

What Mathematics Looks Like at Juniper Hill School

“Mathematics is the language of the universe” – Galileo.

Mathematics is not just used in the real world - it is the real world. At Juniper, we support our children to see maths in a world context, using it to make sense of all that is around us. We want our children to recognise the importance of Mathematics in the wider world and to be confident to relate their skills and knowledge in a range of problem-solving contexts.

Curriculum Aims

Juniper’s mathematics curriculum is based on the 2014 National Curriculum, which sets out a clear programme of study for each phase of primary education. The details of this are in the Mathematics policy, and are supported by our Calculation Policy to ensure that there is a consistent approach to teaching the four operations over time.

Class teachers need to:

- Know where their children are - through summative and formative assessment, talk for mathematics
- within lessons and awareness of the children’s prior learning.
- Understand where their children need to be - through a secure understanding of year group expectations, progression in mathematical skills and knowledge (see the White Rose maths calculation and progression document) and attainment in the previous key stage and year group
- Know how they are going to get them there - through a range of pedagogies, strategies to promote independence and maintaining high expectations for all children.
- Effectively deploy other adults in the classroom to support children at all stages of lessons and interventions (see the Maths Inclusion Curriculum SEND document).
- Plan effectively for progression during and between lessons.
- Ensure precise mathematical vocabulary and explanations – through modelling, questioning and encouraging children to ask and answer questions using precise mathematical vocabulary. Make use of stem sentences such as “I think the answer is... Because...”. All children are encouraged to ‘Be like a mathematician’ using problem solving, measuring and explanations.

Across the week, lessons should include the three National Curriculum aims of fluency, mathematical reasoning and problem solving. Children should be encouraged to make connections across different aspects of mathematics, as well as become increasingly able to apply their mathematical knowledge to science and other subjects.

What does Mathematics look like at Juniper Hill?

- Maths is taught daily across all Key Stages.
- All lessons include a clear aim (learning objective) and success criteria.
- Lessons incorporate a range of concrete, pictorial and abstract representations to enable children to master new concepts; children should be allowed to choose the most appropriate resources to help them access mathematical concepts.
- Planning is based on a variety of high-quality resources that meet the requirements of the National Curriculum and uses White Rose to guide planning in line with the school.
- Lessons should relate to real life so that children see the purpose and value of learning new concepts.
- Lessons should include whole-class teaching, partner or team-based practice of skills and independent practice (We use an ‘I do, we do, you do’ structure).
- Lessons will combine elements of fluency, reasoning and problem solving within different contexts.
- Previously learned concepts are revisited through lesson starters (Retrieval practice).
- Differentiation is mainly achieved through scaffolding and group work for children who need more support, while children who are achieving beyond the expected standard are encouraged to work more deeply within the curriculum of their year group to demonstrate mastery and help them attain greater depth within the expected standard. Their learning will, where possible, have a more independent, enquiry-led focus.