



2024-2025

Mathematics

Curriculum Offer

Stage 1 - Quality First Teaching. Every child receives at least:

- *Whole class maths lessons 5x per week with cross curricular and enrichment opportunities
- *Lessons containing CPA approach
- *Access to online subscription services for home practice with [TTrockstars](#)
- *Celebration of practice through [TTrockstars](#)
- *All children take part in number day
- *Arithmetic sessions 4x20 mins a week
- *Year 4 - times dedicated to practising timetables

Stage 2 - Additional Support

- *In class focus group with adult giving additional feedback on learning
- *Adaptive learning for those below or on Key performance Indicators
- *In class RRI
- *Live marking

Stage 3 - Intervention

During pupil progress reviews children who are still struggling to progress are identified and appropriate targeted intervention is put into place including:

- *Pre-teach
- *[Numbots](#)
- *Plus 1 / Power of 2
- *RRI

Stage 4 - Further Support

If summative assessment does not show sufficient progress being made despite intervention, liaise with SENDCO.

Intent

- At Alexandra Park Junior School, we strive to nurture self-assurance, excitement, and curiosity about mathematics among our students. Our approach to achieving this is through a mastery-based method that fosters deep understanding.

This entails:

- The majority of students progress through the curriculum content at a similar pace. We accomplish this by adapting activities, providing scaffolding resources, and offering individual support and intervention to ensure that all children can achieve year-group objectives. This enables every child to master concepts and be ready to move on to the next part of the curriculum sequence.
- Teaching is grounded in accurate assessment and tailored lessons that cater to students' needs, promoting conceptual and procedural knowledge.
- We emphasise practice, variation, and consolidation in a variety of subject areas by applying skills through cross-curricular links, real-life contexts, and connections to the wider world. Children must comprehend how mathematics relates to their economic well-being.
- We devote time to topics to embed learning and develop a deep conceptual understanding, enabling children to apply their mathematical skills through various fluency, problem-solving, and reasoning tasks.
- We instil in every child and staff member the belief that everyone can do maths and that maths is for everyone.

Our objective is for every child to leave our care as a capable and independent mathematician, possessing the confidence and skills necessary to calculate fluently, reason confidently, and solve problems efficiently. They will be thoroughly prepared in all aspects of mathematics and fully equipped for the next phase of their education.

Intent – Overview of Long Term Plan

Overview of Long-Term Plan for Maths

	Year 3	Year 4	Year 5	Year 6
Autumn	Fluency with CPA Approach Place Value Addition and Subtraction Multiplication and Division A	Place Value Addition and Subtraction Area Multiplication and Division A	Place Value Addition and Subtraction Multiplication and Division Fractions A	Place Value Addition, Subtraction, Multiplication and Division Fractions A Fractions B Converting Units Ratio
Spring	Multiplication and Division B Length and Perimeter Fractions A Mass and Capacity	Multiplication and Division Length and Perimeter Fractions Decimals A	Multiplication and Division B Fractions B Decimals and Percentages Perimeter and Area Statistics	Algebra Decimals Fractions, Decimals and Percentages Area, Perimeter and Volume Statistics Shape
Summer	Fractions B Money Time Shape Statistics	Decimals B Money Time Shape Statistics Position and Direction	Shape Position and Direction Decimals Negative Numbers Converting Units Volume	Position and Direction

Intent – Year 3 Long Term Plan

Year 3 Long Term Plan

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15
Autumn Term	Fluency with CPA Approach		Place Value				Addition and Subtraction				Multiplication and Division			Consolidation	

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Spring Term	Multiplication and Division B			Length and Perimeter			Fractions A			Mass and Capacity		

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Summer	Fractions B		Money		Time			Shape		Statistics		Consolidation

Year 3 Curriculum

We use the White Rose Curriculum which we will supplement using the NCETM resources.

Due to being a junior school, we have taken into consideration the challenges we face. Therefore, year 3 have 2 weeks at the start of the year to recap and consolidate Year 2 knowledge and learn some skills in preparations for Year 3.

Intent – Year 4 Long Term Plan

Year 4 Long Term Plan

Autumn Term	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15
	Place Value				Consolidation	Addition and Subtraction			Consolidation	Area	Multiplication and Division A			Consolidation	

Spring Term	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
	Multiplication and Division B			Length and Perimeter		Fractions				Decimals A		

Summer	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
	Decimals B		Money		Time		Consolidation	Shape		Statistics	Position and Direction	

Year 4 Curriculum

We use the White Rose Curriculum which we will supplement using the NCETM resources.

Within the sequence of learning, consolidation weeks have been accounted for. This allows children to consolidate their prior learning.

Intent – Year 5 Long Term Plan

Year 5 Long Term Plan

Autumn Term	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15
	Place Value			Consolidation	Addition and Subtraction		Consolidation	Multiplication and Division A			Consolidation	Fractions A			

Spring Term	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
	Multiplication and Division B			Fractions B		Decimals and Percentages			Perimeter and Area		Statistics	

Summer	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
	Shape			Position and Direction		Decimals			Negative Numbers	Converting Units		Volume

Year 5 Curriculum

We use the White Rose Curriculum which we will supplement using the NCETM resources.

Within the sequence of learning, consolidation weeks have been accounted for. This allows children to consolidate their prior learning.

Intent – Year 6 Long Term Plan

Year 6 Long Term Plan

Autumn Term	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13	Week 14	Week 15
	Place Value		Addition, Subtraction, Multiplication and Division					Fractions A		Fractions B		Converting Units		Ratio	

Spring Term	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
	Algebra		Decimals		Fractions, Decimals and Percentages			Area, Perimeter and Volume		Statistics	Shape	

Summer	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
	Position and Direction	Consolidation				Themed projects, Consolidation and Problem solving						

Year 6 Curriculum

We use the White Rose Curriculum which we will supplement using the NCETM resources.

