

Curriculum for Excellence Factfile – Numeracy across Learning



What is numeracy?

Numeracy is a vital skill that is important in everyday life. It is about being confident when solving problems, making decisions and analysing situations that involve numbers. Numeracy is key to lifelong learning, e.g. it enables a young person to understand scientific concepts, interpret figures, understand cause and effect etc. Like all learning, it begins in the home and continues in nursery with, for example, counting, songs and rhythms. As children move to primary school they use numeracy in a wide range of everyday activities at school and in activities outwith school, and at play. Curriculum for Excellence recognises the importance of numeracy in learning and in life and promotes numeracy across all areas of the curriculum, ensuring that children develop the necessary skills and the confidence to apply numeracy skills throughout their learning.

Numeracy development progresses as part of mathematics and underpins much of what is taught in this area. Numeracy across learning provides essential analytical, problem-solving and decision-making skills across the curriculum.

All staff and all teachers, regardless of the subject being taught, are responsible for supporting, developing and extending learners' numeracy skills and for ensuring that what a child has learned in earlier years is built upon, practised and refreshed regularly throughout their time at school. Developing skills in numeracy will increase opportunities for all young people in the world of work, enhancing employability prospects and life chances.

Teaching numeracy across the curriculum

All schools and educational establishments need to have strategies in place to ensure that children and young people develop high levels of numeracy skills. Promoting numeracy

across all areas of the curriculum will ensure that all teachers will develop a shared understanding of how children and young people progress in numeracy. Teachers will work with colleagues and fellow professionals, within and outwith their school, to help identify opportunities for developing and reinforcing numeracy skills within the learning and teaching experiences of each learner.

In numeracy, children and young people will learn through active learning and purposeful play. They will develop problem-solving capabilities through:

- calculating mentally
- explaining their thinking
- using relevant contexts and experiences
- using technology in appropriate and effective ways
- collaborating and learning independently.

To achieve this, teachers will:

- make links across the curriculum so that concepts and skills are developed further by being applied in different real-life situations
- promote an interest in and enthusiasm for numeracy.

How can parents/carers help?

Children are learning all the time through what they see, hear and do. Parents are the first teachers in their child's learning, and have a key role to play in developing skills as children move through their education. They can do this, for example by finding opportunities to practise numeracy skills and by listening and providing feedback as children explain their thinking.

www.LTScotland.org.uk/commstoolkit

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Numeracy skills can be developed outside school in many ways, including:

- learning a range of skills through participating in clubs and activities, sports or fitness centres
- weighing and timing, for example in cooking and baking, estimating and measuring quantities in DIY
- understanding and working with time; using timetables and calendars; working out costs and rates, e.g. hiring goods at an hourly rate
- using money and budgeting pocket money or wages
- using the information gathered from reading newspapers, using the internet and watching TV to draw conclusions and make choices that involve numeracy.

What does numeracy include and what will young people learn?

Young people develop essential numeracy skills which will enable them to be successful in their everyday lives at school and in their life at work. Numeracy can help young people develop the financial awareness they need for independent living, effective money and time management and the ability to interpret and use numerical information appropriately in making decisions and judgements.

At school, the teaching of numeracy is organised into a number of areas which include understanding and calculating numbers, applying numbers when working with money, time and measurement and understanding information to make decisions. The aim is to support and prepare young people for their life outwith school.

Assessing numeracy skills

It is important to have a clear picture of the progress each child and young person is making across all aspects of numeracy, so that further learning can be planned. From early years through to the senior phase, teachers will carry out ongoing assessment of numeracy skills to see what pupils know, understand and are able to do. This evidence will be apparent across all curriculum areas including in maths lessons.

Parents will receive reports on assessment of progress in all curriculum areas, including numeracy. National guidance on recognising achievement, profiling and reporting published in December 2010 provides further information.

For more information on assessment and the support for teachers available in this area such as the National Assessment Resource (NAR), you can refer to the Curriculum for Excellence factfile on Assessment and Qualifications.

Numeracy qualifications

New Numeracy Units will be available from SQA to support the development of numeracy skills, helping to raise overall standards. The Units will provide learners with recognition

of their ability to work with numbers and money, to calculate, to measure, to handle graphical information and to make decisions that are relevant for learning, life and work. These Units will form part of the new courses in Maths at Access 3 and National 4 and Lifeskills Maths courses at National 4 and National 5. They will also be available as free-standing Units for all learners at Scottish Credit and Qualifications Framework (SCQF) levels 3, 4 and 5. Numeracy skills will be partially embedded in National 5 Maths courses. See SQA leaflet '*Qualifications are changing – A guide for parents and carers*', available in print from your school or to download at www.sqa.org.uk/curriculumforexcellence.

Numeracy skills are expected to be developed where appropriate across the new qualifications. How this happens will vary from course to course, depending on the subject area.

Further information online:

www.LTScotland.org.uk/Understandingthecurriculum – more detailed information on Curriculum for Excellence

www.LTScotland.org.uk/learningteachingandassessment/learningacrossthecurriculum/responsibilityofall/numeracy/index.asp – more information on numeracy across learning

www.LTScotland.org.uk/resources/h/sumfun.asp?strReferringChannel=search&strReferringPageID=tcm:4-615801-64 – *Have Sum Fun* leaflet

www.LTScotland.org.uk/parentzone – information for parents on all aspects of children's education

www.hmie.gov.uk – information on inspection and evaluation of education provision

www.sqa.org.uk/curriculumforexcellence – latest information on development of new qualifications

www.sqa.org.uk/sqa/3832.html – numeracy core skills

www.employersandyoungpeople.org – making connections with employers to support learning

www.thebigplus.com – help and support for adults with reading, writing and numbers

Curriculum for Excellence is a major change to the education system in Scotland that aims to raise standards of learning and teaching for all 3-18-year-olds, wherever they learn. In this factfile we sometimes use the term 'parents' for short – we mean all parents and carers. When we talk about 'learners' we mean all young people learning in nursery, school, college, community learning, training, special schools, extended support and secure settings. 'Teachers' or 'teaching staff' means all staff who support young people's learning e.g. lecturers, nursery staff, trainers, youth workers, learning support personnel, among others.

CfE factfiles series 1: Background and Benefits; Assessment and Qualifications; The Secondary Experience (Autumn 2010)

CfE factfiles series 2: Health and Wellbeing; Parents as Partners; Supporting Learners (October 2010)

CfE factfiles series 3: Literacy across Learning; Numeracy across Learning; 3-18 Transitions; Outdoor Learning (March 2011)