by the end of the year.* ~ Teacher may decide to use a part of a lesson to draw margins in advance.	~ Children are aware of their achievements and regular feedback is given of how to move forward and maintain standards. ~

Amounts expected & Recording methods -A reasonable amount of work in line with Year expectations to be achieved and recorded. - Children are encouraged to show working out and any jottings. - An area is identified at the right hand side of the page for a' work it out box'.	~ Children are given every opportunity to investigate different ways of recording. ~ Children shown different ways of recording. ~ teachers show their own working out methods and let children' see inside my head'. ~ Jottings, notes etc can be recorded on post it notes.	~Children are given feedback in marking and verbally about their work and suggestions or challenges set as part of their next step marking. ~ Children need to be encouraged to use jottings, notes etc and need to recognise that this need to be quick however **they must be readable and organised not just be scribbles!**
Showing working out -Detailed working out with clear logical steps are expected.	~Children are shown examples of working out for problems set by the teacher. ~Children are given opportunity to share their working out in paired groups. ~ children share how they worked it both verbally and visually with use of the visualizer and whiteboards,	~Children are given verbal feedback during the lesson about their recording methods and working out as well as at the end of the lesson and as part of their next step in which they can edit, improve or meet a challenge.
Learning Objectives And Success Criteria. ~Learning objectives and success criteria are identified for each lesson on labels and stuck into books. ~ The class learning objective and success criteria are shared with children at the beginning of the lesson.	~Year learning objectives available. ~steps to achieving the learning objective available. ~ School will provide stickers for teachers to print success criteria on to. Older year groups may decide to print on paper and children trained to glue this in themselves.	~Learning objectives and success criteria are evident in children's books ~Children can discuss their learning and talk about achievements and challenges showing awareness of how to make progress and where to go next.
Improvement Of Standards and Progress Evident In Books~ ~ A reasonable amount of progress in line with year expectations is made in each mathematics lesson. ~ Very High expectations are set each lesson. ~ Setting out and recording of mathematics is modelled.	~examples of setting out children's work are kept for each year group.	~ Book scrutinises shows high standards of progress and recording in children's books.

Modelling The school expects the teacher to model examples, setting out of work and thought processes explicitly. Teachers cannot assume that children will naturally think a certain way. It is expected that children should copy the first example in to their books before starting the rest of the activity. This will allow children a chance to set out the work carefully whilst having an example of they need to do right in front of them. This can then be discussed or referred back to when necessary.	~ Each classroom has a visualiser for teachers to model correct layout on the page, jottings and notes ~ Teachers should use a maths book which belongs to them which will be used under the visualiser to model calculations and layout. This will match the book the children are recording in.	Teachers will model examples and layout to the children. When working through calculations teachers will outwardly discuss what they are thinking. "Hmm now I think I put this number here because it's the biggest... then I... " which will in turn encourage children to think and be able to talk out loud what they are thinking too.

Format & Structure of Maths Lessons in KS1 & KS2

The school believes in mathematical lessons being structured in such a way that all children access their year group expectations. . The use of resources or manipulatives within mathematical lessons is paramount to children's learning to aid understanding. The use of flash~forwards and pre teaching are incorporated into daily lessons to aid progress and mini plenaries help address misconceptions and mini hurdles to aid expected progress.

Action	Support	Expectations & Monitoring
 **Calculation Method Starters** ~ Each lesson will begin with a calculation method challenge. ~ Each challenge will relate to either addition and subtraction or multiplication and division.(so inverse is incorporated) ~ Calculation methods will be taught in each class for the first two weeks of term ~ Calculation taught methods will follow the school calculation policy (including outlined expanded methods) related to the Year Expectations. ~ Speaking and listening of mathematics is evident is mathematic lessons. ~ Children are challenged to tell and explain methods as well as being challenged to apply them.	**~Calculation policy available to all staff. The teacher must use the appropriate methods for their year group.** ~ Any methods can be discussed with the mathematics co~ ordinator.	~ Understanding of Methods are regularly assessed and planning informed~ evidence in children's books of learnt methods to applied and mastery skills developed. ~ Staff **could start the year using the methods taught in the previous year group** but progress through the methods as children improve. Staff should aim for children fluent in the calculation methods for their own year group.
 **Main Lesson** Staff are encourage to be flexible about the main part of their maths lessons. The lesson should be organized to maximize the learning and maximize the number of children being successful. This may follow a different pattern each time.		

Use of Resources - Class mathematical resources to be used to develop understanding are visible within the classroom environment and readily available on a daily basis for children to select and use as manipulatives.	- Regular assessment of equipment and requests for new or replacements are made. - -Class sets of equipment for number are provided. - Centrally stored equipment available from the mathematics co-ordinator.(see resources appendix).	-Termly sheet given to class teachers to make any requests for equipment needed for next terms teaching or replacement of used resources.
 **Use of Mini Plenaries** - Use of mini plenaries are used in each lesson. When the lesson is paused and progress is checked and misconceptions are addressed. - Whiteboards and show me techniques used as an assessment during the lesson.	- Good practise is shared and discussed. -Lessons are modelled among staff or other schools. - Training material is available.	-Mini and final plenaries are used to impact and inform planning. -Evidence in books reflects children being informed by plenaries and moved on avoiding misconceptions which hinder progress within the lesson.
 **FLASH FORWARD** **(Final 5 minutes of the lesson** -Flash forwards are used to introduce a future topic from the next week in the form of a: • mini problem solving • task • or challenge -These flash Forward activities are used to assess and inform future planning. -Pre-teaching is then carried out.	-Year Expectations. -Planning Framework from Raising stars identifies next learning objectives. -Flash forward ideas and activities are shared amongst staff. **- Focus education pre learning tasks which match to starting points**	-Flash Forwards are evident in planning. -flash forward activities are recorded in children's books.
 **Pre Teaching** - Pre-teaching is carried out for identified children. - Children are selected and added to assembly booster groups.	-Materials for booster groups- ideas of activities and resources are available. -Broken down steps to achieve this learning objective are available.	- Progress in class lessons due to prior learning is evident. -individual children move forward after attending prior learning and therefore make improved progress of learning.