Within the sequence of learning, we have moved ratio to Autumn term. This allows more time for teachers to consolidate learning before SATs.

Intent - Retrieval Flashback 4

Flashback 4 Year 3 | Week 8 | Day 5

5 × 5

1) Use the bar model to complete the subtractions.

527	
345	182

- = - =

2) Eva saves £212 and Mo saves £96
How much have they saved in total?

3) 60 tens = hundreds

4) How many faces does a cube have?

White Rose Maths

Flashback 4 Year 5 | Week 5 | Day 5

DC

1) Use <, > or = to make the statement true.

568 + 429 ○ 468 + 529

2) 6,024 - 4,515 =

3) The number line is increasing in intervals of

4) 954 ÷ 9 =

White Rose Maths

Flashback 4 Year 4 | Week 7 | Day 5

4 × 7

1) Write a subtraction to check the answer to 3,518 + 783 = 4,301

2) Find the difference between 8,342 and 2,418

3) What is 1,000 less than 9,428?

4) 3 minutes 18 seconds = seconds.

White Rose Maths

Flashback 4 Year 6 | Week 7 | Day 5

D

1) Estimate the answer to 4.91 × 12.01

2) Use <, > or = to compare.

50,000 ÷ 5 ○ 150,000 ÷ 150

3) 30,000 × 6 + 30,000 × 20 = 30,000 ×

4) 2.45 - 1.35 =

White Rose Maths

Flashback 4 starter activities to improve retention.

Q1 is from the last lesson;

Q2 is from last week;

Q3 is from 2 to 3 weeks ago;

Q4 is from last term/year.

There is also a bonus question on each one to recap topics such as telling the time, times-tables and Roman numerals.

Arithmetic

Impact

We use these arithmetic tests for early morning work. This supports the children to have a good, fluent knowledge of arithmetic to be successful in maths. These tests allow methods to be continually revisited and revised so that gaps are found and filled. If children are struggling with the questions there are some targeted, subject specific arithmetic sheets with a guide to support children's understanding further.

Implementation

Q 1-9 – Monday

Q 10 – 18 – Tuesday

Q 19 – 27 – Wednesday

Q 28 – 36 – Thursday

Input data for the week - Friday

These arithmetic sessions are to be evidenced in Arithmetic Maths books which the teachers will mark with the children and take a score out of 40 at the end of the week and record this on the given excel spreadsheet. Whole class marking ensures this is a manageable way for staff to address misconceptions. Deeper misconceptions can be addressed through RRI.

Impact

These arithmetic session will support the children with their automaticity in maths. It helps to develop the children's problem solving skills which promotes faster calculations, improves memory skills and prompts children to look for patterns or connections in number.

1	$3 \times 2 =$			1
2	$80 \div 10 =$			1
3	$7 \times 3 =$			1
4	$24 \div 3 =$			1
5	$3 \times 4 =$			1
6	$16 \div 4 =$			1
7	$11 \times 8 =$			1
8	$64 \div 8 =$			1
9	$405 \div 10 =$			1

10	$687 - 10 =$			1
11	$17 + \underline{\quad} = 20$			1
12	$20 - 6 =$			1
13	$5 + 3 + 6 =$			1
14	$659 - 263 =$			2
15	$463 + 238 =$			2
16	$45 + \underline{\quad} = 76$			1
17	$56 - \underline{\quad} = 38$			1
18	$\frac{4}{10} + \frac{3}{10} =$			1

19	$\frac{12}{15} - \frac{3}{15} =$			1
20	$586 + 6 =$			1
21	$46 \times 4 =$			2
22	$395 + 100 =$			1
23	$693 - 100 =$			1
24	$6 \div 10 =$			1
25	$£2 + £5 =$			1
26	$50p - 32p =$			1
27	$525 + 70 =$			1

28	$95 \div 5 =$			2
29	$693 + 300 =$			1
30	$575 - 3 =$			1
31	$395 - 80 =$			1
32	$942 - 700 =$			1
33	$453 + 235 =$			1
34	$583 - 152 =$			1
35	$4 \times \underline{\quad} = 36$			1
36	$60 \div \underline{\quad} = 12$			1

Implementation

At Alexandra Park Junior School, we utilise the White Rose Maths scheme (WRM) to enhance our curriculum delivery. This program empowers our teachers to thoughtfully plan and lessons that cater to the individual developmental needs of our students. Our teachers foster a collaborative and independent learning environment, while leading by example and modelling mathematical concepts in daily lessons. With this approach, our students are able to revisit and progressively develop their mathematical skills at a level that is age-appropriate and personalised to their unique needs.

- We have a framework in place to ensure that children's progress is monitored and targeted for intervention where required. This is done through pupil progress meetings, where pre-teach interventions are based on assessments. Depending on the assessment results, some children may require additional support in the form of Numbots intervention. Pre-test assessments are also used to help teachers understand their pupils' existing knowledge and skills.
- At the start of each lesson, children revisit previously taught content through "flashback 4's" to strengthen their knowledge and address any gaps.
- The main teaching sessions start with an introduction to the TLC, including steps to success and key vocabulary for the day. This vocabulary is added to the working wall.
- Paired tasks are completed using a "ping-pong" approach, with short bursts of pupils practicing together with short bursts of teacher input and discussion. These tasks are taken from the White Rose PowerPoints and encourage valuable paired discussion.
- After the paired tasks, children work independently on questions. Each week consists of 3 lessons, which are evidenced in books, and 2 practical lessons.
- Practical sessions are recorded in Class Active Learning Books.
- At the end of each session, children work through their answers with the rest of the class to address misconceptions. Children mark their questions with pink and green highlighters, and teachers can use this to plan same-day interventions (shown through the children's use of purple pen) to ensure all children are ready to progress.

