

Proposed Agenda for Numeracy Learning Walk

Purpose of the Learning Walk:

A learning walk is a focused journey around the school to

- Find evidence to support the identification of an area for development
- Enable visioning for further improvement
- Observe the putting into practice of a new approach
- Assess the impact of the implementation of the new approach, whether it be an agreed initiative and/or strategy, and to identify what else needs to be done
- Present evidence to show the consistency of the implementation of this new approach

Definition of numeracy (taking into account the context of special schools):

The National Numeracy Organisation UK provides very clear advice and guidance on numeracy <http://www.nationalnumeracy.org.uk/home/index.html>

Numeracy is a life skill. Being numerate goes beyond simply 'doing sums'; it means having the confidence and competence to use numbers and think mathematically in everyday life...Ofsted has published a number of guidance materials recently that should inform the learning walk.

<http://www.nationalnumeracy.org.uk/what-is-numeracy/index.html>

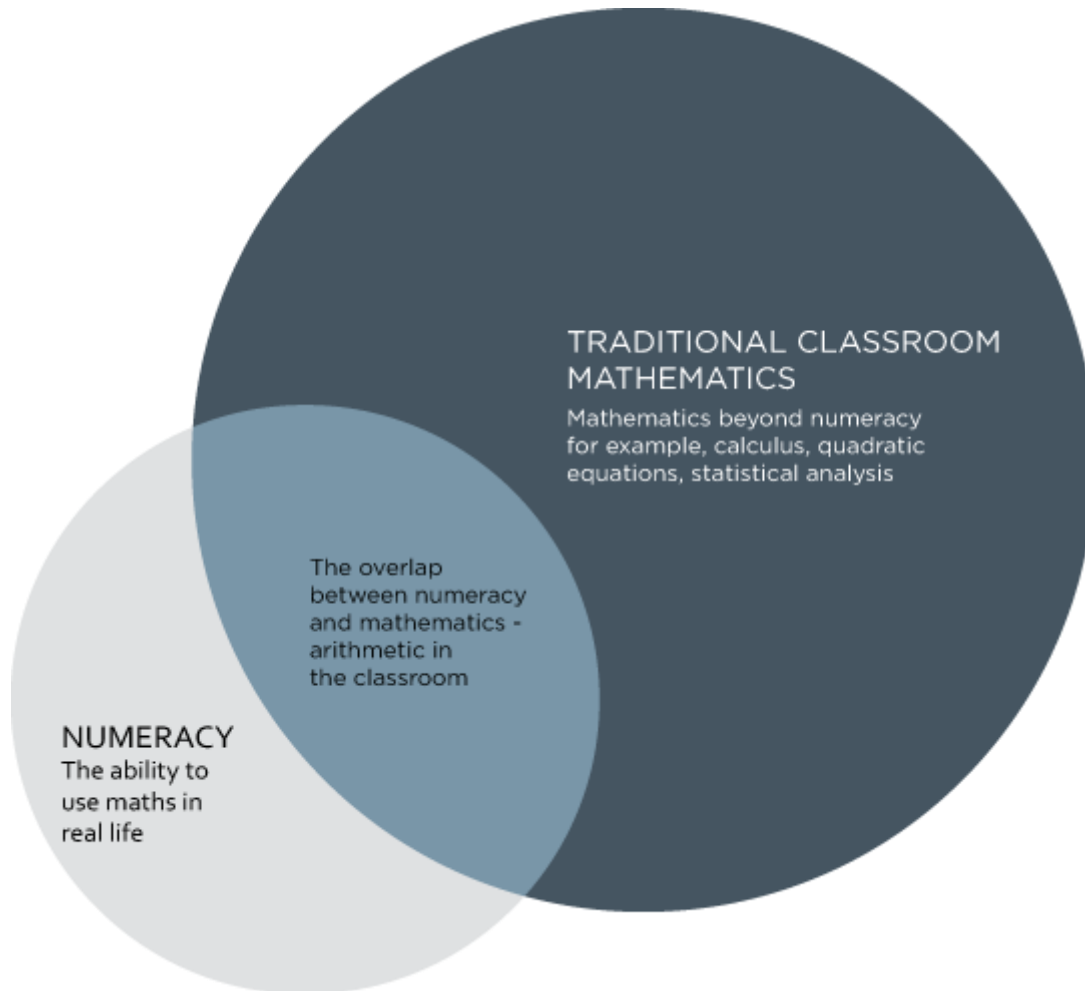
“Mathematical numeracy is an individual’s capacity to identify and understand the role that mathematics plays in the world, to make well-founded judgements and to use and engage with mathematics in ways that meet the needs of that individual’s life as a constructive, concerned and reflective citizen”. (PISA)

Everyone needs both to live their lives and do their work effectively (skills such as calculating time, space or distance, using spreadsheets, checking invoices and VAT) and to be an engaged citizen who understands the use of numbers and data in the modern world (for example, being able manage their own finances and to make sense of statistics and financial or economic news reported in the media).

Importantly, this description goes beyond mere computation – it includes essential skills such as solving problems, understanding and explaining the solutions, making decisions based on logical thinking and reasoning, and interpreting data, charts and diagrams. The age of information technology presents us with more data than ever before and puts an ever greater premium on numeracy skills and understanding.

Our concept of numeracy is represented in the diagram below:

Numeracy and mathematics



We want every young person in the UK to reach a level of numeracy that allows them to follow the career or further education path of their choice when they leave school. We want them to reach a level of numeracy that enables them to realise their full potential in their personal and social life too. We want it to be unacceptable for poor numeracy to hold back individuals at any point in their life after school.

