Maths – Progression Planning

Intent: Within an environment which promotes high aspirations for all, we intend to provide an innovative mathematical offer. MetaMaths is a unique approach that is used to help children's mastery of maths. The approach supports the skills and developmental needs of each child at an individual level, drawing on their interests and fascinations, whilst incorporating metacognitive awareness. The language and thinking that underpins MetaMaths mastery is intended to develop a deeper level of competency and confidence when applying maths to everyday experiences. Our integration of maths with STEM learning, indoors and out, is intended to provide context and purpose to children's mathematical application and reflections. Our intention is to fuse resilience and intrigue into the functionality of maths, as well as into the critical thinking skills needed to solve problems.

Implementation: MetaMaths is an innovative and unique approach to maths. This is an evidence based approach, implemented as a result of expert knowledge. The integration of metacognition and maths, enables children to consciously select thinking strategies to solve mathematical problems. MetaMaths is implemented across all environments and within all subjects. This approach is based on an understanding that children will better transfer knowledge to long term memory, if key concepts connect with both old and new learning. Building on children's interests and fascinations, supports the integration of STEM learning into the MetaMaths framework. Implementation of progression plans, enable teachers to use assessment as a tool for informing teaching and closing the gaps.

All of this is achieved through a Reggio Emilia style approach to our curriculum implementation. A belief that children access their learning through many different languages, inspires a creative and diverse approach to teaching.

Through our focus on cognitive challenge and high aspirations for all, our enhancement opportunities are as follows: MetaMaths Target Time – supporting different levels of attainment, Maths through children's literature, Musical maths, Maths Sentence Builders, Aspiration Group and Maths QUEST sessions.

MetaMaths and the EYFS - Alfreton Nursery School

Progression Stages	EYFS Assessment	ANS Skills progression	Transition GLD	MetaMaths A - Z Progression			Term of focus	Enhance.
	Stacks blocks and puts things inside other, taking them out again	Notice similarities and differences	Positional language	C	D	T	Autumn 1 STEM	AH 3rd term all levels, all term LA 3rd term Closing the gap JW 2nd term Closing the gap
	Compares amounts - more, lots, same	Compare what is seen	Measure language	C	D	T		
	Takes part in number finger rhymes	Verbally sequence numbers 1-5	Counting 1:1 to 5	L	A	B	Autumn 1 Maths	
	Counting behaviours and saying some numbers in sequence	Verbally sequence numbers 1-5	Counting 1:1 to 5	L	A	B		
	Autumn 1 Core vocabulary: **Number names, count, how many?, more, less, big, small, next, before**							
	Exploring spatial words when climbing and hiding	Uses describing words	Positional and measure language	Z	E	Q	Autumn 2 STEM	AH 3rd term all levels, all term LA 3rd term
	Build with a range of resources	Notice similarities and differences	Positional and measure language	Z	E	Q		

Skill differentiation is taught through implementing the 5 Principles of Counting.

	Reacts to changes in amount of up to three objects	Notice similarities and differences	Counting 1:1 to 5 Cardinal Principle	U	E	T	Autumn 2 Maths	Closing the gap JW 2nd term Closing the gap
	Beginning to count up to five objects, often missing numbers or objects	Count and match 1-5	Counting 1:1 to 5 Cardinal Principle	U	E	T		
	Autumn 2 Core vocabulary: **Number names, count, how many?, more, less, big, small, next, before, altogether, same, different**							
	Compares sizes and weights using gesture and language	Use language of big and small	Understand measure and position	C	D	T	Spring 1 STEM	AH 3rd term all levels, all term LA 2nd term Closing the Gap JW 4th term Closing the gap
	Explores 2D & 3D shapes - round, flat, sides, corner . . .	Name simple 2D shapes Name one or more 3D shapes	Recognise 2D shapes	C	D	T		
	Compare quantities - fewer than . . .	Talk about measurement more broadly	Understand measure and position	C	D	T		
	Says one number for each item in order to 5	Count and match 1-5	Count 1:1 to 5 Cardinal principle	O	S	K	Spring 1 Maths	
	Shows finger numbers up to 5	Count and match 1-5	Count 1:1 to 5 Cardinal principle	O	S	K		
	Cardinal principal - final number represents total	Understand cardinal principle	Count 1:1 to 5 Cardinal principle	O	S	K		

Skill differentiation is taught through implementing the 5 Principles of Counting.