We believe in building staff understanding of the curriculum's expectations, and we achieve this through regular CPD provided by the subject leader, collaborative lesson study (Trios), the NCETM, and maths hub.

Ping Pong Structure

Small steps sequenced into CPA approach. The 2 practical lessons need to be marked as a whole class with evidence of purple pen and recorded in maths folder. These will be monitored in spotlights.

- 1. Concrete** - ALL children are using the resources to build the number sentence. – This allows SEND children to be involved and supports ALL children with bridging.
- 2. Pictorial** – ALL children will use the picture on the ping pong to support their learning. – Some children may still need to use a place value chart at this point.
- 3. Abstract** – ALL children will be to access ping pong 3 from the previous quality first teaching. – Some children will still need to use visuals to aid learning.
- 4. Abstract** – Whilst everyone completes this ping pong, this may be where your SEND children will start their worksheet with scaffolds and visuals.

L3

Ping Pong:
W.W.Y.P to answer and explain these questions

Use the counters to build the number sentence on your **place value** chart.

$0.7 + 0.5 =$

Ones	Tenths	Hundredths

What is the same? What is different?

$7 + 5 =$

$0.7 + 0.5 =$

The answer is _____ because _____

Mathematical talk

- What do you notice?
- How can your own knowledge help you?
- How could you use partitioning to help find a complement to 10? What number is left?

Use the **place value** counters to answer the question.

$0.8 + 0.7 =$

Ones	Tenths	Hundredths
	8	
	7	

What is the same? What is different?

$8 + 7 =$

$0.8 + 0.7 =$

The answer is _____ because _____

Mathematical talk

- What do you notice?
- How can your own knowledge help you?
- What do you notice about the digits in each 1?
- How could you use partitioning to help find a complement to 10? What number is left?

Answer these questions with your partner: What **method** have you used?

$1.3 + 0.7 =$

1	.	3	
+	.	7	

What is the same? What is different?

$_ + _ =$

$_ + _ =$

The answer is _____ because _____

Mathematical talk

- What do you notice?
- How can your own knowledge help you?
- How could you use partitioning to help find a complement to 10? What number is left?

Answer these questions with your partner: What **method** have you used?

$0.78 + 0.47 =$

$0.68 + 0.56 =$

What is the same? What is different?

$_ + _ =$

$_ + _ =$

The answer cannot be _____ because _____
Therefore, the answer must be _____ because _____

Mathematical talk

- What do you notice?
- Which column do you start adding from?
- What is another way you can tackle this question?

Examples of Ping Pong

149
Measure and explain these angles

Label each angle with the correct name

Have a Think **11** **Ping Pong**

acute = more than 90
obtuse = less than 90
right angle = 90

acute = Less than 90°
Obtuse = more than 90°
Right angle = 90°

Sort the angles into acute, obtuse or reflex

Acute	Obtuse	Reflex
12° 87°	151°	171°

What facts will help you?

Classify angles A to G as acute, obtuse, reflex or right angle

Have a Think **11** **Ping Pong**

Are the statements always true, sometimes true or never true?

Obtuse angles are greater than 90° but less than 180°
Reflex angles are greater than 180°

It is always true because if it is 90° or less it can't be a right angle or an acute angle. It is only true if it is over 180°.

150
Ping Pong
Measure and explain these angles

What are the coordinates of A and B?

What are the coordinates of the other point?

Have a Think **11** **Ping Pong**

The answer is _____ because _____

Work out the missing coordinates

The points are 2 of 4 vertices of a rectangle. Plot the first vertex. What are the coordinates?

Have a Think **11** **Ping Pong**

The answer is _____ because _____

151
Ping Pong
Measure and explain these angles

Plot the points on the coordinate grid

(2, 4)
(4, 4)
(4, 2)
(2, 2)

Join the points to make a polygon. What polygon have you drawn?

The answer is a rectangle because a rectangle has 4 sides.

152
Ping Pong
Measure and explain these angles

Label each angle with the correct name

Have a Think **11** **Ping Pong**

acute = more than 90
obtuse = less than 90
right angle = 90

acute = Less than 90°
Obtuse = more than 90°
Right angle = 90°

Sort the angles into acute, obtuse or reflex

Acute	Obtuse	Reflex
87°	151°	171°

What facts will help you?

Classify angles A to G as acute, obtuse, reflex or right angle

Have a Think **11** **Ping Pong**

Are the statements always true, sometimes true or never true?

Obtuse angles are greater than 90° but less than 180°
Reflex angles are greater than 180°

It is always true because if it is 90° or less it can't be a right angle or an acute angle. It is only true if it is over 180°.

153
Ping Pong
Measure and explain these angles

What is the value of x?

$70 + 20 = 90$

The answer is 90 because $70 + 20 = 90$

Work out the missing angles

$90 + 110 = 180$

The answer is 110 because $90 + 110 = 180$

Work out the missing angles

Tiny has written some number sentences about this diagram. How many more can you find?

$a + b + c + d + e = 360$
 $d + e = 180$

Write some other number sentences about this diagram.

The answer is _____ because _____

Ping pongs should be marked as a class, evidence of pink and green highlighters and purple pens for corrections.



Resources

- Manipulatives are stored in labelled boxes in the classroom for the children to use. Children should be encouraged to use the manipulatives themselves when needed. This of course should be modelled by the class teachers and teaching assistants.

