EDWARD WILSON PRIMARY SCHOOL

# Intent, Implementation and Impact – Mathematics

## Intent

At Edward Wilson Primary School, we intend to deliver a balanced and progressive curriculum which:

- Is in line with the expectations in the National Curriculum 2014
- Provides children in all year groups with opportunities to develop their understanding of number, calculation, shape, space and measure
- Makes rich connections across mathematical ideas to develop fluency, mathematical reasoning and competence in solving increasingly sophisticated problems
- Gives each pupil a chance to believe in themselves as mathematicians and develop the power of resilience and perseverance when faced with mathematical challenges
- Engages all children and entitles them to the same quality of teaching and learning opportunities, striving to achieve their potential
- Allows pupils to better make sense of the world around them relating the pattern between mathematics and everyday life
- We use the EYFS Statutory Framework for nursery and reception and the National Curriculum Programme of study as the basis for the teaching of Mathematics across KS1 and KS2

## Implementation

### Teaching and Learning

### Early Years and KS1

- In the EYFS, children receive a maths carpet session daily and a 1:1 or small group session with the teacher twice a week. They are also surrounded by opportunities to engage with mathematical activities that they can access during free-flow times.
- All children in KS1 have a daily maths lesson that lasts one hour which build up their understanding of mathematics through practical, visual and eventually more abstract practices
- Teaching methods include discussions between teacher and pupil, discussions between pupils, practical work, role-play, songs, games, group activities, individual work, practice of basic skills and investigative work
- Learning begins with concrete objects that the children can manipulate to form an understanding of the given concept or process
- This is aided by or replaced by pictorial representations when the teacher deems the children ready
- After a solid understand has been grasped, children focus on the abstract representations and are explicitly shown how they relate to the concrete materials and visual representations that they are already familiar with
- In each lesson, resources are available to scaffold the learning of less able pupils in order for them to access the mathematical tasks.
- Children move through the different stages of the activities – practice, use and apply, reasoning and extension tasks
- Children are shown how to apply their mathematical knowledge to different contexts
- They are encouraged to become 'excellent explainers' in order to develop a wide mathematical vocabulary that will allow them to reason
- This excellent explaining is modelled to them constantly by teachers and key vocabulary is displayed and referred to.

- At least twice a week, pupils self-assess their work. This helps them to take more responsibility for their own learning and monitoring future directions.
- All children are encouraged to practise their number facts on a daily basis. Termly number fact competitions are entered by all children in the EYFS and KS1.
- AFL strategies are used throughout the lessons to check pupils' understanding and correct misconceptions
- Summative assessments are reported to parents in the end of year report
- Regular book monitoring ensures quality, progression and consistency of teaching across the school
- Teachers are supported by the subject leader to ensure confidence in the skills and facts they are required to teach.
- Regular opportunities for Number Talk activities and mathematical investigations give the children the opportunity to explore new way of thinking, improve their number fluency and apply their mathematical knowledge.

**KS2**

- All children have a daily maths lesson that lasts one hour
- Teaching methods include discussions between teacher and pupil, discussions between pupils, practical work, group activities, individual work, practice of basic skills and investigative work:
- The CPA (concrete, pictorial, symbolic) teaching approach ensures that pupils have the best possible grounding in mathematics and gives them the opportunity to manipulate concrete materials to access abstract mathematical ideas.
- In each lesson, resources are available to scaffold the learning of less able pupils in order for them to access the mathematical tasks.
- Children move through the different stages of the activities – practice, use and apply, reasoning and extension tasks
- At least twice a week, pupils write a comment to self-assess their work. This helps them to take more responsibility for their own learning and monitoring future directions.
- All children are encouraged to practise their times tables on a weekly basis with a times table test taking place every week across KS2
- The calculation policy is used within school to ensure a consistent approach to the teaching of the four operations over time
- Regular opportunities for Number Talk activities and mathematical investigations give the children the opportunity to explore new way of thinking, improve their number fluency and apply their mathematical knowledge.
- AFL strategies are used throughout the lesson to check pupils' understanding and correct misconceptions
- Teachers use assessment sheets to create end-of term mathematics tests designed to monitor the pupils' progress across the year and identify gaps in the learning. The tests are monitored by the subject leader
- Summative assessments are reported to parents in the end of year reports
- Regular book monitoring ensures quality, progression and consistency of teaching across KS2
- Teachers are supported by the subject leader to ensure confidence in the skills and facts they are required to teach

**Impact**

- Our children have a 'can do' attitude, enjoy maths and understand the importance in plays in daily life
- Our maths books include a range of activities showing evidence of the development of mathematical facts and fluency, engagement in problem solving activities and that the groundwork is being established for them to reason around mathematical materials
- Our feedback support pupils to be the best mathematicians they can be and ensure a greater proportion are on track as they progress through the key stages

- Challenge for pupils enables a greater proportion of children to achieve 'greater depth' as they progress through the school
- Evidence from regular book monitoring ensures that learners across the school are progressing well in mathematics and that appropriate mathematical concepts are being taught consistently.
- Our maths books include a wide range of activities showing evidence of fluency, reasoning and problem solving activities
- Pupils' interviews show that our children are developing a growth mind-set, enjoy maths and understand the relevance of what they are learning in relation to real world concepts