



# Subject Self Evaluation Form

## Subject: Mathematics

### School Context

Katherine Semar Infant and Junior Schools serve an established and settled residential area in Saffron Walden. The socio-economic circumstances of the pupils are better than the average nationally although lower than the other schools in our local cluster. The proportion of pupils eligible for a free school meal is slightly below average although many families are on low incomes and need support through regular food banks and uniform referrals. The majority of parents are supportive but a significant minority have low aspirations and this has an impact on their support for their children's academic progress and on the extent to which they become involved in their children's learning. As a result of this, some of the pupil premium supports these families financially through clubs and educational visits. We have identified that 20% of our pupils have home lives that may negatively affect their school life and sometimes their ability to thrive (adverse childhood experiences). Significant work is completed to support these children through learning mentors and our school listening service as well as more recently employing a family engagement champion, who works with our most vulnerable children on improving attendance. A significant minority of our families live in the flats surrounding schools in overcrowded, damp accommodation without access to a garden.

Unfortunately, we have had a high number of parents within our school community who have died or have been diagnosed with a life limiting condition. Within the last five years, we have had eleven children who have had a parent who has died. We have received support from charities like Winston's wish and our school educational psychologist. Currently we have two children who are supporting a parent cope with multiple sclerosis and we have ten children in last two years whose parent has been diagnosed with cancer. In the infant school, we also have a child whose father is receiving specialist care and hoping that may prolong his life for six months. We have used our school play therapist to support these children and we have two trained learning mentors who have received additional training on grief and bereavement. We have looked at our PSHE curriculum and worked on the zones of regulation as well as work on grief and bereavement to support the children in our school. We have re-designed our curriculum and changed the books in Year Three as we felt 'The Wild Way home' was triggering for the two children whose Mothers have recently died. In Year Two, three of the children can be dysregulated for sustained periods of time and we are continually looking for the best ways to support them with their grief.

The largest ethnic groups are White British (75.98%) and any other white background (16%). Mixed White & Asian (1.44%), Mixed White & Black Caribbean (1.15%). Mixed White & Black African (0.92%), Mixed any other mixed background (2.07%). The percentage of children who are not white British has increased by 6.2% since last year. This school has 12 out of 17 possible ethnic groups. The average number of groups for this phase of education is identified as 9 so we like to celebrate our cultural diversity.

Staff retention is very high. This means the shared vision and ethos is well-developed as staff have built this vision with staff team. Monitoring, evaluation and review has happened in a cycle where each subject has a deep dive on a rolling programme which has happened for the past 12 years so experienced subject leaders know their subject's strengths and areas for development well.

The school currently holds:

- The Healthy Schools' Enhanced Award
- Sports Mark – Platinum Award
- Music Mark
- Philosophy for children Silver Award

Katherine Semar Infant and Junior Schools are not faith schools but our ethos is broadly Christian. We have close links with St Mary's Church, which is the nearest Anglican Church, as well as the community church and the Baptist church regularly having assemblies from the Saffron Walden assemblies team. Inclusion is a school priority and we welcome and value diversity. We are particularly keen to build on the supportive relationships we have forged with many partners involved with the school. The school focuses on promoting high academic achievement, providing plentiful opportunities for sport and exercise, creative arts and personal development. Promoting good health is a school priority.

Saffron Walden and the local surrounding area does not have any specialist provision locally and consequently we have a number of children with severe and complex needs who are seeking specialist provision. The LA have placed them in our school whilst looking for a specialist setting. In response to this the Trust are looking at providing specialist provision but this is in an early stage of planning.

The infant and junior schools work extremely closely to further enhance the continuity for children and cohesive community provision. The infant and junior school operate as one school, which has been developing since 2011 when Julie Puxley became the headteacher. This has been further enhanced by Julie Puxley becoming executive headteacher in 2017 of the Junior school and infant school as well as the rest of Senior Leadership Team working across both schools. The children have a smooth transition from Year 2 to Year 3 and beyond. There is now a single governing body, policies, procedures and governor training is aligned. We continue to have a joint website and joint weekly newsletter for parents. We have shared co-ordinator posts, enriching subject leadership. Planned, shared staff meetings and training are of a high quality and create continuous professional development for staff. There is a deeper understanding of the progression of learning between key stages and shared assessment methods. The SLT work together daily to enhance provision in classrooms, using staff specialisms. Due to high staff retention the shared vision and ethos is well-developed as staff have built this vision with key stakeholders over a number of years.