Year 1 Calculation Starters EXPECTATIONS

Teachers must refer to the School maths calculation policy to see exactly which methods should be used with these expectations

Addition	
Step 1	One-digit + one-digit without bridging
Step 2	One-digit + one-digit bridging the tens
Step 3	Two-digit + one-digit without bridging
Step 4	Two-digit + one-digit bridging the tens
Step 5	Two-digit + multiple of 10
Subtraction	
Step 1	One-digit - one-digit
Step 2	Two-digit - one-digit without bridging
Step 3	Two-digit + one-digit bridging the tens
Step 4	Two-digit – multiple of 10 bridging the tens
Multiplication	
Step 1	Doubles to 20
Division	
Step 1	Halves to 20

Year 2 Calculation Starters EXPECTATIONS

Teachers must refer to the School maths calculation policy to see exactly which methods should be used with these expectations

Addition	
Step 1	One-digit + one-digit without bridging
Step 2	One-digit + one-digit bridging the tens
Step 3	Two-digit + one-digit without bridging
Step 4	Two-digit + one-digit bridging the tens
Step 5	Two-digit + multiple of 10
Step 6	Two-digit + two-digit without bridging
Step 7	Two-digit + two-digit bridging the tens
Step 8	One-digit + one-digit + one-digit bridging the tens
Subtraction	
Step 1	One-digit - one-digit
Step 2	Two-digit - one-digit without bridging
Step 3	Two-digit + one-digit bridging the tens
Step 4	Two-digit – multiple of 10 bridging the tens
Step 5	Two-digit - two-digit without bridging
Step 6	Two-digit - two-digit bridging the tens
Step 7	One-digit - one-digit - one-digit
Multiplication	
Step 1	One-digit x 2
Step 2	One-digit x 10
Step 3	One-digit x 5
Division	
Step 1	Two-digit ÷ 2
Step 2	Two-digit ÷ 10
Step 3	Two-digit ÷ 5

Year 3 Calculation Starters EXPECTATIONS

Teachers must refer to the School maths calculation policy to see exactly which methods should be used with these expectations

Addition

Step 1	**Two-digit addition** no carrying
Step 2	**Three-digit addition** no carrying
Step 3	**Three-digit addition** carrying 1 ten
Step 4	**Three-digit addition** carrying 1 hundred
Step 5	**Three-digit addition** carrying once, including answers greater than 999
Step 6	**Three-digit addition of three numbers** carrying once

Subtraction

Step 1	**Two-digit subtraction** no exchange
Step 2	**Three-digit subtraction** no exchange
Step 3	**Three-digit subtraction** exchanging 1 ten for 10 units
Step 4	**Three-digit subtraction** exchanging 1 hundred for 10 tens
Step 5	**Three-digit subtraction** exchanging once

Multiplication

Step 1	**Two-digit × one-digit** no carrying
Step 2	**Two-digit × one-digit** carrying units to tens
Step 3	**Two-digit × one-digit** carrying units to tens
Step 4	**Three-digit × one-digit** carrying units to tens
Step 5	**Three-digit × one-digit** carrying tens to hundreds
Step 6	**Two-digit × one-digit** carrying tens to hundreds

Step 7	**Two-digit × one-digit** carrying twice
Step 8	**Three-digit × one-digit** carrying twice with answers less than 1000
Step 9	**Three-digit × one-digit** carrying twice with answers greater than 1000
Step 10	**Three-digit × one-digit** carrying twice in any position
Step 11	**Four-digit × one-digit** with answers less than 10 000

Division

Step 1	**Two-digit ÷ one-digit** no carrying
Step 2	**Three-digit ÷ one-digit** no carrying
Step 3	**Two-digit ÷ one-digit** carrying 1 ten
Step 4	**Two-digit ÷ one-digit** carrying several tens
Step 5	**Three-digit ÷ one-digit** carrying once
Step 6	**Three-digit ÷ one-digit** first digit smaller than the divisor
Step 7	**Three-digit ÷ one-digit** carrying tens
Step 8	**Three-digit ÷ one-digit** second digit smaller than the divisor
Step 9	**Four-digit ÷ one-digit** carrying once, any position

Year 4 Calculation Starters EXPECTATIONS

Teachers must refer to the School maths calculation policy to see exactly which methods should be used with these expectations

Addition

Step 7	**Four-digit addition** carrying once
Step 8	**Three-digit addition** carrying twice
Step 9	**Four-digit addition** carrying once or twice
Step 10	**Three- and four-digit addition** carrying once or twice, answers greater than 9999
Step 11	**Four-digit addition** carrying three times
Step 12	**Addition of three numbers with three and four digits** carrying up to three times

Subtraction

Step 6	**Four-digit subtraction** exchanging 1 thousand for 10 hundreds
Step 7	**Four-digit subtraction** exchanging a ten and a thousand
Step 8	**Three-digit subtraction** exchanging twice, adjacent digits
Step 9	**Four-digit subtraction** exchanging twice, adjacent digits
Step 10	**Four-digit subtraction** with a zero in the column to be exchanged from

Multiplication

Step 12	**Four-digit × one-digit** carrying up to four times
Step 13	**Four- and five-digit × one-digit**
Step 14	**Six- and seven-digit × one-digit**
Step 15	**Three-digit × 10 or × 20**
Step 16	**Three-digit × any two-digit multiple of 10**
Step 17	**Four- and five-digit × any two-digit multiple of 10**
Step 18	**Three- and four-digit × a multiple of 100 or 1000**