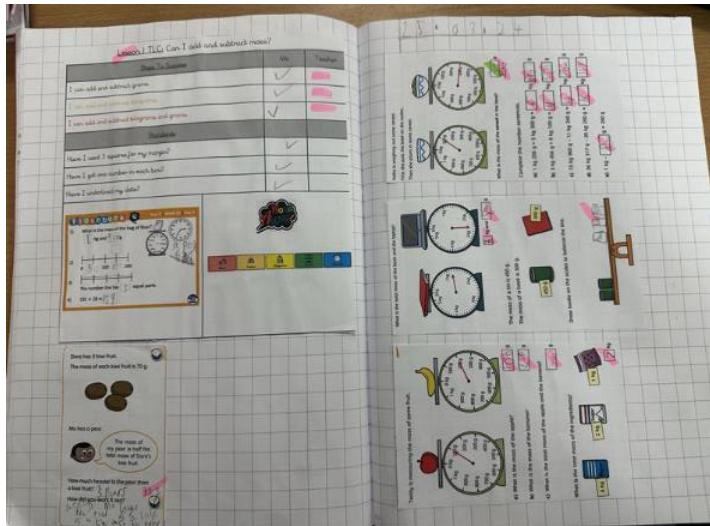
Impact

The aim of our mathematics curriculum is to help children understand the relevance and importance of real-world concepts. By the end of Year 6, as they transition to secondary school, we want our students to have developed efficient and accurate mathematical skills that they can use to calculate effectively. Our goal is to instil in children the understanding that maths is a vital life skill that they will rely on in many areas of their daily lives. At Alexandra Park Junior School, we promote maths as an exciting and enjoyable subject in which children can investigate and ask questions to support their understanding. When we evaluate the work in children's books, we can clearly see the high quality of mathematics throughout the school. Children can confidently talk about their work in maths lessons and apply age-appropriate skills and knowledge in their work. They are willing to take risks and learn from their mistakes, showing both perseverance and resilience in their mathematical learning.

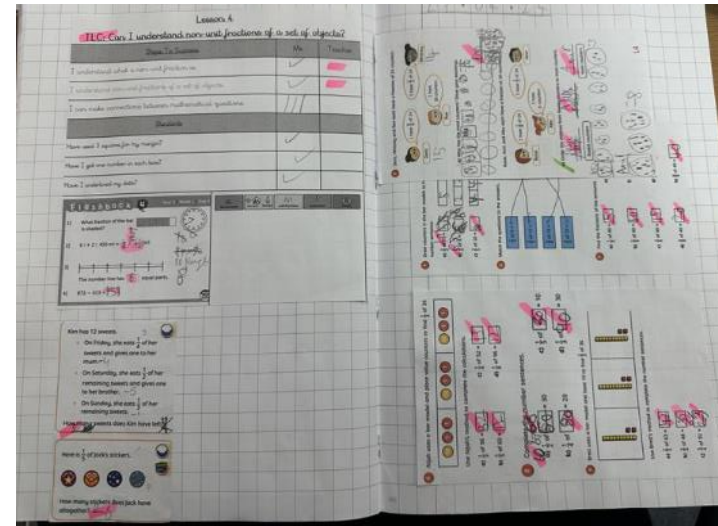
Impact may be measured in a variety of ways, including:-

- Book scrutiny
- Planning scrutiny
- Learning walks
- Lesson observations and pop-ins
- Staff and pupil voice
- Data analysis

Impact - Year 3

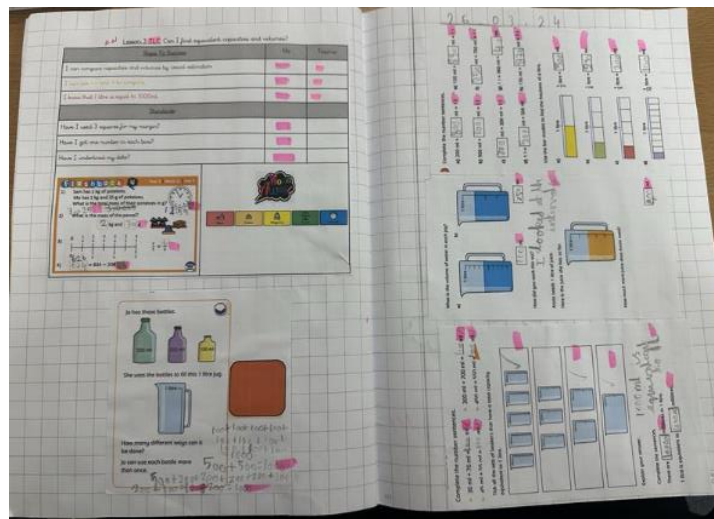


I like learning different things about maths. Sometimes I use a fraction wall or counters to show my working out.

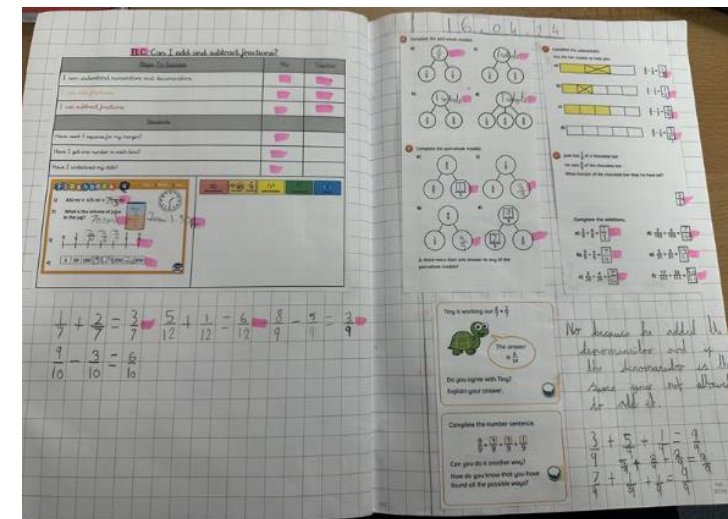


We have been learning about fractions, how to make a whole so that, if the denominator is the same it makes a whole, we have been adding and subtracting fractions.

