Windmill Hill Academy
Subject Key Summary Points

At Windmill Hill Academy, we inspire pupils to be passionate lifelong learners by providing them with an ambitious broad and balanced curriculum, with the inclusion of a variety of enrichments, which will inspire them to have high aspirations. We inspire all learners to have strong desire to know or learn something and questioning their learning experiences to find out more. Throughout each year group and across the curriculum, pupils will make sustained progress, develop excellent knowledge, understanding and skills, regardless of their different starting points and backgrounds.

Subject	Maths
Overall curriculum	An Daras Multi Academy Trust has used the latest pedagogy, research and understanding of local contextual needs to structure the curriculum design to ensure the growth of capability mature children who exhibit a sustained curiosity for learning. The 'lived values and experiences' of pupils are determined by the individual school and should run through all operational elements of curriculum provision. Mathematics is an interconnected subject in which pupils need to be able to move fluently between representations of mathematical ideas. The programmes of study are, by necessity, organised into distinct domains, but pupils should make rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems. Where possible, they should also apply their mathematical knowledge across the wider curriculum – for example, in science, DT, Computing and other subjects. <u>Mastery</u> Mastery is characterised by a belief that, by working hard, all children can succeed at mathematics. On this basis, children are taught all together as a class and are not split into 'prior attainment' groupings. Carefully structured teaching is planned in small steps to help all children succeed in Maths.
Pedagogy	Our Maths curriculum focuses on developing our pupils through the acquisition of **WISDOM, KNOWLEDGE, and SKILLS.** These have been selected because they ensure the **whole development of the child** will be prioritised, they enable pupils to meet the expectations of the National Curriculum 14 and have ambitions beyond the NC14. Each theme has a set of curriculum tools which ensure it is fully embedded through the lived experiences of staff, children, and stakeholders. Impact scales will measure the effectiveness of curriculum provision on the growth of children within these three **equally important** themes. The expectation is that the majority of pupils will move through the programmes of study at broadly the same pace. However, decisions about when to progress should always be based on the security of pupils' understanding and their readiness to progress to the next stage. Pupils who grasp concepts rapidly should be broaden their understanding through rich and sophisticated problems before any acceleration through new content. Those who are not sufficiently fluent with earlier material should consolidate their understanding, including through additional practice, before moving on. Our pedagogy is that

	children should learn facts, develop methods and have strategies to tackle maths in a range of situations and contexts. This begins in the EYFS as we believe that early acquisition of mathematical knowledge leads to greater success as pupils move through the school. **Wisdom** ▪ setting challenging age-related knowledge, reasoning and problem-solving tasks based on systematic, accurate assessment of pupils' prior skills, knowledge and understanding. ▪ independently applying skills and knowledge to new learning in Mathematics. **Knowledge** ▪ small, adapted target steps for all children to move through at a pace that suits their needs; ▪ following a structured programme that introduces then builds on relevant skills, knowledge and concepts related mathematical thinking. ▪ the school ensuring it is well equipped and up-to-date in all areas of Maths. ▪ timely support and intervention; systematically and effectively checking pupils' understanding throughout lessons. ▪ ensuring that feedback, verbal or written, is personal, frequent and of a consistently high quality - enabling pupils to understand how to improve and develop their work - with planned in time for children to respond to feedback. **Capabilities** • applying their skills to everyday situations. • Independently using their learning effectively and being capable and ready for the next stage of their education and beyond into employment. • Developing the skills and confidence to ask for help and advice. • Listening to support and learn new concepts, skills, and knowledge. • Challenging themselves to advance in their understanding of the area being taught.
Assessment	Assessment is regarded as an integral part of teaching and learning and is a continuous process. It is the responsibility of the class teacher to assess all pupils in their class. **Formative** Each lesson begins with recall of prior declarative and procedural knowledge using tools including White Rose Flashback Four. Other formative assessment strategies include: mini-plenaries, questioning, marking, feedback from support staff and pupil self-assessment. During our daily maths, we incorporate assessment opportunities to check learning is not too easy/not too hard and to test the recall of facts and

