The importance of early maths

Reception RISE Webinar

19th November 2025

Department for Education

The importance of early maths

A webinar for education leaders, focused on improving outcomes in the Reception year

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MATHS HUBS

Maths in Reception

- **Importance**
- **Content**
- Practice and pedagogy
- Monitoring and assessment
- The role of leaders

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Why is maths in Reception important?

Foundations of good mathematics are laid early
Children's skills at the start of formal schooling are the strongest predictor of later outcomes
Disadvantage gaps are already evident:

- low income
- ethnicity
- geography
- EAL
- low social and cultural capital

In the Reception year, we have the best chance of closing the gap

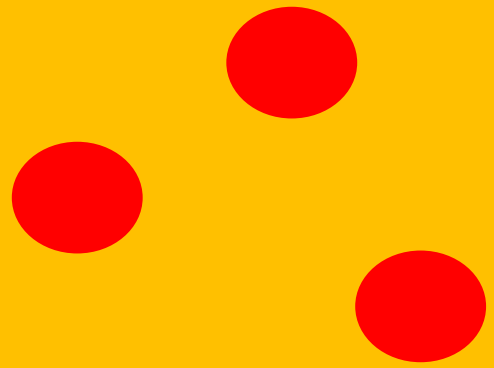
The maths content

Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically…

It is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures.

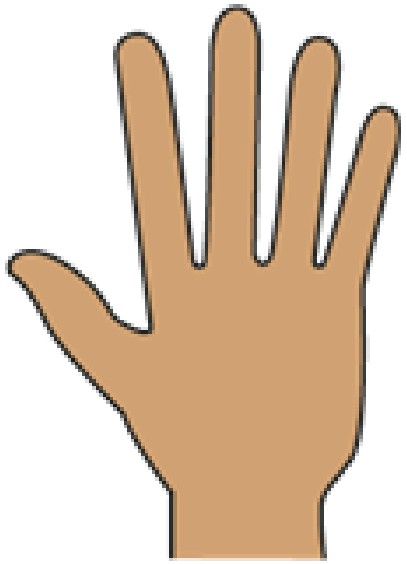
Early years foundation stage (EYFS) statutory framework

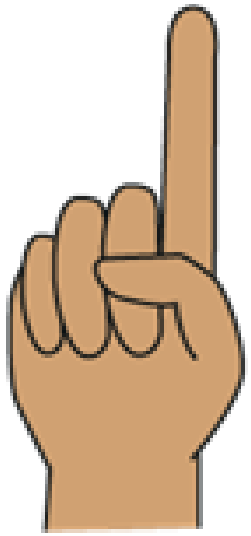
Both number and shape space and measures are important



ELGs

Number	Numerical Pattern
have a deep understanding of number to 10, including the composition of each number;	verbally count beyond 20, recognising the pattern of the counting system;
subitise (recognise quantities without counting) up to 5;	compare quantities up to 10 in different contexts, recognising when one quantity is greater than, less than or the same as the other quantity;
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 facts.	explore and represent patterns within numbers up to 10, including evens and odds, double facts and how quantities can be distributed equally.





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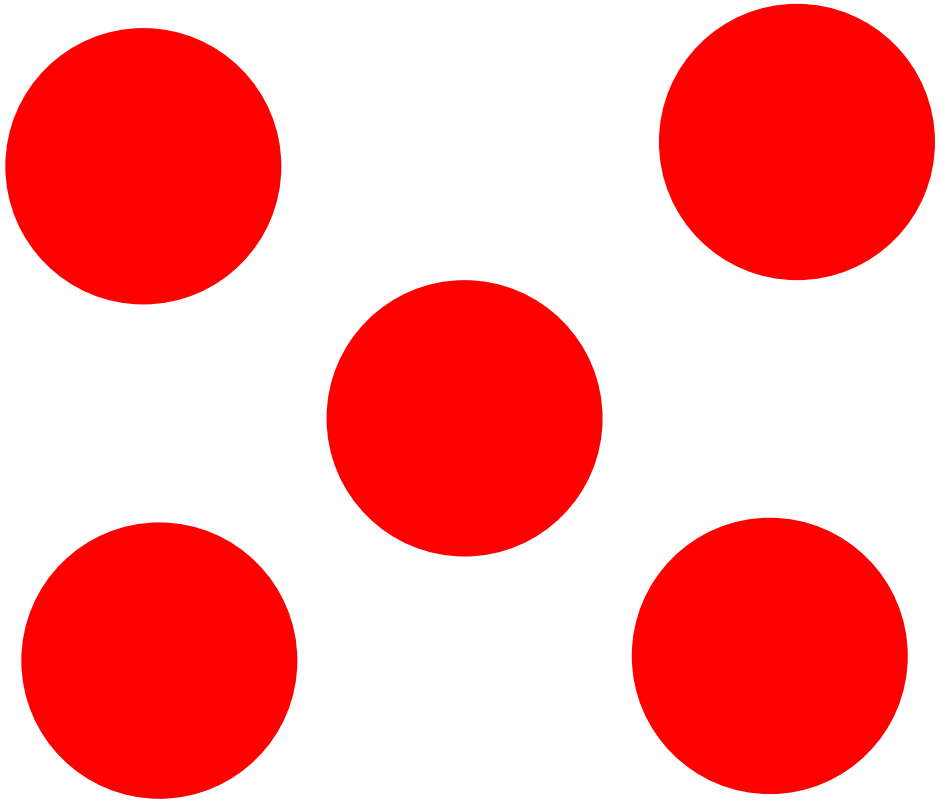
What do you see?