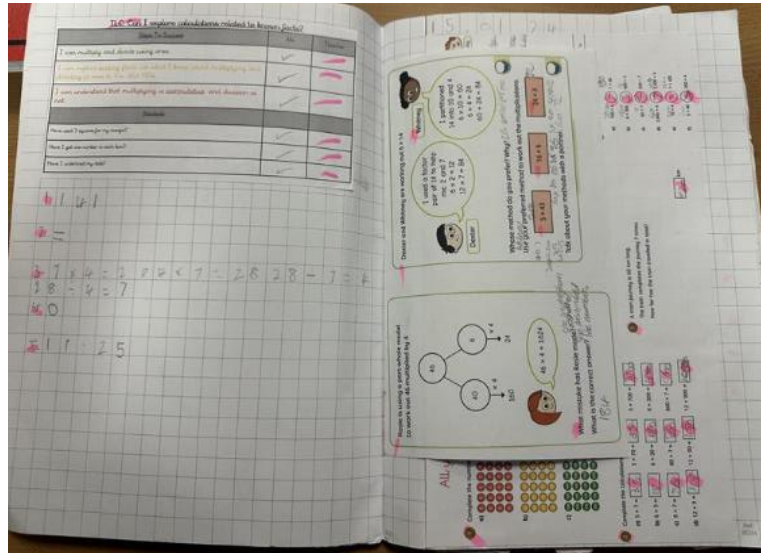
In ping pong we work with our partners, we have to do our worksheet on our own.



RRI helps me in my work.



Impact - Year 4

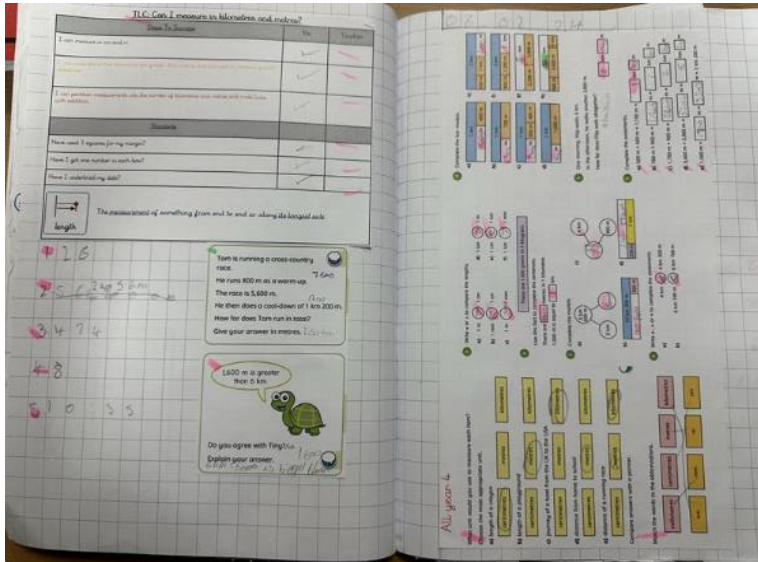


The teacher helps us, and we correct our work with purple pen.

I have found decimals, tenths and hundredths. easy because we must divide by 10.

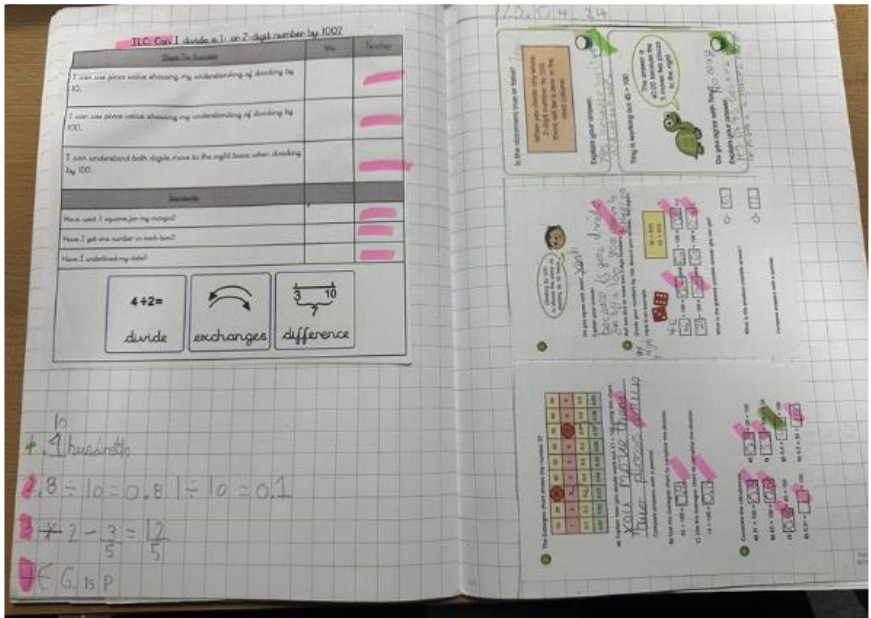
We know how we have done in our post test, and it is stuck in our books/

I use the maths equipment to help me.



When I get questions wrong my teacher helps me through RRI.

We do retrieval at the beginning of a lesson, and I find it a bit easy



I like learning and doing my times tables. I like column addition, multiplication, division because it helps me a lot.

It is ok to make mistakes because you learn from them.

