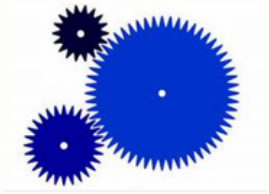
# Curriculum Rationale



# MATHS



## INTENT

- Build strong foundations through the use of Inspire Maths and Mastering number
- Develop confident mathematicians who can apply their learning
- Develop mathematical skills and understanding required for adult life
- Foster an enthusiasm and fascination surrounding mathematics
- Develop factual, procedural and conceptual knowledge
- Develop confident mathematical communicators who can use appropriate vocabulary, representations and oracy skills to explain, justify and challenge mathematical thinking.
- Raise the standards of mathematics for everyone
- Make mathematics meaningful and relevant, giving children opportunities to apply their learning to real-life situations and understand how maths is used beyond the classroom.
- Develop confident, resilient mathematicians who believe they can succeed and are willing to persevere when learning feels challenging.
- Use technology purposefully within our tech-rich learning environment to remove barriers, provide alternative ways to explore and represent mathematics, and deepen understanding.

## IMPLEMENTATION

We teach mathematics using the Inspire mathematics programme: Inspire maths builds knowledge in small cumulative steps building and revisiting using a spiral curriculum.
This programme was chosen as it is an inclusive approach with high expectations.

'Inspire Maths is structured around a mastery curriculum which is designed to help children see connections across topics, deepening their conceptual understanding. This thoughtful organisation of the topics also provides opportunities for the application and extension of fundamental concepts once children have learnt them; again, deepening children's understanding and mastery of these concepts.'

- Lessons are taught using high-quality textbooks, digital and concrete resources and a consistent CONCRETE-PICTORIAL-ABSTRACT (CPA) approach across all year groups.

Pupils engage in:

- Development of mental strategies
- Written methods Practical work
- Investigational work and reasoning
- Problem solving and reasoning
- Mathematical discussion using precise mathematical language
- Consolidation of basic skills and routines

- Focus on oracy in maths. The national curriculum for Mathematics reflects the importance of spoken language in pupils' development across the whole curriculum – cognitively, socially and linguistically. The quality and variety of language that pupils hear and speak are key factors in developing their mathematical vocabulary and presenting a mathematical justification, argument or proof. They must be assisted in making their thinking clear to themselves as well as others and teachers should ensure that pupils build secure foundations by using discussion to probe and remedy their misconceptions.
- Maths working walls are encouraged to display key vocabulary or recent classwork that will inform future lessons
- Mastering Number has been introduced from Reception to Year 5 on a daily basis. In R-Y2 This programme focuses on the key knowledge and understanding needed in Reception, and progression through KS1 using small steps in learning,supporting pupils to understand relationships between numbers and the use of precise mathematical language. It also includes the careful choice of representations, including the rekenrek, to expose the structure of numbers. In KS2 Knowledge of multiplication and division and its applications forms the single most important aspect of the KS2 curriculum, and is the gateway to success at secondary school. This project enables pupils in Years 4 and 5 to develop fluency in multiplication and division facts, and a confidence and flexibility with number that exemplifies good number sense.

## IMPACT

As a result of our mathematics curriculum, we expect pupils to:

- Develop secure and lasting mathematical knowledge, with strong number sense and fluency in key facts, including multiplication and division facts.
- Make connections between mathematical concepts, drawing on previously learned knowledge and applying it confidently to new and increasingly complex learning.
- Select and use appropriate representations, resources and strategies, moving confidently between concrete, pictorial and abstract approaches.
- Become confident problem-solvers who can reason, investigate, spot patterns, make predictions and persevere when solutions are not immediately obvious.
- Communicate mathematically with confidence, using precise mathematical vocabulary to explain their thinking, justify their choices and engage in purposeful mathematical discussion.
- Develop accuracy, speed and confidence with their multiplication tables.
- Recognise and learn from misconceptions, developing the resilience to adapt strategies, check solutions and understand that mathematics are an important part of mathematical learning.
- Apply mathematical knowledge independently, using efficient mental and written methods and choosing appropriate approaches for different problems and real-life situations.
- Leave each stage of their education well prepared for the next, with the mathematical knowledge, fluency and confidence needed to access future learning successfully.
- See themselves as capable mathematicians, empowered to use mathematics confidently in everyday life, future study and an increasingly technological world.

# Curriculum Rationale

# MATHS

## EYFS

In the EYFS, we aim to develop curious, confident and enthusiastic mathematicians. Maths is taught explicitly and embedded throughout continuous provision, routines and play, giving children meaningful opportunities to explore number, pattern, shape, space and measure. There is a strong focus on developing secure number sense through daily Mastering Number sessions. Learning is broken into small steps and revisited regularly, with carefully chosen practical resources, including the rekenrek, helping children to understand numbers and the relationships between them.

Our Concrete–Pictorial–Abstract (CPA) approach begins in EYFS, with children using practical resources before progressing towards pictures, marks and symbols. Mathematical talk and oracy are central, with children encouraged to use appropriate vocabulary, explain their thinking, notice patterns and begin to reason.