Division

Step 10	Three-digit ÷ one-digit carrying twice
Step 11	Four-digit ÷ one-digit carrying two or three times
Step 12	Three- or four-digit ÷ one-digit answers with remainders
Step 13	Five-digit ÷ one-digit answers with or without remainders
Step 14	Four-digit ÷ one-digit with fraction remainders
Step 15	Four-digit ÷ one-digit with remainders as decimals, 1 dp
Step 16	Four-digit ÷ one-digit with remainders as decimals, 2 or 3 dp
Step 17	Three-digit ÷ one-digit with remainders as recurring decimals
Step 18	Dividing decimals by one-digit numbers

Year 5 Calculation Starters EXPECTATIONS

Teachers must refer to the School maths calculation policy to see exactly which methods should be used with these expectations

Addition

Step 13	**Five-digit addition** carrying up to four times	32
Step 14	**Addition of a list of numbers**	34
Step 15	**Large number addition**	36

Subtraction

Step 11	**Five-digit subtraction** exchanging twice, non-adjacent digits
Step 12	**Five-digit subtraction** exchanging twice, adjacent digits
Step 13	**Five-digit subtraction** with a zero in the column to be exchanged from
Step 14	**Five-digit subtraction** exchanging three or four times
Step 15	**Five-digit subtraction** with zeros in the columns to be exchanged from

Multiplication

Step 1	**Three- and four-digit × one-digit**
Step 2	**Two-, three- and four-digit × 10 and × 20**
Step 3	**Two- and three-digit × a teens number** no carrying in the addition
Step 4	**Two- and three-digit × a teens number** with carrying in the addition
Step 5	**Three-digit × a teens number** five-digit answers
Step 6	**Three-digit × any two-digit multiple of 10**
Step 7	**Two- and three-digit × two-digit** no carrying in the addition
Step 8	**Two- and three-digit × two-digit** with carrying in the addition
Step 9	**Three-digit × two-digit** five-digit answers
Step 10	**Four- and five-digit × two-digit**

Division

Step 1	Three-digit ÷ one-digit short division revision
Step 2	Five-digit ÷ one-digit short division with remainders revision
Step 3	Two-digit ÷ one-digit long division
Step 4	Three-digit ÷ one-digit long division
Step 5	Four-digit ÷ one-digit long division
Step 6	Four-digit ÷ one-digit long division, answers with zeros
Step 7	Three-digit ÷ 11 long division, no zeros in answers
Step 8	Four-digit ÷ 11 long division, with zeros in answers
Step 9	Four-digit ÷ 12 long division
Step 10	Four-digit ÷ 13 long division

Year 6 Calculation Starters EXPECTATIONS

Teachers must refer to the School maths calculation policy to see exactly which methods should be used with these expectations

Addition

Step 16	Decimal addition one decimal place
Step 17	Decimal addition two decimal places
Step 18	Decimal addition different numbers of decimal places

Subtraction

Step 16	Large number subtraction
Step 17	Decimal subtraction two decimal places
Step 18	Decimal subtraction different numbers of decimal places

Multiplication

Step 11	Three-digit × three-digit multiples of 100
Step 12	Three-digit × three-digit multiples of 10
Step 13	Multiplying two three-digit numbers easier tables facts
Step 14	Multiplying two three-digit numbers harder tables facts
Step 15	Simple decimals × one-digit
Step 16	Simple decimals × two-digit
Step 17	Multiplying two decimals with one decimal place
Step 18	Multiplying two decimals with one or two decimal places

Division

Step 11	**Four-digit ÷ 14, 15 or 16** long division
Step 12	**Four-digit ÷ 17, 18 or 19** long division, where the first two digits are smaller than the divisor
Step 13	**Four-digit ÷ a number between 11 and 19** long division
Step 14	**Four-digit ÷ a number between 11 and 19** long division, with fraction remainders
Step 15	**Four-digit ÷ a number in the 20s** long division
Step 16	**Four-digit ÷ two-digit** long division
Step 17	**Three-digit ÷ two-digit** long division, decimal answers 1 dp
Step 18	**Three-digit ÷ two-digit** long division, decimal answers 2 dp

Cross Curricular And Parental Engagement Maths in KS1 & KS2

The school believes that in order to develop and deepen understanding of mathematics mathematical skills should be used and applied to other subjects within the curriculum. Cross curricular links are made to other subjects in which mathematical skills can be used. Mathematical work , graphs and data handling elements are displayed in each classroom and children are given the opportunity to add to and analysis this data. Parents are involved in every aspect of their child's mathematical learning and shown ways to help with homework.

Action	Support	Expectations & Monitoring
Data handling Graph displays in every classroom - A graph display is present in every classroom. - This display is added to and results recorded by the children – daily or weekly. - The graph is discussed with the children and relevant questions asked so data is analysed and recording and reading data is achieved - Along with a graph there should be a table or tally chart in which data is gathered and displayed- The purpose of the graph will be explained and displayed.	Graph examples will be available and discussed amongst staff as well as books on data handling in science and other curriculum areas.	Foundation- Pictogram. Year 1 – tally chart and pictogram. Year 2 – Bar chart and data table. Year 3- Carroll Diagram and table of data. Year 4 – Venn Diagram and data chart. Year 5 – Line Graph and timetables. Year 6 – Pie Chart and data WHOLE SCHOOL DISPLAY (reading maths percentages. E.g. percentage data collected for classes throughout the school who complete homework for each Year group.)
Parent workshop Meetings - Parent's invited to lessons or workshops to learn correct mathematical method being taught to their year group. - Children make pack or resources at the beginning of the year to help with homework. A homework help pack with items such as a hundred square, times table square etc.	- A list of necessary items for your year group.	Each child has a pack of resources to help them complete their homework.
Videos Of methods - Children are videoed explaining calculation methods from their class and this is shared on the school website - Class teacher on school website explaining methods. - -Website links to methods on the internet.	Use the calculation policy. Use available material on the internet.	Positive feedback from parents about helping their child.

