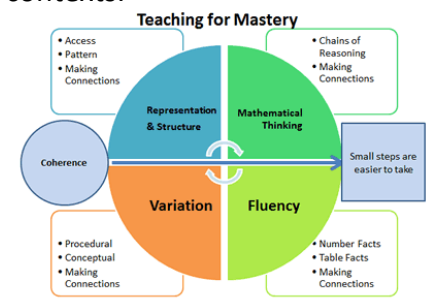


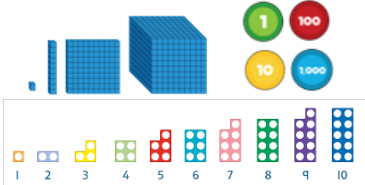



Curriculum statement for the teaching and learning of Maths Mastery

INTENT			
<p>When teaching mathematics at St Peter’s Cross Keys Academy, we intend to provide a curriculum which caters for the needs of all individuals and sets them up with the necessary skills and knowledge for them to become successful in their future adventures. We aim to prepare them for a successful working life. We incorporate sustained levels of challenge through varied and high quality activities with a focus on fluency, reasoning and problem solving. Mastery Pupils are required to explore maths in depth, using mathematical vocabulary to reason and explain their workings. A wide range of mathematical resources are used and pupils are taught to show their workings in a concrete, pictorial and abstract form wherever suitable. They are taught to explain their choice of methods and develop their mathematical reasoning skills. We encourage resilience, adaptability and acceptance that struggle is often a necessary step in learning. Our curriculum allows children to better make sense of the world around them relating the pattern between mathematics and everyday life.</p>			
High Expectations	Modelling	A Vocabulary Rich Environment	Pattern and Connection Identification
<p>All children are expected to succeed and make progress from their starting points. Children’s progress is tracked from their starting point in EYFS and carefully monitored throughout all key stages.</p>	<p>Teachers teach the skills needed to succeed in mathematics providing examples of good practice and having high expectations.</p>	<p>We intend to create a vocabulary rich environment, where talk for maths is a key learning tool for all pupils. Pre teaching key vocabulary is a driver for pupil understanding and develops the confidence of pupils to explain mathematically.</p>	<p>All children will have opportunities to identify patterns or connections in their maths; they can use this to predict and reason and to also develop their own patterns or links in maths and other subjects.</p>
The Teaching of Fluency	The Teaching of Reasoning	The Teaching of Problem Solving	MASTERY
<p>We intend for all pupils to become fluent in the fundamentals of mathematics, including 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.</p>	<p>We intend for all pupils to reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.</p>	<p>We intend for all pupils 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.</p>	<p>All children secure long-term, deep and adaptable understanding of maths which they can apply in different contexts.</p>  <p>The diagram, titled 'Teaching for Mastery', features a central circle divided into four quadrants: 'Representation & Structure' (top-left, blue), 'Mathematical Thinking' (top-right, green), 'Variation' (bottom-left, orange), and 'Fluency' (bottom-right, light green). A central white circle contains a circular arrow and the text 'Small steps are easier to take'. Surrounding the quadrants are boxes listing associated skills: 'Access, Pattern, Making Connections' for Representation & Structure; 'Chains of Reasoning, Making Connections' for Mathematical Thinking; 'Procedural, Conceptual, Making Connections' for Variation; and 'Number Facts, Table Facts, Making Connections' for Fluency. A 'Coherence' circle is positioned to the left of the central circle.</p>

