The Early Years Team

Preparing for the Early Years Foundation Stage (EYFS) Reforms: Mathematics

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EYFS Framework and the Development Matters

3 prime areas underpin everything in the early years

- Communication and Language
- Physical development
- Personal, social and emotional
- 4 specific area help children to strengthen and apply the prime areas
- Literacy
- Mathematics
- Understanding of the world
- Expressive art and design

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The Seven Key Features of effective practice

- The best for every child
- High quality care
- The Curriculum – what we want children to learn
- Pedagogy – Helping children to learn
- Assessment – checking what children have learnt
- Self regulation and executive function
- Partnership with parents

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Characteristics of effective learning

2017

Playing and exploring – Engagement

Finding out and exploring

Playing with what they know

Being willing to have a go

Active learning – Motivation

Being involved and concentrating

Keep trying

Enjoying achieving what they set out to do

Creating and thinking – Critically thinking

Having their own ideas

Making links

Choosing ways to do things

2021

Playing and exploring – Children investigate and experience things and 'have a go'

Active Learning – children concentrate and keep on trying if they encounter difficulties and enjoy achievements

Creating and thinking critically – children have and develop their own ideas, make links between ideas and develop strategies for doing things

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Mathematics involves providing children with opportunities to develop and improve their skills in counting, understanding and using numbers, calculating simple addition and subtraction problems; and to describe shapes, spaces, and measure

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Educational Programme for Mathematics 2021

- Strong grounding in numbers
- Deep understanding 1-10
- Recognise patterns
- Secure base of knowledge and vocabulary
- Spatial reasoning skills
- Positive attitude

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What children will be learning at birth to three

- Stacking with blocks and cups
- Take part in finger rhymes
- Compare amounts saying ‘lots’, ‘more’, or ‘same’.
- Develop counting like behaviour, such as pointing or saying some numbers
- Begin to have special awareness
- Compare sizes and notice patterns
- Complete inset puzzles

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What 3 & 4 year olds will be learning

- Develop fast recognition of 3 objects, without having to count them
- Recite numbers past 5
- Number items 1 to 5 and positioning
- Link numbers and amounts
- Talk about 2D and 3D
- Understand positioning
- Solve mathematical problems

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Children in reception will be learning to:

- Count objects
- Subitise
- Link number symbols with its cardinal number value
- Count beyond ten
- Compare numbers
- Understand one more than or one less then
- Explore numbers to10 and recall number bonds 0-10

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Children in reception will be learning to:

- Select, rotate and manipulate shapes in order to develop spatial reasoning skills.
- Compose and decompose shapes so that children recognise a shape can have other shapes within it, just as numbers can.
- Continue, copy and create repeating patterns.
- Compare length, weight and capacity.

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Checkpoints

There are no checkpoints in the specific areas of learning.

Within the new framework Observation Checkpoints have been included in the prime areas of learning for additional things practitioners might want to look out for to ensure children are making progress , these have not been included for the specific areas.

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Early Learning Goals (ELG) for Mathematics (1)

ELG Number

- Have a deep understanding of numbers to 10, including the composition of each number
- Subitise (recognise quantities without counting) up to 5
- Automatically recall (without reference to rhymes, counting or other aids) number bonds up to 5(including subtraction facts) and some number bonds to 10, including double fact's

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Early Learning Goals (ELG) for Mathematics (2)

ELG Numerical Patterns

- Verbally count beyond 20, recognise the pattern of counting system
- Compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity
- Explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed evenly

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SEND/Safeguarding

Be aware of children who are very quiet and don't add to discussions or join in with activities. Children with EAL, communication difficulties or lack of environmental experiences need more real, actual hands on experiences with extra communication and language added.

You will need to work closely with parents and other agencies to find out more about these development difficulties and incorporate some 1:1 time for catching up and building up their confidence to take part.

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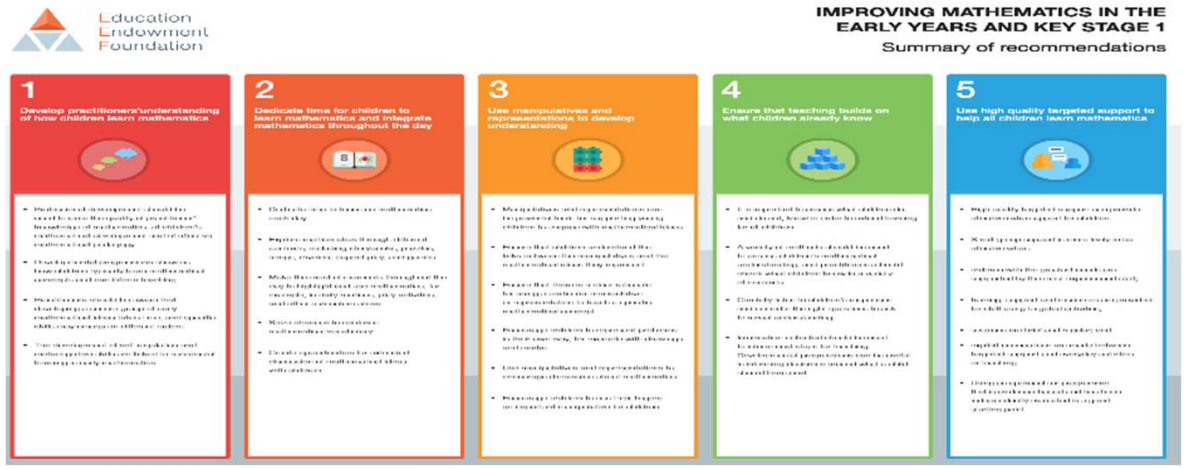
Education Endowment Foundation

- ‘Early Years settings and schools should invest in developing practitioners’ own understanding of mathematics, their understanding of how children typically learn, and how this relates to effective pedagogy.’ https://educationendowmentfoundation.org.uk/public/files/Publications/Maths/EEF_Maths_EY_KS1_Guidance_Report.pdf



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Effective Pedagogies

- Routines
- Stories and rhymes
- Games






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Predictors of Mathematical Success

- Support from home

- Balanced curriculum

- Number Sense

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Useful links

- Improving Mathematics in the Early Years and Key Stage 1 | Education Endowment Foundation | EEF
- https://creativestarlearning.co.uk/early-years-outdoors/a-pocket-outdoor-maths-kit/
- http://www.emwest.co.uk/eyfs-resources

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Key References

- NCETM Typical progression charts

  https://www.ncetm.org.uk/resources/52500

- Learning trajectories
  https://www.learningtrajectories.org/

- Early Math Collaborative (Erikson)

  https://earlymath.erikson.edu/

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Reflection

- Do you provide a rich environment inside and out?
- Do you carry out learning walks to check that your staff are able to support children learning?
- Do you gather information from parents about what their children can do?
- Do children contribute to their own learning environment and do you provide learning at home with parents
- How effective are 1-1 and appraisals for staff?
- Do you access training to support staff professional development?
- Do staff carry out peer observations to see where they can improve?

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