Sharing of Calculation Materials. - Calculation policy is given to parents explaining methods taught in their year group at the beginning of the year. - Share year expectations with parents. - Workshops for parents – acting as drop in sessions.	- Year group sheets available along with year expectations. - The website and the information for parents will include the methods and guidance on how to complete	• All parents understand methods taught to their children and have regular opportunities to drop in and check methods taught.
Links To Other Subjects - Evidence in topic books of cross-curricular work so that mathematics is used and applied in other subjects - Evidence of Depth of mathematical knowledge. - Evidence of applied mathematical knowledge and skills in other subjects. - Mathematical skills are developed and understanding extended.	- Ways of using mathematical skills to use and apply e.g. data handling in science.	• Book scrutiny of topic books show use of mathematical skills in other subjects. E.g. Science, geography, art . Design and technology, History etc.

Assessment in KS1 & KS2

The school believes in regular assessments to be carried out in line with year expectations to inform staff pupils and parents about pupil's achievements and progress. Assessments and informative and purposeful. They are used to inform future planning along with flash-forwards.

Action	Support	Expectations & Monitoring
End of Year Summative -Year group is assessed against their year group expectations on a regular basis.	- Assessments are discussed and audited between staff. - Target sheets are included in the front of exercise books and have spaces for the teacher to indicate the three times the skills has been demonstrated.	A target on the expectations must be seen twice in a lesson and then a third time as an application or in a test situation. At least 85 percent of each Year group need be secure at the end of the academic year .
End of Unit Assessment tasks - Each year group has a written number assessment on which to assess the number targets against. - Raising stars end of unit practical assessments are available to reinforce judgements.	- Carousel lesson so identified group assessed against expectations.	- Sheet of recorded year expectations set against targets. - Class mark book is kept and regularly updated- - A build of evidence in children's books.
Questioning -Questioning is used to test children's knowledge against Year expectations.	-Mathematics detectives introduced in each year group to help application of MAST questioning. Connor Convince Olive Organise Isaac Image Sally Special - Types of varied questioning for each year group given to teachers.	-each mathematics lesson include an elements of convince and conject or other questioning. - Evident in children's books and during lesson observations.
Gathering evidence in books _Children share their books and achievements with others. -Regular book scrutiny's - flash -forwards taught and used to inform planning of future lessons and ensure rapid progress.	Feedback from book scrutiny's discussed and actioned on.	-Regular book scrutiny's by head teacher and mathematics coordinator. -Child perceptions - flash-forwards seen in children's books.
Other evidence gathering - Lesson observations - Learning walks - Assessment records of targets measures against year expectations. - Year number assessment.	Whole school focus identified and actioned on.	Regular monitoring of all aspects on SLT timetable.

Support for Maths

Inevitably, there maybe some children who are unable to grasp particular concepts on the first part of the yearly cycle and therefore adjustments may need to be made to second and third time a child is exposed to the particular skill. The most important thing for staff to realise and take on is that maybe as a teacher they haven't delivered it in a way that has been suitable to a child's particular learning style not because the child 'will never understand it'! The teacher will need to approach the learning in a different way on the second and third part of the sequence, not repeat the methods used on the first attempt. **Just because you say again, or you say it louder doesn't mean it will be understood.**

Action	Support	Expectations & Monitoring
Power of 2 ~		~
Booster Groups After the data input point, the Assessment leader will analyse		
Dyscalculia or specific maths weakness		

Mathematical language and Questioning.

The school believes in children being given every opportunity to use correct mathematical language when explaining methods and working out. They shall learn how to say and spell a wide range of mathematical vocabulary which will build. They will have full understanding of unit related mathematical vocabulary and be able to use it readily when talking about their work.

Action	Support	Expectations & Monitoring
Mathematical language Mathematical vocabulary related to the current learning objective will be displayed in every classroom. Mathematical dictionaries are available in mathematics lessons for children to use as reference and an opportunity to look up vocabulary. Children reference their work with a title and take any opportunity to write about methods and explanation using the correct mathematical vocabulary.	Class mathematical glossary given out to staff.	Mathematical vocabulary is evident in classrooms and displayed. Children use mathematical vocabulary when talking about their work and written vocabulary is present in their work. In observations, children's vocabulary is modified to ensure that children use the correct terms in every maths lesson.
Speaking and Listening Children are given every opportunity to discuss mathematical work and use appropriate mathematical language. Mathematical language is modelled by the teacher.	Vocabulary lists available in line with Year expectation.	Children talking in lessons and explaining their work. Children's books contain written vocabulary. Children given opportunities to discuss and reason with a partner, a group or invited to the whiteboard to model / explain a method.
Questioning & thinking time Children will need to be questioned throughout the lesson to ensure they have a deep understanding of the concept. Replies need to be tackled and the teacher needs to be careful to create an environment where getting a wrong answer is not a problem. Children will need to be given adequate thinking time and talk partner opportunities in order to encourage all pupils to think.	Teaching assistants can be used to support this time by modelling thinking out loud with particular pupils or acting as a partner for a child.	During lesson observations and learning walks, teachers will be directing well pitched questions to pupils in the class, allowing for thinking and probing further to deepen understanding.

Calculation in KS1 & KS2

The school believes in following an agreed calculation policy in which methods year expectations are outlined. This ensures progression throughout the school and ensures expected and exceeded progress. Agreed methods to be taught ensures all children meet expectations and the year group focuses on an agreed method.