## Baseline

**Number** 10% below, 82% GLD

**Numerical Patterns** 15% below, 83% GLD

**Listening, Attention and Understanding** 10% below, 88% GLD

**Speaking** 10% below, 85% GLD

## School vision

### School Values

Our curriculum cannot be separated from our school's core values: be kind, be confident, be curious, be positive, be respectful and be resilient. These permeate all aspects of school life and underpin our school curriculum. Although these are directly taught within our curriculum they are also 'lived' throughout our school and effectively create the culture that allows our curriculum to be successful.

### Curriculum Aims

Alongside our school values we have a set of aims for our school curriculum. These are the key threads that underpin and link our children's curriculum experiences together. We want children to: question; challenge themselves and each other; investigate the world around them; experience the world first hand; communicate effectively; and seek to develop their understanding of themselves, each other and the world around them. These aims were developed by and for the school community; parents, teachers, staff and governors collaborated to create our INSPIRE curriculum aims.



## Intent

A high-quality mathematics education provides a foundation for understanding the world and the ability to reason mathematically; it is essential to everyday life. These skills will engender a

sense of enjoyment and curiosity about the world in which we live. “Maths is the truly global language. With it, we convey ideas to each other that words can’t handle – and bypass our spoken Tower of Babel” (Professor Alison Wolf).

## Aims

- To become **fluent in the fundamentals of mathematics**, 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.
- To **reason mathematically** by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- To be able to **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.

## Implementation

We will become **fluent in the fundamentals of mathematics** by:

- Daily teaching of Mathematical concepts, with a minimum of 5 hours study a week.
- Using the calculation and fluency policies to teach an increasingly complex set of skills within a progression of skills.
- Have routines for learning times tables, with regular monitoring of progression.
- Use interleaved practice to regularly practise fluency arithmetic (KS2).
- Use the Number Sense programme to support fluency in additive structures.
- Moving fluently between representations of mathematical ideas. (The programmes of study are, by necessity, organised into apparently distinct domains, but pupils 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).
- Following the CPA approach (Concrete, Pictorial, Abstract).
- Following a 7 part teaching and learning sequence: Revisit, Starter/Explore, In Focus/Hook, Model/Teach, Guided Practice, Independent Practice, Deepening Understanding.
- Use Adaptive Teaching to meet the needs of all children, including masterclass lessons where appropriate.
- Intervention support carefully planned for children with identified gaps in knowledge.
- Using structures to support understanding and progression- see calculation policies.
- Real-life ‘hooks’ allowing children to apply their mathematics to real-life contexts and problem solving where appropriate.
- Identifying, understanding and applying a number of strategies to solve a problem as there is more than one way.
- Promote a growth mind-set approach towards their learning – developing a love for mathematics.
- Going deeper and broadening children’s learning (instead of moving to next year’s curriculum content, but digging deeper with a range of activities).
- Use reasoning statements to encourage children to explain their thoughts, processes and understanding.
- Encourage pupils to talk in mixed-ability partners and groups to discuss their mathematical thinking/reasoning.
- Plan conceptual and procedural variation, including non-concepts.
- Allow pupils opportunities to learn from each other and support one another.

- Answer in full sentences – with a focus on using mathematical vocabulary (STEM sentences).
- Using learning walls within every classroom to support pupils learning.

We will become able to **reason mathematically** by:

- Using mathematics across the wider curriculum. For example in computing, using algorithms, promoting logical thinking, abstraction of code etc.
- Using opportunities throughout the day to explore mathematical concepts through problem solving and mathematical games.
- Using enrichment books to supplement knowledge for the different strands of learning.
- Answering in full sentences.
- Using mathematical reasoning statements.
- Promoting discussion between pupils; working in mixed-ability pairs and groups.
- Promoting enjoyment of learning through practical activity, exploration and discussion through:
  - Describing – talking through the process of achieving the answer
  - Explaining – using ‘because’
  - Convincing – I know this is true/correct/right because ...
  - Justifying – explores/ delves into deeper maths
  - Proving – visual and algebraic proof (4 initial categories of proof: Contradiction, exhaustion, logical reasoning, generic proof)

