

# How do we teach maths in Early Years?



We use a mastery approach so all children have a deep knowledge of maths, including number and 'number sense'. We use a mix of daily adult led and child initiated learning activities. The maths curriculum has been broken down into key concepts to carefully build secure understanding.

## 1. Adult directed teaching that meets the needs of all learners

Adult led activities embed opportunities for creative and divergent thinking, peer collaboration and expert teacher modelling. All lessons always include elements from the 5 counting principles and give a real life context to the maths taught. Lessons follow the structure: counting and number sense, set a real life context, we learn with our friends (collaborative problem solving), we learn together (teacher expert modelling).

## 2. Make the most of everyday routines and spontaneous learning to develop mathematical skills and thinking

Adult led activities embed opportunities for creative and divergent thinking, peer collaboration and expert teacher modelling. All lessons always include elements from the 5 counting principles and give a real life context to the maths taught. Lessons follow the structure: counting and number sense, set a real life context, we learn with our friends (collaborative problem solving), we learn together (teacher expert modelling).

## 3. Building on children's play

We observe what children can do and then support accordingly. An adult may join the conversation with 'what can you see?' or 'what have you noticed?'. From this point, an adult may move the children on to their natural next step in learning or use this information during future adult led activities. Child led activities include: applying the key concepts taught in a range of contexts, children 'realising, experiencing and discovering' for themselves.

## 4. Supporting and extending children's thinking through sustained shared thinking

Staff model 'thinking aloud' when solving a problem and encourage children to solve problems in the same way in return. Staff also pose questions like 'I wonder if'... or 'I'm not sure I have got this right' to encourage children to solve problems. Carefully presenting misconceptions can also encourage discussion, reasoning and learning through 'realising, experiencing and doing'

## 5. A rich, stimulating and interesting environment

Our environment motivates the children which leads to more play, more talk, shared thinking and ultimately greater learning. The environment is a mix of man-made and natural resources to support the 'concrete, pictorial, abstract' (CPA) approach. Maths is 'everywhere' in the environment as well as a dedicated space for resources and stimulating children's mathematical thinking.

### Why do we teach this way?

We meet the needs of our individual children. We base our approach on: our area demographic data, past trends, information about the current cohort, success of mastery approach in years 1-6, 'Maths, No Problem' training, theorists: George Polya 'How to solve it', Zoltan Diens '4 principles of learning maths, Piaget influences the 'Concrete, Pictorial Abstract', Vygotsky 'Zone of Proximal development' and 'social learning' Dweck 'raising effort'.

Further information regarding the purpose of each part of the lesson can be found in the planning support document. This also gives more detail to the adult directed lessons and planned environment opportunities.

### Our mastery approach includes:

- ensuring all children are taught the same main focus and usually as a whole group
- embedding the '5 counting principles' within all lessons
- planning small steps that are built into the learning
- ensuring activities are 'low floor – high ceiling' to support and extend all children
- full sentences for answers, including using sentence stems and frames
- using precise, accurate and varied vocabulary that is modelled by adults and used by children
- children routinely collaborating with peers and discussing their thoughts with adults
- adults carefully presenting misconceptions and asking children to help solve the problems in a variation of contexts
- ensuring the learning environment plans for children to discover and 'realise, experience and discover' learning for themselves
- presenting similar problems in a variation of different ways
- modelling to the children what something 'is' but also saying what it 'is not' to consolidate learning and discuss misconceptions
- using appropriate stories, photos, songs and rhymes support children's learning and makes it memorable
- targeted support after adult led activities to continue to meet the needs of all children

### What are the 5 counting principles?

1. One to one principle (one number is given to each object when counting – each object only once)
2. Stable order principle (Numbers must be in a certain order when counting)
3. Cardinal principle (number assigned to the final object represents the total number in the group)
4. Abstraction principle (anything can be counted, including the things we can't touch)
5. Order-irrelevance principle (order we count is irrelevant as amount the same)

# How do we teach reading in Early Years?



## Guided reading and 1:1 reading

A systematic approach to the teaching of reading using the agreed scheme of 'project X' books (SLT, Literacy lead and experienced teacher). Teachers to model reading and children to decode key words.

## Picture books

Picture books are used to inspire, teach and develop language and cognitive thinking.