	Spring 1 Core vocabulary: **Number names, altogether, 2D shape names, bigger, smaller, longer, shorter, inside, on top of, underneath**							
	Compares size, weight, length and capacity	Talk about measurement more broadly	Understand measurement	G	W	V	Spring 2 STEM	AH 3rd term all levels, all term LA 2nd term Closing the gap JW 4th term Closing the gap
	Notices patterns and makes patterns	Continue a simple repeating pattern	Understand, continue and create a repeating pattern	G	W	V		
	Understands positional language without gesture	With support uses positional language	Positional language and repeating pattern	G	W	V		
	Fast recognition of up to 3 objects	Subitize to 3	Subitize to 3	U	E	X	Spring 2 Maths	
	Links numerals and amounts to 5	Understands the written number	Count 1:1 to 5 Cardinal principle	U	E	X		
	Experiments with own symbols marks and numbers	Understands the written number	Counting 1:1 to 5 Cardinal Principle	U	E	X		
	Solve real life number problems to 5	Can apply understanding	Counting 1:1 to 5 Cardinal Principle	U	E	X		
	Spring 2							

Skill differentiation is taught through implementing the 5 Principles of Counting.

	Core vocabulary: **Number names, altogether, 2D shape names, bigger, smaller, longer, shorter, inside, on top of, underneath, how many can you see?, what number is it?, pattern, repeat, what comes next?**							
	Uses positional language to describe a sequence of movements	Independently uses positional language	Positional language	O	P	J	Summer 1 STEM	AH 3rd term all levels, all term LA 4th term Closing the gap JW 5th term Closing the gap
	Selects shapes appropriately for activities - triangle for a roof . . .	Talk about characteristics of shapes	Recognise 2D shapes	O	P	J		
	Connects shapes to make new shapes	Name one or more 3D shapes	Recognise 2D shapes	O	P	J		
	Talks about and identifies patterns in the environment	Notice similarities and differences	Understand, continue and create a repeating pattern	O	P	J		
	Create and extend repeating patterns, correcting as necessary	Corrects a simple repeating pattern	Positional language Understand, continue and create a repeating pattern	O	P	J		
	Use language to describe a sequence of events - first, next, then	Uses ordinal language	Positional language	O	P	J		
	Fast recognition of up to 3 objects	Subitize to 3	Subitize to 3	U	E	X	Summer 1 Maths	

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	Links numerals and amounts to 5	Understands the written number	Counting 1:1 to 5 Cardinal Principle	U	E	X		
	Experiments with own symbols marks and numbers	Understands the written number	Counting 1:1 to 5 Cardinal Principle	U	E	X		
	Solve real life number problems to 5	Can apply understanding	Counting 1:1 to 5 Cardinal Principle	U	E	X		
	Summer Term Core vocabulary: **Number names, altogether, 2D shape names, bigger, smaller, longer, shorter, inside, on top of, underneath, how many can you see?, what number is it?, pattern, repeat, what comes next?, first, then, last**							

Summer 2 Maths & STEM – Blockers revisited for individuals and cohorts, through continuous provision and enhancements.	AH 3rd term all levels, all term
Moderation – Half termly moderation held between Maths leader and link practitioners. Focus – • How do the 3I's work together? • Is the intent built on evidence? Does the implementation reflect highly aspirational and knowledgeable leadership? Does the impact have sustained positive outcomes for all children? • How does learning build on prior learning? • How does learning link to future learning? • Why are we teaching what we are teaching now?	LA 4th term Closing the gap JW 5th term Closing the gap

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• Does our teaching reflect the intent? • Is the learning altering long term memory?		

Impact: The impact of MetaMaths and the implementation of systematic progression plans, is that children know more, remember more and are able to apply learning fluently into their everyday lives. Ambitious intentions and a consistently demanding level of expectation is evident through lessons, leading to a culture of no limits learning. Coherently planned and sequenced lessons, result in children acquiring the detailed knowledge and skills needed to solve mathematical problems, bridge old and new learning, and be ready for their next stage in education.

Subject Lead – Amanda Hubball

Skill differentiation is taught through implementing the 5 Principles of Counting.