We will **solve problems** through:

- Using examples of problems, including multi-step problems.
- CPA approach; Concrete, Pictorial, Abstract
- The problem-solving strategies we will incorporate into our teaching are:
  - Visualisation
  - Work backwards
  - Reason logically
  - Conjecture (can be proved in a watertight way)
  - Work systematically
  - Look for patterns and making links.
  - Trial and improvement

### Impact

## Early Years Outcomes

	2022	2023	2024	National Average 2023
% achieving a Good Level of Development (GLD)	81%	75%	78%	67%

### **GLD (Good Level of Development) 2024**

Number in group	Autumn 1 (Baseline)	Summer 2 (EYFSP)
Cohort (60)	22 (37%)	47 (78%)
Girls (37)	14 (38%)	31 (84%)
Boys (23)	8 (35%)	16 (70%)
EAL (14)	2 (14%)	11 (79%)
PPG (4)	0 (0%)	1 (25%)
SEN (9)	0 (0%)	3 (33%)

<b>AOLD (Areas of Learning and Development) 2024</b>	<b>Achieved ELG (%)</b>
Listening, Attention and Understanding	88%
Speaking	85%
Managing Self	93%
Building Relationships	95%
Self-regulation	92%
Gross Motor Skills	90%
Fine Motor Skills	88%
Word Reading	87%
Comprehension	90%
Writing	82%
Number	82%
Numerical Patterns	83%
Past and Present	87%
People, Cultures and Communities	87%
The Natural World	93%
Creating with Materials	90%
Being Imaginative and Expressive	83%

- Children's overall attainment is strong.
- Over the year, number saw significant increases in the % children on track for ELG.
- Children worked in a guided group after each mathematics lesson to aid keep up not catch up.
- The reasons for not meeting the ELG in number range from poor understanding of counting and cardinality to insufficient recall of number bonds.

Summer 2	Listening, Attention and Understanding	Speaking	Managing Self	Building Relationships	Self-regulation	Gross Motor Skills	Fine Motor Skills	Word Reading	Comprehension	Writing	Numbers	Numerical Patterns	Past and Present	People, Culture and Communities	The Natural World	Creating with Materials	Being imaginative and expressive
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Whole cohort																	
No of pupils	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61	61

%F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% below	10	10	5	5	7	5	8	7	8	18	10	15	11	13	5	5	7
% GLD	90	90	95	95	93	95	92	93	92	82	90	85	89	87	95	95	93

Pupil Premium																	
No of pupils	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4

%F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% below	0	25	0	0	0	0	0	0	25	25	0	25	0	0	0	0	0
% GLD	100	75	100	100	100	100	100	100	75	75	100	75	100	100	100	100	100

Not Pupil Premium																	
No of pupils	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57	57

%F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% below	11	9	5	5	7	5	9	7	7	18	11	14	12	14	5	5	7
% GLD	89	91	95	95	93	95	91	93	93	82	89	86	88	86	95	95	93

Boys																	
No of pupils	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32

%F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% below	6	6	6	3	9	9	13	6	3	19	6	9	13	13	3	6	9
% GLD	94	94	94	97	91	91	88	94	97	81	94	91	88	88	97	94	91

Girls																	
No of pupils	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29

%F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% below	14	14	3	7	3	0	3	7	14	17	14	21	10	14	7	3	3
% GLD	86	86	97	93	97	100	97	93	86	83	86	79	90	86	93	97	97

EAL																	
No of pupils	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
%F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% below	8	23	0	8	0	0	8	0	15	31	8	15	8	8	8	0	0
% GLD	92	77	100	92	100	100	92	100	85	69	92	85	92	92	92	100	100
Not EAL																	
No of pupils	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	48
%F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% below	10	6	6	4	8	6	8	8	6	15	10	15	13	15	4	6	8
% GLD	90	94	94	96	92	94	92	92	94	85	90	85	88	85	96	94	92

SEN																	
No of pupils	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
%F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% below	50	50	50	33	67	50	50	50	33	50	50	50	50	50	33	50	50
% GLD	50	50	50	67	33	50	50	50	67	50	50	50	50	50	67	50	50
Not SEN																	
No of pupils	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55	55
%F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% below	5	5	0	2	0	0	4	2	5	15	5	11	7	9	2	0	2
% GLD	95	95	100	98	100	100	96	98	95	85	95	89	93	91	98	100	98

