

**Downfield Primary School**

**Mathematics and Numeracy Policy**

**Rationale**

At Downfield Primary School, we want all children to be numerate. We also strive for pupils to develop enthusiasm, motivation and confidence in Mathematics and Numeracy. We hope that through this approach pupils will develop key skills needed for learning, life and work. We aim to develop pupils skills to problem solve, develop strategies and see their mistakes as an opportunity for learning. Staff and parents will collaborate to support each child in attaining in Mathematics and Numeracy at Downfield Primary School.

**Mathematics**

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

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, which allows us to communicate ideas in a concise, unambiguous and rigorous way.

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 and equips us with the skills we need to interpret and analyse information, assess risk and make informed decisions. (ACFE- Maths Cover paper)

**Numeracy**

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

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)

**Dundee City Council Numeracy Strategy**

Dundee City Council Numeracy Strategy is a policy which is used in all schools in Dundee to ensure we develop numerate individuals and begin to close the attainment gap of all pupils in Numeracy.

Everyone uses numerical skills and concepts in everyday life. To face the challenges of the 21st Century, each young person needs to have confidence in using numeracy, and Scotland, needs both specialist mathematicians and a highly numerate individuals.

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**Aims**

At Downfield Primary School we are adopting this approach in Mathematics and Numeracy:

• To raise attainment.

• To promote a growth mind-set.

• To engage all pupils in their learning.

• To allow pupils to learn in a more supportive and nurturing environment.

• To support and challenge pupils mathematical thinking.

• To create a strong foundation of concepts early on which will be built upon throughout their learning at Downfield Primary School.

**Learning and Teaching**

Staff at Downfield Primary school are trained in the pedagogy of Conceptual Number. Staff aim to embed this in their practice to raise attainment in Numeracy.

**What is Conceptual Number?**

Staff at Downfield Primary School believe the conceptual number approach is:

• An active and engaging approach to Numeracy lessons.

• Pupils use concrete materials and learning aids to support and challenge their thinking across all stages.

• Develops pupils understanding of what concepts like addition, subtraction, multiplication and division actually mean rather than rote learning.

• Encourages to share their mathematical thinking through methods such as discussion and pictorial as well as written.

• Encourages children to develop a positive attitude and understand that mistakes are to be learned from and not feared.

A Numeracy lesson (see appendix A for full format) in Downfield Primary School will include a variety of these:

* Maths Warn Up
* Mental maths Whiteboards
* Teacher Input
* Plenary
* Game (Incentive to maintain focus)
* Friday challenge

Staff are adopting a variety of strategies for differentiation in Mathematics and Numeracy to meet the needs of individuals. One of these strategies is the implementation of a variety of mathematical resources to promote engagement. This gives pupils opportunities for personal challenge. This also promotes Growth mind-set in Numeracy.

**Assessment**

Assessment supports learning by focusing on the process of children and young people moving from where they are in their learning towards their desired goals. Assessment can also be used to identify and plan any support they will need to achieve these goals.

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At Downfield we aim to regularly assess the children’s understanding of concepts. This is often done at the beginning of a block of teaching to inform teachers of children’s individual understanding. Teachers will use these assessments to plan the next steps. A further assessment will be carried out at the end of a block of learning to measure the progress of each individual. Teachers at Downfield also use plenaries and mini plenaries throughout lesson to gauge understanding and progress. Throughout the year we gather and record assessment data using school wide trackers.

**Family Engagement**

At Downfield Primary School we encourage parents to help by:

• Discussing their child’s learning with them.

• Demonstrating real life uses for Mathematics and Numeracy e.g. money, going to the shops, time tables, awareness of numbers in the environment, simple counting, skip counting.

• Encouraging a growth mind-set towards Mathematics and Numeracy.

• Encouraging your children to demonstrate their mathematical thinking in different ways.

• Allowing your children time to explore different solutions before offering support.