This objective must play an important part in directing teaching and learning policies in schools. Teachers themselves must be intent on supporting all learners to reach a level of numeracy appropriate to their daily life and future education or career pathways.

Across all subjects: In the school curriculum, numeracy is a proficiency developed mainly in mathematics lessons, but also applied and extended in other subjects.

Figure 1:
The essentials of numeracy for all



Ofsted reflects the same thinking about the importance of developing computational skills, and problem solving in its **report Good practice in primary mathematics, a specially commissioned report**, Ofsted November 2011. The survey focused on identifying characteristics of effective practice in building pupils' secure knowledge, skills and understanding of number so that they demonstrate fluency in calculating, solving problems and reasoning about number.

Key findings from Good practice in primary mathematics (Ofsted)

The schools had identified some essential precursors for learning traditional vertical algorithms (column methods) for addition, subtraction, multiplication and division. These were:

- understanding of place value
- fluency in mental methods
- recall of number facts such as multiplication tables and number bonds.

- Practical, hands-on experiences of using, comparing and calculating with numbers and quantities and the development of mental methods are of crucial importance in establishing the best mathematical start in the Early Years Foundation Stage and Key Stage 1.
- Pupils' confidence, fluency and versatility are nurtured through a strong emphasis on problem solving as an integral part of learning within each topic (and across topics). Skills in calculation are strengthened through solving a wide range of problems, exploiting links with work on measures and data handling, and meaningful application to cross-curricular themes and work in other subjects.
- The schools visited coupled this with plenty of opportunities for developing mathematical language so that pupils learn to express their thinking using the correct vocabulary.

Other key Ofsted reports re Maths;

Mathematics: made to measure, based on the annual programmes of mathematics survey inspections, Ofsted May

The key message from **Mathematics: made to measure**: The responsibility of mathematics education is to enable all pupils to develop;

- conceptual understanding of the mathematics they learn, its structures and relationships
- fluent recall of mathematical knowledge and skills in order to equip them to solve familiar problems as well as tackle creatively the more complex and unfamiliar ones that lie ahead.

Good practice in primary mathematics: evidence from 20 successful schools (110140), Ofsted, Nov 2011; www.ofsted.gov.uk/resources/110140

Ofsted's mathematics web page; www.ofsted.gov.uk/inspection-reports/our-expert-knowledge/mathematics

The National Centre for Excellence in Teaching of Maths is a very good resource, especially for preparing for the new National Curriculum Maths programmes of study 2015
<https://www.ncetm.org.uk/> There is a special page for teachers of SEN pupils
(<https://www.ncetm.org.uk/?group=19>)

Context of guidance within the special school setting

Taking into account the needs of the pupils in special schools, particularly SLD/PMLD schools, the learning walk will focus upon how numeracy across the curriculum develops the numerical language, computational and numeracy problem-solving skills of all pupils.

Evidence will include;

- Review of the school policies and programmes for developing numeracy
- Lesson observations
- Scrutiny of policy & planning
- Brief visits to lessons
- Walks around the school during non-lesson time
- Discussions with relevant staff
- Scrutiny of student’s work
- Scrutiny of the learning environment
- Discussions with students

Suggestions for format of the day:

Focus	With whom?	Comment
Review of lesson observation evidence		What evidence is there in recent lesson observations that all adults are promoting numeracy?
Scrutiny of policy & planning		Is there a school numeracy policy? How does the school know it is being implemented across the curriculum? Discussion with numeracy lead Analysis of sample of curriculum planning across subjects and key stages (EYFS, KS1,KS2) How is numeracyplanned across the curriculum?
How are pupil’s PLP/IEP numeracy targets addressed in lesson?		Scrutiny of sample of PLP/IEPs and numeracy lesson plans. Is there a match? Is differentiation good enough?
How well are the staff trained in the teaching and learning of numeracy skills – and what is the evidence that this training is implemented and having an impact on progress and		Review of CPD programme for numeracy for groups of staff (teaching and non-teaching)

achievement in numeracy?		
What is the contribution of ICT to promote & develop numeracy		Discussion with ICT co-ordinator(s)
Tracking progress and achievement in numeracy		Scrutiny of progress in numeracy for different groups of pupils
Brief visits to lessons		This is to note how many opportunities there are in brief lesson visits to promote numeracy
Walks around the school during non-lesson time		Break and lunch times are good times to see NUMERACY in action! Can you provide me with an escort?
Discussions with relevant staff		Have a think about which staff could contribute re talking about NUMERACY activities in the school
Scrutiny of student's work		We could look at some photographic evidence and samples of personalised learning plans – does the evidence support the numeracy targets?
Scrutiny of the learning environment – how does it promote numeracy		A walk around the school would be useful here.
Discussions with students		Could we have another short discussion where the children talk about their experiences of numeracy and of visitors to the school related to numeracy?
Preparation for life – life skills relating to numeracy		Can we meet with the PSHCE coordinator and go through the PSHCE programme. And discuss how you explicitly develop pupils' life skills relating to numeracy?
Numeracy in the wider community		How do you develop this? Can we audit the opportunities for pupils to participate in communication in the wider community and extracurricular activities?
Equalities and discrimination		Do all groups of pupils in the school have good access to numeracy/communication opportunities?

Programme will therefore need to include;

1. Meetings with
 - a. Lead for Progress & Achievement
 - b. Lead for Teaching & Learning
 - c. Lead for Numeracy
 - d. Group of teachers
 - e. Group of TAs
 - f. Lead(s) for ICT across the curriculum
 - g. Group of pupils
2. Scrutiny of planning, PLPs, pupils' folders of work/outcomes - members of SLT + JM
3. Learning walk during lessons
4. Learning walk at lunchtime / break time
5. Feedback to SLT