Impact - Year 5

I like to calculate things

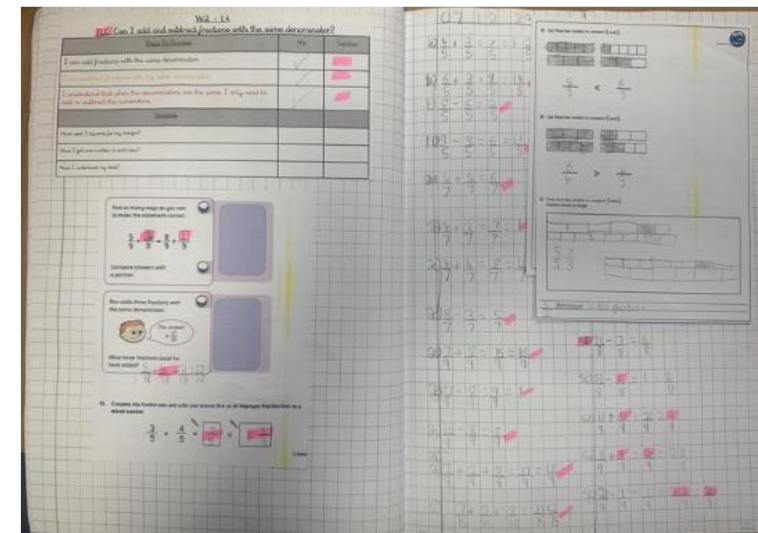
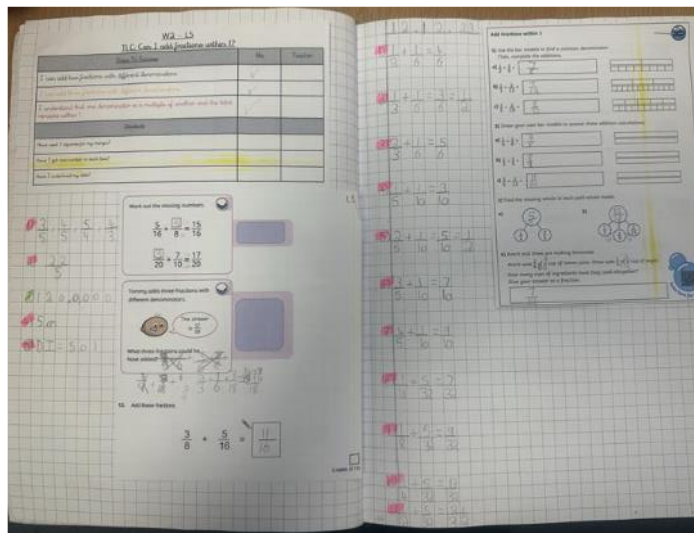
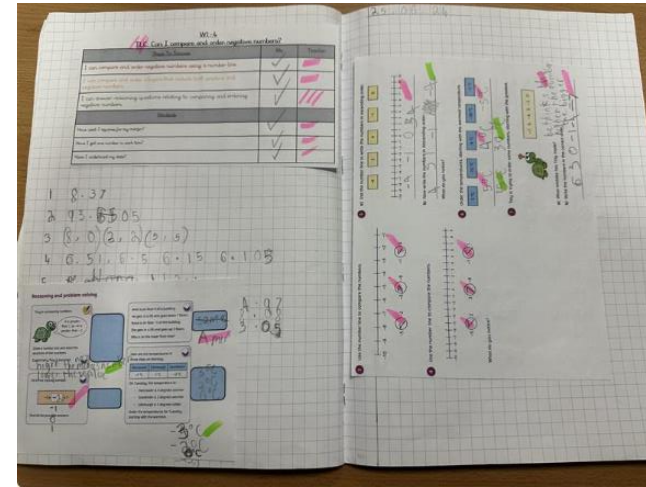
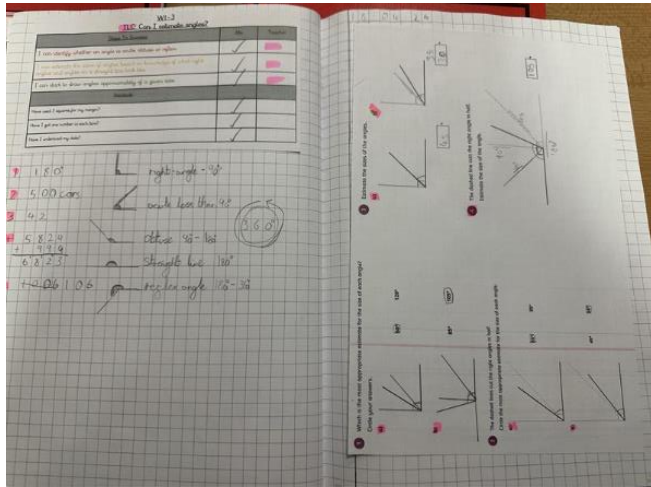
We use the maths box which has all the counters and cubes and base 10 which helps us. We have our own one on each table.

I now know that reflex angles are above 180 degrees and below 360 degrees. I thought an obtuse angle was 180 degrees before.

I found the fractions easy because all you needed to do was convert them. Perimeter was easy.

Fractions, at the start I was confused but I understood it at the end. My partner and the teacher were helping me. Demonstrations on the board, RRI and ping pong with my partner helps me.

I am challenged by my teacher through Problem solving.



Impact - Year 6

If I get red or orange on my pre-test results, it makes me determined to get more on my next test. We go through it as a class to help my understanding.

