

## Early Years Mathematics Rationale

'Children develop quickly in the early years and a child's experiences between birth and age five have a major impact on their future life chances.'

*EYFS Statutory Framework, 2021*

At Askwith Primary School, we believe that all children's education begins in Early Years. As a result, our curriculum offer for mathematics begins in Early Years and shows the sequential steps of essential knowledge acquired from Reception to Year 6. The mathematics curriculum in Early Years follows, but is not limited to the Statutory Framework. Guidance is taken from Development Matters and as a school we have enhanced the mathematics curriculum, aligning it with our National Curriculum expectations for Year 1, in order to fully ensure that all children (this includes SEND, EAL, PP and vulnerable children) are equipped with the knowledge, skills and understanding to become confident mathematical problem solvers. We have a determined approach that drives us to ensure that all children meet the expected standard at the end of Early Years and that all children are ready for the transition into Year 1.

In the revised EYFS Framework, mathematics is broken down into two Early Learning Goals:

- Number
- Numerical Patterns

However, as a school we also teach Space, Shape and Measures to ensure that all children have a full knowledge of mathematics and are ready to access the National Curriculum as they move into Key Stage One.

| Intent   | Implementation  | Impact: to be reviewed at the end of each year |
|--|---|--|
| The Early Years Statutory Framework (EYSF) is not the curriculum | <ul style="list-style-type: none"><li>• All staff work together to produce progression documents that have specific end goals drawn from the EYSF, Development Matters and Askwith curriculum</li></ul> |  |
| All pupils follow a robust mathematics curriculum                | <ul style="list-style-type: none"><li>• Systematic planning is in place for all pupils in</li></ul>   |  |

|  |  |  |
|--|--|--|
| <p>Working memory is not overloaded to allow the acquisition of key mathematical knowledge</p> | <p>granular steps (this includes SEND, EAL, PP and vulnerable children)</p> <ul style="list-style-type: none"> <li>• Continuous provision is enhanced where necessary to support pupils meeting endpoints</li> <li>• Same day interventions are put in place to ensure that no learner falls behind</li> <li>• Mathematical resources are carefully chosen to minimise distractions and ensure mathematical knowledge is fully embedded and there is alteration to long term memory</li> </ul> |  |
|--|--|--|

### **Substantive and disciplinary knowledge in mathematics**

The mathematics curriculum is one in which substantive knowledge and skills merge in a way that does not happen in any other subject area. The taught knowledge in mathematics is substantive rather than disciplinary and children will be taught to make links across different mathematical components to build this substantive knowledge in their long term memory. Learning journeys in mathematics specifically reference connected knowledge from other areas of the mathematics curriculum, providing children the opportunities to interleave their mathematical knowledge and make purposeful and meaningful links.

### **Creativity**

Creativity is a strong thread that permeates our mathematics curriculum. Opportunities for children to approach mathematics in different ways and to solve problems are carefully planned into each unit of work. Mathematics' problem solving is a creative process and children are encouraged to show their thinking and mistakes are embraced as a part of the problem solving journey. By using this approach, children become empowered and they learn what can be possible with a strong mathematical understanding.

Mathematical creativity allows children the opportunity for collaborative learning and communication through carefully planned learning activities. Children can investigate, pose questions and become creative decision makers and mathematical risk takers in an environment where it is ok to make mistakes thus developing resilience and confidence.

*"Creative mathematics is all about developing problem-solving skills which enable pupils to solve unfamiliar mathematical problems creatively. Pupils realise that there might be more than one possible solution to solving a given situation and learn how to adopt diverse strategies towards problem-solving which best suit their learning styles, capabilities and situation. Pupils are also given the time, space and resources to explore mathematical skills and concepts and can devise their own path to a solution."*

Elaine Muscat, Scientix Deputy Ambassador

## **Assessment**

In the Early Years at Askwith Primary School, formative assessment is integral to the planning, teaching and learning.

Assessments of both the prime and specific areas of learning are carried out through impact notes. Opportunities for assessment are planned daily through focus sessions and enhanced provision. For example, a focus session about odd and even numbers may be led by the teacher. The teacher will make impact notes following that session. Enhanced provision is then planned to ensure there are opportunities for the children to practise odd and even numbers in areas of provision. This can be personalised for particular children's needs. Adults within provision make further impact notes when supporting the children to practise.

We ensure that children are provided with age appropriate, formative feedback, allowing them to move their learning on in a sequential way. This gives children the opportunity to demonstrate any connected knowledge held in the long term memory. Verbal feedback is provided and children use this to move on in their learning. As a school, we feel it is important that the children respond to this feedback, verbally, and that they are able to articulate their own progress.

Oral knowledge checks are carried out at 2, 6 and 12 weeks after the end of a unit to check knowledge has been embedded in the children's long term memory.

**Reviewed September 2021**