	methods. This ensures pupils can quickly and accurately recall the core facts essential in securing long term mathematical success. **Summative** Pupils are more formally assessed at the start and end of each unit and the end of each term. White Rose pre and post units assessments are used to inform planning. NTS standardised assessments are used. Teachers use the pupil results to analyse for gaps to plan follow up work. Summative assessment is used to monitor attainment and progress. The monitoring of the standards of children's learning and the quality of learning and teaching mathematics is the shared responsibility of the Senior Leadership Team and the subject leader. The work of the subject leader also involves supporting colleagues in the teaching of mathematics, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. A named member of the school governing body is briefed to overview the teaching of the curriculum in the school.
Culture	Mathematics is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology andengineering, and necessary for financial literacy and all forms of employment. A high-quality education in maths, therefore, provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject. Enrichment is planned for through DT, Science, Outdoor Learning, etc. <u>Five Big Ideas in Teaching for Mastery</u> • Coherence • Representation and Structure • Mathematical Thinking. ... • Fluency • Variation
Systems	The school follows the National Curriculum (2014) and teachers use the White Rose scheme of learning as the basis for their sequencing and planning of lessons. Teachers are encouraged to use NCETM materials (Ready to Progress and assessment materials). They are free to design their own lessons following a mastery approach. The school also follows the Mastery Number programme in EYFS/KS1 in addition to their maths sessions. This is supplemented with other resources and in particular: Ready to Progress, KIRFs, TestBase, Daily Maths and TTRS. We begin in the EYFS with a highly structured and carefully sequenced programme of mathematics, with a focus on core facts.

	Children will learn facts – and know why facts are linked (Declarative knowledge). They will learn methods – and know how methods work (Procedural knowledge) And they will develop strategies – and know why these strategies work (Conditional Knowledge) Our systems ensure pupils experience a detailed and carefully sequenced curriculum and within that regular, planned rehearsal and practice in order to ensure that they securely grasp the concepts taught. The aim is for our pupils to become 'free' mathematicians. Pupils need to recall facts swiftly and accurately. This leads to an automaticity and frees up working memory for new learning. We also aim to ensure there is a balance of rehearsal, recall and practice with explain and prove reasoning activities. Teachers will help pupils with SEND to overcome any barriers to participating and learning and make any 'reasonable adjustments' needed to include pupils. To make lessons inclusive, teachers will anticipate what barriers to taking part and learning may pose for pupils with SEND. Some modifications or adjustments will be made or smaller steps to achieve the learning goal. Occasionally, pupils with SEND will have to work on different activities, or towards different learning intentions, from their peers. In EYFS, all areas of learning and development are important and inter-connected. These are stipulated in the 'Statutory framework for the early years foundation stage'. The most relevant statement for mathematics is Mathematics **ELG Number** ▪ Have a deep understanding of number to 1, including the composition of each number ▪ Subitise (recognise quantities without counting) up to 5 ▪ Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5 (including subtraction facts) and some number bonds to 10, including double facts. **ELG: Numerical** ▪ Patterns Children at the expected level of development will: - Verbally count beyond 20, recognising the pattern of the counting system ▪ Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity ▪ Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.
Policies/key documents	▪ Windmill Hill Academy: Maths Curriculum Teaching Sequence and Guidance ▪ National Curriculum Progression Document ▪ White Rose Scheme of Learning ▪ Mastering number Overview

	▪ Calculation Policy ▪ Calculation Policy Guidance ▪ Bar model guidance ▪ KIRFs for all year groups ▪ SEND Policy *All of these can be found at:* *https://www.windmillhillacademy.org/web/maths/604871*
Perceptions from viewpoints (e.g. pupils/parents/Governors)	Pupil: The vast majority of pupils (94%) agree that they are learning a lot at this school. *Pupil Survey Summer 2023.* "What I like about my school... Mathematics, English, science, Wild Tribe, Physical Education, breaktimes and not to forget the after-school clubs." *Pupils Survey Summer 2023.* "I like how they try to make lessons more fun or exciting!" *Pupils Survey Summer 2023.* Parent: The vast majority of parents agree (99%) that the teaching is good. *Parent Survey Summer 2023.* "My child is very happy to go to school and enjoys the activities that she is given." *Survey Summer 2023* Staff: All staff agree (100%) that leaders are doing all that they can to improve teaching. *Staff survey Summer 2023.* "It is a wonderful school to work in and I am very proud of all of our achievements!" *Survey Summer 2023* Governors: ▪ "The school has a lovely warm, happy, inclusive feeling about it. The children appear very engaged and enthusiastic, which is evident by the work displayed on the walls and how all classes appear to have a learning thread running through, incorporating a number of visible subjects such as Maths, English Writing, Art, History etc." *Governor feedback Spring 2022*