Implementation			
White Rose & further resources	Morning Starter & Consolidation/Pre-Teaching	Assessment	Online Maths Tools
<p>Every class from EYFS to Y6 follows the White Rose scheme of learning which is based on the National Curriculum. White Rose units and small steps are used to carefully plan and support children with progress. Lessons may be personalised to address the individual needs and requirements for a class but coverage is maintained. In order to further develop the children's fluency, reasoning and problem-solving, we also use further resources (NCETM, NRICH etc.) to extend and support learning objectives and to deepening understanding and further develop a child's understanding of a concept and the links between maths topics.</p> 	<p>Morning Starter activities are completed in each class. On some days, maths tasks are set to ensure general knowledge and fluency are maintained and developed; these may take many forms, e.g.: arithmetic, multiplication facts or several questions on a maths topics.</p> <p>During each mathematics lesson, Y1-Y6 complete daily Fluent in 5 arithmetic questions to continue to embed arithmetic skills and fluency. Opportunities are given to discuss strategies together, sharing multiple solutions and broadening rich mathematical vocabulary.</p> <p>EYFS and Key Stage 1 have a daily Maths Mastery Number session which uses the Rekenrek resource. This concrete apparatus further supports the fluency of number, embedding number facts and bonds ready for Key Stage 2.</p>	<p>Through our teaching we continuously monitor pupils' progress against expected attainment for their age, making formative assessment notes where appropriate and using these to inform our teaching. Summative assessments are completed at the end of each term; their results form discussions in termly Pupil Progress Meetings and update our summative school tracker. Further to this, the summative data feeds into termly year group intervention trackers, which identifies children that are not on track for end of year group expectations and are identified and worked with accordingly to support progress. The main purpose of all assessment is to always ensure that we are providing excellent provision for every child.</p>	<p>In order to advance individual children's maths skills in school and at home, we utilise Times Tables Rock Stars for multiplication practise, application and consolidation. In KS2, maths homework is set weekly, reflecting the weekly maths unit in order to consolidate learning and to share the models and methods with parents too.</p> <p>Purplemash mathematic tools are used to support lessons and to set children homework tasks or free choice practise at home.</p> 

Concrete Pictorial Abstract (CPA)	Continuing Professional Development (CPD)	Cross Curricular	Whole school events
<p>We implement our approach through high quality teaching delivering appropriately challenging work for all individuals. To support us, we have a range of mathematical resources in classrooms including Numicon, Base10 and place value counters (concrete equipment). When children have grasped a concept using concrete equipment, images and diagrams are used (pictorial) prior to moving to abstract questions. Abstract maths relies on the children understanding a concept thoroughly and being able to use their knowledge and understanding to answer and solve maths without equipment or images.</p> 	<p>We continuously strive to better ourselves and frequently share ideas and things that have been particularly effective in staff training and meeting opportunities. We take part in local training opportunities and regional networking events, such as the NCETM East Midlands East maths hub work groups, the East Midlands Maths Conference and the Nottingham Schools Primary Teaching and Learning training events.</p> 	<p>Maths is taught across the curriculum ensuring that skills taught in these lessons are applied in other subjects such as Design and Technology, History, Science and Geography.</p>	<p>We celebrate our success with our Times Tables Awards. Bronze, Silver, Gold, Platinum, Platinum Plus and Diamond certificates are awarded in our Celebration Collective Worship. Other special days are also celebrated – such as Twosday.</p>

IMPACT			
PUPIL VOICE	EVIDENCE IN KNOWLEDGE	EVIDENCE IN SKILLS	OUTCOMES
<p>Through discussion and feedback, children talk enthusiastically about their maths lessons and speak about how they love learning about maths. They can articulate the context in which maths is being taught and relate this to real life purposes. Children show confidence and believe they can learn about a new maths area and apply the knowledge and skills they already have.</p>	<p>Pupils know how and why maths is used in the outside world and in the workplace. They know about different ways that maths can be used to support their future potential. Mathematical concepts or skills are mastered when a child can show it in multiple ways, using the mathematical language to explain their ideas, and can independently apply the concept to new problems in unfamiliar situations. Children demonstrate a quick recall of facts and procedures. This includes the recollection of the times table.</p>	<p>Pupils use acquired vocabulary in maths lessons. They have the skills to use methods independently and show resilience when tackling problems. The flexibility and fluidity to move between different contexts and representations is evident throughout maths lessons and within cross curricular topics and subjects. The chance to develop the ability to recognise relationships and make connections in maths lessons is evident in activities. Teachers plan a range of opportunities to use maths inside and outside school.</p>	<p>At the end of each year we expect the children to have achieved Age Related Expectations (ARE) for their year group. Some children will have progressed further and achieved greater depth (GD). Children who have gaps in their knowledge receive appropriate support and intervention.</p> <p>Mastery: All children secure long-term, deep and adaptable understanding of maths which they can apply in different contexts</p>