Autumn Birth																	
No of pupils	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
%F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% below	16	4	8	4	12	8	8	4	4	12	4	4	8	8	4	4	8
% GLD	84	96	92	96	88	92	92	96	96	88	96	96	92	92	96	96	92

Spring Birth																	
No of pupils	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
%F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% below	0	25	0	13	0	0	0	13	25	25	13	25	0	13	0	0	0
% GLD	100	75	100	88	100	100	100	88	75	75	88	75	100	88	100	100	100

Summer Birth																	
No of pupils	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
%F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% below	7	11	4	4	4	4	11	7	7	21	14	21	18	18	7	7	7
% GLD	93	89	96	96	96	96	89	93	93	79	86	79	82	82	93	93	93

Boys performed slightly better than girls.

PPG children performed better than non- PPG children.

EAL children performed similarly to non EAL children

Autumn children achieved better than spring and summer children who achieved similarly.

## **End of Key Stage One (Year 2) Outcomes**

Attainment Results	2022	2023	2024	National Average 2023
% at or above the expected standard in reading, writing and maths combined	73%	72%	73%	55%
% at or above the expected standard in reading	88%	83%	88%	68%
% at or above the expected standard in writing	78%	73%	75%	59%
% at or above the expected standard in maths	81%	85%	88%	70%
% achieving a higher level of attainment in reading, writing and maths combined	22%	18%	20%	
% achieving a higher level of attainment in reading	37%	40%	48%	18%
% achieving a higher level of attainment in writing	24%	20%	28%	8%
% achieving a higher level of attainment in maths	31%	32%	40%	16%
Science Teacher Assessment	92%	88%	88%	

### **Strengths in Year 2**

- A strong team is in place, with good TA support to work with this cohort, interweaving masterclasses where appropriate.
- High quality teaching and learning took place in Year 2 with highly skilled and experienced teachers across the year group.

### **Barriers to achievement**

- Fluency and recall of number facts has had an impact. Therefore, our 10MM maths each day will be using the Number Sense programme to aid fluency and teaching specific strategies.

## **Year 4 Multiplication Check**

Attainment Results	2022	2023	2024	National Average 2023
Average score out of 25	22.3	22.4	24.2	20.4
% achieving 25/25 raw score	40%	33%	62%	31%

Attainment is incredibly high in the MTC and is a specific focus for teachers through Year 3 and Year 4.

Attainment for disadvantaged children is particularly pleasing for most of the children in this group, with one exception where illness has lowered attendance. In 2023 and 2024 there was no significant gap between these children and their peers.

Children who have not become fluent at their times tables in each year group have been identified and worked with in subsequent years.

It is a National Curriculum expectation that pupils can recall their times tables, with fluency, by the end of Year 4.

The children who have achieved Gold in our times tables system, can get full marks in the MTC. Those below Gold, even those on Silver award, do significantly less well.

As the curriculum sophisticates in Year 5 and 6, children who do not have a secure and fluent recall of their times tables do find Maths less enjoyable and can't achieve as much in lessons. This is because the curriculum applies their multiplication knowledge in different contexts.

There is no pass/fail mark for this tables check and no retest for those who do not score highly. We use the information to inform interventions into Year 5.

- The children have had targeted times tables lessons throughout year 3 and year 4
- The children use software called TTRockstars to practise times tables online.
- The teachers run a monthly test in Year 4, to inform them of the children's progress in learning times tables and to organise intervention based on specific needs.
- The results from 2024 were higher than those of 2023 which were similar to 2022's results, (Average overall score of 22.3 in 2022).
- We held an MTC parent workshops for 23-24. We have timetabled in a workshop again this academic year. If parents missed the workshop, we sent the information home for parents.