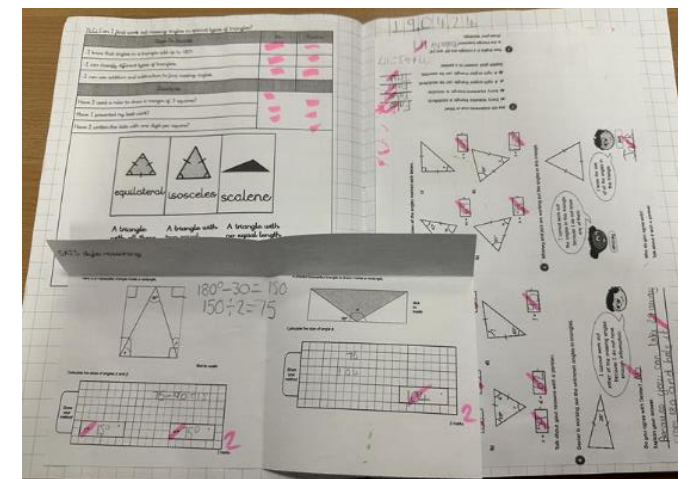
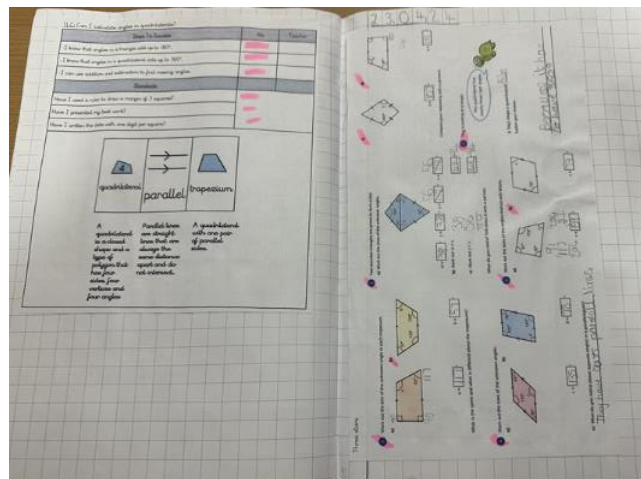
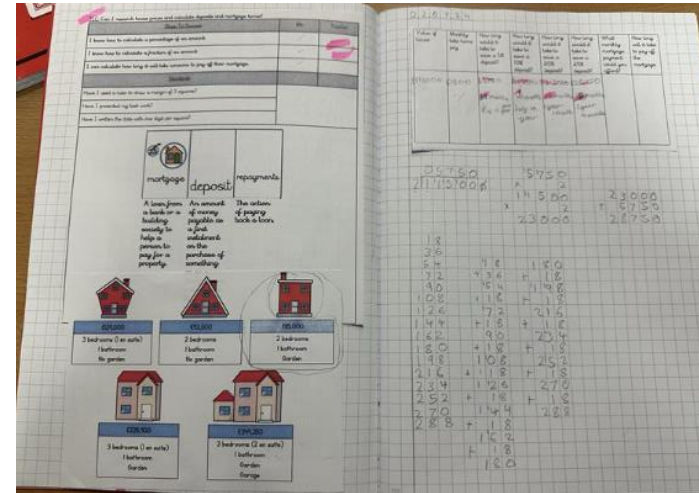
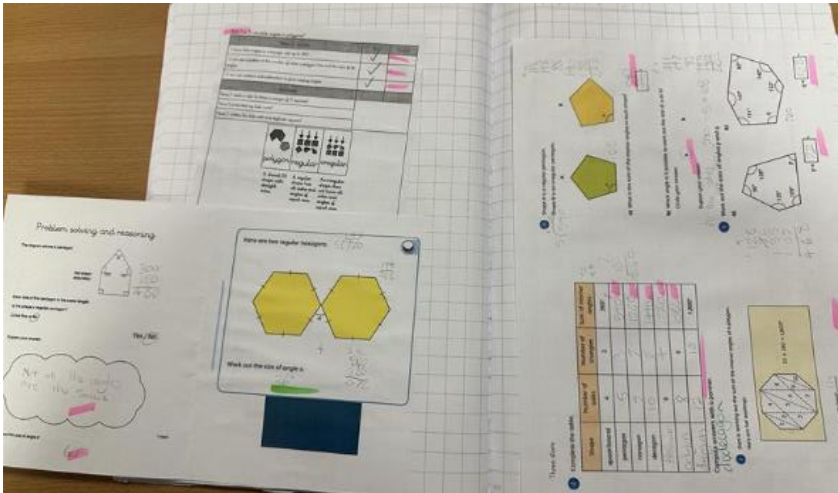
Maths is fun and I like to challenge myself to find the right answer.

Pre teach helps me to answer the questions and gave me confidence to tackle work.

I liked learning about finding the area and perimeter of shapes, I like the problems in lessons.

Multiplying decimal numbers was hard but I feel confident now in answering because the teachers encourage us.

Most children have had RRI and they see the value in it.

