



Maths statement of intent

Maths is essential to everyday life, whether it be working out the cost of shopping or working out how long you have got before your favorite TV show. We use Maths every day and as a result, we ensure that our children are fluent in the fundamentals of Mathematics and are able to apply these skills to reason and solve problems. We follow the National Curriculum and ensure that year group age related expectations are planned for using White Rose.

How do we teach Maths at Ashleworth C of E primary school?

At Ashleworth we teach stimulating and engaging Maths lessons every day in both classes. We make sure our lessons are challenging for all children through our 'Do it, Twist it, Solve it' approach.

'Do it' tasks develop children's fluency of skills. This includes using mathematical methods accurately and recalling facts efficiently. 'Twist it' tasks encourage children to use the skills learnt in the 'Do it' task to reason logically. This includes proving, explaining and justifying answers using correct mathematical vocabulary. 'Solve it' tasks require children to use their skills to solve problems with perseverance.

We also have a problem solving session each week, which focuses on a specific problem solving skill.

Examples of children's learning

IBM: divide a 3-digit number by a 2-digit number using long division when there are no remainders.

Do it

1) $645 \div 15$

2) $735 \div 15$

3) $375 \div 15$

4) $406 \div 14$

5) $812 \div 14$

Twist it

Which is the odd one out?

1) 480 ÷ 15

2) 448 ÷ 14

3) 504 ÷ 14

Solve it

1) Alice has collected 435 stamps. She has 15 pages in her stamp book. How many stamps will be on each page? Will there be any remaining?

2) A toy factory makes 518 toys a day. There are 14 machines making the toys. How many toys does each machine make?

Handwritten work shows long division for 15 into 645, 735, 375, 406, and 812. It also shows calculations for the twist and solve tasks, such as 435 ÷ 15 = 29 and 518 ÷ 14 = 37.

IBM: use BIDMAS to calculate an answer.

Do it

Use BIDMAS to calculate.

1) $8^2 + 9 + (19 - 7)$

2) $(8 + 9) + 6^2$

3) $7^2 - (35 + 12)$

4) $583 - (43 \times 4)$

5) $(483 \times 5) - 115$

6) $6^2 + (255 \div 3)$

Twist it

Daniel completed the following calculation and got the answer 162.

$32 + 9 \times 4 - 2$

$32 + 36 - 2$

$62 - 2$

60

Can you explain what he did and where he made the mistake?

Solve it

Use the following 3 numbers to create a calculation with the answers below.

3, 4, 9

33

39

24

63

Handwritten work shows calculations for the do it tasks, such as 8^2 + 9 + (19 - 7) = 89 + 9 + 12 = 110. It also shows a critique of Daniel's calculation, pointing out that he should have done 9 x 4 first, resulting in 32 + 36 - 2 = 66. The solve it task shows calculations like (4 + 3) x 9 = 27 x 9 = 243.

Our Maths working walls

In both classrooms, we have a Maths working wall. These display small steps of learning for the current unit of work which shows each child what they will be learning next. We make sure Mathematical vocabulary is also displayed to encourage children to use it independently when justifying and explaining an answer.

*Picture of learning wall.

Regular skills practice

We have a daily arithmetic session where each child completes 'Rainbow Maths'. This gives children the opportunity to consolidate and revisit concepts.

