

**Aims:**

- To improve competence and fluency in maths for all learners
- To promote maths as an essential skill for every career
- To ensure a consistent approach to numeracy and maths teaching and learning at Westpark School

**Rationale:**

Learning mathematics and numeracy gives children and young people access to the wider curriculum by providing a life skill which permeates learning and the opportunity to pursue further studies and interests. Mathematics plays an important role in areas such as science or technologies and is vital to research and development in fields such as engineering, computing science, medicine and finance.

**Audience:**

All staff/parents

**Quality Indicators:**  
1.3, 2.2, 2.3,  
2.7, 3.1, 3.2

**Principles for Curriculum Design****Challenge and enjoyment**

- Set learners challenging goals
- Make learners think hard about their learning
- Ensure that learning is active and engaging to motivate all learners

**Breadth**

- Use a variety of contexts through which to develop and demonstrate learning
- Give all pupils the opportunity to be involved in all aspects of school life

**Progression**

- Ensure that all learners have the opportunity to achieve appropriate success
- Ensure that all learners have the opportunity to share and celebrate their achievements
- Share expectations and standards with learners
- Review and evaluate learners' progress
- Provide timely, accurate verbal and written feedback on their learning

**Depth**

- Give learners the opportunity to develop and apply greater intellectual rigour
- Give pupils the opportunity to develop secure understanding

**Personalisation and choice**

- Take account of their prior learning
- Ensure that all learners have ownership of their learning
- Take account of different learning styles

**Coherence**

- Help learners see the link between different aspects of learning
- Provide opportunities for learners to transfer and apply learning in different contexts

**Relevance**

- Ensure learners understand the purpose of the activity
- Make links with learners' experiences, learning and interests within and beyond the school

**Progression Pathways**

All teachers are expected to record pupil progress using the benchmarks and progression pathways to ensure appropriate challenge and support for pupils as well as a breadth of experience.

**Learning Experiences**

Throughout their education, pupils should experience an environment which is rich in number and which sets high expectations for numeracy and the use of number.

Numeracy and Maths teaching and learning should support the development of eight key skills required to support and extend knowledge and understanding in numeracy and mathematics:

- interpreting questions
- selecting and communicating processes and solutions
- justifying the choice of strategy used
- linking mathematical concepts
- using mathematical vocabulary and notation
- mental agility
- algebraic reasoning
- determining the reasonableness of a solution

Teachers should ensure that these skills are applied across a range of contexts and significant aspects of learning.

All pupils should get daily opportunities to develop their numeracy and mathematic skills through:

- the use of relevant, real-life and enjoyable contexts which build upon young people's own experiences
- effective direct and interactive teaching
- a balance of open ended and closed, assessment/practice learning activities
- harnessing the motivational benefits of following children and young people's interests through responsive planning and the meaningful use of IDL
- collaborative working and independent thinking and learning
- building on the principles of Assessment is for Learning
- frequent opportunities to apply developing skills using holistic contexts and assessments
- the development of problem-solving skills and approaches
- the appropriate and effective use of ICT

The balance between these approaches will vary at different stages and across different sectors and areas of the curriculum. Continuing dialogue about learning and teaching approaches within and across sectors will help to ensure continuity and progression.

Westpark has a range of high-quality maths teaching and learning resources, from which teachers can autonomously identify an appropriate resource.

## Contexts for Learning

### Mental Maths

At Westpark School planned mental maths activities use the Big Maths framework of CLIC sessions. Every class will work through a complete CLIC session weekly (fortnightly in nursery). The CLIC sessions will be differentiated to provide appropriate pace and challenge. Assessment in Big Maths is described below.

### Number Talks

Number Talks are short, regular exercises aimed at building number fluency (numeracy). Numeracy is the ability to play with numbers meaning students can visualise problem solving, perform calculations quickly, and are flexible in their mathematical strategy. Each pupil at Westpark will engage in 3 or 4 Number Talks per week.

### SEAL (Maths Recovery)

Pupils who have are not making the appropriate progress in maths and numeracy may benefit from a period of SEAL maths, a targeted intervention delivered by PSAs. All children are assessed at the start and end of each session, to identify target groups in each class.

Throughout education, effective learning and teaching in numeracy and Maths will involve a skilful mix of appropriate approaches including:

### Engaging with the Wider Community

- Moderation work will take place every term between stage partners at Westpark School to evaluate and improve teaching and learning
- Development work will be undertaken with colleagues from Northfield ASG, including moderation of attainment of levels
- Parents will be given a termly overview of learning targets in numeracy and maths.
- Parents will be invited to school open days and parents' evening to discuss pupil progress and contribute to school-wide developments in numeracy and maths.

## Assessment

Assessment judgements should be made using the Benchmarks for each curriculum level. The Benchmarks describe the standards that children and young people need to meet to achieve a level. The Benchmarks are grouped together to support holistic assessment and avoid assessment of individual Experiences and Outcomes.

Assessment is an on-going process to support learning. The Benchmarks should be used to help monitor progress towards achievement of a level and to support overall professional judgement of when a learner has achieved a curriculum level. They support professional dialogue, moderation and monitoring of progress in learning. Evidence of progress and achievement will come from:

- observing day-to-day learning within, and outwith, the classroom.
- coursework, including tests.
- learning conversations.
- planned periodic holistic assessments.
- information from standardised assessments (including SNSA).

**Achievement of a level is based on evidence and on overall professional judgement.**

**Assessment in Big Maths:** An appropriate place for each pupil in the Big Maths progression will be identified using the resource assessments at the start of each session. Ongoing pupil progress will be measured using these assessments throughout the session.

### Pre and post topic assessment:

Teachers will prepare pre and post topic assessments in collaboration with their stage partner, that bundle together the learning outcomes for termly maths topics, to measure effect sizes and evaluate teaching and learning; as part of the continuous cycle of improvement. These assessments will form part of the picture of pupil progress and achievement.

For further guidance for assessment, please refer to the Education Scotland website:

<https://education.gov.scot/Documents/btc5-framework.pdf>

**Learners should be aware of their numeracy and maths targets, and of the next steps in their learning. These may be displayed on a learning wall, but should always be discussed during teaching and learning, and used during feedback to inform ongoing progress towards targets. Jotters should demonstrate progress towards and achievement of these targets. Quality feedback may be written or verbal, and may come from learners, peers or members of staff. What is important is that the feedback is used effectively to ensure progress.**

## Resources

Guidance for the teaching of these skills can be found in Education Scotland's professional learning resource 'Numeracy and Mathematics Skills', that can be found here:

[https://education.gov.scot/improvement/documents/numeracy/num4\\_sslnnumeracyskillsplr050914.pdf](https://education.gov.scot/improvement/documents/numeracy/num4_sslnnumeracyskillsplr050914.pdf)

An example of good practice in the use of number talks in a Scottish School can be found here:

<https://education.gov.scot/improvement/practice-exemplars/Developing%20number%20talks%20and%20promoting%20mathematical%20mindsets%20%E2%80%93%20South%20Ayrshire>

A resource for supporting the improvement of teaching and learning higher order thinking skills:

<https://education.gov.scot/improvement/learning-resources/Higher%20order%20thinking%20skills%20in%20maths>