



A Curriculum for Excellence

Maths and Numeracy Policy

Reviewed May 2015

Rights Respecting Schools

Article 13

You have the right to find out things and share what you think with others, by talking, drawing, writing or in any other way unless it harms or offends other people.

Article 28

You have the right to a good quality education. You should be encouraged to go to school to the highest level you can.

Article 29

Your education should help you use and develop your talents and abilities. It should also help you learn to live peacefully, protect the environment and respect other people.

Introduction

Mathematics is the study of the properties, relationships and patterns in number and shape, and it is the use of this knowledge to analyse, interpret, simplify and solve problems.

Numeracy promotes the development of the number-based skills that are needed regularly by everyone in their lives and is a part of Mathematics.

Rationale

Mathematics

Learning mathematics develops logical reasoning, analysis, problem-solving skills and the ability to think in abstract ways, as well as offering opportunities for creativity. It is a universal language of numbers and symbols.

Mathematics is important in everyday life, allowing us to make sense of the world around us. It gives us confidence in dealing with number and in understanding shape, position and movement. It enables us to think abstractly, model real-life situations and make generalisations, it equips us with the skills we need to interpret and analyse information, assess risk and make informed decisions.

(ACFE- Maths Cover paper)

Numeracy

Numeracy is a fundamental life skill. Being numerate involves developing confidence and competence in using number that allows individuals to solve problems, interpret and analyse information, make informed decisions, function responsibly in everyday life and contribute effectively to society.

It gives increased opportunities within the world of work and sets down foundations which can be built upon through life-long learning.

Whilst numeracy is part of mathematics, it is also a core skill which permeates all areas of learning, allowing pupils the opportunity to access the wider curriculum.

(ACfE- Numeracy Outcomes paper)

Aims

At Banff Primary School we aim:

1. To develop a positive attitude to numeracy and maths as an interesting and exciting subject in which all children gain success and enjoyment
2. To develop mathematical understanding through systematic direct teaching of appropriate learning objectives
3. To encourage the effective use of numeracy and maths as a tool in a wide range of activities within and outwith school and, subsequently, adult life
4. To develop an ability in the children to express themselves fluently, to talk about the subject with confidence, using correct mathematical language and vocabulary
5. To develop and make connections within maths and numeracy
6. To develop the ability to think clearly and logically with independence of thought and flexibility of mind
7. To develop mathematical skills and knowledge and a quick recall of basic facts

Learning and Teaching Approaches

Active involvement in mathematical experiences, set in real and relevant contexts, is vital to the development of knowledge, understanding, skills and a positive attitude towards numeracy and mathematics.

Within a rich and supportive learning environment, best practice will draw upon a skilful mix of approaches include:

- Planned active learning with opportunities to observe, explore, investigate, experiment and play
- Development of problem-solving capabilities
- Development of mathematical thinking skills
- Development of skills and accuracy in mental agility
- Use of relevant contexts, familiar to young people's experiences
- Appropriate, effective use of technology
- Building on the principles of Assessment is for Learning
- Collaborative and independent learning

- Making links across the curriculum where appropriate
- Increased opportunities for discussion, communication and explanation of thinking

From the early stages onwards, we aim for all our pupils to experience success in mathematics and develop the confidence to take risks, ask questions and explore alternative solutions without fear of being wrong. They should, therefore, enjoy exploring and applying mathematical concepts to understand and solve problems, explaining their thinking and presenting their solutions to others in a variety of ways.

At all stages, the use of collaborative learning encourages children to reason logically and creatively through discussion of mathematical ideas and concepts. Misconceptions and wrong answers are an opportunity to improve and deepen children's understanding of mathematical concepts, through use of effective questioning and discussion.

Teachers work to ensure that the fundamental numeracy skills are established and consolidated through imaginative and interactive approaches, to enable children to develop a sound understanding of number.

Emphasis is still to be placed on establishing the foundations of numeracy, such as confidence in recall and use of number bonds and multiplication facts, understanding of place-value, and the application of mental strategies. These skills will be continually reinforced throughout the pupils' education. Oral/Mental Maths activities are used on a daily basis.

Individual, group or class teaching, using direct or indirect methods, are used as appropriate to the circumstances of the class/ stage. Practical experience and use of number and maths equipment is vital to facilitate learning and promote better understanding. Wherever possible, ICT is used to enhance learning.

Mental Maths

Classes will take part in daily mental maths activities (5-10 minutes per day) where they will focus on a variety of skills and mathematical language in the main areas of mathematics and numeracy. Target skills are outlined for each stage in the school Mental Maths progression of skills.

Problem Solving

Classes/Groups will take part in weekly problem solving challenges using *Apex Maths*, *Heinemann Active Maths* or other relevant Maths activities related to ongoing class work to allow them to apply the skills they have learned to real life problems.

Planning and Resources

In Banff Primary School, the Maths and Numeracy curriculum is delivered principally through the CfE experiences and outcomes. The main resource used is *Heinemann Active Maths* which has been developed for teaching CfE and includes a broad range of resources including textbooks, game boards and Smart board activities. At early level and part of the first level this is complimented by *Total Numeracy* workbooks. Teacher may also use other resources such as *Abacus* or *Scottish Heinemann Maths* to support teaching and learning of

some concepts. To plan and record progression teachers use the school planners with suggested resources.

Assessment and Monitoring

In mathematics, as in other curricular areas, assessment forms an integral and ongoing part of learning and teaching. It is gathering of evidence of attainment and progression for the purpose of informing future planning, teaching and reporting.

In working with pupils, our teachers continuously evaluate and make use of this assessment in planning future activities. Assessment for Learning strategies are used on a daily basis. Formative and summative assessment will be used in the learning & teaching process:

- To share learning objectives and success criteria clearly
- To assess understanding through skilful questioning
- To give pupils clear and regular feedback
- To assist learners and teachers to identify the next steps in the learning process which will ensure progression
- To engage in the process of self and peer assessment

On-going classwork will be the main source of evidence, available through observation of:

1. Oral questioning and discussion
2. Practical tasks
3. Pupils' written work
4. Pupil's own assessments and comments

More formal evidence will be gathered in P1, P3, P5 and P7 using INCAS testing.

Transitions (Pre-school/Primary/Secondary)

Teacher discussions take place annually between nursery and P1 and as each child moves from one class to the next. Teachers will discuss evidence of prior learning and starting points for the following year.

Information regarding pupil attainment in mathematics at P7 will be passed on to Banff Academy through existing and developing primary/secondary liaison arrangements.