RAINBOW MATHS					GREEN (8)				
Monday	Tuesday	Wednesday	Thursday	Friday	Monday	Tuesday	Wednesday	Thursday	Friday
1 1x5 5	1 3x5 15	1 8x5 40	1 6x5 30	1 35+5 71	2 2x5 10	2 5x5 25	2 2x5 10	2 5x5 25	2 5+5 11
3 3x5 15	3 6x5 30	3 4x5 20	3 8x5 40	3 10+5 21	4 4x5 20	4 8x5 40	4 5x5 25	4 20+5 4	4 25+5 51
5 5x5 25	5 9x5 45	5 6x5 30	5 10+5 2	5 15+5 31	6 6x5 30	6 10x5 50	6 3x5 15	6 45+5 8	6 40+5 81
7 7x5 35	7 4x5 20	7 0x5 0	7 5+5 1	7 55+5 111	8 8x5 40	8 7x5 35	8 1x5 5	8 30+5 8	8 20+5 41
9 9x5 45	9 11x5 55	9 5x5 25	9 25+5 5	9 60+5 121	10 10x5 50	10 12x5 60	10 4x5 20	10 25+5 5	10 45+5 91
11 11x5 55	11 1x5 5	11 8x5 40	11 4x5 20	11 30+5 61	12 12x5 60	12 2x5 10	12 7x5 35	12 10x5 50	12 50+5 101
13 3x5 15	13 0x5 0	13 9x5 45	13 10x5 50	13 12x5 60	14 9x5 45	14 9x5 45	14 12x5 60	14 7x5 40.5	14 6x5 30
15 5x5 25	15 7x5 35	15 8x5 40	15 60+5 12	15 8x5 40	16 7x5 35	16 5x5 25	16 6x5 30	16 40+5 8	16 2x5 10
17 1x5 5	17 7x5=10 2	17 2x5 10	17 55+5 11	17 7+5=12 60	18 6x5 30	18 7x5=20 4	18 4x5 20	18 15+5 7	18 7+5=9 45
19 11x5 55	19 7x5=5 1	19 11x5 55	19 50+5 10	19 7+5=4 20	20 4x5 20	20 7x5=40 8	20 3x5 15	20 35+5 7	20 7+5=7 35
21 10x5 50	21 9x5 45	21 12x5 60	21 3x5 15	21 5x5 25	22 0x5 0	22 1x5 5	22 12x5 60	22 12x5 60	22 0x5 0
23 12x5 60	23 1x5 5	23 5x5 25	23 8x5 40	23 7x5 35	24 2x5 10	24 3x5 15	24 8x5 40	24 9x5 45	24 4x5 20
25 11x5 55	25 10x5 50	25 3x5 15	25 6x5 30	25 12x5 60					

Outside of the Maths lesson, we practice our times tables. By the end of Key Stage 1, we aim for children to be able to recall their 2,5,10 and 3 times table. By the end of Year 4, children will be able to recall times tables up to 12 x 12.

How do we assess Maths?

We assess Maths on a daily basis through teacher's marking and children's self-evaluation. This information is then used to plan the subsequent lesson to ensure every child's needs are built on and met. Each child in Year 2-6 has a learning wall in their Maths book which outlines age related expectations. These are updated regularly by teachers and children.

Year 4 Maths Learning Wall

Number and place value	I can add and compare numbers beyond 1000	I can recognise the place value of each digit in a 4-digit number	I can count on and back in multiples of 4, 8, 25 and 100	I can read Roman numerals to 100	I can count back through zero	I can compare and order decimals to two decimal places	I can round numbers to the nearest whole number, 10, 100 or 1000
Calculation	I can add and subtract numbers up to 4-digits using a formal written method	I can add and subtract numbers with up to 1 dp	I can multiply 2-digit and 3-digit numbers by a one-digit number	I can recall multiplication and division facts for all tables up to 12 x 12	I can divide 3-digit numbers by a 1-digit number		
Fractions	I can add and subtract fractions with the same denominator	I can count up and down in hundredths	I can find an equivalent fraction from a given fraction	I can write decimal equivalents for 1/4, 1/2 and 3/4	I can multiply and divide 2-digit numbers by 10 and 100		
Measurement	I can calculate using money in pounds and pence	I can convert between different units of measurement (eg km to m and hour to minute)	I can read, write and convert time between analogue and 24 hour digital clocks	I can convert between hours/minutes, years/months, weeks/days	I can find the area of a rectilinear shape by counting squares	I can measure and calculate the perimeter of a rectilinear figure, in cm and m	
Geometry	I can identify lines of symmetry in 2d shapes	I can compare and classify polygons based on their properties	I can identify acute and obtuse angles and order them by size	I can plot specific coordinate points to draw a polygon	I can describe positions as coordinates in the first quadrant		
			Statistics	I can interpret and present discrete and continuous data in bar and line graphs for example	I can solve comparison and difference problems from a range of charts and tables		

Maths is assessed 3 times a year using Milestones. Milestone 1 is for years 1 and 2; Milestone 2 is for years 3 and 4 and milestone 3 is for years 5 and 6. From this, we can see any gaps in individual children's progress and then support for the identified children is planned for the following term.

Reception are assessed against the Early Learning Goals.

Children are assessed at the end of Years 2 and 6 for the end of Key Stage Statutory assessments.