



Barthol Chapel Primary School

Mathematics and Numeracy Policy

Introduction

It is the responsibility of every practitioner in Barthol Chapel School to develop pupil numeracy and mathematical skills. Keeping the child at the centre, we will plan and provide learning experiences to ensure that our young people benefit fully from the experiences and outcomes of Curriculum of Excellence and entitlements as outlined in A Curriculum Framework 3—18 for Aberdeenshire.

Features for Effective Learning

It's important to consider that effective learning requires the following key features:-

- a) Coherent Curriculum
- b) Learning and Teaching
- c) Support for Pupils
- d) Leadership
- e) Partnership Working

Skills of effective learning will be founded on the idea that learners learn best when:

- *They understand clearly what they are trying to learn, and what is expected of them*
- *They are given feedback about the quality of their work and what they can do to make it better*
- *They are given advice about how to make improvements*
- *They are fully involved in deciding what needs to be done next and who can give them help if they need it.*

Aberdeenshire 3-18 Curriculum Framework

Curriculum Organisers

Within the mathematics framework, some statements of experiences and outcomes are also identified as statement of experiences and outcomes in numeracy. These form an important part of the mathematics education of all children and young people as they include many of the numerical and analytical skills required by each of us to function effectively and successfully in everyday life. All teachers with a responsibility for the development of mathematics will be familiar with the role of numeracy within mathematics and with the means by which numeracy is developed across the range of learning experiences.

Within the Curriculum for Excellence, the mathematics experiences and outcomes are structured within three main curriculum organisers, each of which contains a number of sub divisions:

Number, money and measure

- Estimation and rounding
- Number and number processes
- Multiples, factors and primes
- Powers and roots
- Fractions, decimal fractions and percentages
- Money
- Time measurement
- Mathematics – its impact on the world, past, present and future
- Patterns and relationships
- Expressions and equations

Shape, position and movement

- Properties of 2D shapes and 3D objects
- Angle, symmetry and transformation

Information handling

- Data and analysis
- Ideas of chance and uncertainty

When planning numeracy and mathematical experiences, practitioners at Barthol Chapel School will apply the principles for Curriculum Design from Curriculum for Excellence:

- Challenge and enjoyment
- Breadth
- Progression
- Depth
- Personalisation and choice
- Coherence
- Relevance

Within the teaching and learning of mathematical/numeracy skills and knowledge focus is placed on the four capacities: confident individuals, effective contributors, successful learners and responsible citizens to allow each child and young person to reach their full potential.

Planning

Teachers and other practitioners in planning together will ensure that experiences are relevant and realistic for the child or young person in his or her circumstances. Provide the children with knowledge of mathematics and numerical skills for learning for life and work.

- Within the experiences and outcomes which span more than one level, careful planning is required to ensure appropriate breadth, progression and pace.
- Teachers and other practitioners will plan and present learning in ways that enable learners to use knowledge and skills in different contexts.
- Teachers should make use of Aberdeenshire Progression Frameworks for Numeracy & Mathematics and national benchmarks as a support tool.

- Additional curricular planning is also required in an appropriate format to support interdisciplinary projects.

Assessment

Assessment will focus on the application of standards and expectations of each learner's progress and achievement in;

- Knowledge and understanding
- Skills
- Attributes and capabilities

As detailed in the experiences and outcomes and benchmarks within each of the curriculum areas and in the curriculum guidance.

Assessment approaches will help learners to show their progress through the levels and enable them to demonstrate their achievements in a range of ways which are appropriate to learning. Learners will demonstrate that their progress is secure and that they have achieved a level, they will be provided with opportunities to show they:

- Have achieved a breadth of learning across the experiences and outcomes for an aspect of the curriculum
- Can respond to the level of challenge set out in the experiences and outcomes and are moving forward to more challenging learning in some aspects
- Can apply what they have learned in new and unfamiliar situations.

Teachers will use these three aspects to decide when a learner has met agreed expectations and achieved a level, either in a part of a curriculum area or in a whole curriculum area.

Assessment in mathematics will focus on children and young people's abilities to work increasingly skilfully with numbers, data and mathematical concepts and process and use them in a range of contexts. Teachers will gather evidence of progress as part of day-to-day learning about number, money and measurement, shape position and movement and information handling.

Some Questions

- Do they relish the challenge of number puzzles, patterns and relationships? Can they explain increasingly more abstract ideas of algebraic thinking?
- Can they successfully carry out mathematical processes and use their developing range of skills and attributes as set out in the experiences and outcomes? As they apply these to problems, can they draw on skills and concepts learned previously?
- As they tackle problems in unfamiliar contexts, can they confidently identify which skills and concepts are relevant to the problem? Can they then apply their skills accurately and then evaluate their solutions?
- Can they explain their thinking and demonstrate their understanding of 2D shapes and 3D objects?
- Can they evaluate data to make informed decision?
- Are they developing the capacity to engage with and complete tasks and assignments?

Assessment may also link with other areas of the curriculum, within and outside the classroom, offering children and young people opportunities to develop and demonstrate their understanding of mathematics through social studies, technologies and science, and cultural and enterprise activities.

The use of specific assessment tasks will be important in assessing progress at key points of learning including transitions.

Resources

It is important that the resources used to deliver mathematics and numeracy experiences and outcomes meet the following criteria:-

- Are relevant to age and stage
- Are current and listed to show whole school progression
- Are purchased to reflect improvement plans
- Have mechanisms for consultation with staff, pupils and parents where appropriate

Monitoring, Evaluation and Review

This policy has been written in consultation with staff, pupils, parents and the wider community.

A copy of the policy will be made available to all stakeholders and monitored and evaluated in line with our Quality Assurance procedures.

This policy is a working document and will be reviewed on an annual basis as informed by local and national developments.