

# Maths at AJA



### Maths Lessons:

We view the 'concrete, pictorial and abstract' process in maths less as linear, but more triangular. To develop a secure and conceptual understanding of mathematical concepts, pupils should be able to move between these three key areas at any point in their learning.

#### their learning.

Arithmetic:						
	*	🔀 🔀	$\star \star \star$			
Autumn 2	10 x 0.2	100 x 0.2	1000 x 0.2			
Autumn 1	3⁄4 + 2/3	<sup>3</sup> ⁄ <sub>4</sub> + 4/5	<sup>3</sup> ⁄ <sub>4</sub> + 1 4/5			
Last year	4.4 + 0.5	4.4 + 0.05	404 + 0.44			
Surprise	20 x 3	27 x 3	270 x 30			
Testbase special	205-80	205-8	200.5-8			



Every maths lesson is opened with arithmetic practice. Pupils need to develop and use – with confidence – the operational strategies (addition, subtraction, multiplication and division). This allows our pupils to apply their thinking skills to more challenging areas

#### <u>Assessment:</u>

To monitor pupil attainment and progress, we deliver a range of assessments:

- Termly NFER Assessments
- Termly Sumdog diagnostic checks
- Termly Times Tables Rockstars baseline checks
- Performance in class

#### Environment:

Maths Working Walls allow children to see written methods for calculations, while absorbing the mathematical language used in a particular area of the subject.

Every classroom across the school will have our calculation policies for the four areas clearly displayed:

## HTML strategy:

		12 × 1	27 2	
	7	8	9	
2		5	6	
INT		2	3	
	Delete	0	Enter	0 22

At AJA, we use technology and our knowledge of computing to enhance all of our learning. Within Maths, we use Times Tables Rockstars in order to assess and develop the children's skills and knowledge of their times tables.

In order to develop reasoning and problem-solving across the Academy, we use an online platform called 'Sumdog.' This is a low-stakes quiz style platform that allows pupils to enhance their skills in maths whilst playing fun games.



We hold weekly competitions within Sumdog and Times Tables Rockstars. The pupils and classes with the highest engagement earn certificates and prizes!

$\frac{1}{4} + \frac{2}{4} = 6$	Number Line +10 $2.3 + 3.2 = 55$ 23 - 33 - 45 - 53 - 55	Barbiticning 23+32-55 (Tens) 20+30=50 (mm8) 3+2=5 (Telu) 50+5=55	$\frac{\frac{\text{Pictorial}}{8-3+5}}{-\frac{6}{6}} = \frac{6}{6}$	Number Line 4 8 - 15 = 33 15 25 35 45 45 15 +10 +10 +3	$\begin{array}{c} \underline{\text{Bottlinning}} \\ \text{H}_8 - 15 = 33 \\ \text{(Ten)} & \text{Ho} - 10 = 30 \\ \text{(ans)} & \text{g} - 5 = 3 \\ \text{(Tea)} & 30 + 3 = 33 \end{array}$	131/31/34 5 10 15	Amays 3 × 5 = 15 × 5 3	Grid Mathed 214 x b x  20 4 b  20224-1444 (1996) (1997) (1	Patenal 	15-3-5 5 × 0-15	Bar Model 20 ÷ 4 = 5
123.02	Addition &	375	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Subtraction	24-?=15	432.1	Nultiplicatio 2.374	n 88 365	210	Division	6)738 - <u>600</u> (s+10)
+368.10	$\frac{q}{3} + \frac{21,234}{11,2713}$	400 (10136) 507	- 7.648 - 54.749 Column	If I have \$5, and I agend \$3.28, article annual I have \$\$60.?	24 15 Bar Madel	12 96.3 4321.0 5,617.3 Column (decama)	* 32 4748 71220 75,968	* 2 ***** ***** ***** ***** ***** ***** ***** ***** ***** ******	11)2,349	6)9426	$-\frac{1}{10} \frac{6}{(4 \times 3)}$ $-\frac{1}{10} \frac{6}{(4 \times 3)}$
Column	Column	Expanded Column	Lound	Einding Change		sometric (accurac)	Colume	Expanded Column	Short Division	(bus_step)	Long Division

The main purpose of a working wall is to support children in their current learning and enable independence. If the wall is built with the children at the point of teaching, time spent displaying things on the wall outside of teaching time is minimised and what is on there is genuinely relevant. Here's an example of a maths working display:





		0
time graph	compare	label
scale	difference	x-axis
How many more?	Sum	y-axis
data	discrete data	continuous data
, line graph	bar chart	pictogram