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Subitising 6 video

Please use this link to access the video:
https://youtu.be/2Jg3jxc1Trw?list=PLW0D-hEq1jVTkIYVbyEsbVVTCAvjSIPWv&t=1038

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For the more detailed curriculum

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https://www.gov.uk/government/publications/development-matters--2

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Contexts for teaching maths

Whole-group sessions, routines, continuous provision and small-group work

With thanks to Richard Atkinson, Molescroft Primary School, Beverley

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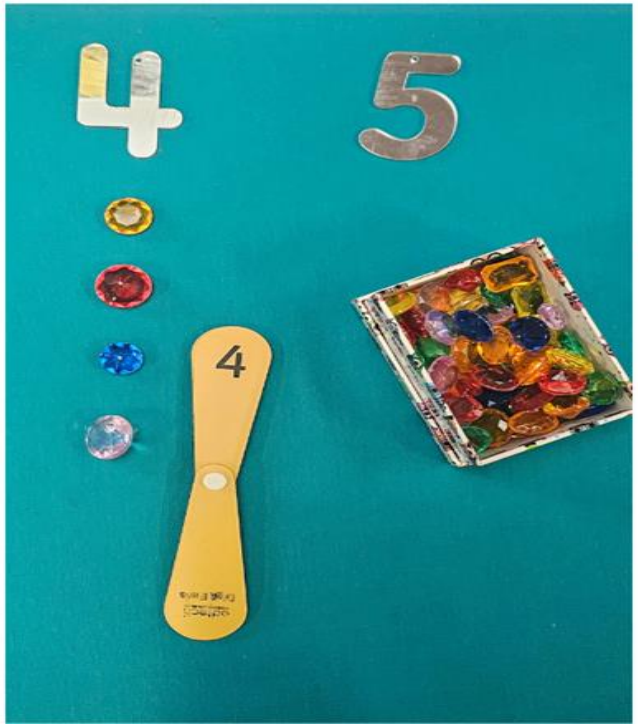






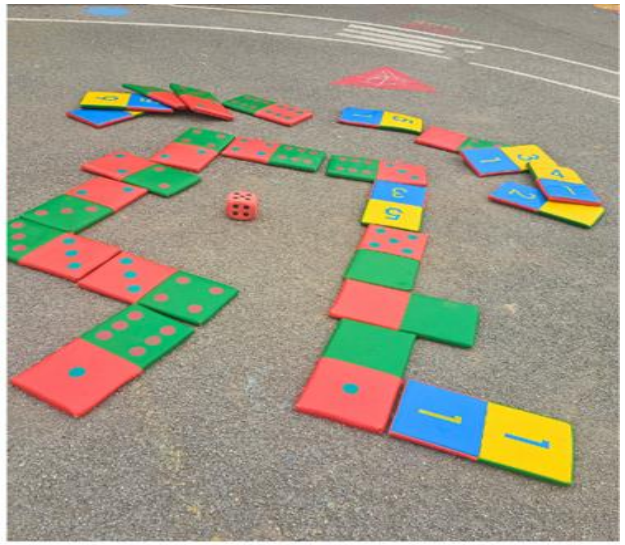

Subitising

A pedagogical approach: Learning Trajectories

Clements and Sarama (2004) define learning trajectories as descriptions of children's thinking and learning in a specific mathematical domain and a related, conjectured route through a set of instructional tasks designed to engender those mental processes or actions hypothesized to move children through a developmental progression **of levels of thinking**… (p. 83)

Pedagogy in Reception

"Time Spent on Maths Is Time Taken Away from Play."

Agree or Disagree?

Children who learn mathematics with intentional activities are more likely to engage in higher-quality socio-dramatic play during free-choice play time. Those in classrooms with an emphasis on mathematics were more likely to be engaged at a high-quality level than those in classrooms without this emphasis.

