



Mathematics Curriculum Statement

Intent

At Richardson Dees we are on our mastery journey to improve the teaching and learning of mathematics. Using this approach, which involves small steps with varied representations and structures, we are confident that we can build solid foundations from which our pupils can grow as mathematicians.

Our school has been part of the Teaching for Mastery programme run by Great North Maths Hub. Through attending Teacher Research Groups supported by a Mastery Specialist, we have developed our classroom practice based on current recognised pedagogy. Our aim is to equip all pupils with the skills and confidence to solve a range of problems through fluency with numbers and mathematical reasoning. Alongside these key skills, we also strive to instil in our children a love of maths; the ability to see the possibilities and creativity in the maths around us, to be intrigued and to wonder about maths.

Implementation

Whole class together – we teach mathematics to whole classes. Lessons are planned based on formative assessment of what pupils already know and we include all children in learning mathematical concepts. At the planning stage, teachers consider what scaffolding may be required for children who may struggle to grasp concepts in the lesson, and suitable challenge questions for those who may grasp the concepts rapidly. Decisions are not made about who these children may be prior to the lesson.

Longer and deeper – in order to address the aims of the NC, our long/medium term plans have been adjusted to allow longer on topics. Each lesson focus is on one key conceptual idea and connections are made across mathematical topics. To outsiders it may appear that the pace of the lesson is slower, but progress and understanding is deepened. Questions probe pupil understanding throughout and responses are expected using precise mathematical vocabulary.

Difficult areas and possible misconceptions are identified during the planning process and children will be supported through these.

Lesson Structure

Maths Meeting

3 short activities to build fluency, spot patterns and make connections.

This provides good opportunities for mathematical thinking, reasoning and explaining.

Fluency

There is a whole school focus on developing an instant recall of key facts, such as number bonds, times tables. Our 30 minute daily arithmetic session develops accuracy, flexibility and efficiency. Our times tables 55 Club is incorporated into these sessions. We use interleaving to prevent dis-fluency

Main Lesson

Carefully chosen representations (manipulatives and images) are used by all year groups and abilities to explore concepts. These representations will appear in books as children show their understanding. Teachers use a small steps approach to allow the concepts to be understood by all children. Teachers use questioning throughout every lesson to check understanding and dig deeper. Children are asked to explain their thinking and errors are valued as an opportunity to clarify misconceptions. Discussion and feedback – pupils have opportunities to talk to their partners and explain/clarify their thinking throughout the lesson.

Greater Depth

Children who grasp concepts quickly are given the opportunity to “go deeper” rather than move into the next year group objectives. Challenge can take several forms, e.g. giving or writing a clear explanation of a problem or concept; children devising their own related problem; reversing a problem; finding an alternative solution/method or teaching a friend.

SEN pupils – may be supported by additional adults, different resources, differentiated activities.

Progress

Half termly assessment activities are planned which involve a range of ideas and skills linked to one or more of the key objectives covered previously. As a result of these assessments, individual targets are discussed with pupils and interventions are put in place to close gaps. These interventions include pre-teaching of concepts to support our less confident pupils.

Long-term assessments are undertaken through a combination of teacher assessment and end of year tests. The tests used are the national tests at the end of Year 2 and 6 and the optional tests for Years 3, 4 and 5.