

## Numeracy

### Category: Early Years

#### Risk Management and Legal Implications

Failure to manage risk may impact on the delivery of Service objectives and the outcomes achieved by Service users. Education and Children’s Services aim to mitigate the implications by ongoing management and review of risk in all elements of work activity.

The production of this document is one way in which we aim to reduce our exposure to risk. By providing staff with information on good practice, making reference to other guidance that is available across the Council and providing clarity on how we should do things, we can ensure that the management of risk is intrinsic to what we do.

#### **Version Control:**

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## Numeracy

### Rationale

“Being numerate helps us to function responsibly in everyday life and contribute effectively to society. It increases our opportunities within the world of work and establishes foundations which can be built upon through lifelong learning. Numeracy is not only a subset of mathematics: it is also a life skill which permeates and supports all areas of learning allowing children access to the wider curriculum.”

(Curriculum for Excellence)

“Literacy, numeracy and mathematical thinking are woven within the fabric of all conversations, interactions and experiences. They are everywhere in the environment. They are part of a child’s everyday life and are fundamental to all other learning.”

(Realising the Ambition – Being Me)

“From the earliest stage, the aim is to equip every child with .....the foundations for numeracy to support their learning and achievement and ensure that every child has the same chance to succeed.”

(A Blueprint for 2020: The Expansion of Early Learning & Childcare in Scotland)

### Aims

In early numeracy children should learn to:

- develop a sense of size and amount by observing, exploring, using and communicating with others about things in their environment
- explore numbers, understanding that they represent quantities and use them to count, create sequences and describe order
- use practical materials, count on and back to develop an understanding of addition and subtraction and record ideas and solutions in different ways
- share out a group of items by making smaller groups and split a whole object into smaller parts
- develop awareness of how money is used and recognise and use a range of coins
- develop an awareness of routines and events, times and seasons and explore ways to record and display these using clocks, calendars and other methods
- experiment with everyday items as units of measure to investigate sizes and amounts in the environment, sharing my findings with others
- collect objects and ask questions to gather information, organise my findings in different ways
- match objects and sort using a variety of criteria, sharing my ideas with others
- use signs and charts to find information, plan and make choices and decisions in daily life.

“Numeracy is not just about being able to count. It is about developing number sense which encourages creativity of thought, and it allows children to interact with the world around them. Number sense can be used to understand everyday activities. Being able to



recognise that symbols have different meaning in different contexts and the ability to quantify.

Numeracy and mathematical thinking encompasses many different elements including recognition of numerical symbols, verbalising numbers and being able to recognise patterns and shapes. It involves many different skills such as understanding numbers, counting, problem solving, measuring, sorting and patterning. However, numeracy is not only about developing these skills. It is also about having the ability to apply these concepts in all areas of life. Therefore, numeracy should be embedded throughout the curriculum and the environment and should not simply be seen as an area on its own.”

(Realising the Ambition – Being Me)

Realising the Ambition – Being Me, promotes the need to provide our young learners with: “Experiences which:

- Provide interesting resources which encourage questions and develop the language of numeracy and maths.
- Provide well-resourced play areas which combine familiar items with new objects to widen numerical and mathematical experiences for children.

Adults who:

- Engage the child in conversations.
- Explain and model new words with the correct level of challenge to extend the child’s grasp of numerical and mathematical language.
- Share writing for everyday purposes, explaining why and pointing out signs and symbols and what they mean.

In an environment which:

- Offers a range of play and real-life experiences which encourages children to describe, explain and ask why.”

### **How these aims are to be achieved**

Staff encourage the development and acquisition of early numeracy skills such as:

- observational skills, through opportunities to look carefully at objects, pictures and activities and discuss what he/she sees
- ordering skills, by giving children opportunities to arrange objects in a logical order along some dimension such as weight, age/height and by matching one set of ordered items to another, understand the concepts of mathematical language for example big, long, smaller

Classification skills

- size, feel, shape, appearance
- verbalise their perceptions of comparisons
- group materials and explain their reasoning
- concept of mathematical words – some, a few, many



#### Temporal awareness skills

- routines for washing, snack, breakfast etc
- sequencing events/activities
- work through simple routines and timetables throughout the day
- understand some conceptual language of time for example morning, afternoon

#### Number skills

- develop one to one correspondence
- experience early cardinal and ordinal numbers for example 1,2,3, first/last
- compare simple amounts of similar materials for example some sand/more sand
- take part in simple number rhymes/jingles

#### Spatial relationship skills

- work with materials which fit together and can be rebuilt/reshaped
- through investigations re-shape and re-arrange materials
- work with resources of varying size and shape

#### Cause and effect

- ask questions regarding their activities, experiences and investigations
- participate in early numeracy experiences in the outdoor environment
- undertake activities, which encourage them to compare, evaluate, draw conclusions and solve problems.

#### **Resources**

- Books
- Games - sorting, matching, counting
- Displays - to look at for example seasonal
- ICT resources

#### **Evaluation**

Practical real-life experiences give children confidence to experiment and discover things for themselves so that with sensitive staff planning, learning can develop in different directions.