Action	Support	Expectations & Monitoring
Calculation Policy - An agreed school calculation policy is used throughout the school - Calculation methods are taught in the expected order.	School calculation policy.	All methods are taught for each calculation method in line with year expectations outlined on the school calculation policy.
Parental Involvement - Parents understand that methods are taught in a set order to ensure progress and consistency throughout the school.	- Class expectations and year calculation methods shared with parents.	- Parents feel confident with methods and feel able to ask class teachers or the mathematics co-ordinator.
Calculation Methods Agreed - All year groups are taught in line with the calculation policy.	- Agreed whole school calculation policy.	• Mathematics co-ordinator to discuss and advice on methods taught.

Maths Homework in KS1 & KS2

The school believes in enabling children to have regular practice of the basic skills at home. As the curriculum moves from one topic area to another we feel that pupils will benefit from revisiting the basic skills every single week so they become embedded but are also always kept fresh in their minds.

Action	Support	Expectations & Monitoring
Setting up the maths homework Children will need to be checked to see that the level book they are working on is appropriate. A new homework exercise book will need to be set up with the new label on it. A lesson should be spent discussing the layout of the example page, reminding children how to complete it and then allowing them to complete one full page INSISTING on the correct layout. Pupils can then share their books to check each other's to ensure they are set out in the correct way. Expectations need to be given to the children, along with an explanation of when the homework is giving in and when it needs to be sent home. ALL CHILDREN NEED TO COMPLETE MATHS HOMEWORK	The guidance sheet stuck needs to be stuck in the front of the book. Letter for parents to accompany the homework. Example page layout stuck in front of book	Staff will need to record the completion of the mental maths homework on in the class record book. (See below) Mrs MacFarlane will issue letters to parents if maths homework is not completed.
Checking the books are at the correct level Teachers need to check that the children are working on the correct level book at the start of the school year and at regular intervals from that point on. Adjustments need to be made if the child is unable to complete 80% of the work independently.	Teachers can use the Schofield and Sims assessment task to gather a rough idea of which book a child should start on. Teachers can also provide the child with 1 page from the front of a book to gauge how well a pupil copes with the questions. (This will need to be monitored by the class teacher – not sent home.	Staff will check on a regular basis that the book is appropriate for the child. Children continually getting high marks or those who are often getting high numbers of mistakes should be investigated promptly.

Weekly maths homework expectations Pupils complete a **minimum of 1 test (a,b & c)** per week	Teachers may choose to provide children with time to complete their homework if completing it at home is an issue (the child has no control over!). This may be ***offering*** for them to stay in at break time to complete.	This will be recorded in the teachers mark book. Children not meeting the homework expectation will be issued with a letter from the maths subject leader.
Recording & marking the maths homework Pupils will record their answers in the exercise books. Each page will need to be divided into 4 sections. A, B, C and a column where the teacher will record the **corrections** needed to be completed. Pages will need to indicate the book, section and test completed.	Pupils will have an example stuck into their homework book. On the first lesson of the new year pupils will be shown how to set out the page accurately. If children are not setting out the page correctly the teacher or teaching assistant will show the child how to do this.	Layout of the books needs to be correct. Marking shows that books laid out incorrectly or poorly will need to be improved. Teaching assistants can be used to mark the mental maths but must indicate issues to the class teacher that have been identified. Pupils will receive... -1 house point – for every part completed -1 additional house point – for each part that has no mistakes. -1 house point for responding to corrections. (7 house points per page completed) Weekly % of children completing maths homework will be recorded and collated by the maths coordinator.
Children on high level books Some children may plough quite quickly through the series of books. In this case children will need to be given additional material that is based on problem solving as opposed to moving on to the next level book. There is a risk that children will come up against mental maths that will require teaching from parents. In line with the new curriculum, children will need to broaden their skills rather than moving to greater calculation levels.	The shared drive has examples of problem solving activities which will develop their ability to apply their maths skills. This information is available in a letter for parents.	This activities will need to be marked by the class teacher.
	YEAR GROUP	**Expectation (do not exceed)**
	Year R	KS1 Books 1 -2 (as and when ready to commence)
	Year 1	KS1 Books 1 – 4 (written in booklets)
	Year 2	KS1 Books 3 – 6 (written in booklets moving towards recording in exercise books)
	Year 3	KS2 Books Intro - 1
	Year 4	KS2 Books 1 - 2
	Year 5	KS2 Books 2 - 3
	Year 6	KS2 Books 3 - 4

Basic Skills Sessions in KS1 & KS2

There are some skills that children need to be revisiting every day in order for it to become embedded and engrained in their brains! Times tables and number bonds need to be covered regularly so that they become automatic for pupils and allow them to progress later on in the school. If they have mastered these skills this will have a massive impact on their ability to learn in the future.