## End of Key Stage Two (Year 6) Outcomes

Attainment Results	2022	2023	2024	National Average 2023
% at or above the expected standard in reading, writing and maths combined	72%	83%	79%	59%
% at or above the expected standard in reading	87%	90%	88%	73%
% at or above the expected standard in writing	81%	88%	90%	71%
% at or above the expected standard in maths	84%	88%	85%	73%
% at or above the expected standard in grammar, punctuation and spelling	84%	90%	91%	72%

% achieving a higher level of attainment in reading, writing and maths combined	19%	23%	21%	8%
% achieving a higher level of attainment in reading	39%	58%	39%	29%
% achieving a higher level of attainment in writing	25%	32%	41%	13%
% achieving a higher level of attainment in maths	40%	38%	44%	24%
% achieving a higher level of attainment in grammar, punctuation and spelling	43%	49%	41%	30%

Progress Results	2022	2023	2024
Average progress in reading	+0.4	+2.7	* <a href="#">tbc</a>
Average progress in writing	+0.6	+2.1	
Average progress in maths	+1.0	+1.2	

Average Scaled Scores	2022	2023	2024	National Average 2023
Reading	107	109	108	105
Maths	107	108	108	104
Grammar, Punctuation and Spelling	108	111	109	105

<b>Maths Data</b>	Maths Sept	Maths Jan	Maths March	Maths May	Target
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Overall APS	95.2	102.1	105.8	108.11	107.9
Number of pupils who achieved 100+	24	38	49	53	
% 100+	38%	60%	78%	84%	85.7
Number of pupils who achieved 110+	0	5	19	27	
% 110+	0%	8%	30%	43%	41.3

2022 results for comparison	97.1	98.9	101.0	106.5	106.3
2022 Pupil 100+	45%	52%	73%	84%	81%
2022 Pupil 110+	6%	13%	24%	40%	37%

2023 results for comparison	95.5	98.3	103.8	107.3	108.8
2023 Pupil 100+	41%	56%	81%	88%	85%
2023 Pupil 110+	4%	9%	25%	36%	37%

Number of Disadvantaged	9	Not Dis.		55	Target
% Dis. 100+	11%	22%	67%	78%	78%
% Not Dis. 100+	43%	68%	81%	87%	85%

% Dis. 110+	0%	0%	11%	11%	11%
% Not Dis. 110+	0%	9%	34%	49%	45%

Number of girls	34	No. of boys		30	Target
% Girls 100+	30%	55%	76%	79%	79%
% Boys 100+	48%	69%	83%	93%	90%

% Girls 110+	0%	6%	21%	42%	35%
% Boys 110+	0%	10%	41%	45%	47%

Number of EAL	12	Not EAL		52	Target
EAL 100+	5	7	10	11	
% EAL 100+	45%	64%	91%	100%	92%
Not EAL 100+	19	31	39	42	
% Not EAL 100+	37%	61%	76%	82%	83%

EAL 110+	0	2	4	5	
% EAL 110+	0%	18%	36%	45%	33%
Not EAL 110+	0	3	15	22	
% Not EAL 110+	0%	6%	29%	43%	42%

6HA	Total	22			Target
% 100+	41%	68%	77%	82%	82%
% 110+	0%	18%	45%	55%	50%

6EW	Total	20			Target
% 100+	35%	70%	85%	95%	95%
% 110+	0%	5%	35%	45%	35%

6JH	Total	22			Target
% 100+	36%	41%	68%	73%	81%
% 110+	0%	0%	9%	27%	38%

Children who completed KS2 at KSJ	59	Yr5/6 chd.			5	Target
% All of KS2 chd. EXP.	39%	63%	80%	85%	86%	
% Joined in Y5/6 EXP.	20%	20%	40%	60%	60%	

% whole of KS2 chd. GD	0%	7%	31%	44%	42%
% Joined in Y5/6 GD	0%	20%	20%	20%	20%

Girls performed less well than boys at expected and especially at the higher standard. We are investigating if this is a trend and conducting pupil interviews.

EAL children performed better than non EAL children at expected level and higher level.

Non disadvantaged children performed slightly better than disadvantaged children at expected and higher level.

The results remained high in across all areas, especially at Greater Depth.

### **Areas of strength**

- The year group had been split into 3 classes, allowing more individual attention in smaller classes.
- Small group intervention in maths and reading started in Autumn term and continued into Spring term and Summer term 2024.
- High quality teaching and learning took place in Year 6 with highly skilled and experienced teachers in classes.

### **Barriers to attainment**

- In year 6 we had 64 pupils and 6 of those children joined our school throughout the year. Out of those 6 children, 2 children brand new to English.
- Attendance is not at the expected standard for our priority 20%. An Attendance Officer is working with the families.