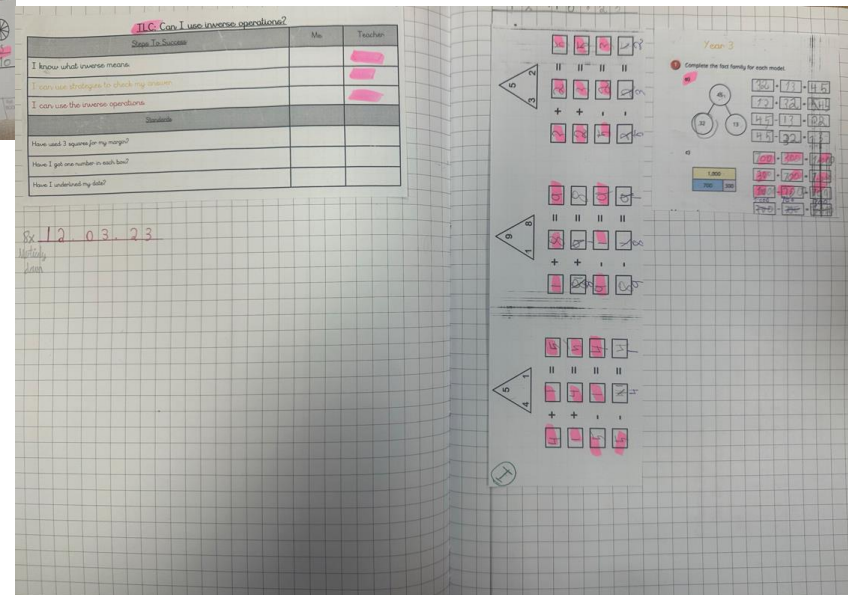
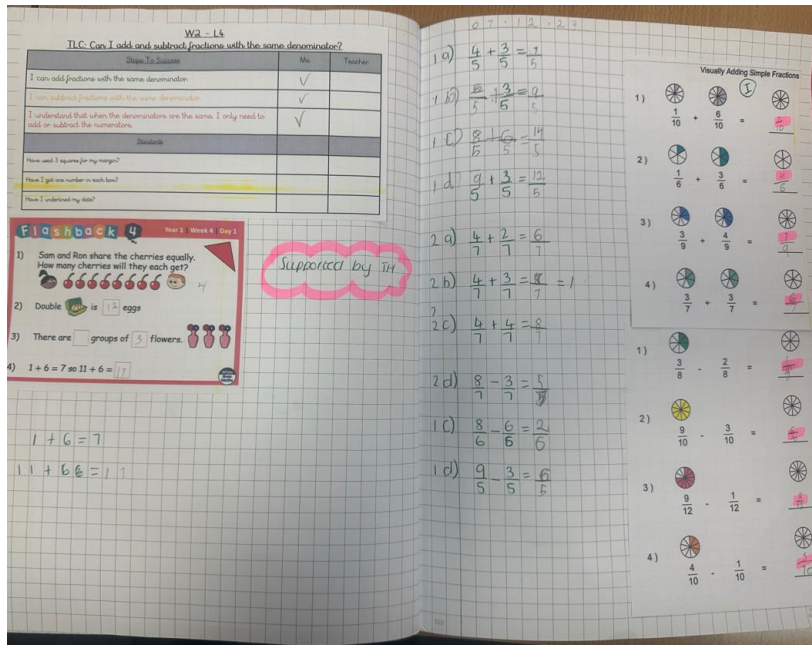


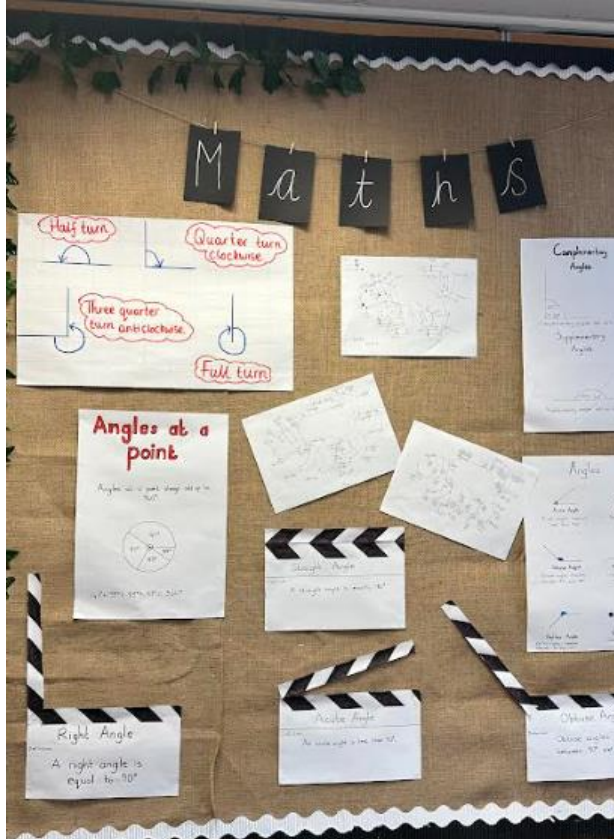
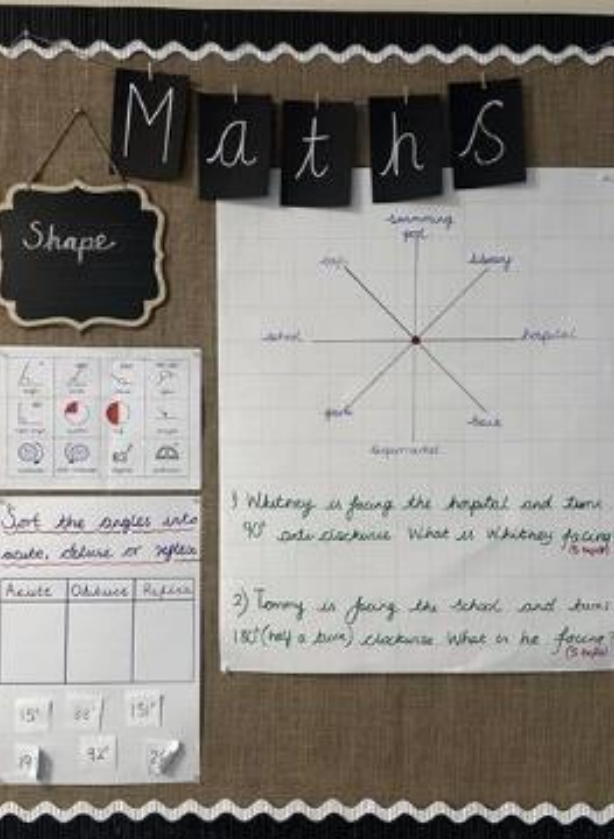
Impact - SEND

Kagan structures, can have a massive impact on SEND children's learning.

Children can still access the current year group curriculum at their level. For instance, a child worked on inverse operations with single digits and even attempted 2-digit and 3-digit numbers.

This is also evident in the child's work whilst adding fractions. The child focussed on adding and subtracting within 10 while working on fractions. Addressing gaps in learning whilst keeping the child up with the curriculum.





Examples of Working Walls