 

Subject Key Summary Points

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| Subject | Maths |
| Overall Curriculum | **AnDaras 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. They should also apply their mathematical knowledge across the wider curriculum – for example, in Science, DT, Computing and other subjects. |
| 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.  Wisdom  Children develop in wisdom in the maths curriculum:  Pupils develop conditional knowledge in maths which allows them to apply their declarative and procedural knowledge to a range of increasingly complex problems and reason their choices.  Pupils make wise choices in which concrete and pictorial representations are effective to support them in a wide range of mathematical situations.  Knowledge  Children acquire knowledge in maths:  Pupils are taught declarative knowledge to reduce cognitive load, e.g. multiplications to 12 x 12, number bonds to 10.  Pupils are taught procedural knowledge, e.g. a series of steps and algorithms i.e.add, subtract, multiply and divide using effective mental and written methods.  Capabilities  Children develop their capabilities:  Pupils develop their reasoning skills when choosing which declarative and procedural knowledge to apply to a problem.  Pupils demonstrate their capabilities as mathematicians by applying their knowledge in other curriculum areas, e.g. programming in computing, making accurate observations and predictions in science, effectively designing, making and evaluating in DT.  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 challenged through being offered 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.  Support and scaffolding is provided in all mathematics lessons and is done in various ways, such as:   * + setting challenging age-related knowledge, reasoning and problem-solving tasks based on systematic, accurate assessment of pupils’ prior skills, knowledge and understanding;   + small, differentiated target steps for all children to move through at a pace that suits their needs;   + timely support and intervention; systematically and effectively checking pupils’ understanding throughout lessons;   + ensuring that marking and constructive feedback 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;   providing pupils with a wide range of concrete, pictorial and abstract representations which they will be able to select with greater independence and understanding. |
| 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. This is achieved through both formative and summative assessments.  Formative  This is achieved through mini-plenaries, questioning, marking, T.A feedback and pupil self-assessment. Pupils are more formally assessed at the end of each unit and the end of each term.    Summative  White Rose pre- and post- unit assessments are used at the beginning of each strand to elicit pupils’ prior knowledge and termly NTS standardised assessments are used. Teachers use the pupil results to analyse for gaps to plan follow up learning. Summative assessment is used to monitor attainment and progress.  Key Instant Recall Facts (KIRFs) are assessed at the beginning and end of each half-term. Having a secure understanding and recall of these are critical for the children’s everyday learning and form the foundations for meeting the National Curriculum.    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. |
| Culture | Mathematics is a creative and highly interconnected discipline that has been developed over centuries, providing the solution to some of |

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|  | history’s most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, 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. |
| Systems | The school follows the National Curriculum (2014) and teachers use the White Rose scheme of learning as the basis for their planning. This is supplemented with other resources and in particular: Ready to Progress, KIRFs, Classroom Secrets, Mastering Number Approach, 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 and knowledge, to prepare them for and have the foundations to excel in the Maths’ curriculum.  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 automacity 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. |
| Policy | The Policy for mathematics aims to ensure that all pupils:   * 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;      * reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language;      * can 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. We want pupils to be able to work systematically through problems without the need to rely on trial and error methods. [Welcome to Lew Trenchard Church of England Primary School](https://www.lewtrenchard.devon.sch.uk/web/teaching_and_learning/439282) |
| Perceptions | The monitoring of the standards of children’s learning and the quality of learning and teaching mathematics is the shared responsibility of the S.L.T 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 mathematics in the school. Monitoring shows the following of systems is strong and teachers are trying to strike a balance between doing and deriving. The areas we are targeting are our transfer of knowledge and skills to other domains of the curriculum and reasoning responses for all pupils. Effective feedback and pace of moving learning on also a continuing challenge- we want marking to be honest and useful for our pupils to move on in their learning and avoid misconceptions becoming embedded. |