<b>Significant developments in the subject</b>
<ul style="list-style-type: none"> <li>• Clearly sequenced vocabulary policy.</li> <li>• Mathematics enrichment books to supplement teaching and learning through book-talk and oracy.</li> <li>• Evidenced based lesson sequence- 7 part Mastery Teaching and Learning Sequence.</li> <li>• Subject leaders delivered training which developed teachers understanding of early mathematics.</li> <li>• Fluency everyday (10 minute maths sessions and within the daily lessons)</li> <li>• Number Sense programme introduced in EYFS and KS1 and Year 3 to support fluency of additive structures.</li> <li>• Regular parental workshops.</li> </ul>

<b>Strengths</b>
<ul style="list-style-type: none"> <li>• A love and enthusiasm for mathematics promoted throughout the school and demonstrated by the children through pupil survey.</li> <li>• High expectations.</li> </ul>

- Well-presented books that show clear sequence of learning and progression through the year groups.
- Longer and deeper learning on units of work to ensure secure understanding and consolidate learning.
- Results.
- Books and planning demonstrate a clear sequence of deep learning and progression.
- Opportunities for fluency daily '10 minute maths (10MM)' sessions are established. Opportunities for problem solving and reasoning are embedded. Deepening understanding activities are consistently used to challenge pupils.
- Real-life context hooks are planned in (where relevant in every lesson).
- Targeted 'Masterclasses' are carried out to support all learners to achieve their potential. Children are identified through assessment and class teacher observations.
- The marking policy has been updated to include MC to support our ethos of 'keep up' not 'catch up' where appropriate.
- 1:1 planning sessions with leaders supported with the development of year group folders to support teachers in planning – including a bank of resources (e.g. calculation policy, key vocabulary, possible STEM sentences, examples of support and challenge, NCETM small steps, ready to progress guidance.).
- A document entitled 'Mathematics at Katherine Semar Schools' has been created for mathematics which is a one-stop document detailing the ethos and teaching expectations at KSS, including a clear procedure for presenting work in books. It highlights the importance of a consistent approach to teaching mathematics at KSS and contains key information from all the policies used to deliver mathematics at KSS. It is used to support the induction of new staff and all existing staff.
- Mathematics workshops are carried out in KS2 to encourage and develop parental engagement and support in children's maths at home. In EYFS and KS1 caregivers are invited in to watch a mathematics lesson before enjoying spending time in the classroom environment with their child.
- Our times tables system was reviewed and improved to establish a clear path of progression for the children and to further motivate them to learn their tables. Year 4 carry out regular times tables intervention for targeted children and have built in daily times tables fluency practice for all children.
- Our calculation policy was updated and delivered to staff in Autumn 2020. It was also updated in 2021/2022 in line with the new EYFS framework and 2023/2024 in line with the introduction of the Number Sense programme. There is progression for addition, subtraction, multiplication and division, setting out year group objectives, mental strategies, formal written calculations and strategies, vocabulary and concrete, pictorial and abstract methods.
- We have engaged in the NCETM Mastering Number programme for teachers in EYFS and KS1 and KS2 designed to help children embed good number sense.
- We have engaged in the NCETM Specialist Knowledge for Teaching Mathematics – Primary Early Career Teachers designed to support primary early career teachers in developing specialist knowledge for teaching mathematics, thus enabling them to understand, teach and support pupils in maths in the classroom.

### **To maintain outstanding**

- Continued reflection of the fluency policy and the embedding of Number Sense programme.
- Evaluate use of interventions/masterclasses across the schools for maximum impact.
- Monitor consistency of teaching and support new members of staff to be able to do so.

## Monitoring and evaluation systems

At Katherine Semar we believe that the most effective way to monitor the impact of our Mathematics policy is to utilise and triangulate a broad range of moderating activities, involve our stakeholders, and apply these regularly, consistently and robustly. Through our annual Monitoring, Evaluation and Review cycle, we employ the following monitoring activities in Mathematics:

- **Lesson Observations and Learning Walks**
  - Senior Leaders and Subject Co-ordinators regularly undertake planned and unplanned lesson observations and learning walks. These have a clear focus and feedback, and findings are used to inform individual and whole-school Continuing Professional Development (CPD), School Development Planning and future monitoring activities.
- **Internal and External Assessments**
  - In line with the school's assessment policy, each year group undertakes a range of internal and external assessments as appropriate to their age and stage of development. Data from these assessments is used to inform planning, teaching, interventions, and adult support to ensure all children are making maximum progress.
- **Work Scrutinies**
  - Work scrutinies are carried out by subject coordinators, Senior Leadership Team and whole staff.
- **Pupil Progress Meetings**
  - Half-termly pupil progress meetings are held between class teachers and senior leaders. These review the progress of each child as an individual and ensure quality first teaching and relevant interventions ensure every child makes maximum progress.
- **Pupil Conferences**
  - Every child from Year Two to Six has a learning mentor from the senior leadership team. They have individual pupil conferences each term which supports children to take ownership of their own learning, review their progress and set themselves development targets.
- **Governor Visits**
  - As part of the Governors' Monitoring, Evaluation and Review cycle, lead governors in each subject, make regular visits to school to monitor progress towards the school development plan.
  - Monitoring activities include a range of teaching and learning observations, discussions with subject co-ordinators, meetings with pupils, visits to subject specific celebration assemblies, work scrutinies and subject leader reports.
- **Pupil interviews**
  - Senior staff, subject co-ordinators and governors take regular opportunities to listen to the views of pupils in relation to their experience of Mathematics at our school and their feedback actively informs subject development through our curriculum action plan.
- **Planning Scrutiny**
  - Planning scrutinies are carried out by subject coordinators and Senior Leadership Team.
- **Staff Meetings**

- Teachers to feedback at staff meetings to support the development of the mastery curriculum at Katherine Semar (what is working successfully, where can we progress and develop further?).
- **Mathematics Monitoring Days**
- Termly mathematics monitoring days led by subject leaders with a changing focus such as; planning scrutiny, book looks, learning wall evaluations, learning walks of mathematics teaching and learning, analysing mathematics data.

## SMSC

### Spiritual

- Having fun with numbers and data.
- Appreciating the beauty and perfection of mathematics.
- Recognising 'eureka' moments.
- Wondering at the beauty of order and patterns; symmetry in the natural world e.g. flowers, crystals.
- Noticing naturally occurring mathematical forms e.g. hexagons in snowflakes and in honeycombs.
- Engage in increasingly challenging problem solving activities, persevere to overcome difficulties and experience the pleasure and satisfaction in reaching a solution.

### Moral

- Developing a respect for truth.
- Understanding that statistics, in many shapes and forms, can be misused to prove a particular viewpoint.
- To investigate moral issues surrounding money and wealth.
- Encouraging sense of personal responsibility for their own learning in class and through homework.

### Social

- Acquiring skills to help them take financial responsibility.
- Collecting data in groups.
- Planning small budgets.
- Learning how to solve problems which can improve peoples' living conditions.
- Looking at practical applications of mathematics e.g. conducting and analysing surveys.
- Maths games for social interaction, taking turns and sharing.
- Recognising maths skills as a tool for society.

### Cultural

- Learning that numbers are a symbol system and different cultures have different systems (e.g. Arabic, Roman).
- Discovering mathematical patterns in art from a wide variety of cultural contexts e.g. Islamic patterns, mosaic, Greek and Rangoli patterns.
- Investigating mathematical problems using a variety of cultural contexts.
- Counting in a different language.

## Training

See subject leader folder for CPD pre- 2020.

NCETM Mastering Number (2021)

09/09/21: Mathematics vocabulary training.

16.01/22: Deep Dive Training

01/02/22: Metacognition and oracy.

29.04.21: Ian Gunn subject monitoring.

26.05.21: Understanding our brains and how it effects learning.

10.06.21/01.07.21: Book scrutiny.

Oct 2022: Voice 21 Oracy in mathematics.

03.11.22: Mathematics spotlight

19.01.23: Early mathematics training for all staff. Interactive model lesson delivered and training on use of subitising across the school.

March 2023: Using Picture Books to Promote high quality learning in maths (Herb Gisburg)

11/07/23: Festival of Education (Amanda Spielman)

2022/23: Mathematics spotlights across the trust.

Termly – Maths Subject Leader Updates (Consortium).

2023/2024: Mathematics Mastery Specialist training.

November 2023 - Number Sense training for maths leaders.

January 2024- Number Sense training for staff.

November 2024- Inset Day- focus representation and structure.