By the end of EYFS, we want children to have strong mathematical foundations, positive attitudes towards maths and the confidence to see themselves as capable mathematicians, ready for Year 1 and beyond.

## KS1 & 2 MATHS

| | Autumn 1 | Autumn 2 | Spring 1 | Spring 2 | Summer 1 | Summer 2 |
|---|---|---|---|---|---|---|
| Y1 Inspire 1 | Unit 1 and 2<br>Number bonds ro 10<br>Number bonds | Unit 3<br>Addition within 10 | Unit 4<br>Subtraction within 10 | Unit 5<br>Shapes and Patterns | Unit 7<br>Numbers to 20 | Unit 8<br>Additionand Subtraction within 20 |
| Y2 Inspire 1 | Unit 7 and 8 recap | Unit 12<br>Numbers to 40 | Unit 14 and 15<br>Multiplication and Division | Unit 17<br>Numbers to 100 | Unit 16 and 17<br>Time and Money | Unit 9, 10 and 11<br>Length, Mass , Picture Graphs |
| Y3 Inspire 2 | Unit 1 and 2<br>Numbers to 1000<br>Addition and Subtraction within 1000 | Unit 3 and 4<br>Using Models:Addition and Subtraction<br>Multiplication and Division | Unit 5 and 6<br>Multiplying by 2 and 3<br>Multiplyong by 4, 5 and 10 | Unit 7 and 10<br>Using Models:<br>Multiplication and Division | Unit 11 and 12<br>Fractions<br>Money | Unit 13, 14 and 15<br>Time<br>Volume<br>Graphs |
| Y4 Inspire 3 | Unit 1, 2 and 3<br>PV<br>Addition<br>Subtraction | Unit 5 and 6<br>Multiplication | Unit 7<br>Division | Unit 10 and 14<br>Fractions and Money | Unit 15 and 16<br>Time<br>Angles | Unit 11 and 18<br>Length, Mass and Volume<br>Area and Perimeter |
| Y5 Inspire 4 | Unit 1, 2 and 3<br>PV | Unit5, 9 and 10<br>Fractions and Decimals | Unit 6 and 11<br>Angles<br>Time | Unit 12 and 13<br>Area, and Perimeter<br>Symmetry | Unit 4<br>Graphs | Decimals and Fractions recap.<br>Introduce basic percentages |
| Y6 Inspire 5 and some 6 | Unit 1 and 2<br>Whole Numbers | Unit 3 and 4<br>Fractions | Unit 7 and 10<br>Decimals and Percentages | Skill Revision | Skill Revision | Unit 12 and 14<br>Properties of triangles and 4 sided shapes<br>Volume of cubes and cuboids |

# Curriculum Rationale

# MATHS

## ASSESSMENT CRITERIA

- We implement an inclusive curriculum so that all children, including those with SEND, can make progress and demonstrate success in a range of ways.
- We conduct baseline assessments, checking the pupils' existing knowledge and skill level.
- We review and re-cap prior learning and link it to new and current study. We identify curriculum links so that learning can be applied and assessed in new contexts. We encourage the children to 'CONNECT".
- Teachers use a range of assessment activities in their class, including the review of knowledge organisers, mini assessments, digital quizzes and content creation, sketch books, independent tasks, work in books, pupil chats in lessons.
- Children are encouraged to share their voice, verbally or digitally on how they think they are doing and what they enjoy about learning this subject. This is collated by the subject leader.
- To meet the expected standard, pupils should demonstrate a broad understanding of the key facts in the end points for that year in addition, they retain key knowledge from prior learning.
- At the greater depth standard, pupils demonstrate knowledge and understanding of every aspect of the key specification to the highest degree. and are able to make connections independently.
- Peer audits provide quality assurance, moderation of standards and training across trust schools.

**National Assessments**

- National statutory assessments complement our ongoing teacher assessment. They provide an additional measure of attainment and help us evaluate how successfully pupils have secured the knowledge and skills set out in the National Curriculum.
- In Year 4, children complete the statutory Multiplication Tables Check (MTC), an online assessment of fluency in recalling multiplication facts up to 12 × 12. We use the outcomes alongside our own assessments to identify strengths and any areas requiring further teaching or support.
- At the end of Year 6, pupils complete the statutory Key Stage 2 National Curriculum tests (SATs) in mathematics, which assess arithmetic and mathematical reasoning. Outcomes are considered alongside the much wider picture of each child's mathematical knowledge, understanding and progress developed throughout their time at school.
- Appropriate access arrangements are put in place for eligible pupils, including pupils with SEND, in accordance with national guidance, so that children can access statutory assessments as fairly as possible.
- National assessment outcomes are analysed alongside school assessment information to identify patterns, strengths and areas for development and to inform future curriculum planning, teaching and intervention.

**At Prescot Primary School and Nursery, we aim to:**
**Empower Today, Prepare for Tomorrow.**