## Families

An open door policy from November for parents to come in and read with children every week. Planned opportunities, at least every half term, to support parents to help their children read.

## Extra support

Children have opportunities to read more than once per week to ensure rapid progress

## Home reading

Children will take home a 'story sack' every week with opportunities for role play, discussion and activities to involve families. Age appropriate reading books available for children and parents to access every day and always have an appropriate book at home.

**Children have a love for reading and can read**

## Library visits

Children visit the town library at least every term and are encouraged to take out a book. Children visit our school library at least every half term and choose a reading book.

## Environment

A redeveloped, designated area for reading both inside and outside. Children to have at least 4 areas to access multiple books – including fiction and non-fiction.

## Why do we teach this way?

With families, our strategy is for children to develop a love for reading, songs and telling stories. Children will have many role models, models of reading and access to rich and engaging texts. The simple view of reading is at the heart of developing the teaching of reading. Research: Research evidence on reading for pleasure, building an outstanding reading school (Oxford school improvement).

## Words in the environment

Many carefully planned and purposeful reading opportunities are embedded in the environment – including phonics.

## Planning

A focus book inspires and drive learning for various areas (see bi-weekly plan)

## Reading buddies

Year 6 pupils read with EY children at least once every half term to role model reading and inspire the EY children.

## Phonic teaching

Phase 1 phonics taught all year to develop listening skills and support children into year 1 and beyond. Phase 2 and beyond taught explicitly and daily from October 2019. Teaching matches the needs of all learners. Teaching to be taught in mixed ability groups and support and challenge planned for.

## Modelling

Daily modelling of reading that engages the children to listen. Modelling of telling stories orally and using props to make them up. Modelling of songs and nursery rhymes. Rhymes and songs embedded into core routines. At least 5 key foci for the same book planned when reading (e.g. children join in with phrases, literal questions, role play, blooms high order questions etc.).

## Developing vocabulary and a word rich environment

Vocabulary exposure is carefully planned for and embedded into the key areas of the environment. This is done in a purposeful and coherent way – vocabulary changed at least every 2 weeks when key book is changed. Vocabulary 'grows' as part of adult led and child initiated learning and responds to the needs of the children.

## Support

Access to resources and displays are embedded in the environment to support early reading (strategies, phonic displays and pictorial representations).

# How do we teach phonics in Early Years?



Phonic learning is <b>referred to</b> throughout the day – in addition to discrete teaching lessons	We use <b>'Letters and Sounds'</b> to plan lessons that meet the needs of our children	We use <b>'Jolly Phonics'</b> rhymes and actions to support learning and make it 'stick'
Multi-sensory approach including <b>'Concrete'</b> resources are used to give context to the learning	<b>How do we teach phonics in Early Years?</b> In September 2019, the majority of our children had limited sound recognition for reading and no phonics for writing	We teach <b>daily</b> phonic sessions and have a long term plan  Adapted depending on the needs of the children
Relevant phonics is in the environment and accessible during <b>'active learning'</b>	<b>Mastery</b> approach – time invested in ensuring understanding	Children have multiple <b>opportunities</b> to apply phonics for reading and writing at word and sentence level (including handwriting)

## Letters and sounds

This is a full, stand-alone phonics teaching programme which has been fully revised to meet the core criteria for high quality phonics with an all new Phonics Teacher's Guide and 83 brand new Phonics Readers. The programme is designed to be started no later than Reception and to be completed by the end of KS1 or before. It covers aA-zZ letter sounds and shapes, consonant blends, consonant digraphs, split digraphs, vowel digraphs and trigraphs in a systematic daily progression. Blending and segmenting are incorporated very early on and are practised in whole class, small group and individual activities and in decodable readers.

## Jolly Phonics (we use as a supplement to help learn and apply sounds)

Jolly phonics is multi-sensory and highly active, which makes them suitable for young children... There are also songs for each letter sound, which adds to the fun of the programme. The child friendly activities enable the necessary repetition to take place, which brings success, as well as the pleasure of being able to work out words for themselves

Our systematic approach ensures pitch and coverage and gives our children a multi-sensory experience. We meet the children's needs with a mastery approach (which is evident in the time invested for each phase, re-visiting key elements and ensuring everyone succeeds). The self-assessment criteria issued by the government also ensures the phonic schemes we use are fit for purpose.