Action	Support	Expectations & Monitoring
Organisation The content of Basic Skills sessions will follow a similar focus in each year group. Class teachers will need to decide areas which are a particular focus for their classes. **(1) Timetables & number facts & counting** 2x 15 minute BASIC SKILLS SESSIONS PER WEEK	Teachers will provided with: Times table and number fact assessments for each of the levels (bronze, silver, gold & platinum)	Teachers need to aim for all of the children in the class to achieve the silver expectation (based on the Year group expectation). Pupils exceeding this and achieving GOLD are performing higher than the expectations in the year group. PLATINUM standard is linked to application. BLUE TOPAZ has been designed to broaden children ability as children have to teach another member of the class.
Times table assessment tests The timetable assessment test should be completed EVERY THREE WEEKS during the first 5 minutes of the ICT lesson.	Timetables tests are stored on the computer in ICT suite and can be accessed by pupils to complete. The tests will automatically grade the children.	Teachers will need to take the feedback from these assessments and spend the next 2 weeks feeding any issues into the planning of subsequent Basic Skills sessions.
Recording the times tables results Teachers need to record the pupil's results in the class record book.	Teachers will be provided with record books at the start of a new academic year. There will be space for children's grades to be recorded. This can be shared with parents at parents evening.	Children who are struggling to achieve BRONZE need to be focused on. The expectation for the whole year group is 100% of pupils achieve the SILVER grade **(Year group expectations)**
Format of basic skills sessions Most basic skills lessons will be oral, hands on and include games and other inventive ways of encouraging children to learn the basic facts. There is an emphasis on paired work and group work and this should not feel like another lesson. **Counting activities also need to be part of the basic skills sessions.**	E.g. Blue topaz children could support the class by teaching an activity that helps children practice their multiplication facts. Teachers can use interactive games and tools to help bring the learning of timetables to life. Teachers can use regular games to support the learning.	Written recording ***can*** be complete at the back of the exercise books. Each session should be 15 minutes long and must take place **2 times per week.**

Basic Skills Maths – Year Group Expectations

	Bronze	Silver National Expectation	Gold	Platinum
Yr R	1 more or less to 10	Add and subtract two single digit numbers	Number bonds to 10	Word problems involving + -
Yr 1	Number bonds to 10	Number bonds to 20	Add and subtract single digit number from 2 digit numbers	Word problems involving x tables
		2x tables	2, 10 x tables	
Yr 2	Add and subtract single digit number from 2 digit numbers	Multiples of 10 that make 100	Number bonds to 100	Word problems involving x tables
	2, 10 x tables	2, 5, 10 x tables	2, 3, 5, 10 x tables	
Yr 3	2, 3, 4, 5, 10 x tables	2, 3, 4, 5, 8, 10 x tables	2, 3, 4, 5, 6, 8, 10, x tables	Word problems involving x tables
Yr 4	2, 3, 4, 5, 6, 8, 10, x tables	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 x tables	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13x tables	Word problems involving x tables
Yr 5	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13x tables	2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 x tables and division facts	Factors to 25	Word problems involving x tables
Yr 6	Factors to 25	Factors to 50	Factors to 100	Multiplication of decimals
Blue Topaz (All Year Groups – MASTERY) Pupils need to teach and support another member of the class to achieve a bronze or silver certification.				

Weekly / Unit Planning in KS1 & KS2

The school believes that time spent planning is important but needs to be efficient. Copying out plans or typing out details plans is not time productive. The school rather teachers spend time on planning activities that are pitched correctly that are progressive and will allow for great progress rather than spending a long time writing about a lesson. Planning should be snappy, efficient and be a map / route to where the children need to get to.

Action	Support	Expectations & Monitoring
Short Term / Weekly Planning At the start of each new block (either 2 weeks of 3 weeks) the class teacher breaks down and separates the unit overview in to possible teaching sequences. The class teacher uses this to create learning intentions mapped across the two week or three week period. Teachers need to remain focused on the year group expectations which are displaying in bold lettering. HOWEVER, these may not necessarily become the learning objectives as children may be building up to a specific objective.	The rising stars scheme is stored on the shared drive and provides teachers with the overview of a unit along with the success criteria and the year group expectations that are linked to the specific unit.	Teachers should map out the learning objectives over the 2/3 week period (deciding how long (based on their own summative assessment) should be spent on each objective) Teacher should then only plan a maximum of 3 days ahead at any one time. At the end of each lesson the teacher completes the formative assessment section of the lesson plan (notes about how to adjust the following day) The teacher will also complete the objective sheet identifying which children exceeded the expectation and which children were unable to master the activity (This will be stored when the objective come up again in another unit and when completing teacher assessment.
TO STAND ALONE or TO NOT STAND ALONE? The new curriculum does discuss the need for Problem solving and mental maths to be included as part of every lesson. The belief is that children need to see that problem solving is PART of maths and not something separate. However, we intend to do both! We expect to see normal maths lessons with elements of problem solving and application (particularly on the 2nd and 3rd cycle) built in. However, specific discrete skills need to be taught in order develop the children's skills in problem solving which can in turn be applied within their lessons.		
Picture Maths **1 LESSON EVERY 2 WEEKS** Every 2 weeks pupils will apply there maths skills in a different context using the Picture Maths Materials	The Rising Stars Picture Maths materials will be used for the lessons.	These lessons will be recorded in the book and the evidence will used to decide whether children have met the required standard.

Discrete Problem Solving SKILLS lessons **1 LESSON EVERY 2 WEEKS** During each unit, pupils will need to complete 1 of the problem solving skill lessons.	Rising star Problem Solving lesson plans set out how to deliver these lessons.	Plans will need to be annotated and adjusted/modified to suit the children within the class. These lessons will be recorded in the book and the evidence will used to decide whether children have met the required standard.
Assessment Task Lessons **FINAL LESSON OF UNIT** At the end of each unit, children will need to complete an assessment task. These assessment tasks will be set out as carousel enabling teachers to sit and physically watch the children carrying out the activity.	Rising star Assessment Task lesson plans set out how to deliver these lessons. Teachers must work through the problems in order to ensure that children's skills are developed in the correct order.	Plans will need to be annotated and adjusted/modified to suit the children within the class. These lessons will be recorded in the book and the evidence will used to decide whether children have met the required standard.
Other resources to support teaching of maths Teachers are expected to use their own judgement when designing lessons to meet the needs of their children. The pre made lesson plans should be adjusted an annotated and any scheme of work used should not just be followed. When planning lessons, teachers may choose to look at other materials to see if they provide the children with a better activity which is more likely to lead them to success, than the original suggested activity. Therefore, although the school are following the structure and materials from the Rising Stars scheme, teachers need to use their professional judgement to pick and choose good quality activities from other schemes to support the learning.	Teachers are provided with the following **additional** materials to support the planning and activity design in maths: • Scholastic 100 Maths (for the new Maths Curriculum) • Abacus Evolve textbooks • Target Your Maths * textbooks • Medal maths (some classes) • Old National Numeracy strategy planning is stored on the school shared drive. • TalkItSolveIt Challenges • My Maths Interactive starters and activities ***Recommended**	Teachers are not expected to copy out lesson plans or type them out in their own words. Plans can be photocopies and annotations must be made to **indicate where the activity has been adjusted / modified** for the children in the class. These plans should also include jottings of key questions etc that need to be asked along with differentiation suggestions.