(Clements and Sarama 2018)

Incidental teaching of maths

The NRC review (2009) found that teaching incidentally through play or only integrating maths with other topics were insufficient.

Sustained focused teaching and learning time for mathematics is essential.

(Clements and Sarama (2017)

The role of the practitioner

Please use this link to access the video:
https://youtu.be/2Jg3jxc1Trw?list=PLW0D-hEq1jVTkIYVbyEsbVVTCAvjSIPWv&t=2352

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Ensuring assessment does not include burdensome evidence gathering

Schools should not include burdensome evidence gathering requirements against any of the areas of learning in their assessment policies so that teachers can spend as much time as possible interacting with children and directly supporting their learning and development.

What is the current practice in your school?

Early years foundation stage profile handbook (DfE 2025)

How can you relieve the pressure to collect evidence?

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Recording evidence

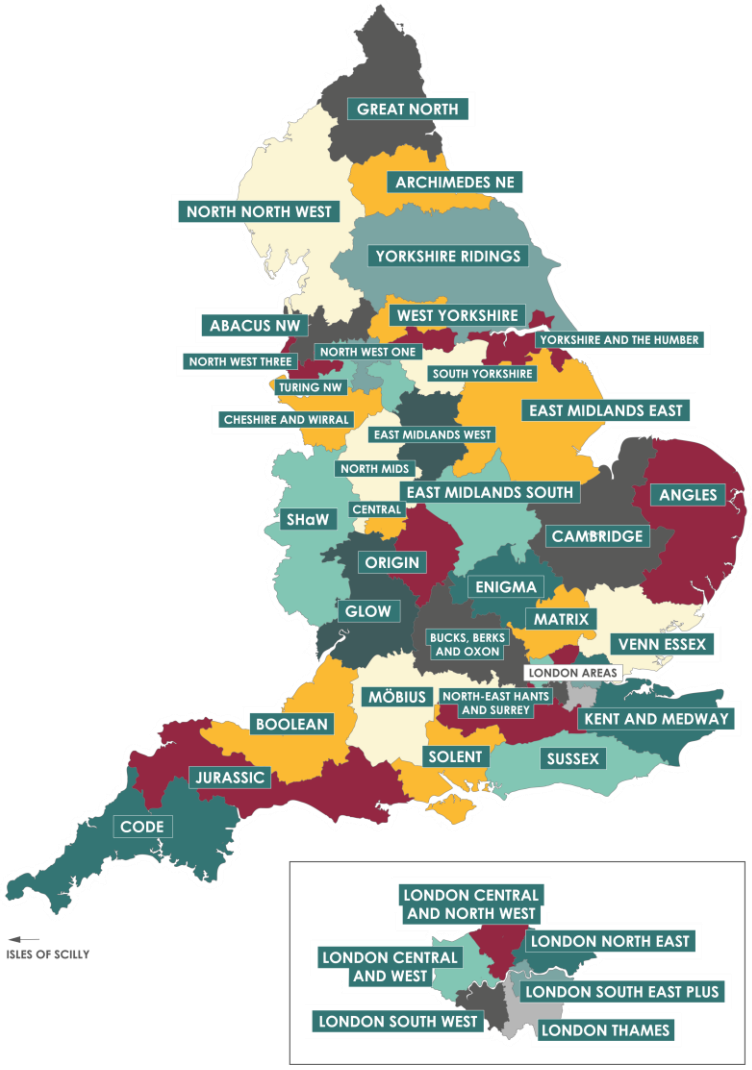
However, teachers may find it helpful to record, in a simple way, particularly noteworthy achievements… such as numbers they know.

This is sufficient to make a judgement. **Sources of written or photographic evidence are not required**, and teachers are not required to record evidence.

What to do and not to do

Do	Do not
Observe maths in reception – all aspects and join in	Only observe the whole-class teaching session
Focus on children's reasoning and their sense-making	Ask about 'greater-depth children'
Ask about children who are at risk of not meeting the maths ELG at the end of the year and the strategies that have been put in place	Require recorded evidence for every area of maths learning
Talk to the teacher about the progress of the class	Insist on children engaging in formal recording
	Require any children to record equations (2 + 3 = 5)

Contact your local Maths Hub



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https://www.ncetm.org.uk/maths-hubs/find-your-hub/

Call to action: what will you do after today?

Reflect, plan and take action:		What to use:
1	How well do you know the GLD data in your school, trust or LA?	GLD Data Tool and your newest data from 24/25
2	How will you raise awareness and share the key messages from today?	Promote this webinar with your team and network
3	How does your school improvement plan focus on reception?	Reception Webpage and Webinars
4	How will you engage with the developing Reception Improvement Offer?	All of the above and watch this space

Post-webinar Evaluation form