Suggested Three Week Unit Block

Unit Lesson 1	Unit Lesson 2	Unit Lesson 3	Unit Lesson4	**Standalone Lesson** Picture Maths Lesson
Unit Lesson 5	Unit Lesson 6	Unit Lesson 7	Unit Lesson 8	**Standalone Lesson** Problem Solving Skills Lesson
Unit Lesson 9	Unit Lesson 10	Unit Lesson 11	Unit Lesson 12	Assessment Task Lesson

Suggested Two Week Unit Block

Unit Lesson 1	Unit Lesson 2	Unit Lesson 3	Unit Lesson4	Picture Maths Lesson
Unit Lesson 5	Problem Solving Skills Lesson	Unit Lesson 7	Unit Lesson 8	Assessment Task Lesson

Classroom Planning Resources

The following resources belong to the school and are available for you to use. These should be stored in the classroom when not in use.

Resource	YrR	Yr1	Yr2	Yr3	Yr4	Yr5	Yr6
Rising Stars Maths Vocabulary	✓	✓	✓	✓	✓	✓	✓
Rising Stars Picture Maths & CD		✓	✓	✓	✓	✓	✓
Rising Stars Problem Solving & CD		✓	✓	✓	✓	✓	✓
Rising Stars Fluency With Fractions & CD		✓		✓	✓		✓
Rising Stars Unit Assessment Tasks		✓		✓		✓	
Focus PRE LEARNING TASKS		✓	✓	✓	✓	✓	✓
Focus STEP UPS		✓	✓	✓	✓	✓	✓
Focus YEAR GROUP OBJECTIVES		✓	✓	✓	✓	✓	✓
Target Your Maths		✓	✓	✓	✓	✓	✓
Target Maths		✓	✓		✓	✓	
Scholastic 100 Lessons – New Maths Curriculum & CD		✓	✓	✓	✓	✓	✓
Badger Maths – Problem Solving						✓	✓
Target Your Maths Answer Book				✓	✓		✓
Classworks Numeracy			✓				
Focus education mastery material		✓	✓	✓	✓	✓	✓

Differentiation in KS1 & KS2

With the introduction of the new curriculum the school's approach to Differentiation has changed. Teaching to the top means that all children in the class should be working toward the same objective. Clearly, this creates a number of issues which are addressed below.

Action	Support	Expectations & Monitoring
Year Group expectations All children are working towards their own Year Groups' expectations. If excelling in a subject, the teacher still remains focused on their expectations but works to embed and deepen these skills further. Only children who are working well below the expected level may be working on different expectations.	Staff, parents and pupils are provided with the year group expectations. These are stored on the school website and are handed out to parents at the start of each academic year.	Lessons have one learning objective only and all children are working towards the same expectation. This is clearly evidence in the children's books.
Teaching to the top & grouping The school believes that every child has the potential to achieve well and all children should be given the same access to learning. This means not always assuming that children remain in the same groups. Group should be fluid and therefore children making up each group would change on a daily basis. Teacher should not make assumptions that all children in a group know the same amount. Pre teaching and quality formative assessment will allow teachers to flexibly adjust grouping and in turn provide the children with the right level of support. As opposed to giving children support just because they are in the triangle group.	The Shirley Clarke DVDs include good examples of using mini plenaries.	Teaching staff use mini plenaries, formative assessment starters and flash forwards to group children accordingly. These groups are flexible and if, during a mini plenary, children are performing well they may well be moved to another group. If children are underperforming they will need to be grouped together to have some focused teaching or support. Teachers may decide to use groups as a rough starting point but they will need to be flexible and membership to these groups should not be fixed. In some lesson, teachers may decide to allow children to choose their starting point to allow for children to have no limits to their learning.

Pre teaching Children will be expose to forthcoming learning in a FLASH FORWARD. Children will be challenged on a skill / topic that is coming soon. The results of this will give the teacher a chance to see if there is a group of children that would benefit from some pre-teaching. During pre-teaching sessions, small groups of children are given some work that will in turn prepare them better for the main lesson. Rather than addressing issues after the lesson, this approach gives children the chance to fully take part in the lesson (as opposed to not being able to access it!) This in turn maximised the success the child will have within the lesson. This is a method the school is adopted and is a form of differentiation.	Teachers will be provided with Pre teaching activities in which to check children's understanding before the lesson. Booster groups during assembly will consist of a core group of pupils and will topped up by other children who have been identified as needing some pre teaching on a subject.	Teachers will use the pre teaching approach where possible and where appropriate. If large numbers of children need pre teaching then the class teacher will need to create a lesson that could be delivered to the whole class in advance of teaching the main concept.
Supports and adjustments to activities to achieve the same objective If children are unsuccessful in learning a concept, the teacher needs to focus on their own practice and identify a new way of presenting this piece of learning so that the child can understand it. Within lessons, teachers will need to create activities that support children to achieve the same objective. Ideally, all of the children would achieve the goal in the same way, however, their will be some children who may need adjustments made to their work in order to allow them to achieve the expectation.	Target your maths material provides children with the year group expectation SECTION B, a build-up activity SECTION A and an extension activity SECTION C.	Lower ability children may need a more scaffolded approach to achieve the learning objective. The long term goal is that the children end up achieving the L.O set by the teacher. Higher ability children may need the task to be adjusted so that it becomes more application based or context linked.

Step Up Sheets The step up sheets are a resource that helps focus on the progress being made by pupils. It can be used as a self-assessment tool or as check for the teacher. It is designed to break down the progression towards the number, measurement, geometry and statistics objectives. Not all objectives have this resource but the vast majority do. Where they do not exist it was felt that this particular tool was not necessary. Teachers may want to break down a task or scaffold it, to enable children to make progress to achieving a particular expectation. The steps sheet take a particular MATHS expectation and breaks down all the steps that preceded this one.	Teachers can use this resource to find out what the children need to work on before reaching the current expectation. This could be used to plan activities which will enable children to work towards achieving the year group expectation. An electronic copy will be stored in the TSM – Maths Framework folder on the shared drive.	This resource will benefit the class teachers. It will enable planning. Teachers do not have to use this resource but will benefit from using it to support planning particularly for the lower ability.
Use of Teaching Assistants Teaching assistants must be used carefully to support the learning within the classrooms. Teaching assistants must be directed by the class teacher and must use support the child and then allow the child to work independently to apply their skills. Children should not become dependent on the T.A. and should learn to attempt something first before asking for help.	Teaching assistants will be allocated to classes based on need. As the number of children in the school requiring 1:1 TA support is high, the number of general T.As is relatively small. Teachers who have 1:1 T.A.s in their classes are encouraged to maximise the use of 1:1 T.A. to supervise particular groups allowing for the 1:1 pupil to gain some independence and not become reliant on adult support. Teaching assistants will be clear on Maths Calculation Policy and be able to explain the calculations within the policy to all children if needed.	Teaching assistants must be utilised and must add value to the learning in the classroom. Teaching assistants should be used for the duration of the lessons including starters and plenaries. Teaching assistants can be used to support or deliver specific pre teaching content under the direction of the class teacher. This approach cannot be used on every occasion, as the class teacher should be doing a reasonable share of the pre teaching to their pupils.

TSM - Mathematics Planning MAP

Main Focus of the unit								
Key L.O. ✓ Clear and precise ✓ DECONTEXTUALISED ✓ One L.O. for all	**Starter/Main** ✓ Include KEY QUESTIONS to be asked during the session ✓ Use AfI strategies to check understanding / ensure progress	**Activities inc – Challenge for All & Assessment for learning** ✓ Include **KEY QUESTIONS** to be asked during the session ✓ Design activities for that challenge ALL ability groups – ensure **PROGRESS** ✓ **RANGE OF DIFFERENTIATION** & remember groups may vary across the week / across topics & following AfL ✓ Indicate individuals / groups of focus children from Formative Assessment ✓ Indicate effective T.A. use			**Plenary** ✓ Mini plenaries throughout ✓ Mini plenaries throughout ✓ Reflection time ✓ SAT question?	**FLASH FORWARD**	**Marking**	**Formative Assessment** Who needs further consolidation? Who needs moving on? Which activities need to be adapted / changed?
Next steps / Pre teaching								

Maths Next Steps

★ Corrections

Identify particular questions that were problematic and direct to some corrections.

✓ You are starting to understand long multiplication
★ Re do questions 4,5,6 . Set out correctly.

4) 13 x 5 = ?

13
x 5

5) 16 x 3 = ?

6) 33 x 2 = ?

✓ Well done. You multiplication is improving.
★ Re do circled questions below. Remember to add up your answers carefully from the grid

6)

9)

★ Scaffolds

Identify issues that occurred in the piece of work and provide the child with another example by providing a scaffold that reduces in support.

Try these...

Ex. 24 x 5 = ?

x	20	4
5	100	20

= _____

32 x 5 = ?

x	30	2
5		

= _____

14 x 5 = ?

x		
5		

= _____

★ Extension

Consider offering the child a chance to extend their learning by repeating the same processes perhaps with higher / bigger numbers or greater calculations.

✓ You added 2 digits to 2 digits correctly.
★ Now try these...

```
  345
+  24
-----

  554
+  24
-----

 4454
+ 243
-----
```

✓ You correctly answered the addition questions
★ Explain the addition method in 5 steps number the answer will be even. Explain.

1
2
3
4
5

★ Application

Challenge a child further by offering a chance to apply learnt skills to SATs questions or other questions.

✓ You understood fractions of basic shape.
★ Try these... Level 4 questions

✓ Excellent investigative shown today
★ What strategies did you use today to ensure that you didn't repeat yourself.

★ Explanations

Ask pupils to explain their answers or explain steps they need to carry out in order to solve problems.

✓ You understood equivalent fractions
★ If I multiply an even number by an odd number the answer will be even. Explain.

Marking & Success Criteria in KS1 & KS2

The school has worked hard to develop a marking policy that is consistent across subjects and across the whole school. In order for marking to be successful it needs to be acted on quickly and then followed up by the class teacher. General comments have very little impact on learning.

Action	Support	Expectations & Monitoring
Marking Policy Children's maths books need to be marked regularly by teaching staff. Staff need to follow the marking policy.	Additional guidance and examples are given below. Old books and examples of real marking in practice can be obtained from the maths leader.	Children need at least 2 pieces of maths work marked in line with the policy on a weekly basis. Next step marking needs to be responded to and checked by the teacher. Book and work scrutinies will be used to check whether books are being marked in line with the policy.
Success Criteria Use of success criteria needs to be consistent across the whole school. The school has designed a standard success criteria that needs to be inserted into the books at the start of each lesson. In the event of children generating their own success criteria, the blank format will need to be used and children will add their own to this.		